Honeywell
THE POWER OF CONNECTED

Farenhyt™ Series



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Honeywell Introduction

Honeywell is building a smarter, safer,
and more sustainable world.

THAT'S THE POWER OF **CONNECTED**.
THAT'S THE POWER OF **HONEYWELL**.

Connected Aircraft | Connected Automobile | Connected Home | Connected Building
Connected Plant | Connected Supply Chain | Connected Worker

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This document contains certain statements that may be deemed "forward-looking statements" within the meaning of Section 21E of the Securities Exchange Act of 1934. All statements, other than statements of historical fact, that address activities, events or developments that we or our management intends, expects, projects, believes or anticipates will or may occur in the future are forward-looking statements. Such statements are based upon certain assumptions and assessments made by our management in light of their experience and their perception of historical trends, current economic and industry conditions, expected future developments and other factors they believe to be appropriate. The forward-looking statements included in this release are also subject to a number of material risks and uncertainties, including but not limited to economic, competitive, governmental, and technological factors affecting our operations, markets, products, services and prices. Such forward-looking statements are not guarantees of future performance, and actual results, developments and business decisions may differ from those envisaged by such forward-looking statements. We identify the principal risks and uncertainties that affect our performance in our Form 10-K and other filings with the Securities and Exchange Commission.

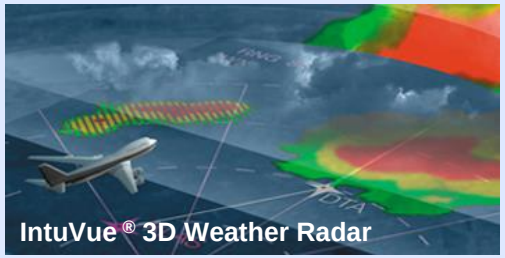
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Honeywell Overview

$39.4B Sales (2017) | ~**1,300** sites | ~**131,000** employees | **Morris Plains, N.J.** headquarters | **Fortune 100**

Aerospace

$14.8B
Sales



Unmatched Scope of Offerings

- Mechanical, Cockpit (Autopilot), and Software Offerings From Nose to Tail
- Apps, Services, Maintenance, Subscriptions
- End-to-End Connectivity Solutions From Hardware to Airtime
- Turbochargers for Fuel Efficiency

Home and Building Technologies

$10.7B
Sales



Connecting Homes and Buildings

- **Security and Fire**
- **Environmental & Combustion Controls**
- Connecting Homes With Lyric™
- Open Software Connecting "Internet Of Things" in Buildings

Performance Materials and Technologies

$9.3B
Sales



Winning Technology

- Refining and Petrochemical Catalysts
- Gas Processing Modular Offerings
- Solstice® LGWP Materials
- SmartLine Transmitters
- Asset Optimization Software

Safety and Productivity Solutions

$4.6B
Sales



Connecting Workers

- **Industry Safety** (Industrial & Commercial Gas detectors)
- Keeping Workers Safe (Safety Equipment)
- **Sensing and Productivity Solutions**
- Barcode scanners, Voice, Mobility, Data Analytic Solutions for Workers
- Warehouse Automation

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Reflects 2016 Full Year Results

Aligned to Key Global Macro Trends

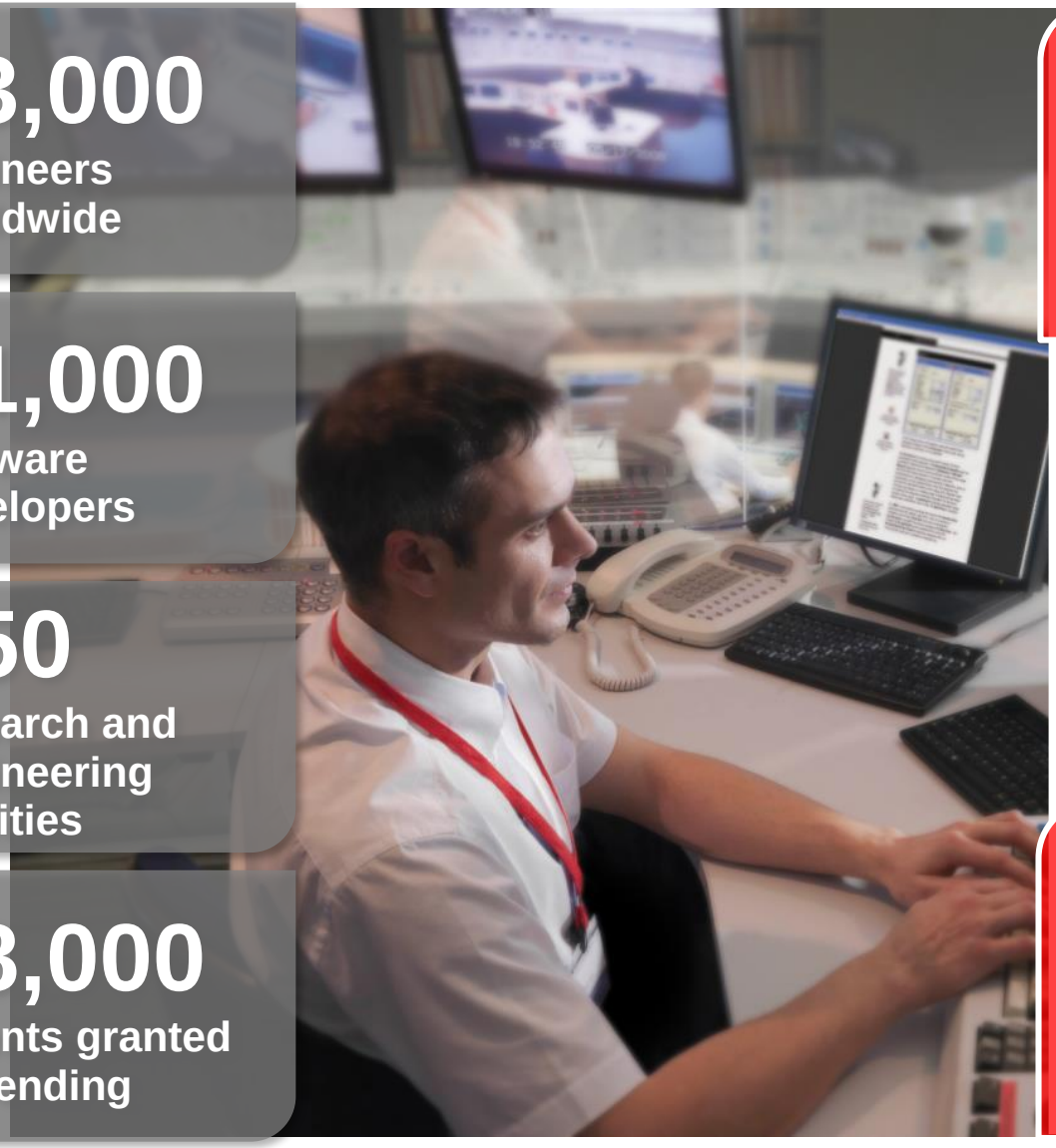
Technology and Innovation

23,000
engineers worldwide

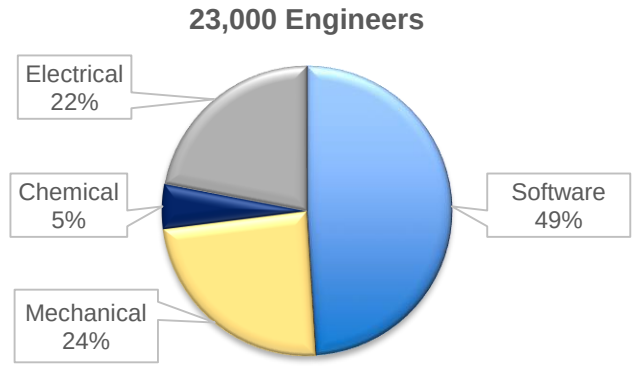
11,000
software developers

150
research and engineering facilities

38,000
patents granted or pending



Honeywell is building a smarter, safer, and more sustainable world. That's the **Power of Connected.** That's the **Power of Honeywell.**



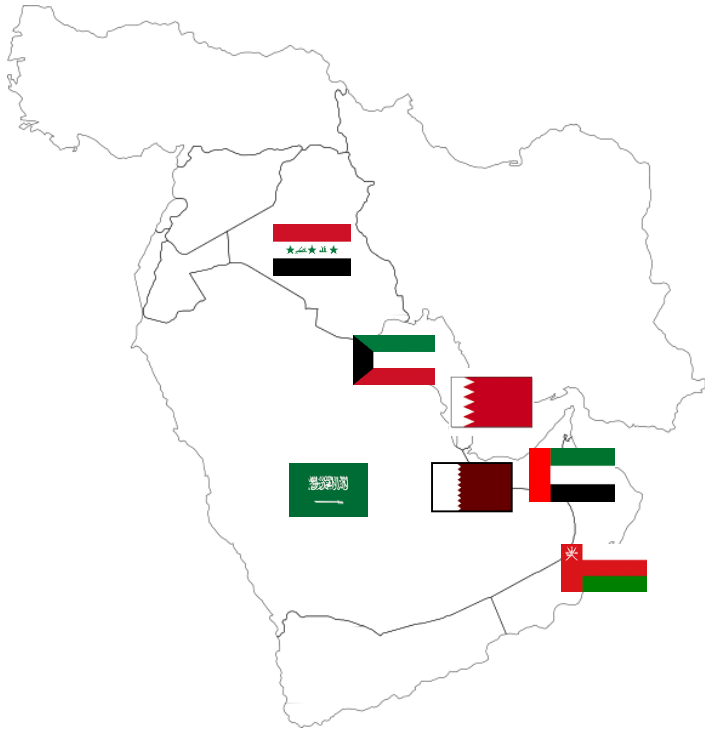
100%
Compatible with CMMI Maturity Level 5

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HONEYWELL IN THE MIDDLE EAST





- Honeywell has a legacy of **60** years in the Middle East
- **~1,800 employees** across KSA, Egypt, UAE, Bahrain, Qatar, Iraq, Libya, Oman and Kuwait
- **1 manufacturing** and 1 R & D unit in KSA

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High Level Archtechtures

Level System Architecture

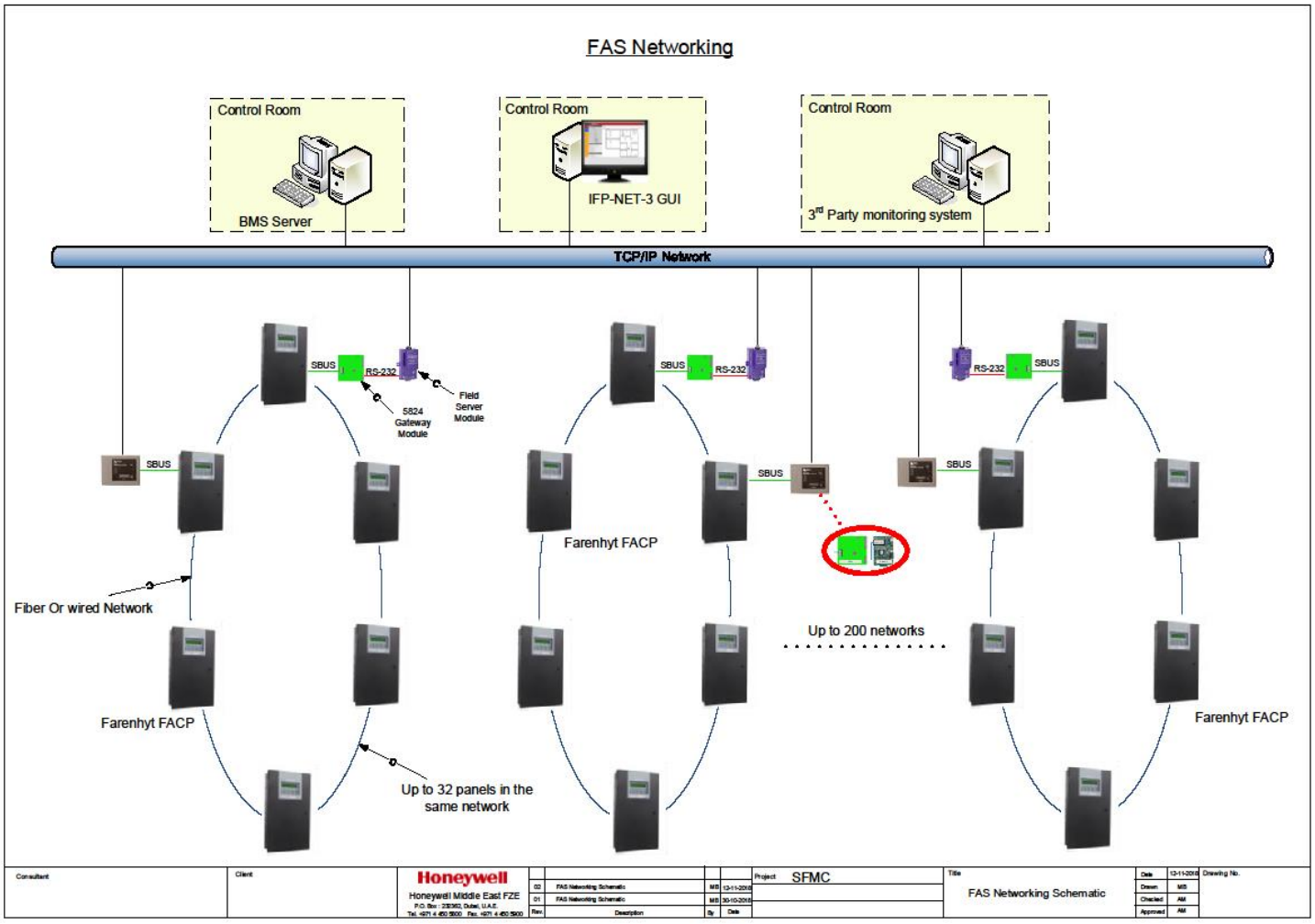


Figure 1 FAS Networking Schematic Drawing

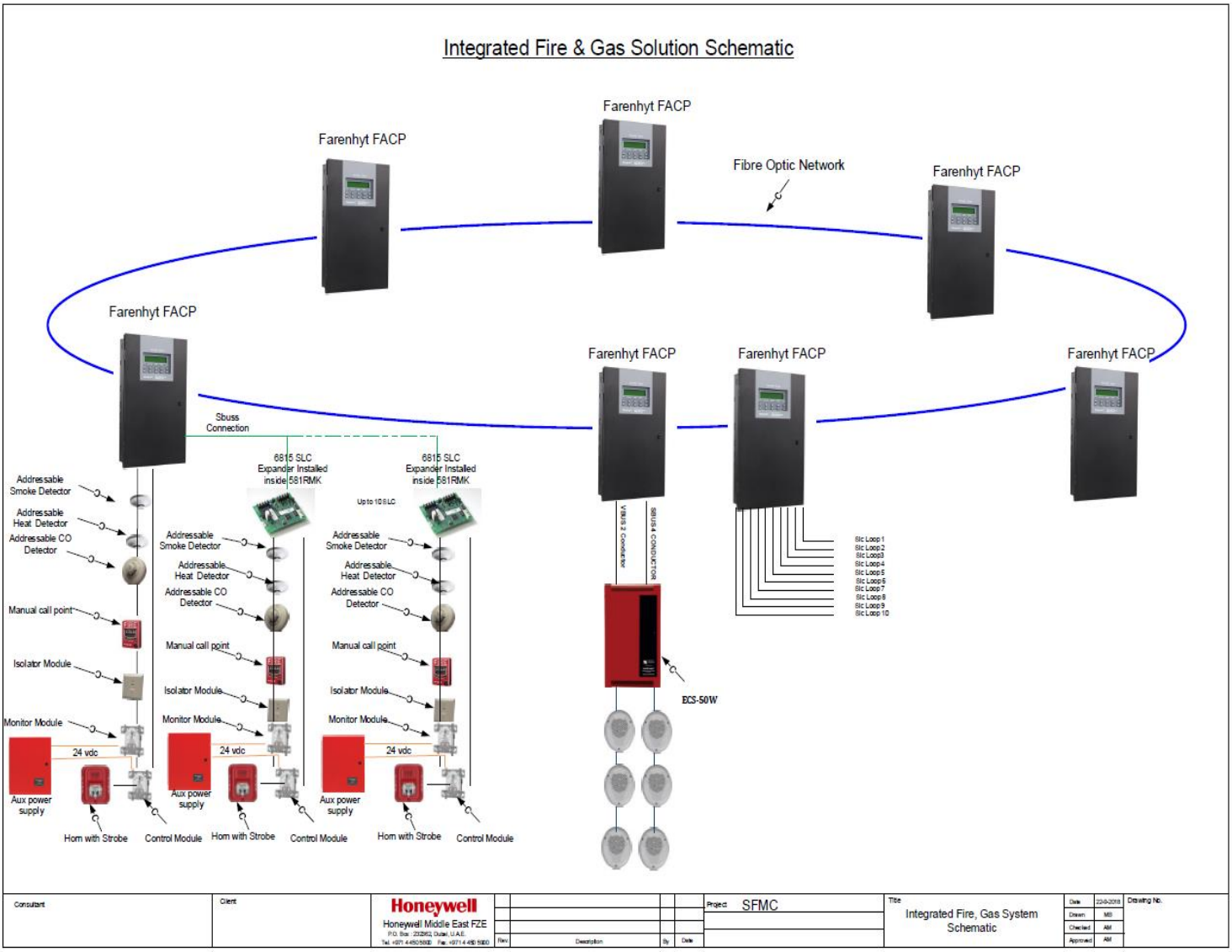


Figure 2 FAS Schematic Drawing

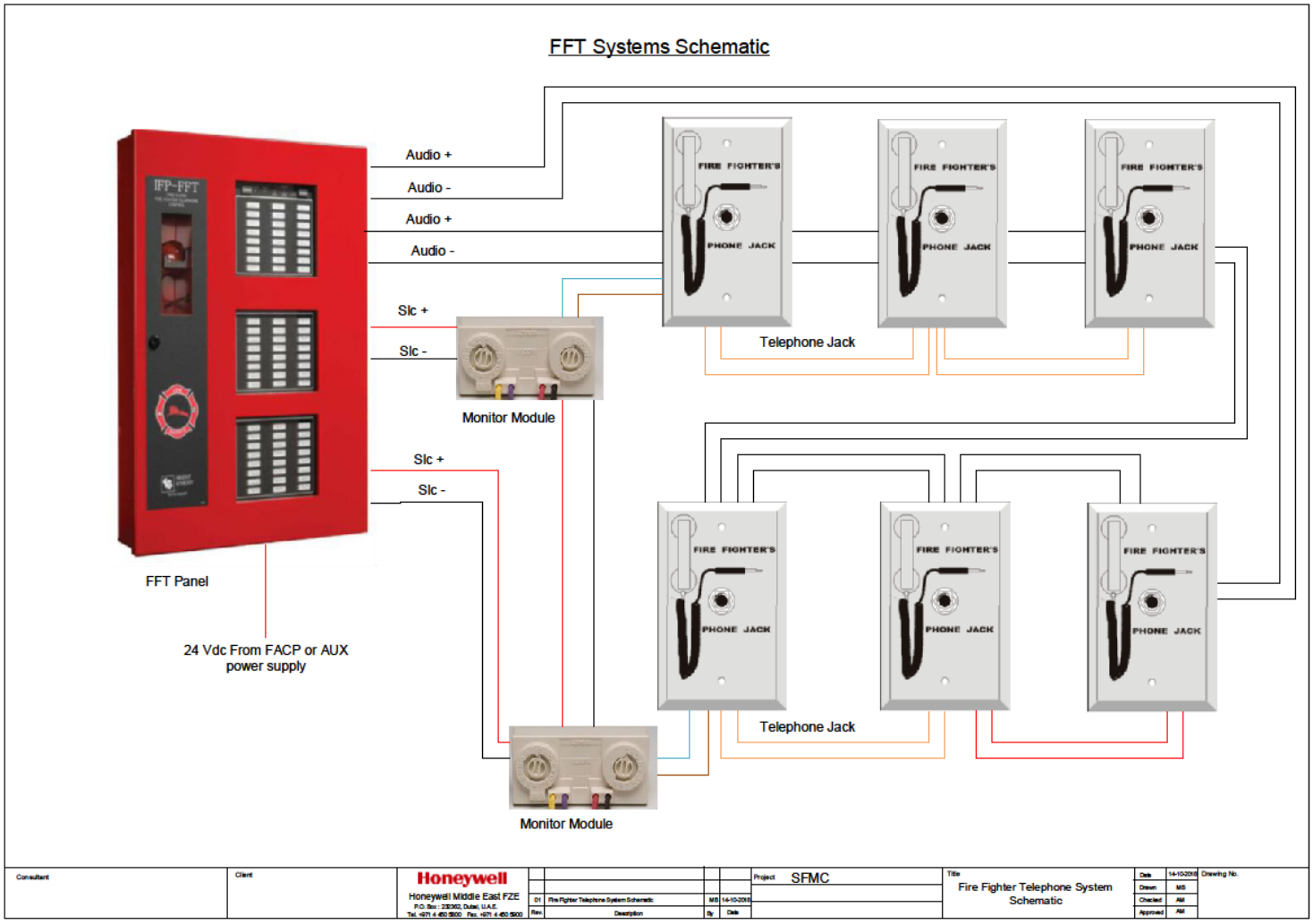


Figure 3 FFT Schematic Drawing

Refrecnce List & Case Studies

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Fax: +971 4 4505 900

Honeywell (Northford & System Sensors) **Project List**

Project name	Country
ARAMCO Wasit Gas Plant - Khobar	KSA
RC Namareq Projects	KSA
Ma'aden	KSA
Capital Market Authority Tower	KSA
Rabig PP-2	KSA
Rabig PP-10	KSA
King Abdullah Financial City	KSA
Mekka Metro	KSA
SABIC Industries - Core Plant	KSA
SABIC Industries - Port Sabtank	KSA
Yanbu Export Refinery	KSA
Marrafiq Yanbu	KSA
SWCC Jeddah Plant	KSA
SWCC Shouqaiq Plant	KSA
SEC Western Substations	KSA
Jeddah Sea Port	KSA
Haramein Metro	KSA
Sabic Jubail - ARRAZI entire plant	KSA
Sabic Jubail - IBN ZAHR Plant	KSA
Saudi Kayan Project	KSA
Sabic - Petrokemya	KSA
North Park- Aramco	KSA
Ma'aden Aluminum Smelter Administration and other buildings.	KSA
Sipchem EA & Port project	KSA
Sipchem EVA Plant	KSA
Port Logistic project of SABIC	KSA
Ibn Rusahid PET II project	KSA
Ma'aden Rolling Mill	KSA
380 SS of SCECO at Raz Al Khair	KSA
Sabic Marketing Warehouses Riyadh, Dammam & Jeddah	KSA
SAUDI KAYAN - FAS	KSA
Al-Bayroni - SAMAD	KSA
SABIC - Petrokemya FAS Upgrade	KSA
Aramco Building - 345	KSA
ARAMCO RASTANURA	KSA

Color Coating Line, Hadeed-Jubail	KSA
Yanbu Petrochemical complex project polyolefines	KSA
SAUDI PAPER	KSA
Saudi Chevron Plant Jubail	KSA
Project	Region
Cairo Metro Lines 1, 2 and 3	Egypt
Cairo Int'l Monitoring Tower	Egypt
Cairo Airport Satelite Stations	Egypt
Queen Aalia Airport Jordan	Jordan
Jomo Kenyata Int'l Airport	Kenya
Mekka Metro	KSA
Jeddah Sea Port	KSA
Haramein Metro	KSA
Tripoli Monitoring Tower	Libya
Tripoli Old Terminal	Libya
Murtalla Muhammad Int'l Airport	Nigeria
Muscat International Airport	Oman
Ata-Turk Int'l Airport	Turkey
Dubai VIP Terminal	United Arab Emirates
Mar del Plata Airport, Mar del Plata, Buenos Aires	Argentina
Pistarini Airport Receiving Plant, Ezeiza, Buenos Aires	Argentina
Pistarini Airport Transmission Plant, Ezeiza, Buenos Aires	Argentina
Pistarini Airport Radar Plant, Ezeiza, Buenos Aires	Argentina
El Calafate International Airport, El Calafate, Santa Cruz	Argentina
Barracks of the Royal Australian Navy in Cresswell and Lavarack	Australia
Tugan and North-South Bypass (NSBT) Tunnels, Queensland	Australia
Belem International Airport	Brazil
Palmas International Airport	Brazil
Recife International Airport	Brazil
Brasilia International Airport	Brazil
Canada Line, 20 computerized stations of the line between Vancouver and the Vancouver International Airport	Canada
Edmonton International Airport	Canada
St. John’s Airport, Newfoundland	Canada
Moncton Airport, New Brunswick	Canada
Ningbo International Airport, Zhejiang	China
Beijing Capital International Airport Terminal T3, Beijing	China



LUXURY CONDOMINIUM COMPLEX UPGRADES FIRE ALARM SYSTEM FOR MORE RELIABLE PROTECTION

Honeywell Farenhyt Series IFP-2000

The Needs

More accurate alarm location: When the old, conventional system registered an alarm, a sounder only indicated the building the alarm was triggered in, so guards often had to waste time searching for the source floor by floor.

Tamper-proof technology: Over the years, many condo owners hired private contractors to renovate their units, frequently removing smoke detectors or notification devices in the process. These modifications went undetected by the old system, putting people in danger and creating potentially expensive liability issues.

Fiber optic cable: For monitoring purposes, systems in individual buildings were connected to a main fire alarm control panel via underground copper wiring, making the outdated system highly vulnerable to lightning strikes, which occur frequently in this coastal Florida location.

The Solution

Gulf and Bay Club is a condominium complex comprised of 6 apartment buildings, each with as many as 70 individual residences and several out-buildings, located in Sarasota, Florida. The newly upgraded fire system, installed by Sarasota-based Fire Brigade Alarm Systems, consists of 12 Farenhyt IFP-2000 fire alarm control panels from Silent Knight, networked together with fiber optic cable for improved performance.

The addressable system's immediate identification of alarm locations and ease of monitoring have enhanced maintenance and management – ultimately providing better protection for condo residents. Using an Internet Protocol (IP) line for reporting fire alarm signals to a central monitoring station also helps reduce costs while increasing the system's communications reliability.

Connie Bittle, General Manager of Gulf and Bay Club, and her team were so happy with the results that Fire Brigade extended the system to include 5 additional buildings. The Farenhyt IFP-2000 can connect with as many as 16 fire alarm control panels using fiber optics, so expanding the system was simple.

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Farenhyt™ Series



IFP-2000

"We're happy with it. We have better devices, better access to information, and better control in terms of what unit contractors are doing."

Connie Bittle, General Manager, Gulf and Bay Club

Benefits

- The new system delivers individual point identification for each of the facility's more than 800 smoke detectors, providing guards with an exact location of each device in alarm.
- The new system sends a trouble signal if anyone removes a smoke detector or tampers with other devices on the network.
- Using fiber optic cable rather than copper wiring for communications helps prevent common transient power issues typically caused by lightning. The telemetry for this operation is also being handled over the fiber optic network, avoiding lightning issues and creating a supervised method of telemetry.
- The Gulf and Bay Club has access to real-time fire alarm information and a historical log of events, so the team can proactively address alarm and trouble events.
- The new system communicates signals to a central monitoring station over a cable modem internet connection, using a single phone line for backup instead of 2 phone lines. This reduces costs and allows the central station to be alerted faster.

Call Honeywell to discover how we can help you with your fire-safety needs.

Find your local distributor
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12 Clintonville Road
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A CHARTER SCHOOL DISTRICT LOOKS TO THE FUTURE WITH HONEYWELL FARENHYT BLACK

Honeywell Farenhyt Series IFP-2100

The Charter School located in Mesa, Arizona, is home to 800 elementary and middle school students. The campus includes a large 2-story main building (75 class rooms), a gymnasium, cafeteria and two computer labs. The charter school's district long ago established Honeywell Farenhyt™ as their standardized fire safety system across all schools.

The Needs

- A simple, yet comprehensive out-of-the-box Farenhyt fire safety system
- A life safety system that could communicate beyond fire events
- Ability to move away from land lines as sole communications option
- Emergency coverage for portable buildings

The Challenge

As a new-build project in 2018, the school requested a forward-thinking, fire security system that could provide maximum emergency coverage, advanced communication options, and be scalable for future campus expansions.

The school wanted a comprehensive, out-of-the-box Farenhyt system that could address not only current emergency needs, but also grow as the telecommunications, campus size, and school district grew. While current Farenhyt fire systems are well suited to protect students and staff from fire events, they require an equipment upgrade to provide non-fire emergency communication capabilities. This meant no verbal commands could be deployed for non-fire emergencies, such as active shooter scenarios, unless additional voice-activation side cars were installed. This would incur additional equipment and labor costs.

In addition, current stand-alone Farenhyt panels relied on land-based phone lines, which would limit the school's ability to modernize into digital or VOIP. Looking into the future, the charter school wanted the ability to expand and upgrade key features, including potential wireless detection for some of the portable buildings.

Solution

Intelligrated Communications Inc. (ICI) of Arizona, an authorized Engineered Systems Distributor (ESD) of Honeywell fire safety systems, saw an ideal opportunity to integrate the new Farenhyt Series Black into the charter school's existing fire system. ICI chose the IFP2100ECS panels for their ability to combine an intelligent analog/addressable fire alarm control panel with an emergency communications system.

The IFP2100ECS can store 15 recordable messages, mapped to eight ECS buttons. ECS messages can be prioritized of fire when needed. This would allow the charter school to pre-program their emergency response messages appropriate for fire and non-fire events, and deploy whichever was necessary.

To further enhance communications, the panels feature built-in dual phone line digital alarm communicator/transmitter (DACT), with IP and optional cellular technology. This would allow the school to move away from land lines, when ready, and adopt a fully digitized communications system.

"This panel has the Alarmnet already built in, so the school can switch from phone to internet anytime," states Mat Amerman, president and CEO of ICI. "There will eventually be no need for dedicated phone lines. This saves money... it's future proofing!"

ICI also chose the new IFP2100ECS panels for their ability to integrate with SWIFT™ wireless fire alarm detectors. SWIFT is a Class A, commercial wireless fire detection system using a robust, self healing mesh technology for a stronger and more reliable network. SWIFT sensors detect fire, just like their wired counterparts, while providing the installation flexibility of a wireless format. This solution was ideal for the school's plans for expansion requiring portable structures. SWIFT detectors could simply be adhered to the structure, then removed or relocated when necessary. No unnecessary and costly wire installations would be required to accommodate temporary facilities.

The IFP2100ECS panels can be expanded up to 2,100 points per panel, making it the largest in the Farenhyt Black Series, and ideal for the 90,500 sq ft campus.

"The new IFP2100ECS comes with almost everything you need in one box. That makes it incredibly easy to provide customers with a fast, turnaround solution for upgrading their fire systems," comments Mat. He continues, "this school district has standardized Farenhyt as their system of choice, and this new option will make upgrades much simpler

Benefits

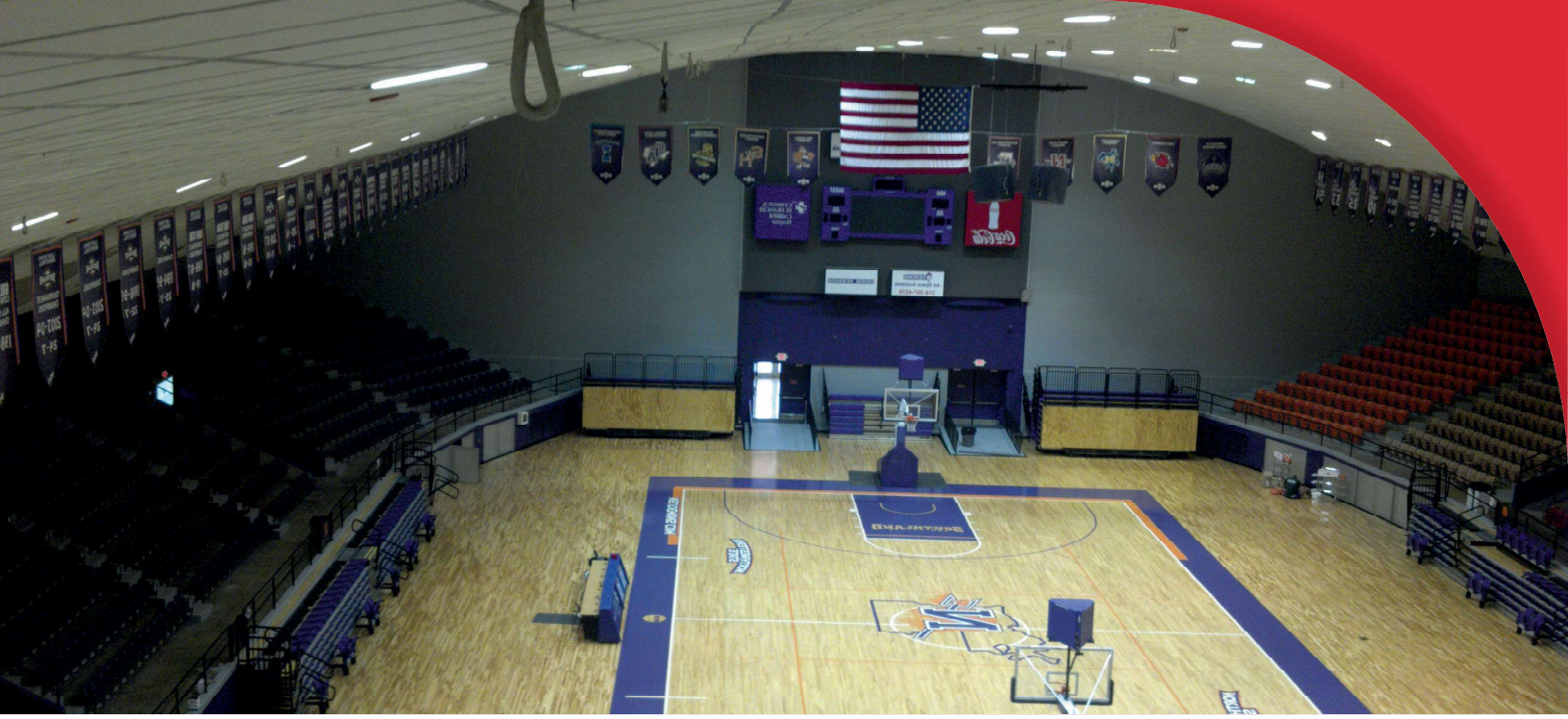
- Reduced installation costs through latest Farenhyt fire panels with built-in ECS
- Future ability to integrate digital and VOIP communications
- Cost savings through wireless coverage option for portable buildings
- Discreet, black fire panels that blend in

Find your local distributor
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SYSTEM UPGRADE SETS STAGE FOR UNIVERSITY FIRE PROTECTION

Honeywell Farenhyt Series IFP-1000ECS

The Needs

- **Addressability – when something happens, staff members need to be able to identify the location of the event and determine severity.**
- **The integration of multiple features into one system to simplify design and installation.**
- **A system capable of outfitting the building's domed ceiling, reaching 52 feet at its peak, with speakers and speaker strobes.**

The Solution

At 26,000 square-feet, the newly renovated Prather Coliseum at Louisiana's Northwestern State University (NSU) is the largest facility in its parish (county). When the building's fire alarm system was found to have unrepairable issues, the facilities team turned to Fire Tech Systems, a fire protection consultant, for some much-needed updates. It started as a quick fix, but the project quickly transformed into a large-scale system expansion and overhaul.

Since NSU was in the process of renovating the facility and increasing its seating capacity, the team decided to upgrade its fire protection and voice evacuation system at the same time. Fire Tech Systems chose System Sensor's integrated mass notification system to get the massive job done – in only two months.

"We like the panel's ease of installation and programming, capability to expand, and user-friendliness for the operator," states Ronald J. Case, Senior Project Manager of Fire Tech Systems. "The three-year warranty was another big plus."

Not only did the new system bring NSU's fire protection up to code, but the coliseum went from only 6 pull stations and 2 horns, to more than 175 notification devices, 73 detectors, 16 pull stations, and 85 modules for integration into other building equipment.



"We have a long-running relationship with System Sensor and have never found anything comparable to the sound quality. In addition, they're economical products and we can pass those savings down to our end-user."

Ronald J. Case, Senior Project Manager, Fire Tech Systems

Benefits

- An economical system that can be easily upgraded as code requirements or facility changes transpire.
- Smart placement of speakers reduces distortion during an emergency event.
- The IFP-1000ECS is fully-supervised, so if a speaker or detector is in need of repair or completely offline, the central monitoring station and NSU facility management are automatically notified.
- Relays are incorporated into the addressable duct detectors for HVAC shutdown and heat detectors are installed outside the shower area to keep humidity from tripping smoke detectors, minimizing false alarms.
- The modern fire alarm and emergency communications system, combined with expanded seating and a new hardwood floor, give the coliseum a fresh, new look.

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System Description

FP-2100HV Fire Alarm Control Panel



The Honeywell Farenhyt Series is your turnkey solution for fire protection, emergency communications and CO detection all in one easy to use package. From the top floor to the bottom line, Honeywell Farenhyt Series continue to lead with innovative and feature-rich products, and they are simultaneously affordable. Honeywell Farenhyt Series has always focused on functionality and flexibility, which is why its products are routinely found in educational institutions, hospitals and health care facilities, commercial complexes, commercial living spaces, and government buildings around the world.

The IFP Series of fire products offers flexible, easy-to-use and maintain fire and CO alarm control systems, with the power of choice to select the right size and accessories for the project.

IFP-2100 has the interconnection capability for up to 32 panels. The system has two modes of operation, multiple panels covering one larger building, or multiple independent buildings.

Features:

- Built-in support for up to 159 IDP/SK detectors and 159 IDP/SK modules or 127 SD SLC devices.
- Four-line LCD display with 40 characters per line
- Four programmable function keys
- Network card allows copper network connection with a multi-mode or single-mode fiber connection option.
- Built-in dual phone line, digital alarm communicator/transmitter (DACT), IP or optional cellular technologies.
- Jump Start Auto Programming® feature for easy programming.
- Built in USB interface for programming
- Supports up to four SWIFT wireless gateways. Each gateway can have up to 49 wireless devices
- Supports Class B (Style 4) and Class A (Style 6 or Style 7 configuration for SLC and SBUS.

IFP-2100ECS Fire Alarm Control Panel

The IFP-2100ECS (red) and IFP-2100ECSB (black) are intelligent analog/ addressable Fire Alarm Control Panels combined with an Emergency Communication System (ECS). When the ECS features are enabled, they are integrated with the fire alarm and voice evacuation functions of the control panel.

The IFP-2100ECS panel and accessories provide features to meet the requirements for Mass Notification Systems as described in UL 2572.

This state of the art fire alarm control panel allows you to choose one of three SLC protocols per system. The IFP-2100ECS panel contains one built in signaling line circuit (SLC), which can support 159 IDP/SK sensors and 159 IDP/SK modules per loop. Additional SLC loops can be added using the model 6815 SLC expander for IDP/SK devices to increase the overall point capacity to a maximum of 2100 points per panel.



IFP-2100ECS has the interconnection capability for up to 32 panels. The system has two modes of operation, multiple panels covering one larger building, or multiple independent buildings. A separate network can be used for voice paging across all panels.

Features:

- Single enclosure for both Fire and Emergency Control System components.
- Can select ECS message as priority over fire.
- Network support for up to 32 Sites.
- Four-line LCD display with 40 characters per line.
- Separate network support for voice paging.
- 15 Recordable one minute messages that can be mapped to eight ECS buttons.
- Support for up to 16 SBUS addressable amplifiers using a combination of ECS-50W, ECS-125W, ECS-INT50W or ECS-DUAL50W for a maximum of 2000 Watts

IFP-NET-3 Graphical Monitoring Workstation.

IFP-Net is a Microsoft® Windows® based graphic user interface linking selected fire alarm control panels together to a PC to easily monitor them. The PC operator would receive real-time information about a system with details showing right where the event is occurring.



The IFP-Net-3 consists of a Honeywell Farenhyt Series FACP connected to a Gateway via a 5824 module, which is plugged into a TCP/IP Ethernet port and communicates with a PC (PC not included) with the IFP-Net-3 software. No dedicated wire or fiber connection is required with this system the existing Ethernet infrastructure is utilized.

The IFP-Net-3 supports up to 200 Gateway's per system, which can be connected to a compatible Honeywell Farenhyt or Silent Knight FACPs.

Features:

- Support of IFP-Series devices with IFPN-GW-Kit installation package
- Auto-navigation automatically locates and zooms to the device related to an alarm or event based on the

priority of the event

- Configurable windows provide flexibility to display information as desired
- Dynamically generated sizable key map
- New and Acknowledged Event boxes display all off-normal events, simultaneously with graphic screens
- Operator log with response tracking
- History Manager records operator, event, and response (with time and date stamp) to disk
- Powerful search filters for custom reporting of all events
- Screen database with screens for all sites.
- Definable function keys, functional buttons, and navigational buttons
- Floor plans can be zoomed in and out to any level
- Devices can be placed at any zoom level
- Import vector.dfx, wmf, .bmp, .jpg or .gif
- Full linked multimedia (text, audio, video, and bitmaps) to any device, all-definable by the administrator.

RA-2000 Display Remote Annunciator.

The RA-2000 red remote annunciator can be used to operate and program the IFP-2000 or RPS-2000 FACP. The RA-2000's keypad and display match the built-in annunciator of the IFP- 2000 control panel. The remote annunciator connects to the control panel via the RS-485 SBUS. When the system is in normal operation and has AC power, the Power LED is lit and all other LEDs are off. The other LEDs turn on as alarms, supervisors, troubles, and system silenced occur. The RA-2000 can be surface or flush mounted and is also available in gray color as RA-2000GRAY



Features:

- 160-character backlit LCD display (4 lines with 40 characters each).
- Operation and appearance is identical to IFP-2000 built-in annunciator.
- Tactile/audible feedback when key is pressed on annunciator
- RS-485 SBUS interface to panel.
- Can be flush or surface mounted. Trim ring (P/N RA-100TR or RA-2000GRAYTR) available for surface mounting.
- Five Status LEDs for; alarms, supervisory, trouble, silence and AC power indications.
- Four programmable function keys.

- Available in red or gray color
- Wiring lengths up to 6000 ft. from the control panel.
- UL listed, complies with NFPA 72 and FM Approved.

ECS-50W Intelligent 50 Watt Amplifier



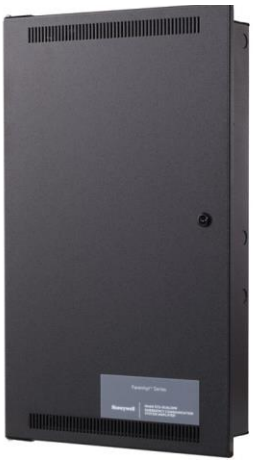
The ECS-50W (red cabinet) or ECS-50WB (black cabinet) are intelligent 50 watt amplifiers for use with the IFP-100ECS, IFP-300ECS, IFP- 1000ECS, IFP-2000ECS and IFP-2100ECS. The ECS-50W or ECS-50WB are used to amplify the audio message for distribution throughout the facility. Since it is designed as a self-contained distributed amplifier it can be conveniently located near the area of protection to reduce wiring demands.

Each ECS-50W/ECS-50WB is capable of producing 50-watts of audio power. Up to eight ECS-50W's can be used on the voice evacuation system.

Features:

- SBUS addressable, up to eight ECS-50Ws per system for total of 400 watts.
- Each ECS-50W is supervised and has four onboard audio circuits expandable to eight with the ECS-CE4 for a system total of 64 audio circuits
- Selectable for 25V or70.7V operation.
- Six-wire connection to ECS system: Two-wires for the VBUS and four-wires for the SBUS connections.
- The ECS-50W/ECS-50WB can be surface or flush mounted

ECS-DUAL50WB Intelligent 50 Watt Amplifier



The ECS-DUAL50W (red) and ECS-DUAL50WB (black) are intelligent 50 /100 watt amplifier for use with the IFP-100ECS, IFP-300ECS, IFP- 1000ECS, IFP-2000ECS or IFP-2100ECS. The ECS-DUAL50W is used to amplify audio message for distribution throughout a facility. The ECS-DUAL50W is capable of producing up to 100 watts of audio power. The ECS-DUAL50W has its own power supply with battery backup and eight speaker circuits. The ECS-DUAL50W is fully supervised by the main panel for trouble conditions.

Features:

- Amplifier is compatible as: 50W with 50W as backup
- 100 W single channel
- Dual channel using 50W for each channel

- Dual channel 50 W each channel with 50 W backup using ECS-50WBU
- Amplifier Bandwidth 400Hz to 4000Hz

IFP-FFT Fire Fighter Telephone Control Systems



The IFP-FFT is a Fire Fighters Telephone communication system. The IFP-FFT Fire Fighter Telephone System provides supervision, annunciation, and control for local and remote telephone handsets. The IFP-FFT with keypad, provides indications of phone activation, and corresponding trouble conditions. The FFT-24 expander board lets you add additional zones to the IFP-FFT. The IFP-FFT can use up to two FFT-24s for a total of 72 zones. Each zone consists of one addressable monitor module (IDP-Minimon) and a minimum of one Fire Fighter Telephone Jack (FFT-FPJ).

Features:

- IFP-FFT Fire Fighter Telephone module for control and annunciation of up to 72 remote telephone jacks
- A maximum of 10 Fire Fighter Remote Handsets (FFT-RHS) can be used at one time to communicate over the telephone circuit connected to the IFP-FFT.
- Single telephone station mount comes in a lockable cabinet containing one remote handset. Available in Recessed mount (FFT-STSR) or surface mount (FFT-STSS).
- System Status LEDs
- Supports two FFT-24 zone expanders

IDP-PHOTO Intelligent Plug-In Photoelectric Smoke Detectors



The IDP-PHOTO is a photoelectric smoke detector and the IDP-PHOTO-T is a photoelectric smoke detector with thermal. These plug-in smoke detectors, with integral communication, provide features that surpass conventional detectors and are for use with the Honeywell Farenhyt Series fire alarm control panels (FACPs). Detector sensitivity can be programmed from the FACP software. Sensitivity is continuously monitored and reported to the FACP. Point ID capability allows each detector's address to be set with rotary address switches, providing exact detector locations for selective maintenance when chamber contamination reaches unacceptable levels.

IDP-Photo and IDP-Photo-T have a unique optical sensing chamber that is engineered to sense smoke produced by a wide range of combustion sources.

Features:

- Sleek, low-profile design
- Reliable analog communications for trouble-free operation
- Superior EMI resistance for reliability
- Simple field cleaning for code compliance
- Dual LED indicators for 360º visibility

IDP-FIRE-CO Advanced Multi-Criteria Fire/CO Detector



The IDP-FIRE-CO is a plug-in, addressable device that provides both fire and carbon monoxide (CO) detection. For fire, the detector combines four separate sensing elements in one unit (smoke, CO, light/flame, and heat) to sense multiple components of a fire. This approach enables enhanced sensitivity to real fire with heightened immunity to nuisance particulate. For CO, the detector's electrochemical sensing cell creates a separate signal for life safety CO detection. Released through the incomplete burning of various fuels, CO is a colorless, odorless and deadly gas that is virtually impossible to detect with the human senses. Because the potential exists for dangerous levels of CO to accumulate in almost any building, legislation mandating the use of CO detection in commercial spaces continues to increase across the U.S. and Canada. The IDP-FIRE-CO is listed to the UL 2075 standard for system-connected life safety carbon monoxide monitoring.

Features:

- Unique ability to detect all four major elements of a fire:
  - Smoke
  - Carbon Monoxide (CO)
  - Light/flame
  - Heat
- Separate CO detection signal
- Highest nuisance alarm immunity
- Automatic drift compensation of smoke sensor and CO cell
- Uses only one address on the SLC
- RealTest® CO testing capability
- UL 268 and UL 2075 listed
- Separates audible signal for fire or CO alarm when used with B200S base
- CO cell end-of-life warning and fault

10 IDP-Heat-HT Intelligent Plug-In Thermal Detectors



The IDP-Heat, IDP-Heat-HT, and IDP-Heat-ROR are plug in thermal detectors, with integral communication, that provide features that surpass conventional detectors. These thermal detectors are for use with Honeywell Farenhyt series fire alarm control panels (FACPs). Detector sensitivity can be programmed from the FACP software. Sensitivity is continuously monitored and reported to the FACP. Point ID capability allows each detector's address to be set with rotary address switches, providing exact detector locations for selective maintenance when chamber contamination reaches unacceptable levels IDP-Heat is a fixed temperature thermal detector that uses a thermistor sensing circuit to produce 135ºF (57ºC) fixed thermal detection.

Features:

- Sleek, low-profile design
- Reliable analog communications for trouble-free operation
- Superior EMI resistance for reliability
- Simple field cleaning for code compliance
- Dual LED indicators for 360º visibility
- Dual electronic thermistor design on the IDP-Photo-T

Detector Bases



The B501 4" mounting base and B200S Sounder base are plug in detector bases for IDP style detectors intended for use with Honeywell Farenhyt Series fire alarm control panels (FACPs).

The B200S sounder base series is designed for new and existing commercial dwelling unit applications. It offers maximum flexibility in installation, configuration, and operation to meet or exceed UL 268 and UL 464 requirements.

The sounder base "listens in" to the communication between the attached sensor head and the fire alarm control panel (FACP) to adopt the same address as the detector, but as a unique device type on the loop. The FACP can then use that address to command an individual sounder or a group of sounders to activate. In addition, the FACP's will enable custom tone patterns.

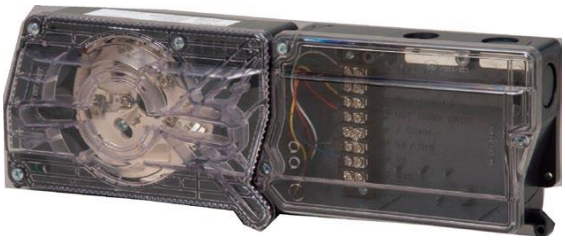
The B200S series sounder bases recognize the System Sensor® synchronization protocol.

Features:

- Plug-in mounting provides ease of installation
- Tamper-proof feature prevents removal of the detector without the use of a tool
- B200S Includes a pre-wire mounting plate fits various junction box sizes
- B200S Supports Continuous, ANSI Temporal 3, ANSI Temporal 4, and March Time tone
- B200S has the ability to synchronize with other System Sensor notification devices
- UL Listed



DNR Duct Smoke Detector



The DNR Intelligent non-relay photoelectric duct smoke detector housing and DNRW watertight non-relay photoelectric duct smoke detector housing (head not included) are for use with Honeywell Farenhyt Series fire alarm control panels (FACPs). The DNR and DNRW feature a pivoting housing that is flexible enough to fit configurations from square to rectangular. They feature low-flow technology that enables duct smoke detection throughout a broad range of airflow environments. Many difficult to solve HVAC applications occur in low airflow duct applications where reliable smoke detection is critical. These duct detectors can detect smoke at air speed velocities of 100 feet per minute or greater, while continuing the same reliable performance to 4000 feet per minute.

Features:

- Photoelectric integrated low-flow technology
- Air velocity rating from 100 to 4000 feet per minute (0.5 to 20.32 meters per second)
- Support for Class B or Class A wiring
- Patented sampling tube installs from front or back of the detector with no tools required
- Provides trouble signal in the event the sensor cover is removed or improperly installed.
- UL 268A listed.
- Remote testing capability

IDP-PULL-DA Addressable Double Action Pull station

The IDP-PULL-DA is a dual action pull station requiring two motions to active the station. Both pull stations are designed to work with Honeywell Farenhyt series fire alarm control panels (FACPs).The IDP-PULL-SA and IDP-

PULL-DA can be surface mounted to an SB-I/O surface back box or semi-flush mounted on a standard single-gang with a minimum depth of 2.13”(5.40 cm) or double gang or 4” (10.61 cm) square electrical box. You can also use the optional (System Sensor® PN BG-TR) trim ring if the station is being semi-flush mounted.



Features:

- Installer can open station without causing an alarm condition
- Dual-color LED is visible through handle of station blinks green to indicate normal operation and remains steady red in an alarm condition
- Key operated test and reset lock using lock plate actuator
- Key matches compatible FACP locks
- Meets ADA requirement for 5 lbs maximum pull force to active

IDP-CONTROL Addressable Notification Module

The IDP-CONTROL is an addressable notification module for use with Honeywell Farenhyt Series fire alarm control panels (FACPs). The IDPCONTROL gives you the flexibility to add notification circuits wherever they are needed on a Farenhyt FACP signaling line circuit (SLC) loop. The IDP-CONTROL provides supervised monitoring of wiring to load devices that require an external power supply to operate, such as bells, horns, and strobes. It is capable of Class B and Class A supervision.



Features:

- Flexible solution for adding notification circuits where needed
- Support for Class B (style Y) or Class A (style Z) wiring
- Panel controlled status LED that flashes green in normal state and is solid red in alarm
- Polling LED visible through the cover plate
- Rotary address switches for fast installation

6.A.4.15 IDP-MONITOR Addressable Monitor Module

The IDP-MONITOR is an addressable monitor module for use with Honeywell Farenhyt Series fire alarm control panels (FACPs). The IDP-MONITOR acts as an interface to contact devices, such as woterflow switches and pull stations. The IDP-MONITOR supports Class A supervised or Class B supervised witing to the load device. Conventional 4-wire detectors can be monitored for alarm and trouble conditions.



Features:

- Support for Class B (style Y) or Class A (style Z) wiring
- Panel controlled status LED that flashes green in normal state and is solid red in alarm
- Polling LED visible through the cover plate
- Rotary address switches for fast installation

IDP-ISO Line Isolator Module



The IDP-ISO is a SLC loop line isolator module for use with the Honeywell Farenhyt Series fire alarm control panels (FACPs).

The IDP-ISO acts as an automatic switch that opens when the line voltage on the signaling line circuit (SLC) loop drops below four volts. Isolator modules should be spaced between groups of sensors or modules in a loop to protect the rest of the loop. If a short occurs between any two isolators, then both isolators immediately switch to an open circuit state and isolate the devices between them. The remaining units on the SLC loop continue to fully operate. No more than 25 devices are recommended for each group.

Features:

- Isolates short circuits on an SLC loop
- Protects the modules on the SLC loop so other devices continue to operate
- Panel controlled status LED that flashes green in normal state and is solid red in alarm

P2RL Indoor Horn and Strobe



The L-Series audible visible notification products offer the most versatile and easy-to-use line of horns, strobes, and horn strobes in the industry with lower current draws and modern aesthetics. With white and red plastic housings, standard and compact devices, and plain, FIRE, and FUEGO-printed devices, System Sensor L-Series can meet virtually any application requirement

The L-Series line of wall-mount horns, strobes, and horn strobes include a variety of features that increase their application versatility while simplifying installation. All devices feature plug-in designs with minimal intrusion into the back box, making installations fast and foolproof while virtually eliminating costly and time-consuming ground faults.

Features:

- Updated Modern Aesthetics.
- Offers small profile devices for horns and horn strobes.
- Automatic selection of 12- or 24-volt.
- Uses field-selectable candela settings on wall units: 15, 30, 75, 95, 110, 135, 185

PC2RL Indoor Horn and Strobe



The L-Series audible visible notification products offer the most versatile and easy-to-use line of horns, strobes, and horn strobes in the industry with lower current draws and modern aesthetics. With white and red plastic housings, standard and compact devices, and plain, FIRE, and FUEGO-printed devices, System Sensor L-Series can meet virtually any application requirement

The L-Series line of wall-mount horns, strobes, and horn strobes include a variety of features that increase their application versatility while simplifying installation. All devices feature plug-in designs with minimal intrusion into the back box, making installations fast and foolproof while virtually eliminating costly and time-consuming ground faults.

Features:

- Listed for ceiling mounting only.
- Features a plug-in design with minimal intrusion into the back Box.
- Designed with tamper-resistant construction.
- Field-selectable candela settings on ceiling units: 15, 30, 75, 95, 115, 150, 177
- Compatible with System Sensor synchronization protocol

HRL Indoor Selectable Horn



The L-Series line of wall-mount horns, strobes, and horn strobes include a variety of features that increase their application versatility while simplifying installation.

All devices feature plug-in designs with minimal intrusion into the back box, making installations fast and foolproof while virtually eliminating costly and time-consuming ground faults.

To further simplify installation and protect devices from construction damage, the L-Series utilizes a universal mounting plate for all models with an onboard shorting spring, so installers can test wiring continuity before the device is installed.

Features:

- Updated Modern Aesthetics.
- Small profile devices for Horns and Horn Strobes
- Tamper-resistant construction
- Field-selectable candela settings on wall units: 15, 30, 75, 95, 110, 135, and 185.
- Automatic selection of 12- or 24-volt operation at 15 and 30 candela
- Horns listed for wall or ceiling use

SCRL Indoor Strobe Ceiling



The L-Series line of wall-mount horns, strobes, and horn strobes include a variety of features that increase their application versatility while simplifying installation.

All devices feature plug-in designs with minimal intrusion into the back box, making installations fast and foolproof while virtually eliminating costly and time-consuming ground faults.

To further simplify installation and protect devices from construction damage, the L-Series utilizes a universal mounting plate for all models with an onboard shorting spring, so installers can test wiring continuity before the device is installed

Features:

- Plug-in design with minimal intrusion into the back box
- Tamper-resistant construction
- Automatic selection of 12- or 24-volt operation at 15 and 30 candela
- Field-selectable candela settings on ceiling units: 15, 30, 75, 95, 115, 150, and 177
- Listed for ceiling mounting only
- Universal mounting plate for ceiling units

SPCRL Ceiling speaker

The L-Series line of wall-mount horns, strobes, and horn strobes include a variety of features that increase their application versatility while simplifying installation.

All devices feature plug-in designs with minimal intrusion into the back box, making installations fast and foolproof while virtually eliminating costly and time-consuming ground faults.

To further simplify installation and protect devices from construction damage, the L-Series utilizes a universal mounting plate for all models with an onboard shorting spring, so installers can test wiring continuity before the device is installed



Features:

- Plug-in design and protective cover reduce ground faults
- No extension ring required
- Rotary switch simplifies field selection of speaker voltage (25 and 70.7 Vrms) and power settings (¼, ½, 1 and 2 watts).
- Speakers offer high fidelity and high volume sound output
- 520 Hz +/- 10% square wave tone capable with compatible FACP

SPSRL speaker with strobe

The L-Series line of wall-mount horns, strobes, and horn strobes include a variety of features that increase their application versatility while simplifying installation.

All devices feature plug-in designs with minimal intrusion into the back box, making installations fast and foolproof while virtually eliminating costly and time-consuming ground faults.

To further simplify installation and protect devices from construction damage, the L-Series utilizes a universal mounting plate for all models with an onboard shorting spring, so installers can test wiring continuity before the device is installed



Features:

- Plug-in design and protective cover reduce ground faults
- Universal mounting plate with an onboard shorting spring tests wiring continuity before installation
- Field selectable candela settings on wall units: 15, 30, 75, 95, 110, 135, 185
- Rotary switch simplifies field selection of speaker voltage (25 and 70.7 Vrms) and power settings (¼, ½, 1 and 2 watts)
- Speakers offer high fidelity and high volume sound output
- 520 Hz +/- 10% square wave tone capable with compatible FACP

Aspirating Detection



The FAAST XT aspirating smoke detector combines advanced particle separation with unique dual source optical smoke detection technology to provide highly sensitive Very Early Warning Fire Detection while providing enhanced immunity to false alarms. This technology enables FAAST XT to accurately detect incipient fire conditions as early as 60 minutes before a fire actually starts when set for Early Warning and Very Early Warning Fire Detection in applications ranging from mission critical to harsh and extreme environments.

An installed FAAST XT device can protect up to 28,800 sq. ft. (2,676 sq. m) in standard coverage type applications and can be monitored in several different ways, including: Serial or TCP Modbus, Ethernet over a LAN or a direct connection, or via FAAST XT's onboard USB. When connected to a LAN, FAAST XT's email server can provide email event notification to... FAAST XT also communicates alarm and notifications via form C relays

Aspirating Detection

Features:

- Approved for use in Class I, Division 2, Groups A, B, C, and D Hazardous Locations
- Provides Very Early Warning Fire Detection, as precise as 0.00029%/ft obscuration
- Five alarm levels and three sensitivity modes provide application flexibility
- A single device covers up to 28,800 square feet.
- Dual source optical detection chamber with enhanced algorithms provide high sensitivity with greater immunity to nuisance conditions
- TCP and Serial modbus for easy integration with building management systems.
- Easy configuration via USB interface, no external power needed

6.A.4.24 FSL100-UV Flame Detector



The range consists of UV, UV/IR and IR3 flame detectors. All utilize sophisticated sensing and signal analysis to detect fires quickly while also rejecting false alarms.

The FSL100 may be small and lightweight for easy installation but it is designed to work in tough indoor/outdoor environments, as well as potentially explosive atmospheres with a large field of view it can detect a range of different types of fire including hydrocarbon and non-hydrocarbon sources. Available in UV, UV/IR and 3IR we have your application covered.

Features:

- Suitable for indoor applications; for example fume hoods and hydrogen storage areas

- Effective solution for materials burning with low temperatures, e.g. Sulphur.
- Alarms to fires from heavy hydrocarbons (wood, paper, petroleum, etc.), light hydrocarbons (methanol, methane, etc.), and hydrogen
- Good resistance against the influences of:
    - Direct and reflected sunlight
    - Artificial light, such as fluorescent tubes and glass covered halogen lamps

RPS-1000 Aux Power Supply



RPS-1000 intelligent distributed power module adds 6.0 amps of power, six Flexput™ I/O circuits, and two Form C relay circuits to a compatible Farenhyt addressable system.

RPS- 1000 connects to the FACP via the RS-485 system bus allowing up to an additional 6,000 feet of wiring. Each RPS- 1000 is optically isolated providing ground loop isolation and transient protection. RPS-1000 supports its own backup battery and monitors the AC power.

The Flexput circuits can be programmed as notification appliance circuits, continuous, resettable, or door holder power, or as conventional initiation circuits for 2 or 4-wire smoke detectors and contact devices (e.g. pull stations).

Features:

- Six onboard Flexput circuits programmable for:
- Notification appliance circuits (Class B/Style Y & Class A/Style Z)
- Conventional initiation circuits (Class B/Style B & Class A/Style D) both 2- and 4-wire.
- Auxiliary power (for door holders, continuous power, or resettable power)
- 6.0 amps output power
- Supports Class A (Style 6) and Class B (Style 4) configuration of the SBUS
- Up to 6,000 foot wiring distance from the RPS-1000
- Battery charging capacity is 35 Ah

FM Series Electromagnetic Door Holder

FM Series electromagnetic door holders are designed for virtually any remote door release application. They are primarily used to hold fire and smoke barrier doors open until released by a remote smoke detector or other switching device. The complete assembly consists of: an armature contact plate with adjustable pivot mounting for installation in the door, and a heavy-duty electromagnet, in a durable plastic enclosure, mounted on the wall or floor behind the door. A separate closing device is required.



Features:

- All models support 12 VDC, 24 VAC/VDC, or 120 VAC.
- Improperly applied voltage does not damage the unit.
- 25 to 40 pounds (11.3 kg) holding power.
- Magnet protected against transients and surges up to 600 volts (AC models).
- Fail-safe operation; power failure releases door to close.
- Positive release button initiates closing motion.
- Floor- and wall-mount models

List of Devices:

	PART NUMBER	DESCRIPTION	COO
	Farenhyt Series Intelligent Addressable Fire Alarm Control Panels		
	IFP-2100HV	Farenhyt 2100 point Addressable Fire Panel, 4 line LCD display with 40 characters per line,	US
	IFP-2100HVB	Farenhyt 2100 point Addressable Fire Panel, 4 line LCD display with 40 characters per line, One SLC loop card inbuild, 159 Detectors and 159 Modules per loop	US
	RFP-2100HV	Farenhyt Remote Addressable Fire Panel (No Display) - 2100 point, One SLC loop card inbuild, 159 Detectors and 159 Modules per loop, Additional Loop cards can be expanded through 5815RMK (Remote mounting Kit which accomodates 2 SLC Cards (6815)), Network upto 32 panels, inbuild eight on-board Flexput™ circuits,Built in USB interface	US
	RFP-2100HVB	Farenhyt Remote Addressable Fire Panel (No Display) - 2100 point, One SLC loop card inbuild, 159 Detectors and 159 Modules per loop, Additional Loop cards can be expanded through 5815RMK (Remote mounting Kit which accomodates 2 SLC Cards (6815)), Network upto 32 panels, inbuild eight on-board Flexput™ circuits,Built in USB interface for programming,Four programmable function keys, 240VAC @	US
	Farenhyt Series Intelligent Addressable Fire Alarm Control Panels with Emergency control Systems		
	IFP-2100ECSHV	Farenhyt 2100 point Integrated Fire Alarm & Emergency Communication System, 4 line LCD display with 40 characters per line, One SLC loop card inbuild, 159 Detectors and 159 Modules per loop, Additional Loop cards can be expanded through 5815RMK (Remote mounting Kit which accomodates 2 SLC Cards (6815)), Network upto 32 panels, inbuild eight on-board Flexput™ circuits,Built in USB interface for programming, Support for up to 16 addressable amplifiers using a	US
	IFP-2100ECSHVB	Farenhyt 2100 point Integrated Fire Alarm & Emergency Communication System, 4 line LCD display with 40 characters per line, One SLC loop card inbuild, 159 Detectors and 159 Modules per loop, Additional Loop cards can be expanded through 5815RMK (Remote mounting Kit which accomodates 2 SLC Cards (6815)), Network upto 32 panels, inbuild eight on-board Flexput™ circuits,Built in USB interface for programming, Support for up to 16 addressable amplifiers using a combination of ECS-50W,ECS-INT50W or ECS-DUAL50W for a maximum	US
	Farenhyt Series Intelligent Addressable Fire Alarm Control Panels Accessories		
	6815	SLC Loop Expander which supports 159 Detectors and 159 Modules	US
	5815RMK	Remote Mounting Kit Cabinet holds two 6815s. Red cabinet	US
	5815RMKB	Remote Mounting Kit Cabinet holds two 6815s. Black cabinet.	US
	SK-NIC	Network Interface Card	US
	SK-NIC-KIT	Accessory kit for installing the SK-NIC outside of the FACP cabinet. Includes one SK-NIC Network Card	US
	SK-FML	Fiber Module, multi-mode	US
	SK-FSL	Fiber Module, single-mode	US
	5496	6 Amps Distributed Power Module with SBUS. Four power-limited notification outputs; 2Class A or 4 Class B, or 1 Class A and 2 Class B	US
	5496CB	Cabinet Only 5496	US

	SK-F485C	Copper to Fiber Converter	US
	5824	Serial/Parallel Printer Interface Module for printer connection	US
	5860TG	TRIM RING FOR USE W/ 5860 & RA-1000, GRAY	US
	5860TR	TRIM RING FOR USE W/ 5860R & RA-1000R, RED	US
	5865-3	LED Annunciator. Fits 3-gang electical box. Red.	US
	5865-4	LED Annunciator. Fits 4-gang electical box. Red.	US
	5880	LED / IO module has 40 programmable LED outputs and eight supervised dry contact inputs which are useful for custom applications	US
	5883	Relay Interface Board for use with 5880	US
	Farenhyt Series Panels Software GUI/Accessories		
	IFP-NET-3	Software and key (a key is required on each PC in system)	US
	IFPN-GW-EM-3	Gateway Interface board	US
	IFPN-GW-KIT	Installation packages includes Gateway interface, Cabinet, and 5824 Serial/Parallel printer interface	US
	00IFPN-SERCABL	SERIAL CABLE, CONNECTION 5824/NION	US
	PRN-7	24-pin dot-matrix printer, 110-230 VAC power.	CN
	Farenhyt Series Intelligent Addressable Fire Alarm Control Panels Spare parts		
	IFP-2100HVBD	PC Board - Accessories Of IFP-2100HV, High Voltage	US
	RFP-2100HVBD	PC Board - Accessories Of RPS-2000HV, High Voltage	US
	IFP-2100CB	Cabinet Only - Accessories Of IFP-2100 - Red	US
	IFP-2100BCB	Cabinet Only - Accessories Of IFP-2100 - Black	US
	RFP-2100CB	Cabinet Only - Accessories Of RFP-2100 - Red	US
	RFP-2100BCB	Cabinet Only - Accessories Of RFP-2100 - Black	US
	RPS-1000BCB	Cabinet Only - Accessories Of RFP-1000 - Black	US
	SK-SCK	Seismic Mounting Kit For All Sk Controls And Power Supplies	US
	THUMBLTCH	Thumb Lock Replacement Kit Used To Replace Key Lock With A Thumb	US
	58KEY	5820 Firefighters Key	US
	BB-3	3 Gang Backbox - Red	US
	BB4S	4 Gang Backbox - Red	US
	REL-4.7K	End Of Line Resistor; 4.7k With Leads	US
	REL-4.7K-BP	End Of Line Resistor; 4.7k With Leads; Qty. 10	US
	REL-47K	End Of Line Resistor; 47k With Leads	TW
	REL-47K-BP	End Of Line Resistor; 47k With Leads; Qty. 10	US
	Farenhyt Series Repeater Panels		
	RA-1000	4 X 20 Display Remote Annunciator.Gray.	US
	RA-1000R	4 X 20 Display Remote Annunciator.Red	US
	RA-2000	4 X 40 Display Remote Annunciator. Red	US
	RA-2000GRAY	4 X 40 Display Remote Annunciator. Gray	US
	Farenhyt Series Repeater Panels Accessories		
	RA-2000BD	Pc Board For RA-2000 Annunciator	US
	RA-100TR	Red. Surface Mount Trim Ring	US
	Farenhyt Series Intelligent Distributed Power Module		
	RPS-1000HV	High voltage (240V) Intelligent Distributed Power Module	US
	Farenhyt Series Emergency control Systems/ Amplifiers/ LOC		
	ECS-50WHV	ECS 50 Watt Amplifier 220vac 50Hz	US

	ECS-DUAL50WHV	Amplifier 50/100 Watt Dual Channel / Back-up Amp -high Voltage	US
	ECS-INT50W	Intelligent 50W Internal Amplifier	US
	ECS-50WBU	External Backup Amplifier board for ECS-DUAL50WHV Amplifier	US
	ECS-CE4	4 Circuit Expander For ECS-50W Or ECS-125W	US
	ECS-SW24	24 Switch Expander	US
	ECS-LOC2100	ECS Local Operating Console For IFP-2100ECS - Red Cabinet	US
	ECS-LOC2100B	ECS Local Operating Console For IFP-2100ECSB - Black Cabinet	US
	ECS-RPU	Remote Paging Unit For IFP-ECS Control Panels	US
	Farenhyt Series Emergency control Systems / Amplifiers/ LOC/ Accessories and Spares		
	IFP-2100ECSCB	Cabinet Only - Accessories Of IFP-2100ECS - Red Cabinet	US
	IFP-2100ECSBCB	Cabinet Only - Accessories Of IFP-2100ECS - Black Cabinet	US
	ECS-50WHVBD	Board Only For ECS-50W 220vac	US
	ECS-NVCM	Replacement Voice Control Module For IFP-300ECS And IFP-2100ECS	US
	ECS-EMG	Replacement Switch Module - Accessories Of IFP-300ECS And IFP-	US
	ECS-50WBCB	Cabinet Only For ECS-50W - Black Cabinet	US
	ECS-DUAL50WBCB	Cabinet Only For ECS-DUAL50W - Black Cabinet	US
	ECS-RVM	Replacement Remote Voice Module For ECS-RCU Or ECS-RCU2000	US
	ECS-50WCB	Cabinet Only For ECS-50W - Black Cabinet	US
	ECS-DUAL50WHVBD	PC Board Only For ECS-DUAL50WHV - 220VAC	US
	6861BIA	Replacement 4 X 40 Lcd Annuciator Board For ECS & Evs Systems - Black	US
	6861GIA	Replacement 4 X 40 Lcd Annuciator Board For ECS & Evs Systems - Grey	US
	Fire Fighter Telephone Systems		
	IFP-FFT	Farenhyt Fire Fighter Telephone Control Panel	US
	FFT-24	24 Zone Expander	US
	FFT-RHS	Remote Handset	US
	FFT-FPJ	Fire Fighter Phone Jack	US
	FFT-STSR	Single Telephone Station Recessed. A lockable cabinet containing one	US
	FFT-STSS	Single Telephone Station Surface Mount. A lockable cabinet containing	US
	FFT-BGK	Break Glass Kit For Single Station	US
	FFT-HSC	Fire Fighters Handset Cabinet. Holds up to 10 remote handsets	US
	IDP Addressable Detectors/Devices from System Sensor		
	IDP-ACCLIMATE	Intelligent Addressable Multicriteria Photoelectric Smoke Detectorc (Smoke with Thermal (Base Not Included)	MX
	IDP-PHOTO	Intelligent Addressable Photoelectric Smoke Detector. (Base Not	MX
	IDP-PHOTOR	Intelligent Photoelectric Replacement Smoke Detector remote test capable, for use with DNR (W) duct smoke detector	MX
	IDP-PHOTO-T	Intelligent Addressable Photoelectric Smoke Detector with Thermal (135ºF)(57ºC) (Base Not Included)	MX
	IDP-HEAT	Intelligent Addressable Thermal Detector Fixed Temp 135 (Base Not	MX
	IDP-HEAT-HT	Intelligent Addressable High temperature heat detector 135ºF –190ºF (57ºC – 88ºC) (Base Not Included)	MX
	IDP-HEAT-ROR	Intelligent Addressable Fixed temperature and rate-of rise thermal detector (Rate-of-rise detection 15ºF/min (9ºC/min) (Base Not Included)	MX
	IDP-FIRE-CO	Intelligent Addressable Fire & CO Combination Detector (Base Not Included). Combines four separate sensing elements in one unit (smoke, CO, light/flame, and	IT

	IDP-BEAM	Intelligent Addressable Beam Smoke Detector	MX
	IDP-BEAM-T	Intelligent Addressable Beam Smoke Detector with Test Feature	MX
	IDP-CONTROL	Intelligent Addressable Supervised Control Module	MX
	IDP-CONTROL-6	Intelligent Addressable 6 Circuit Supervised Control Module	MX
	IDP-ISO	Intelligent Addressable Line Isolator Mod. Isolates Short Circuits On Slc	MX
	IDP-MINIMON	Intelligent Addressable Mini Monitor Module, Supervised, Single	MX
	IDP-MONITOR	Intelligent Addressable Monitor Module, Supervised, Single Contact	MX
	IDP-MONITOR-10	Intelligent Addressable Monitor Module, Supervised, 10 Points	MX
	IDP-MONITOR-2	Intelligent Addressable Monitor Module, Supervised W/ 2 Initiating	MX
	IDP-PULL-DA	Intelligent Addressable Pull Station, Dual Action, Key Reset	MX
	IDP-PULL-SA	Intelligent Addressable Pull Station, Single Action, Key Reset	MX
	IDP-RELAY	Intelligent Addressable Relay Module W/ 2 Isolated Sets Of Form C	MX
	IDP-RELAY-6	Intelligent Addressable Relay Module W/ 6 Form C Relays	MX
	IDP-RELAYMON-2	Intelligent Addressable Dual Input/dual Output Module	CN
	IDP-ZONE	Intelligent Addressable 2-wire Zone Interface Module	MX
	IDP-ZONE-6	Intelligent Addressable 2-wire Zone Interface W/ 6-zone Inputs	MX
	ISO-6	Six Position Line Isolator Mod. Isolates Short Circuits On Slc Loop	IT
	SMB500	4” Square Surface Mount Electrical Box for use with IDP modules	IT
	IDP-ACB	IDP module cabinet (provides mounting space for two IDP modules)	US
	CB500	Control module barrier, required by UL to separate power limited and nc	MX
	IDP Addressable Devices bases and accessories		
	B501.	4” Mounting detector base, without flange, India	IN
	B501	4 Inch Base	US
	B210LP	IDP 6” Mounting Base	MX
	B210LPBP	IDP Conventional Flanged Mounting Base; Pkg. Of 10	MX
	B224BI	IDP 6” Isolator Base	MX
	B224RB	IDP 6” Relay Base	MX
	B200S	Intelligent Sounder Base High/low Volume Output W/ansi Temporal 3 Or Temporal 4, Continuous, March Or Custom Tone	MX
	B200S-LF	Intelligent Low Frequency Sounder Base W/ansi Temporal 3 Or Temporal 4, Continuous, March Or Custom Tone	US
	B200SR	6” - Sounder Base, Reverse Compatible	MX
	B200SR-LF	Low Frequency Sounder Base Assembly, Reverse Compatible	US
	B501BP	Bulk pack of B501, quantity 10	MX
	BCK-200B	Black detector cover conversion kit (Bulk pack qty. 10)	MX
	C58-227-01	Replacement dust cover for legacy style sensors	US
	C58-237-00	Replacement dust cover for low profile sensors	US
	DNR	InnovairFlex intelligent duct detector, non-relay, does not include head	MX
	DNRW	InnovairFlex duct detector, non-relay, does not include head, watertight	MX
	F110	Accessory flange ring for B210LP, legacy design	MX
	F210	Accessory flange ring for B210LP, new design	US
	ST-10	Detector sampling tube, 8-10’ ducts	US
	ST-3	Detector sampling tube, 2-4’ ducts	US
	ST-5	Detector sampling tube, 4-8’ ducts	MX
	Wireless Sensors and Devices		
	WIDP-ACCLIMATE	Swift Wireless Acclimate Detector	MX
	WIDP-HEAT	Swift Wireless Heat Detector	MX

	WIDP-HEAT-ROR	Swift Wireless Heat Rate-of-rise Detector	MX
	WIDP-MONITOR	Swift Wireless Monitor Module	MX
	WIDP-PHOTO	Swift Wireless Photoelectric Detector	MX
	WIDP-RELAY	Swift Wireless Relay Module	MX
	WIDP-WGI	Swift Wireless Gateway	US
	W-USB	Swift Wireless Usb Key	IT
	B210W	Swift Wireless Base	MX
CONVENTIONAL INITIATING DEVICES			
System Sensor Plug-in Smoke Detectors			
	2151	Smoke Detector Head, Photo, Low-Profile	MX
	2151T	Smoke Detector Head, Photo/Thermal, Low-Profile -Req. B100 Series	MX
	5151	135 °F (57°C) electronic fixed & ROR heat; requires B400 series base.	CN
	CO1224T	Conventional Carbon Monoxide Detector, 12/24 VDC, with sounder and trouble relay with test function; UL2075 listed	MX
	CO1224TR	Conventional Carbon Monoxide Detector, 12/24 VDC, with sounder and trouble relay with test function, round; UL2075 listed	MX
	CO-PLATE	CO detector plate, package of 5. Use when replacing round CO	CN
System Sensor Plug-in Detector Bases			
	B401	Detector mounting base. For conventional detectors.	US
	B110LP	Base, 2-Wire, Low-Profile, Flanged, 12/24VDC	MX
	B112LP	Base, 4-Wire, Low-Profile, Form-A&C, 24VDC	MX
	B114LP	Base, Conventional, 4-Wire, Low-Profile, Form-A&C + A, 120VAC	MX
	B114LPBT	Base, Conventional, 4-Wire, 24 VAC/DC, Form-A/C contacts, Low/No Flow Duct Applications, Use with RTC100	MX
	B116LP	Base, Conventional, 2-Wire, Low-Profile, Form-C, 24VDC	MX
	B210LP	Conventional Flanged Mounting Base	MX
	B210LPBP	Conventional Flanged Mounting Base; Pkg. of 10	MX
Explosion Proof detectors			
	302-EPM-135	135 °F (57° C) explosion-proof.	US
	302-EPM-194	194 °F (90° C) explosion-proof.	US
	30-3013	Optical smoke detector, explosion-proof [Not FM or CSFM Listed] Pyrotector Special Detectors	US
	XAL-53	Kilark Manual Station, explosion-proof; NO & NC contacts.	US
System Sensor Beam Detectors & STI Beam Cage			
	BEAM1224	Projected Beam Smoke Detector, Single-ended Reflected Type, Includes Trouble Relay, Transmitter/Receiver in One Unit.	MX
	BEAM1224S	Same as BEAM1224 with Built-in Sensitivity Test Filter.	MX
	BEAMLRK	Projected Beam Smoke Detector Long Range Kit, Increases Distance.	DE
	BEAMMMK	Projected Beam Smoke Detector Multi-Mount Kit, Wall or Ceiling.	MX
	BEAMSMK	Projected Beam Smoke Detector Surface Mount Kit.	CN
	BEAMHKR	Beam Detector Heater Kit for reflectors, 4 used with long range kit	MX
	6500-MMK	Heavy duty multi-mount kit (for installations prone to vibration or where there is difficulty in maintaining the set angle. When installed with the transmitter/receiver unit, 6500-SMK must be used as well)	MX
	6500-SMK	Surface-mount kit for use with the BEAM1224 and FSB-200 when using the 6500-MMK Heavy Duty Multi-Mount Kit	MX
	STI9625	STI Beam detector guard; Use with 6424	CN

System Sensor Duct Smoke Detectors			
	DNR	InnovairFlex intelligent duct detector, non-relay, does not include head.	MX
	DNRW	InnovairFlex duct detector, non-relay, does not include head,	MX
	D2	InnovairFlex 2-wire conventional photoelectric duct detector, includes	MX
	D4120	InnovairFlex 4-wire conventional photoelectric duct detector, includes	MX
	D4120W	InnovairFlex 4-wire conventional photoelectric duct detector, includes 2D51 detector, watertight.	MX
	D4S	InnovairFlex 4-wire conventional sensor only component	MX
	2D51	Replacement 4-wire head	MX
	DCOIL	InnovairFlex duct accessory coil, required on DNR if a remote test	MX
	DST1	InnovairFlex sampling tube, steel, 1' with holes	MX
	DST1.5	InnovairFlex sampling tube, steel, 1.5' with holes	MX
	DST3	InnovairFlex sampling tube, steel, 3' with holes	MX
	DST5	InnovairFlex sampling tube, steel, 5' with holes	MX
	DST10	InnovairFlex sampling tube, steel, 10' with holes	MX
	ETX	InnovairFlex exhaust tube, steel, 1'	MX
System Sensor Detector Accessories			
	EOLR-1	12 or 24 volt EOL relay module.	MX
	APA151	Annunciator with piezo, alarm and power LED's.	MX
	M02-04-00	Test Magnet Only.	US
	M02-09-00	Telescope handle with test magnet.	MX
	RA100Z	Remote LED. Mounts to single gang box.	MX
	RTS151	Remote test station; with switch, alarm and power LED's.	MX
	RTS151KEY	Remote test station; with switch, alarm and power LED's, key reset.	MX
	SMB600	Surface mounting kit; 400 series detectors and standard 6-inch base.	CN
	XP-4	Extension pole, 15 ft. (three, 5ft. Poles) for use with XR2, XR2B and XR5.	US
	XR2	Detector Installation/Removal tool kit, low profile for 700 series	US
	XR2B	Detector Installation/Removal tool kit for 800 and 355 series detectors.	MX
Supervisory Valve Switches			
	OSY2	Outside screw & yoke supervisory switch w/2 SPDT.	US
	PIBV2	Post indicator butterfly valve supervisory switch w/2 SPDT.	US
FM Series Door Releases			
	FM900	Door holder extension kit.	US
	FM900-100	Door holder spacer, 1 inch.	US
	FM900-50	Door holder spacer, 1/2 inch.	US
	FM900-75	Door holder spacer, 3/4 inch.	US
	FM900-Z	Door holder spacer kit, 90 degree.	US
	FM980	FM-980, 12 Vdc, 24 Vac/Vdc, 120/250 Vac, surface floor mount, single	US
	FM996-L8	FM-996, 12 Vdc, 24 Vac/Vdc, 120/250 Vac, surface wall mount.	CN
	FM998	FM-998, 12 Vdc, 24 Vac/Vdc, 120/250 Vac, flush wall mount.	US
	Batteries and Accessories		
	BAT-12120-BP	FOUR (4) BAT-12120 BAT-12120 (12V, 12AH) SHIPPED IN EACH BULK	VN
	BAT-12180-BP	TWO (2) BAT-12180 (12V, 18AH) SHIPPED IN EACH BULK PACK	VN
	BAT-12260-BP	TWO (2) BAT-12660 (12V, 26AH) SHIPPED IN EACH BULK PACK	VN
	BAT-1250-BP	TEN (10) BAT-1250 (12V, 5AH) SHIPPED IN EACH BULK PACK	CN
	BAT-1270-BP	FIVE (5) BAT-1270 (12V, 7AH) SHIPPED IN EACH BULK PACK	VN
	BAT-121000	BATTERY, 12 VOLT, 100 AH.	CN

	BAT-12550	BATTERY, 12 VOLT, 55 AH.	VN
	BB-17F	BATTERY BACKBOX, HOLDS UP TO TWO 12 V, 18 AH BATTERIES, RED	US
	BB-26	BATTERY BACKBOX – MOUNTS UP TO 2, BAT-12260 BATTERIES	US
	BB-55F	BATTERY BOX, HOLDS UP TO TWO BAT-12260 (26 AH) OR BAT-12550 (55	US
	111682	RES THA 4.7K 1/2W 5% CF/TAPE 10 PER	
	Audible/Visual Notification (System Sensor) L Series		
	L Series- Horn Stobe - Wall		
	P2RL	HORN STROBE 2W RED WALL	MX
	P2WL	HORN STROBE 2W WHITE WALL	MX
	P2RL-P	HORN STROBE 2W RED WALL, PLAIN	MX
	P2WL-P	HORN STROBE 2W WHITE WALL, PLAIN	MX
	L Series- Horn Stobe - Ceiling		
	PC2RL	HORN STROBE 2W RED CEILING	MX
	PC2WL	HORN STROBE 2W WHITE CEILING	MX
	Lseries- Strobe - Wall		
	SRL	STROBE RED WALL	MX
	SWL	STROBE WHITE WALL	MX
	SRL-P	STROBE RED WALL, PLAIN	MX
	SWL-P	STROBE WHITE WALL, PLAIN	MX
	L Series Strobe - Ceiling		
	SCRL	STROBE RED CEILING	MX
	SCWL	STROBE WHITE CEILING	MX
	L Series Horn - Wall		
	HWL	HORN WHITE WALL	MX
	HRL	HORN RED WALL	MX
	L Series Chime - Wall		
	CHWL	CHIME WHITE WALL	MX
	CHRL	CHIME RED WALL	MX
	CHSRL	CHIME STROBE RED WALL	MX
	CHSWL	CHIME STROBE WHITE WALL	MX
	L Series Chime - Ceiling		
	CHSCRL	CHIME STROBE RED CEILING	MX
	CHSCWL	CHIME STROBE WHITE CEILING	MX
	L Series Speaker - Wall		
	SPRL	SPEAKER RED WALL	MX
	SPWL	SPEAKER WHITE WALL	MX
	L Series Speaker - Ceiling		
	SPCRL	SPEAKER RED CEILING	MX
	SPCWL	SPEAKER WHITE CEILING	MX
	L Series Speaker Strobe - Wall		
	SPSRL	SPEAKER STROBE RED WALL	MX
	SPSWL	SPEAKER STROBE WHITE WALL	MX
	SPSRL-P	SPEAKER STROBE RED WALL, PLAIN	MX
	SPSWL-P	SPEAKER STROBE WHITE WALL, PLAIN	MX
	L Series Speaker Strobe - Ceiling		
	SPSCRL	SPEAKER STROBE RED CEILING	MX
	SPSCWL	SPEAKER STROBE WHITE CEILING	MX

	SPSCWL-P	SPEAKER STROBE WHITE CEILING, PLAIN	MX
	L Series Bezel Kit - Wall (Pack of 5)		
	BZR-F	Wall Red Bezel Kit FIRE	MX
	BZR-AL	Wall Red Bezel Kit ALERT	MX
	BZR-AG	Wall Red Bezel Kit AGENT	MX
	BZR-EV	Wall Red Bezel Kit EVAC	MX
	BZR-P	Wall Red Bezel Kit PLAIN	MX
	BZW-F	Wall White Bezel Kit FIRE	MX
	BZW-AL	Wall White Bezel Kit ALERT	MX
	BZW-AG	Wall White Bezel Kit AGENT	MX
	BZW-EV	Wall White Bezel Kit EVAC	MX
	BZW-P	Wall White Bezel Kit PLAIN	MX
	BZGR-F	Wall Red Bezel Kit Compact FIRE	MX
	BZGR-AL	Wall Red Bezel Kit Compact ALERT	MX
	BZGR-AG	Wall Red Bezel Kit Compact AGENT	MX
	BZGR-EV	Wall Red Bezel Kit Compact EVAC	MX
	BZGR-P	Wall Red Bezel Kit Compact PLAIN	MX
	BZGW-F	Wall White Bezel Kit Compact FIRE	MX
	BZGW-AL	Wall White Bezel Kit Compact ALERT	MX
	BZGW-AG	Wall White Bezel Kit Compact AGENT	MX
	BZGW-EV	Wall White Bezel Kit Compact EVAC	MX
	BZGW-P	Wall White Bezel Kit Compact PLAIN	MX
	BZSPR-P	Wall Red Bezel Kit PLAIN	MX
	BZSPR-AL	Wall Red Bezel Kit ALERT	MX
	BZSPR-EV	Wall Red Bezel Kit EVAC	MX
	BZSPR-AG	Wall Red Bezel Kit AGENT	MX
	BZSPR-F	Wall Red Bezel Kit FIRE	MX
	BZSPW-P	Wall White Bezel Kit Plain	MX
	BZSPW-AL	Wall White Bezel Kit ALERT	MX
	BZSPW-EV	Wall White Bezel Kit EVAC	MX
	BZSPW-AG	Wall White Bezel Kit AGENT	MX
	BZSPW-F	Wall Red Bezel Kit FIRE	MX
	BZSPRC-F	Wall Red Bezel Kit FIRE	MX
	BZSPWC-F	Wall White Bezel Kit FIRE	MX
	L Series Bezel Kit - Ceiling (Pack of 5)		
	BZRC-F	Ceiling Red Bezel Kit FIRE	MX
	BZRC-AL	Ceiling Red Bezel Kit ALERT	MX
	BZRC-AG	Ceiling Red Bezel Kit AGENT	MX
	BZRC-EV	Ceiling Red Bezel Kit EVAC	MX
	BZRC-P	Ceiling Red Bezel Kit PLAIN	MX
	BZWC-F	Ceiling White Bezel Kit FIRE	MX
	BZWC-AL	Ceiling White Bezel Kit ALERT	MX
	BZWC-AG	Ceiling White Bezel Kit AGENT	MX
	BZWC-EV	Ceiling White Bezel Kit EVAC	MX
	BZWC-P	Ceiling White Bezel Kit PLAIN	MX
	BZSPRC-P	Ceiling Red Bezel Kit PLAIN	MX
	BZSPRC-AL	Ceiling Red Bezel Kit ALERT	MX

	BZSPRC-EV	Ceiling Red Bezel Kit EVAC	MX
	BZSPRC-AG	Ceiling Red Bezel Kit AGENT	MX
	BZSPWC-P	Ceiling White Bezel Kit PLAIN	MX
	BZSPWC-AL	Ceiling White Bezel Kit ALERT	MX
	BZSPWC-EV	Ceiling White Bezel Kit EVAC	MX
	BZSPWC-AG	Ceiling White Bezel Kit AGENT	MX
	L Series Color Lens Kit - Wall (Pack of 5)		
	LENS-A2	Wall Amber Lens	MX
	LENS-B2	Wall Blue Lens	MX
	LENS-G2	Wall Green Lens	MX
	LENS-R2	Wall Red Lens	MX
	L Series Color Lens - Ceiling (Pack of 5)		
	LENS-AC2	Ceiling Amber Lens	MX
	LENS-BC2	Ceiling Blue Lens	MX
	LENS-GC2	Ceiling Green Lens	MX
	LENS-RC2	Ceiling Red Lens	MX
	L Series Accessories		
	TR-2	Universal Wall Trim Ring, Red (Pack of 5)	MX
	TR-2W	Universal Wall Trim Ring, White (Pack of 5)	MX
	TRC-2	Universal Ceiling Trim Ring, Red (Pack of 5)	MX
	TRC-2W	Universal Ceiling Trim Ring, Red (Pack of 5)	MX
	SBBRL	Wall Surface Mount Back Box, Red	MX
	SBBWL	Wall Surface Mount Back Box, White	MX
	SBBSPRL	Wall Speaker Surface Mount Back Box, Red	MX
	SBBSPWL	Wall Speaker Surface Mount Back Box, White	MX
	SBBCRL	Ceiling Surface Mount Back Box, Red	MX
	SBBCWL	Ceiling Surface Mount Back Box, White	MX
	SpectrAlert® Advance 2-Wire Horn/Strobes, Ceiling Mount		
	PC2RHK	Horn/strobe; 12/24 volt, high-candela 135, 150, 177, 185, red outdoor, in	MX
	PC2WHK	Horn/strobe, 12/24 volt, high-candela 135, 150, 177, 185, white, outdoor	MX
	PC2WK	Horn/strobe, 12/24 volt, multi-candela 15, 15/75, 30, 75, 110, 115, white	MX
	SpectrAlert® Advance 2-Wire Horn/Strobes, Wall Mount		
	P2RHK	Horn/strobe, 12/24 volt, high-candela 135, 150, 177, 185, red outdoor, in	MX
	P2RHK-120	Horn/strobe, 120 volt, high-candela 135, 150, 177, 185, red outdoor, incl	MX
	P2RHK-P	Horn/strobe, 12/24 volt, high-candela 135, 150, 177, 185, red, outdoor, i	MX
	P2RK	Horn/strobe, 12/24 volt, multi-candela 15, 15/75, 30, 75, 110, 115, red, o	MX
	P2RK-P	Horn/strobe, 12/24 volt, multi-candela 15, 15/75, 30, 75, 110, 115, red,	MX
	P2RK-R	Replacement horn/strobe, 12/24 volt, multi-candela 15, 15/75, 30, 75, 11	MX
	P2WHK	Horn/strobe, 12/24 volt, high-candela 135, 150, 177, 185, white, outdoor	MX
	P2WHK-P	Horn/strobe, 12/24 volt, high-candela 135, 150, 177, 185, white, outdoor	MX
	P2WK	Horn/strobe, 12/24 volt, multi-candela 15, 15/75, 30, 75, 110, 115, white	MX
	P2WK-P	Horn/strobe, 12/24 volt, multi-candela 15, 15/75, 30, 75, 110, 115, white	MX
	SpectrAlert® Advance 4-Wire Horn/Strobes, Ceiling Mount		
	PC4R	Horn/strobe, 12/24 volt, multi-candela 15, 15/75, 30, 75, 110, 115, red	MX
	PC4RH	Horn/strobe, 12/24 volt, high-candela 135, 150, 177, 185, red	MX
	PC4W	Horn/strobe, 12/24 volt, multi-candela 15, 15/75, 30, 75, 110, 115, white	MX
	SpectrAlert® Advance 4-Wire Horn/Strobes, Wall Mount		

	P4R	Horn/strobe, 12/24 volt, multi-candela 15, 15/75, 30, 75, 110, 115, red	MX
	P4RH	Horn/strobe, 12/24 volt, high-candela 135, 150, 177, 185, red	MX
	P4RK	Horn/strobe, 12/24 volt, multi-candela 15, 15/75, 30, 75, 110, 115, red, c	MX
	P4RK-R	Replacement horn/strobe, 12/24 volt, multi-candela 15, 15/75, 30, 75, 11	MX
	P4W	Horn/strobe, 12/24 volt, multi-candela 15, 15/75, 30, 75, 110, 115, white	MX
	P4WK	Horn/strobe, 12/24 volt, multi-candela 15, 15/75, 30, 75, 110, 115, white	MX
	SpectrAlert® Advance Ceiling Speakers & Speaker Strobes		
	SPCWK	Speaker only, ceiling, white, outdoor, includes backbox	MX
	SPSCWHK	Speaker/strobe, ceiling, high-candela 135, 150, 177, 185, white, outdoor,	MX
	SPSCWK	Speaker/strobe, ceiling, multi-candela 15, 15/75, 30, 75, 110, 115, white,	MX
	SpectrAlert® Advance Horns		
	HRK	Horn only, 12/24 volt, wall mount, red, outdoor, includes backbox	MX
	HRK-R	Replacement horn, red, wall mount, outdoor	MX
	SpectrAlert® Advance Sounders		
	HR-LF	520Hz Low Frequency Sounder; 12/24 volt, red	MX
	HW-LF	520Hz Low Frequency Sounder; 12/24 volt, white	MX
	SpectrAlert® Advance Strobes, Ceiling Mount		
	SCRK	Strobe, 12/24 volt, multi-candela 15, 15/75, 30, 75, 110, 115, red, outdoc	MX
	SCWK	Strobe, 12/24 volt, multi-candela 15, 15/75, 30, 75, 110, 115, outdoor, in	MX
	SpectrAlert® Advance Strobes, Wall Mount		
	SRK	Strobe, 12/24 volt, multi-candela 15, 15/75, 30, 75, 110, 115, red, outdoc	MX
	SRK-P	Strobe, 12/24 volt, multi-candela 15, 15/75, 30, 75, 110, 115, red, plain (r	MX
	SRK-R	Replacement strobe, 12/24 volt, multi-candela 15, 15/75, 30, 75, 110, 11	MX
	SWK	Strobe, 12/24 volt, multi-candela 15, 15/75, 30, 75, 110, 115, white, outd	MX
	SWK-P	Strobe, 12/24 volt, multi-candela 15, 15/75, 30, 75, 110, 115, white, plair	MX
	SpectrAlert® Advance Wall Speakers & Speaker Strobes		
	SPSRK	Speaker/strobe, wall, multi-candela 15, 15/75, 30, 75, 110, 115, red, outd	MX
	SPSRK-P	Speaker/strobe, wall, multi-candela 15, 15/75, 30, 75, 110, 115, red, outd	MX
	SPSRK-R	Replacement speaker/strobe, wall, multi-candela 15, 15/75, 30, 75, 110,	MX
	SPSWK	Speaker/strobe, wall, multi-candela 15, 15/75, 30, 75, 110, 115, white, ou	MX
	SPSWK-P	Speaker/strobe, wall, multi-candela 15, 15/75, 30, 75, 110, 115, white, ou	MX
	SPWK	Speaker only, wall, white, outdoor, includes backbox	MX
	System Sensor Accessories		
	BB-STD	Standard 4 square box	CN
	WBB	Backbox, weatherproof, red	CN
	WTP	Weatherproof plate, for use with horns, strobes, and horn strobes, red	MX
	WTP-SPW	Weatherproof plate, for use with speakers and speaker strobes, white	MX
	WTPW	Weatherproof plate, for use with horns, strobes, and horn strobes, white	MX
	System Sensor Electric Alarm Bells		
	SSM24-10	24 volt, 10” bell	CN
	SSM24-6	24 volt, 6” bell	CN
	SSM24-8	24 volt, 8” bell	CN
	System Sensor Sounders		
	MHR	Mini piezo horn, 12/24 volt, red	MX
	MHW	Mini piezo horn, 12/24 volt, white	MX
	PF24V	Exit Point directional sound speaker with voice and integral audio amplifi	MX

Manufacturer catalogue

Honeywell
THE POWER OF CONNECTED

Farenhyt™ Series

IFP-2100ECS / IFP-2100ECSB

Scalable Analog/Addressable Fire Alarm Control System

The IFP-2100ECS (red) and IFP-2100ECSB (black) are intelligent analog/addressable Fire Alarm Control Panels combined with an Emergency Communication System (ECS). When the ECS features are enabled, they are integrated with the fire alarm and voice evacuation functions of the control panel. The IFP-2100ECS panel and accessories provide features to meet the requirements for Mass Notification Systems as described in UL 2572.

This state of the art fire alarm control panel allows you to choose one of three SLC protocols per system. The IFP-2100ECS panel contains one built in signaling line circuit (SLC), which can support 159 System Sensor® IDP/SK sensors and 159 IDP/SK modules or 127 Hochiki® SD devices per loop. Additional SLC loops can be added using the model 6815 SLC expander for IDP/SK devices or model 5815XL for SD devices to increase the overall point capacity to a maximum of 2100 points per panel.

IFP-2100ECS has the interconnection capability for up to 32 panels. The system has two modes of operation, multiple panels covering one larger building, or multiple independent buildings. A separate network can be used for voice paging across all panels.

The IFP-2100ECS supports a variety of devices, including RA-2000, RA-1000 or RA-100 remote annunciator, 5824 serial/parallel printer interface module (for printing system reports), RPS-1000 power module, and IDP, SK or SD devices.



IFP-2100ECSB

COMPATIBILITY

The IFP-2100ECS is compatible with the following ECS components:

- ECS-50W, ECS-125W, ECS-INT50W or ECS-DUAL50W Amplifier
- ECS-RVM: Remote voice module
- ECS-SW24: 24 switch expander (max 2)
- ECS-NVCM: Network Voice Control Module (included)
- ECS-LOC: Local Operator Console
- ECS-LOC2100: Local Operator Console
- ECS-LOC2100B: Local Operator Console. Black
- ECS-RPU: Remote Paging Unit

FEATURES & BENEFITS

- Single enclosure for both Fire and Emergency Control System components
- Can select ECS message as priority over fire
- Network support for up to 32 Sites
- Built-in support for up to 159 IDP/SK detectors and 159 IDP/SK modules or 127 SD SLC devices
- Four line LCD display with 40 characters per line
- Available in a red or black cabinet
- Separate network support for voice paging
- Built-in USB interface for programming
- Four programmable function keys
- Built-in dual phone line, digital alarm communicator/transmitter (DACT), IP or optional cellular technologies
- JumpStart AutoProgramming® feature for easy programming
- Capable of producing 520 Hz tones to meet NFPA 72 requirements
- 15 Recordable one minute messages that can be mapped to eight ECS buttons
- Firmware can be upgraded in the field
- Supports up to four SWIFT wireless gateways. Each gateway can have up to 49 wireless devices
- Support for up to 16 SBUS addressable amplifiers using a combination of ECS-50W, ECS-125W, ECS-INT50W or ECS-DUAL50W for a maximum of 2000 watts per system and up to 128 mappable speaker circuits
- On-board supervised microphone

IFP-2100ECS Technical Specifications

PHYSICAL

Overall Dimensions: 21.59"W x 28.10"H x 5.05"D
Shipping Weight: 53 lbs.
Color: Red or Black

ENVIRONMENTAL

Operating Temperature: 32°F to 120°F (0°C to 49°C)
Humidity: 0 to 93% relative humidity (non-condensing)

ELECTRICAL:

IFP-2100ECS AC: 120V @ 50/60Hz, 4.5A total accessory load: 9A @ 27.4VDC power-limited
IFP-2100ECSHV AC: 240V @ 50/60Hz, 2.8A Total Accessory Load
Standby Current: 230mA
Alarm Current: 415mA
Battery Charging Capacity: 7 to 55AH
Battery Size: 18AH max. allowed in control panel cabinet. Larger capacity batteries can be housed in RBB accessory cabinet.
Six Conductor Wiring: Two voice bus & four SBUS

FLEXPUT CIRCUITS

Eight circuits that can be programmed individually as:
Notification Circuits: 3A per circuit @ 27.4VDC, power limited
Auxiliary Power Circuits: 3A per circuit @ 27.4VDC, power limited.
Initiation Circuit: 100mA per circuit @ 27.4VDC, power-limited

APPROVALS

NFPA 13, NFPA 15, NFPA 16, NFPA 70, & NFPA 72: Central Station; Remote Signalling; Local Protective Signalling Systems; Auxiliary Protected Premises Unit; & Water Deluge Releasing Service
UL Listing; CSFM 7165-0559:0505; **FDNY** COA# 6251; **Seismic** (CA) (pending), **FM** approved

COMPATIBLE DEVICES

See the data sheets listed below for a complete listing of the IDP, SK, SWIFT or SD devices.
350361: IDP Device Protocol data sheet
53623: SK Device Protocol data sheet
350360: SD Device Protocol data sheet
350615 & 350617: SWIFT devices data sheet

ORDERING INFORMATION

IFP-2100ECS: Emergency Communication System with FACP. Red Cabinet.
IFP-2100ECSB: Emergency Communication System with FACP. Black Cabinet.
IFP-2100ECSHV: High Voltage (240V) Emergency Communication System with FACP. Red Cabinet.
IFP-2100ECSHVB: High Voltage (240V) Emergency Communication System with FACP. Black Cabinet

ECS ACCESSORIES

ECS-50W: 50 Watt Amplifier
ECS-125W: 125 Watt Amplifier
ECS-DUAL50W: 50 Watt Dual Amplifier
ECS-DUAL50WB: 50 Watt Dual Amplifier,Black
ECS-50WB: 50 Watt Amplifier, Black
ECS-125WB: 125 Watt Amplifier, Black
ECS-INT50W: 50 /Watt Internal Amplifier
ECS-50WBU: External Backup Amplifier
ECS-CE4: Provides 4 additional audio circuits
ECS-RVM: Remote voice module
ECS-SW24: 24 Switch Expander
ECS-NVCM: Network Voice Control Module
ECS-LOC: Local Operator Console
ECS-LOC2100: Local Operators Console, Red
ECS-LOC2100B: Local Operator Console, Black
ECS-RPU: Remote Paging Unit. Red

SBUS ACCESSORIES

RA-2000, RA-1000, RA-1000R, RA-100, RA-2000GRAY: Remote annunciators
6815: Signal Line Circuit (SLC) Expander for IDP or SK devices
5815XL: Signal Line Circuit (SLC) Expander for SD devices
RPS-1000/B: Power Supply. Red or Black
5496: NAC Expander
5824: Serial/Parallel Module
5880: LED I/O Module
5865-3 or 5865-4: LED Annunciator
5883: Relay Interface

MISCELLANEOUS ACCESSORIES

HFSS: Software Suite. Provides programming, upload/download and event reporting
RBB: Remote Battery Box Cabinet. Use for backup batteries up to 35 AH. Dimensions: 16" W x 10" H x 6" D
SK-SCK: Seismic Compliance Kit
SK-NIC: Network Interface Card
SK-FML: Multi Mode Fiber Card
SK-FSL: Single Mode Fiber Card
CELL-MOD: Cellular Communicator in Plastic Enclosure
CELL-CAB-SK: Cellular Communicator in Metal Enclosure with lock and key

For a complete listing of all compliance approvals and certifications, please visit www.farenhyt.com.

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Farenhyt™ Series

IFP-2100 / IFP-2100B / RFP-2100 / RFP-2100B

Scalable Analog/Addressable Fire Alarm Control System



IFP-2100B



RFP-2100B

The IFP-2100 (red) and IFP-2100B (black) are intelligent analog/addressable Fire Alarm Control Panels (FACP). The basic IFP-2100 panel contains one built in signaling line circuit (SLC), which can support 159 System Sensor® IDP/SK sensors and 159 IDP/SK modules or 127 Hochiki® SD devices per loop. Additional SLC loops can be added using the model 6815 SLC expander for IDP/SK devices to increase the overall point capacity to 2100 or model 5815XL for SD devices to increase the overall point capacity to a maximum to 2032 points per panel.

IFP-2100 has the interconnection capability for up to 32 panels. The system has two modes of operation, multiple panels covering one larger building, or multiple independent buildings. The RFP-2100 (red) or RFP-2100B (black) can be used in a networked system where at least one IFP-2100 is in the system. It is the same as the IFP-2100 without the display.

IFP-2100 has eight on-board Flexput™ circuits that can be configured for auxiliary power, notification outputs, or for conventional smoke detector inputs (Class A or Class B). The FACP also has a Built in dual phone line digital alarm communicator/transmitter (DACT), IP or optional cellular technologies, Form C trouble relay, and two programmable Form C relays. IFP-2100 has powerful features such as detector sensitivity, day/night thresholds, drift compensation, pre-trouble maintenance alert, and calibration trouble alert

FEATURES & BENEFITS

- RFP-2100 or RFP-2100B can be used in a networked system where at lease one IFP-2100 is in the system
- Network support for up to 32 Sites
- Built-in support for up to 159 IDP/SK detectors and 159 IDP/SK modules or 127 SD SLC devices
- Four line LCD display with 40 characters per line
- Available in a red or black cabinet
- IFP-2100 or RFP-2100 can be surface or flush mounted
- Four programmable function keys
- Network card allows copper network connection with a multi-mode or single-mode fiber connection option
- Built-in dual phone line, digital alarm communicator/transmitter (DACT), IP or optional cellular technologies
- JumpStart AutoProgramming® feature for easy programming
- Renewable license on downloading software helps inhibit unauthorized programming
- Built in USB interface for programming
- Supports up to four SWIFT wireless gateways. Each gateway can have up to 49 wireless devices
- Supports Class B (Style 4) and Class A (Style 6 or Style 7 configuration for SLC, and SBUS.

IFP-2100 / RFP-2100 Technical Specifications

PHYSICAL

Overall Dimensions: 26.4"H x 16.4"W x 4.11"D
Shipping Weight: 33 lbs.
Color: Red or Black

ENVIRONMENTAL

Operating Temperature: 32°F to 120°F (0°C to 49°C)
Humidity: 0 to 93% relative humidity (non-condensing)

ELECTRICAL

IFP-2100 Primary AC: 120VAC @ 50/60Hz, 4.5A
IFP-2100HV AC: 240VAC @ 50/60Hz, 2.8A
Total Accessory Load: 9A @ 24VDC power-limited
Standby Current: 230mA
Alarm Current: 415mA
Battery Charging Capacity: 17 to 55AH
Battery Size: 18AH max. allowed in control panel cabinet. Larger capacity batteries can be housed in RBB accessory cabinet.
Six Conductor Wiring: Two voice bus & four SBUS

FLEXPUT CIRCUITS

Eight circuits that can be programmed individually as:
Notification Circuits: 3A per circuit @ 24VDC, power limited
Auxiliary Power Circuits: 3A per circuit @ 24VDC, power limited.
Initiation Circuit: 100mA per circuit @ 24VDC, power-limited

AGENCY LISTINGS AND APPROVALS

NFPA 13, NFPA 15, NFPA 16, NFPA 70, & NFPA 72: Central Station; Remote Signalling; Local Protective Signalling Systems; Auxiliary Protected Premises Unit; & Water Deluge Releasing Service
UL Listing
CSFM 7165-0559:0505
FDNY COA# 6251
Seismic (CA) (pending)
FM approved

APPROVED RELEASING SOLENOIDS

Asco	**T8210A107**	**24 VDC**	**3 A max**	**0 Hz**
Asco	**8210G207**	**24 VDC**	**3 A max**	**0 Hz**

COMPATIBLE DEVICES

See the data sheets listed below for a complete listing of the IDP, SK, SWIFT or SD devices.
3350361: IDP Device Protocol data sheet
53623: SK Device Protocol data sheet
350360: SD Device Protocol data sheet
350615 & 350617: SWIFT devices data sheet

ORDERING INFORMATION

IFP-2100: Intelligent Fire Alarm Control Panel. Red Cabinet.
IFP-2100B: Intelligent Fire Alarm Control Panel. Black Cabinet.
IFP-2100HV: High Voltage (240V) Intelligent Fire Alarm Control Panel. Red Cabinet
IFP-2100HVB: High Voltage (240V) Intelligent Fire Alarm Control Panel. Black Cabinet
RFP-2100: Remote Fire Alarm Panel without built in display. Red Cabinet.
RFP-2100B: Remote Fire Alarm Panel without built in display. Black Cabinet.
RFP-2100HV: High Voltage (240V) Remote Fire Alarm Panel without built in display. Red Cabinet.
RFP-2100HVB: High Voltage (240V) Remote Fire Alarm Panel without built in display. Black Cabinet.

SBUS ACCESSORIES

RA-2000, RA-1000, RA-1000R, RA-100, RA-2000GRAY: Remote annunciators
6815: Signal Line Circuit (SLC) Expander for IDP or SK devices
5815XL: Signal Line Circuit (SLC) Expander for SD devices
RPS-1000/B: Power Supply. Red or Black Cabinet
5496: NAC Expander
5824: Serial/Parallel Module
5880: LED I/O Module
5865-3 or 5865-4: LED Annunciator
5883: Relay Interface

MISCELLANEOUS ACCESSORIES

HFSS: Software Suite. Provides programming, upload/download and event reporting
RBB: Remote Battery Box Cabinet. Use for backup batteries up to 35AH. Dimensions: 16"W x 10"H x 6"D
SK-SCK: Seismic Compliance Kit
SK-NIC: Network Interface Card
SK-FML: Multi Mode Fiber Card
SK-FSL: Single Mode Fiber Card
CELL-MOD: Cellular Communicator in Plastic Enclosure
CELL-CAB-SK: Cellular Communicator in Metal Enclosure with lock and key

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Farenhyt™ Series

IDP-PHOTO / IDP-PHOTO-T / IDP-PHOTOR

Intelligent Photoelectric Smoke Detector and Photoelectric Smoke Detector with Thermal

The IDP-PHOTO is a photoelectric smoke detector and the IDP-PHOTO-T is a photoelectric smoke detector with thermal. These plug in smoke detectors, with integral communication, provide features that surpass conventional detectors and are for use with the Honeywell Farenhyt Series fire alarm control panels (FACPs).

Detector sensitivity can be programmed from the FACP software. Sensitivity is continuously monitored and reported to the FACP. Point ID capability allows each detector's address to be set with rotary address switches, providing exact detector locations for selective maintenance when chamber contamination reaches unacceptable levels.

IDP-Photo and IDP-Photo-T have a unique optical sensing chamber that is engineered to sense smoke produced by a wide range of combustion sources. In the IDP-Photo-T, dual electronic thermistors add 135°F (57°C) thermal technology to maximize detection.

The IDP-PhotoR is a remote test capable detector for use with the DNR (W) duct smoke detectors. It is UL 268A listed when used with the DNR (W) duct smoke detector.



IDP-PHOTO (BASE NOT INCLUDED)

Installation

The IDP-Photo and IDP-Photo-T plug into a compatible IDP-series detector base. The IDP-PhotoR is a remote test capable detector for use with the DNR (W) duct smoke detector.

FEATURES & BENEFITS

- Sleek, low-profile design
- Reliable analog communications for trouble-free operation
- Age resistant polymer housing
- Dual electronic thermistor design on the IDP-Photo-T
- Superior EMI resistance for reliability
- Simple field cleaning for code compliance
- Variety of mounting options to meet any application
- Dual LED indicators for 360° visibility
- Detector transmits signal to indicate maintenance is required
- Optional remote LED annunciator (System Sensor® PN RA100Z)
- Plug-in mounting provides ease of installation
- Tamper-proof feature available on mounting bases
- Listed for use in duct applications
- Rotary address switches for fast installation
- UL Listed
- FM Approved
- CSFM Listed
- MEA Listed 225-02-E Vol. V

IDP-PHOTO, IDP-PHOTOR and IDP-PHOTO-T Technical Specifications

PHYSICAL

Height: 2.0" (5.08cm) less sensor
Diameter: 4.1" (10.4CM) installed in B501 base

ENVIRONMENTAL

Operating Temperature:
IDP-PHOTO: 32°F - 120 °F (0°C - 49°C)
IDP-PHOTO-T: 32°F - 100 °F (0°C - 38°C)

Humidity: 10 to 93% non-condensing)

ELECTRICAL RATINGS

Operating Voltage: 15 – 32VDC
SLC Standby and Alarm Current: 300 µA

OTHER RATINGS

IDP-PHOTO-T Thermal: Fixed temperature set point 135°F (57°C)
Velocity: 0 – 4000 fpm (0 – 20 m/sec) (suitable for installation in ducts)
IDP-PHOTO Insect Screen Hole Size: 0.016" (0.41 mm)nominal

ORDERING INFORMATION

IDP-PHOTO: Photoelectric Smoke Detector
IDP-PHOTO-T: Photoelectric Smoke Detector with Thermal (135°F)
IDP-PHOTOR: Photoelectric Smoke Detector, remote test capable, for use with DNR (W) duct smoke detector

ACCESSORIES

RA100Z: Remote LED Annunciator.
XR2B: Detector Removal Tool. A removal and replacement tool for IDP plug-in detectors. Includes the T55-127-000.
M02-04-01: Detector Test Magnet
M02-09-00: Test Magnet with Telescoping Handle
XP-4: Extension Pole for XR2B. Extends from 5 – 15 ft.
T55-127-000: Detector Removal Head.
BCK-200B: Black Detector Kit. For IDP-series detectors.
* Unless otherwise noted, specifications apply to IDP-Photo and IDP-Photo

COMPATIBILITY

The IDP-PHOTO, IDP-PHOTO-T and IDP-PHOTOR are compatible with the following IDP series detector bases:

- B210LP 6" Mounting Base
- B501 4" Mounting Base
- B224BI 6" Isolator Base
- B224RB 6" Relay Base
- B200SR 6" Sounder Base

The IDP-PHOTO, IDP-PHOTO-T and IDP-PHOTOR are compatible with the following Farenhyt Series FACPs:

- IFP-2100 / IFP-2100ECS / RFP-2100
- IFP-2000 / IFP-2000ECS / RPS-2000
- IFP-1000 / IFP-1000ECS
- IFP-300 / IFP-300ECS
- IFP-100 / IFP-100ECS
- IFP-75
- IFP-50

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Farenhyt™ Series

IDP-PHOTO / IDP-PHOTO-T / IDP-PHOTOR

Intelligent Photoelectric Smoke Detector and Photoelectric Smoke Detector with Thermal

The IDP-PHOTO is a photoelectric smoke detector and the IDP-PHOTO-T is a photoelectric smoke detector with thermal. These plug in smoke detectors, with integral communication, provide features that surpass conventional detectors and are for use with the Honeywell Farenhyt Series fire alarm control panels (FACPs).

Detector sensitivity can be programmed from the FACP software. Sensitivity is continuously monitored and reported to the FACP. Point ID capability allows each detector's address to be set with rotary address switches, providing exact detector locations for selective maintenance when chamber contamination reaches unacceptable levels.

IDP-Photo and IDP-Photo-T have a unique optical sensing chamber that is engineered to sense smoke produced by a wide range of combustion sources. In the IDP-Photo-T, dual electronic thermistors add 135°F (57°C) thermal technology to maximize detection.

The IDP-PhotoR is a remote test capable detector for use with the DNR (W) duct smoke detectors. It is UL 268A listed when used with the DNR (W) duct smoke detector.



IDP-PHOTO (BASE NOT INCLUDED)

Installation

The IDP-Photo and IDP-Photo-T plug into a compatible IDP-series detector base. The IDP-PhotoR is a remote test capable detector for use with the DNR (W) duct smoke detector.

FEATURES & BENEFITS

- Sleek, low-profile design
- Reliable analog communications for trouble-free operation
- Age resistant polymer housing
- Dual electronic thermistor design on the IDP-Photo-T
- Superior EMI resistance for reliability
- Simple field cleaning for code compliance
- Variety of mounting options to meet any application
- Dual LED indicators for 360° visibility
- Detector transmits signal to indicate maintenance is required
- Optional remote LED annunciator (System Sensor® PN RA100Z)
- Plug-in mounting provides ease of installation
- Tamper-proof feature available on mounting bases
- Listed for use in duct applications
- Rotary address switches for fast installation
- UL Listed
- FM Approved
- CSFM Listed
- MEA Listed 225-02-E Vol. V

IDP-PHOTO, IDP-PHOTOR and IDP-PHOTO-T Technical Specifications

PHYSICAL

Height: 2.0" (5.08cm) less sensor
Diameter: 4.1" (10.4CM) installed in B501 base

ENVIRONMENTAL

Operating Temperature:
IDP-PHOTO: 32°F - 120 °F (0°C - 49°C)
IDP-PHOTO-T: 32°F - 100 °F (0°C - 38°C)

Humidity: 10 to 93% non-condensing)

ELECTRICAL RATINGS

Operating Voltage: 15 – 32VDC
SLC Standby and Alarm Current: 300 µA

OTHER RATINGS

IDP-PHOTO-T Thermal: Fixed temperature set point 135°F (57°C)
Velocity: 0 – 4000 fpm (0 – 20 m/sec) (suitable for installation in ducts)
IDP-PHOTO Insect Screen Hole Size: 0.016" (0.41 mm)nominal

ORDERING INFORMATION

IDP-PHOTO: Photoelectric Smoke Detector
IDP-PHOTO-T: Photoelectric Smoke Detector with Thermal (135°F)
IDP-PHOTOR: Photoelectric Smoke Detector, remote test capable, for use with DNR (W) duct smoke detector

ACCESSORIES

RA100Z: Remote LED Annunciator.
XR2B: Detector Removal Tool. A removal and replacement tool for IDP plug-in detectors. Includes the T55-127-000.
M02-04-01: Detector Test Magnet
M02-09-00: Test Magnet with Telescoping Handle
XP-4: Extension Pole for XR2B. Extends from 5 – 15 ft.
T55-127-000: Detector Removal Head.
BCK-200B: Black Detector Kit. For IDP-series detectors.
* Unless otherwise noted, specifications apply to IDP-Photo and IDP-Photo

COMPATIBILITY

The IDP-PHOTO, IDP-PHOTO-T and IDP-PHOTOR are compatible with the following IDP series detector bases:

- B210LP 6" Mounting Base
- B501 4" Mounting Base
- B224BI 6" Isolator Base
- B224RB 6" Relay Base
- B200SR 6" Sounder Base

The IDP-PHOTO, IDP-PHOTO-T and IDP-PHOTOR are compatible with the following Farenhyt Series FACPs:

- IFP-2100 / IFP-2100ECS / RFP-2100
- IFP-2000 / IFP-2000ECS / RPS-2000
- IFP-1000 / IFP-1000ECS
- IFP-300 / IFP-300ECS
- IFP-100 / IFP-100ECS
- IFP-75
- IFP-50

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IDP-PHOTO / IDP-PHOTO-T / IDP-PHOTOR

Intelligent Photoelectric Smoke Detector and Photoelectric Smoke Detector with Thermal

The IDP-PHOTO is a photoelectric smoke detector and the IDP-PHOTO-T is a photoelectric smoke detector with thermal. These plug in smoke detectors, with integral communication, provide features that surpass conventional detectors and are for use with the Honeywell Farenhyt Series fire alarm control panels (FACPs).

Detector sensitivity can be programmed from the FACP software. Sensitivity is continuously monitored and reported to the FACP. Point ID capability allows each detector's address to be set with rotary address switches, providing exact detector locations for selective maintenance when chamber contamination reaches unacceptable levels.

IDP-Photo and IDP-Photo-T have a unique optical sensing chamber that is engineered to sense smoke produced by a wide range of combustion sources. In the IDP-Photo-T, dual electronic thermistors add 135°F (57°C) thermal technology to maximize detection.

The IDP-PhotoR is a remote test capable detector for use with the DNR (W) duct smoke detectors. It is UL 268A listed when used with the DNR (W) duct smoke detector.



IDP-PHOTO (BASE NOT INCLUDED)

Installation

The IDP-Photo and IDP-Photo-T plug into a compatible IDP-series detector base. The IDP-PhotoR is a remote test capable detector for use with the DNR (W) duct smoke detector.

FEATURES & BENEFITS

- Sleek, low-profile design
- Reliable analog communications for trouble-free operation
- Age resistant polymer housing
- Dual electronic thermistor design on the IDP-Photo-T
- Superior EMI resistance for reliability
- Simple field cleaning for code compliance
- Variety of mounting options to meet any application
- Dual LED indicators for 360° visibility
- Detector transmits signal to indicate maintenance is required
- Optional remote LED annunciator (System Sensor® PN RA100Z)
- Plug-in mounting provides ease of installation
- Tamper-proof feature available on mounting bases
- Listed for use in duct applications
- Rotary address switches for fast installation
- UL Listed
- FM Approved
- CSFM Listed
- MEA Listed 225-02-E Vol. V

IDP-PHOTO, IDP-PHOTOR and IDP-PHOTO-T Technical Specifications

PHYSICAL

Height: 2.0" (5.08cm) less sensor
Diameter: 4.1" (10.4CM) installed in B501 base

ENVIRONMENTAL

Operating Temperature:
IDP-PHOTO: 32°F - 120 °F (0°C - 49°C)
IDP-PHOTO-T: 32°F - 100 °F (0°C - 38°C)

Humidity: 10 to 93% non-condensing)

ELECTRICAL RATINGS

Operating Voltage: 15 – 32VDC
SLC Standby and Alarm Current: 300 µA

OTHER RATINGS

IDP-PHOTO-T Thermal: Fixed temperature set point 135°F (57°C)
Velocity: 0 – 4000 fpm (0 – 20 m/sec) (suitable for installation in ducts)
IDP-PHOTO Insect Screen Hole Size: 0.016" (0.41 mm)nominal

ORDERING INFORMATION

IDP-PHOTO: Photoelectric Smoke Detector
IDP-PHOTO-T: Photoelectric Smoke Detector with Thermal (135°F)
IDP-PHOTOR: Photoelectric Smoke Detector, remote test capable, for use with DNR (W) duct smoke detector

ACCESSORIES

RA100Z: Remote LED Annunciator.
XR2B: Detector Removal Tool. A removal and replacement tool for IDP plug-in detectors. Includes the T55-127-000.
M02-04-01: Detector Test Magnet
M02-09-00: Test Magnet with Telescoping Handle
XP-4: Extension Pole for XR2B. Extends from 5 – 15 ft.
T55-127-000: Detector Removal Head.
BCK-200B: Black Detector Kit. For IDP-series detectors.
* Unless otherwise noted, specifications apply to IDP-Photo and IDP-Photo

COMPATIBILITY

The IDP-PHOTO, IDP-PHOTO-T and IDP-PHOTOR are compatible with the following IDP series detector bases:

- B210LP 6" Mounting Base
- B501 4" Mounting Base
- B224BI 6" Isolator Base
- B224RB 6" Relay Base
- B200SR 6" Sounder Base

The IDP-PHOTO, IDP-PHOTO-T and IDP-PHOTOR are compatible with the following Farenhyt Series FACPs:

- IFP-2100 / IFP-2100ECS / RFP-2100
- IFP-2000 / IFP-2000ECS / RPS-2000
- IFP-1000 / IFP-1000ECS
- IFP-300 / IFP-300ECS
- IFP-100 / IFP-100ECS
- IFP-75
- IFP-50

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IDP-HEAT/ IDP-HEAT-HT/ IDP-HEAT-ROR

Intelligent Thermal and Rate of Rise Thermal Detectors

The IDP-Heat, IDP-Heat-HT, and IDP-Heat-ROR are plug in thermal detectors, with integral communication, that provide features that surpass conventional detectors. These thermal detectors are for use with Honeywell Farenhyt series fire alarm control panels (FACPs).

Detector sensitivity can be programmed from the FACP software. Sensitivity is continuously monitored and reported to the FACP. Point ID capability allows each detector's address to be set with rotary address switches, providing exact detector locations for selective maintenance when chamber contamination reaches unacceptable levels.

IDP-Heat is a fixed temperature thermal detector that uses a thermistor sensing circuit to produce 135°F (57°C) fixed thermal detection.

IDP-Heat-HT is a variable high temperature detector that provides high temperature detection at 135°F – 190°F (57°C – 88°C).

IDP-Heat-ROR is a fixed temperature and rate-of-rise thermal detector that uses a thermistor sensing circuit to produce 135°F (57°C) thermal protection..



IDP-HEAT (BASE NOT INCLUDED)

FEATURES & BENEFITS

- Sleek, low-profile design
- Reliable analog communications for trouble-free operation
- Age resistant polymer housing
- Innovative thermistor sensing circuit
- Superior EMI resistance for reliability
- Variety of mounting options to meet any application
- Dual LED indicators for 360° visibility
- Detector transmits signal to indicate maintenance is required
- Plug-in mounting provides ease of installation
- Optional remote LED annunciator (System Sensor® PN RA100Z)
- Tamper-proof feature available on mounting bases
- Rotary address switches for fast installation
- UL Listed
- CSFM Listed
- MEA Listed 383-02-E Vol. VI

IDP-HEAT, IDP-HEAT-HT and IDP-HEAT-ROR Technical Specifications

PHYSICAL

Height: 2.0" (5.08cm)
Diameter: 4.1" (10.4CM) installed in B501 base. 6.1" installed in B210LP base
Shipping Weight: 4.8oz

ELECTRICAL RATINGS

Operating Voltage: 15 – 32VDC
SLC Standby and Alarm Current: 300 µA

ENVIRONMENTAL

Operating Temperature
IDP-Heat & IDP-Heat-ROR: -4°F - 100 °F (-20°C - 38°C)
IDP-Heat-HT: -4°F - 150 °F (-20°C - 66°C)
Humidity: 10 to 93% non-condensing)

THERMAL RATINGS

IDP-Heat: Fixed temperature setpoint 135°F (57°C)
IDP-Heat-HT: High temperature heat 135°F – 190°F (57°C – 88°C)
IDP-Heat-ROR: Rate-of-rise detection 15°F/min (9°C/min)

ORDERING INFORMATION

IDP-Heat: Fixed temperature thermal detector
IDP-Heat-HT: Fixed high temperature thermal detector
IDP-Heat-ROR: Fixed temperature and rate-of-rise thermal detector

ACCESSORIES

RA100Z: Remote LED Annunciator.
XR2B: Detector Removal Tool. A removal and replacement tool for IDP plug-in detectors. Includes the T55-127-000.
M02-04-01: Detector test magnet
M02-09-00: Test Magnet with telescoping handle
XP-4: Extension pole for XR2B. Extends from 5 – 15 ft.
T55-127-000: Detector removal head.
BCK-200B: Black detector kit. For IDP-series detectors.
* Unless otherwise noted, specifications apply to IDP thermal detectors.

COMPATIBILITY

The IDP-HEAT, IDP-HEAT-HT, and IDP-HEAT-ROR are compatible with the following IDP series bases:

- B210LP 6" Mounting Base
- B501 4" Mounting Base
- B224BI 6" Isolator Base
- B224RB 6" Relay Base
- B200SR 6" Sounder Base

The IDP-HEAT, IDP-HEAT-HT, and IDP-HEAT-ROR are compatible with the following Farenhyt Series FACPs:

- IFP-2100 / IFP-2100ECS / RFP-2100
- IFP-2000 / IFP-2000ECS / RPS-2000
- IFP-1000 / IFP-1000ECS
- IFP-300 / IFP-300ECS
- IFP-100 / IFP-100ECS
- IFP-75
- IFP-50

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Farenhyt™ Series

IDP-HEAT/ IDP-HEAT-HT/ IDP-HEAT-ROR

Intelligent Thermal and Rate of Rise Thermal Detectors

The IDP-Heat, IDP-Heat-HT, and IDP-Heat-ROR are plug in thermal detectors, with integral communication, that provide features that surpass conventional detectors. These thermal detectors are for use with Honeywell Farenhyt series fire alarm control panels (FACPs).

Detector sensitivity can be programmed from the FACP software. Sensitivity is continuously monitored and reported to the FACP. Point ID capability allows each detector's address to be set with rotary address switches, providing exact detector locations for selective maintenance when chamber contamination reaches unacceptable levels.

IDP-Heat is a fixed temperature thermal detector that uses a thermistor sensing circuit to produce 135°F (57°C) fixed thermal detection.

IDP-Heat-HT is a variable high temperature detector that provides high temperature detection at 135°F – 190°F (57°C – 88°C).

IDP-Heat-ROR is a fixed temperature and rate-of-rise thermal detector that uses a thermistor sensing circuit to produce 135°F (57°C) thermal protection..



IDP-HEAT (BASE NOT INCLUDED)

FEATURES & BENEFITS

- Sleek, low-profile design
- Reliable analog communications for trouble-free operation
- Age resistant polymer housing
- Innovative thermistor sensing circuit
- Superior EMI resistance for reliability
- Variety of mounting options to meet any application
- Dual LED indicators for 360° visibility
- Detector transmits signal to indicate maintenance is required
- Plug-in mounting provides ease of installation
- Optional remote LED annunciator (System Sensor® PN RA100Z)
- Tamper-proof feature available on mounting bases
- Rotary address switches for fast installation
- UL Listed
- CSFM Listed
- MEA Listed 383-02-E Vol. VI

IDP-HEAT, IDP-HEAT-HT and IDP-HEAT-ROR Technical Specifications

PHYSICAL

Height: 2.0" (5.08cm)
Diameter: 4.1" (10.4CM) installed in B501 base. 6.1" installed in B210LP base
Shipping Weight: 4.8oz

ELECTRICAL RATINGS

Operating Voltage: 15 – 32VDC
SLC Standby and Alarm Current: 300 µA

ENVIRONMENTAL

Operating Temperature
IDP-Heat & IDP-Heat-ROR: -4°F - 100 °F (-20°C - 38°C)
IDP-Heat-HT: -4°F - 150 °F (-20°C - 66°C)
Humidity: 10 to 93% non-condensing)

THERMAL RATINGS

IDP-Heat: Fixed temperature setpoint 135°F (57°C)
IDP-Heat-HT: High temperature heat 135°F – 190°F (57°C – 88°C)
IDP-Heat-ROR: Rate-of-rise detection 15°F/min (9°C/min)

ORDERING INFORMATION

IDP-Heat: Fixed temperature thermal detector
IDP-Heat-HT: Fixed high temperature thermal detector
IDP-Heat-ROR: Fixed temperature and rate-of-rise thermal detector

ACCESSORIES

RA100Z: Remote LED Annunciator.
XR2B: Detector Removal Tool. A removal and replacement tool for IDP plug-in detectors. Includes the T55-127-000.
M02-04-01: Detector test magnet
M02-09-00: Test Magnet with telescoping handle
XP-4: Extension pole for XR2B. Extends from 5 – 15 ft.
T55-127-000: Detector removal head.
BCK-200B: Black detector kit. For IDP-series detectors.
* Unless otherwise noted, specifications apply to IDP thermal detectors.

COMPATIBILITY

The IDP-HEAT, IDP-HEAT-HT, and IDP-HEAT-ROR are compatible with the following IDP series bases:

- B210LP 6" Mounting Base
- B501 4" Mounting Base
- B224BI 6" Isolator Base
- B224RB 6" Relay Base
- B200SR 6" Sounder Base

The IDP-HEAT, IDP-HEAT-HT, and IDP-HEAT-ROR are compatible with the following Farenhyt Series FACPs:

- IFP-2100 / IFP-2100ECS / RFP-2100
- IFP-2000 / IFP-2000ECS / RPS-2000
- IFP-1000 / IFP-1000ECS
- IFP-300 / IFP-300ECS
- IFP-100 / IFP-100ECS
- IFP-75
- IFP-50

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IDP-HEAT/ IDP-HEAT-HT/ IDP-HEAT-ROR

Intelligent Thermal and Rate of Rise Thermal Detectors

The IDP-Heat, IDP-Heat-HT, and IDP-Heat-ROR are plug in thermal detectors, with integral communication, that provide features that surpass conventional detectors. These thermal detectors are for use with Honeywell Farenhyt series fire alarm control panels (FACPs).

Detector sensitivity can be programmed from the FACP software. Sensitivity is continuously monitored and reported to the FACP. Point ID capability allows each detector's address to be set with rotary address switches, providing exact detector locations for selective maintenance when chamber contamination reaches unacceptable levels.

IDP-Heat is a fixed temperature thermal detector that uses a thermistor sensing circuit to produce 135°F (57°C) fixed thermal detection.

IDP-Heat-HT is a variable high temperature detector that provides high temperature detection at 135°F – 190°F (57°C – 88°C).

IDP-Heat-ROR is a fixed temperature and rate-of-rise thermal detector that uses a thermistor sensing circuit to produce 135°F (57°C) thermal protection..



IDP-HEAT (BASE NOT INCLUDED)

FEATURES & BENEFITS

- Sleek, low-profile design
- Reliable analog communications for trouble-free operation
- Age resistant polymer housing
- Innovative thermistor sensing circuit
- Superior EMI resistance for reliability
- Variety of mounting options to meet any application
- Dual LED indicators for 360° visibility
- Detector transmits signal to indicate maintenance is required
- Plug-in mounting provides ease of installation
- Optional remote LED annunciator (System Sensor® PN RA100Z)
- Tamper-proof feature available on mounting bases
- Rotary address switches for fast installation
- UL Listed
- CSFM Listed
- MEA Listed 383-02-E Vol. VI

IDP-HEAT, IDP-HEAT-HT and IDP-HEAT-ROR Technical Specifications

PHYSICAL

Height: 2.0" (5.08cm)
Diameter: 4.1" (10.4CM) installed in B501 base. 6.1" installed in B210LP base
Shipping Weight: 4.8oz

ELECTRICAL RATINGS

Operating Voltage: 15 – 32VDC
SLC Standby and Alarm Current: 300 µA

ENVIRONMENTAL

Operating Temperature
IDP-Heat & IDP-Heat-ROR: -4°F - 100 °F (-20°C - 38°C)
IDP-Heat-HT: -4°F - 150 °F (-20°C - 66°C)
Humidity: 10 to 93% non-condensing)

THERMAL RATINGS

IDP-Heat: Fixed temperature setpoint 135°F (57°C)
IDP-Heat-HT: High temperature heat 135°F – 190°F (57°C – 88°C)
IDP-Heat-ROR: Rate-of-rise detection 15°F/min (9°C/min)

ORDERING INFORMATION

IDP-Heat: Fixed temperature thermal detector
IDP-Heat-HT: Fixed high temperature thermal detector
IDP-Heat-ROR: Fixed temperature and rate-of-rise thermal detector

ACCESSORIES

RA100Z: Remote LED Annunciator.
XR2B: Detector Removal Tool. A removal and replacement tool for IDP plug-in detectors. Includes the T55-127-000.
M02-04-01: Detector test magnet
M02-09-00: Test Magnet with telescoping handle
XP-4: Extension pole for XR2B. Extends from 5 – 15 ft.
T55-127-000: Detector removal head.
BCK-200B: Black detector kit. For IDP-series detectors.
* Unless otherwise noted, specifications apply to IDP thermal detectors.

COMPATIBILITY

The IDP-HEAT, IDP-HEAT-HT, and IDP-HEAT-ROR are compatible with the following IDP series bases:

- B210LP 6" Mounting Base
- B501 4" Mounting Base
- B224BI 6" Isolator Base
- B224RB 6" Relay Base
- B200SR 6" Sounder Base

The IDP-HEAT, IDP-HEAT-HT, and IDP-HEAT-ROR are compatible with the following Farenhyt Series FACPs:

- IFP-2100 / IFP-2100ECS / RFP-2100
- IFP-2000 / IFP-2000ECS / RPS-2000
- IFP-1000 / IFP-1000ECS
- IFP-300 / IFP-300ECS
- IFP-100 / IFP-100ECS
- IFP-75
- IFP-50

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IDP-BEAM / IDP-BEAM-T

Addressable Beam Smoke Detector

The IDP-BEAM and IDP-BEAM-T are addressable beam smoke detectors for use with Farenhyt Series fire alarm control panels (FACPs). They are uniquely suited for protecting open areas with high ceilings where other methods of smoke detection are difficult to install and maintain. The IDP-BEAM-T also includes an integrated sensitivity test feature.

Installation of the single-ended reflective design is much easier than dual ended projected beam detectors. Alignment is quickly accomplished using an optical sight and a two-digit signal strength meter incorporated into the IDP-BEAM and IDP-BEAM-T.

Listed for operation from -22°F to 131°F (-30°C to 55°C), the IDP-BEAM and IDP-BEAM-T can be used in applications to provide early warning in environments where temperature extremes exceed the capability of other types of smoke detectors.

The IDP-BEAM and IDP-BEAM-T consist of a transmitter/receiver unit and a reflector. When smoke enters the area between the unit and the reflector it causes a reduction in the signal. When the smoke level reaches the predetermined threshold, an alarm is activated.

These beam smoke detectors have four sensitivity selections along with two Acclimate settings. When either of the two Acclimate settings are selected, the detector will automatically adjust its sensitivity using advanced software algorithms to select the optimum sensitivity for the specific environment.

The IDP-BEAM-T is equipped with an integral sensitivity test feature that consists of a test filter attached to a servo motor inside the detector optics Using the remote test station, (System Sensor® PN RTS451), the motor is activated and moves the filter in the pathway of the light beam, which tests the detector sensitivity. This integral sensitivity test feature allows the user to quickly and easily meet the annual maintenance and test requirements of NFPA 72.



IDP-BEAM

FEATURES & BENEFITS

- 16 to 328 foot protection range
- Single-ended, reflective design
- User friendly alignment procedure
- Six user selectable sensitivity levels
- Optional integral NFPA 72 sensitivity test feature
- Removable plug-in terminal blocks
- Digital display for easy alignment
- Built-in automatic gain control compensates for signal deterioration from dust build-up
- Optional remote test station
- Rotary address switches for fast installation
- Paintable cover
- UL Listed
- CSFM Listed
- MEA Listed 95-01-E Vol. II

IDP-BEAM and IDP-BEAM-T Technical Specifications

OPERATING

Protection Range: 16' – 328' (5 – 100 m)

Adjustment Angle: +/–10° horizontal & vertical (optics move independent of the unit)

Sensitivity Levels: Level 1–25%; Level 2–30%; Level 3–40%; Level 4–50%; Acclimate Level 1–30 to 50%; Acclimate Level 2–40 to 50%

Fault Condition (Trouble): 96% or more obscuration blockage in alignment mode; improper alignment; self-compensation limit reached

Alignment Aid: Optical gunsight; integral signal strength indication; 2-digit display

LEDs: Normal–flashing green; Yellow–trouble; Red–alarm

Test/Rest Feature: Integral sensitivity test filter (IDP-Beam-T only); sensitivity filter (incremental scale on reflector); local test switch; local reset switch; remote test and reset switch (compatible with RTS151 and RTS151KEY test station)

PHYSICAL

Detector: 10"H x 7.5"W x 3.3"D (25.4 x 19.1 x 8.4 cm)

Reflector for 16' – 230': 7.9" H (20 cm) x 9.1" W (23 cm)

Reflector for Beyond 230': 15.7" H (40 cm) x 18.1" W (46 cm)

Shipping Weight: 3.9 lbs (1.8 kg)

ENVIRONMENTAL

Operating Temperature: 32°-100°F (0°C–38°C)

Humidity: 10 to 93% non-condensing)

ELECTRICAL RATINGS

Operating Voltage: 15 – 32 VDC

SLC current draw: Standby & Alarm: 2mA Max.

Accessory current draw: Standby: 2mA Max.; Alarm: 8.5mA Max.

Current During Testing (Average): 500 mA max

ORDERING INFORMATION

IDP-Beam: Beam Smoke Detector

IDP-Beam-T: Beam Smoke Detector with Test Feature

ACCESSORIES

BEAMLRK: Long Range Accessory Kit. Required for applications in excess of 230 ft (70m).

BEAMMMK: Multi-Mount Kit. Provides ceiling or wall mount capability with increased angular adjustment for either the beam or the reflector. When installed with the transmitter/receiver unit, BEAMSMK must also be used.

BEAMSMK: Surface Mount Kit

RTS151: Remote Test Station. Used to initiate the NFPA sensitivity test function.

RTS151KEY: Remote Test Station with Key Lock

BEAMHK: Heater Kit for Transmitter/Receiver Unit. See electrical requirement.

BEAMHKR: Heater Kit for Reflector. See electrical requirements.

COMPATIBILITY

The IDP-BEAM and IDP-BEAM-T are compatible with the following Farenhyt Series FACPs:

- IFP-2100 / IFP-2100ECS / RFP-2100
- IFP-2000 / IFP-2000ECS / RPS-2000
- IFP-1000 / IFP-1000ECS
- IFP-300 / IFP-300ECS
- IFP-100 / IFP-100ECS
- IFP-75
- IFP-50

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IDP-ACCLIMATE

Addressable Multicriteria Smoke Detector

The IDP-ACCLIMATE Multicriteria Photoelectric Smoke Detector incorporates both thermal and photoelectric technologies that interact to maximize detection. An on-board microprocessor with advanced software focuses on rejecting nuisance alarms. The IDP-ACCLIMATE is for use with the Honeywell Farenhyt Series fire alarm control panels (FACPs).

Using advanced software, IDP-ACCLIMATE continuously samples the air in the environment and adjusts its detection parameters and alarm threshold accordingly. And it does this automatically, without user intervention.

A patented photoelectric sensing chamber and dual thermistor heat detector combine with an array of on-board software tools, to maximize fire detection. In a real fire, the smoke and heat sensors work together to make the quickest possible decision. The photo sensor is optimized for smoldering fires, the heat sensors are rate-of-rise compensated to provide a faster response to flaming fires. The on-board intelligent software combines both signals to give an early alarm.

A dual stage drift compensation feature reduces maintenance frequency. IDP-ACCLIMATE offsets the effects of gradual dust buildup and will notify the control panel before its compensation level is reached, allowing time for maintenance. Once the compensation limit is reached, a second signal is sent to the control panel indicating an urgent need for maintenance.

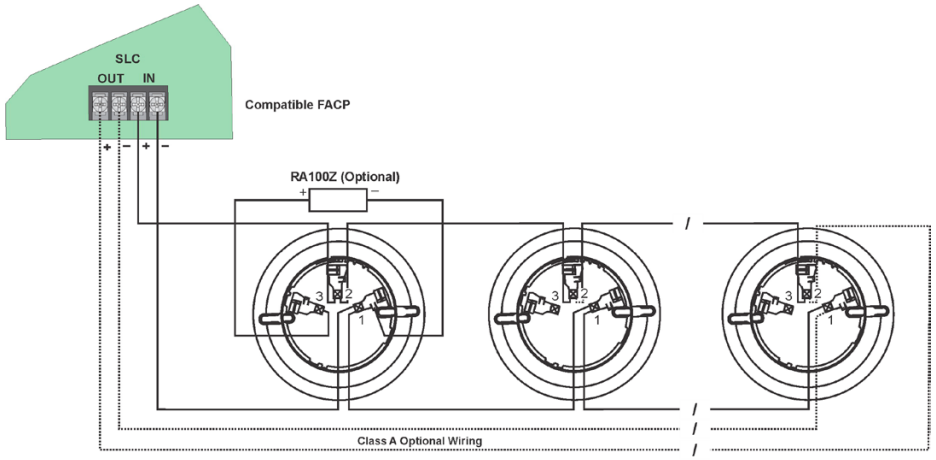


IDP-ACCLIMATE (BASE NOT INCLUDED)

FEATURES & BENEFITS

- Reliable analog communications for trouble-free operation
- Age resistant polymer housing
- Dual electronic thermistor design
- Superior EMI resistance for reliability
- Microprocessor-based design to provide maximum features
- Simple field cleaning for code compliance
- 0.025” mesh bug screen to keep unwanted insects out
- Variety of mounting options to meet any application
- Dual LED indicators for 360° visibility
- On-board drift compensation reduces maintenance
- Detector transmits signal to indicate maintenance is required
- Detector sensitivity increases in hot fires
- Transient smoke conditions are ignored
- Plug-in mounting provides ease of installation
- Tamper-proof feature available on mounting bases
- Rotary address switches for fast installation
- UL Listed
- CSFM Listed
- MEA Listed 225-02-E Vol. V

IDP-ACCLIMATE Technical Specifications



Wiring IDP-Series Detector Mounting Bases

PHYSICAL

Height: 1.66" (4.2cm)
Diameter: 4.0" (10.2cm)
Shipping Weight: 5.2 oz. (147 g)

ENVIRONMENTAL

Operating Temperature: 32°-100°F (0°C–38°C)
Humidity: 10 to 93% non-condensing)

ELECTRICAL RATINGS

Operating Voltage: 15 – 32VDC
Standby Current: 250 µA @ 24 VDC (no communication; LED off). 300 µA @ 24 VDC (one communication every 5 sec with LED enabled)
LED Current: 6.5mA @ 24VDC max (when on)

OTHER RATINGS

Thermal: Fixed Temperature Setpoint 135°F (57°C)
Velocity: 0 – 4000 fpm (0 – 6.1 m/sec)
Insect Screen Hole Size: 0.025" (0.64 mm) nominal

ORDERING INFORMATION

IDP-ACCLIMATE: Multicriteria Photoelectric Smoke Detector

ACCESSORIES

RA100Z: Remote LED annunciator.
XR2B: Detector removal tool. A removal and replacement tool for IDP plug-in detectors. Includes the T55-127-000.
M02-04-01: Detector test magnet
M02-09-00: Telescoping test magnet
XP-4: Extension pole for XR2B. Extends from 5 – 15 ft.
T55-127-000: Detector removal head.
BCK-200B: Black detector kit. For IDP-series detectors.

The IDP-ACCLIMATE is compatible with the following detector bases:

- B210LP - 6" Mounting Base
- B501 - 4" Mounting Base
- B224BI - 6" Isolator Base
- B224RB - 6" Relay Base
- B200SR 6" - Sounder Base

The IDP-ACCLIMATE is compatible with the following Farenhyt Series FACPs:

- IFP-2100 / IFP-2100ECS / RFP-2100
- IFP-2000 / IFP-2000ECS / RPS-2000
- IFP-1000 / IFP-1000ECS
- IFP-300 / IFP-300ECS
- IFP-100 / IFP-100ECS
- IFP-75
- IFP-50

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DNR / DNRW

Intelligent Non-Relay Duct Detector

The DNR Intelligent non-relay photoelectric duct smoke detector housing and DNRW watertight non-relay photoelectric duct smoke detector housing (head not included) are for use with Honeywell Farenhyt Series fire alarm control panels (FACPs).



DNR

The DNR and DNRW feature a pivoting housing that is flexible enough to fit configurations from square to rectangular. They feature low-flow technology that enables duct smoke detection throughout a broad range of airflow environments. Many difficult to solve HVAC applications occur in low airflow duct applications where reliable smoke detection is critical. These duct detectors can detect smoke at air speed velocities of 100 feet per minute or greater, while continuing the same reliable performance to 4000 feet per minute.

By sampling air currents passing through a duct and giving dependable performance for shutdown of fans, blowers, and air conditioning systems, the DNR and DNRW prevent the spread of toxic smoke and fire gases through the protected area.

The intelligent duct detectors communicate and are continuously monitored through the FACP signaling line circuit (SLC) loop. Detector sensitivity changes caused by dirt, temperature, or humidity are reported to the FACP, allowing compensation algorithms to maintain the detector's set sensitivity. An advanced indication at the panel identifies the detector address, allowing for selected maintenance to be performed as needed.

INSTALLATION

The DNR and DNRW are designed for use in air handling systems that have air velocities or 100 to 4000 feet per minute (0.5 – 20.3 m/s).

FEATURES & BENEFITS

- Photoelectric, integrated low-flow technology (IDP-Photo or IDP-PhotoR detector head sold separately)
- Air velocity rating from 100 to 4000 feet per minute (0.5 to 20.32 meters per second)
- Support for Class B or Class A wiring
- Patented sampling tube installs from front or back of the detector with no tools required
- Available space within housing to accommodate mounting of relay module
- Easy to clean
- Provides trouble signal in the event the sensor cover is removed or improperly installed
- Easily accessible code wheels on sensor head (IDP-Photo sold separately)
- UL recognized field replaceable power and sensor boards
- Transparent cover for convenient visual inspection
- UL 268A listed
- Remote testing capability
- DNRW is listed as a watertight enclosure allowing for use in the most extreme environments
- CSFM Listed
- MEA Listed - 225-02-E Vol. V

DNR / DNRW Technical Specifications

PHYSICAL

(Rectangular): 14.38" (37 cm) L x 5" (12.7 cm) W x 2.5" (6..6 cm) D
(Square): 7.75 " (19.7cm) L x 9 " (22.9cm) W x 2.5" (6.35cm) D
Weight: 1.6 lb.

ENVIRONMENTAL

Operating Temperature: -4°F to -158°F (-20°C to -70°C)
Humidity: 0 to 95% non-condensing)

AIR VELOCITY

100 to 4000 ft/min (0.5 – 20.3 m/s)

ELECTRICAL

Please see detector head installation manual for electrical specifications

ORDERING INFORMATION

DNR: Intelligent non-relay duct smoke detector
DNRW: Watertight non-relay duct smoke detector
IDP-PhotoR: Addressable Photoelectric Detector with remote test capability (not included with DNR)
IDP-Relay: Addressable Relay Module, must be added if relay function is required, (fits in housing)

ACCESSORIES

DST1: Metal Sampling Tube Duct Width up to 1'
DST1-5: Metal Sampling Tube Duct Widths 1' - 2'
DST3: Metal Sampling Tube Duct Widths 2' – 4'
DST5: Metal Sampling Tube Duct Widths 4' – 8'
DST10: Metal Sampling Tube Duct Widths 8' – 12'
DH400OE-1: Weatherproof Enclosure
EXT: Metal Exhaust Tube Duct width 1'
RA100Z: Remote LED Annunciator
DCOIL: Duct Accessory Coil. (see important note for detail)
RTS151: Magnetic Remote Test station
RTS151KEY: Key-Activated Remote Test station
M02-04-00: Test Magnet
P48-21-00: Replacement End Cap for Metal Sampling Tube

COMPATIBILITY

The DNR and DNRW are compatible with the following Farenhyt Series FACPs:

- IFP-2100 / ECS / RFP-2100
- IFP-2000 / ECS / RPS-2000
- IFP-1000 / ECS
- IFP-300 / ECS
- IFP-100 / ECS
- IFP-75
- IFP-50
- IFP-25

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Farenhyt™ Series

B501 / B210LP

Addressable Detector Bases

The B210LP 6" mounting base and the B501 4" mounting base are plug in detector bases for IDP style detectors intended for use with Honeywell Farenhyt Series fire alarm control panels (FACPs).

The B210LP and B501 have screw terminals for power (+) and (-) and remote annunciator connections. Communication takes place over the power (+) and (-) lines.



B210LP BASE



B501 BASE

INSTALLATION

The B210LP and B501 can be mounted on a variety of junction boxes as shown in the tables below.

U.S. Junction Box Selection Guide*

MODEL	SINGLE GANG	3.5" OCT	4" OCT	4" SQ
B210LP	Yes	Yes	Yes	Yes
B501	No	Yes	No	No

Metric Junction Box Selection Guide*

MODEL	50MM	60MM	70MM	75MM
B210LP	No	No	No	No
B501	Yes	Yes	Yes	No

*Box depth is contingent on base and wire size. Refer to the National Electric Code or applicable local codes for appropriate recommendations.

FEATURES & BENEFITS

- Plug-in mounting provides ease of installation
- Tamper-proof feature prevents removal of the detector without the use of a tool
- Range of mounting options to meet any application
- Rotary address switches for fast installation
- Optional remote LED annunciator (P/N RA100Z)
- SEMS screws
- 12–22 AWG wire ranges for installation flexibility
- UL Listed
- CSFM Listed
- FM Listed
- MEA Listed 205-91-E Vol, IX

B210LP and B501 Technical Specifications

PHYSICAL

B210LP Diameter: 6.1" (155 mm)
B501 Diameter: 4.1" (104 mm)

ELECTRICAL RATINGS

Operating Voltage: 15 to 32VDC
Wire Gauge: 18–12
SLC Standby and Alarm Current: 170µA
Terminals

- **Terminal 1:** Power (–) and Optional RA100Z
- **Terminal 2:** Power (+)
- **Terminal 3:** Optional RA100Z Remote Annunciator

ENVIRONMENTAL

Operating Temperature: 32°-120°F (0°C – 49°C)
Humidity: 10 to 93% non-condensing)

ORDERING INFORMATION

B210LP: 6" Mounting Base
B501 4: Mounting Base
B210LPBP: 6" Mounting Base bulk pkg of 10

ACCESSORIES

RA100Z: Remote LED Annunciator.
XR2B: Detector Removal Tool. A removal and replacement tool for IDP plug-in detectors. Includes the T55-127-000.
M02-04-00: Detector Test Magnet.
M02-09-00: Test Magnet with Telescoping Handle.
XP-4: Extension Pole for XR2B. Extends from 5 – 15 ft.
T55-127-000: Detector Removal Head.
BCK-200B: Black Detector Kit. For IDP-series detectors.
F210: Accessory flange ring for B210LP

COMPATIBILITY

The B210LP and B501 are compatible with the following IDP series detectors:

IDP-Photo: Photoelectric Smoke Detector
IDP-Photo-T: Photoelectric Smoke Detector with Thermal
IDP-Acclimate: Multicriteria Photoelectric Smoke Detector
IDP-Heat: Fixed Temperature Thermal Detector
IDP-Heat-ROR: Rate-of-Rise Detector with Thermal
IDP-Heat-HT: Fixed High Temperature Thermal Detector

The B210LP and B501 are compatible with the following Farenhyt Series FACPs:

- IFP-2100 / IFP-2100ECS / RFP-2100
- IFP-2000 / IFP-2000ECS / RPS-2000
- IFP-1000 / IFP-1000ECS
- IFP-300 / IFP-300ECS
- IFP-100 / IFP-100ECS
- IFP-75
- IFP-50

For a complete listing of all compliance approvals and certifications, please visit www.farenhyt.com.

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Farenhyt™ Series

B200SR / B200SR-LF

Intelligent Sounder Bases

The B200SR sounder base series is designed for new and existing dwelling unit applications. It offers maximum flexibility in installation, configuration, and operation to meet or exceed UL 268 and UL 464 requirements.

The B200SR series is fully compatible with existing B501BHSeries sounder base installations. The device enables users to select one of two B501-supported tones (ANSI Temporal 3 or Continuous) by removing a jumper.

With its attractive aesthetics, the B200SR series is ideal for applications where appearance is critical. For example, the sounder base employs a separate mounting plate that installs on various junction box sizes to eliminate unsightly surfacemount boxes. In addition, the mounting plate enables pre-wiring of all connections to speed and simplify installation. The housing then mates with the mounting plate and is locked in position with two retaining screws, which are covered by the installed sensor head for added tamper resistance.

The B200SR-LF low frequency sounder base is designed to meet the NFPA 72 sleeping space requirement to produce a fundamental frequency of 520 Hz +/– 10% with a square wave or its equivalent. Studies show that a lower frequency, centered around 520 Hz, is the most ideal to awaken sleeping occupants, even those with mild to severe hearing loss.Installation



B200SR



B200SR-LF

INSTALLATION

The B200SR or B200SR-LF can be mounted directly into a 4” square by at least 1.5” – 2.1” deep electrical box, using the supplied mounting kit.

FEATURES & BENEFITS

- Tone selection via an onboard jumper
- UL 268 and UL 464 compliant
- Pre-wire mounting plate fits various junction box sizes
- Fully compatible with existing B501BH-Series sounder base installations
- Mechanical locking feature prevents the removal of the attached sensor head
- 520 Hz +/– 10% square wave tone (B200S-LF)

B200SR and B200SR-LF Technical Specifications

PHYSICAL

Height: 2.0" (5.08 cm) less sensor
Width: 6.875" (17.46 cm)
Shipping Weight: B200SR 0.50 lb. (227 gm);
B200SR-LF: 0.60 lb. (272 gm)

ENVIRONMENTAL

Operating Temperature: Refer to applicable sensor operating temperature range using the base/ sensor cross reference chart at systemsensor.com
Humidity: 10 to 93% non-condensing)

ELECTRICAL RATINGS

External Supply Voltage:16 to 33VDC (VFWR)
Alarm Current (B200SR): 35mA maximum
Alarm Current (B200SR-LF): 125mA maximum
SLC Operating Voltage: 15 to 32VDC
SLC Standby & Alarm Current: 300 µA maximum

SOUND OUTPUT

Greater than 85 dBA minimum measured in a UL reverberant room at 10 feet, 24 Volts (in continuous tone)

ORDERING INFORMATION

B200SR: Sounder Base
B200SR-LF: Low Frequency Sounder Base

COMPATIBILITY

The B200SR is compatible with the following IDP series detectors:

IDP-Photo: Photoelectric Smoke Detector
IDP-Photo-T: Photoelectric Smoke Detector with Thermal
IDP-Acclimate: Multicriteria Photoelectric Smoke Detector
IDP-Heat: Fixed Temperature Thermal Detector
IDP-Heat-ROR: Rate-of-Rise Detector with Thermal
IDP-Heat-HT: Fixed High Temperature Thermal Detector

The B200SR and B200SR-LF are compatible with the following Farenhyt Series FACPs:

IFP-2100 / IFP-2100ECS / RFP-2100
IFP-2000 / IFP-2000ECS / RPS-2000
IFP-1000 / IFP-1000ECS
IFP-300 / IFP-300ECS
IFP-100 / IFP-100ECS
IFP-75
IFP-50

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Farenhyt™ Series

B200S / B200S-LF

Intelligent Sounder Base

The B200S sounder base series is designed for new and existing commercial dwelling unit applications. It offers maximum flexibility in installation, configuration, and operation to meet or exceed UL 268 and UL 464 requirements.

The sounder base "listens in" to the communication between the attached sensor head and the fire alarm control panel (FACP) to adopt the same address as the detector, but as a unique device type on the loop. The FACP can then use that address to command an individual sounder — or a group of sounders — to activate. In addition, the FACP's will enable custom tone patterns.

The B200S series sounder bases recognize the System Sensor® synchronization protocol. This enables it to be used as a component of the general evacuation signal — along with other System Sensor horns, horn strobes, and chimes — when connected to a FACP output programmed as sounder base power.

The B200S-LF low frequency sounder base is designed to meet the NFPA 72 sleeping space requirement to produce a fundamental frequency of 520 Hz +/- 10% with a square wave or its equivalent. Studies show that a lower frequency, centered around 520 Hz, is the most ideal to awaken sleeping occupants, even those with mild to severe hearing loss.



B200S-LF



B200S

INSTALLATION

The B200S series sounder bases can be mounted directly to 4" (10.16 cm) square, 4" (10.16 cm) octagon, 3 1/2" (8.9 cm) octagon, single-gang or double-gang junction boxes.

FEATURES & BENEFITS

- Addressability for maximum configuration flexibility
- Supports Continuous, ANSI Temporal 3, ANSI Temporal 4, and March Time tones
- Custom tone capability with some FACP models
- Ability to synchronize with other System Sensor notification devices
- UL 268 and UL 464 compliant
- Pre-wire mounting plate fits various junction box sizes
- Uses a mechanical locking feature that prevents the removal of the attached sensor head
- No external relays and input modules needed to supervise the Aux power
- 520 Hz +/– 10% square wave tone (B200S-LF)
- UL Listed
- FM Approved

B200S and B200S-LF Technical Specifications

PHYSICAL

Height: 2.0" (5.08 cm) less sensor
Width: 6.875" (17.46 cm)
Shipping Weight: B200S 0.50 lb. (227 gm);
B200S-LF: 0.60 lb. (272 gm)

ENVIRONMENTAL

Operating Temperature: 32°F - 120°F (0°C-49°C)
Humidity: 10 to 93% non-condensing)

ELECTRICAL RATINGS

Aux power voltage: 16 to 33 VDC (VFWR)
Aux power standby current B200S: .50mA max.
Aux power standby current B200S-LF: .55mA max
Aux power alarm current B200S: 35mA max.
Aux power alarm current B200S-LF: 140mA max.
SLC operating voltage: 15 to 32 VDC
SLC Standby/Alarm Current: 300 µA max (base only)

SOUND OUTPUT

Volume Greater than 85 dBA minimum measured in a UL reverberant room at 10 feet, 24 Volts (in continuous tone).

ORDERING INFORMATION

B200S: Sounder Base
B200S-LF: Low Frequency Sounder Base

ACCESSORIES

M02-04-01: Detector Test Magnet
M02-09-01: Telescoping Test Magnet

COMPATIBILITY

The B200S and B200S-LF are compatible with the following IDP series detectors:

IDP-Photo: Photoelectric smoke detector
IDP-Photo-T: Photoelectric smoke detector with thermal
IDP-Acclimate: Multicriteria Photoelectric smoke detector
IDP-Heat: Fixed temperature thermal detector
IDP-Heat-ROR: Rate-of-Rise detector with thermal
IDP-Heat-HT: Fixed high temperature thermal detector
IDP-FIRE-CO: Multi criteria CO and smoke sensor

The B200S and B200S-LF are compatible with the following Farenhyt Series FACPs

IFP-2100 / IFP-2100ECS / RFP-2100
IFP-2000 / IFP-2000ECS / RPS-2000
IFP-1000 / IFP-1000ECS
IFP-300 / IFP-300ECS
IFP-100 / IFP-100ECS
IFP-75
IFP-50

For a complete listing of all compliance approvals and certifications, please visit www.farenhyt.com.

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Farenhyt™ Series

Farenhyt Series Black Detectors

Intelligent Detectors

The Honeywell Farenhty Series Black detectors are intelligent (addressable) detectors with point ID capability that enable each detector address to be set with rotary address switches providing exact device locations. Detector sensitivity is continually monitored and reported to the fire alarm control panel. The modern design and expanded color options support contemporary aesthetic demands. In addition, each detector is constructed for exceptional installation and maintenance efficiency.

The IDP-PHOTO-W (-IV) photoelectric detector's re-designed optical sensing chamber is engineered to sense smoke produced by a wide range of combustion sources in accordance with more stringent code standards. The sensitivity of the Farenhyt Series Black detectors can be programmed using the control panel software to suit the environment. The IDP-PHOTO-R-W (-IV)photoelectric detector is also remote test capable that may be used with a DNR (DNRW) duct smoke detector housing. The IDP-PHOTO-T-W (-IV) multi-sensor detector offers either photoelectric detection or thermal detection through dual electronic thermistors at 135°F fixed temperature thermal sensing.

Farenhty Series thermal detectors provide cost-effective, intelligent property protection with a UL 521 listing: the IDP-HEAT-W (IDP-HEAT-W-IV) offers 135°F fixed thermal detection; the IDP-HEAT-ROR-W (IDP-HEAT-ROR-W-IV) offers 135°F fixed and rate-of-rise thermal detection; the IDP-HEAT-HT-W (IDP-HEAT-HT-W-IV) provides fixed high-temperature detection at 190°F.



IDP-PHOTO-W



IDP-HEAT-IV

FEATURES & BENEFITS

- Designed to meet UL 268 7th Edition
- New modern profile
- Analog communications
- Low standby current
- Rotary address switches
- Dual LEDs for 360° visibility
- Expanded color options

Farenhyt Series Black Intelligent Detector Technical Specifications

PHYSICAL

Height: 2.0" (51mm) installed in B300-6 base

Diameter: 6.2" (156mm) installed in B300-6 base
4.1" (104 mm) installed in B501 base

Weight: 3.4 oz (95 g)

ENVIRONMENTAL

Operating Temperature:

Photo: 32°F to 122°F (0°C to 50°C)

Photo with Thermal: 32°F to 100°F (0°C to 38°C)

Heat -Fixed temperature: -4°F to 100°F (-20°C to 38°C)

Heat -Rate of Rise (ROR): -4°F to 100°F (-20°C to 38°C)

Heat -High Temperature: -4°F to 150°F (-20°C to 66°C)

UL listed Velocity range: Photo/Photo with Thermal: 0 to 4,000 fpm (0 to 20 m/sec) (suitable for installation in ducts)

Humidity: 10% to 93% non-condensing

Thermal Ratings: Fixed Temperature Set point: 135°F (57°C)

Rate-of-Rise Detection: 15°F/min. (8.3°C/min.)

High Temperature Heat: 190°F (88°C)

ELECTRICAL RATINGS

Voltage Range: 15 to 32VDC peak

Operating Current @ 24VDC**:** 200µA (one communication every 5 seconds with green LED blink on communication)

Maximum Current: 4.5mA @ 24VDC (one communication every 5 seconds with amber LED solid on)

Maximum Alarm Current: 2mA @ 24VDC (one communication every 5 seconds with red LED solid on)

ORDERING INFORMATION

IDP-PHOTO-W: Photoelectric smoke detector, bright white. **-IV**: Ivory

IDP-PHOTO-R-W: Photoelectric smoke detector, remote test capable, for use with DNR(W) duct smoke detectors, bright white. **-IV**: Ivory

IDP-PHOTO-T-W: Photoelectric smoke detector with thermal sensing, bright white. **-IV**: Ivory

IDP-HEAT-W: Thermal heat detector, 135°F fixed, white. **-IV**: Ivory

IDP-HEAT-ROR-W: Thermal heat detector, 135°F rate of rise, white. **-IV**: Ivory

IDP-HEAT-HT-W: hermal heat detector, 190°F high temp, white. **-IV**: Ivory

BASES

B501: 4" mounting base, white. **-IV**: Ivory (effective 1/15/2018)

B501BP: 4" mounting base bulk pack, white (effective 1/15/2018)

B300-6: 6" Flanged mounting base, white. **-IV**: Ivory

B300-6-BP: 6" Flanged mounting base bulk pack

B200S: Intelligent addressable sounder base, white. **-IV**: Ivory (effective 1/15/2018)

B200S-LF: Intelligent addressable low frequency sounder base, white. **-IV**: Ivory (effective 1/15/2018)

B200SR: Intelligent sounder base, white. **-IV**: Ivory (effective 1/15/2018)

B224RB: Relay base, white. **-IV**: Ivory (effective 1/15/2018)

B224BI: Isolator base, white. **-IV**: Ivory (effective 1/15/2018)

ACCESSORIES

SMB600: Surface Mounting Kit (flanged)

TR300: Accessory Flange Ring for B300 6" Base, bright white. **-IV**: Ivory

CK300: Color Kit (includes cover and trim ring), white. **-IV**: Ivory

RA100Z: Remote LED annunciator. Ivory

M02-04-01: Destector test magnet. Ivory

M02-09-00: telescoping test magnet. Ivory

AGENCY LISTINGS AND APPROVALS

For exact certification listings for each model, please reference the respective agency Web site.

UL listed

FM approved

CSFM

COMPATIBILITY

The IDP-PHOTO-W/IV, IDP-PHOTO-T-W/IV, IDP-PHOTO-R-W/IV, IDP-HEAT-W/IV, IDP-HEAT-ROR-W/IV and IDP-HEAT-HT-W/IV are compatible with the following Farenhyt Series FACPs:

- IFP-2100 / IFP-2100ECS / RFP-2100
- IFP-2000 / IFP-2000ECS / RPS-2000
- IFP-1000 / IFP-1000ECS
- IFP-300 / IFP-300ECS
- IFP-100 / IFP-100ECS
- IFP-75
- IFP-50

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Farenhyt™ Series

B200S / B200S-LF

Intelligent Sounder Base

The B200S sounder base series is designed for new and existing commercial dwelling unit applications. It offers maximum flexibility in installation, configuration, and operation to meet or exceed UL 268 and UL 464 requirements.

The sounder base "listens in" to the communication between the attached sensor head and the fire alarm control panel (FACP) to adopt the same address as the detector, but as a unique device type on the loop. The FACP can then use that address to command an individual sounder — or a group of sounders — to activate. In addition, the FACP's will enable custom tone patterns.

The B200S series sounder bases recognize the System Sensor® synchronization protocol. This enables it to be used as a component of the general evacuation signal — along with other System Sensor horns, horn strobes, and chimes — when connected to a FACP output programmed as sounder base power.

The B200S-LF low frequency sounder base is designed to meet the NFPA 72 sleeping space requirement to produce a fundamental frequency of 520 Hz +/- 10% with a square wave or its equivalent. Studies show that a lower frequency, centered around 520 Hz, is the most ideal to awaken sleeping occupants, even those with mild to severe hearing loss.



B200S-LF



B200S

INSTALLATION

The B200S series sounder bases can be mounted directly to 4" (10.16 cm) square, 4" (10.16 cm) octagon, 3 1/2" (8.9 cm) octagon, single-gang or double-gang junction boxes.

FEATURES & BENEFITS

- Addressability for maximum configuration flexibility
- Supports Continuous, ANSI Temporal 3, ANSI Temporal 4, and March Time tones
- Custom tone capability with some FACP models
- Ability to synchronize with other System Sensor notification devices
- UL 268 and UL 464 compliant
- Pre-wire mounting plate fits various junction box sizes
- Uses a mechanical locking feature that prevents the removal of the attached sensor head
- No external relays and input modules needed to supervise the Aux power
- 520 Hz +/– 10% square wave tone (B200S-LF)
- UL Listed
- FM Approved

B200S and B200S-LF Technical Specifications

PHYSICAL

Height: 2.0" (5.08 cm) less sensor
Width: 6.875" (17.46 cm)
Shipping Weight: B200S 0.50 lb. (227 gm);
B200S-LF: 0.60 lb. (272 gm)

ENVIRONMENTAL

Operating Temperature: 32°F - 120°F (0°C-49°C)
Humidity: 10 to 93% non-condensing)

ELECTRICAL RATINGS

Aux power voltage: 16 to 33 VDC (VFWR)
Aux power standby current B200S: .50mA max.
Aux power standby current B200S-LF: .55mA max
Aux power alarm current B200S: 35mA max.
Aux power alarm current B200S-LF: 140mA max.
SLC operating voltage: 15 to 32 VDC
SLC Standby/Alarm Current: 300 µA max (base only)

SOUND OUTPUT

Volume Greater than 85 dBA minimum measured in a UL reverberant room at 10 feet, 24 Volts (in continuous tone).

ORDERING INFORMATION

B200S: Sounder Base
B200S-LF: Low Frequency Sounder Base

ACCESSORIES

M02-04-01: Detector Test Magnet
M02-09-01: Telescoping Test Magnet

COMPATIBILITY

The B200S and B200S-LF are compatible with the following IDP series detectors:

IDP-Photo: Photoelectric smoke detector
IDP-Photo-T: Photoelectric smoke detector with thermal
IDP-Acclimate: Multicriteria Photoelectric smoke detector
IDP-Heat: Fixed temperature thermal detector
IDP-Heat-ROR: Rate-of-Rise detector with thermal
IDP-Heat-HT: Fixed high temperature thermal detector
IDP-FIRE-CO: Multi criteria CO and smoke sensor

The B200S and B200S-LF are compatible with the following Farenhyt Series FACPs

IFP-2100 / IFP-2100ECS / RFP-2100
IFP-2000 / IFP-2000ECS / RPS-2000
IFP-1000 / IFP-1000ECS
IFP-300 / IFP-300ECS
IFP-100 / IFP-100ECS
IFP-75
IFP-50

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IDP-FIRE-CO

Advance Multi-Criteria Fire/CO Detector

The IDP-FIRE-CO is a plug-in, addressable device that provides both fire and carbon monoxide (CO) detection. For fire, the detector combines four separate sensing elements in one unit (smoke, CO, light/flame, and heat) to sense multiple components of a fire. This approach enables enhanced sensitivity to real fire with heightened immunity to nuisance particulate. For CO, the detector's electrochemical sensing cell creates a separate signal for life safety CO detection.



IDP-FIRE-CO

Released through the incomplete burning of various fuels, CO is a colorless, odorless and deadly gas that is virtually impossible to detect with the human senses. Because the potential exists for dangerous levels of CO to accumulate in almost any building, legislation mandating the use of CO detection in commercial spaces continues to increase across the U.S. and Canada. The IDP-FIRE-CO is listed to the UL 2075 standard for system-connected life safety carbon monoxide monitoring.

The IDP-FIRE-CO should be used in conjunction with the B200S/B200S-LF intelligent sounder base (sold separately), which can generate either a Temp 3 pattern for fire or a Temp 4 pattern for CO alarm indication. With each sounder base carrying a unique address, the FACP can then command an individual sounder, or a group of sounders, to activate. The command set from the panel can be tailored to the specific event, allowing selection of tone, and group.

IDP-FIRE-CO can also be used with the B210LP 6" standard base, the B200SR sounder base or the B224RB relay base.

FEATURES & BENEFITS

- Unique ability to detect all four major elements of a fire, smoke, carbon monoxide (CO), light/flame, heat
- Separate CO detection signal
- Highest nuisance alarm immunity
- Automatic drift compensation of smoke sensor and CO cell
- Uses only one address on the SLC
- RealTest® CO testing capability
- UL 268 and UL 2075 listed
- Separates audible signal for fire or CO alarm when used with B200S/B200S-LF base
- CO cell end-of-life warning and fault
- CSFM listed

IDP-FIRE-CO Technical Specifications

PHYSICAL

Diameter: 6.875" (17.46 cm) installed in a B200S base
Height: 3.46" (8.79 cm) installed in B200S base
Shipping Weight: 4.6 oz
Color: Ivory

ENVIROMENTAL

Temperature Range: 32° F to 100° F (0° C to 38° C)
Humidity: 15 to 90% relative humidity (non-condensing)
Air Velocity: 0 to 4,000 ft/min (0 to 20 m/sec)

ELECTRICAL

Operating Voltage: 15 to 32VDC
SLC Standby and Alarm Current: 300µA

SENSITIVITY SETTINGS

Sensitivity settings are programmable through zone programming.
Low: 4% per foot (30.48 cm) of smoke. Used in equipment rooms, kitchens, paint shop.
Medium: 3% per foot (30.48 cm) of smoke. Moderately clean environments: Used in hotel rooms, dorm rooms.
High: 2% per foot (30.48 cm) of smoke. Clean environments: Used in offices.
Warning: After the CO cell has reached the end-of-life, the CO sensor no longer provides life safety protection. However, when the fire detector enters Photo, Thermal, Infrared (PTIR) mode, the following sensitivities apply:
Level 1: 1% per foot (30.48 cm) of smoke. Very clean environments- Used in laboratories.
Level 2: 2% per foot (30.48 cm) of smoke. Clean environments - Used in offices.
Level 5: 3% per foot (30.48 cm) of smoke. Moderately clean environments- Used in hotel rooms, dorm rooms.
Level 6: Thermal alarm at 135° F (57° C).
CO Monitoring UL Standard Reference - Alarm Thresholds are as follows:

Parts Per Million	Detector Response Time
70 ± 5 ppm	60-240 min
150 ± 5 ppm	10-50 min
400 ± 10 ppm	4-15 min

Note: Per UL Standard 2075, the IDP-FIRE-CO has been tested to the sensitivity limits defined in UL Standard 2034.

ORDERING INFORMATION

IDP-FIRE-CO: Multi-Criteria CO Detector (base not included).
Note: Due to the unique nature of this detector, please consult your fire alarm control panel manufacturer for the specific model and compatibility.

OPTIONAL ACCESSORIES

B200S: Intelligent sounder base
B200S-LF: Low Frequency Intelligent sounder base
B210LP: 6" mounting base
B200SR: Sounder base
B224RB: Relay base
M02-04-01: Detector test magnet
M02-09-01: Telescoping test magnet

COMPATIBILITY

The IDP-FIRE-CO is compatible with the following FACPs programmed for System Sensor protocol: (Firmware version 13.0 or higher for IFP-100 & IFP-1000. Firmware version 4.0 or higher for IFP-2000).

- IFP-75 / IFP-75B
- IFP-300 / IFP-300B
- IFP-300ECS / IFP-300ECSB
- IFP-2100 / IFP-2100B / RFP-2100
- IFP-2100ECS / IFP-2100ECSB
- IFP-2000 / RPS-2000 / IFP-2000ECS
- IFP-1000/ECS
- IFP-100/ECS
- IFP-50

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B224RB

Addressable Relay Base

The B224RB is a 6" mounting base with a built-in form C relay contact. The B224RB lets you control a wide variety of normally open and normally closed applications. Because the relay is addressable, the relay device can be located at any point in the signaling line circuit. IDP-series detectors intended for use with the Honeywell Farenhyt Series fire alarm control panel (FACP) plug into the B224RB.



B224RB RELAY BASE

INSTALLATION

The B224RB can be mounted on a variety of junction boxes as shown in the tables below.

U.S. Junction Box Selection Guide*

SINGLE GANG	3.5"OCT	4" OCT†	4" SQ
No	Yes	Yes	Yes

Metric Junction Box Selection Guide*

50MM	60MM	70MM	75MM
No	No	Yes	Yes

*Box depth is contingent on base and wire size. Refer to the National Electric Code or applicable local codes for appropriate recommendations.
†With 3.0 mud ring

FEATURES & BENEFITS

- One form C contact relay
- Support for Class A and Class B wiring
- Fully supervised
- Plug-in mounting provides ease of installation
- Tamper-proof feature prevents removal of the detector without the use of a tool
- Range of mounting options to meet any application
- B501 allows for aesthetically pleasing installation with Recessed Mounting Kit (RMK400)
- UL Listed
- CSFM Listed
- FMListed

B224RB Technical Specifications

PHYSICAL
Height: 1.2" (3.1 cm)
Diameter: 6.1" (15.5cm)

ELECTRICAL RATINGS
Wire Gauge: 18–14
Operating Voltage: 15 – 32VDC
Standby Current: 500 µA max @ 24VDC.

RELAY CHARACTERISTICS:
Coil: 2 coil latching relay
Contact: 1 Form C contact
Resistive: 2A @ 30 VDC
Inductive:
300 mA @ 100 VDC(with 0.35 PF or greater)
300 mA @ 120 VAC (with 0.35 PF or greater)
1A @ 30 VDC (with 0.6 PF or greater)

ENVIRONMENTAL
Operating Temperature: 32°-120°F (0°C – 49°C)
Humidity: 10 to 93% non-condensing)

ORDERING INFORMATION
B224RB: 6" Relay Base

ACCESSORIES
XR2B: Detector Removal Tool. A removal and replacement tool for IDP plug-in detectors. Includes the T55-127-000
M02-04-00: Detector Test Magnet
M02-09-00: Test Magnet with Telescoping Handle
XP-4: Extension Pole for XR2B. Extends from 5 – 15 ft
T55-127-000: Detector Removal Head
BCK-200B: Black Detector Kit
WCK-200B: White Detector Kit

COMPATIBILITY
The B224RB is compatible with the following IDP series detectors:

- IDP-Photo Photoelectric Smoke Detector
- IDP-Photo-T Photoelectric Smoke Detector with Thermal
- IDP-Acclimate Multicriteria Photoelectric Smoke Detector
- IDP-Heat Fixed Temperature Thermal Detector
- IDP-Heat-ROR Rate-of-Rise Detector with Thermal
- IDP-Heat-HT Fixed High Temperature Thermal Detector

The B224RB is compatible with the following Farenhyt Series FACPs:

- IFP-2100 / IFP-2100ECS / RFP-2100
- IFP-2000 / IFP-2000ECS / RPS-2000
- IFP-1000 / IFP-1000ECS
- IFP-300 / IFP-300ECS
- IFP-100 / IFP-100ECS
- IFP-75
- IFP-50

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B501 / B210LP

Addressable Detector Bases

The B210LP 6" mounting base and the B501 4" mounting base are plug in detector bases for IDP style detectors intended for use with Honeywell Farenhyt Series fire alarm control panels (FACPs).

The B210LP and B501 have screw terminals for power (+) and (-) and remote annunciator connections. Communication takes place over the power (+) and (-) lines.



B210LP BASE



B501 BASE

INSTALLATION

The B210LP and B501 can be mounted on a variety of junction boxes as shown in the tables below.

U.S. Junction Box Selection Guide*

MODEL	SINGLE GANG	3.5" OCT	4" OCT	4" SQ
B210LP	Yes	Yes	Yes	Yes
B501	No	Yes	No	No

Metric Junction Box Selection Guide*

MODEL	50MM	60MM	70MM	75MM
B210LP	No	No	No	No
B501	Yes	Yes	Yes	No

*Box depth is contingent on base and wire size. Refer to the National Electric Code or applicable local codes for appropriate recommendations.

FEATURES & BENEFITS

- Plug-in mounting provides ease of installation
- Tamper-proof feature prevents removal of the detector without the use of a tool
- Range of mounting options to meet any application
- Rotary address switches for fast installation
- Optional remote LED annunciator (P/N RA100Z)
- SEMS screws
- 12–22 AWG wire ranges for installation flexibility
- UL Listed
- CSFM Listed
- FM Listed
- MEA Listed 205-91-E Vol, IX

B210LP and B501 Technical Specifications

PHYSICAL

B210LP Diameter: 6.1" (155 mm)
B501 Diameter: 4.1" (104 mm)

ELECTRICAL RATINGS

Operating Voltage: 15 to 32VDC
Wire Gauge: 18–12
SLC Standby and Alarm Current: 170µA
Terminals

- **Terminal 1:** Power (–) and Optional RA100Z
- **Terminal 2:** Power (+)
- **Terminal 3:** Optional RA100Z Remote Annunciator

ENVIRONMENTAL

Operating Temperature: 32°-120°F (0°C – 49°C)
Humidity: 10 to 93% non-condensing)

ORDERING INFORMATION

B210LP: 6" Mounting Base
B501 4: Mounting Base
B210LPBP: 6" Mounting Base bulk pkg of 10

ACCESSORIES

RA100Z: Remote LED Annunciator.
XR2B: Detector Removal Tool. A removal and replacement tool for IDP plug-in detectors. Includes the T55-127-000.
M02-04-00: Detector Test Magnet.
M02-09-00: Test Magnet with Telescoping Handle.
XP-4: Extension Pole for XR2B. Extends from 5 – 15 ft.
T55-127-000: Detector Removal Head.
BCK-200B: Black Detector Kit. For IDP-series detectors.
F210: Accessory flange ring for B210LP

COMPATIBILITY

The B210LP and B501 are compatible with the following IDP series detectors:

IDP-Photo: Photoelectric Smoke Detector
IDP-Photo-T: Photoelectric Smoke Detector with Thermal
IDP-Acclimate: Multicriteria Photoelectric Smoke Detector
IDP-Heat: Fixed Temperature Thermal Detector
IDP-Heat-ROR: Rate-of-Rise Detector with Thermal
IDP-Heat-HT: Fixed High Temperature Thermal Detector

The B210LP and B501 are compatible with the following Farenhyt Series FACPs:

- IFP-2100 / IFP-2100ECS / RFP-2100
- IFP-2000 / IFP-2000ECS / RPS-2000
- IFP-1000 / IFP-1000ECS
- IFP-300 / IFP-300ECS
- IFP-100 / IFP-100ECS
- IFP-75
- IFP-50

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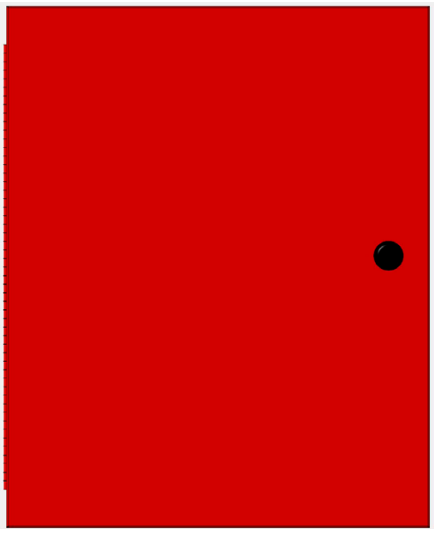
Farenhyt™ Series

IDP-ACB

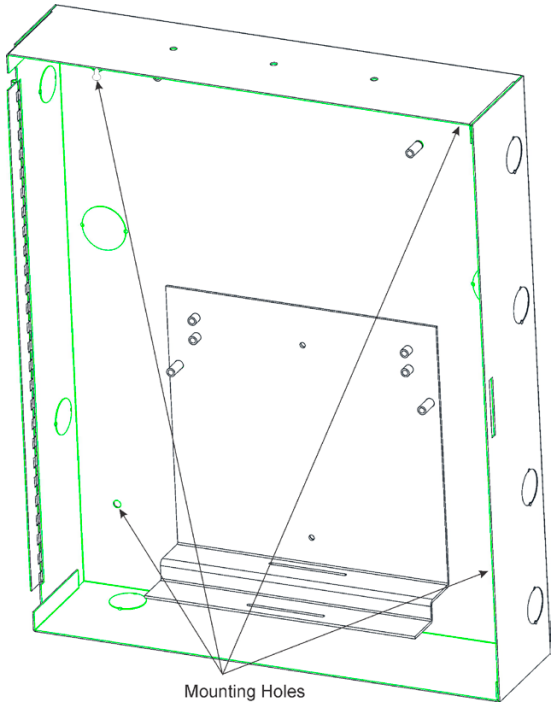
IDP Module Mounting Cabinet

The IDP-ACB cabinet provides mounting space for two IDP modules.

Note: Installation and wiring of this device must be done in accordance with NFPA 72 and local ordinances.



IDP-ACB

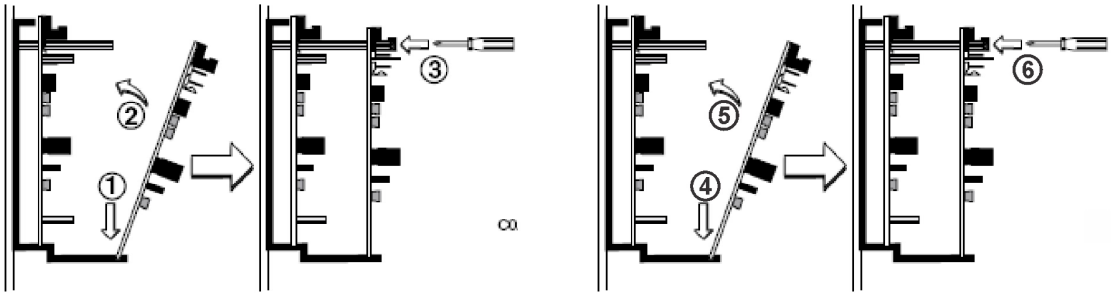


Mounting the IDP-ACB using four mounting holes in a dry, indoor. location. All mounting hardware is included with IDP modules.

FEATURES & BENEFITS

- Has a built-in mounting plate that positions the module boards so that all of the status indicators are visible.
- One to two module mounting in cabinet
- UL Listed

IDP-ACB Technical Specifications



INSTALLING MODULES

PHYSICAL

Dimensions: 12.5" W x 15.25" H x 3" D (31.8cm W x 38.7cm H x 7.6cmD)
Weight: 6.25 lbs (2.8kg)

ORDERING INFORMATION

IDP-ACB: IDP module cabinet

COMPATIBILITY

The IDP-ACB will accommodate one or two of the following modules:

- IDP-Monitor-10
- IDP-Zone-6
- IDP-Relay-6
- IDP-Control-6

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IDP-CONTROL-6

Addressable Notification Module

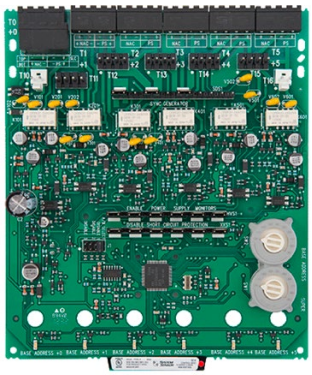
The IDP-CONTROL-6 is an addressable notification module for use with the Honeywell Farenhyt Series fire alarm control panels (FACPs). The IDP-CONTROL-6 has six integrated modules for maximum flexibility, allowing you to add notification circuits wherever they are needed on an FACP signaling line circuit (SLC) loop.

The IDP-CONTROL-6 provides supervised monitoring of wiring to load devices that require an external power supply or amplifier to operate, such as bells, horns, and strobes. It is capable of supporting Class B and Class A wiring.

Upon command from the FACP, the IDP-CONTROL-6 will disconnect the supervision and connect the external power supply across the load device. The disconnection of the supervision provides a positive indication to the panel that the control relay actually turned on. The external power supply is always relay isolated from the SLC loop, so that a trouble condition on the power supply will never interfere with the rest of the system.

If needed, you can disable a maximum of three unused modules on the IDP-CONTROL-6 board. Each module has terminals for connection to an external supply circuit for powering devices on its notification appliance circuit (NAC). One or more multiple power supplies can be used.

The IDP-CONTROL-6 has a short circuit protection monitor for each module. The short circuit protection monitor protects external power supplies against short circuit conditions on the NAC. In addition, an algorithm is incorporated to find a short when the module is active. The module will close all circuits that are not shorted to find the NAC with the problem.



IDP-CONTROL-6

FEATURES & BENEFITS

- Flexible solution for adding notification circuits where needed
- Removable 12 to 18 AWG plug-in terminal blocks
- Support for Class B or Class A wiring
- Individual LED for each module
- Two module mounting in the IDP-ACB cabinet
- Unused modules can be disabled
- Rotary address switches for fast installation
- Mounting hardware included
- UL Listed

IDP-CONTROL-6 Technical Specifications

PHYSICAL

Dimensions: 6.8" H x 5.8"W x 1.25" D
Shipping Weight: 6.3oz (196g)

ELECTRICAL RATINGS

Operating Voltage: 15 to 32VDC
Standby Current: 2.65mA @ 24V
Alarm Current: 35mA maximum (assumes all six relays have been switched once and all six LEDs solid on)
End-of-Line Resistance: 47kΩ
Maximum SLC Wiring Resistance: 41Ω
Maximum NAC Wiring Resistance: 40Ω

ENVIRONMENTAL

Operating Temperature: 32°-120°F (0°C – 49°C)
Humidity: 10 to 85% non-condensing)

ORDERING INFORMATION

IDP-CONTROL-6: Six Input notification module

ACCESSORIES

IDP-ACB: Cabinet. 15.25" H x 12.5" W x 3"D

INSTALLATION

The IDP-CONTROL-6 mounts in the Honeywell IDP-ACB cabinet (P/N IDP-ACB). The IDP-ACB has a built-in chassis that will accommodate one or two IDP-Control-6 modules.

COMPATIBILITY

The IDP-CONTROL-6 is compatible with the following Farenhyt Series FACPs:

- IFP-2100 / IFP-2100ECS / RFP-2100
- IFP-2000 / IFP-2000ECS / RPS-2000
- IFP-1000 / IFP-1000ECS
- IFP-300 / IFP-300ECS
- IFP-100 / IFP-100ECS
- IFP-75
- IFP-50

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IDP-CONTROL

Addressable Notification Module

The IDP-CONTROL is an addressable notification module for use with Honeywell Farenhyt Series fire alarm control panels (FACPs). The IDP-CONTROL gives you the flexibility to add notification circuits wherever they are needed on an Farenhyt FACP signaling line circuit (SLC) loop.

The IDP-CONTROL provides supervised monitoring of wiring to load devices that require an external power supply to operate, such as bells, horns, and strobes. It is capable of Class B and Class A supervision.

Upon command from the FACP, the IDP-CONTROL will disconnect the supervision and connect the external power supply across the load device. The disconnection of the supervision provides a positive indication to the panel that the control relay actually turned on. The external power supply is always relay isolated from the SLC loop, so that a trouble condition on the power supply will never interfere with the rest of the system.



IDP-CONTROL

INSTALLATION

The IDP-CONTROL mounts directly into a 4" square electrical box. The box must have a minimum depth of 2-1/8". A surface mount electrical box (System Sensor® PN SMB500) is available from Honeywell.

COMPATIBILITY

The IDP-CONTROL is compatible with the following Farenhyt Series FACPs:

- IFP-2100 / IFP-2100ECS / RFP-2100
- IFP-2000 / IFP-2000ECS / RPS-2000
- IFP-1000 / IFP-1000ECS
- IFP-300 / IFP-300ECS
- IFP-100 / IFP-100ECS
- IFP-75
- IFP-50

FEATURES & BENEFITS

- Flexible solution for adding notification circuits where needed
- Support for Class B (style Y) or Class A (style Z) wiring
- Panel controlled status LED that flashes green in normal state and is solid red in alarm
- Polling LED visible through the cover plate
- Rotary address switches for fast installation
- SEMS screws for easy wiring
- UL Listed
- CSFM Listed
- MEA Listed 386-02-E Vol. II

IDP-CONTROL Technical Specifications

PHYSICAL
Dimensions: 4.5" H x 4"W x 1.25" D
Shipping Weight: 6.3oz (196g)

ELECTRICAL RATINGS
Operating Voltage: 15 to 32VDC
Standby & Alarm Current: 350 μA
End-of-Line Resistance: 47kΩ
SLC Loop Impedance: 40Ω

ENVIRONMENTAL
Operating Temperature: 32°-120°F (0°C – 49°C)
Humidity: 10 to 93% non-condensing)

ORDERING INFORMATION
IDP-CONTROL: Notification module

ACCESSORIES
SMB500: 4" Square Surface Mount Electrical Box
CB500: Module Barrier. Used to separate power limited and non-power limited wiring in a junction box.

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IDP-ISO

Line Isolator Module

The IDP-ISO is a SLC loop line isolator module for use with the Honeywell Farenhyt Series fire alarm control panels (FACPs). The IDP-ISO acts as an automatic switch that opens when the line voltage on the signaling line circuit (SLC) loop drops below four volts. Isolator modules should be spaced between groups of sensors or modules in a loop to protect the rest of the loop. If a short occurs between any two isolators, then both isolators immediately switch to an open circuit state and isolate the devices between them. The remaining units on the SLC loop continue to fully operate. No more than 25 devices are recommended for each group.



IDP-ISO

INSTALLATION

The IDP-ISO mounts directly into a 4" square electrical box. The box must have a minimum depth of 2-1/8". A surface mount electrical box (System Sensor® PN SMB500) is available from Honeywell.

COMPATIBILITY

The IDP-ISO is compatible with the following Farenhyt Series FACPs:

- IFP-2100 / IFP-2100ECS / RFP-2100
- IFP-2000 / IFP-2000ECS / RPS-2000
- IFP-1000 / IFP-1000ECS
- IFP-300 / IFP-300ECS
- IFP-100 / IFP-100ECS
- IFP-75
- IFP-50

FEATURES & BENEFITS

- Isolates short circuits on an SLC loop
- Protects the modules on the SLC loop so other devices continue to operate
- Panel controlled status LED that flashes green in normal state and is solid red in alarm
- Standard 4 inch electrical box mounting
- SEMS screws for easy wiring
- UL Listed
- CSFM Listed
- MEA Listed 427-91-E Vol. X

IDP-ISO Technical Specifications

PHYSICAL

Dimensions: 4.5" H x 4" W x .25 D (11.4 x 10.2 x .6cm)
Shipping Weight: 6.3oz (196g?

ELECTRICAL RATINGS

Operating Voltage: 15 – 32 VDC
Standby Current: 450 µA max (not isolating; relay closed)
Isolation Current: 5mA max
Fault Detection Delay: 250ms min.
Fault Detection Threshold: 4V
Line Restoration Threshold: 7V

ENVIRONMENTAL

Operating Temperature: 32°-120°F (0°C – 49°C)
Humidity: 10 to 93% non-condensing)

ORDERING INFORMATION

IDP-ISO: Line Isolator Module

ACCESSORIES

SMB500: 4" Square Surface Mount Electrical Box

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IDP-MONITOR-2

Addressable Dual Monitor Module

The IDP-MONITOR-2 is an addressable monitor module with two initiating circuits for use with Honeywell Farenhyt Series fire alarm control panels (FACPs). The IDP-MONITOR-2 acts as an interface to contact devices, such as waterflow switches and pull stations.

The IDP-MONITOR-2 supports Class B supervised wiring to the load device. Conventional 4-wire smoke detectors can be monitored for alarm and trouble conditions.

Because the IDP-MONITOR-2 is capable of monitoring two separate Class B circuits, it is ideal for waterflow tamper switch and flow switch monitoring.



IDP-MONITOR-2

Installation

The IDP-MONITOR-2 mounts directly into a 4" square electrical box. The box must have a minimum depth of 2-1/8". A surface mount electrical box (System Sensor® PN SMB500) is available from Honeywell.

COMPATIBILITY

The IDP-MONITOR-2 is compatible with the following Honeywell Farenhyt Series FACPs:

- IFP-2100 / IFP-2100ECS / RFP-2100
- IFP-2000 / IFP-2000ECS / RPS-2000
- IFP-1000 / IFP-1000ECS
- IFP-300 / IFP-300ECS
- IFP-100 / IFP-100ECS
- IFP-75
- IFP-50

FEATURES & BENEFITS

- Monitor two circuits, with unique addresses, simultaneously
- Support for Class B wiring
- Fully supervised
- Panel controlled status LED that flashes green in normal state and is solid red in alarm
- Rotary address switches for fast installation
- SEMS screws for easy wiring
- UL Listed
- CSFM Listed
- MEA Listed 457-99-E Vol. V

IDP-MONITOR-2 Technical Specifications

PHYSICAL

Dimensions: 4.5" H x 4" W x 1.3 D (11.4 x 10.2 x 3.2cm)
Shipping Weight: 6.3oz (196g)

ELECTRICAL RATINGS

Operating Voltage: 15 – 32VDC
Maximum Current Draw: 6.4mA (LED on)
SLC Standby & Alarm Current: 750µA max @ 24 VDC (one communication every sec with 47k EOL)
End of Line Resistance: 47kΩ

ENVIRONMENTAL

Operating Temperature: 32°-120°F (0°C – 49°C)
Humidity: 10 to 93% non-condensing)

ORDERING INFORMATION

IDP-MONITOR-2: Dual Monitoring Module

ACCESSORIES

SMB500: 4" Square Surface Mount Electrical Box

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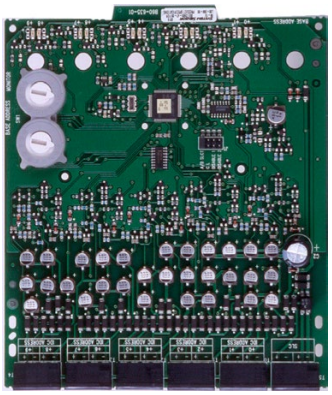
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Farenhyt™ Series

IDP-MONITOR-10

Intelligent Ten Input Monitor Module



IDP-MONITOR-10

The IDP-MONITOR-10 is a 10 point addressable monitor module for use with the Honeywell Farenhyt Series fire alarm control panels (FACPs). The IDP-MONITOR-10 acts as an interface to contact devices, such as waterflow switches and pull stations. The multiple input design allows for easy and efficient installation.

The IDP-MONITOR-10 supports ten Class B supervised contact inputs or five Class A supervised contact inputs. Conventional 4- wire smoke detectors can be monitored for alarm and trouble conditions.

Installation

You can install up to two IDP-MONITOR-10 modules in an accessory cabinet (Honeywell P/N IDP-ACB). The accessory cabinet has a built-in mounting plate that positions the module boards so that all of the status indicators are visible.

Compatibility

The IDP-MONITOR-10 is compatible with the following Farenhyt Series FACPs:

- IFP-2100 / IFP-2100ECS / RFP-2100
- IFP-2000 / IFP-2000ECS / RPS-2000
- IFP-1000 / IFP-1000ECS
- IFP-300 / IFP-300ECS
- IFP-100 / IFP-100ECS
- IFP-75
- IFP-50

FEATURES & BENEFITS

- 10 contact monitor
- Support for Class A and Class B wiring
- Fully supervised
- LED indicator for each input
- Disable unused addresses
- Mount up to two modules in one accessory cabinet (P/N IDP-ACB)
- Rotary address switches for fast installation
- Removable 12 to 18 AWG plug in terminal blocks for easy wiring and troubleshooting
- Mounting hardware included
- UL Listed
- CSFM Listed
- MEA Listed 386-02-E Vol. II

IDP-MONITOR-10 Technical Specifications

PHYSICAL
Dimensions: 6.8" H x 5.8"W x 1.25" D
Shipping Weight: 6.3oz (196g)

ELECTRICAL RATINGS
Wire Gauge: 12-18 AWG
Operating Voltage: 15 to 32VDC
Standby Current: 3.5mA
Alarm Current: 55mA max. (Assumes all ten LEDs solid on)
Initiating Device Circuit Voltage: 10.2VDC max
Initiating Device Circuit Current: 240µA max
SLC Wiring Resistance: 40W max.Ω

ENVIRONMENTAL
Operating Temperature: 32°-120°F (0°C – 49°C)
Humidity: 10 to 93% non-condensing)

ORDERING INFORMATION
IDP-Monitor-10: 10 Input monitoring module

ACCESSORIES
IDP-ACB: Module Cabinet. 15.25" H x 12.5" W x 3"D

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Farenhyt™ Series

IDP-MONITOR

Addressable Monitor Module

The IDP-MONITOR is an addressable monitor module for use with the Honeywell Farenhyt Series fire alarm control panels (FACPs). The IDP-MONITOR acts as an interface to contact devices, such as waterflow switches and pull stations.

The IDP-MONITOR supports Class A supervised or Class B supervised wiring to the load device. Conventional 4-wire smoke detectors can be monitored for alarm and trouble conditions.



IDP-MONITOR

INSTALLATION

The IDP-MONITOR mounts directly into a 4" square electrical box. The box must have a minimum depth of 2-1/8". A surface mount electrical box (System Sensor® PN SMB500) is available from Honeywell.

COMPATIBILITY

The IDP-MONITOR is compatible with the following Honeywell Farenhyt Series FACPs:

- IFP-2100 / IFP-2100ECS / RFP-2100
- IFP-2000 / IFP-2000ECS / RPS-2000
- IFP-1000 / IFP-1000ECS
- IFP-300 / IFP-300ECS
- IFP-100 / IFP-100ECS
- IFP-75
- IFP-50

FEATURES & BENEFITS

- Isolates short circuits on an SLC loop
- Protects the modules on the SLC loop so other devices continue to operate
- Panel controlled status LED that flashes green in normal state and is solid red in alarm
- Standard 4 inch electrical box mounting
- SEMS screws for easy wiring
- UL Listed
- CSFM Listed
- MEA Listed 427-91-E Vol. X

IDP-MONITOR Technical Specifications

PHYSICAL

4.5" H x 4" W x 1.25 D (11.4 x 10.2 x 3cm)
Shipping Weight: 6.3oz (196g?

ELECTRICAL RATINGS

Operating Voltage: 15 – 32VDC
Current Draw (LED on): 5.0mA max
Operating Current (LED flashing): 375µA
Standby Current: 400 µA max @ 24 VDC (one communication every 5 sec with 47K EOL); 550 µA max @ 24 VDC (one communication every 5 sec with EOL <1K)
5.5 mA (with LED latched on)
LED Current: 5.5 mA (with LED latched on)
End-of-Line Resistance: 47K Ω
Initiating Device Circuit Wiring Resistance: 1,500 Ω max
SLC Loop Resistance: 40 Ω max.

ENVIRONMENTAL

Operating Temperature: 32°-120°F (0°C – 49°C)
Humidity: 10 to 93% non-condensing)

ORDERING INFORMATION

IDP-MONITOR: Monitoring Module

ACCESSORIES

SMB500: 4" Square surface mount electrical box

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Farenhyt™ Series

IDP-PULL-SA / IDP-PULL-DA

Addressable Single Action and Dual Action Pull Stations

The IDP-PULL-SA is a single action pull station requiring only one motion to activate the station. The IDP-PULL-DA is a dual action pull station requiring two motions to active the station. Both pull stations are designed to work with Honeywell Farenhyt series fire alarm control panels (FACPs).

INSTALLATION

The IDP-PULL-SA and IDP-PULL-DA can be surface mounted to an SB-I/O surface back box or semi-flush mounted on a standard single-gang with a minimum depth of 2.13"(5.40 cm) or double gang or 4" (10.61 cm) square electrical box. You can also use the optional (System Sensor® PN BG-TR) trim ring if the station is being semi-flush mounted.

COMPATIBILITY

The IDP-PULL-SA and IDP-PULL-DA are compatible with the following Honeywell Farenhyt Series FACPs:

- IFP-2100 / IFP-2100ECS / RFP-2100
- IFP-2000 / IFP-2000ECS / RPS-2000
- IFP-1000 / IFP-1000ECS
- IFP-300 / IFP-300ECS
- IFP-100 / IFP-100ECS
- IFP-75
- IFP-50



IDP-PULL-SA

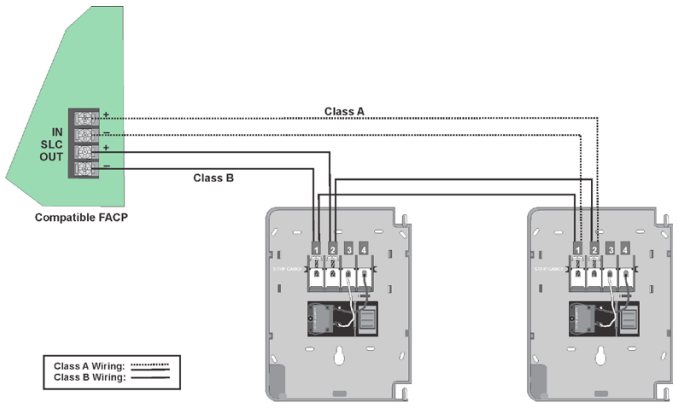


IDP-PULL-DA

FEATURES & BENEFITS

- Installer can open station without causing an alarm condition
- Dual-color LED is visible through handle of station blinks green to indicate normal operation and remains steady red in an alarm condition
- Key operated test and reset lock using lock plate actuator
- Key matches compatible FACP locks
- Meets ADA requirement for 5 lbs maximum pull force to active
- Meets the Americans with Disabilities Act Accessibility Guidelines (ADAAG) controls and operating mechanisms guidelines (Section 4.1.3[13])
- Shell, door, and handle molded from durable LEXAN®
- Reliable analog communications for trouble-free operation
- Braille text on station handle
- Rotary address switches for fast installation
- Handle latches in down position and the word Activated appears, clearly indicating the station has been pulled
- UL Listed, including UL 38, Standard of Manually Actuated Signaling System
- CSFM Listed
- MEA Listed

IDP-PULL-SA and IDP-PULL-DA Technical Specifications



Wiring IDP-Pull-SA & IDP-Pull-DA Pull Stations

SPECIFICATIONS*

Physical: 5.5" H x 4" D (14cm x 10.2cm)
Shipping Weight: 5.4oz
Housing Material: LEXAN polycarbonate resin
Bi-Colored LED:
Blinking Green: Normal
Steady Red: Alarm
Switch: Single pole, single throw (SPST) normally open (N/O) switch which closes upon activation of the pull station

ELECTRICAL RATINGS

Operating Voltage: 15 – 32VDC
SLC Standby and Alarm Current: 350µA
Wire Gauge: Up to 12AWG (3.1 mm^2)

ENVIRONMENTAL

Operating Temperature: 32°-120°F (0°C – 49°C)
Humidity: 10 to 93% non-condensing)

ORDERING INFORMATION

IDP-Pull-SA: Single Action Pull Station
IDP-Pull-DA: Dual Action Pull Station

ACCESSORIES

BG-TR: Optional trim ring.
SB-I/O: Surface backbox, indoor/outdoor.
* Unless otherwise noted, specifications apply to IDP-Pull-SA and IDP-Pull-DA

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Farenhyt™ Series

IDP-PULL-SA / IDP-PULL-DA

Addressable Single Action and Dual Action Pull Stations

The IDP-PULL-SA is a single action pull station requiring only one motion to activate the station. The IDP-PULL-DA is a dual action pull station requiring two motions to active the station. Both pull stations are designed to work with Honeywell Farenhyt series fire alarm control panels (FACPs).

INSTALLATION

The IDP-PULL-SA and IDP-PULL-DA can be surface mounted to an SB-I/O surface back box or semi-flush mounted on a standard single-gang with a minimum depth of 2.13"(5.40 cm) or double gang or 4" (10.61 cm) square electrical box. You can also use the optional (System Sensor® PN BG-TR) trim ring if the station is being semi-flush mounted.

COMPATIBILITY

The IDP-PULL-SA and IDP-PULL-DA are compatible with the following Honeywell Farenhyt Series FACPs:

- IFP-2100 / IFP-2100ECS / RFP-2100
- IFP-2000 / IFP-2000ECS / RPS-2000
- IFP-1000 / IFP-1000ECS
- IFP-300 / IFP-300ECS
- IFP-100 / IFP-100ECS
- IFP-75
- IFP-50



IDP-PULL-SA

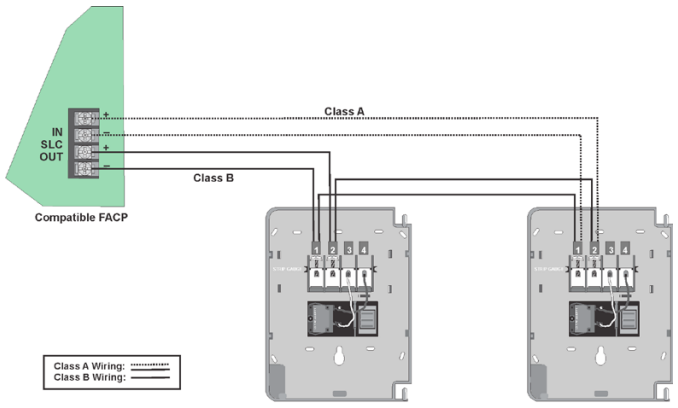


IDP-PULL-DA

FEATURES & BENEFITS

- Installer can open station without causing an alarm condition
- Dual-color LED is visible through handle of station blinks green to indicate normal operation and remains steady red in an alarm condition
- Key operated test and reset lock using lock plate actuator
- Key matches compatible FACP locks
- Meets ADA requirement for 5 lbs maximum pull force to active
- Meets the Americans with Disabilities Act Accessibility Guidelines (ADAAG) controls and operating mechanisms guidelines (Section 4.1.3[13])
- Shell, door, and handle molded from durable LEXAN®
- Reliable analog communications for trouble-free operation
- Braille text on station handle
- Rotary address switches for fast installation
- Handle latches in down position and the word Activated appears, clearly indicating the station has been pulled
- UL Listed, including UL 38, Standard of Manually Actuated Signaling System
- CSFM Listed
- MEA Listed

IDP-PULL-SA and IDP-PULL-DA Technical Specifications



Wiring IDP-Pull-SA & IDP-Pull-DA Pull Stations

SPECIFICATIONS*

Physical: 5.5" H x 4" D (14cm x 10.2cm)
Shipping Weight: 5.4oz
Housing Material: LEXAN polycarbonate resin
Bi-Colored LED:
Blinking Green: Normal
Steady Red: Alarm
Switch: Single pole, single throw (SPST) normally open (N/O) switch which closes upon activation of the pull station

ELECTRICAL RATINGS

Operating Voltage: 15 – 32VDC
SLC Standby and Alarm Current: 350µA
Wire Gauge: Up to 12AWG (3.1 mm^2)

ENVIRONMENTAL

Operating Temperature: 32°-120°F (0°C – 49°C)
Humidity: 10 to 93% non-condensing)

ORDERING INFORMATION

IDP-Pull-SA: Single Action Pull Station
IDP-Pull-DA: Dual Action Pull Station

ACCESSORIES

BG-TR: Optional trim ring.
SB-I/O: Surface backbox, indoor/outdoor.
* Unless otherwise noted, specifications apply to IDP-Pull-SA and IDP-Pull-DA

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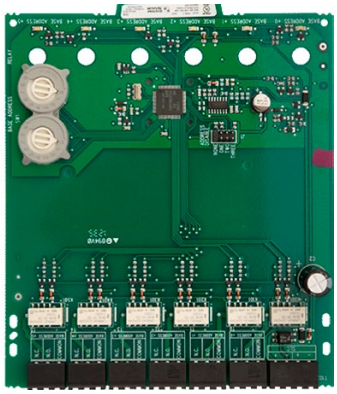
Farenhyt™ Series

IDP-RELAY-6

Addressable Relay Module

The IDP-RELAY-6 is an addressable relay module for use with Honeywell Farenhty Series fire alarm control panels (FACPs). The IDP-Relay-6 has six Form C relays. It allows a Farenhyt FACP to switch discrete contacts by code command. If needed, you can disable a maximum of three unused modules on the IDP-RELAY-6 board. No supervision is provided for the notification appliance circuit.

The IDP-RELAY-6 contacts can be used for virtually any normally open or normally closed application. Each IDP-RELAY- 6 is programmed with a unique signaling line circuit (SLC) loop address. When an event occurs that controls the IDP-RELAY-6, the relay is triggered by the FACP.



IDP-RELAY-6

Installation

The IDP-RELAY-6 mounts in the Honeywell IDP-ACB cabinet (PN IDP-ACB). The IDP-ACB has a built-in chassis that will accommodate one or two IDP-RELAY-6 modules.

COMPATIBILITY

The IDP-RELAY-6 is compatible with the following Farenhyt Series FACPs:

- IFP-2100 / IFP-2100ECS / RFP-2100
- IFP-2000 / IFP-2000ECS / RPS-2000
- IFP-1000 / IFP-1000ECS
- IFP-300 / IFP-300ECS
- IFP-100 / IFP-100ECS
- IFP-75
- IFP-50

FEATURES & BENEFITS

- Six Form C contacts
- Removable 12 to 18AWG plug-in terminal blocks
- Relay programming is completely flexible– can be mapped to zone conditions
- Individual LED for each relay contact
- Two module mounting in the IDP-ACB cabinet
- Up to three unused modules can be disabled
- Rotary address switches for fast installation
- Mounting hardware included
- Class A or B operation
- UL Listed
- CSFM Listed
- MEA Listed 386-02-E Vol. II

IDP-RELAY-6 Technical Specifications

SPECIFICATIONS*

Physical: 6.8" H x 5.8"W x 1.25" D
Shipping Weight: 6.3oz (196g)

ELECTRICAL RATINGS

Operating Voltage: 15 to 32VDC
Standby Current: 1.45mA maximum
Alarm Current: 30 mA/Relay Pulse (15.6 mS pulse duration) pulse under panel control
Relay Contact Ratings:

2.0A @ 25VAC (PF=.35), non-coded
3.0A @ 30VDC resistive, non-coded
2.0A @ 30VDC resistive, coded
0.46A @ 30VDC (L/R=20ms), non-coded
0.7A @ 70.7VAC (PF=.35), non-coded
0.9A @ 125VDC resistive, non-coded
0.5A @ 125VAC (PF=.75), non-coded
0.3A @ 125VAC (PF=.35), non-coded

ENVIRONMENTAL

Operating Temperature: 32°-120°F (0°C – 49°C)
Humidity: 10 to 85% non-condensing)

ORDERING INFORMATION

IDP-RELAY-6: Six Relay Module

ACCESSORIES

IDP-ACB: Cabinet. 15.25" H x 12.5" W x 3"D

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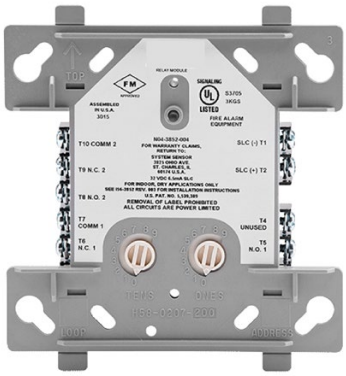
IDP-RELAY

Addressable Relay Module

The IDP-RELAY is an addressable relay module for use with the Honeywell Farenhyt Series fire alarm control panels (FACPs).

The IDP-RELAY allows a Farehyt FACP to switch discrete contacts by code command. The relay contains two isolated sets of Form C contacts, which operate as a DPDT switch. No supervision is provided for the notification appliance circuit.

The IDP-RELAY contacts can be used for virtually any normally open or normally closed application. Each IDP-RELAY is programmed with a unique signaling line circuit (SLC) loop address. When an event occurs that controls the IDP-RELAY, the relay is triggered by the FACP.



IDP-RELAY

INSTALLATION

The IDP-RELAY mounts directly into a 4" square electrical box. The box must have a minimum depth of 2-1/8". A surface mount electrical box (System Sensor® PN SMB500) is available from Honeywell.

COMPATIBILITY

The IDP-RELAY is compatible with the following Farenhyt Series FACPs:

- IFP-2100 / IFP-2100ECS / RFP-2100
- IFP-2000 / IFP-2000ECS / RPS-2000
- IFP-1000 / IFP-1000ECS
- IFP-300 / IFP-300ECS
- IFP-100 / IFP-100ECS
- IFP-75
- IFP-50

FEATURES & BENEFITS

- Two sets of Form C contacts
- Contacts are rated for a variety of amps (see Specifications)
- Panel controlled status LED that flashes green in normal state and is solid red in alarm
- Relay programming is completely flexible– can be mapped to zone conditions
- Polling LED visible through the cover plate
- Rotary address switches for fast installation
- SEMS screws for easy wiring
- UL Listed
- CSFM Listed
- MEA Listed 386-02-E Vol. II

IDP-RELAY Technical Specifications

SPECIFICATIONS*

Physical: 4.275" H x 4".675 W x 1.4 D
Shipping Weight: 6.3oz (196g)

ELECTRICAL RATINGS

Operating Voltage: 15 to 32VDC
Standby Current: 300µA max @ 24VDC (one communication every 5 sec. with LED enabled)
LED Current: 5.5 mA (with LED latched on)
Relay Contact Ratings:

2.0A @ 25VAC (PF=.35), non-coded
3.0A @ 30VDC resistive, non-coded
2.0A @ 30VDC resistive, coded
0.46A @ 30VDC (L/R=20ms), non-coded
0.7A @ 70.7VAC (PF=.35), non-coded
0.9A @ 125VDC resistive, non-coded
0.5A @ 125VAC (PF=.75), non-coded
0.3A @ 125VAC (PF=.35), non-coded

ENVIRONMENTAL

Operating Temperature: 32°-120°F (0°C – 49°C)
Humidity: 10 to 93% non-condensing)

ORDERING INFORMATION

IDP-RELAY: Relay Module

ACCESSORIES

SMB500: 4" Square Surface Mount Electrical Box
CB500: Module Barrier. Used to separate power limited and non-power limited wiring in a junction box.

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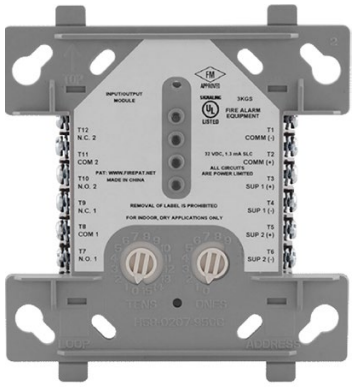
Farenhyt™ Series

IDP-RELAYMON-2

Addressable Dual Relay / Monitor Module

The IDP-RELAYMON-2 multi output-input module is designed for use with the Honeywell Farenhyt Series fire alarm control panels (FACPs).

The addressable module is intended for use in intelligent, two-wire loops. It includes two individual relay control modules and two Class B monitor modules. Each relay output is intended for Form C switching applications which do not require wiring supervision for the load circuit. Each monitor input provides an interface between a fire alarm control panel and one or more normally open contact-type devices. Each relay output has its own green LED.



IDP-RELAYMON-2

INSTALLATION

The IDP-RELAYMON-2 mounts directly into a 4" square electrical box. The box must have a minimum depth of 2-1/8". A surface mount electrical box (System Sensor® PN SMB500) is available from Honeywell.

COMPATIBILITY

The IDP-REALYMON-2 is compatible with the following Farenhyt Series FACPs:

- IFP-2100 / IFP-2100ECS / RFP-2100
- IFP-2000 / IFP-2000ECS / RPS-2000
- IFP-1000 / IFP-1000ECS
- IFP-300 / IFP-300ECS
- IFP-100 / IFP-100ECS
- IFP-75
- IFP-50

FEATURES & BENEFITS

- Monitor two circuits, with unique addresses, simultaneously
- Two Form C relay contacts with each having a unique address
- Fully supervised support for Class B input wiring
- Relay programming is completely flexible – can be mapped to zone conditions
- Individual LEDs for each monitored input and relay output
- Rotary address switches for fast installation
- SEMS screws for easy wiring
- UL Listed
- CSFM Listed
- FM Approved

IDP-REALYMON-2 Technical Specifications

SPECIFICATIONS

Physical: 4.675"H x 4.275"W x 1.4"D (mounts to a 4" square by 2 1/8" deep box).
Shipping Weight: 6.3oz (196g)

ELECTRICAL RATINGS

Operating Voltage: 15 to 32VDC
Standby & Alarm Current: 1.3mA

ENVIRONMENTAL

Operating Temperature: 32°-120°F (0°C – 49°C)
Humidity: 10 to 93% non-condensing)

RELAY CONTACT RATINGS

Current Rating	Max Voltage	Load Description	Application
2A	25VAC	PF=0.35	Non-coded
3A	30VDC	Resistive	Non-coded
2A	30VDC	Resistive	Coded
0.46A	30VDC	(L/R =20ms)	Non-coded
0.7A	70.7VAC	PF=0.35	Non-coded
0.9A	125VDC	Resistive	Non-coded
0.5A	125VAC	PF=0.75	Non-coded
0.3A	120VAC	PF-0.35	Non-coded

ORDERING INFORMATION

IDP-RELAYMON-2: Relay/Monitor module

ACCESSORIES

SMB500: 4" square surface mount electrical box

For a complete listing of all compliance approvals and certifications, please visit www.farenhyt.com.

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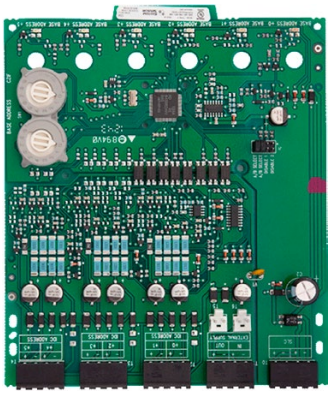
IDP-ZONE-6

Six Zone Interface Module

The IDP-ZONE-6 is an addressable zone interface module for use with the Honeywell Farenhyt Series fire alarm control panels (FACPs). The IDP-ZONE-6 provides six zone inputs that allow a Farenhyt FACP to interface and monitor two-wire conventional smoke detectors. This means you can retrofit an existing building and use existing conventional devices.

The inputs on the IDP-ZONE-6 share a common FACP signaling line circuit (SLC) input, and the initiating device circuits share a common external power supply. Otherwise, each input on the module operates independently from the others. If needed, you can disable a maximum of two unused inputs on the IDP-ZONE-6 board.

It transmits the status of a zone of two-wire detectors to the FACP. Status conditions are reported as normal, open, or alarm.The IDP-ZONE-6 supervises the zone of detectors and the connection of the external power supply. All two-wire detectors being monitored must be UL compatible with the IDP-ZONE-6.



IDP-ZONE-6

INSTALLATION

The IDP-Zone-6 mounts in the IDP-ACB cabinet. The IDP-ACB has a built-in chassis that will accommodate one or two IDP Zone-6 modules.

FEATURES & BENEFITS

- Converts a conventional two-wire loop to an SLC loop
- Six zone inputs
- Fully supervised
- Support for Class B and Class A wiring
- Removable 12 to 18 AWG plug-in terminal blocks
- Individual LED for each relay contact
- Two module mounting in the IDP-ACB cabinet
- Up to two unused modules can be disabled
- Rotary address switches for fast installation
- Mounting hardware included
- UL Listed
- CSFM Listed
- MEA Listed 386-02-E Vol. II

IDP-ZONE-6 Technical Specifications

SPECIFICATIONS

Physical: 6.8" H x 5.8"W x 1.25" D
Shipping Weight: 6.3oz (196g)

ELECTRICAL RATINGS

Operating Voltage: 15 to 32VDC
Standby Current: 2mA
Alarm Current: 40mA max. (Assumes all six LEDs solid on)
Initiating Device Circuit: Supervised, power-limited
Max. IDC Wiring Resistance: 25Ω max
External Power Supply
Standby Current: 50mA
Alarm Current: 270mA
End-of-Line Resistance: 3.9k Ω

ENVIRONMENTAL

Operating Temperature: 32°-120°F (0°C – 49°C)
Humidity: 10 to 93% non-condensing)

ORDERING INFORMATION

IDP-ZONE-6: Six Zone Two-Wire Interface Module

ACCESSORIES

IDP-ACB: Module Cabinet. Cabinet holds two IDP-ZONE-6. 15.25" H x 12.5" W x 3"D

COMPATIBILITY

The IDP-ZONE-6 is compatible with the following Farenhyt Series FACPs:

- IFP-2100 / IFP-2100ECS / RFP-2100
- IFP-2000 / IFP-2000ECS / RPS-2000
- IFP-1000 / IFP-1000ECS
- IFP-300 / IFP-300ECS
- IFP-100 / IFP-100ECS
- IFP-75
- IFP-50

For a list of detectors compatible with the IDP-Zone-6, see the IDP-Zone-6 Installation Instructions. (PN I56-2733-00).

For a complete listing of all compliance approvals and certifications, please visit www.farenhyt.com.

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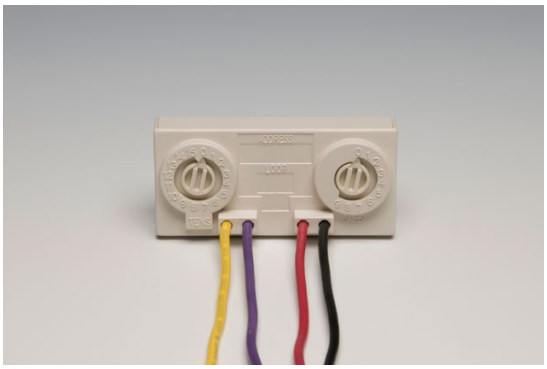
Farenhyt™ Series

IDP-MINIMON

Addressable Monitor Module

The IDP-MINIMON is a compact and light weight addressable monitor module for use with Honeywell Farenhyt Series fire alarm control panels (FACPs). The IDP-MINIMON acts as an interface to contact devices, such as waterflow switches and pull stations.

The IDP-MINIMON supports Class B supervised wiring to the load device. Conventional 4-wire smoke detectors can be monitored for alarm and trouble conditions.



IDP-MINIMON

INSTALLATION

The IDP-MINIMON can be mounted in a single gang junction box directly behind the monitored device. Its small size and light weight allow it to be installed without rigid mounting requirements.

COMPATIBILITY

The IDP-Minimon compatible with the following Farenhyt SeriesFACPs:

- IFP-2100 / IFP-2100ECS / RFP-2100
- IFP-2000 / IFP-2000ECS / RPS-2000
- IFP-1000 / IFP-1000ECS
- IFP-300 / IFP-300ECS
- IFP-100 / IFP-100ECS
- IFP-75
- IFP-50

FEATURES & BENEFITS

- Single contact monitor
- Small and lightweight size allows for flexible mounting options
- Support for Class B wiring
- Fully supervised
- Rotary address switches for fast installation
- Analog communications
- UL Approved
- CSFM Listed
- MEA Listed 457-99-E Vol. V

IDP-MINIMON Technical Specifications

PHYSICAL

Dimensions: 1.3" H x 2.8" W x .5" D (3.3 x 7x 1.3 cm)
Shipping Weight: 1.2oz (37 g)

ENVIRONMENTAL

Operating Temperature: 32°F - 120 °F (0°C - 49°C)
Humidity: 10 to 93% non-condensing)

ELECTRICAL RATINGS

Operating Voltage: 15 – 32VDC
SLC Standby and Alarm Current: 350µA
End-of-Line Resistance: 47K Ω
Initiating device circuit wiring resistance: 1,500Ω max
SLC loop resistance: 40Ω max.
Wire Length: 6" min.

ORDERING INFORMATION

IDP-MINIMON: Mini monitoring module

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IDP-ZONE

Addressable Zone Interface Module

The IDP-ZONE is an addressable two-wire interface module for use with the Honeywell Farenhyt Series fire alarm control panels (FACPs). The IDP-ZONE allows a Honeywell Farenhyt FACP to interface and monitor two-wire conventional smoke detectors. This means you can retrofit an existing building and use existing conventional devices.

The IDP-ZONE is addressed through the signaling line circuit loop of the FACP. It transmits the status of one full zone of two-wire detectors to the FACP. Status conditions are reported as normal, open, or alarm. The IDP-ZONE supervises the zone of detectors and the connection of the external power supply. All two-wire detectors being monitored must be UL compatible with the IDP-ZONE.



IDP-ZONE

INSTALLATION

The IDP-ZONE mounts directly into a 4” square electrical box. The box must have a minimum depth of 2-1/8”. A surface mount electrical box (System Sensor® PN SMB500) is available from Honeywell.

COMPATIBILITY

The IDP-ZONE is compatible with the following Farenhyt Series FACPs:

- IFP-2100 / IFP-2100ECS / RFP-2100
- IFP-2000 / IFP-2000ECS / RPS-2000
- IFP-1000 / IFP-1000ECS
- IFP-300 / IFP-300ECS
- IFP-100 / IFP-100ECS
- IFP-75
- IFP-50

For a list of detectors compatible with the IDP-ZONE see the IDP-ZONE Installation Instructions P/N I56-3602-00..

FEATURES & BENEFITS

- Converts a conventional two-wire loop to an SLC loop
- Fully supervised
- Support for Style B and Style D wiring
- Panel controlled status LED that flashes green in normal state and is solid red in alarm
- Rotary address switches for fast installation
- SEMS screws for easy wiring
- UL Listed
- CSFM Listed
- MEA Listed 386-02-E Vol. II

IDP-ZONE Technical Specifications

SPECIFICATIONS

Physical: 4.5" H x 4"W x 1.25" D
Shipping Weight: 6.3oz (196g)

ELECTRICAL RATINGS

Operating Voltage: 15 to 32VDC
External Power Supply
Alarm Current: 90mA per module
Standby Current: 12mA @ 24 VDC (nominal)
Standby & Alarm Current: 300 µA max @ 24 VDC (one communication every 5 sec. with LED enabled)
End-of-Line Resistance: 3.9kΩ
SLC Loop Impedance: 40Ω
Initiating Device Circuit Wiring Resistance: 25Ω max

ENVIRONMENTAL

Operating Temperature: 32°-120°F (0°C – 49°C)
Humidity: 10 to 93% non-condensing)

ORDERING INFORMATION

IDP-ZONE: Two-wire interface module

ACCESSORIES

SMB500: 4" Square Surface Mount Electrica Box

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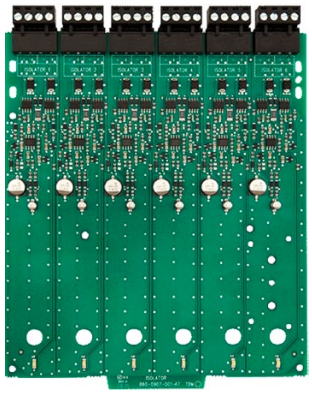
ISO-6

Six Fault Isolator Module

The ISO-6 Six Fault Isolator Module provides six equivalent circuits that will allow a portion of the communications loop to continue operating when a short circuit occurs on that loop.

The ISO-6 Six Fault Isolator Module has an amber LED indicator that will blink in the normal state for each of the six inputs and will latch on during a short circuit condition. The module will automatically restore the communications loop to normal condition when the short circuit is removed.

The ISO-6 Six Isolator Module is an automatic switch that opens when the line voltage drops below four volts. Isolator modules should be spaced between groups of sensors or modules in a loop to protect the rest of the loop. If a short occurs between any two isolators, then both isolators immediately switch to an open circuit state and isolate the devices between them. The remaining units on the loop continue to fully operate.



ISO-6

Applications

The ISO-6 Fault Isolator Modules should be spaced between groups of sensors in an SLC to protect the rest of the loop. Use to isolate short circuit problems within a section of a loop so that other sections can continue to operate normally. The ISO-6 supports a maximum of 25 devices between isolators.

FEATURES & BENEFITS

- Removable 12 to 18 AWG plug-in terminal blocks
- Individual LED status indicators
- Six individual, Class B isolator circuits
- Mount up to two modules in IDP-ACB enclosure (optional)
- Mounting hardware included
- UL Listed
- CSFM Listed
- FM Approved

ISO-6 Technical Specifications

SPECIFICATIONS

Physical: 6.8"H x 5.8"W x 1.0"D
Shipping Weight: 1.1 lbs (.50g) including pkg.
Mounting Option: IDP-ACB

ELECTRICAL RATINGS

Operating Voltage: 15 to 32VDC
Standby Current: 450 µA per circuit, 2.7mA all circuits.
Alarm Current Draw: 17mA per circuit in isolation, 102mA with all circuits in isolation.

ENVIRONMENTAL

Operating Temperature: 32°-120°F (0°C – 49°C)
Humidity: 10 to 85% non-condensing)

ORDERING INFORMATION

ISO-6: Six Isolator module

ACCESSORIES

IDP-ACB: Optional cabinet for one or two modules. Dimensions: 12.5"W x 15.25"H x 3"D (31.8 cm W x 38.7cm H x 7.6 cm D)

COMPATIBILITY

The ISO-6 is compatible with the following Farenhyt Series FACPs:

- IFP-2100 / IFP-2100ECS / RFP-2100
- IFP-2000 / IFP-2000ECS / RPS-2000
- IFP-1000 / IFP-1000ECS
- IFP-300 / IFP-300ECS
- IFP-100 / IFP-100ECS
- IFP-75
- IFP-50

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Farenhyt™ Series

IFP-FFT

Fire Fighters Telephone Control System

The IFP-FFT is a Fire Fighters Telephone communication system. The IFP-FFT Fire Fighter Telephone System provides supervision, annunciation, and control for local and remote telephone handsets. The IFP-FFT with keypad, provides indications of phone activation, and corresponding trouble conditions. The FFT-24 expander board lets you add additional zones to the IFP-FFT.

The IFP-FFT can use up to two FFT-24s for a total of 72 zones. Each zone consists of one addressable monitor module (IDP-Minimon) and a minimum of one Fire Fighter Telephone Jack (FFT-FPJ).



IFP-FFT

INSTALLATION

The IFP-FFT can be surface or flush mounted. Use VIP-TR Trim Ring for flush mounting.

COMPATIBILITY

The IFP-FFT is compatible with the following FACPs:

- IFP-2100ECS / IFP-2100ECSB (120V or 240V)
- IFP-2100 / IFP-2100B / RFP-2100 / RFP-2100B (120V or 240V)
- IFP-2000 / RPS-2000 / IFP-2000ECS (120V or 240V)
- IFP-300 / IFP-300B / IFP-300ECS / IFP-300ECSB
- IFP-1000 / IFP-1000ECS (120V or 240V)
- IFP-100 / IFP-100ECS
- IFP-75
- IFP-50
- RPS-1000

FEATURES & BENEFITS

- IFP-FFT Fire Fighter Telephone module for control and annunciation of up to 72 remote telephone jacks
- A maximum of 10 Fire Fighter Remote Handsets (FFT-RHS) can be used at one time to communicate over the telephone circuit connected to the IFP-FFT
- Fire Fighter Phone Jack (FFT-FPJ) provides a plug-in location for the FFT-RHS
- Single telephone station mount comes in a lockable cabinet containing one remote handset. Available in Recessed mount (FFT-STSR) or surface mount (FFT-STSS).
- Fire Fighter Handset Cabinet (FFT-HSC) is used to store ten fire fighter handsets (FFT-RHS)
- System Status LEDs
- Supports two FFT-24 zone expanders
- The IFP-FFT supports up to 72 IDP-Minimon devices on one FFT system
- Simplified installation by using single loop design
- JumpStart® auto-programming
- For retrofit projects, IFP-FFT is compatible with any UL listed 24V regulated power supply

IFP-FFT Technical Specifications

PHYSICAL

Flush Mount Dimensions: 20¼ "W x 26¾"H x 2.5"– 3"D (51.4 W x 68 H x 6.4–7.6 D cm)

Overall Dimensions: 20"W x 26½"H x 4.6"D (50.75 W x 67.3 H x 11.8 D cm)

Weight: 53 lbs.

Color: Red

ENVIRONMENTAL

Operating Temperature: 32°F to 120°F (0°C to 49°C)

Humidity: 10 to 93% relative humidity (non-condensing)

ELECTRICAL:

Voltage for the IFP-FFT must be a power-limited, filtered, non resettable nominal 24 VDC source. The voltage source must be within the range of 17-29 VDC.

Active Current: 230 mA

Standby Current: 120 mA

SLC Circuit: 32V; 150mA

Audio Circuits: 17V; 53mA

AGENCY LISTINGS AND APPROVALS

UL Listed

ORDERING INFORMATION

IFP-FFT: Fire Fighters Telephone

IDP-Minimon: Mini monitor module

IDP-ISO: Fault Isolator Module

ECS ACCESSORIES

FFT-24: 24 Zone Expander

FFT-FPJ: Remote Phone Jack

FFT-RHS: Fire Fighters Remote Hand Set

FFT-HSC: Fire Fighters Handset Cabinet. Holds up to 10 remote handsets

FFT-STSR: Single Telephone Station Recessed. A lockable cabinet containing one remote handset.

FFT-STSS: Single Telephone Station Surface Mount. A lockable cabinet containing one remote handset.

FFT-BGK: Break Glass Kit for FFT-STS

VIP-TR: Flush Mount Trim Ring

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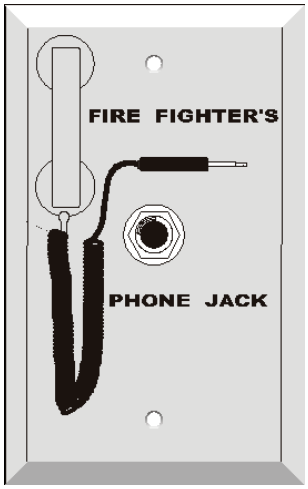
Farenhyt™ Series

FFT-FPJ

Fire Fighters Telephone Phone Jack

TThe FFT-FPJ remote Firefighter Phone Jack provides a quick connect to the IFP-FFT fire fighter telephone system using a FFT-RHS remote handset.

The FFT-FPJ are wired to the IFP-FFT Fire Fighter Telephone System audio circuit. A monitor module detects the connection and its address will turn on the corresponding IFP-FFT zone LED and PZT will sound. Pressing the answer switch will connect the local handset to the phone circuit allowing communication with the remote handset



FFT-FPJ

COMPATIBILITY

The FFT-FPJ is compatible with the IFP-FFT. Firefighters Telephone System.

INSTALLATION

The FFT-FPJ Fire Fighter Phone Jack mounts to a single-gang electrical box (4" x 2-1/8" x 2½") or when the addressable mini-monitor module is installed with it, a deep single-gang electrical box (4" x 2-1/8" x 3¾"). For detailed installation instructions see IFP-FFT installation manual P/N 54708.

FEATURES & BENEFITS

- Single Telephone Station Mount comes in a lockable cabinet containing one remote handset. Available in Recessed mount (FFT-STSR) or surface mount (FFT-STSS).
- Color coded wires, 6 inches long, are prewired to the jack to enable fast and accurate wiring to the system.

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FFT-STSS and FFT-STSR

Fire Fighters Telephone Trim Ring, Plate, Door and Backbox

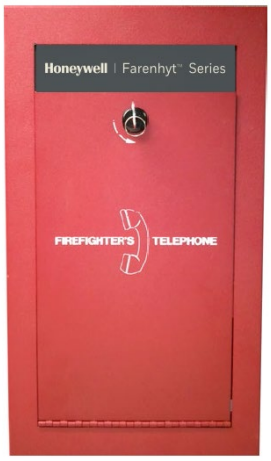
The FFT-STSS and FFT-STSR are compatible with the Fire Fighters Telephone communication system. The FFT-STSS is a surface mount door with keylock. The FFT-STSR is a recessed mount door with keylock.

COMPATIBILITY

The FFT-STSS or FFT-STSR are compatible with IFP-FFT

INSTALLATION

Either recessed or surface enclosures may be used with these Emergency Telephone Stations. If a recessed enclosure is used, the telephone assembly must be a model designed for recessed enclosures. The same is true of surface enclosures.

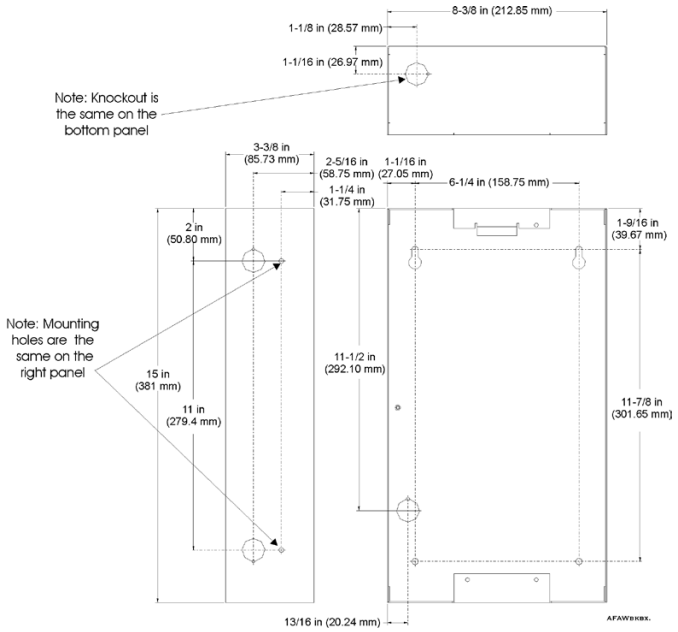


FFT-STSS

FEATURES & BENEFITS

- Single Telephone Station Mount comes in a lockable cabinet containing one remote handset. Available in Recessed mount (FFT-STSR) or surface mount (FFT-STSS).
- Heavy-duty construction
- Doors fit either recessed or surface enclosures
- Red baked-enamel finish

FFT-STSS / FFT-STSR Technical Specifications



BACKBOX DIMENSIONS

PHYSICAL

Flush Mount Dimensions: 9.5" W x 16.25" H x 3.5" D (24.1 W x 41.3 H x 8.9 D cm)

Surface Mount Dimensions: 8.5" W x 15" H x 3.5" D (21.6 W x 38.1 H x 8.9 D cm)

Color: Red

ORDERING INFORMATION

FFT-STSR: Single Telephone Station Recessed. A lockable cabinet containing one remote handset.

FFT-STSS: Single Telephone Station Surface Mount. A lockable cabinet containing one remote handset.

FFT-BGK: Break Glass Kit for FFT-STS.

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FFT-FPJ Technical Specifications

PHYSICAL

Dimensions: 4¾ " W x 2¾" H x 1½" D (12.065 x 6.985 x 3.81 cm)

ENVIRONMENTAL

Operating Temperature: 32°F-120°F (0°C – 49°C)
Humidity: 10% – 93% noncondensing

ELECTRICAL

The FFT-FPJ is a passive device that does not draw current

AGENCY LISTINGS AND APPROVALS

UL: Listed
CSFM: 7300-0559:0167

ORDERING INFORMATION

IFP-FFT: Fire Fighters Telephone
IDP-Minimon: Mini-Monitor module
IDP-ISO: Fault Isolator module

MISCELLANEOUS ACCESSORIES

FFT-24: 24 Zone Expander
FFT-FPJ : Remote Phone Jack
FFT-RHS : Fire Fighters Remote Hand Set
FFT-HSC: Fire Fighters Handset Cabinet. Holds up to 10 remote handsets
FFT-STSR: Single Telephone Station Recessed. A lockable cabinet containing one remote handset.
FFT-STSS: Single Telephone Station Surface Mount. A lockable cabinet containing one remote handset.
FFT-BGK: Break Glass Kit for FFTSTS
VIP-TR: Flush Mount Trim Ring

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RA-2000 / RA-2000GRAY

Remote Annunciator

The RA-2000 or RA-2000GRAY remote annunciators can be used to operate and program the Honeywell Farenhyt Series FACPs. The RA-2000 has a large 160 character, 4 x 40 display and four programmable buttons. These features provide more options for set-up and operation when compared to similar remote annunciators.

The RA-2000 comes in a locked, key controlled cabinet - combining security with easy access. It does not require a code or firefighter's key to silence or reset a panel, and also has convenient separate scroll buttons for alarm, supervisory and trouble conditions. The remote annunciator communicates with the main fire alarm control panel through an RS-485 connection.

The RA-2000 can be surface or flush mounted and is also available in gray color as RA-2000GRAY.



RA-2000

COMPATIBILITY

The RA-2000 or RA-2000GRAY are compatible with the following Honeywell Farenhyt Series FACPs:

- IFP-2000/ECS
- IFP-2100/ECS
- IFP-75
- IFP-300/ECS
- RPS-2000
- RFP-2100
- ECS-LOC

FEATURES & BENEFITS

- Four line LCD display with 40 characters per line
- Tactile/audible feedback when key is pressed on annunciator
- RS-485 SBUS interface to panel
- Initiate and end fire drills with a single key press
- Can be flush or surface mounted. Trim ring (P/N RA-100TR or RA-2000GRAYTR) available for surface mounting
- Multi-panel displays can display the status and event history of all the panels they are assigned in a network
- Multi-panel annunciators will sound the highest priority tone from the panel it is assigned to
- View current status by alarms, supervisories, or troubles
- On-board piezo sounder audibly indicates alarms, troubles, and supervisories
- Five Status LEDs for; alarms, supervisory, trouble, silence and AC power indications
- Four programmable function keys
- Available in red or gray color
- Wiring lengths up to 6000 ft. from the control panel
- UL listed, complies with NFPA 72

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RA-1000 / RA-1000R

Remote Annunciator

The RA-1000 is a remote annunciator used to operate and program IFP-series fire alarm control panels (FACP's). The RA-1000's keypad and display match the built-in annunciator of the IFP-1000 control panel.

The remote annunciator connects to the control panel via the RS-485 system bus. When the system is in normal operation and has AC power, the Power LED is lit and all other LEDs are off. The other LEDs turn on as alarms, supervisories, troubles, system silenced and AC power losses occur.



RA-1000R /RA-1000

INSTALLATION

The RA-1000 can be surface or flush mounted. Use the optional trim ring for surface mounts. When flush mounting an electrical box is optional. If using an electrical box, use a 4S, single-gang, or double-gang box.

COMPATIBILITY

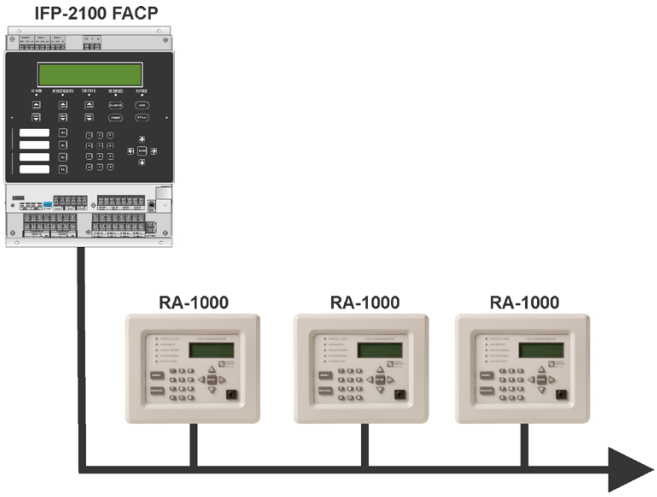
The RA-1000 is compatible with the following Farenhyt Series FACPs:

- IFP-2100 / IFP-2100ECS
- IFP-1000/ECS
- IFP-100/ECS
- IFP-300 / IFP-300ECS
- IFP-75
- IFP-50

FEATURES & BENEFITS

- 80-character backlit LCD display (4 lines with 20 characters on each line)
- Tactile/audible feedback
- RS-485 SBUS interface to panel
- Larger keypad buttons for system reset and silence
- Initiate and end fire drills with a single key press
- View current status by alarms, supervisories, or troubles
- On-board piezo sounder audibly indicates alarms, troubles, and supervisories
- Five Status LEDs for; alarms, supervisory, trouble, silence and AC power indications
- Available in red or gray color
- UL listed, complies with NFPA 72
- Accepts user codes or fire fighter's key
- Support for simultaneous use of multiple RA-1000s
- Wiring lengths up to 6000 ft. from the FACP (depending on wire gauge and number of devices on SBUS)

RA-1000 Technical Specifications



- Up to 31 RA-1000s per system for IFP-2100 or IFP-2100ECS
- Up to 16 RA-1000s per system for IFP-300/ECS
- Up to 12 RA-1000s per system for IFP-1000, IFP-1000ECS, IFP-100 & IFP-100ECS
- Up to 8 RA-1000s per system for IFP-50 or IFP-75
- 80-character backlit LCD display (4 lines with 20 characters each)
- Wiring lengths up to 6000 ft. from the control panel

SPECIFICATIONS

Dimensions: 9.1"W x 7.4"H x 1.5"D (23.1W x 18.8H x 3.8D cm)

ENVIRONMENTAL

Operating Temperature: 32°F to 120°F (0°C to 49°C)

Humidity: 10% to 93% relative humidity (non-condensing)

ELECTRICAL:

Operating Voltage: 24VDC

Standby Current: 20mA

Alarm Current: 25mA

Wiring Distance: 6,000 ft max. from FACP (depending on wire gauge and number of devices on the SBUS)

Max per System: IFP-50 or IFP-75 (8); IFP-100/ECS or IFP-1000/ECS (12); IFP-300/ECS (16); IFP-2100/ECS (31)

ORDERING INFORMATION

RA-1000R: Remote Annunciator. Four line LCD annunciator with 20 characters per line. Red.

RA-1000: Remote Annunciator. Four line LCD annunciator with 20 characters per line. Gray.

OPTIONAL ACCESSORIES

5860TR: Red Trim Ring. For surface mounting.

5860TG: Gray Trim Ring. For surface mounting.

AGENCY LISTINGS AND APPROVALS

- MEA Approved
- CSFM Approved
- FM Approved
- UL listed

For a complete listing of all compliance approvals and certifications, please visit www.farenhyt.com.

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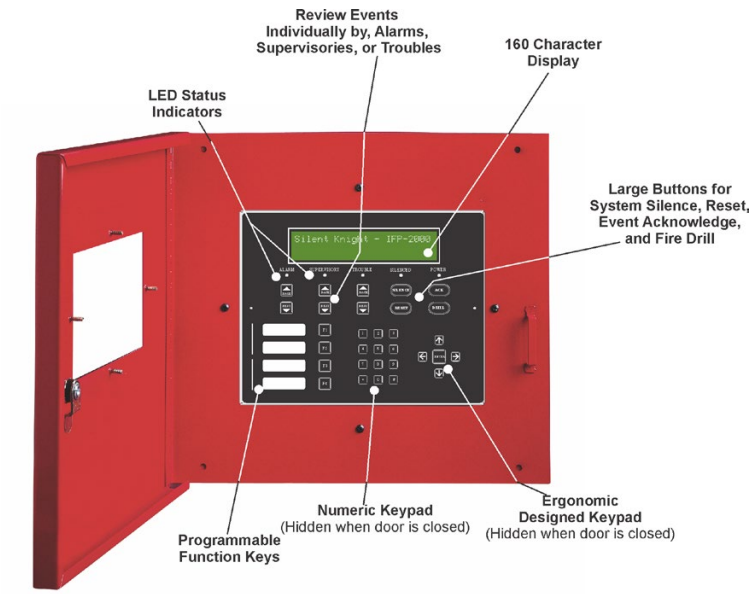
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RA-2000 Technical Specifications



RA-2000 FEATURES

PHYSICAL

Flush Mount

Outside wall: 12.25"W x 11.5"H x 7/8"D (31.1W x 29.2H x 2.2D cm)

Inside wall: 9-3/8"W x 8-3/8"H x 2"D (23.8W x 21.3H x 5.1D cm)

Surface Mount: (Including Trim Ring) 12.25"W x 11.5"H x 3"D (31.1W x 29.2H x 2.2D cm)

ENVIRONMENTAL

Operating Temperature: 32°F to 120°F (0°C to 49°C)

Humidity: 0 to 93% relative humidity (non-condensing)

ELECTRICAL

Operating Voltage: 24VDC

Standby Current: 25mA

Alarm Current: 50mA

ORDERING INFORMATION

RA-2000: Remote Annunciator. Red

RA-2000GRAY: Remote Annunciator. Gray

OPTIONAL ACCESSORIES

RA-100TR: Red surface mount trim ring

RA-2000GRAYTR: Gray surface mount trim ring

AGENCY LISTINGS AND APPROVALS

UL listed

CSFM approved

NFPA 72

FM approved

FDNY COA#: 6162

For a complete listing of all compliance approvals and certifications, please visit www.farenhyt.com.

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SWIFT®

Wireless System Gateway

SWIFT® Wireless System can be applied in many situations that are problematic for traditional wired devices. In cases where areas of a building are difficult or impossible to wire, visually sensitive, or have restricted access, SWIFT wireless sensors provide an efficient, reliable solution.

SWIFT wireless devices communicate via a proprietary wireless mesh protocol to communicate with a Honeywell Farenhyt Series fire alarm system by means of a SWIFT Wireless Gateway (WIDP-WGI). The SWIFT Gateway connects to the SLC loop of the IFP-75, IFP-300, IFP-300ECS, IFP-2100 or IFP-2100ECS panels using IDP protocol.

Wireless devices in a SWIFT network develop "parent-child" communication links with other devices in the mesh, so that a message originating from a remote device "hops" to the closest parent device, and then to successive parent devices until the message reaches gateway. Alternate paths are also identified and supervised by the SWIFT protocol providing approved Class A wireless communication. If a device does not have an established communication path with adequate signal strength, an additional device such as a wireless module may be installed in between so that it will act as a repeater.

The WIDP-WGI supports up to 50 devices: 1 SWIFT Gateway and up to 49 wireless detectors and monitor modules. The Gateway assumes one SLC address (module), each wireless device assumes one module or detector address, and the display driver assumes one SLC address. The maximum number of gateways on a system is limited by the number of available SLC addresses on the FACP, or a maximum of 4 gateways within common wireless range.

The SWIFT system can be installed using only hand tools. However, the SWIFT Tools PC utility provides many benefits to a site evaluation (Site Survey), installing a system (Mesh Configuration), and extracting detailed information from the system (Diagnostics).



WIDP-WGI WIRELESS GATEWAY MODULE

The utility runs on a laptop with Windows®, and uses a USB radio antenna (W-USB) to communicate with wireless devices within range of the PC. Once the devices have formed a mesh, SWIFT Tools can provide current information on all devices in the mesh as long as the PC is within range of the SWIFT Gateway.

FEATURES & BENEFITS

- Wireless mesh technology (902-928 MHz frequency)
- Cascading-wave mesh operation provides a verification on redundant communication paths
- Any wireless device can be added to act as a repeater
- Each gateway supports up to 50 addresses: 1 wireless gateway and up to 49 devices
- Up to 4 wireless networks can be installed with overlapping radio network coverage
- Site Survey feature allows for an evaluation of a site before the installation
- Standard "code wheel" for setting the SLC address
- Wireless devices use (4) CR-123A lithium batteries
- Battery Life – UL listed for 2 years
- SWIFT Tools also creates a useful graphic representation of the wireless network. It provides important system data and a visual perspective.
- SWIFT Tools makes the survey and installation faster and easier to complete; diagnostics simpler to understand and view

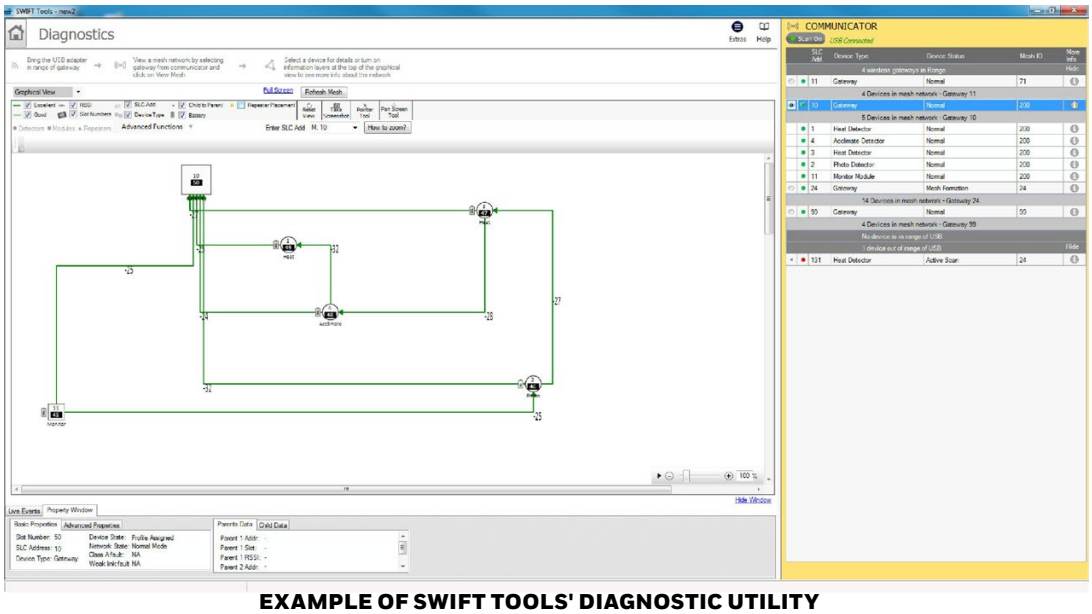
SWIFT TOOLS HAS THE FOLLOWING UTILITIES:

- Site Survey
- Create Mesh Network
- Diagnostics

SWIFT Tools works in a wireless environment with the WIDP-WGI and devices within a range of approximately 20 feet. SWIFT Tools is designed for systems running Microsoft Windows.

MINIMUM SYSTEM REQUIREMENTS

Operating System: Windows XP Professional (SP3), Vista, Windows 7, and Windows 8 (32 bit and 64 bit).
Hard Drive: 20 GB hard drive space with minimum 1GB free space on hard disk.
RAM: Minimum 512MB RAM.
Processor speed: 1GHz minimum (2.4 GHz recommended) Processor, 512K Cache.



EXAMPLE OF SWIFT TOOLS' DIAGNOSTIC UTILITY

SWIFT TOOLS

SWIFT Tools is a Windows PC-based utility that is used for site evaluation, system configuration, and diagnostics. The SWIFT Tools program is used with the W-USB adapter to communicate with wireless devices that are not joined in a network, or with one or more wireless gateways and all devices that have formed a network with each gateway. A graphic representation of the wireless network provides important system

data in an effective format, including communication links, signal strength, battery voltage, and more.

Tool-less operation is supported, allowing you to perform site evaluation and system configuration and installation can be accomplished without using SWIFT Tools when necessary. Multi-colored LEDs on SWIFT devices provide feedback for interactions. At any point, only one instance of SWIFT Tools can run on a laptop or PC.

SWIFT TOOLS HAS THE FOLLOWING UTILITIES:

- Site Survey
- Create Mesh Network
- Diagnostics

SWIFT Tools works in a wireless environment with the WIDP-WGI and devices within a range of approximately 20 feet. SWIFT Tools is designed for systems running Microsoft Windows

ORDERING INFORMATION

WIDP-WGI: Wireless SWIFT Gateway - 1 SWIFT Gateway is required for each wireless mesh, and supports up to 49 SWIFT detectors or modules. Connects to the SLC loop of a compatible panel using IDP protocol. Power may be supplied by the SLC circuit or via an optional 24VDC input.

NOTE: Use of the 24VDC input may be more convenient for service as it allows for powering down a gateway without shuttingdown an SLC loop.

WIDP-Monitor: Wireless monitor module for use with the WIDP-WGI wireless gateway. Includes a special cover with a tamper magnet built in. Recommended for installation in a SMB500 box (ordered separately) rather than a metal backbox for best performance. Ships with 4 Panasonic CR123A or 4 Duracell DL123A batteries.

WIDP-RELAY: Wireless relay module for use with the WIDP-WGI wireless gateway. Includes a special cover with a tamper magnet built in. Recommended for installation in an SMB500 box (ordered separately) rather than a metal backbox for best performance. Ships with 4 Panasonic CR123A or 4 Duracell DL123A batteries.

SWIFT Gateway Technical Specifications

ORDERING INFORMATION (CON'T)

WIDP-PHOTO: Wireless photoelectric smoke detector for use with the WSK-WGI wireless gateway, B501W included

WIDP-ACCLIMATE: Wireless multi criteria photoelectric smoke detector with thermal (135°) for use with the WIDP-WGI wireless gateway, B501W included

WIDP-HEAT: Wireless fixed-temperature (135° F) heat detector for use with the WSK-WGI wireless gateway, B501W included

WIDP-HEAT-ROR: Wireless rate-of-rise (135° F) heat detector for use with the WSK-WGI wireless gateway, B501W included

SMB500: Optional surface-mount backbox.

W-PTOOL: SWIFT Tools programming and diagnostic utility. Free download from farenhyt.com. For installation on a (typically laptop) PC running an approved version of Windows (See Minimum System Requirements for SWIFT Tools). Requires the W-USB radio/antenna dongle for communication with SWIFT Wireless devices

W-USB: Wireless USB radio/antenna dongle that plugs into the USB port of a PC running SWIFT Tools. The W-USB provides a communication link with SWIFT Wireless devices that are within approximately 20 feet and have not formed a mesh. Alternately, when the devices have formed a mesh, bringing the PC/W-USB within range (20 ft.) of the gateway for that mesh will allow SWIFT Tools to acquire information on all devices in that mesh, including point-to point signal strength for all links.

AGENCY LISTINGS AND APPROVALS

The listings and approvals below apply to the WSK-WGI. In some cases, certain modules may not be listed by certain approval agencies listing may be in process. Consult factory for latest listing status.

UL Listed: S2424

CSFM: 7300-0559:0510

FDNY COA #: approved

FM Approved

FCC ID: PV3WFSGW.

STANDARDS AND CODES

The SWIFT Wireless System complies with the following UL Standards and with NFPA 72 Fire Alarm system requirements.

UL 864

UL 268

For a complete listing of all compliance approvals and certifications, please visit www.farenhyt.com.

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SWIFT®

Intelligent Wireless Detectors

Farenhyt SWIFT® wireless detectors are intelligent (addressable detectors which provide secure, reliable communication to the Fire Alarm Control Panel (FACP) across a Class A mesh network. Wireless detectors create an opportunity for applications where it is costly (concrete walls/ceilings, buried wires), obtrusive (surface mount conduit), or possibly dangerous (asbestos) to use traditional wired devices. In addition, both wired and wireless devices can be present on the same FACP providing an integrated wired-wireless solution for increased installation potential.

The SWIFT detection line includes a photoelectric, photo/thermal, standard fixed heat, and rate-of-rise heat detectors. The photoelectric detectors transmit a digital representation of smoke density through a wireless mesh to a gateway and on to a FACP. The photo/thermal detectors combine a photoelectric chamber and a 135ºF fixed temperature heat detector. The fixed heat detector and rate-of-rise detectors utilize sensors designed for open area protection with 50 foot spacing capability as approved by UL 521.

All sensors offer addressable code wheels and two LEDs. The LEDs are controlled by the panels. Operation modes include red, green, and amber colors with various solid or blink patterns.The mesh network within the SWIFT system creates a child-parent relationship between the devices so that each device has two parents providing a second path for communications on every device. If one device can no longer operate for any reason, the rest of the devices can still communicate with each other, directly or through one or more intermediate devices. The system also engages frequency hopping to prevent system interference whether intentional or accidental.



WIRELESS DETECTOR WITH B501W BASE

FEATURES & BENEFITS

- Wireless Installation
- Class A mesh network
- Complies with UL Standards for UL 864 and UL 268
- Frequency hopping
- Bi-directional communications
- Complies with NFPA 72 Fire Alarm System requirements.
- SWIFT devices integrate with previously installed FACPs through the SWIFT gateway and the FACP's SLC loop, for a seamless, easy and cost-effective system addition
- Wireless devices use (4) CR-123A lithium batteries or reliable, long lasting battery life. CR-123A batteries have a UL listed life of 2 years. All devices ship with batteries.
- Ideal for hard-to-wire buildings and can be combined with hard-wired devices for enhanced design and install options
- Swift Tools provides valuable information for device placement associated with conducting Site Surveys, diagnostics, history, statistics and mesh visualization. Swift Tools can be downloaded from the Farenhyt website at no cost. It is also available on the W-USB.

SWIFT Detectors Technical Specifications

PHYSICAL

Height: 2.4" (61 mm) installed in B501W base

Diameter: 4.0 inches (102 mm) installed in B501W base

Device Weight (includes 4 batteries): 8.1 oz (230 g) installed in B501W base

ENVIRONMENTAL

Operating Temperature Range: Photo: 32°F to 120°F (0°C to 49°C); Photo/thermal with Heat: 32°F to 100°F (0°C to 38°C)

Air Velocity: Photo/thermal with Heat: 0 to 4,000 fpm (0 to 20 m/sec)

Humidity: 10 to 93% relative humidity (non-condensing)

Thermal Ratings: Fixed Temperate Set Point: 135°F (57°C); Rate-of-Rise Detection: 15°F/min (8.3°C/min)

ELECTRICAL

Maximum Operating Voltage: 3.3VDC

Maximum Standby Current: 210µA @ 3.3VDC (one communication every 23.9 seconds with LED blink enabled)

Maximum Alarm Current (LED on): 5 mA @ 3.3VDC (LED on)

Radio Frequency Range: 902-928MHz

BATTERY SPECIFICATIONS

Battery Type: 4 Panasonic CR123A or 4 Duracell DL 123A

Battery Life: 2 years

Battery Replacement: Upon TROUBLE BATTERY LOW display and/or during annual maintenance

ORDERING INFORMATION

WIDP-PHOTO: Wireless photoelectric smoke detector for use with the WIDP-WGI wireless gateway, B501W included

WIDP-ACCLIMATE: Wireless multi criteria photoelectric smoke detector with thermal (135°) for use with the WIDP-WGI wireless gateway, B501W included

WIDP-HEAT: Wireless fixed-temperature (135° F) heat detector for use with the WIDP-WGI wireless gateway, B501W included

WIDP-HEAT-ROR: Wireless rate-of-rise (135° F) heat detector for use with the WIDP-WGI wireless gateway, B501W included

WIDP-WGI: Wireless Gateway.

B501W: 4" wireless mounting base.

W-USB: Software interface (via USB port) for computers running the SWIFT Tools programming utility.

AGENCY LISTINGS AND APPROVALS

Each device complies with part 1 of the FCC rules meaning operation is subject to two conditions

1) The device may not cause harmful interference
2) The device must accept any interference received including interference that may cause undesired operation.

The listings and approvals below apply to the basic intelligent wireless detector. In some cases, certain modules may not be listed by certain approval agencies or listing may be in process. Consult factory for latest listing status.

UL Listed: S2424

CSFM: 7272-0559:0506; 7254-0559:0509

FM: approved

FDNY: (pending)

For a complete listing of all compliance approvals and certifications, please visit www.farenhyt.com.

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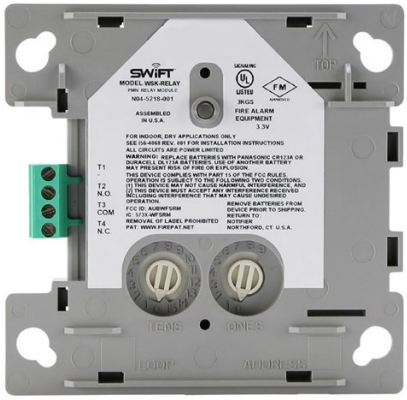
Intelligent Wireless Modules

SWIFT® wireless modules are intelligent addressable modules which provide secure, reliable communication to the Fire Alarm Control Panel (FACP) across a Class A mesh network. Wireless modules create an opportunity for applications where it is costly (concrete walls/ceilings, buried wires), obtrusive (surface mount conduit), or possibly dangerous (asbestos) to use traditional wired devices. In addition, both wired and wireless devices can be present on the same FACP providing an integrated wired-wireless solution for increased installation potential.

The mesh network within the SWIFT system creates a childparent relationship between the devices so that each device has two parents providing a second path for communications on every device. If one device can no longer operate for any reason, the rest of the devices can still communicate with each other, directly or through one or more intermediate devices.

The SWIFT system also engages frequency hopping to prevent system interference whether intentional or accidental. The SWIFT monitor module is intended for use with a wireless gateway to interface with a device having contacts used to signal status conditions. It is designed to provide an interface to contact devices such as security contacts, waterflow switches, or pull stations. The input to the monitor module is non-latching and does not require a reset. The device has a panel controlled LED indicator. The monitor module must be within 3- feet of the monitored device when using field wiring or 20 feet in nonmetallic conduit.

The SWIFT relay module allows a compatible control panel to switch discrete contacts by code command. The relay contains an isolated set of Form-C contacts, which operate as a SPDT switch. Circuit connections to the relay are not supervised by the module. The SWIFT relay module can



WIDP-RELAY WIRELESS RELAY MODULE

be used to activate functions such as a remote power supply (in conjunction with a monitor module), elevator recall, door holders and fan shutdown of wired devices or SWIFT devices within the same mesh network. The module also includes a panel-controlled LED indicator.

The devices communicate across the mesh network through a gateway to the FACP. The FACP views the SWIFT wireless device and another addressable device on the system providing similar detection functions and outputs as a wired counterpart. In addition, both wired and wireless devices can be present on the same FACP to meet the needs of a given application. A SWIFT wireless system can use any combination of modules, smoke, or heat detectors.

FEATURES & BENEFITS

- Wireless Installation
- Class A mesh network
- Addressable code wheels
- Commercial applications
- Complies with UL Standards for UL 864 and UL 268
- Complies with NFPA 72 Fire Alarm System requirements.
- SWIFT Tools also creates a useful graphic representation of the wireless network. It provides important system data and a visual perspective.
- SWIFT Tools makes the survey and installation faster and easier to complete; diagnostics simpler to understand and view
- Bi-directional communications
- Wireless devices use (4) CR-123A lithium batteries for reliable, long lasting battery life. CR-123A batteries have a UL listed life of 2 years.
- Frequency hopping
- SWIFT integrates with previously installed FACPs for a seamless, easy and cost-effective system addition

SWIFT Module Technical Specifications

MONITOR MODULE

Physical Dimensions: Height 4½"; Width 4½"; Depth 1½"

Device Weight (includes 4 batteries): 7.9 oz (224 g)

ENVIRONMENTAL

Operating Temperature Range: Photo: 32°F to 120°F (0°C to 49°C);

Air Velocity: Photo/thermal with Heat: 0 to 4,000 fpm (0 to 20 m/sec)

Humidity: 10 to 93% relative humidity (non-condensing)

ELECTRICAL

Maximum Operating Voltage: 3.3VDC

Average Operating Current: 210µA, 3.9 EOL

Maximum Current Draw: 5 mA (LED on)

EOL Resistance: 3.9K Ohms

Maximum IDC Wiring Resistance: 10 Ohms

Maximum IDC Voltage: 3.2Volts

Maximum Average IDC Current: 5.5µA

Maximum Transmit RF Power: 17dBm

Radio Frequency Range: 902-928 MHz Battery Life: 2 years

BATTERY SPECIFICATIONS

Battery Type: 4 Panasonic CR123A or 4 Duracell DL 123A

Battery Life: 2 years

Battery Replacement: Upon TROUBLE BATTERY LOW display and/or during annual maintenance

RELAY MODULE SPECIFICATIONS

PHYSICAL / OPERATING SPECIFICATIONS

Dimensions: Height 4¼"; Width 4¼"; Depth 1½"

Operating Temperature Range: 32°F to 120°F (0°C to 49°C)

Operating Humidity Range: 10% to 93% non-condensing

ELECTRICAL SPECIFICATIONS

Maximum Operating Voltage: 3.3VDC

Average Operating Current: 210µA

Maximum Current Draw: 5mA (LED on)

Maximum Transmit RF Power: 17dBm

Radio Frequency Range: 902-928MHzMaximum Transmit RF Power: 17 dBm

Radio Frequency Range: 902-928 MHz

RELAY CONTACT RATINGS

Current Rating	Maximum Voltage	Load Description	Application
2A	25 VAC	PF=0.35	Non-coded
3A	30 VDC	Resistive	Non-coded
2A	30 VDC	Resistive	Coded
0.46A	30 VDC	(L/R = 20 ms)	Non-coded
0.7A	70.7 VAC	PF=0.35	Non-coded
0.9A	125 VDC	Resistive	Non-coded
0.5A	125 VAC	PF=0.75	Non-coded
0.3A	125 VAC	PF = 0.35	Non-coded

ORDERING INFORMATION

WIDP-Monitor: Wireless monitor module for use with the WIDP-WGI wireless gateway. Includes a special cover with a tamper magnet built in. Recommended for installation in a SMB500 box (ordered separately) rather than a metal backbox for best performance. Ships with 4 Panasonic CR123A or 4 Duracell DL123A batteries.

WIDP-RELAY: Wireless relay module for use with the WIDP-WGI wireless gateway. Includes a special cover with a tamper magnet built in. Recommended for installation in an SMB500 box (ordered separately) rather than a metal backbox for best performance. Ships with 4 Panasonic CR123A or 4 Duracell DL123A batteries.

WIDP-WGI: Wireless Gateway.

W-USB: Wireless USB radio/antenna dongle that plugs into the USB port of a PC running SWIFT Tools.

SMB500: Optional surface-mount backbox.

AGENCY LISTINGS AND APPROVALS

Each device complies with part 15 of the FCC rules meaning operation is subject to two conditions.

1) The device may not cause harmful interference
2) The device must accept any interference received including interference that may cause undesired operation.

The listings and approvals below apply to the basic intelligent wireless detectors. In some cases, certain modules may not be listed by certain approval agencies or listing may be in process. Consult factory for latest listing status.

UL Listed: S2424

CSFM (Monitor Module): 7300-0559:0507

FM: approved

FDNY: approved

For a complete listing of all compliance approvals and certifications, please visit www.farenhyt.com.

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FieldServer
FS-8700-65 Silent Knight

Driver Manual

(Supplement to the FieldServer Instruction Manual)

APPLICABILITY & EFFECTIVITY

Effective for all systems manufactured after February 2018.

Driver Version:	1.01
Document Revision:	2.C

Technical Support

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1 SILENT KNIGHT GATEWAY COMMAND (SKGWCMD) DESCRIPTION

The Silent Knight Gateway Command (SKgwcmd) Driver allows the FieldServer to transfer data to and from devices over either RS-232 or RS-485 using Silent Knight Gateway Command (SKgwcmd) Driver protocol. The Silent Knight Gateway Command (SKgwcmd) Driver is based on the protocol specification "Gateway Command Set Specification 5820 Intelliknight System rev D.2 dated 11 July 2000"

The Silent Knight Gateway Command driver can serve as an active Client as well as emulate a Silent Knight 5820 device in Server mode.

The Silent Knight unit's serial port settings are configurable. The FieldServer device can be configured to match all Silent Knight Port settings.

2 DRIVER SCOPE OF SUPPLY

2.1 Supplied by Sierra Monitor Corporation

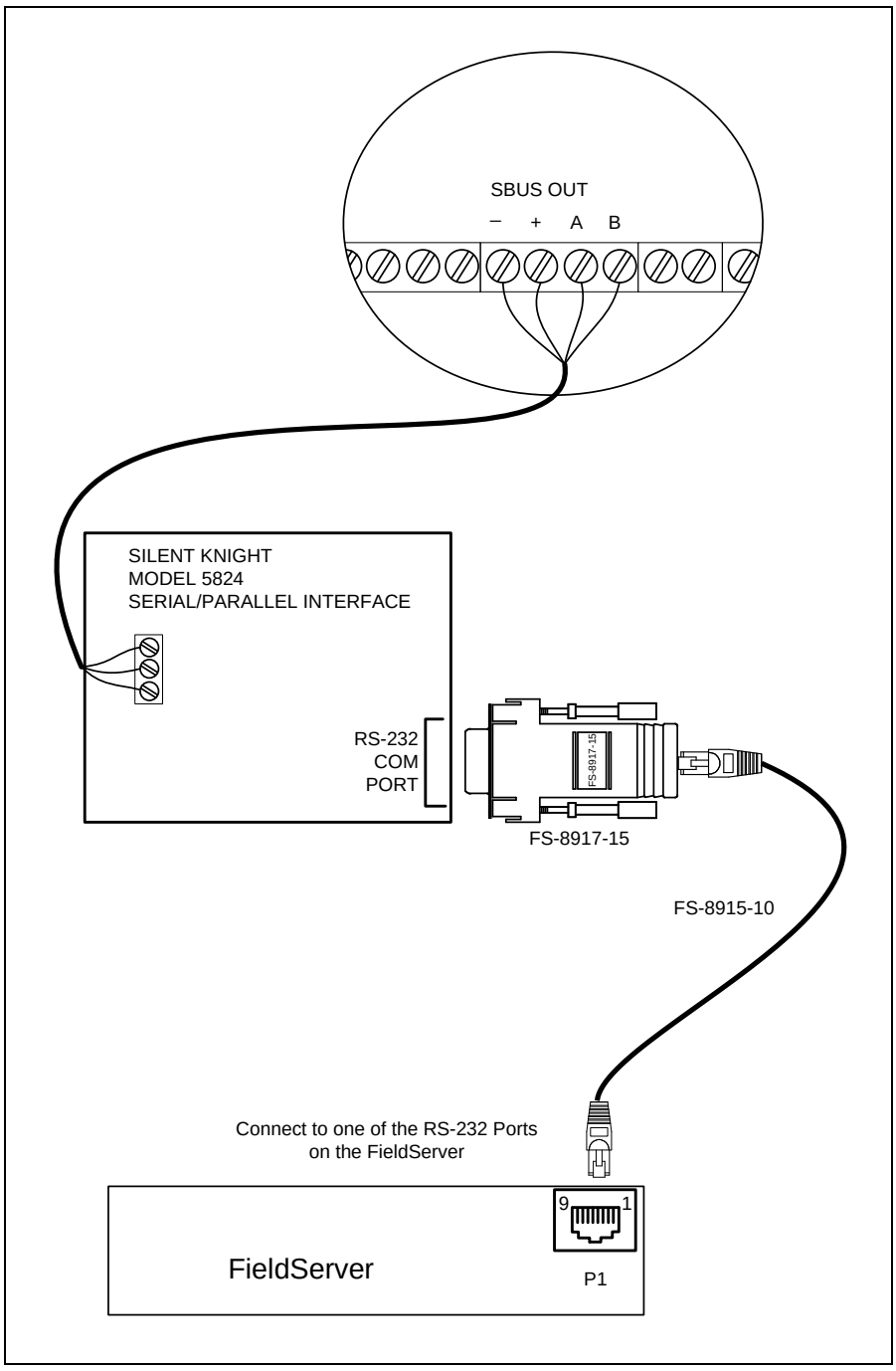
SMC PART #	Description
FS-8917-15	RJ45 to DB9F connector adapter
SPA59132	RS-485 connection adapter

3 HARDWARE CONNECTIONS

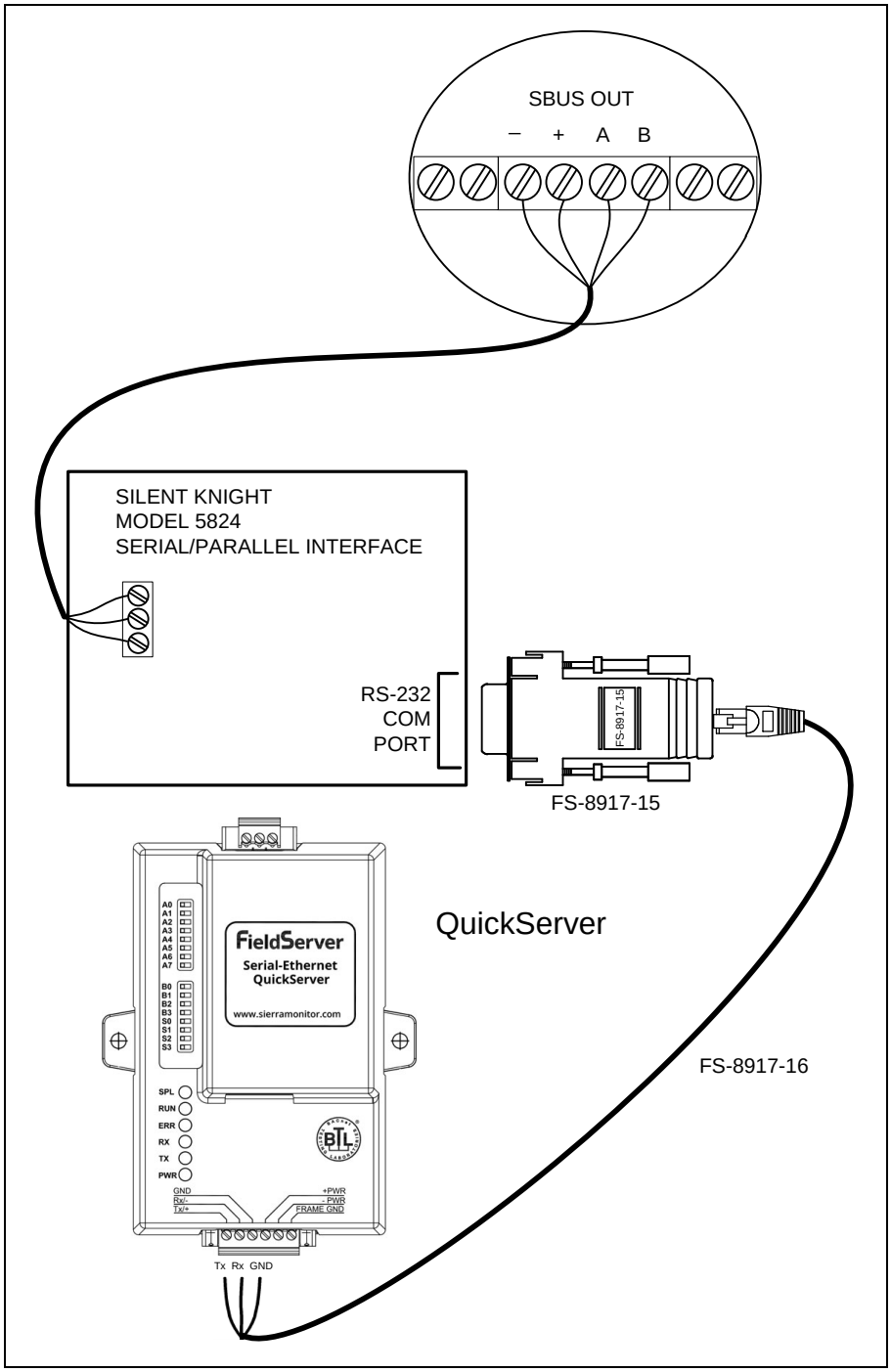
The FieldServer is connected to the Silent Knight Gateway Command as shown below.

Configure the Silent Knight Gateway Command Driver according to manufacturer's instructions.

3.1 FS-B35XX



3.2 QuickServer



Pinouts		
Function	**Color**	**RJ45 #**
Rx/-	Brown	1
Tx/+	Orange/White	8
GND	Blue/White	4

3.3 Connection Notes

To enable communications, the 5824 module needs to be set as a parallel connection in the Silent Knight panel, despite being connected to the serial port on the FieldServer.

4 DATA ARRAY PARAMETERS

Data Arrays are “protocol neutral” data buffers for storage of data to be passed between protocols. It is necessary to declare the data format of each of the Data Arrays to facilitate correct storage of the relevant data.

Section Title
Data_Arrays

Column Title	Function	Legal Values
Data_Array_Name	Provide name for Data Array.	Up to 15 alphanumeric characters
Data_Array_Format	Provide data format. Each Data Array can only take on one format.	FLOAT, BIT, UInt16, SInt16, Byte.
Data_Array_Length	Number of Data Objects. Must be larger than the data storage area required by the Map Descriptors for the data being placed in this array.	1-10, 000

Example

```
//    Data Arrays

Data_Arrays
Data_Array_Name    , Data_Array_Format    , Data_Array_Length
DA_AI_01           , UInt16               , 200
DA_AO_01           , UInt16               , 200
DA_DI_01           , Bit                  , 200
DA_DO_01           , Bit                  , 200
```

5 CONFIGURING THE FIELDSERVER AS A SILENT KNIGHT GATEWAY COMMAND (SKGWCMD) CLIENT

For detailed information on FieldServer configuration, refer to the FieldServer Configuration Manual. The information that follows describes how to expand upon the factory defaults provided in the configuration files included with the FieldServer (see ".csv" sample files provided with the FieldServer).

This section documents and describes the parameters necessary for configuring the FieldServer to communicate with a Silent Knight Gateway Command (SKgwcmd) Server.

The configuration file tells the FieldServer about its interfaces, and the routing of data required. In order to enable the FieldServer for Silent Knight Gateway Command (SKgwcmd) Driver communications, the driver independent FieldServer buffers need to be declared in the "Data Arrays" section, the destination device addresses need to be declared in the "Client Side Nodes" section, and the data required from the Servers needs to be mapped in the "Client Side Map Descriptors" section. Details on how to do this can be found below.

NOTE: In the tables below, * indicates an optional parameter and the bold legal values are default.

5.1 Client Side Connection Parameters

Section Title		
Connections		
Column Title	**Function**	**Legal Values**
Port	Specify which port the device is connected to the FieldServer.	P1-P2, R1-R2
Baud*	Specify baud rate.	Standard Baud Rates up to 19200 (SK Device Limitation), **19200**
Parity*	Specify parity.	Even, Odd, **None**, (Device Limitation)
Data_Bits*	Specify data bits.	**7**, 8
Stop_Bits*	Specify stop bits.	**1**,2
Protocol	Specify protocol used.	SKgwcmd
Poll Delay*	Time between internal polls.	0-32000 seconds, **1s**

Example

```
//  Client Side Connections

Connections
Port            , Baud     , Parity    , Protocol
P1              , 19200    , None      , SKgwcmd
```

5.2 Client Side Node Parameters

Section Title
Nodes

Column Title	Function	Legal Values
Node_Name	Provide name for node.	Up to 32 alphanumeric characters
Protocol	Specify protocol used.	SKgwcmd
Port	Specify which port the device is connected to the FieldServer.	P1-P2, R1-R2

Example

```
//  Client Side Nodes

Nodes
Node_Name          , Protocol    , Port
SK-Device1         , SKgwcmd     , P1
```

5.3 Client Side Map Descriptor Parameters

Column Title	Function	Legal Values
Map_Descriptor_Name	Name of this Map Descriptor.	Up to 32 alphanumeric characters
Data_Array_Name	Name of Data Array where data is to be stored in the FieldServer.	One of the Data Array names from **Section 4**
Data_Array_Offset	Starting location in Data Array.	0 to (Data_Array_Length-1) as specified in **Section 4**
Function	Function of Client Map Descriptor.	Rdbc, Wrbc, Wrbx

5.3.1 Driver Specific Map Descriptor Parameters

Column Title	Function	Legal Values
Node_Name	Name of Node to from which to fetch data.	One of the node names specified in **Section 5.2**
Length*	Length of Map Descriptor.	**1** – 1000. The length must be sufficient to store all data polled to prevent data being discarded by the driver. Certain commands, e.g. description queries use 20 array elements to store the response. Thus, the length must be at least 20. Refer to **Appendix B.2**.
Sk_Function	This mandatory field tells the driver what query or command is required.	Refer to **Appendix B.1**
Da_Byte_Name*	Used when Sk_Function is one of the following: *Output Group Status* *Point Status* *Point Description* Refer to **Sections 5.3.5** and **5.3.7**.	One of the Data Array names from **Section 4**
DA_Bit_Name*	Only used when Sk_Function is *Point Description.* See **Section 5.3.5**.	One of the Data Array names from **Section 4**

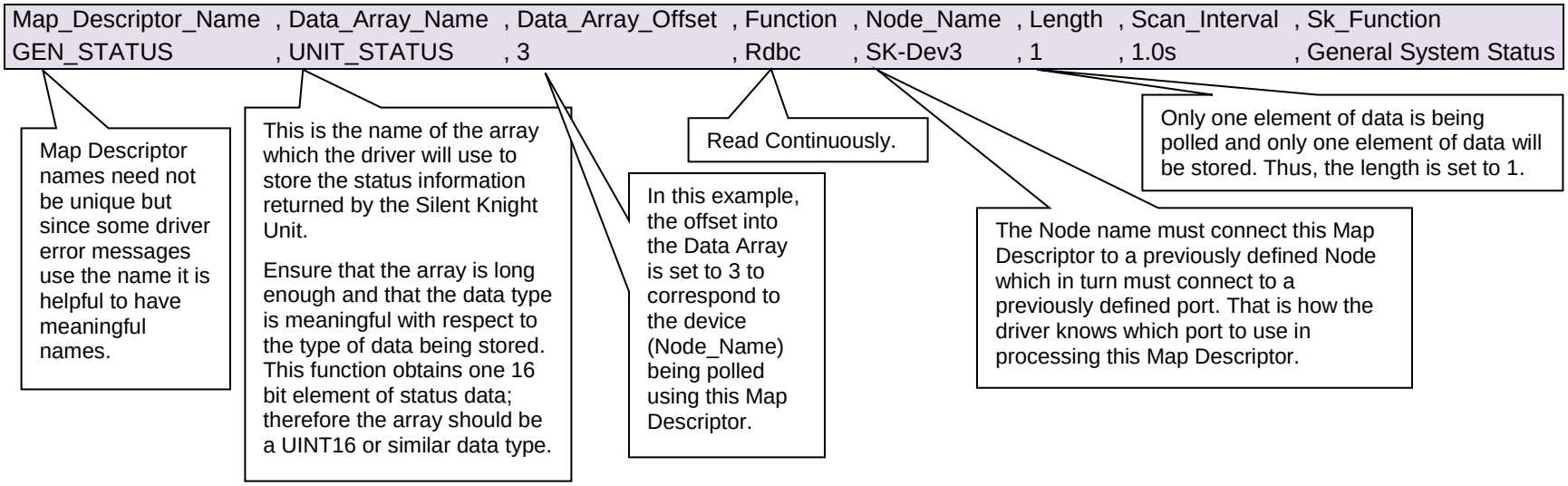
Column Title	Function	Legal Values
Sk_Zone*	This parameter is required for *General Zone Status* *Expanded Zone Status* *Zone Description* Specify the number of the zone being queried.	Whole numbers limited to the range of addressable zones configured in the Silent Knight device
Sk_Group*	This parameter is required for the following commands. *Output Group Status* *Output Group Description*	Whole numbers limited to the range of addressable zones configured in the Silent Knight device
Sk_Module*	This parameter is always used in conjunction with the Sk_Point parameter to uniquely define the address of a point to be queried, enabled or disabled. Refer to **Sections** 5.3.5 and 5.3.7.	0, 1 ,2 … Whole numbers limited to the addressable expander Module ID's
Sk_Point*	When querying a specific point both the sk_module and sk_point parameters must be defined.	0 -199 are sensors. (e.g. S010 is SK_Point 10). 200-399 are modules. (e.g. M010 is Sk_Point 210). Whole numbers limited to the range of addressable points in the Silent Knight Unit.

5.3.2 Timing Parameters

Column Title	Function	Legal Values
Scan_Interval	Rate at which data is polled	>0.1s

5.3.3 Map Descriptor Example – General System Status Query

The Map Descriptor causes the driver to poll the Silent Knight Device every 1.0 seconds, read the general system status and store the result in an array called UNIT_STATUS.



The bits provided in the response will exactly mimic the state of the five indicator LED's on the IntelliKnight front panel.

Bit	Meaning	Bit	Meaning
0	Alarm condition present	8	Not Used
1	Supervisory condition present	9	Not Used
2	Trouble condition present	10	Not Used
3	System silenced	11	Not Used
4	AC Power present	12	Not Used
5	Not Used	13	Not Used
6	Not Used	14	Not Used
7	Not Used	15	Not Used

5.3.4 Map Descriptor Example – Alarm Silence/Reset Commands

This example illustrates the use of the silence command. The alarm reset command is used in an identical fashion. The Driver watches the value of the specified Data_Array (Wrbx function). When the value changes, the command is triggered. Typically, users configure the FieldServer to connect a MMI or field push button on a remote device to set the array element to 1 to trigger the silence command and then set it back to zero.

```
//    Client Side Map Descriptors

Map Descriptors
Map_Descriptor_Name   , Data_Array_Name   , Data_Array_Offset   , Function   , Node_Name   , Length   , Sk_Function
SILENCE-CMD           , CMD_TRIGGERS      , 0                   , Wrbx       , SK-DEV1     , 2        , Silence
```

Have some remote device set the value of this Data Array to trigger this command.

Write on change. When the value of the 1st element of the array called CMD_TRIGGERS changes then the command will be triggered.

Use a length of 2 as a later release of the driver may write the return code from the SK device to the second element of the Data Array.

The Alarm Silence command will be sent to the SK device.

5.3.5 Map Descriptor Example – Point Enable/Disable

In this example point 10 of module 1 is disabled. The command is executed each time the value of the array DA01 element index 10 (11th element) changes. To cause this command to be executed continuously, the function should be changed to Wrbc.

```
Map_Descriptor_Name , Data_Array_Name , Data_Array_Offset , Function , Node_Name , Length , Scan_Interval , Sk_Function , Sk_Module , Sk_Point
ENABLE1             , DA01            , 10                , Wrbx     , SK-DEV1   , 1      , 1.0s          , Point Disable , 1         , 10
```

This is a triggered command.
The Data Array offset = 10. Thus the element of the Data Array indexed by 10 (11th element) will trigger the command when it changes.

Change this to *Point Enable* to enable a point. The remainder of the Map Descriptor remains the same

Sk_Module and Sk_Point must be non-zero. Only one point can be enabled or disabled per Map Descriptor.

5.3.6 Map Descriptor Example - Point Status

NOTE: The Driver does not support polls for multiple points. A separate Map Descriptor needs to be defined to return point status for each point.

```
Map Descriptors
Map_Descriptor_Name  , Data_Array_Name  , Data_Array_Offset  , Function  , Node_Name  , Length  , Scan_Interval  , Sk_Function  , Sk_Module  , Sk_Point  , Da_Byte_Name
POINT_STAT1          , POINT_STATUS      , 0                  , Rdbc      , Node_A      , 1         , 10.0s           , Point Status  , 33          , 1          , -
POINT_STAT2          , POINT_STATUS      , 1                  , Rdbc      , Node_A      , 1         , 10.0s           , Point Status  , 33          , 2          , EXTRA_DATA1
```

The Status data is stored in these arrays. The offset is based on the point number and the offset defined in the Map Descriptor.

A separate Map Descriptor is required to return point status for each point.

Set sk_module & sk_point to non-zero values and length to 1.

The accessory data associated with each point is stored in the corresponding location of these Data Arrays. If this parameter is not defined, the accessory data is discarded.

Point Status Values

Value	Meaning
0x00	Normal
0x01	Alarm
0x02	Pre-Alarm
0x03	Supervisory
0x04	Trouble
0x05	Output Active
0x06	Output Inactive
0x07	Output Disconnected
0x8000	Unused
0x8001	Undefined

Accessory Status Values

Value	Meaning
0x00	Accessory Normal
0x01	Accessory Trouble
0x8000	Accessory Unused

5.3.7 Map Descriptor Example – Point Descriptions

Requests the text description & type designator of any individual point in the system - the panel returns the point description record for the point specified. One Map Descriptor is required for each point description requested.

When a point description is polled the returned data contains the point type, the accessory type and the description. The driver loads the description into 40 consecutive elements of the Map Descriptor's Data Array. The point type data is only stored if the parameter *Da_Byte_Name* is specified by providing the name of another Data Array in which the point type data should be stored. The accessory type data is only stored if the parameter *DA_Bit_Name* is specified by providing the name of another Data Array in which the accessory type data should be stored.

The Map Descriptor below illustrates a query for a point description. Each query returns three data components – a point type, accessory type and a point description. Only one point can be queried per Map Descriptor.

```
//   Client Side Map Descriptors

Map Descriptors
Map_Descriptor_Name  , Data_Array_Name  , Data_Array_Offset  , Function  , Node_Name  , Length  , Scan_Interval  , Sk_Function        , Sk_Module  , Sk_Point  , Da_Byte_Name  , DA_Bit_Name
PNT_DESC1            , DESC_ARRAY       , 0                  , Rdbc      , SK-DEV1    , 20        , 1s             , Point Description  , 1           , 5           , TYPE_ARR       , ACC_ARR
```

The point's description will be placed in 20 consecutive elements of this Data Array starting at this offset position.

20 elements of the Data Array are controlled by this Map Descriptor.

Function name- spelling and spacing are important.

When using the *Point Description* function a single non-zero value must be specified and the Sk_Module parameter must be set to a non-zero value. This is because this function only queries one specific point per Map Descriptor.

The additional data components are stored in these Data Arrays.
The point type is stored as a number at the offset specified by Data_Array_Offset in the array called TYPE_ARR. The accessory type is stored at the same offset in the array called ACC_ARR.

.

6 CONFIGURING THE FIELDSERVER AS A SILENT KNIGHT GATEWAY COMMAND (SKGWCMD) SERVER

The Silent Knight Gateway Command (SKgwcmd) Driver can act as a Server. As the protocol does not support device or node identification it is not possible for this driver to handle more than one Client per FieldServer unless the driver is specifically tied to a port by using the port keyword when defining the Server side node.

For detailed information on FieldServer configuration, refer to the FieldServer Configuration Manual. The information that follows describes how to expand upon the factory defaults provided in the configuration files included with the FieldServer (see ".csv" sample files provided with the FieldServer).

This section documents and describes the parameters necessary for configuring the FieldServer to communicate with a Silent Knight Gateway Command (SKgwcmd) Driver Client.

The configuration file tells the FieldServer about its interfaces, and the routing of data required. In order to enable the FieldServer for Silent Knight Gateway Command (SKgwcmd) Driver communications, the driver independent FieldServer buffers need to be declared in the "Data Arrays" section, the FieldServer virtual node(s) needs to be declared in the "Server Side Nodes" section, and the data to be provided to the Clients must be mapped in the "Server Side Map Descriptors" section. Details on how to do this can be found below.

NOTE: In the tables below, * indicates an optional parameter and the bold legal values are default.

6.1 Server Side Connection Parameters

Section Title		
Connections		
Column Title	**Function**	**Legal Values**
Port	Specify which port the device is connected to the FieldServer.	P1-P2, R1-R2
Baud*	Specify baud rate.	110 – 115200, standard baud rates only
Parity*	Specify parity.	Even, Odd, **None,** Mark, Space
Data_Bits*	Specify data bits.	7, **8**
Stop_Bits*	Specify stop bits.	**1**
Protocol	Specify protocol used.	SKgwcmd

Example

```
//  Server Side Connections

Connections
Port                    , Baud    , Protocol
P1                      , 19200   , SKgwcmd
```

6.2 Server Side Node Descriptors

Section Title
Nodes

Column Title	Function	Legal Values
Node_Name	Provide name for node.	Up to 32 alphanumeric characters
Protocol	Specify protocol used.	SKgwcmd

Example 1

```
//    Server Side Nodes

Nodes
Node_Name                , Protocol
FieldServer              , SKgwcmd
```

Example 2 – Use this example when the FieldServer is being used to emulate more than one Silent Knight Device

```
//    Server Side Nodes

Nodes
Node_Name                , Protocol      , Port
Sk-emulation1            , SKgwcmd       , P1
Sk-emulation2            , SKgwcmd       , P2
```

6.3 Server Side Map Descriptors

6.3.1 FieldServer Specific Map Descriptor Parameters

Column Title	Function	Legal Values
Map_Descriptor_Name	Name of this Map Descriptor.	Up to 32 alphanumeric characters
Data_Array_Name	Name of Data Array where data is to be stored in the FieldServer.	One of the Data Array names from **Section 4**
Data_Array_Offset	Starting location in Data Array.	0 to (Data_Array_Length-1) as specified in **Section 4**
Function	Function of Client Map Descriptor.	Passive

6.3.2 Driver Specific Map Descriptor Parameters

Column Title	Function	Legal Values
Node_Name	Name of Node to fetch data from.	One of the node names specified in **Section 6.2**
Length	Length of Map Descriptor The length parameter's meaning is dependent on the value of the Sk_Function parameter. Refer to **Appendix B.2**.	1 - 1000
Da_Byte_Name*	Only used when Sk_Function is one of the following: *Output Group Status* *Point Status* *Point Description*	One of the Data Array names from **Section 4**
DA_Bit_Name*	Only used when Sk_Function is Point Description.	One of the Data Array names from **Section 4**
Sk_Function	This mandatory field tells the driver what query or command is required.	Refer to **Appendix B**
Sk_Zone*	Use one Map Descriptor for each zone to be emulated.	1, 2, 3 …. Positive Integers
Sk_Group*		
Sk_Module*	These parameters are linked as points belong to modules. Thus the point and module define each point uniquely.	1, 2, 3 …. Positive Integers
Sk_Point*		

6.3.3 Timing Parameters

Column Title	Function	Legal Values
Scada_Hold_Timeout	Time Server side waits before responding to Client that node is offline on FieldServer Client side.	>1.0s

6.3.4 Map Descriptor Example – FieldServer responds to Point Status Requests

This example illustrates a number of Map Descriptors used to allow the FieldServer to emulate 3 modules of 10 points each. These Map Descriptors can only respond to **Point Status** requests. Other Map Descriptors are required to allow responses to other queries like **point description** queries.

```
Map_Descriptor_Name  , Data_Array_Name , Data_Array_Offset , Function , Node_Name , Length , Sk_Function  , Sk_Module , Sk_Point , Da_Byte_Name
SERVER1              , PNT_STAT       , 0                 , Passive  , Node_A    , 10     , Point Status , 1         , 1        , PNT_ACC_STATUS
SERVER2              , PNT_STAT       , 10                , Passive  , Node_A    , 20     , Point Status , 2         , 1        , PNT_ACC_STATUS
SERVER3              , PNT_STAT       , 30                , Passive  , Node_A    , 10     , Point Status , 3         , 1        , PNT_ACC_STATUS
```

Status data is served from the Data Array called PNT_STAT.

The offset increases by the length of each Map Descriptor. Thus Module 2's data will be served from elements 10-19 of the array.

The length is very important.
If a request arrives for all point data then the driver will report status data for
module 1 points 1-10
module 2 points 1-20
module 3 points 1-30
If a request arrived for the status of module 2 point 25 the driver would not respond as a Map Descriptor defining this point has not been defined.

The Point Status request returns two data components per point. The first is the status, a 16 bit value. The second is the accessory status also a 16 bit value. Unless you define the da_byte_name parameter the driver will return zero for this second data component.
By defining an array where the driver can get this data the driver looks in the corresponding element of this array (PNT_ACC_STATUS in this example) and the PNT_STATUS array to return the status of the point requested.

APPENDIX A Troubleshooting

Appendix A.1 Driver Error Messages

Message	Explanation
SKgwcmd: #1 Error. Don't know this function=%d %x(h)	The value of the Sk_Function has been set incorrectly. The driver does not recognize it.[1]
SKgwcmd: #3. Error. Too much data to send=%d max=%d.	The Silent Knight Gateway Command protocol can send a maximum of 7*255 bytes of data per message. Try breaking one Map Descriptor up so that less data is requested at one time. It may not be possible to set Sk_Module, Sk_Point, Sk_Zone or Sk_Group equal to zero as this requires too much data to be sent.
SKgwcmd: #4. Error. Cannot do Exp. Zone Stat. Mapdesc=<%s>	The command code is defined but the command and response format is not defined in the protocol specification. Change the Sk_Function parameter to another suitable command. [1]
SKgwcmd: #5 FYI. The mapDesc called <skgwcmd-stats> is too short.	Increase the value of the length parameter to at least 100.[1] Read Appendix A.2 for additional information.
SKgwcmd: #6 Error. Dont know this function=%d %x(h)	See notes for error 1.
SKgwcmd: #7. Error. Cannot do Exp. Zone Stat.	The command code is defined but the command & response format is not defined in the protocol specification.
SKgwcmd: #8 Error Incoming point status data from module=%d is being abandoned. MapDescriptors are required to define storage for. No further messages about data being abandoned will be provided.	If a Map Descriptor was defined which generated a poll for all point data then a Map Descriptor is required to specify where the point status data for each module must be stored. If this has not been done then this error message will be produced. [1]
SKgwcmd:#9 Error. Don't know this function=%d %x(h)	See notes for error 1.
SKgwcmd:#11* FYI. MapDesc Length too short rqd/actual=%d/%d MapDesc=<%s> Some incoming data will be abandoned	If a Map Descriptor generates a poll for all module points, zone or group data and the SK device returns more data than provided for by the length parameter of the Map Descriptor then this error will be generated. [1]
SKgwcmd:#12* FYI. Point Accessory Status Data abandoned. Define field=da_byte_name in mapDesc=<%s>	To eliminate this error, link the Map Descriptor to two Data Arrays, one for status data and the other for accessory data. See **Section 5.3.7**.[1]
SKgwcmd:#13* FYI. Data Array too short rqd/actual=%d/%d MapDesc=<%s> Some incoming data will be abandoned.	This error is similar to #11 but in this case the Data Array itself is too short. [1]
SKgwcmd:#14* FYI. Point Accessory Status Data abandoned. Define field=da_byte_name in mapDesc=<%s>	See error #12.

[1] Edit the CSV file, download it to the FieldServer and reset the FieldServer for the changes to take effect.
* Subsequent similar messages will be suppressed.

Message	Explanation
SKgwcmd:#15* FYI. Port Checking Disabled ! If there is more than one SK device connected to this FieldServer this may produce errors.	If the FieldServer is to be connected to more than one Silent Knight device, the node definitions in the CSV file need to link to a port definition. Although normally not required for a Server side connection, this is not invalid.
SKgwcmd:#16 FYI. Resetting/Silencing Array too short. <%s>	The value of the length parameter and the length of the Data Array conflict. [2]
Skgwcmd:#17 Error. Incoming data is being abandoned. No further messages about data being abandoned will be provided.	Same error as #8 except that the driver produces this error in a different context.
Skgwcmd:#18 Error. Requested too much data from mapDesc=<%s>rqstd/avail: start=%d/%d. len=%d/%d.	More Zone Status data is contained in the response than the Map Descriptors length or starting zone number allows the driver to process. This error is produced by the Client driver.[2]
SKgwcmd:#19 Error. Incoming zone status data being abandoned. MapDesc's are required to define storage. No further messages about data being abandoned will be provided.	More Zone Status data is contained in the response than the Map Descriptors length or starting zone number allows the driver to process. This error is produced by the Server driver.[2]
SKgwcmd:#20 FYI*. Data Array too short rqd/actual=%d/%d MapDesc=<%s> Some incoming data will be abandoned.	This message is produced by the Server driver. It arises while processing zone status data. The message indicates that some data is being stored correctly but that 'surplus' data is being abandoned. Correct the length or starting zone number in the CSV file. [2]
SKgwcmd:#21* FYI. Data Array too short rqd/actual=%d/%d MapDesc=<%s> Some incoming data will be abandoned.	This message is produced by the Server driver. It arises while processing group status data. The message indicates that some data is being stored correctly but that 'surplus' data is being abandoned. Correct the length or starting zone number in the CSV file. [2]
Skgwcmd:#22 Error. Incoming group status data being abandoned. MapDesc's are required to define storage. No further messages about data being abandoned will be provided.	This message is produced by the Server driver when the Sk_Group is set to zero and the Map Descriptor length is too small to store the incoming group data. Add a passive Map Descriptor to define the storage of the incoming data. [2]
SKgwcmd:#23* FYI. Additional data was discarded. You could have defined storage using the <da_byte_name> parameter in MapDesc=<%s>.	Group Status data consists of the group status and the number of troubles. The number of troubles will be discarded unless the Map Descriptor is connected to a second Data Array using the Da_Byte_Name parameter. This message is a warning only - no action is necessarily required.
Skgwcmd:#24* Error. Requested too much data from mapDesc=<%s> rqstd/avail: start=%d/%d. len=%d/%d.	This message is produced by the Client driver. It arises while processing group status data. The message indicates that some data is being stored correctly but that 'surplus' data is being abandoned. Correct the length or starting zone number.[2]
Skgwcmd:#25 FYI. You could have used a MapDesc called <skgwcmd-stats> to expose diagnostic info.	This is a warning message only. No action is required. Read **Appendix A.2** for additional information.

[2] Edit the CSV file, download it to the FieldServer and reset the FieldServer for the changes to take effect.

Message	Explanation
DRV->SKgwcmd : #29 Err. No write for Func=%d %#x. MD=%s	Write is not possible for specified function. Also see Err #30
DRV->SKgwcmd : #30 Err. MD could not be created.	This is further information for #29. Avoid Wrbc or Wrb Map Descriptors in the configuration for the function specified in #29. If this error occurred during operation, avoid write thru's on the specified Map Descriptor.

Appendix A.2 Driver Stats

In addition to the standard FieldServer communication statistics described in the FieldServer Configuration Manual the DNP 3 Driver can also expose some driver statistics by writing data to a Data Array. A special Map Descriptor is required. The driver recognizes the Map Descriptor by its name which must be "***Skgwcmd-stats***". The following example shows how this special Map Descriptor can be configured.

Example

```
Nodes
Node_Name          , Protocol
Null_Node          , SKgwcmd

Data Arrays
Data_Array_Name    , Data_Format      , Data_Array_Length
SK_STATS           , UINT32           , 300

Map Descriptors
Map_Descriptor_Name , Data_Array_Name , Node_Name      , Length
Skgwcmd-stats      , SK_STATS         , Null_Node      , 300
```

The driver uses the Data Array SK_STATS (in this example) to store driver specific statistics. Only one of these Map Descriptors may be specified per FieldServer.

The driver stores the following data.

Array Element	Contents
0	Not Used
1	SK_STAT_COMPL_HDR1
2	SK_STAT_COMPL_HDR2
3	SK_STAT_COMPL_CMD
4	SK_STAT_COMPL_BLK
5	SK_STAT_COMPL_CRC
6	SK_STAT_COMPL_CRC1
7	SK_STAT_COMPL_CRC2
8	SK_STAT_COMPL_BLK2
9	SK_STAT_MSTR_BAD
10	SK_STAT_MSTR_GOOD
11	SK_STAT_COMPL_SLV
12	SK_STAT_COMPL_GWAY
12	SK_STAT_SEND_MST_POLL
14	SK_STAT_SEND_SLV_IGNORE
15	SK_STAT_MST_IGNORE_GROUP
16	SK_STAT_MST_IGNORE_ZONE

Array Element	Contents
17	SK_STAT_MST_IGNORE_POINT
18	SK_STAT_SEND_SLV_MSG
19	SK_STAT_SEND_SLV_MSG_BYTES
20	SK_STAT_SEND_SLV_CONCT_MSG
21	SK_STAT_SEND_SLV_RCVD_MSG
22	SK_STAT_SEND_SLV_RCVD_BYTES

APPENDIX B Reference

Appendix B.1 Protocol Commands

The following list of commands has been implemented in the Silent Knight Gateway Command (SKgwcmd) Driver. The table contains the keywords that may be used in the .CSV files to specify the Sk_Function parameter.

	Commands Implemented		Commands Implemented
1	General System Status	9	Point Description
2	System Trouble Status	10	Time Status
3	General Zone Status	11	gateway Version
4	Expanded Zone Status	12	Disable Point
5	Zone Description	13	Enable Point
6	Output Group Status	14	Reset Alarms
7	Output Group Description	15	Silence
8	Point Status	16	Time Synch

Most of the commands consist of more than one word. Ensure that there is only a single space between the words and that the space is not a tab character. Leading and trailing spaces are not important but the highest level of user confidence can be achieved by delimiting the Sk_Function with a comma on either side. Spelling is important but the driver is case-insensitive.

Appendix B.2 Length Parameter Settings Based on Sk_Function Parameter

Sk_function command	Length Parameter Meaning
Silence *Reset Alarms*	The length parameter tells the driver how much of the Data Array to reset to zero when one of these commands is received
Output Group Status *General Zone Status*	The length parameter tells the driver how many zones or groups to return data for (if all zones or groups are requested) when one of these commands is received.
Point Status	The length tells the driver how many points to report if the poll requests data for all points.

For all other values of Sk_Function the length should be set to 1 as the driver does not use the parameter.

Appendix B.3 Legal Values for Sk_function

Command	Description
General System Status	Requests the status of the entire system - the bits provided in the response will exactly mimic the state of the five indicator LED's on the IntelliKnight front panel. Refer to **Section 5.3.3**.
System Trouble Status	Monitors the system for trouble or service requirements - the panel responds with the system trouble status record. Refer to **Appendix B.4**.
General Zone Status	Requests the status of one or more zones in the system - the panel responds with a zone status byte for each of the zone(s) specified. Refer to **Appendix B.5**. Set zone number to zero and length to 1 to request all possible zones Set zone number to a specific zone and length to 1 to read status data from one zone. Set zone number to a specific zone and length greater than one to read consecutive zones starting at the zone number specified.
Expanded Zone Status	

<table>
<tr><td>Zone Description</td><td>Requests the text description & type designator for any individual zone in the system - the panel returns the zone description record for the zone specified. Only one specific zone may be queried. 40 consecutive array elements are loaded with the description returned by the device.</td></tr>
<tr><td>Output Group Status</td><td>Requests information about the state of one or more output groups present in the system. Returns the active/inactive state and the number of troubles for each group.
Set group number to zero and length to 1 to request all possible groups.
Set group number to a specific group and length to 1 to read status data from one group.
Set group number to a specific group and the length greater than one to read consecutive groups starting at the group number specified.

<table><tr><th>Value</th><th>Meaning</th></tr><tr><td>1</td><td>Group is Active</td></tr><tr><td>0</td><td>Group is Inactive</td></tr><tr><td>8000h</td><td>Group is not defined.</td></tr></table>
When an output group status is requested the SK device returns the status and the number of troubles in the group. The ‘number of troubles’ is discarded by this driver unless a second Data Array is provided to store this quantity. Specify the second Data Array by putting the array name as the value of a field called Da_Byte_Name in the Map Descriptor. (See the usage for point status illustrated in Section 5.3.6 and 6.3.4).</td></tr>
<tr><td>Output Group Description</td><td>Requests the text description & type designator for any individual output group in the system - the panel returns the output group description record for the output group specified. See Section 5.3.7 for additional information.</td></tr>
<tr><td>Point Status</td><td>Requests the state of one or all points in the system - the panel returns the point status for the point(s) specified. This enables the interfacing computer to select for appropriate data from the large number of points possible in the IntelliKnight system</td></tr>
<tr><td>Point Description</td><td>Requests the text description & type designator of any individual point in the system - the panel returns the point description record for the point specified.</td></tr>
<tr><td>Time Status</td><td>The time and date are stored in 6 consecutive element of the Data Array specified.
<table><tr><th>Element</th><th>Contents</th></tr><tr><td>1</td><td>Second</td></tr><tr><td>2</td><td>Minute</td></tr><tr><td>3</td><td>Hour</td></tr><tr><td>4</td><td>Day</td></tr><tr><td>5</td><td>Month</td></tr><tr><td>6</td><td>Year - 1900</td></tr></table></td></tr>
<tr><td>Gateway Version</td><td>Requests the gateway version number string - the panel responds with gateway version in a null terminated string. This command can be used to determine the command set supported by the connected panel.
The driver writes the version character by character to consecutive elements of the Data Array specified. The version is variable length so ensure that the Map Descriptor length is sufficient to cover all contingencies.</td></tr>
<tr><td>Disable Point</td><td>A specific point must be specified by setting Sk_Module and Sk_Point to non-zero values.</td></tr>
<tr><td>Enable Point</td><td>A specific point must be specified by setting Sk_Module and Sk_Point to non-zero values.</td></tr>
<tr><td>Reset Alarms
Silence</td><td>Used to reset or silence any alarms occurring in the system - the panel returns a non-zero error code if the command could not be completed.</td></tr>
</table>

<table>
<tr>
<td>Time Synch</td>
<td>Used to set the time and date at the panel - the driver uses 6 consecutive elements from the Data Array specified.
<table>
<tr><th>Element</th><th>Contents</th></tr>
<tr><td>1</td><td>Second</td></tr>
<tr><td>2</td><td>Minute</td></tr>
<tr><td>3</td><td>Hour</td></tr>
<tr><td>4</td><td>Day</td></tr>
<tr><td>5</td><td>Month</td></tr>
<tr><td>6</td><td>Year - 1900</td></tr>
</table>
</td>
</tr>
</table>

Appendix B.4 System Trouble Status Bitmap

Bit	Meaning	Bit	Meaning
0	AC Trouble	8	Printer Trouble
1	Battery Trouble	9	Auxiliary Power Trouble
2	Earth Ground Fault Trouble	10	System Aux 1 Switch Trouble
3	unused	11	System Aux 2 Switch Trouble
4	Phone Line 1 Trouble	12	System Switch Trouble
5	Phone Line 2 Trouble	13	Undefined SLC Point Trouble
6	IO Device Trouble	14	SBUS Class A Trouble
7	Account Trouble	15	unused

Appendix B.5 Zone Status Bitmap

Bit	Meaning	Bit	Meaning
0	Alarm condition present in the zone	8	Not Used
1	Supervisory condition present in the zone	9	Not Used
2	Trouble condition present in the zone	10	Not Used
3	Not Used	11	Not Used
4	Not Used	12	Not Used
5	Not Used	13	Not Used
6	Not Used	14	Not Used
7	Not Used	15	Zone Not Defined

FieldServer Protocol Driver Sheet
Silent Knight Gateway Command (SKgwcmd)

FS-8700-65 **Version: 1.02 / Rev. 0**

1 DESCRIPTION

The Silent Knight Gateway Command (SKgwcmd) Driver allows the FieldServer to transfer data to and from devices over either RS-232 or RS-485 using Silent Knight Gateway Command (SKgwcmd) Driver protocol. The Silent Knight Gateway Command (SKgwcmd) Driver is based on the protocol specification "Gateway Command Set Specification 5820 Intellinight System rev D.2 dated 11 July 2000"

The Silent Knight Gateway Command driver can serve as an active Client as well as emulate a Silent Knight 5820 device in Server mode.

The Silent Knight unit's serial port settings are configurable. The FieldServer device can be configured to match all Silent Knight port settings.

1.1 Connection Facts

FieldServer Mode	Nodes	Comments
Client	1	The serial port on the Silent Knight Unit's is not addressable and the protocol does not support node identification. Therefore, only one Silent Knight Unit can be connected to each port on the FieldServer.
Server	1	

2 FORMAL DRIVER TYPE

Serial

Client or Server

3 COMPATIBILITY MATRIX

FieldServer Model	Compatible with this driver
FS-x30	Yes
SlotServer	Yes
ProtoNode	No
QuickServer FS-QS-10xx	No
QuickServer FS-QS-12xx	Yes
ProtoCessor FPC-ED2	Yes
ProtoCessor FPC-ED4	Yes

4 CONNECTION INFORMATION

Connection type: RS-232 or RS-485 (Two wire, Half-Duplex)
Baud Rates: Standard Baud Rates up to 19200 (SK Device Limitation)
Data Bits: 7, 8
Stop Bits: 1,2
Parity: Even, Odd, None, (SK Device Limitation)
Multidrop Capability: No

5 DEVICES TESTED

Device	Tested (FACTORY, SITE)
Silent Knight 5820XL IntelliKnight System rev D.2	SITE
IFP-1000	SITE
Silent Knight 5808 IntelliKnight System	Untested
Silent Knight 5700 IntelliKnight System	Untested
IFP-50	Untested
IFP-100	Untested

6 COMMUNICATIONS FUNCTIONS - SUPPORTED FUNCTIONS AT A GLANCE:

6.1 Read Operations supported

FieldServer as a Client	FieldServer as a Server
General System Status	General System Status
System Trouble Status	System Trouble Status
General Zone Status	General Zone Status
Expanded Zone Status	Expanded Zone Status
Zone Description	Zone Description
Output Group Status	Output Group Status
Output Group Description	Output Group Description
Point Status	Point Status
Point Description	Point Description
Time Status	Time Status
Gateway Version	Gateway Version
Disable Point	Disable Point
Enable Point	Enable Point
Reset Alarms	Reset Alarms
Silence	Silence
Time Synch	Time Synch

6.2 Write (Control) Operations Supported

FieldServer as a Client	FieldServer as a Server
General System Status	General System Status
System Trouble Status	System Trouble Status
General Zone Status	General Zone Status
Expanded Zone Status	Expanded Zone Status
Zone Description	Zone Description
Output Group Status	Output Group Status
Output Group Description	Output Group Description
Point Status	Point Status
Point Description	Point Description
Time Status	Time Status
Gateway Version	Gateway Version
Disable Point	Disable Point
Enable Point	Enable Point
Reset Alarms	Reset Alarms
Silence	Silence
Time Synch	Time Synch

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ECS-RPU

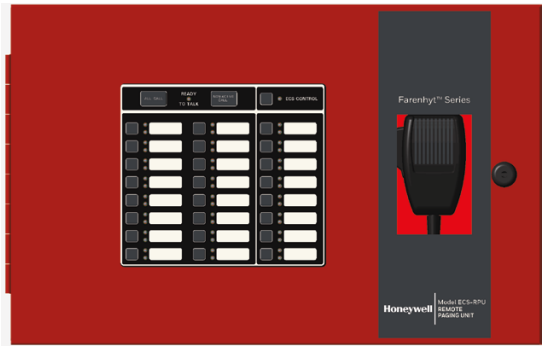
Remote Paging Unit

The ECS-RPU is a remote paging unit that provides a supervised microphone, 8 emergency message buttons, and 16 mappable audio switches. With dimensions of 17¾" x 117/16" x 3½", this lower profile remote paging unit is ideal for locations where the standard LOC won't fit.

The RA-2000 and RA-100 have the same height and flush mount depth as the ECS-RPU so if your installation requires a fully functioning LOC with annunciation the RA-2000 or RA-100 can be installed right next to the ECS-RPU for a sleek installation.

The IFP-100ECS, IFP-300ECS and IFP-1000ECS can support a maximum of 7 ECS-RPUs or ECS-LOCs in any combination.

The IFP-2000ECS, IFP-2100ECS or IFP-2100ECSB can support a maximum of 15 ECS-LOCs or ECS-LOC2100s in any combination.



ECS-RPU

INSTALLATION

The ECS-RPU can be surface or flush mounted.

COMPATIBILITY

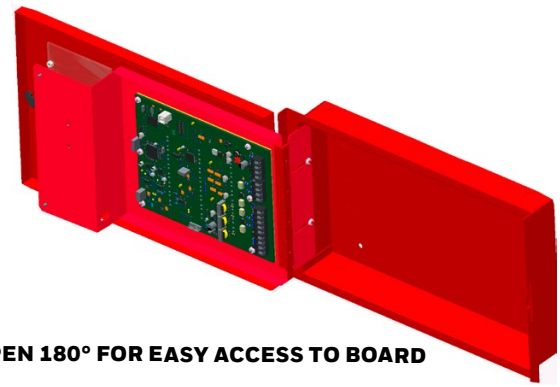
The ECS-RPU is compatible with the following ECS FACP's:

- IFP-2100ECS (max 15 per system)
- IFP-2100ECSB (max 15 per system)
- IFP-2000ECS (max 15 per system)
- IFP-1000ECS (max 7 per system)
- IFP-300ECS (max 7 per system)
- IFP-100ECS (max 7 per system)

FEATURES & BENEFITS

- Smaller footprint than the ECS-LOC
- Supervised Microphone
- Connects to control panel via 4-wire SBUS and 2-wire VBUS
- Eight emergency communication message buttons
- 6 mappable audio switches

ECS-RPU Technical Specifications



ECS-RPU OPEN 180° FOR EASY ACCESS TO BOARD



ECS-RPU SHOWN WITH AN RA-2000

For a complete listing of all compliance approvals and certifications, please visit www.farenhyt.com.

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This document is not intended to be used for installation purposes. We try to keep our product information up-to date and accurate. We cannot cover all specific applications or anticipate all requirements. All specifications are subject to change without notice.

For Technical Support, Please call 800-446-6444.

PHYSICAL

Flush Mount Dimensions:16 3/8" W x 10" (41.6 W x 25.4 cm)

Overall Dimensions: 17.739" W x 11.372" H x 3.329" D (45.057 W x 28.885 H x 8.4557 D cm)

Color: Red

ENVIRONMENTAL

Operating Temperature: 32°F to 120°F (0°C to 49°C)

Humidity: 0 to 93% relative humidity (non condensing)

ELECTRICAL:

Standby Current: 70mA

Alarm Current: 100mA

ORDERING INFORMATION

ECS-RPU: Remote Paging Unit

ACCESSORIES

THUMBLTCH: Turn latch lock

RA-100: Remote Annunciator (used with IFP-100ECS and IFP-1000ECS)

RA-2000: Remote Annunciator (used with IFP-300ECS, IFP-2000ECS, and IFP-2100ECS)

APPROVALS

NFPA 13, NFPA 15, NFPA 16, NFPA 70, &

NFPA 72: Central Station; Remote Signalling; Local Protective Signalling Systems; Auxiliary Protected Premises Unit; Water Deluge Releasing Service.

UL Listed

CSFM: 7165-0559:0505

FDNY COA: (pending);

Seismic (CA): (pending),

FM approved

For more information

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ECS-LOC2100 / ECS-LOC2100B

Local Operator Console

The ECS-LOC2100 (red) or ECS-LOC2100B (black) are a combination supervised remote microphone and annunciator which is compatible with the ECS-Series Emergency Communication System. The ECS-LOC2100/ECS-LOC2100B meets UL requirements for an LOC.

The ECS-LOC2100/ECS-LOC2100B includes a ECS-RVM Remote Voice Module and its associated RA-2000 keypad annunciator. The ECS-RVM provides an interface to the Emergency Communication System and the RA-2000 annunciator is capable of performing complete operation of the fire alarm system, including silencing and resetting.

The IFP-2100ECS or IFP-2000ECS can support a maximum of 15 ECS-LOCs, ECS-LOC2100, or ECS-LOC2100B's in any combination.



ECS-LOC2100B

COMPATIBILITY

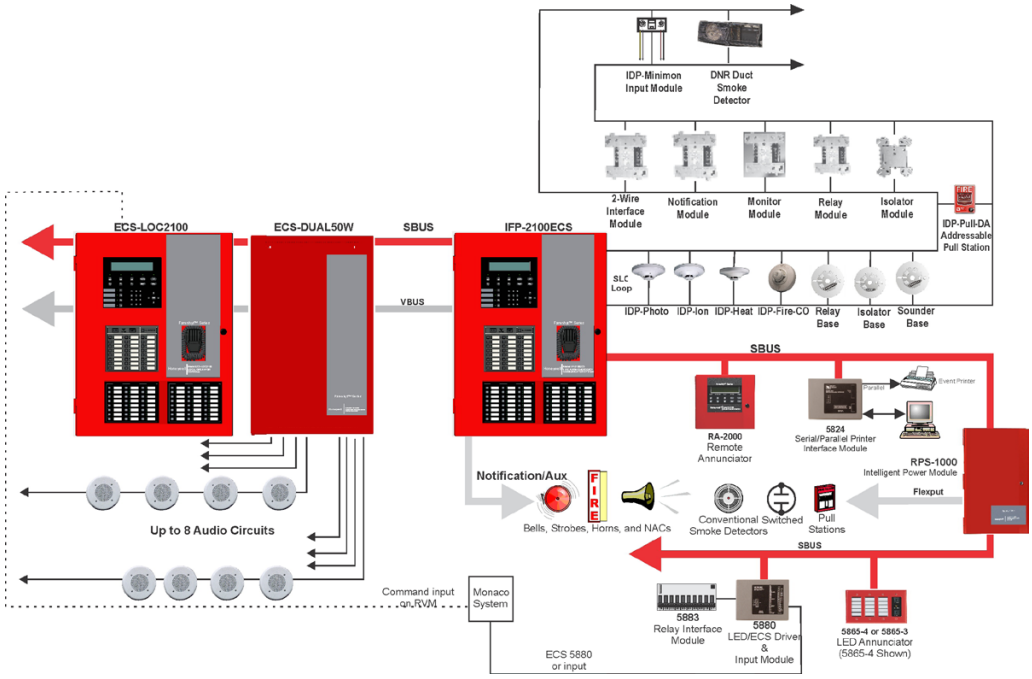
The ECS-LOC2100 and ECS-LOC2100B are compatible with the following ECS FACP's:

- IFP-2100ECS
- IFP-2100ECSB
- IFP-2000ECS

FEATURES & BENEFITS

- On-board supervised microphone
- Available in a red or black cabinet
- Programmable trigger inputs from an external source, such as a Monaco system, to either the ECS-RVM or 5880. Up to eight inputs available on the 5880 module
- After the main panel unit, up to 15 ECS-LOC2100's can be added to provide a total of 15 command units.
- The ECS-LOC2100 or ECS-LOC2100B meets the requirements for a LOC
- Up to 128 mappable speaker circuits using a combination of ECS-50W, ECS-125W or ECS-DUAL50W's mappable to 64 buttons controlling selected output groups
- All Call and Non-Active Call buttons to quickly select all active or all the non-active output groups
- Six-wire connection to ECS system; Two-wires for the voice bus, and four-wires for the SBUS connections

ECS-LOC2100 Technical Specifications



PHYSICAL

Overall Dimensions
20.362”W x 27”H x 5.054”D (51.7 W x 68.6 H x 12.8 D cm)
Color: Red or Black

ENVIRONMENTAL

Operating Temperature: 32°F to 120°F (0°C to 49°C)
Humidity: 0 to 93% relative humidity (non condensing)

ELECTRICAL

Standby Current: 105mA
Alarm Current: 175mA
Voice Integration Wiring:
Six conductor
Two voice bus
Four SBUS

ORDERING INFORMATION

ECS-LOC2100: Local Operator Console
ECS-LOC2100B: Local Operator Console. Black

ACCESSORIES

ECS-RVM: Remote voice module
RA-2000: Keypad annunciator
5880: LED/IO module
ECS-CE4: 4 speaker circuit expander
ECS-SW24: 24 switch expander

APPROVALS

NFPA 13, NFPA 15, NFPA 16, NFPA 70, &
NFPA 72: Central Station; Remote Signalling; Local Protective Signalling Systems; Auxiliary Protected Premises Unit; Water Deluge Releasing Service.

- **UL** Listed
- **CSFM:** 7165-0559:0505
- **FDNY** COA: (pending);
- **Seismic** (CA) (pending)
- **FM** approved

For a complete listing of all compliance approvals and certifications, please visit www.farenhyt.com.

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ECS-LOC

Local Operating Console

The ECS-LOC (red) or ECS-LOCB (black) local operator console is a powerful addition to any emergency voice system for mass notification purposes. The console is a combination supervised remote microphone and annunciator which is compatible with the Honeywell Farenhyt Series Emergency Communication System and meets UL requirements for a local operator console (LOC).

The ECS-LOC provides an interface to the ECS series Emergency Communication Systems. It has a supervised on-board microphone for live communications and its annunciator is capable of performing complete operation of the fire alarm system, including silencing and resetting.

The console's emergency communication system operations includes an on-board supervised microphone, and all call and non-active call buttons that can quickly select all active or all non-active output groups. The system also lets you select an ECS message as a priority over fire.

The ECS-CE4 is a useful addition to an ECS-LOC application. It adds four audio circuits to the ECS-50W, ECS-100W or ECS-125W, mappable to 32 buttons controlling selected output groups. It is very useful for extended coverage and requires no additional space as it mounts inside the amplifier cabinet.

The 5880 LED / IO module can also be used with an ECS-LOC application. The module provides an effective means to customize your remote. annunciation, providing 40 programmable LED outputs and eight supervised dry contact inputs. You can use up to eight 5880 modules on one ECS-LOC control panel for maximum flexibility. Its compact size enables it to be mounted inside the EVS-LOC, or in an accessory cabinet.

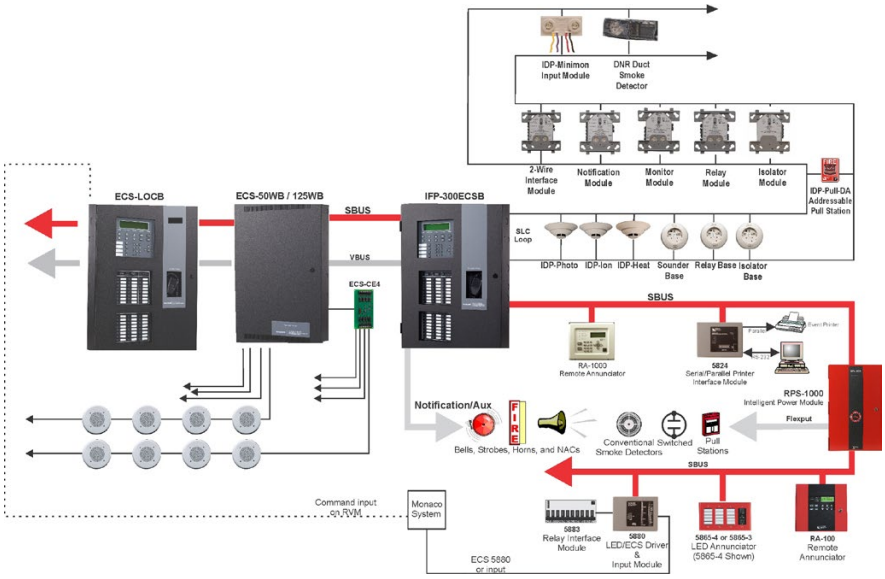


ECS-LOCB

FEATURES & BENEFITS

- Provides additional communications and control options that are also available in the ECS primary panel
- Useful for extending system access to additional areas of a building or mass notification network
- Makes access to the communication system easier when immediate and timely communications are essential
- For added fl exibility, it can also accept programmable trigger inputs from external source, such as a Monaco® system, to either the RVM or 5880. Up to eight inputs are available on the 5880 module.
- Up to 32 mappable speaker circuits can be connected on the ECS-LOC using a combination of the ECS-50W, ECS-100W ECS-DUAL50W or ECS-125W amplifiers. This is useful for extended reach during times when urgent emergency communication is required.
- The optional VIP-TR trim ring is useful for creating a visual appealing interface between the panel and mounting wall.

ECS-LOC Technical Specifications



EMERGENCY COMMUNICATION SYSTEM EXAMPLE

PHYSICAL

Overall Dimensions: 20"W x 26.5"H x 5.05"D (50.75 W x 67.3 H x 12.8D cm)
Color: Red or Black

ENVIRONMENTAL

Operating Temperature: 32°F to 120°F (0°C to 49°C)
Humidity: 0 to 93% relative humidity (non condensing)

ELECTRICAL

Standby Current: 105mA
Alarm Current: 175mA

INSTALLATION

The ECS-LOC can be surface or flush mounted.

ORDERING INFORMATION

ECS-LOC: Local Operator Console

ACCESSORIES

ECS-SW24: 24 switch expander
VIP-TR: panel trim ring for flush mounting
5880: LED/IO module
ECS-CE4: 4 speaker circuit expander
RA-2000: Keypad annunciator

AGENCY LISTINGS AND APPROVALS

UL 864 and **UL 2572**
Meets the requirements for NFPA 72 Local Protective Signaling Systems & Emergency Communication Systems

- **CSFM:** 7165-0559:0505
- **FDNY** COA # 6245
- **Seismic** (CA) (pending)
- **FM** approved

COMPATIBILITY

The ECS-LOC is compatible with the following ECS FACPs:

- IFP-2100ECS: (max 15 per system)
- IFP-2100ECSB: (max 15 per system)
- IFP-2000ECS: (max 15 per system)
- IFP-1000ECS: (max 7 per system)
- IFP-300ECS: (max 7 per system)
- IFP-100ECS: (max 7 per system)

For more information

Learn more about Honeywell's Farenhyt Series and other products available by visiting www.farenhyt.com

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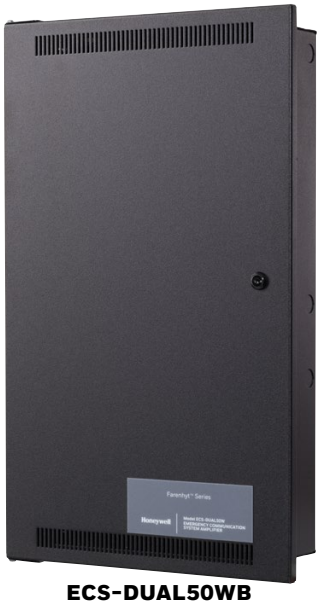
Farenhyt™ Series

ECS-DUAL50W / ECS-DUAL50WB

50/100 Watt Dual Channel Amplifier with optional Backup Amplifier

The ECS-DUAL50W (red) and ECS-DUAL50WB (black) are intelligent 50 / 100 watt amplifier for use with the IFP-100ECS, IFP-300ECS, IFP-1000ECS, IFP-2000ECS or IFP-2100ECS. The ECS-DUAL50W is used to amplify audio message for distribution throughout a facility.

The ECS-DUAL50W is capable of producing up to 100 watts of audio power. The ECS-DUAL50W has its own power supply with battery backup and eight speaker circuits. The ECS-DUAL50W is fully supervised by the main panel for trouble conditions.



ECS-DUAL50WB

Installation

The ECS-DUAL50W can be surface or flush mounted.

Compatibility

The ECS-DUAL50W is compatible with the following voice evacuation components:

- IFP-100ECS
- IFP-300ECS
- IFP-1000ECS
- IFP-2000ECS
- IFP-2100ECS

Note: Dual channel is only compatible with IFP-2000ECS, IFP-300ECS or IFP-2100ECS

FEATURES & BENEFITS

- Amplifier is compatible as: 50W with 50W as backup
- 100 W single channel
- 100 W single channel with 50 W backup using ECS-50WBU
- Dual channel using 50W for each channel (IFP-2000ECS or IFP-2100ECS only)
- Dual channel 50 W each channel with 50 W backup using ECS-50WBU
- Amplifier Bandwidth 400Hz to 4000Hz
- Built in backup amplifier test feature allows you to physically test that the backup amplifers are operating properly
- The ECS-DUAL50W has it's own power supply and backup battery
- Can be mounted up to 6000 feet away from ECS-Series control panel
- 120VAC or 240VAC operation
- Available in a red or black cabinet
- UL 864 and UL 2572
- UL listed for 520Hz signaling when used with compatible speakers
- Up to 16 amplifiers per IFP-2000ECS or ECS-2100ECS system for a maximum of 1600 watts
- Distributed between up to 128 audio circuits

ECS-DUAL50W Technical Specifications

PHYSICAL

Flush Mount Dimensions: 14.5"W x 24.75"H x 3.4"D (36.8 W x 62.9 H x 8.7 D cm)

Overall Dimensions: 16.1"W x 26.5"H x 4.1"D (40.64 W x 66.7 H x 10.5 D cm)

Color: Red or Black

ENVIRONMENTAL

Operating Temperature: 32°F to 120°F (0°C to 49°C)

Humidity:10% to 93% relative humidity (non-condensing)

ELECTRICAL

Primary AC: 120VAC @ 60Hz

ECS-DUAL50W 25V: 190mA standby current

ECS-DUAL50W 70V: 190mA standby current

ECS-DUAL50W 25V: 2380mA alarm current

ECS-DUAL50W 70V: 2470mA alarm current

Primary AC: 240V @50Hz

ECS-DUAL50WHV 25V: 200mA standby current

ECS-DUAL50WHV 70V: 200mA standby current

ECS-DUAL50WHV 25V: 1260mA alarm current

ECS-DUAL50WHV 70V: 1310mA alarm current

Total Power: 100 W @ 25 VRMS or 70.7 VRMS

- **Circuit 1-4:** 50W max.
- **Circuit 5-8:** 50W max

Main ECS Panel SBUS Standby & Alarm: 10mA

Battery Charging Capacity: 7 – 35AH

Battery Size: 18AH max allowed in cabinet. Use RBB accessory cabinet for larger batteries up to 35AH per system.

Voice Integration Wiring:

Six conductor
Two voice bus
Four SBUS

ORDERING INFORMATION

ECS-DUAL50W: Intelligent 50 Watt Amplifier, Red

ECS-DUAL50WB: Intelligent 50 Watt Amplifier, Black

ECS-DUAL50WHV: High Voltage (240VAC) 50/100 Watt Dual Channel Amplifier.

ACCESSORIES

ECS-50WBU: External Backup Amp.

RBB: RBB Remote Battery Box Cabinet. Use for backup batteries up to 35AH. 16" W x 10" H x 6" D

AGENCY LISTINGS

NFPA 13, NFPA 70, NFPA 72, UL 2572, UL 1711 & UL 864: Local Protective Signalling Systems

UL Listed

CSFM: 7165-0559:0174

FDNY COA: (pending)

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Farenhyt™ Series

Intelligent 50 Watt Amplifier

ECS-50W / ECS-50WB

The ECS-50W (red cabinet) or ECS-50WB (black cabinet) are intelligent 50 watt amplifiers for use with the IFP-100ECS, IFP-300ECS, IFP-1000ECS, IFP-2000ECS and IFP-2100ECS. The ECS-50W or ECS-50WB are used to amplify the audio message for distribution throughout the facility. Since it is designed as a self-contained distributed amplifier it can be conveniently located near the area of protection to reduce wiring demands.

Each ECS-50W/ECS-50WB is capable of producing 50-watts of audio power. Up to eight ECS-50W's can be used on the voice evacuation system.

The ECS-50W/ECS-50WB has its own power supply with battery backup and four speaker circuits which can be expanded to eight speaker circuits with the optional ECS-CE4. The ECS-50W/ECS-50WB is fully supervised by the main panel for trouble conditions.



ECS-50W

Compatibility

The ECS-50W / ECS-50WB are compatible with the following Honeywell Farenhyt Series voice evacuation components:

- IFP-100ECS
- IFP-300ECS / IFP-300ECSB
- IFP-1000ECS
- IFP-2000ECS
- IFP-2100ECS / IFP-2100ECSB

FEATURES & BENEFITS

- SBUS addressable, up to eight ECS-50Ws per system for a total of 400 watts
- Each ECS-50W is supervised and has four onboard audio circuits expandable to eight with the ECS-CE4 for a system total of 64 audio circuits.
- ECS-50W uses an easy to install wire harness to connect the ECS-CE4 audio circuit expander
- Can be mounted up to 6000 feet away from ECS-Series panel
- The ECS-50W has it's own power supply and backup battery
- Selectable for 25V or 70.7V operation
- Six-wire connection to ECS system: Two-wires for the voice bus and four-wires for the SBUS connections
- UL 864 and UL 2572
- Available in a red or black cabinet
- The ECS-50W/ ECS-50WB can be surface or flush mounted
- 120 VAC or 240 VAC operation

ECS-50W / ECS-50WB Technical Specifications

PHYSICAL:

Flush Mount Dimensions: 14.5"W x 24.75"H x 3.4"D (36.8 W x 62.9 H x 8.7 D cm)

Overall Dimensions: 16"W x 26.25"H x 4.1"D (40.6 W x 66.7 H x 10.5 D cm)

Color: Red or Black

ENVIRONMENTAL

Operating Temperature: 32°F to 120°F (0°C to 49°C)

Humidity: 10% to 93% relative humidity (non-condensing)

ELECTRICAL

Module	Voltage	Standby Curent	*Alarm Current
ECS-50W, 25V	120V 60HZ	350mA	1100mA
ECS-50WHV, 25V	240V 50HZ	200mA	600mA
ECS-50W, 70V	120V 60HZ	350mA	1200mA
ECS-50WHV, 70V	240V 50HZ	200mA	600mA

***Fully loaded system**

Main ECS Panel SBUS: Standby & Alarm: 10mA

Speaker Circuit: 50 watts @ 25Vrms or 70.7Vrms max.

Battery Charging Capacity: 7 – 35AH

Battery Size: 18AH max allowed in cabinet. Use RBB accessory cabinet for larger batteries up to 35AH per system and AB-55 for larger batteries up to 55AH.

Voice Integration Wiring:

Six conductor
Two voice bus
Four SBUS

ORDERING INFORMATION

ECS-50W: Intelligent 50 Watt Amplifier, Red

ECS-50WB: Intelligent 50 Watt Amplifier, Black

ECS-50WHV: High Voltage (204VAC) 50 Watt Amplifier

ACCESSORIES

ECS-CE4: Audio Circuit Expander

RBB: Remote Battery Box accessory cabinet. Use for backup batteries batteries up to 35AH and too large to fit into ECS-50W cabinet

AB-55: Remote Battery Box accessory cabinet Use for back batteries up to 35AH

SK-SCK: Seismic Compliance Kit

AGENCY LISTINGS AND APPROVALS

NFPA 13, NFPA 70, NFPA 72, UL 2572, UL 1711 & UL 864: Local Protective Signalling Systems

UL Listed

CSFM 7300-0559:0173

City of New York

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Farenhyt™ Series

Intelligent 125 Watt Amplifier

ECS-125W / ECS-125WB

The ECS-125W (red cabinet) or ECS-125WB (black cabinet) is an intelligent 125 watt amplifier for use with the IFP-100ECS, IFP-300ECS, IFP-1000ECS, IFP-2000ECS and IFP-2100ECS. The ECS-125W/ECS-125WB are used to amplify the audio message for distribution throughout the facility. Since it is designed as a self-contained distributed amplifier it can be conveniently located near the area of protection to reduce wiring demands.

Each ECS-125W is capable of producing 125-watts of audio power. Up to eight ECS-125Ws can be used on the voice evacuation system. The ECS-125W has its own power supply with battery backup and four speaker circuits which can be expanded to eight speaker circuits with the optional ECS-CE4. The ECS-125W is fully supervised by the main panel for trouble conditions.



ECS-125W

INSTALLATION

The ECS-125W and ECS-125WB can be surface or flush mounted.

COMPATIBILITY

The ECS-125W / ECS-125WB are compatible with the following Honeywell Farenhyt Series voice evacuation components:

- IFP-100ECS
- IFP-300ECS / IFP-300ECSB
- IFP-1000ECS
- IFP-2000ECS
- IFP-2100ECS / IFP-2100ECSB

FEATURES & BENEFITS

- SBUS addressable, up to eight ECS-125Ws per system for a total of 1000 watts
- Each ECS-125W is supervised and has four onboard audio circuits expandable to eight with the ECS-CE4 for a system total of 64 audio circuits
- ECS-125W uses an easy to install wire harness to connect the ECS-CE4 audio circuit expander
- Can be mounted up to 6000 feet away from ECS-Series panel
- The ECS-125W has it's own power supply and backup battery
- Six-wire connection to ECS system: Two-wires for the voice bus and four-wires for the SBUS connections
- UL 864 and UL 2572
- Available in a red or black cabinet
- 120 VAC or 240 VAC operation

ECS-125W/ ECS-125WB Technical Specifications

PHYSICAL

Flush Mount Dimensions: 14.5"W x 24.75"H x 3.4"D (36.8 W x 62.9 H x 8.7 D cm)

Overall Dimensions: 16"W x 26.25"H x 4.1"D (40.6 W x 66.7 H x 10.5 D cm)

Color: Red or Black

ENVIRONMENTAL

Operating Temperature: 32°F to 120°F (0°C to 49°C)

Humidity: 10% to 93% relative humidity (non-condensing)

ELECTRICAL

Module	Voltage	Standby Current	*Alarm Current
ECS-125W 25V	120V 60Hz	300mA	2200mA
ECS-125WHV 25V	240V 50Hz	250mA	1250mA

***Fully loaded system**

Total Power:

- **Circuit 1:** 100W max.
- **Circuit 2-8:** 50W max.

Main ECS Panel SBUS Standby & Alarm: 10mA

Battery Charging Capacity: 7 – 35AH

Battery Size: 18AH max allowed in cabinet. Use RBB accessory cabinet for larger batteries up to 35AH per system.

Voice Integration Wiring:

Six conductor
Two voice bus
Four SBUS

ORDERING INFORMATION

ECS-125W: Intelligent 125W Amplifier, Red

ECS-125WB: Intelligent 125W Amplifier, Black

ECS-125WHV: High Voltage (240V) 125W Amplifier

ACCESSORIES

ECS-CE4: Audio Circuit Expander

RBB: Remote Battery Box accessory cabinet. Use for backup batteries batteries up to 35AH and too large to fit into ECS-50W cabinet

AB-55: Remote Battery Box accessory cabinet Use for back batteries up to 35AH

SK-SCK: Seismic Compliance Kit

AGENCY LISTINGS AND APPROVALS

NFPA 13, NFPA 70, NFPA 72, UL 2572, UL 1711 & UL 864: Local Protective Signalling Systems

UL Listed

CSFM 7165-0559:0173

City of New York

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5815RMK / 5815RMKB Remote Mounting Kit Product Installation Document

PN 151391:B 07/01/2017 ECN 16-0218

5815RMK and 5815RMKB Remote Mounting Kit

The 5815RMK (red) or 5815RMKB (black) are remote mounting cabinets that lets you install up to two 5815XLs, 6815s, or SK-NIC cards in a single cabinet.

Note: *Installation and wiring of this device must be done in accordance with NFPA 72 and local ordinances.*

Specifications

Dimensions: 10-3/8”W x 10-3/16”H x 3”D

(26.4 cm W x 25.9 cm H x 7.6 cm D)

Compatibility

The 5815RMK or 5815RMKB are compatible with Honeywell Silent Knight 5815XL or 6815 SLC expanders or SK-NIC Network Interface Card.

Mounting

It is important to protect the 5815RMK or 5815RMKB and its contents from water. To prevent water damage, follow the mounting requirements listed below:

- Do not mount directly on exterior walls, especially masonry walls (condensation)
- Do not mount directly on exterior walls below grade (condensation)
- Protect from plumbing leaks
- Protect from splash caused by sprinkler inspection ports
- Do not mount in areas with humidity-generating equipment (such as dryers, production machinery)
- Mount in an area that always remains within the following temperature and humidity range: 0°C-49°C (32°F-120°F) and 10%-93% at 30°C (86°F) non-condensing.
- Mount in an indoor, dry location.

Warning!:

The electronic components on the 5815XL, 6815, SK-NIC and the FACP are sensitive to electrostatic discharge. Wear a grounding strap when handling any of the boards.

To mount the 5815RMK or 5815RMKB cabinet:

1. Remove the 5815RMK or 5815RMKB from its packing container.
2. Unlock the 5815RMK or 5815RMKB cabinet and lift up on the cabinet door to remove it.
3. Unscrewing the two mounting plate screws as shown in Figure 1 to remove the mounting plate.

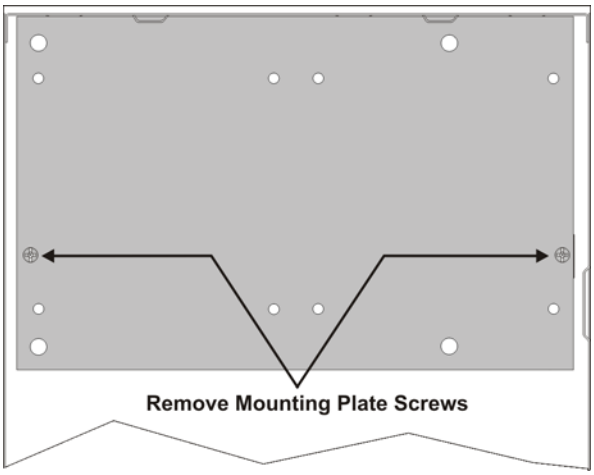


Figure 1: Cabinet Mounting Holes

4. Mount the cabinet using the appropriate

screws and anchors. See also Figure 2.

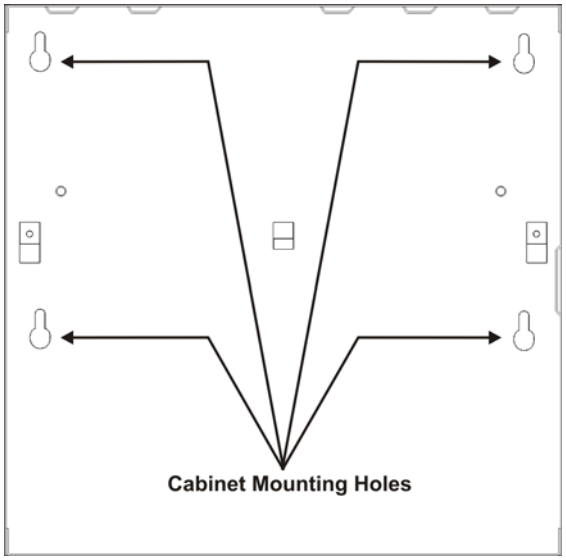


Figure 2: Cabinet Mounting Holes

5. Reinstall the mounting plate in the cabinet.
6. Insert the eight standoffs included with the cabinet as shown in Figure 3.

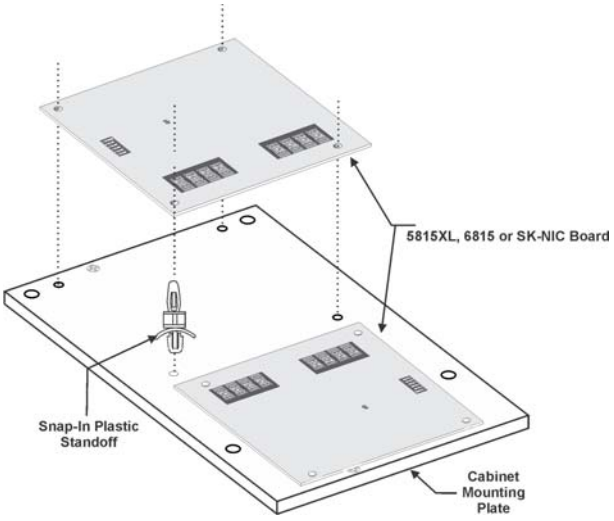


Figure 3: Standoff Installation

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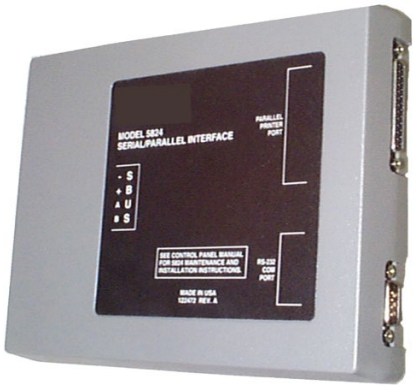
Farenhyt™ Series

5824

Serial / Parallel Gateway Module

With one parallel and one RS-232 serial port, the 5824 Serial/Parallel Interface allows you to connect virtually any standard PC-compatible printer to the Honeywell Farenhyt Series FACPs and to generate reports on-site. You can print a log of real-time events and generate user-friendly reports of event history and detector status. And, because a system can have multiple 5824s, you can locate printers strategically throughout the installation.

The 5824 also provides the Gateway interface for communicating to other systems, such as a building control system. The Gateway protocol is a data stream produced by the FACP that can be used to display system events on a PC monitor. The protocol allows a building control system to handle events and to silence or reset the FACP. The Gateway protocol can be used to interface with CadGraphics, the PC-based graphics annunciator software (available from Honeywell).



5824

COMPATIBILITY

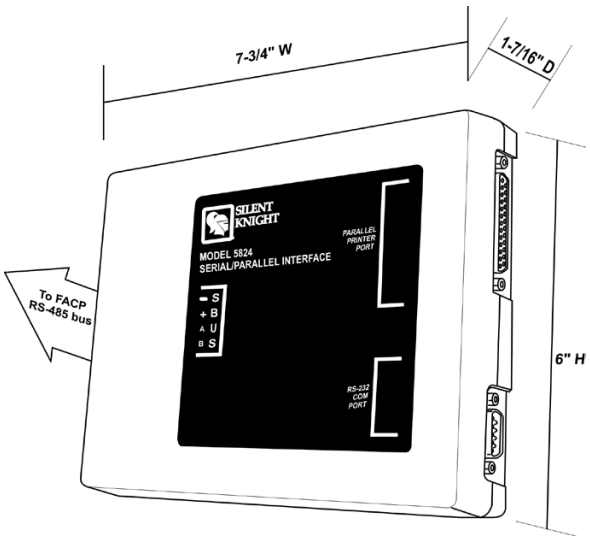
The 5824 is compatible with the following FACPs:

- IFP-2100 / IFP-2100ECS / RFP-2100
- IFP-2000 / IFP-2000ECS / RPS-2000
- IFP-1000 / IFP-1000ECS
- IFP-300 / IFP-300ECS
- IFP-100 / IFP-100ECS
- IFP-75
- IFP-50
- IFP-25

FEATURES & BENEFITS

- Allows connection of standard computer printers
- Quick and easy to install
- DIP switches for setting ID codes
- Housed in a sturdy, wall-mountable, plastic enclosure
- Out of paper/system trouble annunciated at fire panel
- Parallel and RS-232 serial output
- Reports event with date/time stamp in user-friendly report format.
- UL listed, complies with NFPA 72 and 101
- UL listed with the Okidata Microline 320 parallel printer
- FM approved
- Gateway interface can be used to display system events on a PC monitor and interface with building control systems
- Interfaces with the CadGraphics PC-based graphics annunciator software

5824 Technical Specifications



PHYSICAL

Dimensions: 7¾"W x 6"H x 1-7/16"
Color: Gray

ENVIRONMENTAL

Operating Temperature: 32°F to 120°F (0°C to 49°C)
Humidity: 0 to 95% non-condensing)

ELECTRICAL

Operating Voltage: 24VDC
Current: 45mA (alarm and standby)
Max. per system: 2
Wiring Distance: Up to 6,000 feet from control panel (depending on wiring method)

ORDERING INFORMATION

5824: Serial/Parallel Printer Interface Module for printer connection.

AGENCY LISTINGS AND APPROVALS

NFPA 72 and NFPA 101.
UL Listed
CSFM 7165-0559:0502;
MEA: 429-92-E Vol 9
FM approved

For a complete listing of all compliance approvals and certifications, please visit www.farenhyt.com.

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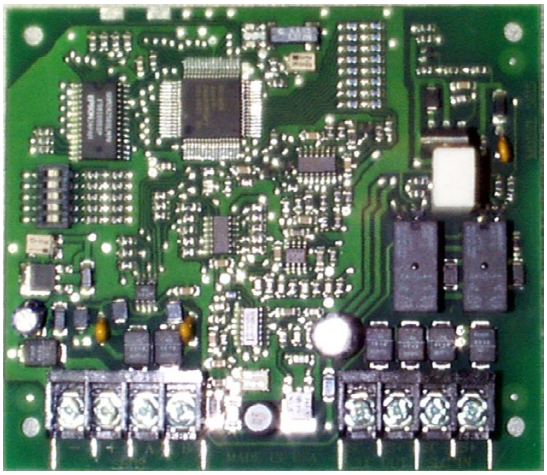
Farenhyt™ Series

5815XL

Signaling Line Circuit Expander

The 5815XL is a signaling line circuit (SLC) expander for use with the Farenhyt IFP-1000, IFP-1000ECS and IFP-2000/ECS analog/addressable fire alarm control panel (FACP). Use the 5815XL to add more SLC devices of the same protocol to the IFP-1000/ECS or IFP-2000/ECS control panel. The 5815XL supports the same number of devices and SLC device types that are supported by the control panel. A maximum of seven 5815XLs can be used with the IFP-1000/ECS FACP. A maximum of 63 5815XLs can be used on an IFP-2000/ECS panel, but the total SLC device count is limited to 636.

The 5815XL communicates with the FACP via an RS 485 system bus. A green LED on the 5815XL board blinks to indicate good communication. If an addressable device on a 5815XL fails, the loop communicates the failure to the IFP-1000 and continues to operate normally.



5815XL

INSTALLATION

The 5815XL can be mounted on standoffs located in the IFP-1000, IFP-1000ECS, IFP-2000/ECS or RPS-1000 cabinet or in the 5815RMK remote mounting kit. All control panel mounting options allow you to install two 5815XLs per cabinet.

COMPATIBILITY

The 5815XL is compatible with the following Honeywell Farenhyt series FACPs:

- IFP-2000 / RPS-2000 / IFP-2000ECS
- IFP-2100 / IFP-2100ECS / RFP-2100
- IFP-1000 / IFP-1000ECS
- IFP-300 / IFP-300ECS

FEATURES & BENEFITS

- Adds support for up to 159 IDP detectors and 159 IDP modules or 127 SD devices to the IFP-2000/ECS system.
- Adds support for up to 99 IDP detectors and 99 IDP modules or 127 SD devices for the IFP-1000/ECS system.
- Communicates with the FACP via RS 485 system bus
- LED indicates good communication
- House up to two 5815XLs in the IFP-1000 cabinet, IFP- 2000/ECS cabinet, RPS-1000 cabinet, or one 5815XL in the 5815RMK remote mounting kit
- SLC wiring used standard wire. Twisted pair or shield cable are not required
- UL 864 listed, complies with NFPA 72 and 101
-
- CSFM approved
- MEA
- FM approved

5815XL Technical Specifications

PHYSICAL

5815XL Physical

Dimensions: 4.2" H (10.7 cm): 4.8" W (12.2 cm)

Shipping Weight: 5.6 oz (159 g)

RPS-1000 Physical (Optional Accessory)

Height: 26" (66 cm)

Width: 16" (40 cm)

Depth: 4.7" (11.8 cm)

Shipping Weight: 28.8 lbs (13.1 kg)

5815RMK Physical (Optional Accessory)

Height: 10.2" (25.9 cm)

Width: 10.4" (26.4 cm)

Depth: 3" (7.6 cm)

Shipping Weight: 1.2 oz (37g)

ENVIRONMENTAL

Operating Temperature: 32°F to 120°F (0°C to 49°C)

Humidity: 10 to 93% relative humidity (non-condensing)

ELECTRICAL

Standby & Alarm Current: 80mA max

SYSTEM CAPACITY

IFP-1000/ECS FACP supports seven 5815XLs

IFP-2000/ECS or IFP-300/ECS FACP supports 63 5815XLs

5815XL Capacity

• 127 SD addressable devices per loop for IFP-1000/ECS, IFP-300/ECS & IFP-2000/ECS

ORDERING INFORMATION

5815XL: Signaling Line Circuit Expander

ACCESSORIES

RPS-1000: Intelligent Power Module. Cabinet holds two 5815XLs.

5815RMK: Remote Mounting Kit. Cabinet holds two 5815XLs.

AGENCY LISTINGS AND APPROVALS

NFPA 13, NFPA 15, NFPA 16, NFPA 70, &

NFPA 72: Central Station; Remote Signalling; Local Protective Signalling Systems; Auxiliary Protected Premises Unit; & Water Deluge Releasing Service. Suitable for automatic, manual, waterflow, sprinkler supervisory (DACT non-coded) signalling services.

UL Listed

CSFM 7170-0559: 135;

MEA 429-92-E Vol. VI

FM Approved

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For more information

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Farenhyt™ Series

5865-3 / 5865-4

LED Annunciators

5865-3 and 5865-4 LED annunciators provide 30 programmable LEDs (15 red, 15 yellow) for maximum flexibility with the Honeywell Farenhyt Series fire alarm control panel. The 5865-3 fits into a standard 3-gang electrical box and the 5865-4 fits into a standard 4-gang electrical box. The annunciators are covered by semi-transparent labels and a cover plate. Up to eight 5865 series annunciators can be used with the FACP. The 5865-3 provides alarm and trouble annunciation for 15 zones while the 5865-4 adds reset and silence input switches for even more versatility.



5865-3



5865-4

COMPATIBILITY

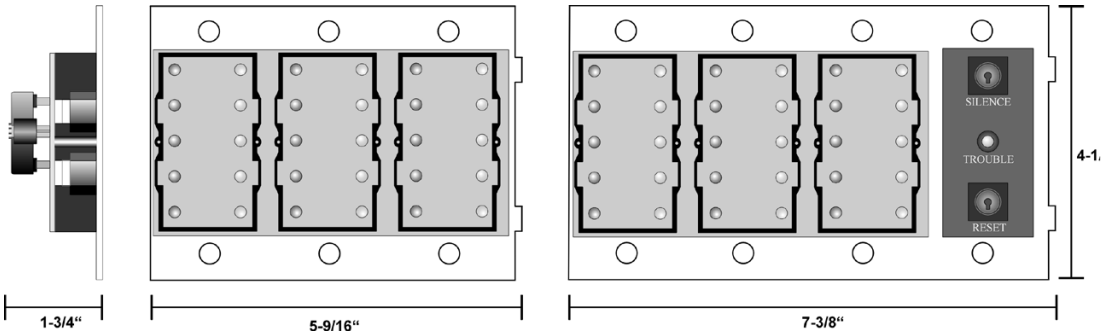
The 5865-3 and 5865-4 are compatible with the following Farenhyt Series FACPs:

- IFP-2100 / IFP-2100B / IFP-2100ECS / IFP-2100ECSB / RFP-2100 / RFP-2100B
- IFP-2000 / IFP-2000ECS / RPS-2000
- IFP-1000 / IFP-1000ECS
- IFP-300 / IFP-300B / IFP-300ECS / IFP-300ECSB
- IFP-100 / IFP-100ECS
- IFP-75 / IFP-75B
- IFP-50

FEATURES & BENEFITS

- 30 programmable LED outputs (15 red and 15 yellow))
- Up to 8 5865s can be used on one panel
- Fit into a standard 3- or 4-gang electrical box
- Comes with four semi-transparent labels that can be typed or printed on
- DIP switch addressable
- Connects to FACP SBUS
- Both modules UL 864 listed; comply with NFPA 72
- 4-wire connection to FACP SBUS
- MEA Approved 429-92-E, Vol 9
- CSFM Approved
- FM Approved

5865-3 and 5865-4 Technical Specifications



PHYSICAL

5865-3: 5 9/16" L x 4.1" H x 1 3/4" D
5865-4: 7 3/8" L x 4.1" H x 1 3/4" D

ELECTRICAL

Operating Voltage: 24VDC
Standby Current: 35mA
Alarm Current: 145mA

MOUNTING:

5665-3: 3-gang electrical box
5665-4: 4-gang electrical box

ENVIRONMENTAL

Operating Temperature: 32°F to 120°F (0°C to 49°C)
Humidity: 10% to 93% relative humidity (non-condensing)

ORDERING INFORMATION

5865-3: LED Annunciator. Fits 3-gang electical box. Red.
5865-4: LED Annunciator. Fits 4-gang electical box. Red.

AGENCY LISTINGS AND APPROVALS

- MEA Approved 429-92-E, Vol 9
- CSFM Approved
- FM Approved
- UL listed

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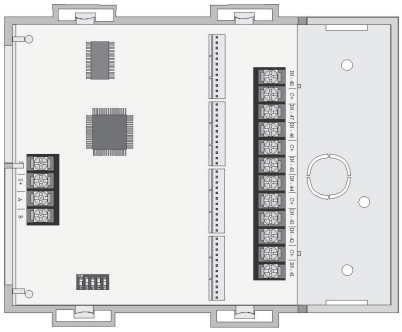
Farenhyt™ Series

IO / LED Driver Module

5880

The 5880 IO / LED Driver module provides an effective means to customize your remote annunciation.

A single 5880 provides 40 programmable LED outputs and eight supervised dry contact inputs. You can use up to eight 5880 modules on one FACP for maximum flexibility. The 5880's compact size allows for mounting inside a remote graphic annunciator or in an accessory cabinet.





5880

Compatibility

The 5880 is compatible with the following FACPs:

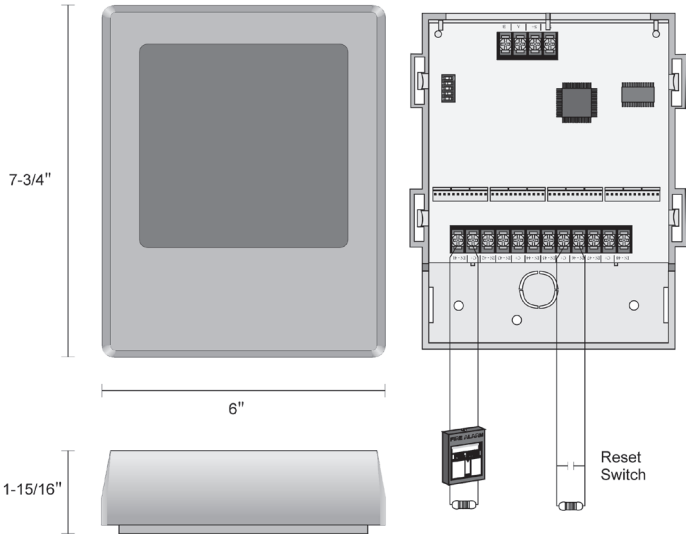
- IFP-2100 / IFP-2100ECS / RFP-2100
- IFP-2000 / IFP-2000ECS / RPS-2000
- IFP-1000 / IFP-1000ECS
- IFP-300 / IFP-300ECS
- IFP-100 / IFP-100ECS
- IFP-75
- IFP-50

IFP-25.

FEATURES & BENEFITS

- 40 programmable open collector LED outputs
- Provides 8 supervised dry contact inputs for system or alarm monitoring functions
- Its compact size allows mounting inside the annunciator, or in an accessory cabinet
- No external resistors required for the 5880 LED driver outputs
- DIP switch addressable
- 4-wire connection to control panel SBUS
- UL 864 listed; complies with NFPA 72
- MEA 429-92-E, Vol. 9
- FM approved
- CSFM listed
- Individually mapped outputs
- Inputs for dry contacts or a remote silence or reset switch
- You can use up to eight 5880 modules on one control panel for maximum flexibility

5880 Technical Specifications



DIMENSIONS

SPECIFICATIONS

Mounting: in annunciator or accessory cabinet

ENVIRONMENTAL

Operating Temperature: 32°F to 120°F (0°C to 49°C)

Humidity: 10 to 85% non-condensing)

ELECTRICAL

Operating Voltage: 24VDC
Standby Current: 35mA
Alarm Current: 200mA
LED: 10mA

ORDERING INFORMATION

5880: LED / IO module has 40 programmable LED outputs and eight supervised dry contact inputs which are useful for custom applications.

AGENCY LISTINGS AND APPROVALS

NFPA 72

Other listings:

UL 864 Listed
CSFM: 7165-0559:0502;
MEA: 429-92-E Vol 9
FM approved

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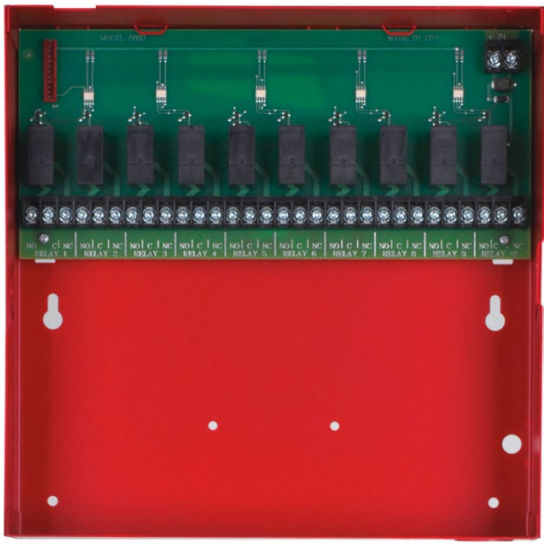
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Farenhyt™ Series

5883

Relay Interface Board

The 5883 Relay Interface Board provides 10 general purpose Form C relays that can be used to control any device that requires a dry contact closure. The interface board is activated by an open collector input from a controlling device such as a 5880 LED Driver Module.



5883

Compatibility

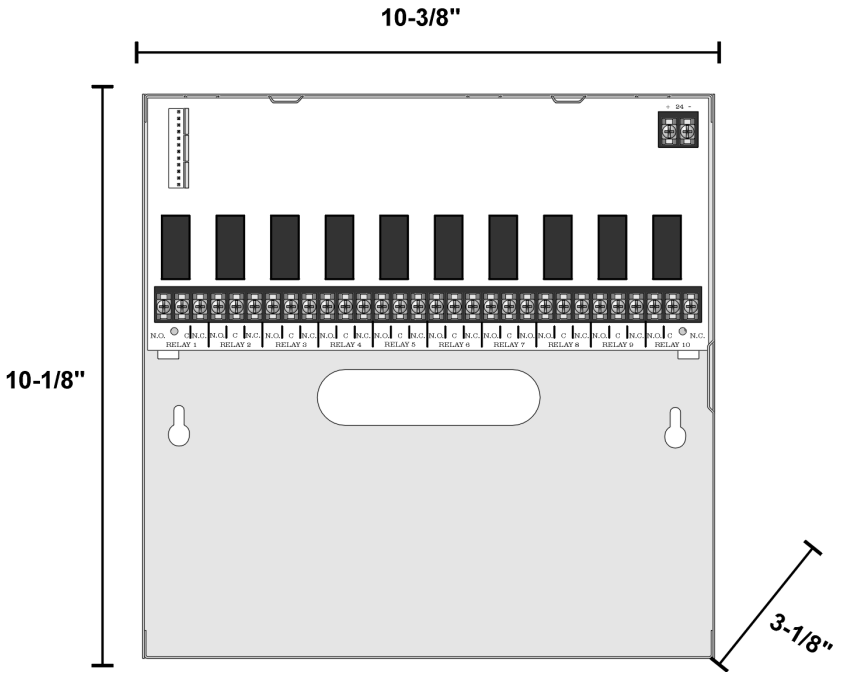
The 5883 is compatible with the following Farenhyt Series FACPs:

- IFP-2100 / IFP-2100B / IFP-2100ECS / IFP-2100ECSB / RFP-2100 / RFP-2100B
- IFP-2000 / IFP-2000ECS / RPS-2000
- IFP-1000 / IFP-1000ECS
- IFP-300 / IFP-300B / IFP-300ECS / IFP-300ECSB
- IFP-100 / IFP-100ECS
- IFP-75 / IFP-75B
- IFP-50

FEATURES & BENEFITS

- 10 general purpose Form C relays
- Relays rated at 5.0A @ 30 VDC or 250 VAC resistive
- Controls any dry contact device
- Housed in protective cabinet

5883 Technical Specifications



5883 DIMENSIONS

PHYSICAL

Cabinet Dimensions: 10 1/8"H x 10-3/8"W x 3 1/8" D (26.04x26.35x7.94CM)

ENVIRONMENTAL

Operating Temperature: 32°F-120°F (0°C -49°C)
Humidity: 10%-85%
Indoor use only

ELECTRICAL

Operating Voltage: 24VDC
Form C Relay: 5A @ 30VDC or 250VAC resistive
Current:
Standby: 0mA
Alarm: 220mA (22mA/Relay)

ORDERING INFORMATION

5883: Relay Interface Board

AGENCY LISTINGS AND APPROVALS

- CSFM
- UL Listed
- City of NY: 429-92-E Vol XI

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IFPN-PRN7

Dot Matrix Printer

The PRN7 is an optional dot matrix printer for use with the IFP-NET-3 system. The PRN7 can be attached to an IFP-NET-3 workstation to print system events, text of linked files, and history logs.



IFPN-PRN7

APPLICATIONS

Printed transaction records reduce the man-hours required to install and maintain a system. A printed record of all system events (alarms, troubles, etc.) and status changes can be especially valuable in the event of a disputed incident.

CONSTRUCTION AND OPERATION

The printer is housed in its own separate enclosure and is suitable for placement on a desk top, counter, or table.

INSTALLATION

The PRN-7 should be placed in a secure area to prevent theft of the printer and/or printed records. The PRN-7 must not be located further than 20 ft/6.10 m (actual cable length) from the control panel.

Consult the control panel installation manual for the proper method and PIN numbers used to complete the electrical connection to the control panel.

NOTE: If printer operation is required during failure of primary power, use of a separate UL-listed Uninterruptable Power Supply (UPS) system is recommended

FEATURES & BENEFITS

- Provides a hard copy printout of all system events and status changes
- Time stamps printed on the record of each event and status change with the current time-of-day and date
- Uses standard 9" x 11" tractor-feed fan-fold paper
- Prints 80 columns of data at 10 characters per inch
- Provides printed records of system configuration and addressable device parameters
- Includes a 24-pin print head
- Very quiet (approximately 52 dBA).

IFPN-PRN7 Technical Specifications

PRINTER SPECIFICATIONS

Printer Method: Serial printing with 24-pin matrix print head

Printing Speed (copy draft): 333 cps at 10 cpi

Character Density: 10 cpi standard (12, 15, 17.1, and 20 cpi available via front panel)

Graphic Resolution (VxH): Up to 360 x 360 dpi

Ribbon Life (approx.) : 6 million characters (DPQ)

Acoustic Noise Level : 52 dBA (approx.)

Dimensions: 18"(45.8cm)W x 7.9" (20.01cm)H x 10.4 (27.8cm)D

Weight: 18.9 pounds (8.6 kg)

ELECTRICAL

Power Supply: 110-230 VAC auto ranging, auto sensing

Power Consumption: 40 watts (printing)

ENVIRONMENTAL

Operating Temperature: 50°F to 104°F (10°C to 40°C)

Humidity: 10% to 85% relative humidity (non-condensing)

ORDERING INFORMATION

PRN-7: 24-pin dot-matrix printer, 110-230 VAC power

AGENCY LISTINGS AND APPROVALS

These listings and approvals apply to the modules specified in this document. In some cases, certain modules or applications may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.

- **UL Listed:** S35611

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IFP-Net-3

GRAPHICAL MONITORING WORKSTATION

IFP-Net is a Microsoft® Windows® based graphic user interface linking selected fire alarm control panels together to a PC to easily monitor them. The PC operator would receive real-time information about a system with details showing right where the event is occurring. For example, if a pull station was activated a graphic of the floor of that building would zoom in onto the location of the pull station and provide the operator with specific instructions on what to do or who to call.

The IFP-Net-3 consists of a Honeywell Farenhyt Series FACP connected to a Gateway via a 5824 module, which is plugged into a TCP/IP Ethernet port and communicates with a PC (PC not included) with the IFP-Net-3 software. No dedicated wire or fiber connection is required with this system the existing Ethernet infrastructure is utilized.

The IFP-Net-3 supports up to 200 Gateway's per system, which can be connected to a compatible Honeywell Farenhyt or Silent Knight FACPs.



IFP-NET-3

PC REQUIREMENTS

The following are the minimum requirements for a IFP-Net-3 workstation that is used on a PC provided by the customer.

- Intel i5 Processor or better
- Standard mouse and keyboard
- Microsoft® Windows 10, 64 bit
- 1024 x768 display resolution
- Sound Card and Speakers
- 4 GB RAM or greater
- Ethernet

FEATURES & BENEFITS

- Support of IFP-Series devices with IFPN-GW-Kit installation package
- Autonavigation automatically locates and zooms to the device related to an alarm or event based on the priority of the event
- System Administrator-definable security profiles allow for extremely flexible definitions for operator accounts
- Configurable windows provide flexibility to display information as desired
- Dynamically generated sizable key map
- New and Acknowledged Event boxes display all off-normal events, simultaneously with graphic screens
- Operator log with response tracking
- History Manager records operator, event, and response (with time and date stamp) to disk
- Powerful search filters for custom reporting of all events
- Screen database with screens for all sites.
- Administrator-definable macros for device communication
- Definable function keys, functional buttons, and navigational buttons
- Floor plans can be zoomed in and out to any level
- Devices can be placed at any zoom level
- Import vector.dfx, wmf, .bmp, .jpg or .gif
- Full linked multimedia (text, audio, video, and bitmaps) to any device, all-definable by the administrator

IFP-NET-3 Technical Specifications

ORDERING INFORMATION

IFP-NET-3: Software and key (a key is required on each PC in system)
IFPN-GW-EM-3: Gateway Interface board
IFPN-GW-KIT: Installation packages includes Gateway interface, Cabinet, and 5824 Serial/ Parallel printer interface
IFPN-CAB1: Gateway/5824/NION router cabinet
IFP-4: IFP-NET verion 4 Software KeyBit (Required for Version 4)
IFP-MM: Adds floatable/Dockable Windows option (to support dual monitors) to IFP-NET

Compatibility

- IFP-2100 / IFP-2100ECS / IFP-2100HV
- IFP-2000 / IFP-2000ECS / IFP-2000HV
- 5700
- 5808
- 6808
- 5820XL/ 5820XL-EVS
- IFP-50
- IFP-75
- IFP-100 / IFP-100ECS
- IFP-1000 / IFP-1000ECS

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SK-F485C

Fiber to SBUS Converter

The SK-F485C offers a seamless conversion from panel SBUS connection to fiber and back again.



SK-F485C

INSTALLATION

The SK-F485C can be mounted using the standoffs on the board in the cabinet of a compatible FACP. The 5815RMK remote mounting kit can also be used allowing up to two SK-F485C converter modules in a single cabinet.

Compatibility

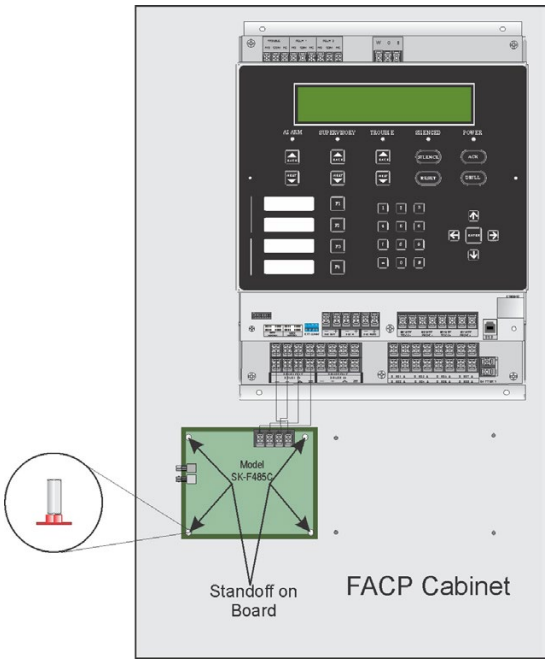
The SK-F485C is compatible with the following FACPs:

- IFP-2100ECS / IFP-2100ECSB
- IFP-2100 / IFP-2100B / RFP-2100 / RFP-2100B
- IFP-2000 / RPS-2000 / IFP-2000ECS
- IFP-300 / IFP-300B / IFP-300ECS / IFP-300ECSB
- IFP-1000 / IFP-1000ECS
- IFP-100 / IFP-100ECS
- IFP-75 / IFP-75B
- IFP-50
- 5496
- RPS-1000

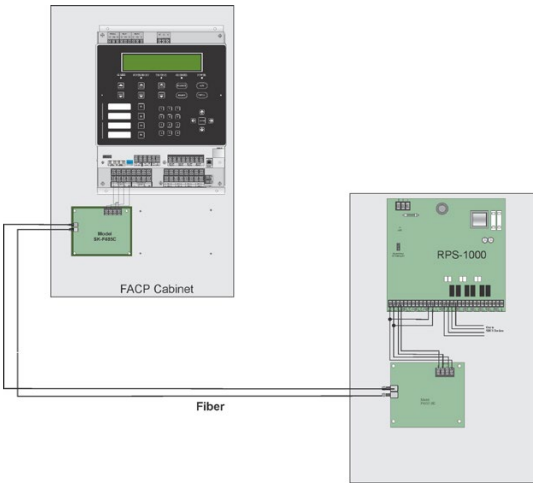
FEATURES & BENEFITS

- Fiber connection duplex ST connectors for Tx and Rx data fiber cable duplex is 62.5 micron. Multimode fiber data rate 115.2K bits/second
- Maximum attenuation 5.5db
- Fiber distance Up to 1.0 mile (1.6Km) SK-F485C connection (two-wire) or terminal strip, and jumper selectable bias / termination
- SK-F485C data direction control automatic half duplex transmitter enable control, for any baud rate / data bits

SK-F485C Technical Specifications



SK-F485C MOUNTING IN FACP CABINET



CONNECTING FIBER TO PANEL TO POWER SUPPLY

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PHYSICAL

Dimensions: 4.75"W x 4.25"H x 1.0"D

ENVIRONMENTAL

Operating Temperature: 32°F-120°F (0°C -49°C)
Humidity: 10%-93% non-condensing

ELECTRICAL

External Power Supply: 9 - 35VDC @ 125mA max.

ORDERING INFORMATION

SK-F485C: Copper to Fiber Converter

ACCESSORIES

5815RMK: Remote Mounting Kit 10.2" H x 10.4" W x 3" D. Cabinet holds up to two SK-486C. Red
5815RMKB: Remote Mounting Kit 10.2" H x 10.4" W x 3" D. Cabinet holds up to two SK-486C. Black

WIRING

Follow the table for wiring the SK-F485C to a compatible FACP.

SK-F485C TERMINALS	FACP SBUS OUT TERMINALS
+	+
–	–
A	A
B	B

AGENCY LISTINGS AND APPROVALS

- CSFM
- UL Listed

For more information

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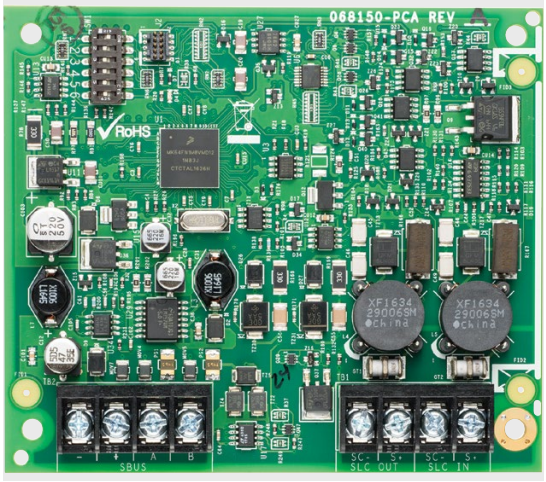
6815

Signaling Line Circuit Expander

The 6815 is a signaling line circuit (SLC) expander for use with the Farenhyt Series IFP-300/ECS or IFP-2100/ECS analog/addressable fire alarm control panel (FACP). Use the 6815 to add more SLC devices of the same protocol to the IFP-2100/ECS or IFP-300/ECS control panel.

Additional 6815;s support 159 IDP or SK devices, and 159 IDP or SK modules for a maximum of 2100 points per IFP-2100/ECS or 300 points per IFP-300/ECS. The number of 6815's used is limited by the number of SBUS devices. 6815 will support IDP, SK or SWIFT devices.

The 6815 communicates with the FACP via an RS 485 system bus. A green LED on the 6815 board blinks to indicate good communication. If an addressable device on a 6815 fails, the loop communicates the failure to the FACP and continues to operate normally



6815

Compatibility

The 6815 is compatible with the following Farenhyt Series FACP's:

- IFP-2100/ECS
- IFP-2100/ECSB
- RFP-2100
- RFP-2100B
- IFP-300/ECS
- FP-300/ECSB

FEATURES & BENEFITS

- Adds support for up to 159 IDP/SK sensors and 159 IDP/SK modules per IFP-300/ECS or IFP-2100/ECS panel
- Communicates with the FACP via RS 485 system bus
- LED indicates good communication
- House up to two 6815s in the IFP-2100/ECS , RFP-2100, IFP-300/ECS, RPS-1000 cabinets, or in the 5815RMK remote mounting kit
- SLC wiring used standard wire. Twisted pair or shield cable are not required
- UL 864 listed, complies with NFPA 72 and 101
- Support for IDP, SK or SWIFT devices

6815 Technical Specifications

PHYSICAL

Dimensions: 4.2"H x 4.8"" W (10.7 x 12.2 cm)
Shipping Weight: 5.6oz (159 g).

ELECTRICAL

Standby & Alarm Current: 78mA max

ENVIRONMENTAL

Operating Temperature: 32°F to 120°F (0°C to 49°C)
Humidity: 0 to 93% non-condensing

SYSTEM CAPACITY

IFP-2100/ECS FACP supports 63 6815s (but a maximum of 2100 SLC devices per system)
IFP-300/ECS FACP supports 63 5815XLs (but a maximum of 300 SLC devices per system)
6815 Capacity: 159 IDP or SK sensors and 159 IDP or SK modules per loop

ORDERING INFORMATION

6815: Signaling Line Circuit Expander.

ACCESSORIES

RPS-1000: Intelligent Power Module. Cabinet holds two 6815s.
5815RMK: Remote Mounting Kit Cabinet holds two 6815s. Red cabinet
5815RMKB: Remote Mounting Kit Cabinet holds two 6815s. Black cabinet.
SK-NIC-KIT: Remote Mounting Kit Cabinet. holds one 6815. 10-3.8" W x 10-3/16" H x 3" D

AGENCY LISTIINGS AND APPROVALS

NFPA 13, NFPA 15, NFPA 16, NFPA 70, & NFPA 72: Central Station; Remote Signalling; Local Protective Signalling Systems; Auxiliary Protected Premises Unit; & Water Deluge Releasing Service. Suitable for automatic, manual, waterflow, sprinkler supervisory (DACT non-coded) signalling services.
UL listed
CSFM listed
FDNY COA 6245
FM approved

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Farenhyt™ Series

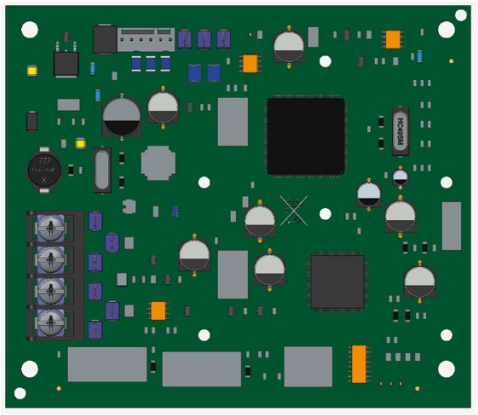
SK-NIC

Network Interface Card

The SK-NIC, Network Interface Card, is an optional component of the Honeywell Farenhyt Series fire alarm control panels. It allows the sub-assemblies to connect to the Broadband network from remote locations:

The SK-NIC card comes standard with network connections using unshielded, twisted-pair, copper wire. The following optional fiber-optic network connections using add-on modules are available.

- SK-FML multi-mode fiber module (optional)
- SK-FSL single-mode fiber module (optional)



SK-NIC

INSTALLATION

The SK-NIC is adaptable for an installation in the standard Honeywell Farenhyt Series cabinets. Typically, the SK-NIC card is mounted on standoffs under the motherboard. (Except with the IFP-75). For instructions on the installation of the SK-NIC, refer to the following documents:

- P/N: LS10172-001SK-E SK-NIC Installation Instruction
- P/N: LS10178-001SK-E Fiber Modules Installation Instruction

COMPATIBILITY

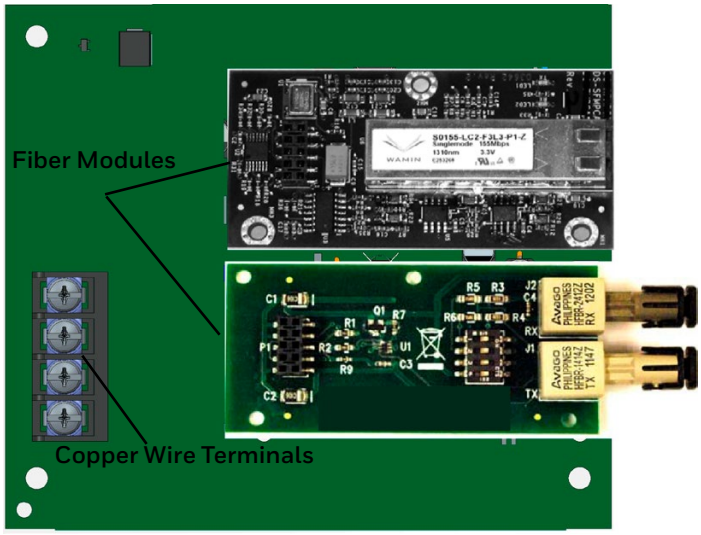
The SK-NIC is compatible with the following Farenhyt Series FACP's:

- IFP-2100/ECS or IFP-2100/ECSB
- IFP-300/ECS or IFP-300/ECSB
- IFP-75 or IFP-75B

FEATURES & BENEFITS

- Listed under UL® Standard 864, 9th Edition
- Provides the capability for networked FACPs to connect in Styles 4 or 7 configurations
- Offers standard unshielded, twisted-pair copper wire network connections.
- Provides add-on fiber-optic modules that allow the network connection through single or multi-mode fiber-optic cables
- SK-NIC can be mounted within the FACP cabinet. (Except with IFP-75)
- SK-NIC-KIT accessory kit is available if you want to install the SK-NIC outside of the FACP cabinet
-
- Has 625K baud ARCNET Repeater

SK-NIC Technical Specifications



SPECIFICATIONS

ENVIRONMENTAL

Operating Temperature: 32°F to 120°F (0°C to 49°C)

Humidity: 0 to 93% relative humidity (non-condensing)

ELECTRICAL:

Operating Voltage: 24VDC

Standby Current: 21mA

Alarm Current: 21mA

WIRING SPECIFICATIONS:

Copper Wire: 16 to 18 AWG twisted-pair, unshielded

Up to 3,000 ft. (914.4 m) between each node.

Fiber-Optic Cable: (SK-FML only) Up to 200 microns optimized for 62.5/125 microns. Up to 8 dB loss between nodes.

Fiber-Optic Cable: (SK-FSL only) Optimized for 9/125 micrometer cable @ 1310 nm. Up to 30dB loss between nodes.

ORDERING INFORMATION

SK-NIC: Network Interface Card

ACCESSORIES

SK-NIC-KIT: Accessory kit for installing the SK-NIC outside of the FACP cabinet. Includes one SK-NIC Network Card.

SK-FML: Fiber Module, multi-mode

SK-FSL: Fiber Module, single-mode

AGENCY LISTINGS AND APPROVALS

UL listed

CSFM approved

NFPA 72

FM approved

FDNY COA#: 6162

For a complete listing of all compliance approvals and certifications, please visit www.farenhyt.com.

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For Technical Support, Please call 800-446-6444.

For more information

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SK-FML / SK-FSL

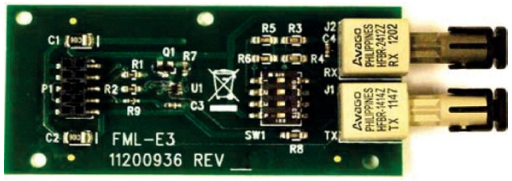
Fiber Optic Modules

The Honeywell SK-FML (Fiber-Optic Multi-Mode) and SK-FSL (Fiber-Optic Single-Mode) are plug-in fiber loop modules. These work as one channel to transmit or receive communications with the SK-NIC (Network Interface Card) ARCNET communication circuit.

The SK-FML module allows multimode fiber to connect network nodes. It features ST-style connectors with a maximum attenuation of 8db with 62.5/125 micrometer cable. The SK-FSL module allows single mode fiber to connect network nodes. It features LC-style connectors with a maximum attenuation of 30db with 9/125 micrometer cable.

Each fiber loop module can Transmit (TX) or Receive (RX) fiber-optic cable connecting to the SK-NIC. Up to two fiber loop cards can be added to the SK-NIC, and both cards may be combined in the same configuration. Both modules are listed per ANSI/UL Standard 864, 9th addition.

Use these two modules with the SK-NIC to create a common communications and annunciation link on a fiber-optic network of up to 17 panels. A designated panel is configured as the communicator for all panels in the link for convenient single-point communications. Note that panels can also be connected in this way using copper wire.



SK-FML (MULTI MODE FIBER)



SK-FSL (SINGLE MODE FIBER)

Compatibility

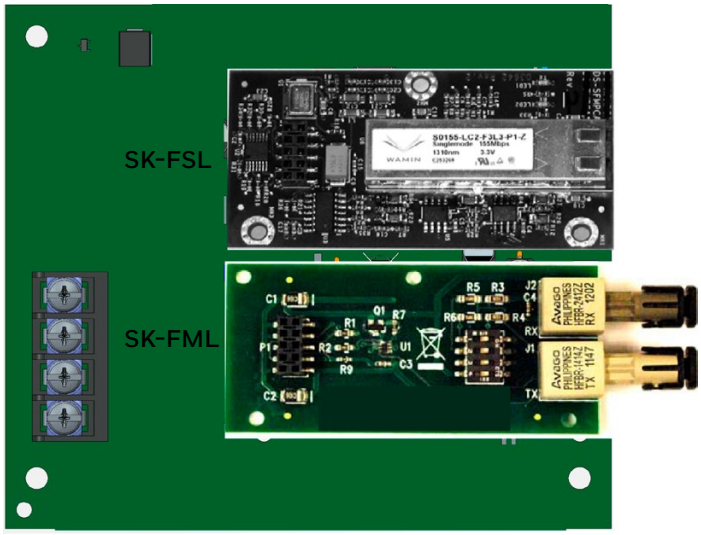
The SK-FSL and SK-FML are compatible with the following Honeywell Farenhyt Series FACPs:

- IFP-2100/ECS or IFP-2100/ECSB
- IFP-300/ECS or IFP-300/ECSB
- IFP-75 or IFP-75B

FEATURES & BENEFITS

- Listed per ANSI/UL® Standard 864 9th edition
- SK-FML features ST-style connectors with a maximum attenuation of 8 dB with 62.5/125 micrometer cable
- SK-FSL features LC-style connectors with a maximum attenuation of 30db with 9/125 micrometer cable
- Offers the option to combine single and multi-mode modules on the same network card
- Simple plug-in card installation

SK-FML AND SK-FSL Technical Specifications



INSTALLATION

The SK-FML and SK-FSL modules are designed to plug into their designated spots on the SK-NIC card.

ENVIRONMENTAL

Operating Temperature: 32°F to 120°F (0°C to 49°C)

Humidity: 0 to 93% relative humidity (non condensing)

	SK-FML	SK-FSL
Connection:	ST syle	LC style
Cable Type:	62.5/125 micrometers	9/125 micrometers
Standby Current:	0.053A	0.079A
Alarm Current:	0.053A	0.079A

ORDERING INFORMATION

SK-FML: Fiber Module, multi-mode

SK-FSL: Fiber Module, single-mode

ACCESSORIES

SK-NIC: Network Interface Card

SK-NIC-KIT: Accessory kit for installing the SK-NIC outside of the FACP cabinet (required for 6700 panel installation). Includes one SK-NIC Network Card.

AGENCY LISTINGS AND APPROVALS

UL listed

FM approved

CSFM approved

NFPA 72

FDNY COA: 6162

For a complete listing of all compliance approvals and certifications, please visit www.farenhyt.com.

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CELL-CAB-SK / CELL-MOD

Cellular Fire Alarm Communicator

The CELL-CAB-SK and CELL-MOD are cellular communication options for the next generation of Honeywell Farenhyt series addressable fire alarm control panels.

These cellular options meet UL 864 requirements for sole, primary or backup path communications. AlarmNet provides nationwide digital cellular network coverage for a UL listed connection between the CELL-CAB-SK / CELL-MOD and the central station.

The CELL-CAB-SK houses a GSM (cellular) communicator inside a metal cabinet with lock and key and includes external antenna that mounts on top of the unit. The CELL-MOD houses the GSM communicator inside a plastic enclosure that may or may not require an external antenna depending on the installation environment. Both models can be remotely mounted away from the fire alarm control panel via a 4-wire bus for optimum reception.

The CELL-CAB-SK / CELL-MOD can serve as the sole communications path for compatible Honeywell fire alarm control panels with programmable supervision time of 1-60 minutes.



CELL-CAB-SK



CELL-MOD

FEATURES & BENEFITS

- Cellular card comes in a plastic case or metal enclosure with lock and key
- 4-wire bus connection allows remote mounting for best reception
- UL 864 and NFPA 72 code compliant for sole, primary, or backup communications
- Optional external antennas
- Includes Quality of Service (QOS) diagnostics via AlarmNet which conveys vital communicator information, including when messages are received, signal strength, and message path used
- Programmable supervision time from 1 to 60 minutes
- Provides full data reporting using Contact ID format
- Accounts can be easily managed through on-line management tools

CELL-CAB-SK / CELL-MOD Technical Specifications

PECIFICATIONS

PHYSICAL

Overall Dimensions:
CELL-CAB-SK: 10.38"W x 10.165"H x 3.176"D
CELL-MOD: 7.809"W x 5.982"H x 1.5"D
Shipping Weight: 1.3lbs (CELL-MOD)
5.2lbs (CELL-CAB-SK)
Color: Red

ENVIRONMENTAL

Operating Temperature: 32°F to 120°F (0°C to 49°C)
Humidity: 10 to 93% relative humidity (non-condensing)

ELECTRICAL

Standby Current: 55mA
Alarm Current: 100mA

RADIO TRANSCEIVER

3G Cellular Radio
UMTS WCDMA FDD 850/1900MHz
FCC part 15, 22, 24, and 68 compliant

COMMUNICATION PROTOCOLS

HSPA+ (4G) and HSPA (HSDPA & HSUPA) (3G)

ORDERING INFORMATION

CELL-CAB-SK: Cellular module housed in metal cabinet with lock and key. Includes external antenna
CELL-MOD: Cellular module housed in plastic enclosure. (External antenna sold separately)
GSM-ANT3DB: 3dB gain external/remote antenna
7626-50HC: 50 ft. antenna cable, low loss

AGENCY LISITINGS AND APPROVALS

UL 864, NFPA 72
FCC ID: CFS8DLPHS8-US

COMPATIBILITY

The CELL-CAB-SK and CELL-MOD are compatible with the following Farenhyt Series FACPs:

- IFP-75 / IFP-75B
- IFP-300 / IFP-300B
- IFP-300ECS / IFP-300ECSB
- IFP-2100 / IFP-2100B
- IFP-2100ECS / IFP-2100ECSB

For a complete listing of all compliance approvals and certifications, please visit www.farenhyt.com.

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SK-NIC Network Interface Card Product Installation Document

PN LS10172-001SK-E:A 07/01/2017 ECN 16-0218

SK-NIC Network Interface Card

The SK-NIC Network Interface card is used when networking a group of FACPs.You must use the SK-NIC to link the panels together.

Installation and wiring of this device must be done in accordance with NFPA 72 and local ordinances.

Compatibility

The SK-NIC is compatible with the following Honeywell Silent Knight and Farenhyt Series FACPs:

- IFP-2100/ECS
- IFP-300/ECS
- IFP-75
- 6820/6820EVS
- 6808
- 6700

For programming and addressing, refer to Networking/Common Communication link section of the FACP Installation manual.

Note: *The SK-NIC provides a common communications link for 6700, 6808, and 6820 or 6820EVS. These panels cannot be linked together for peer-to-peer networking.*

Specifications

Standby Current: 21mA

Alarm Current: 21mA

Operating Voltage: 24VDC

Operating Temperature: 32°F to 120°F (0°C to 49°C)

Layout & Mounting

The SK-NIC can be mounted within the FACP cabinet (except with IFP-75 or 6700) or in the SK-NIC-KIT accessory cabinet. Accessory cabinets include the SK-NIC, small cabinet with door, cable, and mounting hardware.

The SK-NIC-KIT accessory kit is available to install the SK-NIC outside of the FACP cabinet.

See Installation sheet P/N LS10171-001SK-E.

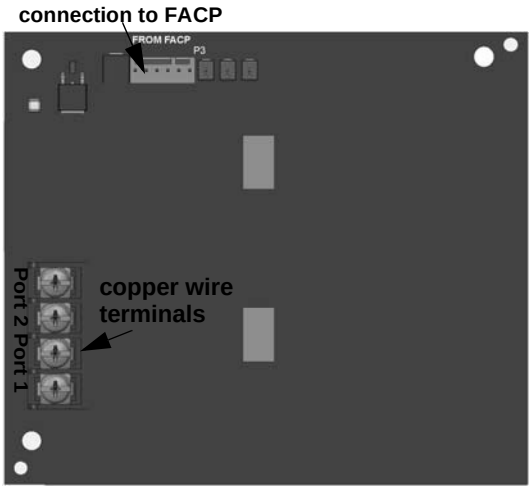


Figure 1: View of SK-NIC

SK-NIC Installation

Use the following steps to properly connect the SK-NIC to the FACP port using the supplied 6-pin cable P/N130372-L8.

1. Place the SK-NIC on one of the SLC expander standoff sets.
2. Using 6-pin cable, connect one end to the FACP pin connector on labeled “Data Network” and the other end to the SK-NIC card P3 connector. See Figure 2.

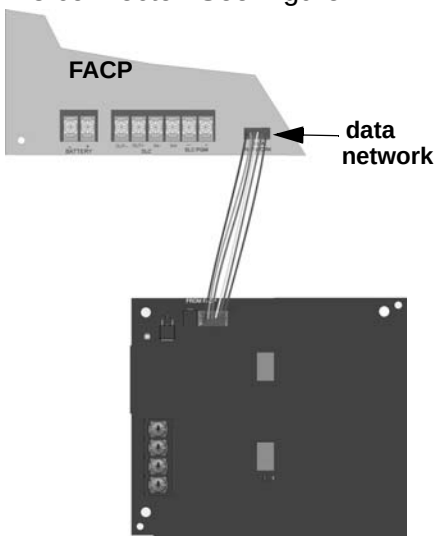


Figure 2: Panel to SK-NIC connection

To Mount the SK-NIC Remotely

Follow the steps above except, the 6-pin cable that runs from the SK-NIC to the FACP must be run in conduit.

Note: *For more information, see the FACP installation manual.*

Fiber Loop Modules

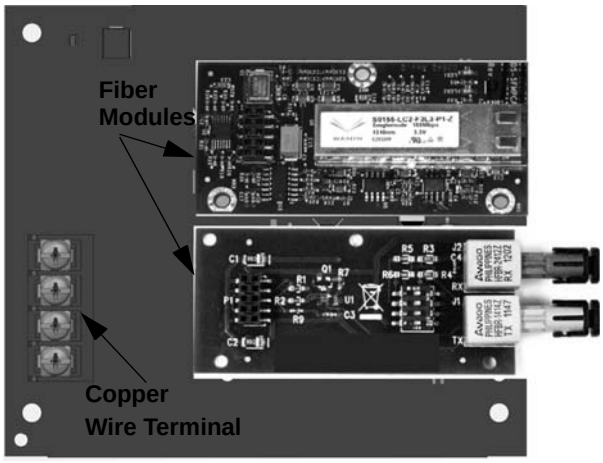


Figure 3: SK-NIC Fiber Loop Modules or Wire Terminals

The SK-NIC connects to other networked units using unshielded, twisted-pair wiring or fiber optic cable.

The SK-FML (Fiber-Optic Multi-Mode) and SK-FSL (Fiber-Optic Single-Mode) are plug-in fiber loop modules. The two types of fiber optic modules are used as one channel to transmit or receive communications with the SK-NIC, ARCNET communication circuit.

The following describe the two types of fiber optic modules:

1. The SK-FML is a fiber module that allows the multi-mode fiber to network between nodes.
2. The SK-FSL is a fiber module that allows the single-mode fiber to network between nodes.

Note: *For more information on SK-FML and SK-FSL, see installation sheet P/N LS10178-001SK-E.*

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6815 SLC Expander
Product Installation Document

PN LS10173-001SK-E:A 07/01/2017 ECN 16-0218

6815 SLC Expander

The 6815 SLC expander lets you add additional addressable devices to a compatible Fire Alarm Control Panels (FACP).

Installation and wiring of this device must be done in accordance with NFPA 72 and local ordinances.

Compatibility

The 6815 is for use with compatible Honeywell Silent Knight and Farenhyt Series Fire Alarm Control Panels FACP's:

Note: *For compatibility, programming and more information see FACP installation manual.*

Specifications

Standby Current: 78mA

Alarm Current: 78mA

Operating Voltage: 24VDC

Operating Temperature: 32°F to 120°F (0°C to 49°C)

Mounting

You can mount the 6815 in a compatible FACP cabinet, in the 5895XL or RPS-1000 intelligent power module cabinet, or in the SK-NIC-KIT remote mounting kit.

Warning!
The electronic components on the 6815 and the panel are sensitive to electrostatic discharge. Wear a grounding strap when handling any of the boards.

To mount the 6815:

1. Remove power from the panel.
2. If mounting the 6815 in an FACP or 5895XL, use the standoffs located under the panel assembly and secure with screws provided with the 6815.
   –OR–
   If mounting the 6815 in a 5815RMK or SK-NIC-KIT orientate the 6815 board(s) as shown in Figure 1 and snap into place on the plastic standoffs.

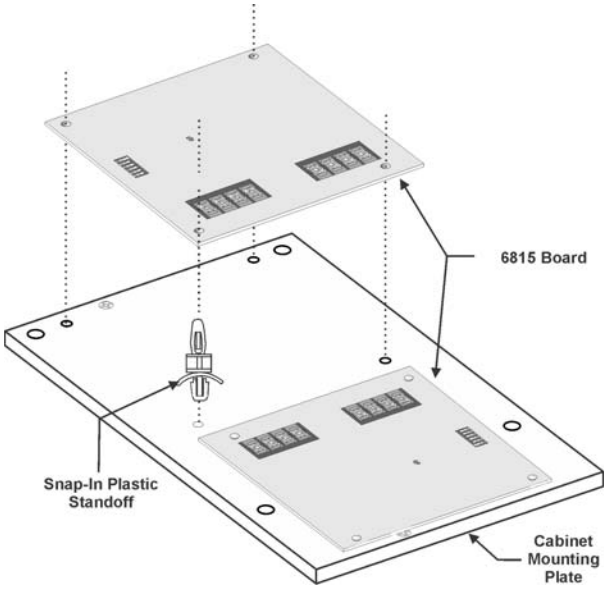


Figure 1: Standoff Installation and 6815 Board Mounting

Wiring

See Table 1 and Figure 2 to wire a 6815 to a compatible FACP or the 5895XL.

Table 1: 6815 to FACP Connections

6815 Terminals	FACP SBUS Out Terminals
+	+
–	–
A	A
B	B

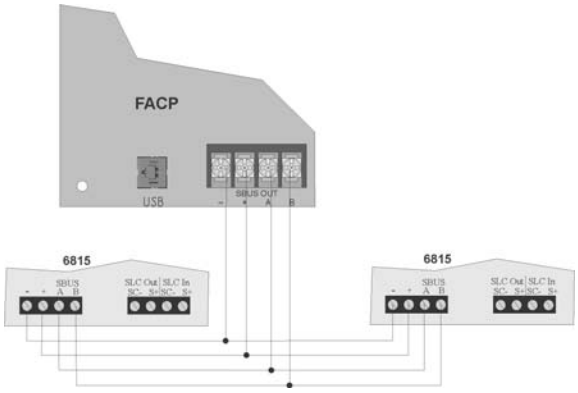


Figure 2. 6815 Connection to the Control Panel

Setting DIP Switches

Use the on-board DIP switches to select an ID number for the 6815. Refer to Figure 3 to see how to set the DIP switches for the desired ID number.

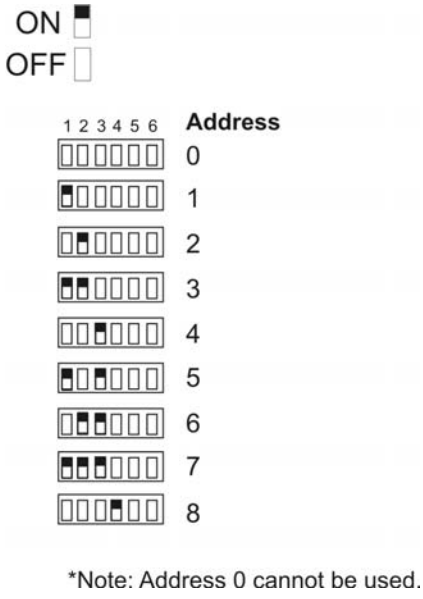


Figure 3. Set DIP Switches on the 6815

Once the ID number is set, you must add the 6815 to the system through programming using JumpStart or by adding it manually.

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RPS-1000 / RPS-1000B

6 Amp Intelligent Distributed Power Module

RPS-1000 is an intelligent distributed power module that adds 6.0 amps of power, six Flexput™ I/O circuits, and two Form C relay circuits to a compatible Honeywell Farenhyt Series addressable system. The RPS-1000 is available in a red (RPS-1000) or black (RPS-1000B) cabinet. The RPS- 1000 connects to the FACP via the RS-485 system bus allowing up to an additional 6,000 feet of wiring. Each RPS- 1000 is optically isolated providing ground loop isolation and transient protection. RPS-1000 supports its own backup battery and monitors the AC power.

The Flexput circuits can be programmed as notification appliance circuits, continuous, re-settable, or door holder power, or as conventional initiation circuits for 2 or 4-wire smoke detectors and contact devices (e.g. pull stations).Installation.



RPS-1000B

Compatibility

The RPS-1000 and RPS-1000B are compatible with the following Farenhyt Series FACP's:

- IFP-2100ECS / IFP-2100ECSB (63 max per panel)
- IFP-2100 / IFP-2100B / RFP-2100 / RFP-2100B (63 max per panel)
- IFP-2000 / RPS-2000 / IFP-2000ECS (63 max per panel)
- IFP-300 / IFP-300B / IFP-300ECS / IFP-300ECSB (16 max per panel)
- IFP-1000 / IFP-1000ECS (8 max per panel)
- IFP-100 / IFP-100ECS (8 max per panel)
- IFP-50 (8 max per panel)

FEATURES & BENEFITS

- 6.0 amps output power
- Supports Class A (Style 6) and Class B (Style 4) configuration of the SBUS
- Two Form C programmable relays rated at 2.5A @ 24 VDC
- Ground loop isolation and transient protection
- Provides SBUS optical isolation and re-conditions the RS- 485 signal
- Built-in synchronization for appliances from System Sensor®, AMSECO, Gentex®, and Wheelock®
- Up to 6,000 foot wiring distance from the RPS-1000
- Battery charging capacity is 35AH
- Large cabinet size can house two 18AH backup batteries or RBB accessory cabinet can house battery sizes larger that 18AH
- Room to mount two 6815 or 5815XL SLC expander modules
- Six onboard Flexput circuits programmable for:
- Notification appliance circuits (Class B/Style Y & Class A/Style Z)
- Conventional initiation circuits (Class B/Style B & Class A/Style D) both 2- and 4-wire
- Auxiliary power (for door holders, continuous power, or resettable power)

RPS-1000 / RPS-1000B Technical Specifications

PHYSICAL

Mounting Dimensions: 14.5"W x 24.75"H x 3.9"D (36.8 cm W x 62.9 cm H x 9.8 cm D)
Overall Dimensions: 16.1"W x 26.4"H x 4.1"D (40.6 cm W x 67 cm H x 11.8 cm D)
Color: Red or Black

ENVIRONMENTAL

Operating Temperature: 32°F-120°F (0°C -49°C)
Humidity: 10%-93% non-condensing

ELECTRICAL

Primary AC: 120 V, 50 or 60Hz, 2.5A, or 240V, 50 or 60Hz, 1.4A
Total Accessory Load: 6A @ 24VDC
Current
Standby: 40mA
Alarm: 160mA
SBUS Standby & Alarm: 10mA
Flexput Circuits:
Notification: 3amps per circuit (6A system total)
Initiation: 100mA power limited @ 24VDC

ORDERING INFORMATION

RPS-1000: Intelligent Distributed Power Module, Red
RPS-1000B: Intelligent Distributed Power Module, Black
RPS-1000HV: High voltage (240V) Intelligent Distributed Power Module

ACCESSORIES

RBB: Remote Battery Box Accessory Cabinet. 16" W x 10" H x 6" D (406 mm W x 254 mm H x 152 mm D)
AB-55: Remote Battery Box Accessory Cabinet. 20"W x 12" H x 7.5" D
6815: SLC Expander Module for IDP or SK devices
5815XL: SLC Expander Module for SD devices
SK-SCK: Seismic Compliance Kit

AGENCY LISTING AND APPROVALS

NFPA 13, NFPA 70, NFPA 72, UL 2572, UL 1711 & UL 864: Local Protective Signalling Systems;
UL Listed
CSFM
City of New York: 429-92-E Vol IX

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Operating Instructions

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Farenhyt™ Series

Installation and Operation Guide

IFP-2100/ECS
RFP-2100

Analog/Addressable Fire System
Emergency Communication System

Document: LS10143-001SK-E Rev: B
ECN: 17-0364

Fire Alarm & Emergency Communication System Limitations

While a life safety system may lower insurance rates, it is not a substitute for life and property insurance!

An automatic fire alarm system—typically made up of smoke detectors, heat detectors, manual pull stations, audible warning devices, and a fire alarm control panel (FACP) with remote notification capability—can provide early warning of a developing fire. Such a system, however, does not assure protection against property damage or loss of life resulting from a fire.

An emergency communication system—typically made up of an automatic fire alarm system (as described above) and a life safety communication system that may include an autonomous control unit (ACU), local operating console (LOC), voice communication, and other various inter-operable communication methods—can broadcast a mass notification message. Such a system, however, does not assure protection against property damage or loss of life resulting from a fire or life safety event.

The Manufacturer recommends that smoke and/or heat detectors be located throughout a protected premises following the recommendations of the current edition of the National Fire Protection Association Standard 72 (NFPA 72), manufacturer's recommendations, State and local codes, and the recommendations contained in the Guide for Proper Use of System Smoke Detectors, which is made available at no charge to all installing dealers. This document can be found at http://www.systemsensor.com/appguides/. A study by the Federal Emergency Management Agency (an agency of the United States government) indicated that smoke detectors may not go off in as many as 35% of all fires. While fire alarm systems are designed to provide early warning against fire, they do not guarantee warning or protection against fire. A fire alarm system may not provide timely or adequate warning, or simply may not function, for a variety of reasons:

Smoke detectors may not sense fire where smoke cannot reach the detectors such as in chimneys, in or behind walls, on roofs, or on the other side of closed doors. Smoke detectors also may not sense a fire on another level or floor of a building. A second-floor detector, for example, may not sense a first-floor or basement fire.

Particles of combustion or "smoke" from a developing fire may not reach the sensing chambers of smoke detectors because:

- Barriers such as closed or partially closed doors, walls, chimneys, even wet or humid areas may inhibit particle or smoke flow.
- Smoke particles may become "cold," stratify, and not reach the ceiling or upper walls where detectors are located.
- Smoke particles may be blown away from detectors by air outlets, such as air conditioning vents.
- Smoke particles may be drawn into air returns before reaching the detector.

The amount of "smoke" present may be insufficient to alarm smoke detectors. Smoke detectors are designed to alarm at various levels of smoke density. If such density levels are not created by a developing fire at the location of detectors, the detectors will not go into alarm.

Smoke detectors, even when working properly, have sensing limitations. Detectors that have photoelectronic sensing chambers tend to detect smoldering fires better than flaming fires, which have little visible smoke. Detectors that have ionizing-type sensing chambers tend to detect fast-flaming fires better than smoldering fires. Because fires develop in different ways and are often unpredictable in their growth, neither type of detector is necessarily best and a given type of detector may not provide adequate warning of a fire.

Smoke detectors cannot be expected to provide adequate warning of fires caused by arson, children playing with matches (especially in bedrooms), smoking in bed, and violent explosions (caused by escaping gas, improper storage of flammable materials, etc.).

Heat detectors do not sense particles of combustion and alarm only when heat on their sensors increases at a predetermined rate or reaches a predetermined level. Rate-of-rise heat detectors may be subject to reduced sensitivity over time. For this reason, the rate-of-rise feature of each detector should be tested at least once per year by a qualified fire protection specialist. Heat detectors are designed to protect property, not life.

IMPORTANT! Smoke detectors must be installed in the same room as the control panel and in rooms used by the system for the connection of alarm transmission wiring, communications, signaling, and/or power. If detectors are not so located, a developing fire may damage the alarm system, compromising its ability to report a fire.

Audible warning devices such as bells, horns, strobes, speakers and displays may not alert people if these devices are located on the other side of closed or partly open doors or are located on another floor of a building. Any warning device may fail to alert people with a disability or those who have recently consumed drugs, alcohol, or medication. Please note that:

- An emergency communication system may take priority over a fire alarm system in the event of a life safety emergency.
- Voice messaging systems must be designed to meet intelligibility requirements as defined by NFPA, local codes, and Authorities Having Jurisdiction (AHJ).
- Language and instructional requirements must be clearly disseminated on any local displays.
- Strobes can, under certain circumstances, cause seizures in people with conditions such as epilepsy.
- Studies have shown that certain people, even when they hear a fire alarm signal, do not respond to or comprehend the meaning of the signal. Audible devices, such as horns and bells, can have different tonal patterns and frequencies. It is the property owner's responsibility to conduct fire drills and other training exercises to make people aware of fire alarm signals and instruct them on the proper reaction to alarm signals.
- In rare instances, the sounding of a warning device can cause temporary or permanent hearing loss.

A life safety system will not operate without any electrical power. If AC power fails, the system will operate from standby batteries only for a specified time and only if the batteries have been properly maintained and replaced regularly.

Equipment used in the system may not be technically compatible with the control panel. It is essential to use only equipment listed for service with your control panel.

Telephone lines needed to transmit alarm signals from a premises to a central monitoring station may be out of service or temporarily disabled. For added protection against telephone line failure, backup radio transmission systems are recommended.

The most common cause of life safety system malfunction is inadequate maintenance. To keep the entire life safety system in excellent working order, ongoing maintenance is required per the manufacturer's recommendations, and UL and NFPA standards. At a minimum, the requirements of NFPA 72 shall be followed. Environments with large amounts of dust, dirt, or high air velocity require more frequent maintenance. A maintenance agreement should be arranged through the local manufacturer's representative. Maintenance should be scheduled monthly or as required by National and/or local fire codes and should be performed by authorized professional life safety system installers only. Adequate written records of all inspections

Installation Precautions

Adherence to the following will aid in problem-free installation with long-term reliability:

WARNING - Several different sources of power can be connected to the fire alarm control panel. Disconnect all sources of power before servicing. Control unit and associated equipment may be damaged by removing and/or inserting cards, modules, or interconnecting cables while the unit is energized. Do not attempt to install, service, or operate this unit until manuals are read and understood.

CAUTION - System Re-acceptance Test after Software Changes: To ensure proper system operation, this product must be tested in accordance with NFPA 72 after any programming operation or change in site-specific software. Re-acceptance testing is required after any change, addition or deletion of system components, or after any modification, repair or adjustment to system hardware or wiring. All components, circuits, system operations, or software functions known to be affected by a change must be 100% tested. In addition, to ensure that other operations are not inadvertently affected, at least 10% of initiating devices that are not directly affected by the change, up to a maximum of 50 devices, must also be tested and proper system operation verified.

This system meets NFPA requirements for operation at 0-49º C/32-120º F and at a relative humidity. However, the useful life of the system's standby batteries and the electronic components may be adversely affected by extreme temperature ranges and humidity. Therefore, it is recommended that this system and its peripherals be installed in an environment with a normal room temperature of 15-27º C/60-80º F.

Verify that wire sizes are adequate for all initiating and indicating device loops. Most devices cannot tolerate more than a 10% I.R. drop from the specified device voltage.

Like all solid state electronic devices, this system may operate erratically or can be damaged when subjected to lightning induced transients. Although no system is completely immune from lightning transients and interference, proper grounding will reduce susceptibility. Overhead or outside aerial wiring is not recommended, due to an increased susceptibility to nearby lightning strikes. Consult with the Technical Services Department if any problems are anticipated or encountered.

Disconnect AC power and batteries prior to removing or inserting circuit boards. Failure to do so can damage circuits.

Remove all electronic assemblies prior to any drilling, filing, reaming, or punching of the enclosure. When possible, make all cable entries from the sides or rear. Before making modifications, verify that they will not interfere with battery, transformer, or printed circuit board location.

Do not tighten screw terminals more than 9 in-lbs. Overtightening may damage threads, resulting in reduced terminal contact pressure and difficulty with screw terminal removal.

This system contains static-sensitive components. Always ground yourself with a proper wrist strap before handling any circuits so that static charges are removed from the body. Use static suppressive packaging to protect electronic assemblies removed from the unit.

Follow the instructions in the installation, operating, and programming manuals. These instructions must be followed to avoid damage to the control panel and associated equipment. FACP operation and reliability depend upon proper installation.

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Model IFP-2100 Basic Operating Instructions

Model IFP-2100ECS Basic Operating Instructions

Section 1
Introduction

The IFP-2100 (red) / IFP-2100B (black) and IFP-2100ECS (red) / IFP-2100ECSB (black) are analog addressable fire alarm control panels (FACP), that meets the requirements of UL 864. The IFP-2100ECS is an analog addressable fire control system combined with an Emergency Communication System that meet the requirements for Mass Notification as described in UL 864 and UL 2572.

The RFP-2100 (red) or RFP-2100B (black) are the same as the IFP-2100 without the display. The RFP-2100 is used in a networked system where there is at least one IFP-2100/ECS in the system. When using the RFP-2100 as a stand alone local unit, one LCD annunciator must be connected, and the annunciator must be wired in conduit within 20'of the RFP-2100.

Note: All references to IFP-2100 or IFP-2100ECS within this manual are applicable to the IFP-2100B and IFP-2100ECSB. All References to the IFP-2100HV are applicable to the IFP-2100HVB, RFP-2100HV, RFP-2100HVB, IFP-2100ECSHV and the IFP-2100ECSHVB.

Note: All references to RFP-2100 within this manual are applicable to RFP-2100B.

1.1 Overview of Basic System

The IFP-2100/ECS base system is packaged as an assembled stack of 3 circuit boards mounted to an aluminum housing.

1.1.1 Hardware Features

- The basic IFP-2100/ECS panel contains one built in signaling line circuit (SLC), which supports up to 159 IDP or SK sensors and 159 IDP or SK modules or 127 SD SLC devices. Additional SLC loops can be added to increase overall point capacity.
- Additional 6815 SLC expanders supports 159 IDP or SK sensors and 159 IDP or SK modules for a maximum of 2100 points per IFP-2100/ECS control panel.
- Additional 5815XL SLC expander supports only SD Protocol for a maximum of 2032 points per IFP-2100/ ECS control panel.
- 9.0A of output power is available through 8 sets of terminals for notification and auxiliary applications. Each circuit is power limited per UL 864 and can source up to 3.0A (total output power must not exceed 9.0A). The constant auxiliary power load must not exceed 6.0A for normal standby.
- Built-in dual phone line, digital alarm communicator/transmitter (DACT), IP or optional cellular technologies.
- Reports events to central station by point or by zone.
- UL Listed for pre-action and deluge releasing systems.
- Dedicated Form C trouble relay and two general purpose Form C programmable relays.
- Can be used with RA-2000s[1], RA-1000s[2] or RA-100s[2] in any combination.
- Supports the 5865-3, 5865-4, and 5880 LED annunciators[1]. See sections 4.11 and 4.12 for additional information on these models.
- Printing of event log available through the Model 5824[1] serial/parallel printer interface module.
- Supports conventional 2-wire & 4-wire detectors using the 8 Flexput™ circuits or SLC zone modules.
- 999 software zones, 999 output groups.
- Add four notification/auxiliary power circuits with each 5496 Intelligent Power Module.
- Add six Flexput™ circuits with each RPS-1000 Remote Power Supply.

1. The system can have a maximum of 63 SBUS devices in any combination.

2. RA-1000 and RA-100 can have a maximum of 31 devices used.

1.1.2 Network System Hardware Features

- The default network setup can contain up to 32- IFP-2100/ECS / RFP-2100 panels connected.
- Network support for up to 32 Sites.
- Each building is referred to as a "site".
- Panels can be interconnected using CLASS B or CLASS A topology.
- To network panels together use the SK-NIC network card. Copper wire or fiber optic cable panel connectivity can be used within the same networked system.
- The network architecture provides true peer to peer capability allowing network survivability for all hardware that remains operational in the event of partial system failure.

1.1.3 Software Features

- Advanced analog smoke detector features:
  - Three sensitivity settings (high, medium, low)
  - Automatic drift compensation
  - Maintenance alert region
  - Point status meets calibrated smoke test requirements for NFPA 72
  - Automatic day/night sensitivity adjustment
- "JumpStart AutoProgramming" feature for easy programming
- Non-volatile event history stores 1000 events per panel
- A choice of output patterns available for notification outputs, including ANSI 3.41 temporal signal
- Built-in synchronization appliance support for AMSECO, Gentex®, System Sensor®, and Wheelock®

1.1.4 IFP-2100ECS Features

- 15 Recordable one minute messages that can be mapped to eight ECS buttons.
- ECS messages can be selected as priority over fire.
- Support of up to 15 ECS-LOC's.
- Programmable trigger inputs from an external source, such as a Monaco system, to either the ECS-VCM, ECS-NVCM, ECS-RVM, 5880, any SLC input module or Flexput module.
- Support for up to 16 SBUS addressable amplifiers using a combination of ECS-50W, ECS-125W, ECS-INT50W or ECS-DUAL50W for a maximum of 2000 watts per system and up to 128 mappable speaker circuits.
- Support for dual channel and backup audio using the ECS-DUAL50W amplifier and ECS-50WBU back-up amplifier.
- Single enclosure for both Fire and Emergency Control System components.
- Support for one ECS-VCM or ECS-NVCM.

1.1.5 Terms Used in this Manual

The following terminology is used with the above mentioned control panels:

Term	Description
SLC	Signaling line circuit
Module	The term module is used for all hardware devices except for SLC addressable devices and notification appliances. This includes the IFP-2100/ECS/RFP-2100 panels itself and the built-in power supply. It also refers to any (optional) 5815XL or 6815 SLC expansion modules.
Input Point	An addressable sensing device, such as a smoke, heat detector or a contact monitor device
Input Zone	A protected area made up of input points
Output Point (or “Output Circuit”)	A notification point or circuit for notification appliances. Relay circuits and auxiliary power circuits are also considered output points
Group (or “Output Group” or OPG)	A group of output points. Operating characteristics are common to all output points in a group
Mapping	Mapping is the process of specifying which outputs are activated when certain events occur in the system. Section 8.2 explains mapping in detail
Networking	Up to 32 panels can be networked.
Network System	Consist of any combination of 32 panels of these model numbers: IFP-75, IFP-300, IFP-300ECS, IFP-2100, IFP-2100ECS, RFP-2100, IFP-2000, or IFP-2000ECS
ECS	Emergency Communication System
SWIFT	Smart Wireless Integrated Fire Technology

1.2 Compatible Products

Table 1-1 lists the products available for use with the IFP-2100/ECS.

Table 1-1: IFP-2100/ECS Compatible Products

Type of Device	Model	Description
IDP Addressable SLC Devices	See Section 7.1 for a list of compatible devices	
SK Addressable SLC Devices	See Section 7.2 for a list of compatible devices	
SD Addressable SLC Devices	See Section 7.3 for a list of compatible devices	
SWIFT Wireless SLC Devices	See Section 7.4 for a list of compatible devices	
Other Modules	5824 Serial/Parallel Printer Interface Module	Allows a printer to be attached for the system for on-site logging. Four maximum per system.
	5815XL (Rev H or above) SLC Expander	Each 5815XL allows up to 127 SD devices to be added to the system. The number of 5815XLs that can be added to the system is limited only by the maximum number of SBUS devices. However the maximum SD point count is limited to 2032 per panel. 5815XL will only support SD protocol devices

Table 1-1: IFP-2100/ECS Compatible Products

Type of Device	Model	Description	
Other Modules (con't)	6815 SLC EXPANDER	Each 6815 supports up to 159 IDP or SK sensors and 159 IDP or SK modules. The maximum point count for IDP or SK devices is limited to 2100 per panel. 6815 supports System Sensor devices (IDP or SK)	
	RFP-2100 Remote Fire Panel w/no display	Same operation as IFP-2100/ECS without display	
	5824 Serial/Parallel Printer Interface Module	Allows a printer to be attached for the on-site event logging. Maximum of four 5824s per control panel.	
	RPS-1000 (Rev F or higher) Intelligent Power Module	Provides additional power, six Flexput™ circuits, and two Form C relays. See *Model* RPS-1000 *Installation Instructions P/N 151153.*	
	5496 (Rev F or above) NAC Expander	Provides four additional Notification Appliance Circuits/Auxiliary power	
	RA-2000 LCD Alarm Annunciator	4x40 LCD annunciator.Same operation, similar appearance as on-board annunciator. Any combination of supported annunciators for a max of 63.	
	RA-1000 LCD Alarm Annunciator	4x20 LCD annunciator. Any combination of supported annunciators for a max of 31.	
	RA-100 LCD Alarm Annunciator	4x20 LCD annunciator. Any combination of supported annunciators for a max of 31.	
	5865-3 and 5865-4 LED Annunciator	LED annunciator can display up to 30 LEDs (15 red and 15 yellow). 5865-4 has key switches for silence and reset, and a system trouble LED.	
	5880 (Rev C or above) LED I/O Module	Driver for up to 40 LEDs. Interfaces with customized annunciator boards. In addition, the 5880 has eight generic switch input points.	
	5883 General Purpose Relay Module	Provides 10 Form C relays. Designed to be driven by the 5880. Up to four, 5883s can be used with each 5880 module.	
	ECS-VCM	Voice Control Module	Refer to the ECS-Series installation manual PN 151455 for more info on these accessories.
	ECS-NVCM	Network Voice Control Module	
	ECS-SW24	24 Switch expander	
	ECS-50W	50 watt audio amplifier	
	ECS-125W	125 watt audio amplifier	
	ECS-INT50W	50 watt internal amplifier	
	ECS-DUAL50W	Dual Channel amplifier	
	ECS-50WBU	Backup daughter card	
	ECS-CE4	Provides 4 additional audio circuits for the ECS-50W or the ECS-125W	
	ECS-RVM	Remote Voice Microphone	
	SK-NIC	Network Interface Card	
	ECS-LOC2100	Local Operating Console	Refer to LS10188-0001SK-E

Table 1-1: IFP-2100/ECS Compatible Products

Type of Device	Model	Description	
Wireless	WIDP-WGI	Wireless Gateway	Refer to the *SWIFT wireless Installation Manual* P/N LS10036-FH-E for more information on these accessories.
	WIDP-PHOTO	Wireless Photoelectric Smoke Detector w/ 4" base	
	WIDP-ACCLIMATE	Wireless Multi criteria photoelectric smoke detector with thermal (135°F) w/ 4" base	
	WIDP-HEAT-ROR	Wireless Heat Rate of Rise Detector 135° fixed w/4" base	
	WIDP-HEAT	Wireless Heat, 135° fixed Heat Detector w/4" base	
	WIDP-MONITOR	Wireless Addressable Monitor module	
	WIDP-RELAY	Wireless Addressable Relay module	
	B210W	6" wireless base	
	WSK-WGI	Wireless Gateway	Refer to the *SWIFT wireless Installation Manual* P/N LS10036-SK-E for more information on these accessories.
	WSK-PHOTO	Wireless photo with 4" base	
	WSK-PHOTO-T	Wireless Multi criteria photoelectric smoke detector with thermal (135°F) with 4" base	
	WSK-HEAT-ROR	Wireless heat, ROR/ 135° fixed with 4" base	
	WSK-HEAT	Wireless Heat, 135° fixed with 4" base	
	WSK-MONITOR	Wireless monitor module	
	WSK-RELAY	Wireless relay module	
	B210W	6" wireless base	
Misc.	7860 Telephone Cord	RJ31X cord for connecting phone line to the IFP-2100/ECS	
	HFSS Honeywell Fire Software Suite	For communication and panel programming with a Windows-based computer. Enables remote viewing of detector status and event history.	
	RBB	Remote Battery Box for mounting backup batteries up to 35AH that are too large to fit into the main control panel cabinet. Dimensions: 16" W x 10" H x 6" D (40.64 cm W x 25.4 cm H x 15.24 cm D)	
	AB-55	Remote Battery Box for mounting backup batteries up to 55AH that are too large to fit into the main control panel cabinet. Dimensions: 20" W x 12" H x 7.5" D (50.8 cm W x 30.48 cm H x 19.05 cm D)	
	CELL-MOD	Cellular board with Plastic Enclosure	Refer to the CELL-CAB-SK/CELL-MOD *Installation Manual* P/N LS10182-001SK-E for more information.
	CELL-CAB-SK	Cellular board with Metal Enclosure. Lock & key	

Section 2
Agency Listings, Approvals, and Requirements

2.1 Federal Communications Commission (FCC)

1. The following information must be provided to the telephone company before the IFP-2100/ECS can be connected to the phone lines:

A	Manufacturer:	Honeywell Silent Knight	
B	Model Number:	IFP-2100; IFP-2100ECS	
C	FCC registration number:	US: HS9AL10A2100	
	Ringer equivalence:	1.0A	
D	Type of jack:	RJ31X	
E	Facility Interface Codes:	Loop Start:	02LS2
F	Service Order Code:	9.0F	

This equipment complies with Part 68 of the FCC rules and the requirements adopted by ACTA. On the inside cover of this equipment is a label that contains, among other information, a product identifier. If requested, this information must be provided to the telephone company.

A plug and jack used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC Part 68 rules and requirements adopted by the ACTA. A compliant telephone cord (not provided) and modular jack must be utilized with this product. It is designed to be used with a modular jack that is also compliant.

The REN (ringer equivalence number) provided on this installation sheet is used to determine the number of devices that may be connected to the public switched telephone network. This number must not exceed 5.0. Since this product has an REN of 1.0A, the number of devices is limited. The REN number is embedded in the FCC registration number as 10A.

If the IFP-2100/IFP-2100HV/ IFP-2100ECS or IFP-2100ECSHV causes harm to the telephone network, the telephone company will notify you in advance that the temporarily discontinuance of service may be required. But if advance notice is not practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations or procedures that could affect the operation of the equipment. If this happens the telephone company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service.

If trouble is experienced with the IFP-2100/IFP-2100HV/ IFP-2100ECS or IFP-2100ECSHV, for repair or warranty information, please contact Honeywell Farenhyt Series at 1-800-328-0103 or www.farenhyt.com. If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the IFP-2100/IFP-2100HV/ IFP-2100ECS or IFP-2100ECSHV until the problem has been resolved.

This product cannot be adjusted or repaired in the field. It must be returned to the factory for service.

This equipment is not designed for use with party line service. Connection to party line service is subject to state tariffs. You may contact the state public utility commission, public service commission or corporation commission for information.

Since the IFP-2100/IFP-2100HV/ IFP-2100ECS or IFP-2100ECSHV are commercial fire alarm panels, it must be connected upstream of all other equipment utilizing the phone lines. If you have questions about the

installation, contact your telephone company or a qualified installer.

Warning
This device has been verified to comply with FCC Rules Part 15. Operation is subject to the following conditions: (1) This device may not cause radio interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

Caution - To ensure proper operation, this equipment must be installed according to the enclosed installation instructions. To verify that the equipment is operating properly and can successfully report an alarm, this equipment must be tested immediately after installation, and periodically thereafter, according to the enclosed test instructions.

Caution - In order for "alarm dialing equipment" to be able to seize the phone line to report an alarm or other event when other customer equipment (telephone, answering system, computer modem, etc.) connected to the same line is in use, "alarm dialing equipment" must be connected to a properly installed RJ31X jack. The RJ31X jack must be connected in series with, and ahead of, all other equipment attached to the same phone line. Series installation of an RJ31X jack is depicted in the figure below. If you have any questions concerning these instructions, you should consult your telephone company or a qualified installer about installing the necessary jack and alarm dialing equipment for you.

2.2 Underwriters Laboratories (UL)

2.2.1 Requirements for All Installations

General requirements are described in this section. When installing an individual device, refer to the specific section of the manual for additional requirements. The following subsections list specific requirements for each type of installation (for example, Central Station Fire Alarm systems, Local Protected Fire Alarm systems, and so on). See Section 10.7 for information on releasing operation.

1. All field wiring must be installed in accordance with NFPA 70 National Electric Code.
2. Use the addressable smoke detectors specified in Section 7.1 (IDP devices), Section 7.2 (SK devices) or Section 7.3 (SD devices), Section 7.4 (SWIFT devices) of this manual and/or conventional detectors listed in the compatibility chart in Appendix A.
3. Use UL listed notification appliances compatible with the IFP-2100/ECS from those specified in Appendix A of this manual.
4. A full system checkout must be performed any time the panel is programmed.

Restricted Options:

- The loss of AC signal is defaulted to 3 hours, but the system still allows settings from 0 - 30 hours. For UL certified installations, this number must be set from 1 to 3 hours.
- The system allows the use of non-latching, spot type smoke detectors. This feature may not be used in commercial applications whereby a general alarm is sounded. It is intended for elevator recall, door holding applications, and hotel/motel room applications.
- The system allows the Alarm Verification confirmation time to be set from 60 to 250 seconds. For UL certified installations the setting must be a minimum of 60 seconds.
- The systems allows the Auto-resound time to be set to 24 or 4 hours. For UL certified installations that are utilizing SWIFT devices, the value must be set to 4 hours.
- Call forwarding shall not be used.
- When two count is used: detector spacing shall be cut in half, you shall not use the alarm verification feature, and no delay shall be used.

- P.A.S. (positive alarm sequence) feature shall be used only with automatic detectors.

2.2.2 Requirements for Central Station Fire Alarm Systems

1. Use both phone lines. Enable phone line monitors for both lines.
2. You must program a phone number and a test time so that the IFP-2100/ECS shall automatically initiate and complete a test signal transmission sequence to its associated receiver at least once every 6 hrs.
3. The AC Loss Hours option must be set from 1-3 hours.
4. If using wired Ethernet or cellular, you must program the corresponding account/subscriber ID and a test time so that the FACP shall automatically initiate a test signal transmission sequence to its associated receiver at least once every 6hrs.

2.2.3 Requirements for Local Protected Fire Alarm Systems

At least one UL listed supervised notification appliance must be used.

2.2.4 Requirements for Remote Station Protected Fire Alarm Systems

Minimum system requirements are one Honeywell Silent Knight addressable initiating device and wither a 5220, Keltron 3158 or the built-in Digital Alarm Communicator Transmitter (DACT).

1. Do not exceed the current draw load restrictions shown in Section 3.7.
2. The AC Loss Hours option must be set from 1-3 hours.

2.2.5 Requirements for the Installation of Carbon Monoxide (CO) Detection and Warning Equipment, NFPA 720

When using carbon monoxide detection the system must be monitored by a Supervising Station.

2.2.6 NFPA Requirements

The following is the minimum configuration to meet the NFPA requirements.

Table 2-1 NFPA Requirements for IFP-2100 or RFP-2100

Model/ Module	Description	Local	Releasing	Auxiliary	Remote Station	Central Station
021000	Motherboard	Y	Y	Y	Y	Y
RFP-2100	Remote unit	O (1)	O (1)	O (1)	O (1)	O (1)
Cell-Mod	Transmitter	O	O	O	O	O
5220	Rev Pol Mod	O	O	Y	Y	O
5815XL	SLC Exp	O	O	O	O	O
5824	Serial card	O	O	O	O	O
7644	Rev pol mod	O	O	N	Y	O
6815	SLC Exp	O	O	O	O	O
SK-NIC	Network card	O	O	O	O	O
SK-FML	Fiber module	O	O	O	O	O

Table 2-1 NFPA Requirements for IFP-2100 or RFP-2100

Model/ Module	Description	Local	Releasing	Auxiliary	Remote Station	Central Station
SK-FSL	Fiber module	O	O	O	O	O
IFP-2100CB	Enclosure	Y	Y	Y	Y	Y
IFP-2100CBC	Enclosure	Y	Y	Y	Y	Y
RFP-2100CB	Enclosure	Y	Y	Y	Y	Y
RFP-2100BCB	Enclosure	Y	Y	Y	Y	Y
6861BIA/ 6861GIA (5)	annunciator	Y	Y	Y	Y	Y
Y = YES, N = NO, O = OPTIONAL						

Table 2-2: NFPA Requirements for IFP-2100ECS

Model/Module	Description	Local	Releasing	Auxiliary	Remote Station	Central Station	Mass Notification (In-Building)	Emergency	EVAC
021000	Motherboard	Y	Y	Y	Y	Y	Y	Y	Y
6861BIA/ 6861GIA	Annunciator boards	Y	Y	Y	Y	Y	Y	Y	Y
ECS-EMG	LED / switch card	Y	Y	Y	Y	Y	Y	Y	Y
5220	Direct Conn Module	O	O	Y	Y	O	N	O	N
5496	Indicating Circuit Expander	O	O	O	O	O	O	O	O
5815XL	SLC Expander	O	O	O	O	O	O	O	O
5824	Serial/Parallel Interface	O	O	O	O	O	O	O	O
5865-3, -4	Remote Annunciator	O	O	O	O	O	O	O	O
5880	Remote Annunciator	O	O	O	O	O	O	O	O
5883	Relay Module	O	O	O	O	O	N	O	N
5895XL	Power Module	O	O	O	O	O	O	O	O
7644	EOL device	O	O	N	Y	O	O	O	O
6815	SLC expander	O	O	O	O	O	O	O	O
SK-NIC	Network card	O	O	O	O	O	O	O	O
ECS-NVCM	Network Voice Control Mod	O	O	O	O	O	O	O	O
SK-FML, -FSL	Network Fiber Mod	O	O	O	O	O	O	O	O
IDP-RELAY	Control Mod	O	O	Y	O	O	N	O	N
RPS-1000	Power Expander	O	O	O	O	O	O	O	O

Table 2-2: NFPA Requirements for IFP-2100ECS

Model/Module	Description	Local	Releasing	Auxiliary	Remote Station	Central Station	Mass Notification (In-Building)	Emergency	EVAC
RBB	Accessory cabinet	O	O	O	O	O	O	O	O
IFP-2100ECSCB / IFP-2100ECSBCB	Enclosure	Y	Y	Y	Y	Y	Y	Y	Y
ECS-DUAL50W	Amplifier	N	N	N	N	N	Y[1]	O	Y[1]
ECS-50W	Amplifier	N	N	N	N	N	Y[1]	O	Y[1]
ECS-125W	Amplifier	N	N	N	N	N	Y[1]	O	Y[1]
ECS-SW24	Switch Annunciator	N	N	N	N	N	Y	O	Y
ECS-VCM	Voice Control Module	N	N	N	N	N	Y	O	Y
ECS-RVM	Remote Voice Module	N	N	N	N	N	Y	O	Y
ECS-INT50W	Amplifier	N	N	N	N	N	Y	O	Y

Y = YES, N = NO, O = OPTIONAL

1. At least one of the following amplifiers is required for MNS operation as well as EVAC: ECS-Dual50W, ECS-50, ECS-125 or ECS-INT50W.

Section 3
Before You Begin Installation

This section of the manual is intended to help you plan your tasks to facilitate a smooth installation. Please read this section thoroughly, especially if you are installing a IFP-2100, IFP-2100ECS or RFP-2100 panel for the first time.

3.1 Inventory

When the IFP-2100/ECS shipment is received, check that all the parts have been included in the shipment. The shipment consist of one of each of the following:

- main circuit board with display
- backbox with door.
- plastic bag containing two keys, screws, cables, and ten 4.7K ohm end-of-line resistors
- manual

3.2 Environmental Specifications

It is important to protect the IFP-2100/ECS control panel from water. To prevent water damage, the following precautions should be FOLLOWED when installing the units:

- Intended for indoor use in dry locations only
- Do not mount directly on exterior walls, especially masonry walls (condensation)
- Do not mount directly on exterior walls below grade (condensation)
- Protect from plumbing leaks
- Protect from splash caused by sprinkler system inspection ports
- Do not mount in areas with humidity-generating equipment (such as dryers, production machinery)

When selecting a location to mount the IFP-2100/ECS control panel, the unit should be mounted where it will NOT be exposed to: temperatures outside the range of 0°C- 49°C (32°F-120°F) or humidity exceeding 93% noncondensing.

3.3 Software Downloads

In order to supply the latest features and functionality in fire alarm and life safety technology to our customers, we make frequent upgrades to the embedded software in our products. To ensure that you are installing and programming the latest features, we strongly recommend that you download the most current version of software for each product prior to commissioning any system. Contact Technical Support with any questions about software and the appropriate version for a specific application. Software updates can be found at www.farenhyt.com

3.4 Electrical Specifications

Table 3-1 list the terminal block on the IFP-2100/ECS as well as a description of each individual terminal and their respective electrical rating.

Table 3-1 Terminal Descriptions and Electrical Specifications

Terminal Label		Description	Rating		Earth Ground Faults
			Voltage	Current	
B		AC input (hot)	120/240 VAC 50/60 Hz	4.5A for the IFP-2100 2.8A for the IFP-2100HV	N/A
G		Earth ground	N/A	N/A	N/A
W		AC input (neutral)	120/240 VAC 50/60 Hz	4.5A for the IFP-2100 2.8A for the IFP-2100HV	N/A
X	*I/O 1	Flexput™ Circuits	24 VDC	3.0 A notification and auxiliary power circuits	0Ω
O				100 mA for initiation circuits	
X	*I/O 2	Flexput™ Circuits	24 VDC	3.0 A notification and auxiliary power circuits	0Ω
O				100 mA for initiation circuits	
X	*I/O 3	Flexput™ Circuits	24 VDC	3.0 A notification and auxiliary power circuits	0Ω
O				100 mA for initiation circuits	
X	*I/O 4	Flexput™ Circuits	24 VDC	3.0 A notification and auxiliary power circuits	0Ω
O				100 mA for initiation circuits	
X	*I/O 5	Flexput™ Circuits	24 VDC	3.0 A notification and auxiliary power circuits	0Ω
O				100 mA for initiation circuits	
X	*I/O 6	Flexput™ Circuits	24 VDC	3.0 A notification and auxiliary power circuits	0Ω
O				100 mA for initiation circuits	
X	*I/O 7	Flexput™ Circuits	24 VDC	3.0 A notification and auxiliary power circuits	0Ω
O				100 mA for initiation circuits	
X	*I/O 8	Flexput™ Circuits	24 VDC	3.0 A notification and auxiliary power circuits	0Ω
O				100 mA for initiation circuits	
B	SBUS1 OUT	SBUS communication	5 VDC	100 mA	0Ω
A					
+		SBUS power	24 VDC	1.0 A	
-					
B	SBUS1 IN	Used for Class A installations			0Ω
A					
+					
-					

* *Regulated for NAC circuits, special application when used for releasing or auxiliary power circuits.*

Table 3-1 Terminal Descriptions and Electrical Specifications

Terminal Label		Description	Rating		Earth Ground Faults
			Voltage	Current	
B	SBUS2 OUT	SBUS communication	5 VDC	100 mA	0Ω
A					
+		SBUS power	24 VDC	1.0 A	
-					
B	SBUS2 IN	Used for Class A installations			0Ω
A					
+					
-					
N.C.	RELAY 1	General Purpose Relay 1	24 VDC	2.5 A, resistive	N/A
C					
N.O.					
N.C.	RELAY 2	General Purpose Relay 2	24 VDC	2.5 A, resistive	N/A
C					
N.O.					
N.C.	TROUBLE	Trouble Relay	24 VDC	2.5 A, resistive	N/A
C					
N.O.					
S-	SLC OUT	SLC terminals	32 VDC	150 mA	0Ω
S+					
SC-	SLC IN	Used for Class A installations			0Ω
SC+					
Ring		Phone Line 1 Telco Ring	N/A		0Ω
Tip		Phone Line 1 Telco Tip			
Ring		Phone Line 1 Premises Ring			
Tip		Phone Line 1 Premises Tip			
Ring		Phone Line 2 Telco Ring	N/A		0Ω
Tip		Phone Line 2 Telco Tip			
Ring		Phone Line 2 Premises Ring			
Tip		Phone Line 2 Premises Tip			
+	Battery	Battery Connection	24 VDC	1.12 A	N/A
–					
P3	EXT. Comm Cellular Connection	B	input		0Ω
		A			
		S+		55 mA, 95 mA	
		S-			
P7	Data Network	Used for SK-NIC	24 VDC	21 mA	0Ω
P8	Voice Network	Used For ECS-NVCM	24 VDC	59 mA	0Ω

3.5 Wiring Specifications

Induced noise (transfer of electrical energy from one wire to another) can interfere with telephone communication or cause false alarms. To avoid induced noise, follow these guidelines:

- Isolate input wiring from high current output and power wiring. Do not pull one multi-conductor cable for the entire panel. Instead, separate the wiring as follows:

High voltage	AC power terminal
SLC loops	SLC In/Out Terminals
POTS reporting input/output	Phone line circuits, Ring Tip Telco, Phone Terminals
Notification circuits	I/01-I/08 Terminals
SBUS	SBUS1 In/Out Terminals, SBUS 2 In/Out Terminals, Cellular communication
Relay circuits	Trouble, Relay 1, Relay 2 Terminals

- Do not pull wires from different groups through the same conduit. If you must run them together, do so for as short a distance as possible or use shielded cable. Connect the shield to earth ground at the panel. You must route high and low voltages separately.
- Route the wiring around the inside perimeter of the cabinet. It should not cross the circuit board where it could induce noise into the sensitive microelectronics or pick up unwanted RF noise from the high speed circuits. See Figure 3-2 for an example.
- High frequency noise, such as that produced by the inductive reactance of a speaker or bell, can also be reduced by running the wire through ferrite shield beads or by wrapping it around a ferrite toroid.

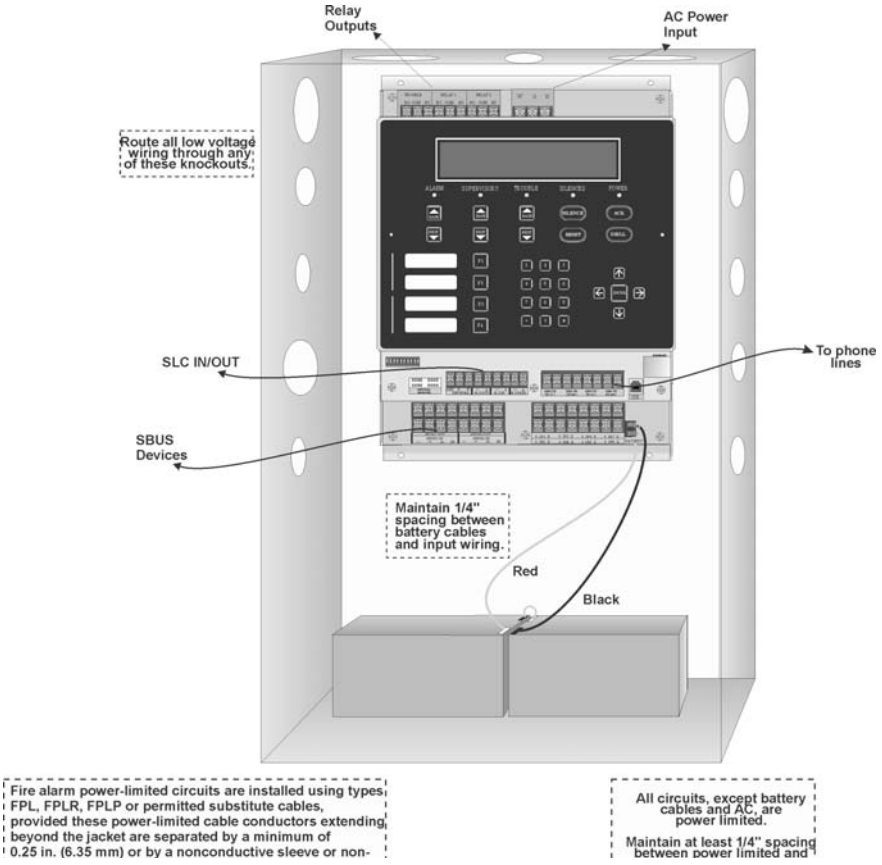


Figure 3-1 Wire Routing Example for 6820

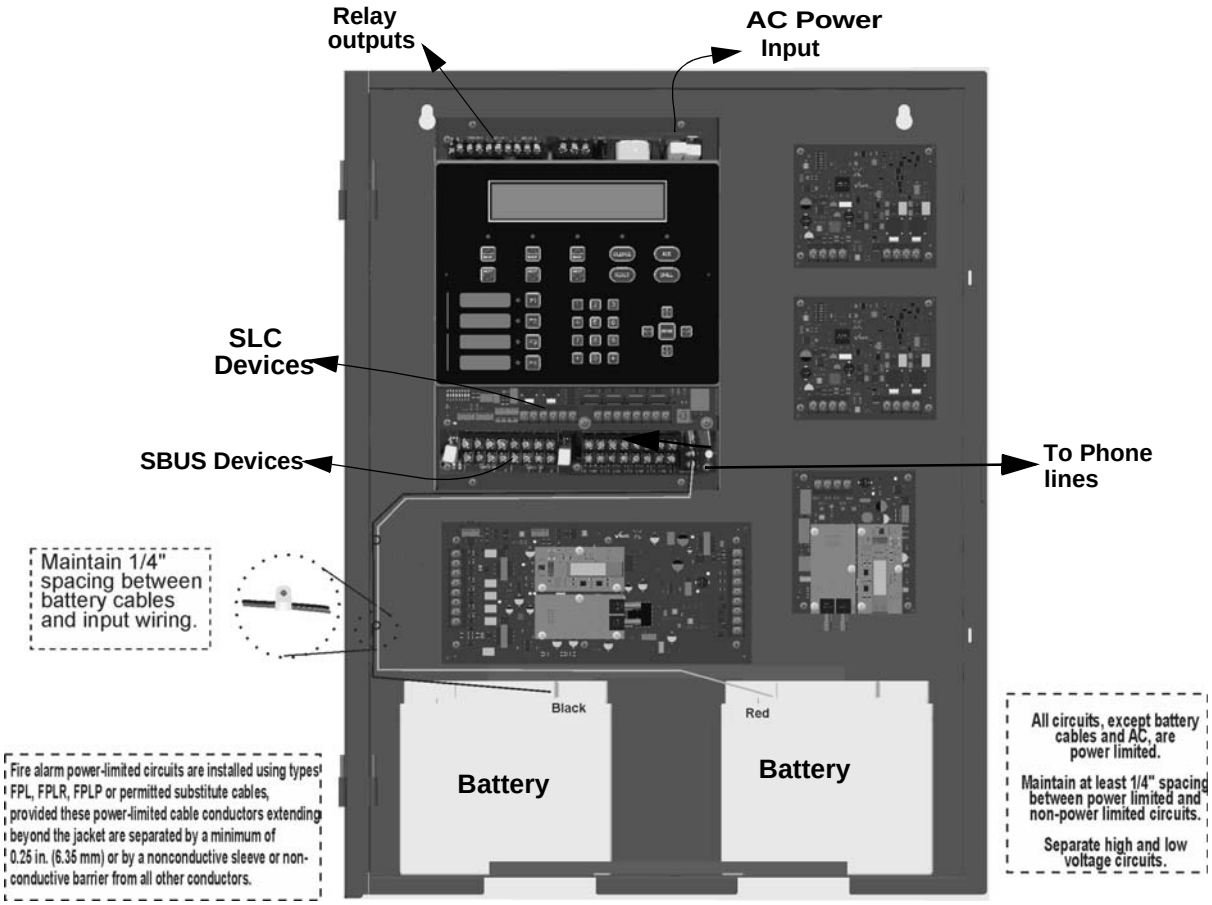


Figure 3-2 Wire Routing Example for IFP-2100ECS

3.6 Board Assembly Diagram

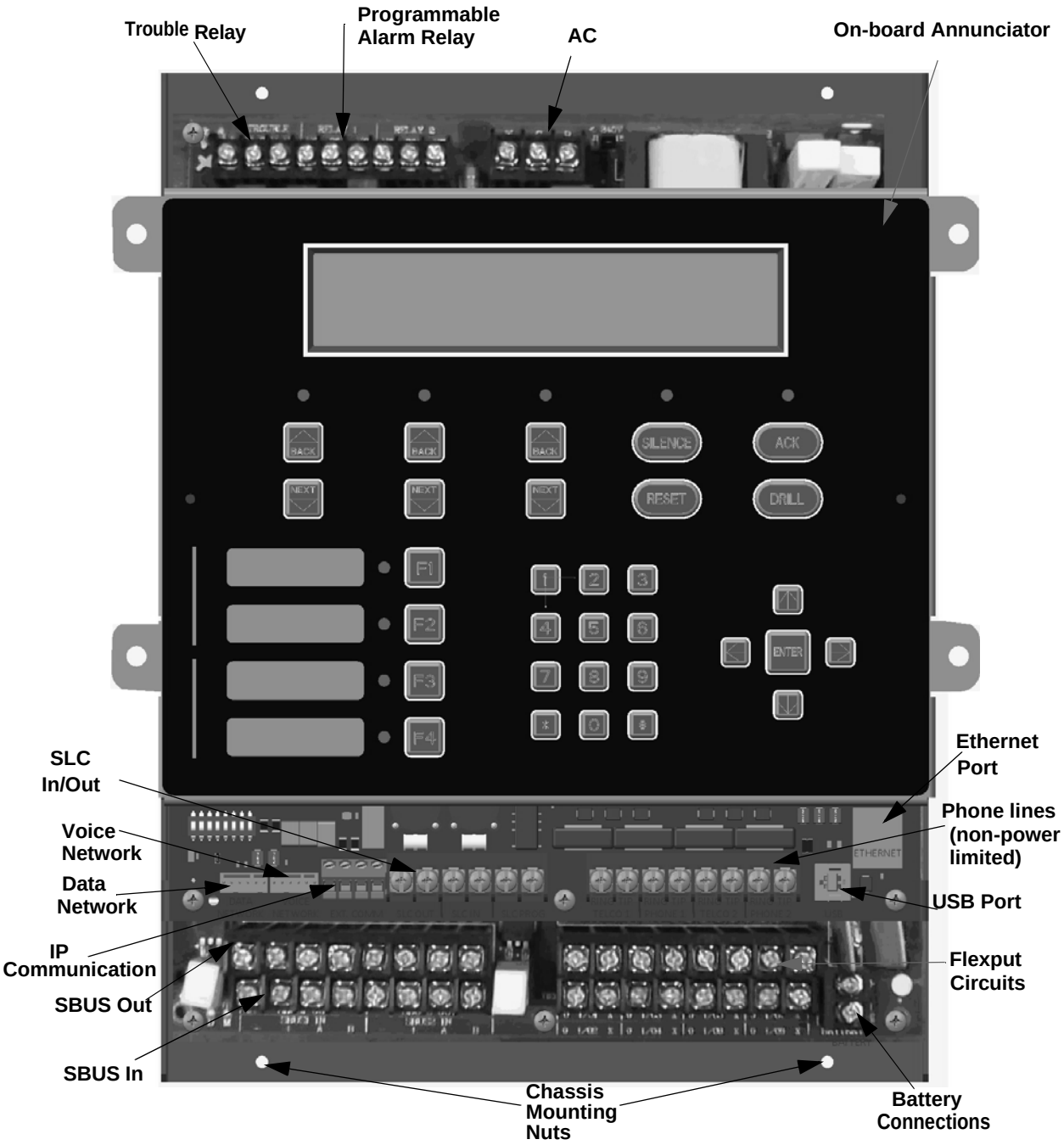


Figure 3-3 Model IFP-2100 Assembly

Figure 3-3 shows the circuit boards, metal housing and annunciator that attach the IFP-2100/ECS assembly to the cabinet. If you should need to remove the board assembly for repair, remove the four mounting nuts which hold the assembly in the cabinet. Then lift the entire assembly out of the cabinet. Do not attempt to remove the circuit boards from the metal bracket.

3.7 Calculating Current Draw and Standby Battery

This section is for helping you determine the current draw and standby battery needs for your installation.

3.7.1 Current Draw Worksheet Requirements

The following steps must be taken when determining IFP-2100/ECS current draw and standby battery requirements.

1. You will use the Current Draw Worksheet to determine current draw and standby battery requirements. Use Table 3-2 if installing IDP SLC Devices, Table 3-3 if installing SK SLC Devices or use Table 3-4 if installing SD SLC Devices For the IFP-2100/ECS, the worst case current draw is listed for the panel, addressable devices, and all SBUS expanders. Fill in the number of addressable devices and expanders that will be used in the system and compute the current draw requirements for alarm and standby. Record this information in the current draw worksheet on Line A.
2. Add up the current draw for all auxiliary devices and record in the table on Line B.
3. Add up the current draw for all notification appliance loads and record in the table on Line C.
4. For notification appliances and auxiliary devices not mentioned in the manual, refer to the device manual for the current ratings.
5. Make sure that the total alarm current you calculated, including current for the panel itself, does not exceed 9.0 A. This is the maximum alarm current for the IFP-2100/ECS control panel. If the current is above 9.0 A you will need to use a notification power expander(s) such as the 5496 or the RPS-1000 intelligent power expander, to distribute the power loads so that the IFP-2100/ECS or the power expanders do not exceed their power ratings. Refer to the current draw worksheets provided with the 5496 or the RPS-1000 manuals so you do not exceed their power ratings.
6. Alternatively, you may network additional IFP-2100/ECS or RFP-2100s to get additional power.
7. Complete the remaining instructions in the appropriate current draw worksheet for determining battery size requirements.

3.7.2 Current Draw Worksheet for IDP SLC Devices

Use Table 3-2 to determine current requirements during alarm/battery standby operation when IDP SLC devices are installed. You can install up to 159 IDP sensors per loop (2100 points max per panel) *and* 159 IDP modules per loop (2100 points max per panel). Copy this section if additional space is required.

Table 3-2: Current Draw Worksheet for IDP SLC Devices

Device	# of Devices	Current per Device	Standby Current	Alarm Current
For each device use this formula:	This column X	This column =	Current per number of devices.	
Fire Panel (Battery current draw)	1	Standby: 230 mA	230 mA	
		Alarm: 415 mA		415 mA

Table 3-2: Current Draw Worksheet for IDP SLC Devices

Device	# of Devices	Current per Device			Standby Current	Alarm Current
Addressable SLC Devices						
IDP-Photo		Standby:		.30 mA[1]	mA	mA
IDP-Photo-T					mA	mA
IDP-PhotoR					mA	mA
IDP-Heat					mA	mA
IDP-Heat-HT					mA	mA
IDP-Acclimate		Standby:		.30 mA[1]	mA	mA
IDP-Heat-ROR					mA	mA
IDP-Beam (without integral test)		SLC	Standby/Alarm:	2 mA	mA	mA
		Aux. Pwr	Standby:	2 mA	mA	
			Alarm:	8.5 mA		mA
IDP-Beam-T[5] (with integral test)		SLC	Standby/Alarm:	2 mA	mA	mA
		Aux. Pwr	Standby:	2 mA	mA	
			Alarm:	8.5 mA		mA
DNR[6] (non-relay)		None, included with IDP-PhotoR				
DNR[7] (with relay)		None, included with IDP-PhotoR & IDP-Relay				
IDP-CO-Fire		SLC	Standby:	.30 mA	mA	
			Alarm:	7.2 mA		mA
IDP-Monitor		Standby/Alarm		.375 mA	mA	mA
IDP-Minimon					mA	mA
IDP-Pull-SA/IDP-Pull-DA					mA	mA
IDP-Monitor-2		Standby/Alarm:		.75 mA	mA	mA
IDP-Monitor-10		Standby/Alarm:		3.5 mA	mA	mA
IDP-Control		SLC	Standby	.375 mA	mA	
			Alarm:	.375 mA		mA
		Aux Pwr	Standby	1.7 mA	mA	
			Alarm:	7mA		mA
IDP-Control-6		SLC	Standby	2.25 mA	mA	
			Alarm:	2.25 mA		mA
		Aux Pwr	Standby	8 mA	mA	
			Alarm:	20 mA		mA
IDP-Relay		Standby/Alarm:		.255 mA	mA	mA
IDP-Relay-6		Standby/Alarm:		1.45 mA	mA	mA
IDP-RelayMon-2		Standby:		1.3 mA	mA	
		Alarm:		24 mA		mA
IDP-Zone		Aux Pwr	Standby	12 mA	mA	
			Alarm:	90 mA		mA
		SLC	Standby/Alarm	.27 mA	mA	mA
IDP-Zone-6		Aux Pwr	Standby	50 mA	mA	
			Alarm:	70 mA		mA
		SLC	Standby/Alarm	2 mA	mA	mA

Table 3-2: Current Draw Worksheet for IDP SLC Devices

Device	# of Devices	Current per Device			Standby Current	Alarm Current
SLC Accessories						
B200SR Sounder Base		Aux Pwr	Standby:	.5 mA	mA	
			Alarm:	35 mA		mA
		SLC	Standby	.3 mA	mA	
B200S Intelligent Sounder Base		Aux Pwr	Standby:	.5 mA	mA	
			Alarm: (high vol)	35 mA		mA
		SLC	Standby	.3 mA	mA	
B200SR-LF Low Frequency Sounder Base		Aux Pwr	Standby:	1 mA	mA	
			Alarm:	125 mA		mA
B200S-LF Low Frequency Sounder Base		Aux Pwr	Standby	.55 mA	mA	
			Alarm (high vol)	140 mA		mA
		SLC	Standby	.30 mA	mA	
B224RB Relay Base		Standby/Alarm:		.5 mA	mA	mA
RT151/151 KEY		Alarm:		7.5 mA		mA
RA100Z		Alarm:		10 mA		mA
SLC Isolator Devices						
IDP-ISO (Isolator Module)	(318 max/loop & 2100 max/ panel)	Standby/Alarm:		0.45 mA	mA	mA
ISO-6 (6 Fault Isolator Module)		Standby: (per circuit)		.45 mA	mA	
		Alarm: (per circuit)		17 mA		mA
B224BI Isolator Base		Standby/Alarm:		0.5 mA	mA	mA
Accessories Modules						
6815 SLC Loop Expander	(63 max)[4]	Standby:		78 mA	mA	
		Alarm:		78 mA		mA
RA-2000 Remote LCD Annunciator	(63 max)[4]	Standby:		20 mA	mA	
		Alarm:		25 mA		mA
RA-1000 Remote LCD Annunciator	(31 max)	Standby:		20 mA	mA	
		Alarm:		25 mA		mA
RA-100 Remote LCD Annunciator		Standby:		25 mA	mA	
		Alarm:		50 mA		mA
5824 Serial/Parallel Module	(4 max.)	Standby/Alarm:		45 mA	mA	mA
5496 NAC Expander	(63 max)[4]	Standby/Alarm:		10 mA	mA	mA
RPS-1000 Power Supply		Standby/Alarm:		10 mA	mA	mA
5865-4 LED Annunciator (with reset and silence switches)	(63 max)[4]	Standby:		35 mA	mA	
		Alarm:		145 mA		mA
5865-3 LED Annunciator Module	(63 max)[4]	Standby:		35 mA	mA	
		Alarm:		145 mA		mA
5880 LED I/O Module		Standby:		35 mA	mA	
		Alarm:		200 mA		mA
5883 Relay Interface	(63 max)[4]	Standby:		0 mA	mA	
		Alarm: (22 mA/relay)		220 mA		mA
ESC-50W or ECS-125W Voice Amplifier with/without ECS-CE4	(16 max.)	Standby		10 mA	mA	
		Alarm		10 mA		mA

Table 3-2: Current Draw Worksheet for IDP SLC Devices

Device	# of Devices	Current per Device		Standby Current	Alarm Current
ECS-INT50W Internal Amplifier	(16 max.)	Standby:	52 mA	mA	
		Alarm @ 25V:	275 mA		mA
		Alarm @ 70V:	310 mA		mA
ECS-DUAL50W Dual Voice Amp	(16 max.)	Standby/Alarm:	10 mA	mA	mA
ECS-50WBU Back-Up Amplifier	(16 max.)	Standby/Alarm:	10 mA	mA	mA
ECS-VCM Voice Control Module	(1 max.)	Standby:	70 mA	mA	
		Alarm:	100 mA		mA
ECS-NVCM Voice Control Module		Standby/Alarm:	59 mA	mA	mA
ECS-SW24 Switch Expander	(32 max.)	Standby:	10 mA	mA	
		Alarm:	25 mA		mA
ECS-RPU Remote Paging Unit	(15 max.)	Standby:	70 mA	mA	
		Alarm:	100 mA		mA
ECS-LOC Local Operating Console (includes RA-2000, RVM & SW-24)		Standby:	105 mA	mA	
		Alarm:	175 mA		mA
Network Cards					
SK-NIC Network Interface Card	(1 Max.)	Standby/Alarm:	21 mA	mA	mA
SK-FML Fiber Optic Multi Mode	(1 Max.)	Standby/Alarm:	53 mA	mA	mA
SK-FSL Fiber Optic Single Mode	(1 Max.)	Standby/Alarm:	79 mA	mA	mA
Wireless Modules					
WIDP-WGI Wireless Gateway		Max current using ext supply	40 mA	mA	mA
		Max current SLC Power	24 mA	mA	mA
Total System Current					
Auxiliary Devices[2]	Refer to devices manual for current rating				
IPDACT-2 IP Communicator	(1 max.)	Standby:	93 mA	mA	
		Alarm:	136 mA		mA
IPDACT-2UD IP Communicator	(1 max.)	Standby:	98 mA	mA	
		Alarm:	155 mA		mA
CELL-MOD/CELL-CAB-SK		Standby:	55 mA	mA	
		Alarm:	100 mA		mA
		Alarm/Standby:	mA	mA	mA
		Alarm/Standby:	mA	mA	mA
		Alarm/Standby:	mA	mA	mA
Auxiliary Devices Current					
Notification Devices	Refer to device manual for current rating				
5495/5499 Power Supply		24 VDC	One input circuit: 15 mA		mA
			Both input circuits: 30 mA		mA
		Alarm:	mA		mA
		Alarm:	mA		mA
		Alarm:	mA		mA
Notification Appliances Current					mA
Total current ratings of all devices in system (line A + line B + C)				mA	mA
Total current ratings converted to amperes (line D x .001):				A	A

Table 3-2: Current Draw Worksheet for IDP SLC Devices

Device	# of Devices	Current per Device	Standby Current	Alarm Current
Number of standby hours			H	
Multiply lines E and F.		**Total standby AH**	AH	
Alarm sounding period in hours. (For example, 5 minutes = .0833 hours)				H
Multiply lines E and H.		Total alarm AH		AH
Add lines G and I.[3]			AH	
Multiply by the Derating Factor			x 1.25	
		Total ampere hours required		

1. The FACP can only support 5 devices w/LED's on. The current draw has been added to the panels alarm current.
2. If using door holders, you do not need to consider door holder current for alarm/battery standby, because power is removed during that time. However, during normal operation, door holders draw current and must be included in the 9.0A total current that can be drawn from the panel.
3. Use next size battery with capacity greater than required.
4. Maximum SBUS address capacity is 63 SBUS modules. The practical limit is determined by the amount of SBUS bandwidth consumed by each SBUS module. See section 4.13.2.
5. The IDP-Beam-T draws a maximum of 500mA from auxiliary power when the test feature is used. This should be considered when determining auxiliary power capacity but not calculated into current requirements for day to day operation.
6. The IDP-PhotoR is sold separately from the DNR. Current draw for the DNR + IDP-PhotoR is calculated by increasing the "Number of Devices" column for each IDP-PhotoR used with a DNR.
7. The DNR housing does not include a Relay circuit board. If a relay is needed, be sure to add one to the IDP-Relay & IDP-PhotoR "Number of Devices" column for each DNR used for correct current calculations.

3.7.3 Current Draw Worksheet for SK SLC Devices

Use Table 3-3 to determine current requirements during alarm/battery standby operation when SK SLC devices are installed. You can install up to 159 SK sensors per loop (2100 points max per panel) *and* 159 modules per loop (2100 points max per panel).

Table 3-3 Current Draw Worksheet for SK SLC Devices

Device	# of Devices	Current per Device	Standby Current	Alarm Current
For each device use this formula: This column X This column = Current per number of devices.				
Fire Panel (Battery current draw)	1	Standby: 230 mA	230 mA	
		Alarm: 415 mA		415 mA

Table 3-3 Current Draw Worksheet for SK SLC Devices

Device	# of Devices	Current per Device			Standby Current	Alarm Current
Addressable SLC Detectors						
SK-PHOTO		Standby/Alarm:		.30 mA[1]	mA	mA
SK-PHOTO-T					mA	mA
SK-HEAT					mA	mA
SK-HEAT-HT					mA	mA
SK-ACCLIMATE					mA	mA
SK-HEAT-ROR					mA	mA
SK-DUCT[5] (includes PhotoR)					mA	mA
SK-BEAM (without integral test)		SLC	Standby/Alarm:	2 mA		
		Aux. Pwr	Standby:	2 mA	mA	
			Alarm:	8.5 mA		mA
SK-BEAM-T[4] (with integral test)		SLC	Standby/Alarm:	2 mA		
		Aux. Pwr	Standby:	2 mA	mA	
			Alarm:	8.5 mA		mA
SK-FIRE-CO		SLC	Standby:	.30mA	mA	
			Alarm:	7.2mA		mA
Addressable SLC Module						
SK-MONITOR		Standby/Alarm:		.375 mA	mA	mA
SK-MINIMON					mA	mA
SK-PULL-SA					mA	mA
SK-PULL-DA					mA	mA
SK-MONITOR-2		Standby/Alarm:		.75 mA	mA	mA
SK-MON-10		Standby/Alarm:		3.5 mA	mA	mA
SK-CONTROL		SLC	Standby:	.375 mA	mA	
			Alarm:	.375 mA		mA
		Aux Pwr	Standby:	1.7 mA	mA	
			Alarm:	7 mA		mA
SK-CONTROL-6		SLC	Standby:	2.25 mA	mA	
			Alarm:	2.25 mA		
		Aux Pwr	Standby:	8 mA	mA	
			Alarm:	20 mA		mA
SK-RELAY		Standby/Alarm:		.255 mA	mA	mA
SK-RELAY-6		Standby/Alarm:		1.45 mA	mA	mA
SK-RELAYMON-2		Standby:		1.3 mA	mA	
		Alarm:		24 mA		mA
SK-ZONE		Aux Pwr	Standby	12 mA	mA	
			Alarm	90 mA		mA
		SLC	Standby/ Alarm	.27 mA	mA	mA
SK-ZONE-6		Aux Pwr	Standby	50 mA	mA	
			Alarm	270 mA		mA
		SLC	Standby/Alarm	2 mA	mA	mA

Table 3-3 Current Draw Worksheet for SK SLC Devices

Device	# of Devices	Current per Device			Standby Current	Alarm Current
SLC Modules						
B200SR Sounder Base		Aux Pwr	Standby:	.5mA	mA	
			Alarm:	35mA		mA
		SLC	Standby	.3 mA	mA	
B200S Intelligent Sounder Base		Aux Pwr	Standby:	.5 mA	mA	
			Alarm: (high vol)	35 mA		mA
		SLC	Standby	.3 mA	mA	
B200SR-LF Low Frequency Sounder Base		Aux Pwr	Standby:	1 mA	mA	
			Alarm:	125 mA		mA
B200S-LF Low Frequency Sounder Base		Aux Pwr	Standby	.55 mA	mA	
			Alarm (high vol)	140 mA		mA
		SLC	Standby	.30 mA	mA	
B224RB Relay Base		Standby/Alarm:		0.5 mA	mA	mA
RTS151/151 KEY		Alarm:		7.5 mA		mA
RA100Z		Alarm:		10 mA		mA
SLC Isolator Devices						
SK-ISO (Isolator Module)	(318 max/loop & 2100 max/ panel)	Standby/Alarm:		.45 mA	mA	mA
B224BI Isolator Base		Standby/Alarm:		.5 mA	mA	mA
Accessories Modules						
6815 SLC Loop Expander	(63 max.)	Standby/Alarm:		78 mA	mA	mA
RA-2000 Remote LCD Annunciator	(63 max)[4]	Standby:		20 mA	mA	
		Alarm:		25 mA		mA
RA-1000 Remote LCD Annunciator	(31 max.)	Standby:		20 mA	mA	
		Alarm:		25 mA		mA
RA-100 Remote LCD Annunciator		Standby:		25 mA	mA	
		Alarm:		50 mA		mA
5824 Serial/Parallel I/O Module	(4 max.)	Standby/Alarm:		45 mA	mA	mA
5895XL Power Supply	(63 max.)	Standby/Alarm:		10 mA	mA	mA
5496 NAC Expander		Standby/Alarm:		10 mA	mA	mA
5865-4 LED Annunciator (with reset and silence switches)	63 (max.)	Standby:		35 mA	mA	
		Alarm:		145 mA		mA
5865-3 LED Annunciator		Standby:		35 mA	mA	
		Alarm:		145 mA		mA
5880 I/O Module		Standby:		35 mA	mA	
		Alarm:		200 mA		mA
5883 Relay Interface	(63 max.)	Standby:		0 mA	mA	
		Alarm:		220 mA (22 mA per relay)		mA
ECS-50W or ECS-125W Audio Amplifier with/without EVS-CE4	(16 max.)	Standby:		10 mA	mA	
		Alarm:		10 mA		mA
ECS-INT50W Internal Amplifier	(16 max.)	Standby:		52 mA	mA	
		Alarm @ 25V:		275 mA		mA
		Alarm @ 70V:		310 mA		mA

Table 3-3 Current Draw Worksheet for SK SLC Devices

Device	# of Devices	Current per Device		Standby Current	Alarm Current
ECS-VCM Voice Control Module	(1 max.)	Standby:	70 mA	mA	
		Alarm:	100 mA		mA
ECS-NVCM Voice Control Module		Standby/Alarm:	59 mA	mA	mA
ECS-SW24 Switch Expander	(32 max.)	Standby:	10 mA	mA	
		Alarm:	25 mA		mA
ECS-RPU Remote Paging Unit	(15 max.)	Standby:	70 mA	mA	
		Alarm:	100 mA		mA
ECS-LOC Local Operating Console (includes RA-2000, RVM & SW-24)		Standby:	105 mA	mA	
		Alarm:	175 mA		mA
		Total System Current			
Network Cards					
SK-NIC Network Interface Card	(1 Max.)	Standby/Alarm:	21 mA	mA	mA
SK-FML Fiber Optic Multi Mode	(1 Max.)	Standby/Alarm:	53 mA	mA	mA
SK-FSL Fiber Optic Single Mode	(1 Max.)	Standby/Alarm:	79 mA	mA	mA
Wireless Modules					
SK-WGI Wireless Gateway		Max current using ext supply	40 mA	mA	mA
		Max current SLC Power	24 mA	mA	mA
		Total System Current			
Auxiliary Devices[2]	Refer to devices manual for current rating.				
IPDACT-2 IP Communicator	(1 max.)	Standby:	93 mA	mA	
		Alarm:	136 mA		mA
IPDACT-2UD IP Communicator	(1 max.)	Standby:	98 mA	mA	
		Alarm:	155 mA		mA
CELL-MOD/CELL-CAB-SK		Standby:	55 mA	mA	
		Alarm:	100 mA		mA
		Alarm/Standby:	mA	mA	mA
		Alarm/Standby:	mA	mA	mA
		Alarm/Standby:	mA	mA	mA
		Alarm/Standby:	mA	mA	mA
		Auxiliary Devices Current			
Notification Appliance Circuits	Refer to device manual for current rating.				
5495/5499 Power Supply		24 VDC	One input circuit: 15 mA		mA
			Both input circuits: 30 mA		mA
		Alarm:	mA		mA
		Alarm:	mA		mA
		Alarm:	mA		mA
		Alarm:	mA		mA
		Notification Appliances Current			mA
Total current ratings of all devices in system (line A + line B + C)				mA	mA
Total current ratings converted to amperes (line D x .001):				A	A
Number of standby hours:				H	
Multiply lines E and F.		**Total standby AH**		AH	
Alarm sounding period in hours. (For example, 5 minutes = .0833 hours)					H
Multiply lines E and H.		**Total alarm AH**			AH
Add lines G and I.[3]				AH	
Multiply by the Derating Factor				x 1.25	

Table 3-3 Current Draw Worksheet for SK SLC Devices

Device	# of Devices	Current per Device	Standby Current	Alarm Current
		Total ampere hours required		

1. The FACP can only support 5 devices w/LED's on. This current draw has been added to the panels alarm current.
2. If using door holders, you do not need to consider door holder current for alarm/battery standby, because power is removed during that time. However, during normal operation, door holders draw current and must be included in the 6.0A total current that can be drawn from the panel.
3. Use next size battery with capacity greater than required.
4. SK-BEAM-T draws a maximum of 500mA from Auxiliary power only when the test feature is used. this should be considered when determining auxiliary power capacity but not calculated into current requirements for day to day operation.
5. The SK-DUCT housing contains a vacant mount for a SK-RELAY (sold separately). Current draw for the SK-RELAY is calculated by increasing the SK-RELAY row of the calculation sheet by one for each SK-RELAY used with a SK-DUCT.

3.7.4 Current Draw Worksheet for SD SLC Devices

Use Table 3-4 to determine current requirements during alarm/battery standby operation when SD SLC devices are installed. You can install up to 127 SD devices per loop (2032 max per panel). Copy this section if additional space is required.[1]

Table 3-4: Current Draw Worksheet for SD SLC Devices

Device	# of Devices	Current per Device			Standby Current	Alarm Current
For each device use this formula:	This column	X This column = Current per number of devices.				
Fire Panel (Battery current draw)	1	Standby:		230 mA	230 mA	
		Alarm:		415 mA		415 mA
SD500-AIM		Standby/Alarm:		.55 mA[6]	mA	mA
SD500-MIM					mA	mA
SD500-PS					mA	mA
SD500-ARM					mA	mA
SD505-HEAT					mA	mA
SD505-PHOTO					mA	mA
SD500-ANM		Aux. Pwr	Standby:	8 mA	mA	
			Alarm:	60 mA		mA
		SLC	Standby/Alarm:	.55 mA	mA	mA
SD500-SDM		SLC	Standby/Alarm:	.55 mA	mA	mA
		Aux. Pwr	Standby:	20 mA	mA	
			Alarm:	106 mA		mA
SLC Accessory Base						
SD505-6RB		Standby/Alram:		.082 mA	mA	mA
SD505-6SB		Aux. Pwr	Standby:	1 mA	mA	
			Alarm:	32 mA		mA
		SLC	Standby/Alarm:	.082 mA	mA	mA

Table 3-4: Current Draw Worksheet for SD SLC Devices

Device	# of Devices	Current per Device			Standby Current	Alarm Current
SD505-DUCTR		Aux. Pwr	Standby:	20 mA[2]	mA	
			Alarm:	62 mA[2]		mA
		SLC	Standby/Alarm:	.5mA	mA	mA
SD505-DTS-K			None, included with SD505-DUCTR worst case.			
SD505-DUCT		SLC	Standby/Alarm	.5mA	mA	mA
SLC Isolator Devices						
SD505-LIM	(1272 max.)	Standby/Alarm		.092mA	mA	mA
SD505-6IB	(2032 max.)					
Accessories Modules						
5815XL SLC Expander	(63 max.)[5]	Standby/Alarm:		55mA	mA	mA
RA-2000 Remote LCD Annunciator	(63 max)[4]	Standby:		20mA	mA	
		Alarm:		25mA		mA
RA-1000 Remote LCD Annunciator		Standby:		20mA	mA	
		Alarm:		25mA		mA
RA-100 Remote LCD Annunciator		Standby:		25mA	mA	
		Alarm:		50mA		mA
5824 Serial/Parallel Printer Interface Module	(4 max.)	Standby/Alarm:		45mA	mA	mA
5496 NAC Expander	(63 max.)[5]	Standby/Alarm:		10mA	mA	mA
RPS-1000 Power Supply		Standby/Alarm:		10mA	mA	mA
5865-4 LED Annunciator (with reset and silence switches)	(63 max.)[5]	Standby:		35mA	mA	
		Alarm:		145mA		mA
5865-3 LED Annunciator	(63 max.)[5]	Standby:		35mA	mA	
		Alarm:		145mA		mA
5880 LED I/O Module		Standby:		35mA	mA	
		Alarm:		200mA		mA
5883 Relay Interface	(63 max.)[5]	Standby:		0mA	mA	
		Alarm:		220mA (22 mA per relay)		mA
ECS-VCM Voice Control Module	(1 max.)	Standby:		70mA	mA	
ECS-NVCM Network Voice Control Module		Standby/Alarm:		59mA	mA	mA
ECS-SW24 Switch Expander	(32 max.)	Standby:		10mA	mA	
		Alarm:		25mA		mA
ECS-50W or ECS-125W Audio Amplifier with/without ECS-CE4	(16 max.)	Standby:		10mA	mA	
		Alarm:		10mA		mA
ECS-INT50W Internal Amplifier	(16 max.)	Standby:		52mA	mA	
		Alarm @ 25V:		275mA		mA
		Alarm @ 70V:		310mA		mA

Table 3-4: Current Draw Worksheet for SD SLC Devices

	Device	# of Devices	Current per Device		Standby Current	Alarm Current
	ECS-RPU Remote Paging Unit	(15 max.)	Standby:	70 mA	mA	
			Alarm:	100 mA		mA
	ECS-LOC Local Operating Console (includes RA-2000, RVM & SW-24)		Standby:	105 mA	mA	
			Alarm:	175 mA		mA
	ECS-DUAL50W Dual Voice Amp	(16 max.)	Standby/Alarm:	10 mA	mA	mA
	ECS-50WBU Back-Up Amplifier	(16 max.)	Standby/Alarm:	10 mA	mA	mA
	Network Cards					
	SK-NIC Network Interface Card	(1 Max.)	Standby/Alarm:	21 mA	mA	mA
	SK-FML Fiber Optic Multi Mode	(1 Max.)	Standby/Alarm:	53 mA	mA	mA
	SK-FSL Fiber Optic Single Mode	(1 Max.)	Standby/Alarm:	79 mA	mA	mA
A				**Total System Current**		
	Auxiliary Devices[3]	Refer to devices manual for current rating.				
	IPDACT-2 IP Communicator		Alarm:	136 mA		mA
			Standby:	93 mA	mA	
	IPDACT-2UD IP Communicator		Alarm:	155 mA		mA
			Standby:	98 mA	mA	
	CELL-MOD/CELL-CAB-SK		Standby:	55 mA	mA	
			Alarm:	100 mA		mA
			Alarm/Standby:	mA	mA	mA
			Alarm/Standby:	mA	mA	mA
			Alarm/Standby:	mA	mA	mA
B				**Auxiliary Devices Current**		
	Notification Devices	Refer to devices manual for current rating.				
	5495/5499 Power Supply		24 VDC	One input circuit: 15 mA		mA
				Both input circuits: 30 mA		mA
			Alarm:	mA		mA
			Alarm:	mA		mA
			Alarm:	mA		mA
			Alarm:	mA		mA
C				**Notification Appliances Current**		mA
D	Total current ratings of all devices in system (line A + line B + C)				mA	mA
E	Total current ratings converted to amperes (line D x .001):				A	A
F	Number of standby hours				H	
G	Multiply lines E and F.			Total standby AH	AH	
H	Alarm sounding period in hours. (For example, 5 minutes = .0833 hours)					H
I	Multiply lines E and H.			Total alarm AH		AH
J	Add lines G and I.[4]				AH	
	Multiply by the Derating Factor				x 1.25	
				Total ampere hours required		

1. Total does not include isolator devices or accessory bases.

2. If using 24 VDC aux power only. No standby or alarm current for battery calculation if using 24VAC, 120VAC or 240VAC.
3. If using door holders, you do not need to consider door holder current for alarm/battery standby, because power is removed during that time. However, during normal operation, door holders draw current and must be included in the 9.0A total current that can be drawn from the panel.
4. Use next size battery with capacity greater than required.
5. Maximum SBUS address capacity is 63 SBUS modules. The practical limit is determined by the amount of SBUS bandwidth consumed by each SBUS module. See section 4.13.2.
6. The FACP can only support 2 devices w/LED’s on. The current draw has been added to the panels alarm current.

3.7.5 Maximum Battery Standby Load

Table 3-5 and Table 3-6 show the standby load calculations for the IFP-2100 based on 24 and 90 hours of standby. The standby load calculations of line D in the Current Draw Calculation Worksheet must be less than the number shown in Table 3-5 and Table 3-6 for the selected battery size, standby hour and alarm time. The numbers below have a built in 20% derating factor for the battery amp-hour capacity.

Table 3-5: Maximum Battery Standby Loads for 24 Hour Standby

Rechargeable Battery Size	24 hr Standby, 5 mins. Alarm	24 hr Standby, 15 min alarm	24 hr Standby, 20 min alarm
17AH	535 mA	473 mA	442 mA
18AH	569 mA	506 mA	475 mA
24AH	769 mA	706 mA	675 mA
33AH	1.07A	1.01A	975 mA
35AH	1.14A	1.07A	1.04A
40AH	1.30A	1.24A	1.21A
55AH	1.80A	1.74A	1.71A

Table 3-6: Maximum Battery Standby Loads for 90 Hour Standby*

Rechargeable Battery Size	90 hr Standby, 5 min alarm	90 hr Standby, 15 min alarm	90 hr Standby, 20 min alarm
33 AH	N/A	N/A	N/A
40 AH	347 mA	331 mA	322 mA
55 AH	480 mA	464 mA	456 mA

Warning

Honeywell Silent Knight does not support the use of batteries smaller than those listed in Table 3-5 and Table 3-6. If you use a battery too small for the installation, the system could overload the battery resulting in the installation having less than the required 24 hours standby power. Use Table 3-5 and Table 3-6 to calculate the correct battery amp hour rating needed for your installation. It is recommended that you replace batteries every five years.

*For FM Installation only

Section 4
Control Panel Installation

4.1 Mounting the Control Panel Cabinet

Read the environmental specifications in Section 3.2 before mounting the control panel cabinet. This will ensure that you select a suitable location.

The IFP-2100 cabinet can be surface or flush mounted. Cabinet base dimensions are 24¾" H x 14.5" W. If you flush mount there should be 1.5" to 1.75" of cabinet extruding from the wall, this should be measured from either the top edge or bottom edge to the exterior side of the sheet rock. Do NOT flush mount in a wall designated as a fire break.

The IFP-2100/ECS cabinet can be surface or flush mounted. Cabinet base dimensions are 26½" H x 20"W. If you flush mount the cabinet, there should be 1.5" to 1.75" of cabinet extruding from the wall, this should be measured from either the top edge or bottom edge to the exterior side of the sheet rock. Do NOT flush mount in a wall designated as a fire break.

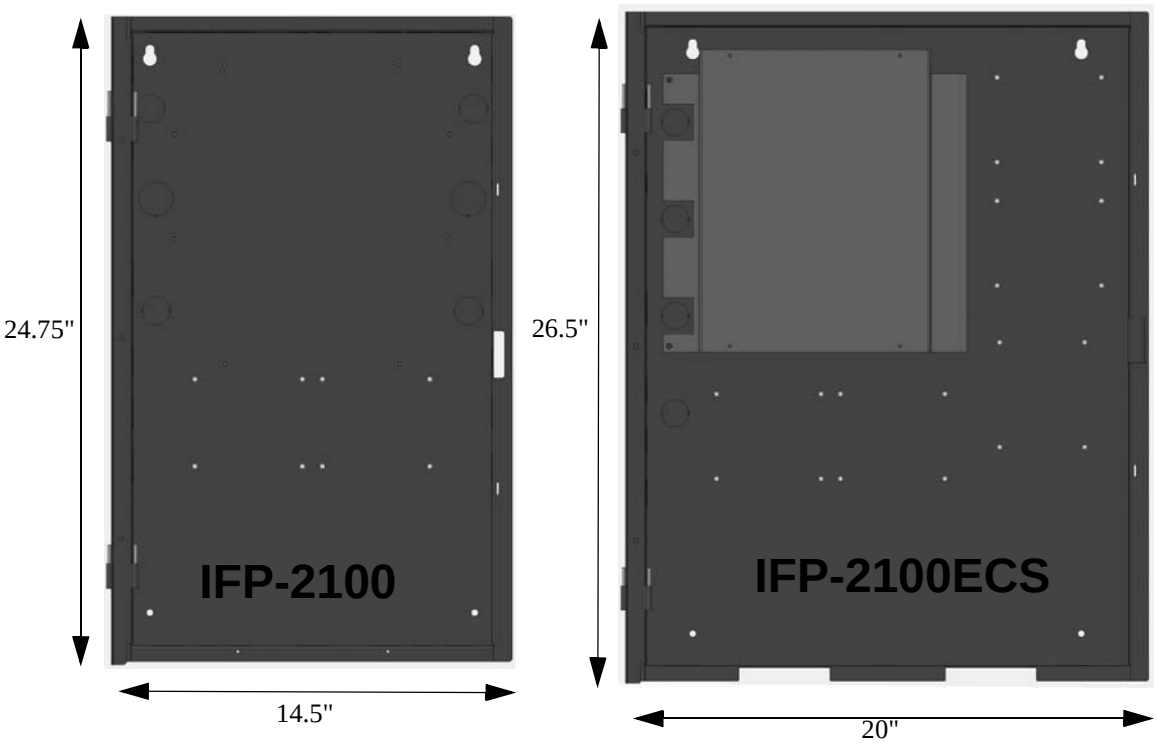


Figure 4-1 FACP Cabinet Mounting

4.1.1 Preventing Water Damage

Water damage to the fire system can be caused by moisture entering the cabinet through the conduits. Conduits that are installed to enter the top of the cabinet are most likely to cause water problems. Installers should take reasonable precautions to prevent water from entering the cabinet. Water damage is not covered under warranty.

4.1.2 Removing the IFP-2100/ECS Assembly from the Housing

Should it ever be necessary to remove the control panel assembly from the cabinet for repair, do so by unscrewing the nuts that connect the control panel assembly to the cabinet. Do not attempt to disassemble the circuit boards.

4.1.3 Ethernet Connection

Ethernet connect for IP communication. For port location see Figure 3-3.

4.2 AC Power Connection

WARNING: RISK OF ELECRICAL SHOCK AND EQUIPMENT DAMAGE

SEVERAL DIFFERENT SOURCES OF POWER CAN BE CONNECTED TO THIS PANEL. DISCONNECT ALL SOURCES OF POWER BEFORE SERVICING. THE PANEL AND ASSOCIATED EQUIPMENT MAY BE DAMAGED BY REMOVING AND/OR INSERTING CARDS, MODULES OR INTERCONNECTING CABLES WHILE THIS UNIT IS ENERGIZED

The AC terminals are rated at 120VAC, 50 or 60 Hz, 5A (for the IFP-2100/ECS) or 240VAC, 50 or 60 Hz, 2.8A (for the IFP-2100/ECSHV).)

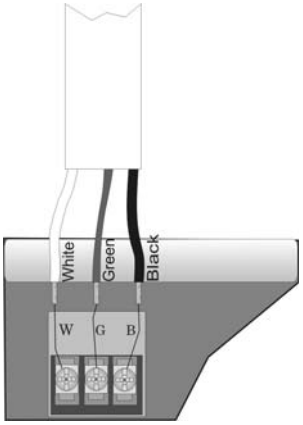


Figure 4-2 120 VAC Power Connection for the IFP-2100/ECS

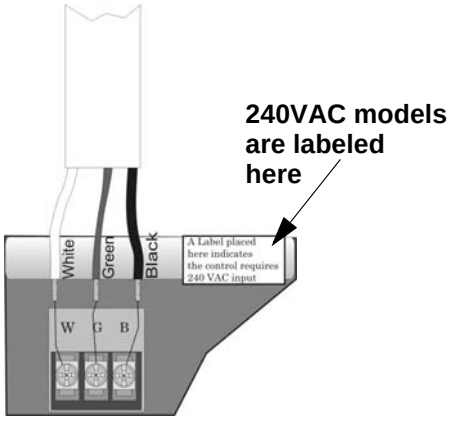


Figure 4-3 240VAC Power Connection for the IFP-2100/ECSHV

4.3 Battery Power

The batteries must be sealed lead acid type. Before connecting the batteries to the FACP, make certain that the interconnect cable between the batteries is not connected. Do not connect the battery jumper cable until the system is completely installed. Observe polarity when connecting the batteries.

WARNING: RISK OF PERSONAL INJURY

Battery contains sulfuric acid which can cause severe burns to the skin and eyes and can destroy fabrics. If contact is made with sulfuric acid, immediately flush the skin or eyes with water for 15 minutes and seek immediate medical attention

The control panel battery charge capacity is 17 to 55 AH. Use 12V batteries of the same AH rating. Determine the correct AH rating as per your standby load calculation (see Section 3.7).

Wire batteries in series to produce a 24-volt equivalent. Do not parallel batteries to increase the AH rating. It is recommended that you replace batteries every five years.

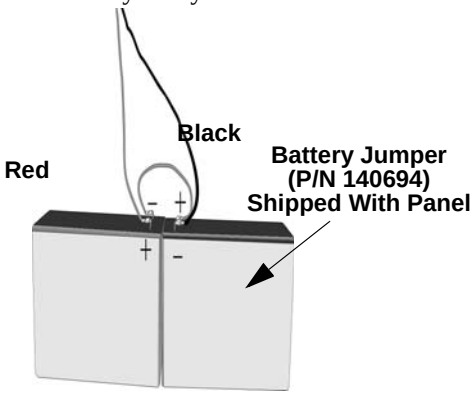


Figure 4-4 Battery Connection

4.3.1 Battery Accessory Cabinets

The Model RBB or AB-55 Accessory cabinets can be used when you are required to use backup batteries that are too large to fit into the main control panel cabinet.

The RBB cabinet holds batteries up to the 35 AH size. The RBB dimensions are 16" W x 10" H x 6" D (40.64 cm W x 25.4 cm H x 15.24 cm D).

The AB-55 Accessory cabinet holds batteries up to the 55AH size. The AB-55 dimensions are 20" W x 11.5" H x 7.5" D (50.8 cm W x 30.48 cm H x 19.05 cm D).

4.3.1.1 Installing the RBB or AB-55 Accessory Cabinet and Batteries

To properly install the accessory cabinet and backup batteries, follow these steps:

1. Mount the accessory cabinet. See Figure 4-5 for the four cabinet mounting holes.
   - If mounting onto drywall the accessory cabinet must be mounted onto ¾-inch plywood. This is necessary because the weight of the batteries inside the accessory cabinet could cause the cabinet to pull away from the drywall.
   - When mounting on concrete, especially when moisture is expected, attach a piece of

¾-inch plywood to the concrete surface and then attach the RBB or AB-55 cabinet to the plywood.

- If using the battery cable extenders provided (P/N 140643), mount the RBB or AB-55 cabinet no more than 18" away from the main control panel cabinet. This will ensure that the battery cables reach the battery terminals.

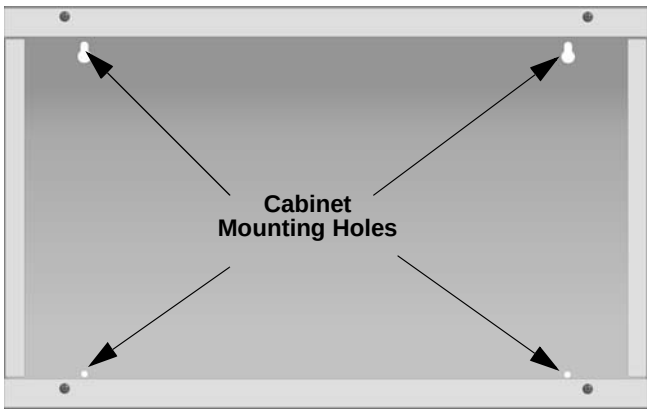


Figure 4-5 RBB or AB-55 Cabinet Mounting Holes

2. Connect the main control panel battery cables to the battery cable extenders as shown in Figure 4-6.

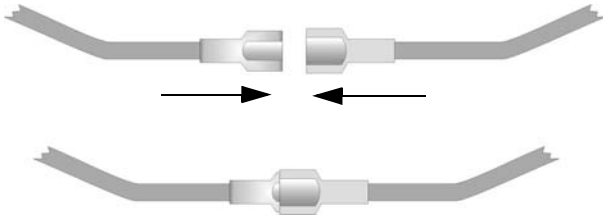


Figure 4-6 Splicing Control panel Battery Cable to RBB or AB-55 Battery Cable Extenders

3. Run extended battery cable from control panel cabinet through conduit to RBB or AB-55 cabinet. See Figure 4-7.

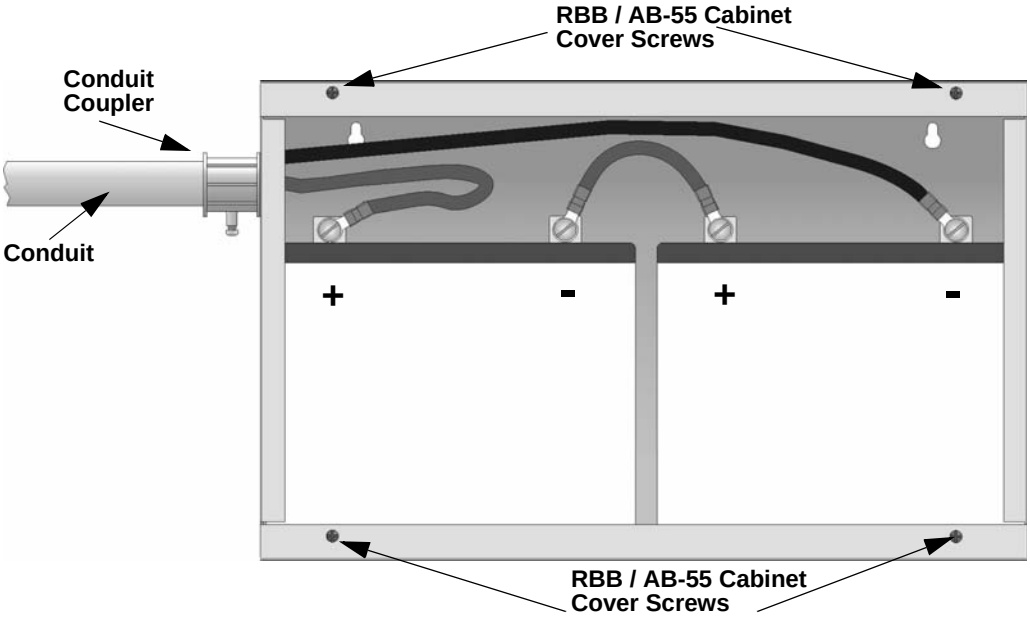


Figure 4-7 Battery Connections in the RBB or AB-55 Cabinet

Note: Figure 4-7 is an example of how the wire connections can be routed. However, any other cabinet knockouts (on either the main control panel or the RBB/AB-55 cabinet), that are not previously being used may be utilized to connect conduit between the two cabinets.

4. Connect battery leads to the backup battery terminals. See Figure 4-7.
   - Observe the proper polarity to prevent damage to the batteries or the control panel.
5. Insert the RBB or AB-55 cover screws into the cover mounting holes. See Figure 4-7.
   - Screw the cover screw ¾ of the way into the cover mounting hole.
6. Align the cover plate mounting keyhole over the cover mounting screws. See Figure 4-8.

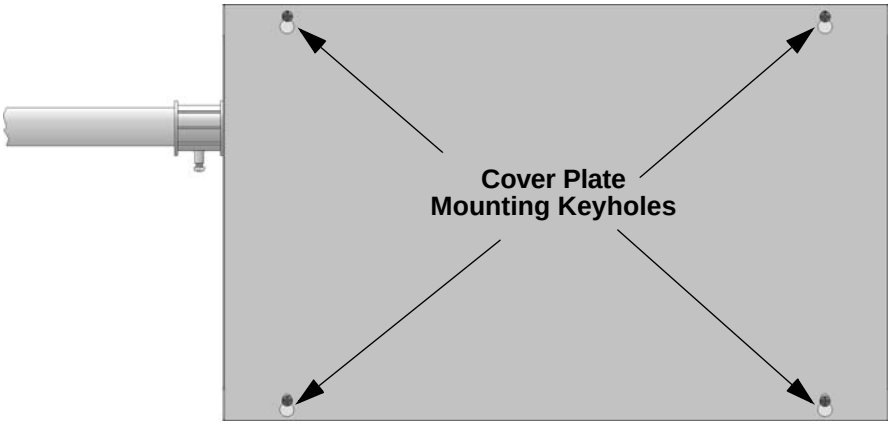


Figure 4-8 Cover Plate Mounting Keyholes and Cover Mounting Screws Alignment

7. Slide the cover into place and tighten the cover mounting screws. See Figure 4-8.

4.4 SBUS Wiring

This section contains information on calculating SBUS wire distances and the types of wiring configurations (Class A and B).

4.4.1 Calculating Wiring Distance for SBUS Modules

The IFP-2100/ECS panel has two SBUS circuits which can support up to 1.0A of module load per SBUS circuit. When determining the type of wire and the maximum wiring distance that can be used, you will need to calculate loads for each SBUS to ensure that each SBUS does not exceed 1.0A.

To calculate the wire gauge that must be used to connect SBUS modules to the control panel, it is necessary to calculate the total worst case current draw for all modules on a single SBUS circuit. The total worst case current draw is calculated by adding the individual worst case currents for each module. The individual worst case values are shown in the table below.

Note: Total worst case current draw on a single SBUS cannot exceed 1 amp. If a large number of accessory modules are required, and the worst case current draw will exceed the 2 amps total, then the current draw must be distributed using RPS-1000 Power Expanders. Each RPS-1000 Power Expander provides an additional SBUS, with an additional 1 amp of SBUS current. Wiring distance calculations are done separately for each RPS-1000, and separately for each control panel SBUS.

Table 4-1: SBUS Device Current Draw

Model Number	Worst Case Current Draw
RA-2000, RA-1000, RA-100 Fire Annunciator	.120 amps
6815 SLC Loop Expander	.078 amps
5815XL SLC Loop Expander	.150 amps
5824 Serial/Parallel Printer Interface Module	.040 amps
5880 LED I/O Module	.250 amps
5865 LED Annunciator	.200 amps
RPS-1000 Intelligent Power Supply	.010 amps
5496 NAC Expander	.010 amps
ECS-50W	.010 amps
ECS-125W	.010 amps
ECS-VCM / ECS-VCM with ECS-SW24*	.115 amps /.185 amps
ECS-NVCM Network Voice Control Module	.059 amps
ECS-EMG NVCM keypad	.06 amps
ECS-LOC	.210 amps /.325 amps
ECS-DUAL50W	.010 amps
ECS-DUAL50W WITH ECS-50WBU	.010 amps
SK-NIC Network Interface Card	.021 amps
CELL-MOD/CELL-CAB-SK	.145 amps
SK-F485C Fiber Converter	.125 amps

Note: Refer to Table 3-2 if using IDP SLC devices, Table 3-3 for SK devices, and refer to Table 3-4 if using SD SLC devices for maximum number of each type of device that can be used per system.

* All devices must use the same SBUS and VBUS.

After calculating the total worst case current draw, refer toTable 4-2 for the maximum distance the modules can be located from the panel on a single wire run. The table ensures 6.0 volts of line drop maximum. In general, the wire length is limited by resistance, but for heavier wire gauges, capacitance is the limiting factor.

These cases are marked in the chart with an asterisk (*). Maximum length can never be more than 6,000 feet, regardless of gauge used. The formula used to generate this chart is shown in the note below.

Table 4-2: Wire Distances Per Wire Gauge Using Copper Wire

Wiring Distance: SBUS Modules to Panel				
Total Worst Case Current Draw (amps)	**22 Gauge**	**18 Gauge**	**16 Gauge**	**14 Gauge**
0.100	1852 ft.	4688 ft.	* 6000 ft.	* 6000 ft.
0.200	926 ft.	2344 ft.	3731 ft.	5906 ft.
0.300	617 ft.	1563 ft.	2488 ft.	3937 ft.
0.400	463 ft.	1172 ft.	1866 ft.	2953 ft.
0.500	370 ft.	938 ft.	1493 ft.	2362 ft.
0.600	309 ft.	781 ft.	1244 ft.	1969 ft.
0.700	265 ft.	670 ft.	1066 ft.	1687 ft.
0.800	231 ft.	586 ft.	933 ft.	1476 ft.
0.900	206 ft.	521 ft.	829 ft.	1312 ft.
1.000 (Max)	185 ft.	469 ft.	746 ft.	1181 ft.

Note: The following formulas were used to generate the wire distance chart:

$$\text{Maximum Resistance (Ohms)} = \frac{6.0 \text{ Volts}}{\text{Total Worst Case Current Draw (amps)}}$$

$$\text{Maximum Wire Length (Feet)} = \frac{\text{Maximum Resistance (Ohms)}}{\text{Rpu}} * 500$$

(6000 feet maximum)

where: Rpu = Ohms per 1000 feet for various wire gauges (see table below)

Table 4-3: Typical Wire Resistance Per 1000 ft. Using Copper Wire

Wire Gauge	Ohms per 1000 feet (Rpu)
22	16.2
18	6.4
16	4.02
14	2.54

Wiring Distance calculation example:

Suppose a system is configured with the following SBUS modules:

2 - Module RA-2000 Fire Annunciator

1 - RPS-1000 Intelligent Power Expander

1 - 5865 LED Annunciator

1 - 5824 Serial/Parallel Interface Module

The total worst case current is calculated as follows:

RA-2000 Current Draw	= 2 x .120 amps	= .240 amps
RPS-1000 Current Draw	= 1 x .010 amps	= .010 amps
5865 Current Draw	= 1 x .200 amps	= .200 amps
5824 Current Draw	= 1 x .040 amps	= .040 amps
Total Worst Case Current Draw		= .490 amps

Note: For assistance with SBUS calculation, please refer to www.farenhyt.com.

Using this value, and referring to the Wiring Distance table, it can be found that the available options are:

370 feet maximum using 22 Gauge wire

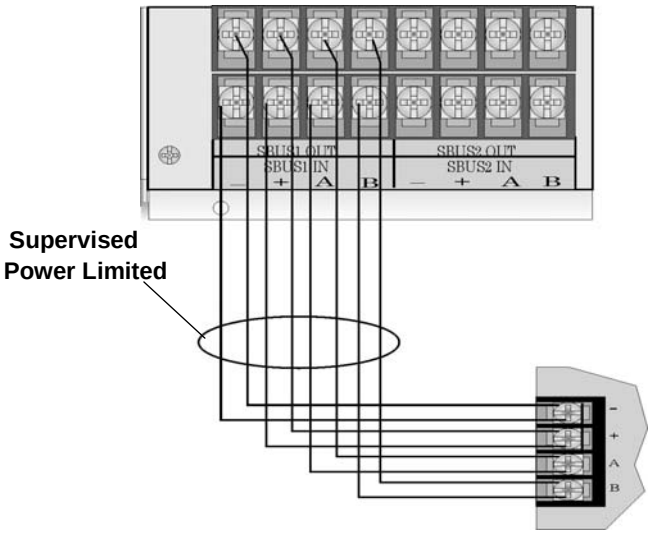
938 feet maximum using 18 Gauge wire

1493 feet maximum using 16 Gauge wire

2362 feet maximum using 14 Gauge wire

4.4.2 Wiring Configurations

Figure 4-9 illustrates SBUS 1, Class A wiring configuration and Figure 4-10 illustrates SBUS1 Class B configuration. SBUS 2 wiring configurations are the same as SBUS1.



Caution

For proper system supervision do not use looped wire under terminals marked A, B, +, and - of the SBUS device connectors. Break wire runs to provide supervision of connections.

Figure 4-9 SBUS Class A Wiring

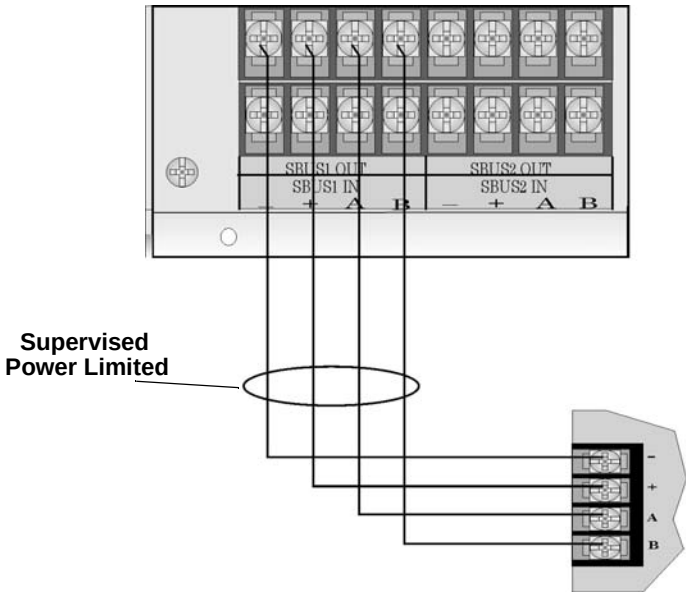


Figure 4-10 SBUS Class B Wiring

4.5 RA-2000 Remote Annunciator Installation

The optional Model RA-2000 Remote Annunciator, shown in Figure 4-11. The RA-2000 can be surface or flush mounted. It is available in gray color as RA-2000GRAY.



Figure 4-11 Model RA-2000 Remote Annunciator, Front View

RA-2000 installation involves the following steps:

1. Make sure power is off at the panel.
2. Mount the RA-2000 in the desired location (see Section 4.5.1).
3. Connect the RA-2000 to the panel (see Section 4.5.2).
4. Use the DIP switches on the back of the RA-2000 to assign an SBUS ID# to the RA-2000 (see Section 4.13.1).
5. The RA-2000 module must be added to the system through programming. JumpStart will add the module automatically (see Section 8.1). You can also add it manually (see Section 9.2.2). Select a name, if desired (see Section 9.2.1.2).

4.5.1 Mounting the RA-2000

4.5.1.1 Flush Mounting

This section of the manual describes flush mounting.

Follow these steps to flush mount the RA-2000

1. The backbox dimensions are 9 1/4” W x 8 3/8” H. The backbox can be mounted prior to the complete installation of the RA-2000 using any of the mounting holes shown in Figure 4-12.

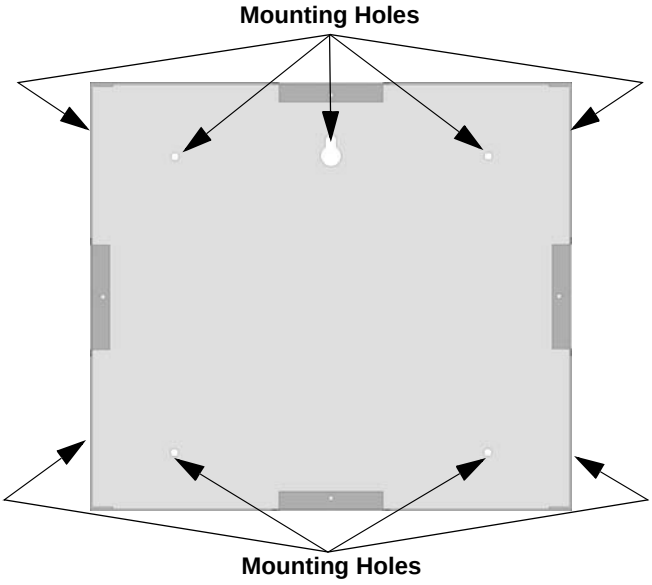


Figure 4-12 Backbox Mounting Holes

2. Remove knockout holes as needed for wires. See Figure 4-13 for backbox knockout locations.

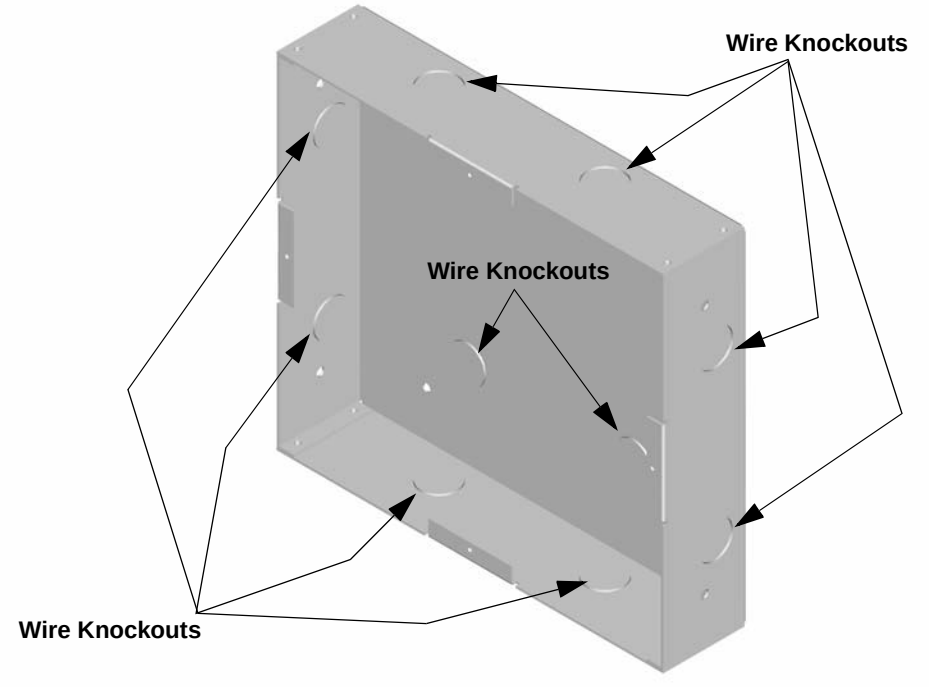


Figure 4-13 Backbox Knockout Locations

3. Wire the annunciator board to the main control panel. As described in Section 4.5.2.

4. Attach the annunciator and door assembly to backbox as shown in Figure 4-14 using the supplied screws.

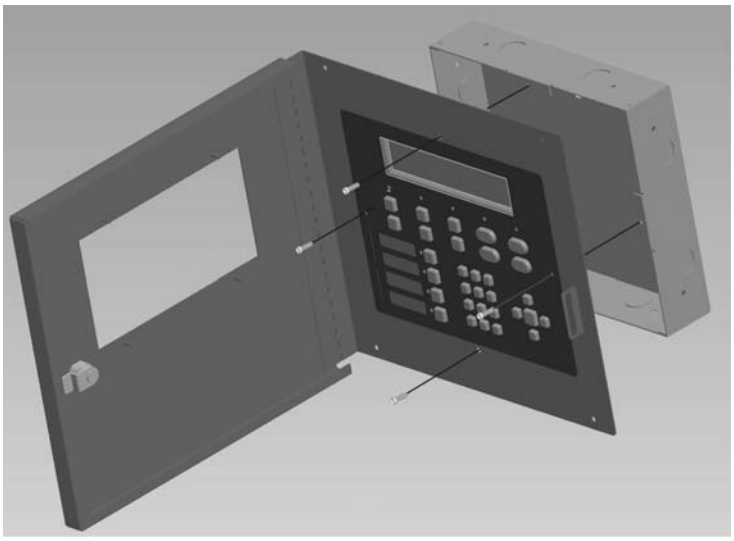


Figure 4-14 Attaching Annunciator / Door Assembly to Backbox

4.5.1.2 Surface Mounting

The Model RA-100TR red trim ring and RA-2000GRAYTR gray trim ring kits are available for use when surface mounting the RA-2000.

1. Remove the desired knock out. See Figure 4-13.
2. To properly mount the backbox, insert a single screw into the key shaped mounting hole. Do not tighten all the way. See Figure 4-15.

   Place a level on top of the backbox, with the backbox level insert the rest of the mounting screws.

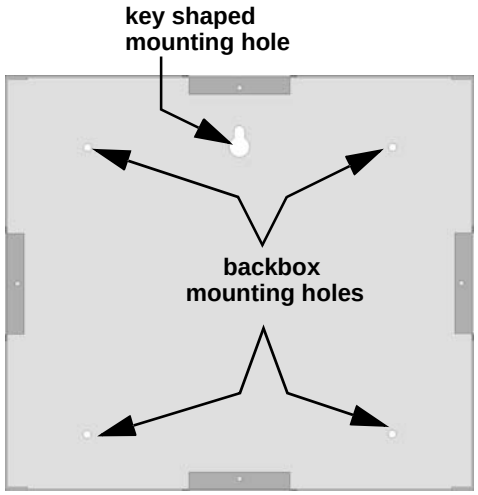


Figure 4-15 Backbox Surface Mount Holes

3. Run wires to the control panel.

4. Place the trim ring over the backbox as shown in Figure 4-16.

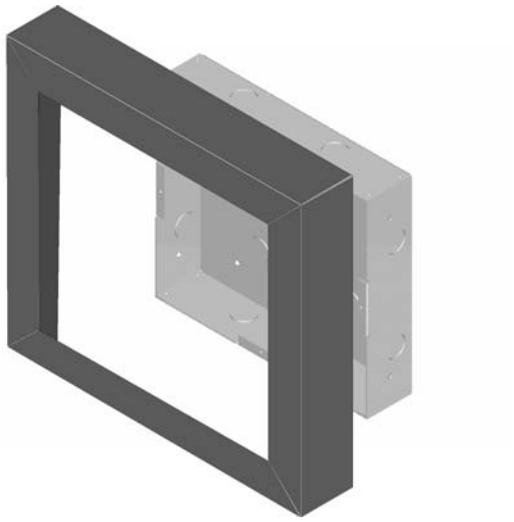


Figure 4-16 Installing Trim Ring

5. Connect wires from the RA-2000 to the SBUS connectors on the FACP.
6. Attach the annunciator and door assembly to the backbox using screws provided (see Figure 4-14).

4.5.2 RA-2000 Connection to the Panel

Connect the RA-2000 to the panel as shown in Figure 4-17.

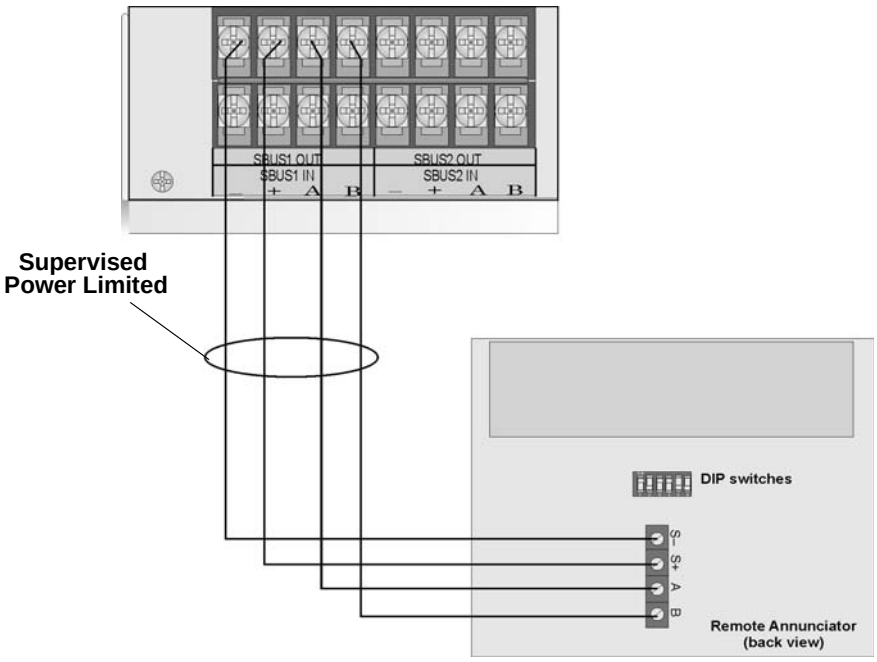


Figure 4-17 Model RA-2000 Connection to the Panel

4.5.3 Temporary Programming Display

When an RFP-2100 is being initially setup, place an RA-2000 on the panel at address 63 or address 31 for an

RA-1000 or RA-100 and power up the panel. This will initiate the Temporary Programming Display feature. This allows the RA-2000, RA-1000 or RA-100 to act as the main annunciator for the RFP-2100 panel and allows access to the idle screen and menu system for programming. While in this mode, a trouble will be annunciated through the system to indicate the feature is being utilized. This is only available when no other annunciators are programmed into the system. When running JumpStart Auto-programming, the system will ask if the intention is to keep the display or remove it after programming.

When using the Temporary Display is no longer necessary; power the panel off, remove the display, and re-power the panel.

4.6 RA-1000 Remote Annunciator Installation

The optional Model RA-1000 Remote Annunciator, is shown in Figure 4-18. Up to 31 annunciators can be added to the IFP-2100 system.



Figure 4-18 Model RA-1000 Remote Annunciator, Front View

RA-1000 installation involves the following steps:

1. Make sure power is off at the panel.
2. Mount the RA-1000 in the desired location (see Section 4.6.1).
3. Connect the RA-1000 to the panel (see Section 4.6.2).
4. Use the DIP switches on the back of the RA-1000 to assign an ID# to the RA-1000 (see Section 4.12.1).
5. The new RA-1000 module must be added to the system through programming. JumpStart will add the module automatically (see Section 8.1). You can also add it manually (see Section 9.2.2). Select a name, if desired (see Section 9.2.1.2).

4.6.1 Mounting the RA-1000

This section of the manual describes mounting the remote annunciator. The annunciator can be flush- or surface-mounted.

Figure 4-19 shows the parts of the annunciator. Instructions for disassembling and mounting appear on the

following pages.

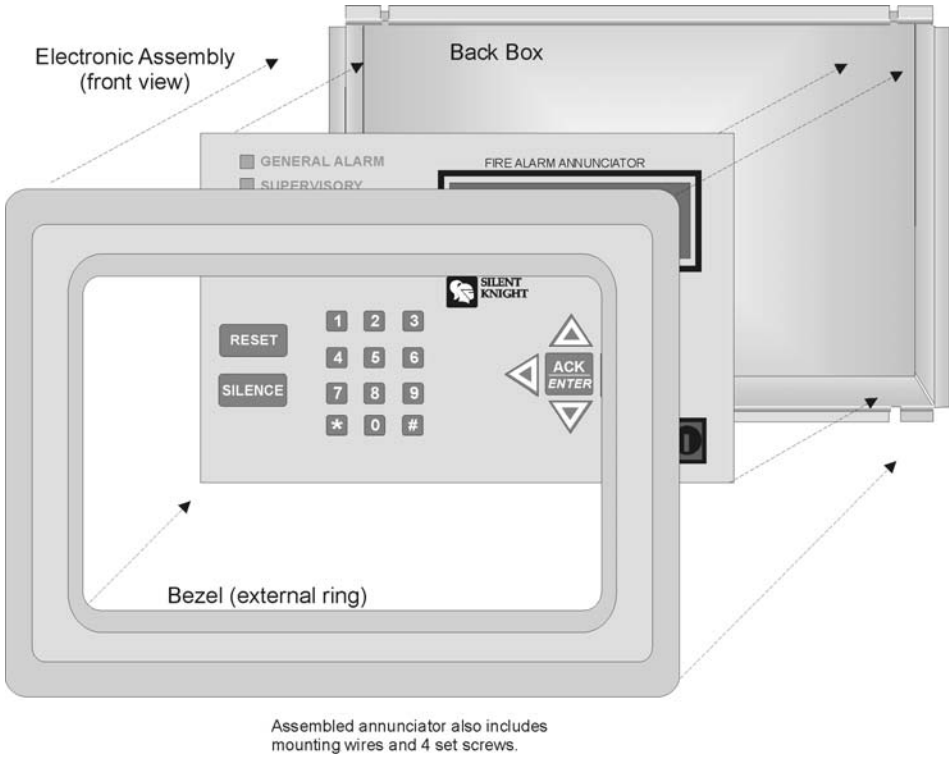


Figure 4-19 Annunciator Parts

The RA-1000 comes from the factory fully assembled. You must disassemble it for mounting. To disassemble the annunciator, use a 5/64 hex wrench to remove the set screws, located on the bottom of the annunciator bezel. (See Figure 4-20 for location of the set screws.)

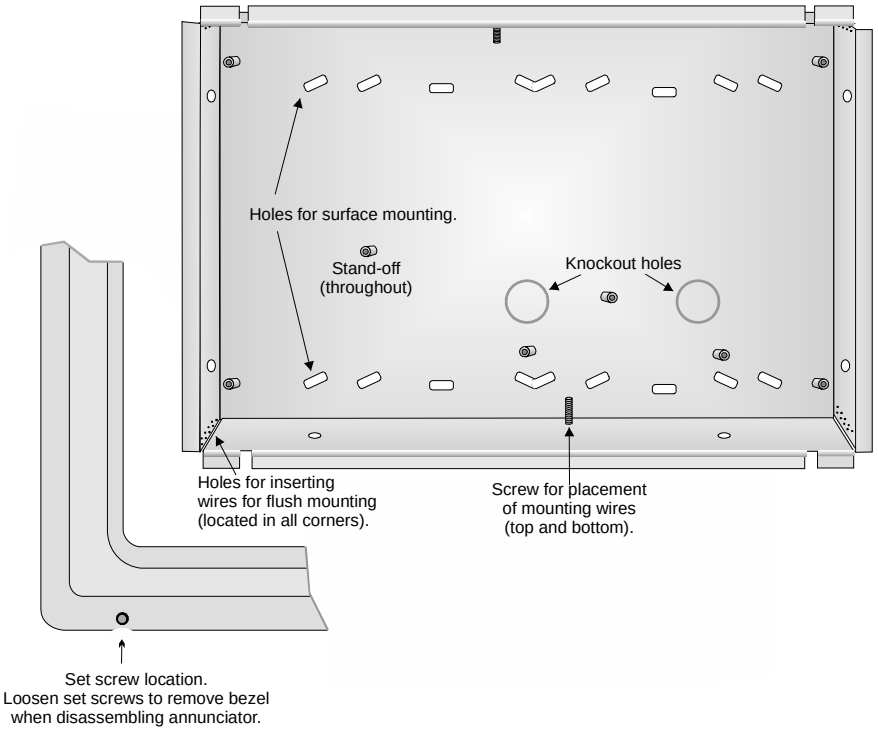


Figure 4-20 Annunciator Backbox and Bezel Details

4.6.1.1 Flush Mounting

This section of the manual describes flush mounting. You can flush-mount with or without an electrical box.

Flush Mounting with an Electrical Box

The RA-1000 annunciator can be used with the following types of electrical boxes: 4S, single-gang, and double-gang. If an electrical box is used, the box must be 1-3/8” back from the face of the wall to accommodate the annunciator. Studs used with an electrical box must be two by fours (or larger).

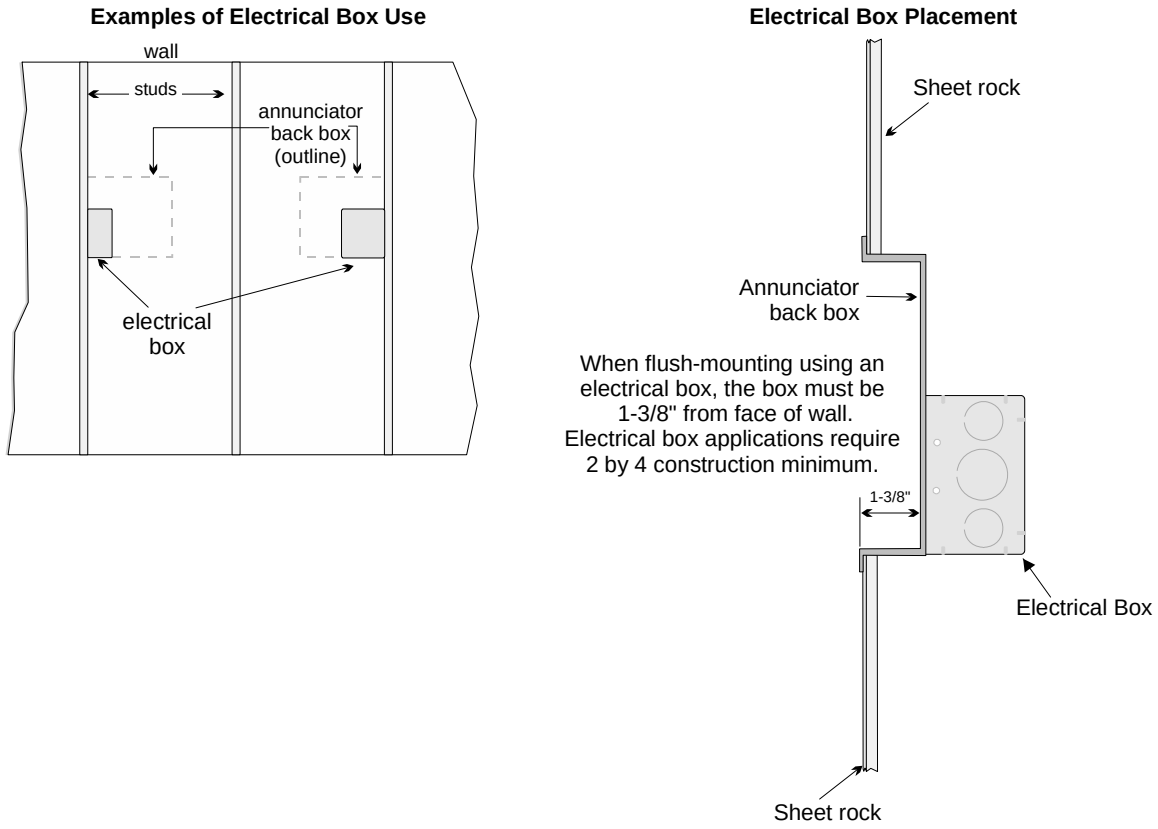


Figure 4-21 Placement of Electrical Box for Flush Mounting

Flush Mounting Steps

1. Cut a hole in the sheet rock to the following dimensions: 8-1/4” w x 6-5/8” h. If an electrical box is used, the box must be 1-3/8” back from face of wall to accommodate the annunciator (see Figure 4-21).
2. Remove knockout holes as needed for wires.
3. Fit the annunciator backbox into the hole and stabilize with mounting wires. Angle the mounting wires into the first hole past the sheet rock. Secure the wires behind the screws as shown in Figure 4-22. When all four wires are in place, the backbox should fit snugly into the hole in the sheet rock.

4. After the annunciator wiring to the panel has been completed (described in Section 4.6.2), replace the electronic assembly in the backbox. Place the bezel over the backbox and tighten the set screws on the bezel.

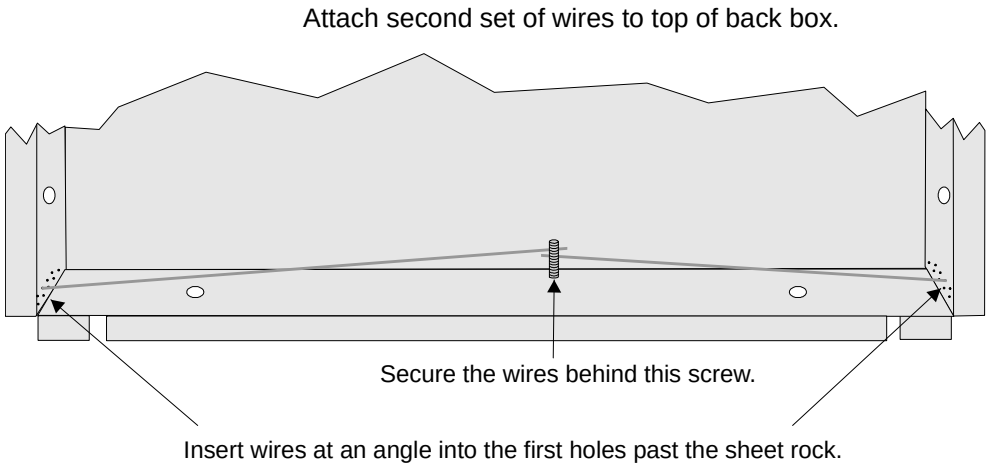


Figure 4-22 Flush Mounting the Backbox

4.6.1.2 Surface Mounting

The RA-1000 can be mounted directly to a surface or can be attached to a single, double, or four-square electrical box. The Model 5860TG/TR trim ring kit is available for use when surface mounting.

1. Drill holes in the surface to match the screw holes on the backbox.
2. Fit the trim ring over the backbox.
3. Attach the backbox to the surface using screws provided.
4. After the annunciator wiring to the panel has been completed (described in Section 4.6.2), replace the electronic assembly in the backbox. Place the bezel over the backbox and tighten the set screws on the bezel.

4.6.2 Model RA-1000 Connection to the Panel

Connect the RA-1000 to the panel as shown in Figure 4-23.

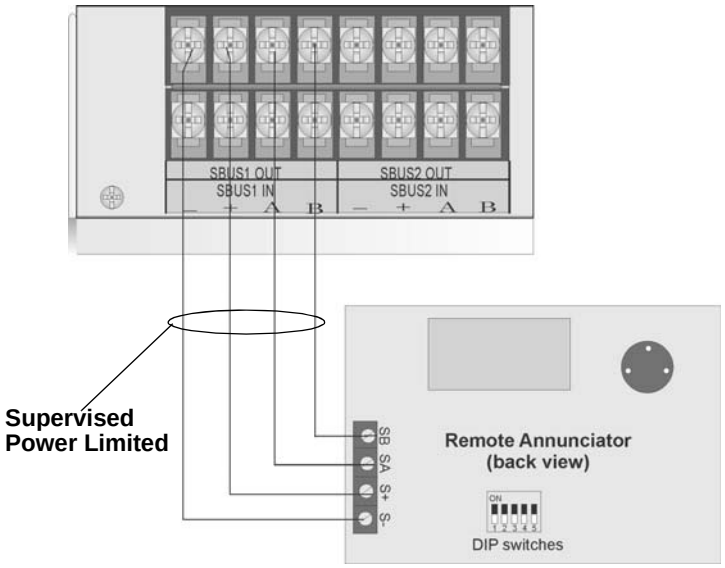


Figure 4-23 Model RA-1000 Connection to the Panel

4.7 RA-100 Remote Annunciator Installation

The optional Model RA-100 Remote Annunciator, is shown in Figure 4-24. The RA-100 can be surface or flush mounted. Up to 31 annunciators can be added to the IFP-2100 system in any combination.



Figure 4-24 Model RA-100 Remote Annunciator, Front View

RA-100 installation involves the following steps:

1. Ensure power is turned off at the panel.
2. Mount the RA-100 in the desired location (see Section 4.5.1).
3. Connect the RA-100 to the panel (see Section 4.7.2).
4. Use the DIP switches on the back of the RA-100 to assign an ID number to the RA-100 (see Section 4.13.1).
5. The RA-100 module must be added to the system through programming. JumpStart will add the module automatically (see Section 8.1). You can also add it manually (see Section 9.2.2). Select a name, if desired (see Section 9.2.1.2).

4.7.1 Mounting the RA-100

This section of the manual describes mounting the remote annunciator. The annunciator can be flush- or surface-mounted.

4.7.1.1 Flush Mounting

This section of the manual describes flush mounting.

Follow these steps to flush mount the RA-100:

1. The backbox dimensions are 9-9/32” W x 8-3/8” H. The backbox can be mounted prior to the complete installation of the RA-100 using any of the mounting holes shown in Figure 4-25.

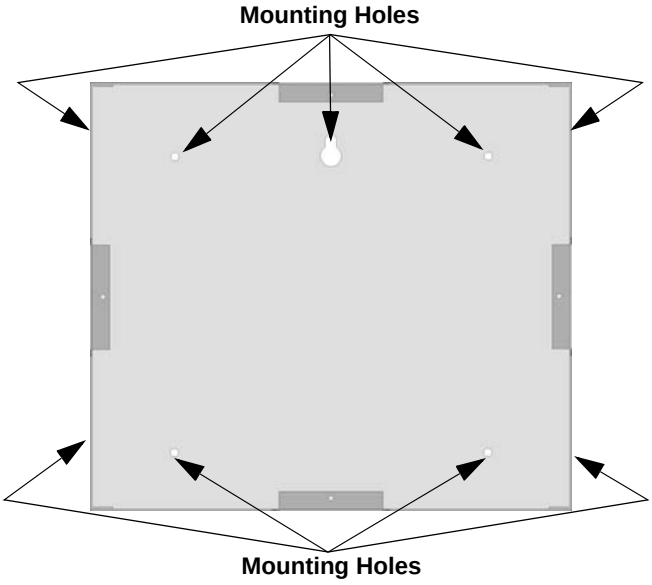


Figure 4-25 Backbox Mounting Holes

2. Remove knockout holes as needed for wires. See Figure 4-26 for backbox knockout locations

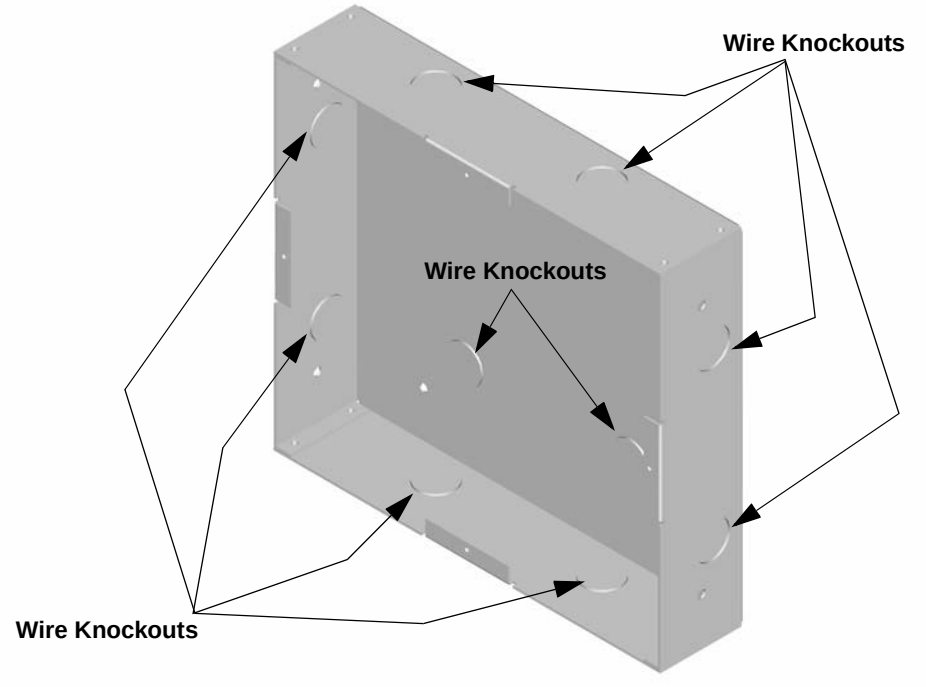


Figure 4-26 Backbox Knockout Locations

3. Wire the Annunciator board to the main control panel. See Figure 4-23.

4. Attach the annunciator/ door assembly to backbox as shown in Figure 4-14 using the supplied screws.

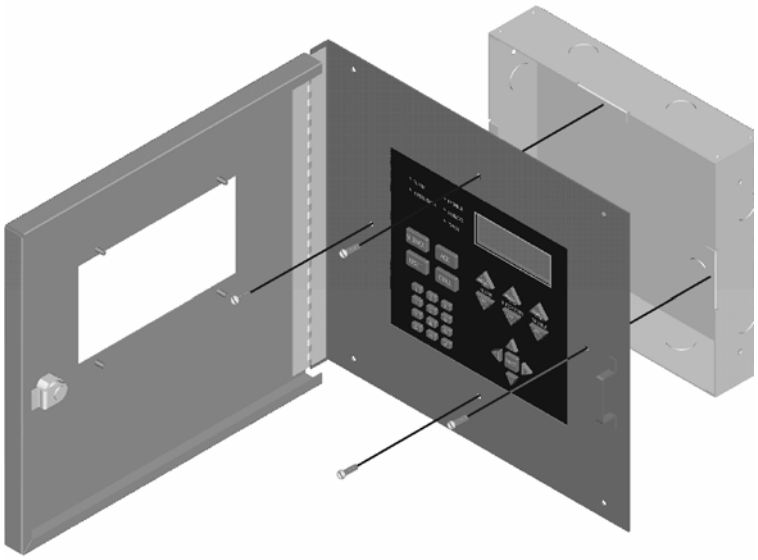


Figure 4-27 Attaching Annunciator/Door Assembly to Backbox

4.7.1.2 Surface Mounting

The Model RA-100TR trim ring kit is available for use when surface mounting.

1. Remove the desired knock out. See Figure 4-26.
2. To properly mount the backbox, insert a single screw into the key shaped mounting hole. Do not tighten all the way. See Figure 4-28.

   Place a level on top of the backbox, with the backbox level insert the rest of the mounting screws.

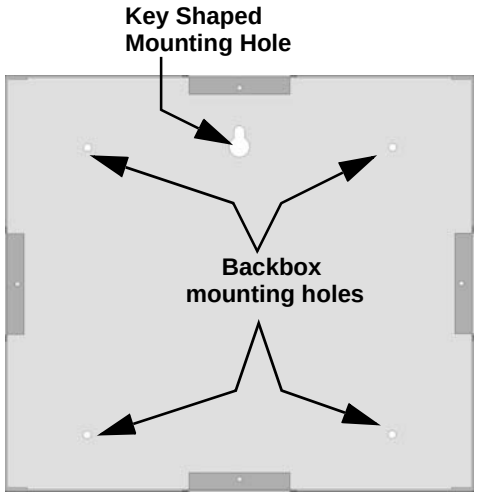


Figure 4-28 Backbox Surface Mount Holes

3. Run wires to the control panel.

4. Place the trim ring over the backbox as shown in Figure 4-29.

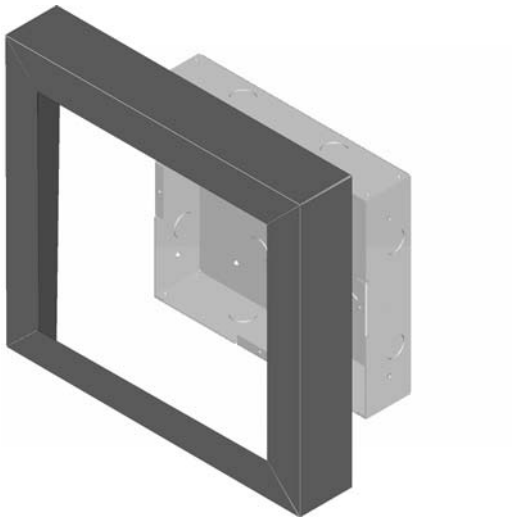


Figure 4-29 Installing Trim Ring

5. Connect wires from the RA-100 to the SBUS connectors on the FACP. (See Figure 4-30).
6. Attach the annunciator and door assembly to the backbox using screws provided.

4.7.2 Model RA-100 Connection to the Panel

Connect the RA-100 to the panel as shown in Figure 4-30.

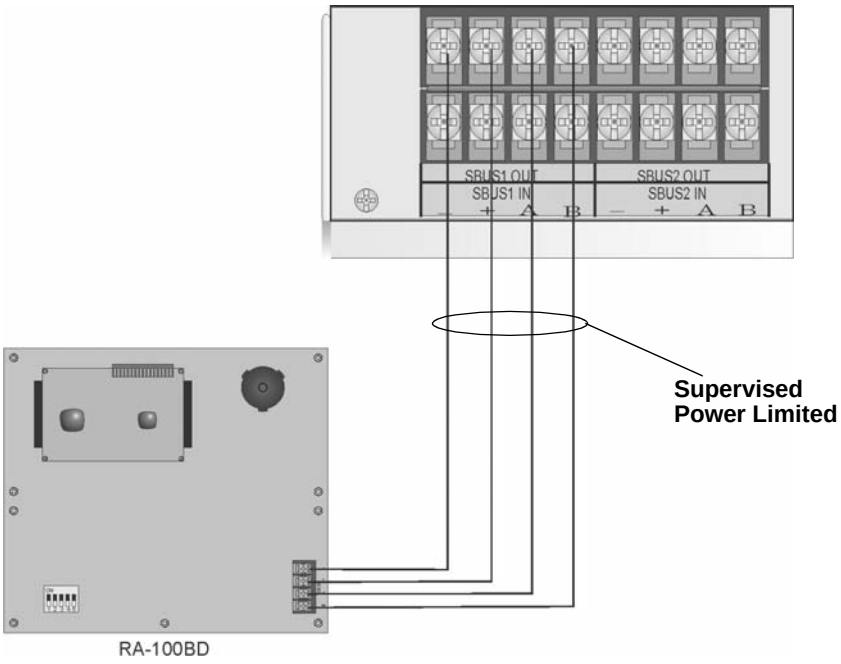


Figure 4-30 Model RA-100 Connection to the Panel

4.8 5815XL Installation

The 5815XL SLC expander lets you add additional addressable devices. The maximum number of SD SLC devices per panel is 2032. The number of 5815XL's is limited by the maximum number of SBUS devices.

Note: 5815XL will only support SD protocol devices on this panel

To install the 5815XL:

1. Make sure power is off at the panel.
2. Mount the 5815XL in the IFP-2100/ECS cabinet, the RPS-1000 cabinet, or the 5815RMK remote mounting kit. Use the standoffs located under the control panel board assembly and secure with screws provided with the 5815XL. For additional information see Model RPS-1000 Installation Instructions (P/N 151153) or 5815RMK Remote Mounting Kit Installation Instructions (P/N 151391).
3. Connect the 5815XL to the control panel. (See Section 4.8.1.)
4. Use on-board DIP switches to select an SBUS ID#. (See Section 4.13.1.)
5. Add the 5815XL module to the system through programming. JumpStart will add the module automatically (see Section 8.1). You can also add it manually (see Section 9.2.2). Select a name, if desired (see Section 9.2.1.2).

You are now ready to connect SLC devices to the 5815XL (see Section 7.6).

Figure 4-31 is a drawing of the 5815XL board, showing the location of terminals and DIP switches.

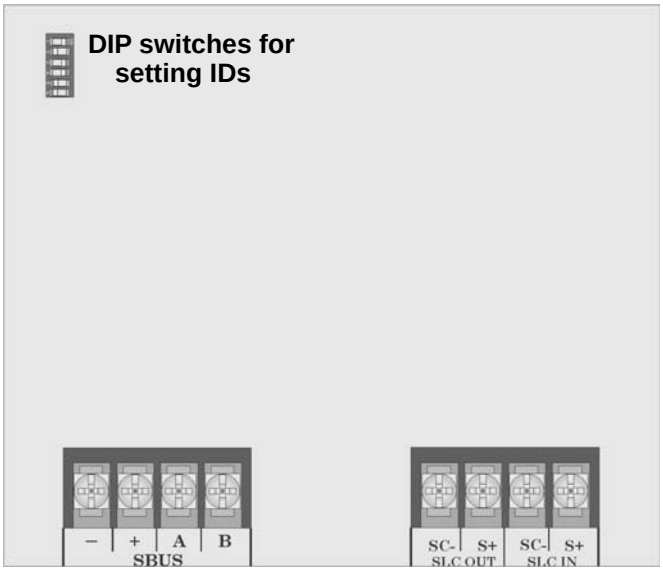


Figure 4-31 5815XL Board

4.8.1 5815XL Connection to the Panel

Connect the 5815XL to the control panel as shown in Figure 4-32. After the 5815XL is connected to the panel, it

must be added to the system. This programming steps are described in Section 9.2.2.

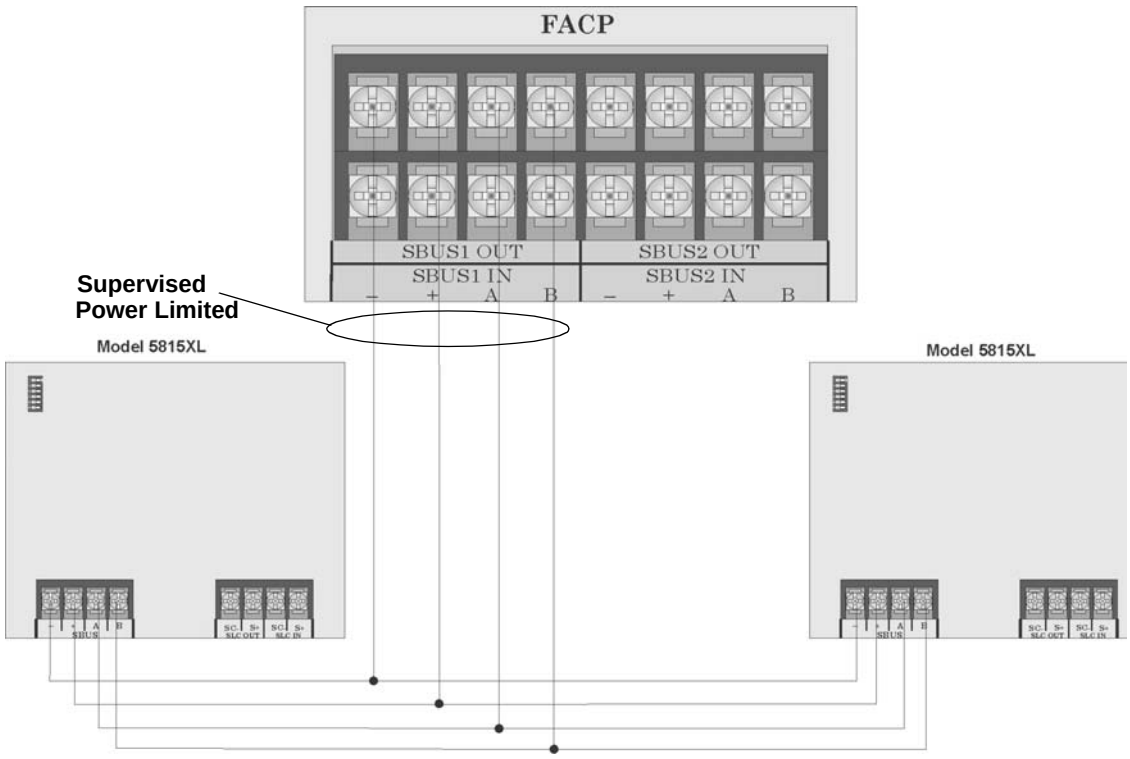


Figure 4-32 5815XL Connection to Main Panel Assembly

4.9 6815 Installation

The 6815 SLC expander lets you add additional addressable devices. The maximum number of IDP or SK SLC devices per panel is 2100. The number of 6815's is limited by the maximum number of SBUS devices.

Note: An external 6815 will support IDP, SK or SWIFT SLC devices.

To install the 6815:

1. Make sure power is off at the panel.
2. Mount the 6815 in the IFP-2100/ECS cabinet, the RPS-1000 cabinet, or the 5815RMK remote mounting kit. Use the standoffs located under the control panel board assembly and secure with screws provided with the 6815. For additional information see Model RPS-1000 Installation Instructions (P/N 151153) or 5815RMK Remote Mounting Kit Installation Instructions (P/N 151391).
3. Connect the 6815 to the control panel. (See Section 4.9.1.)
4. Use on-board DIP switches to select an SBUS ID#. (See Section 4.13.1.)
5. Add the 6815 module to the system through programming. JumpStart will add the module automatically (see Section 8.1). You can also add it manually (see Section 9.2.2). Select a name, if desired (see Section 9.2.1.2).

You are now ready to connect SLC devices to the 6815 (see Section 7.7).

Figure 4-33 is a drawing of the 6815 board, showing the location of terminals and DIP switches.

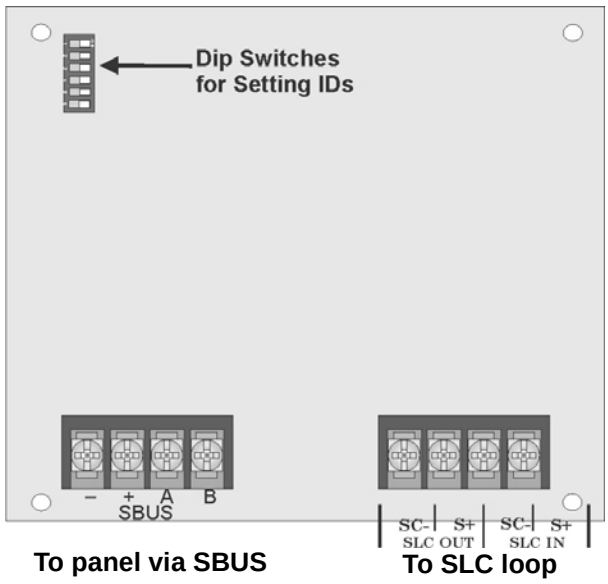


Figure 4-33 6815 Board

4.9.1 6815 Connection to the Panel

Connect the 6815 to the control panel as shown in Figure 4-34. After the 6815 is connected to the panel, it must be added to the system. This programming steps are described in Section 9.2.2.

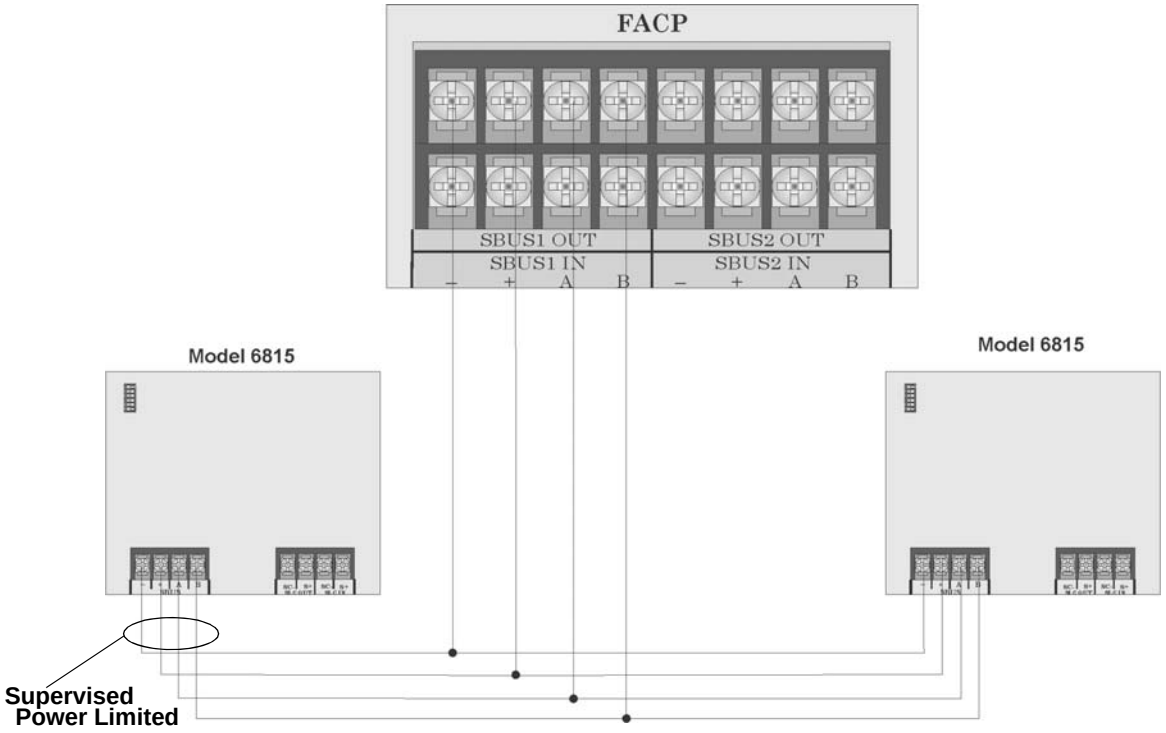


Figure 4-34 6815 Connection to Main Panel Assembly

4.10 5824 Serial/Parallel Interface Module Installation

The 5824 serial/parallel interface module allows you to connect a printer to the panel, so you can print a real-time log of system events. Instructions for installing the 5824 appear below. The 5824 is for ancillary use only.

5824 installation involves the following steps:

1. Ensure that all power has been removed from the FACP.
2. Connect the 5824 to the FACP as shown in Figure 4-35.

Note: Four 5824s per panel maximum.

3. Use the DIP switches on the 5824 board to assign an SBUS ID# to the 5824 (see Section 4.13.1).
4. Configure the 5824 device through programming. See Section 4.10.1.

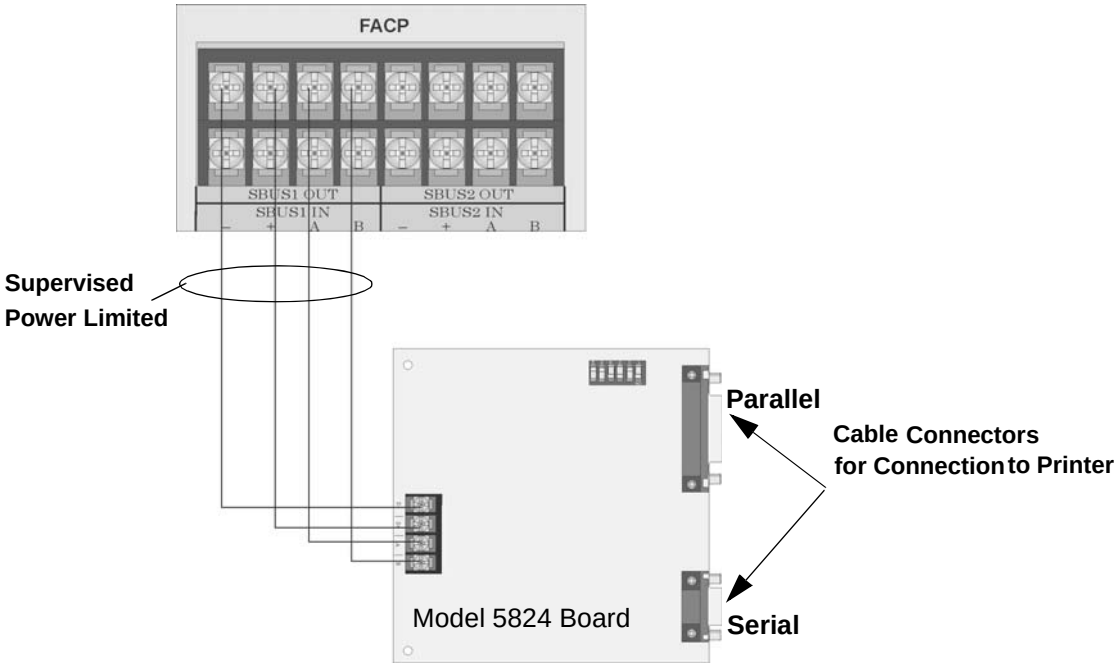


Figure 4-35 5824 Connection to the Panel

4.10.1 Selecting 5824 Options

Configuring the 5824 includes the following steps:

- Add the module to the system. JumpStart will add the module automatically (see Section 8.1). You can also add it manually (see Section 9.2.2).
- Select a name, if desired (see Section 9.2.1.2).
- Select options for the printer and the output port.

Printer and Output Port Options

1. From the Main Menu, select 7 for Panel Programming.
2. Select 1 for Module.
3. Select 1 for Edit Module.

4. From the list that displays, select the 5824 module you want to configure.
5. Press right arrow twice to skip over the Enter Module ID and Enter Module Name options. A screen similar to the one shown in Figure 4-36 will display.

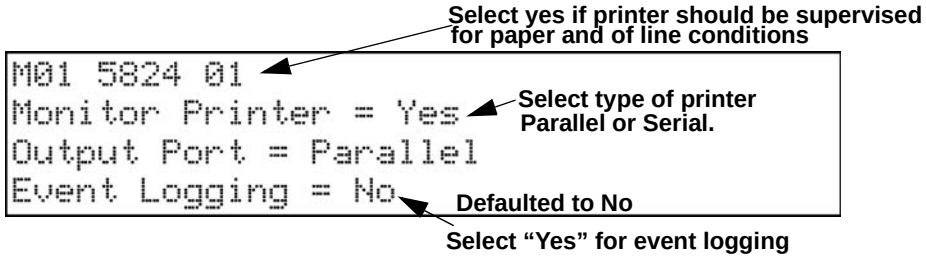


Figure 4-36 Selecting Printer and Output Port Options

6. Select options for the printer as needed for your installation. Most printers are parallel.

Note: When setting Monitor Printer to "Yes" the system defaults to printing only for the connected panels site. Use HFSS Honeywell Fire Software Suite to configure the 5824 to print for multiple sites.

7. If you are using a serial printer, use the next screen to select serial port options as required for your printer. Refer to your printer manual if you need more information.

Option	Choices
Baud Rate:	75 - 19200
Data Bits:	5 - 8
Stop Bits:	.5, 1, 2
Parity:	None, Even, Odd

4.11 5880 LED I/O Module

The 5880 is an LED driver board that can be used in a wide variety of applications, including as an interface with most customized floor plan annunciator boards. The 5880 can drive up to 40 LEDs and has one PZT controller. The 5880 also has eight inputs for dry contact monitoring. The following sub-sections describe hardware installation. Refer to Section 9 for programming information.

4.11.1 5880 Board Layout

Figure 4-37 shows the locations of screw terminals for connection to the panel and contact monitor wiring, pin connectors for connecting LEDs and the DIP switch for selecting an SBUS ID number for the 5880.

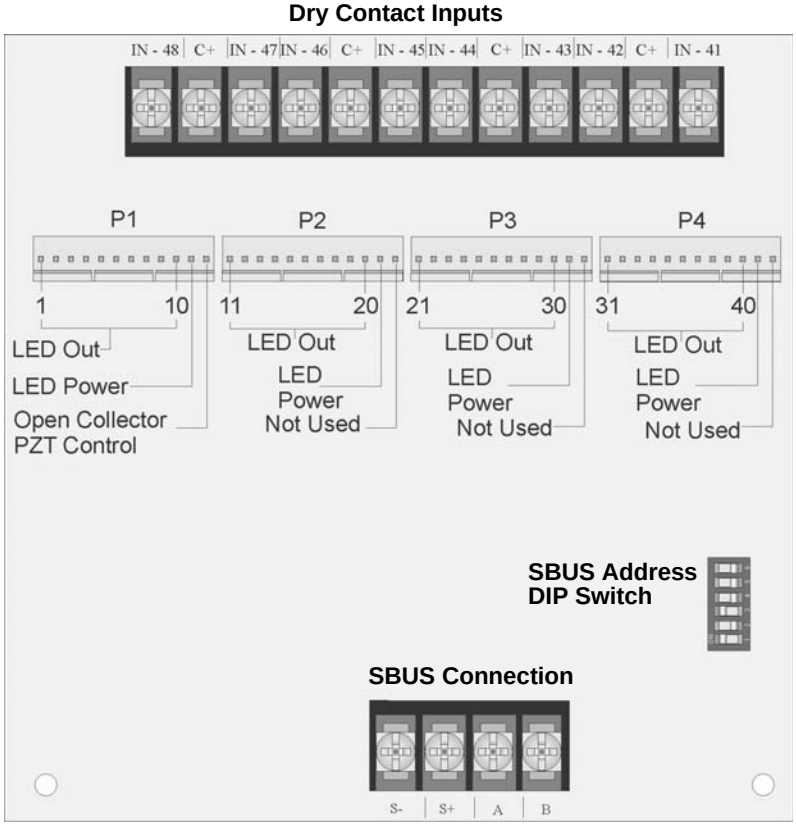


Figure 4-37 5880 Board Layout

4.11.2 FACP Connection

The 5880 connects to the panel via the SBUS. Make connections as shown in Figure 4-38. After the 5880 is

connected to the panel, it must be added to the system. This programming step is described in Section 9.2.2.

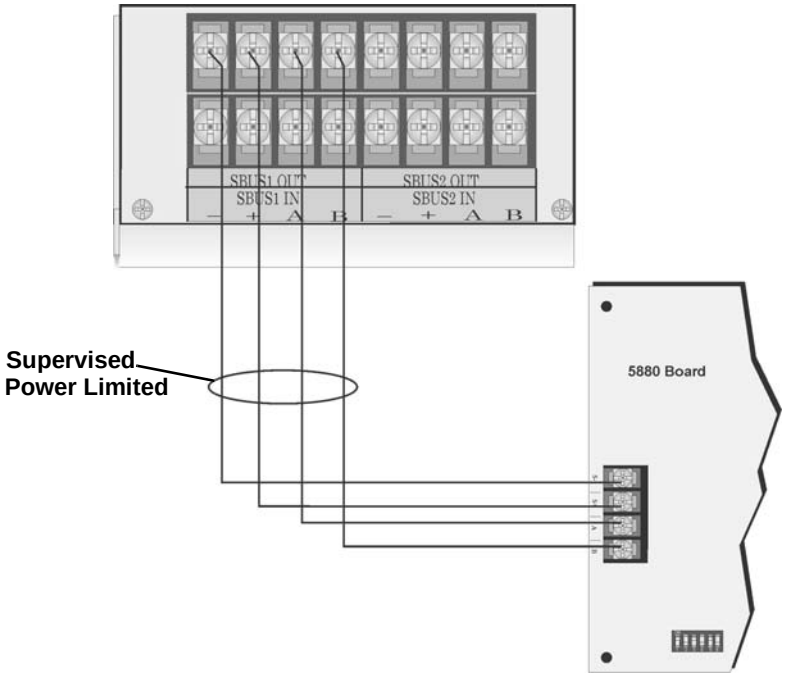


Figure 4-38 5880 Connection to Main Control Panel Assembly

4.11.3 LED Wiring

There are four 12-pin connectors on the 5880 board for connecting LEDs. Each LED gets its power from Pin 11. Internal resistors are sized so that there is approximately 10 mA of current for each LED; no series resistors are required. LED outputs can be mapped to output circuits. See Section 9.5.4 for programming details.

Wire the LEDs as shown in Figure 4-39.

On connector P1, Pin 12 is an open collector output for controlling a PZT. If used, the 5880 PZT will match the PZT pattern of the on-board or remote annunciator.

Note: The circuit connected to "Open Collector Output" (last pin on P1) must be current limited so that no more

than 100 mA of current is allowed to flow into the open collector transistor.

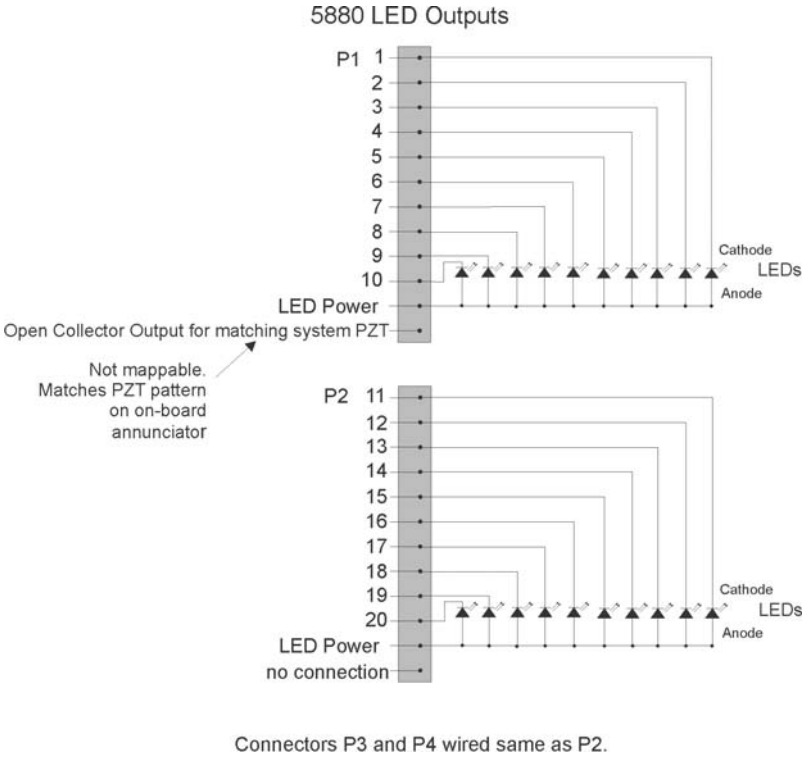


Figure 4-39 5880 Board Layout

4.11.4 Dry Contact Wiring

The 8 input circuits on the 5880 board are for monitoring switch inputs. Any type of switch supported by the control panel can be used with the 5880. For example, you can use a 5880 to monitor pull stations, water flow, tamper, reset, or silence switches.

Wire dry contacts as shown in Figure 4-40. Notice grouping of terminals; power terminals are shared by two inputs.

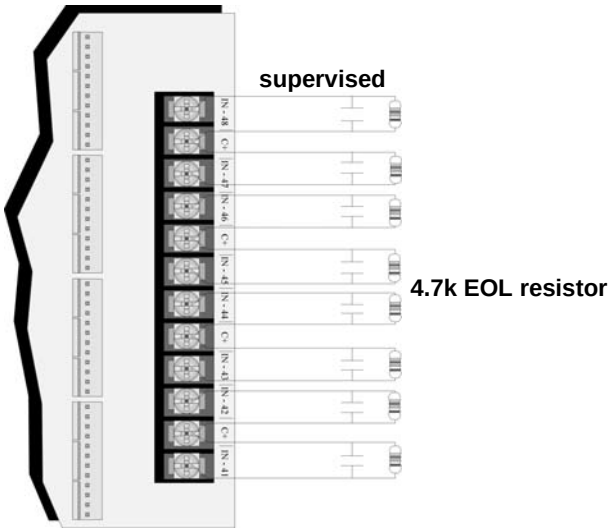


Figure 4-40 Dry Contact Wiring

4.12 5865-3 / 5865-4 LED Annunciator Installation

The 5865-3 and 5865-4 are LED annunciators. The 5865-4 has 30 mappable LEDs, remote fire system silence and fire system reset key switches, and a general system trouble LED. The 5865-3 has 30 mappable LEDs only. These are arranged as 15 pairs of red (typically used for alarm) and yellow (typically used for trouble) LEDs.

Installation of the 5865-3 and 5865-4 is identical. The key switches and the trouble LED follow the behavior of other system annunciators and do not require any installation steps. The following sub-sections describe how to install the 5865-3 and 5865-4 hardware. Refer to Section 9 for programming information.

Note: This manual uses "5865" when referring to aspects of the 5865-3 and 5865-4 that are common to both models.

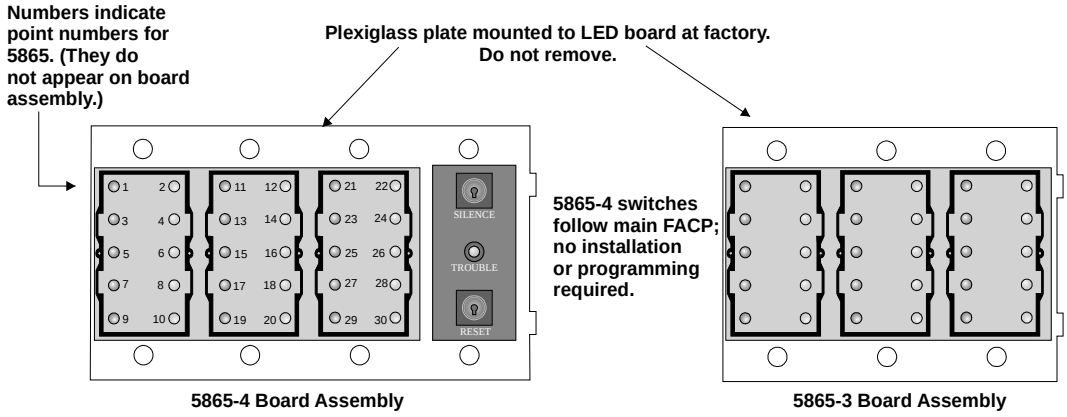


Figure 4-41 5865-3 and 5865-4 Assembly (front view)

4.12.1 FACP Connection

The 5865 connects to the panel via the SBUS. Make connections as shown in Figure 4-42. After the 5865 is connected to the panel, it must be added to the system. This programming step is described in Section 9.2.2.

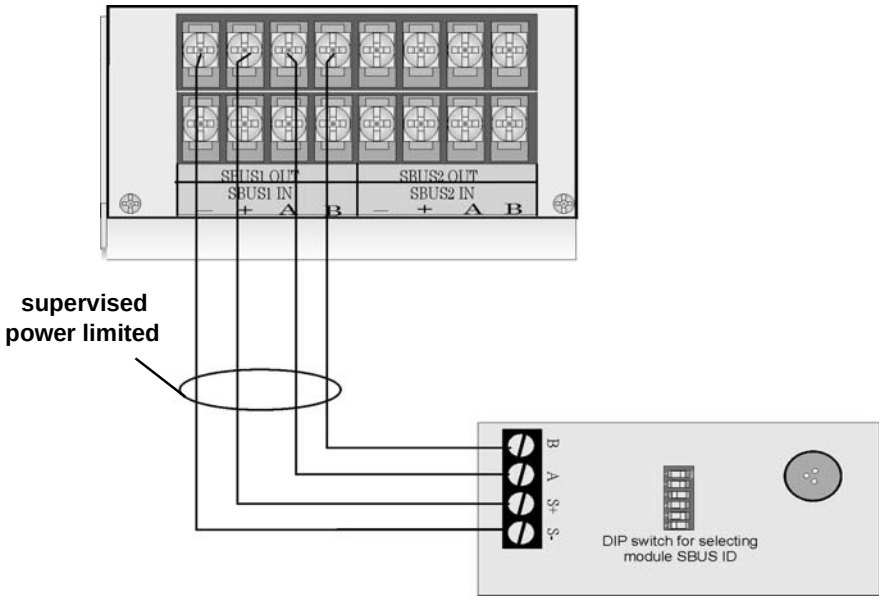


Figure 4-42 5865 Connection to the FACP

4.12.2 5865 Mounting

Mount the 5865-4 to a standard 4-gang electrical box. Mount the 5865-3 to a standard 3-gang electrical box. In Figure 4-43, the 5865-4 attached to a 4-gang box is used as an example.

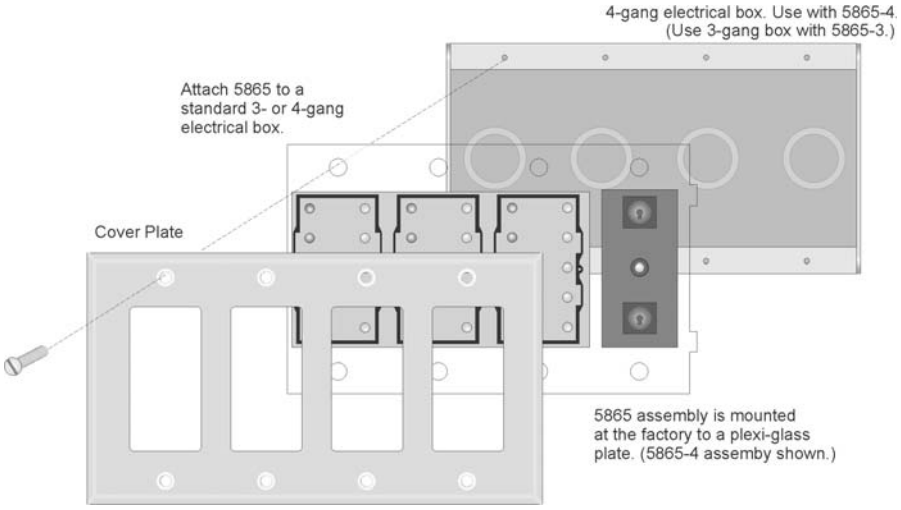


Figure 4-43 5865 Mounting Example

The 5865 ships with a set of zone description labels that can be inserted into the 5865 board assembly. These labels can be used in a typewriter or can be written on by hand. Slide the labels under the plexiglass as shown in Figure 4-44. The LEDs will show through the label when illuminated.

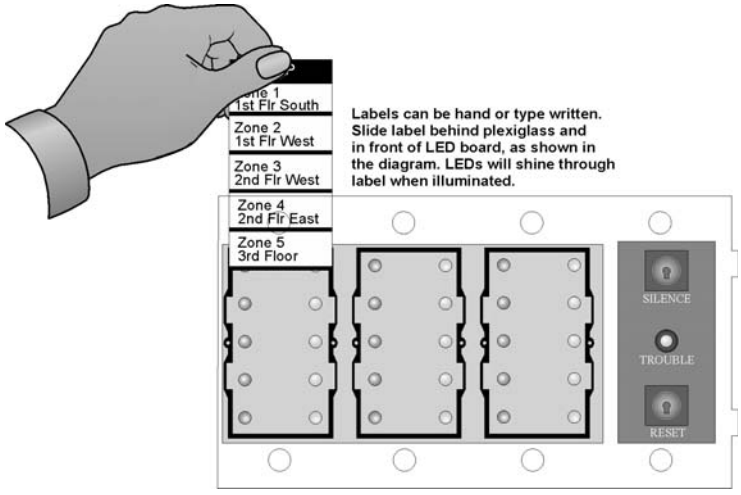


Figure 4-44 Inserting Zone Description Labels

4.13 Configuring SBUS Modules

This section describes how to configure any system hardware modules that have been added to the system.

4.13.1 Assigning SBUS Module IDs

SBUS devices on a panel are addressed from 1 to 63 and are connected to either SBUS 1 or SBUS 2. Although the addressing scheme allows 63 SBUS devices to be connected to a panel, the actual number is limited by current draw and SBUS bandwidth usage as discussed below. When installing a hardware module (see Table 4-1 for a list of compatible devices), you must use the DIP switches on the module to assign an ID# to the module. Address zero is an invalid address and is not allowed.

Figure 4-45 shows all possible DIP switch positions and their correlation to a numerical ID. For example, to select ID 2, place DIP switch 2 in the up or on position.

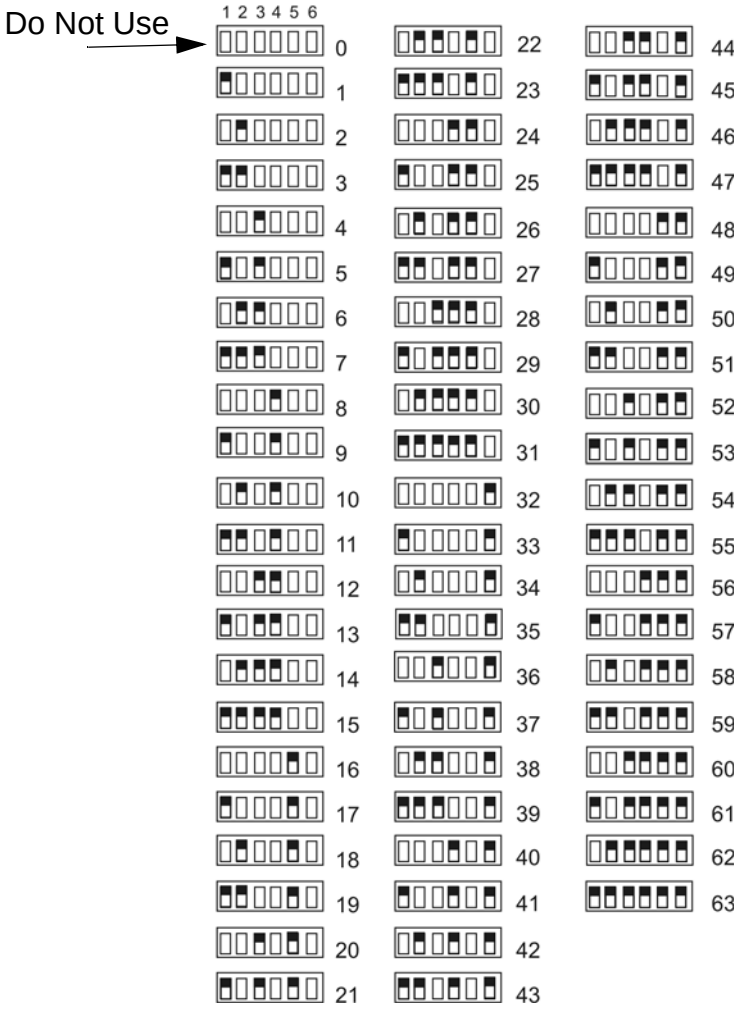


Figure 4-45 Possible SBUS module addresses

Refer to Section 9.2 to edit, add, delete, and view module list.

4.13.2 SBUS Bandwidth Considerations

Each SBUS device generates a certain amount of traffic on the SBUS. Generally, the amount of traffic generated depends on the type of SBUS device. To help you figure out the SBUS bandwidth usage of a given collection of

devices, a tool is available on the Farenhyt website (www.farenhyt.com). The tool will serve as a guide to help determine how heavily loaded an SBUS is with respect to bandwidth. We recommend you use this tool if you plan to have more than eight SBUS devices per SBUS. Remember to include devices that are on RPS-1000 SBUS repeaters in your list of devices for SBUS bandwidth calculations. See Section 4.4.1.

4.14 Telephone Connection

Connect the telephone lines as shown in Figure 4-46. The Model 7860 phone cord is available from Honeywell Silent Knight for this purpose. If you do not use the model 7860 to connect to the phone lines, the wire used for the connection must be 26 AWG or larger diameter wire.

A number of programmable options are available for customizing telephone lines. These options are described in Section 9.6.1.2.

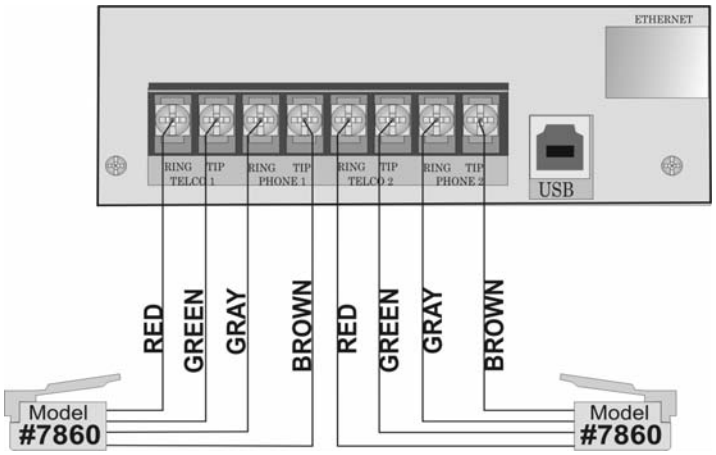


Figure 4-46 Connection of Telephone Lines

4.15 Flexputs™ I/O Circuits

The eight Flexput™ circuits are an innovative and versatile feature of the control panel. They can be used as: Class A or B notification circuits, Class A or B initiation circuits (either 2 or 4 wire detectors), or as auxiliary power (resettable, continuous, sounder base sync, or door holder).

The polarity of the Flexput terminals differs depending on whether the circuit is programmed as an input or an output circuit. If the circuit is programmed as an input circuit (for a detector or normally open contact) the X terminal is negative and O terminal is positive. If the circuit is programmed as an output circuit (Aux power or NAC) then the X terminal is positive and the O terminal is negative.

4.15.1 Conventional Notification Appliance

This sub-section of the manual explains how to install conventional notification appliances for Class A and Class B configurations.

4.15.1.1 Class B Notification Wiring

You must use an appliance from the list of compatible appliances in the Appendix A at the back of this manual.

To install a circuit:

1. Wire Class B Notification appliances as shown in Figure 4-47.

2. Configure the circuit through programming (see Section 9.5)

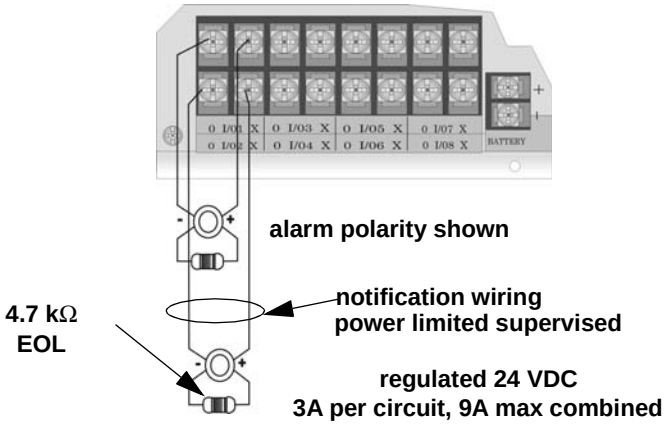


Figure 4-47 Class B Notification Appliance Circuit Wiring

Maximum voltage drop is 3V per Class B notification. See Table 4-4.

Table 4-4: Maximum Impedance Class B

Current	Maximum Impedance
1.0A	3Ω
1.5A	2Ω
2.0A	1.5Ω
2.5A	1.2Ω
3.0A	1.0Ω

4.15.1.2 Class A Notification Wiring

You must use an appliance from the list of compatible appliances in Appendix A at the back of this manual.

To install a Class A notification appliance circuit:

1. Wire the Class A notification appliances as shown in Figure 4-48.

Caution!

For proper system supervision do not use looped wire under terminals marked O and X of the Flexput connectors. Break wire runs to provide supervision of connections.

2. Configure the circuit for Class A in programming (see Section 9.5).

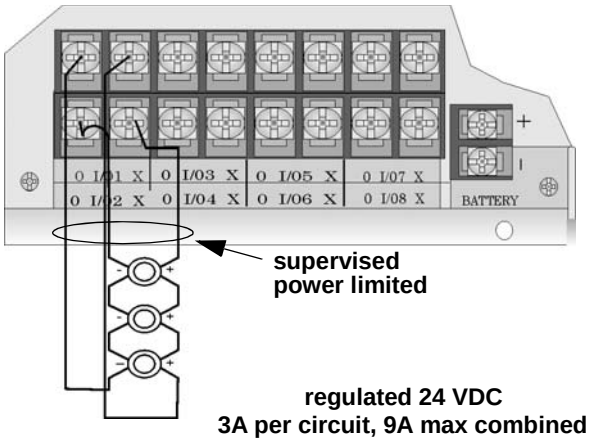


Figure 4-48 Class A Notification Appliance Circuit Configuration

Note: In programming any point that uses multiple Flexput circuits, the lowest Flexput circuit number is used to refer to the circuit pair. For example, Figure 4-48 uses both Flexput circuit 1 and 2, so in programming it would be referred to as point 1.

Maximum voltage drop is 3V per Class A circuit. See Table 4-5.

Table 4-5: Maximum Impedance Class A

Current	Maximum Impedance
1.0A	3Ω
1.5A	2Ω
2.0A	1.5Ω
2.5A	1.2Ω
3.0A	1.0Ω

4.15.2 Conventional Input Switch Circuits

This section of the manual explains how to install conventional initiating devices for Class A or Class B configurations.

4.15.2.1 Class B Inputs

You can connect conventional Class B switches, such as waterflow switches and pull stations, directly to the Flexput circuits of the control panel.

To install a Class B switch:

1. Wire the Class B switch as shown in Figure 4-49.

2. Configure the circuit through programming (see Section 9.5).

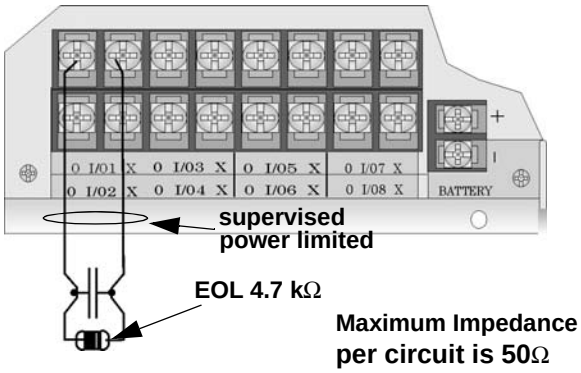


Figure 4-49 Class B Input Switches

4.15.2.2 Class A Inputs

You can connect conventional Class A switches, such as waterflow switches and pull stations, directly to the Flexput circuits of the control panel.

To install a Class A switch:

1. Wire the Class A switch as shown in Figure 4-50.
2. Configure the circuit through programming (see Section 9.5).

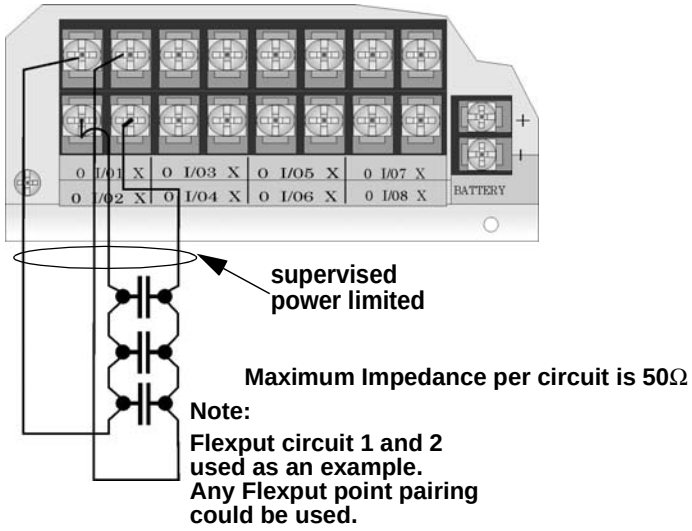


Figure 4-50 Class A initiating Switches

Note: In programming any point that uses multiple Flexput circuits, the lowest Flexput circuit number is used to refer to the circuit pair. For example, Figure 4-50 uses both Flexput circuit 1 and 2, so in programming it would be referred to as point 1.

4.15.3 Installing 2-Wire Smoke Detectors

Any compatible UL listed two-wire smoke detector can be used with the control panel (see Appendix A for list of compatible smoke detectors). Figure 4-51 and Figure 4-52 illustrate how to connect a UL listed 2-wire detector to the control panel.

4.15.3.1 Installing 2-Wire Class B Smoke Detectors

To install a Class B two-wire smoke detector, wire as shown in Figure 4-51.

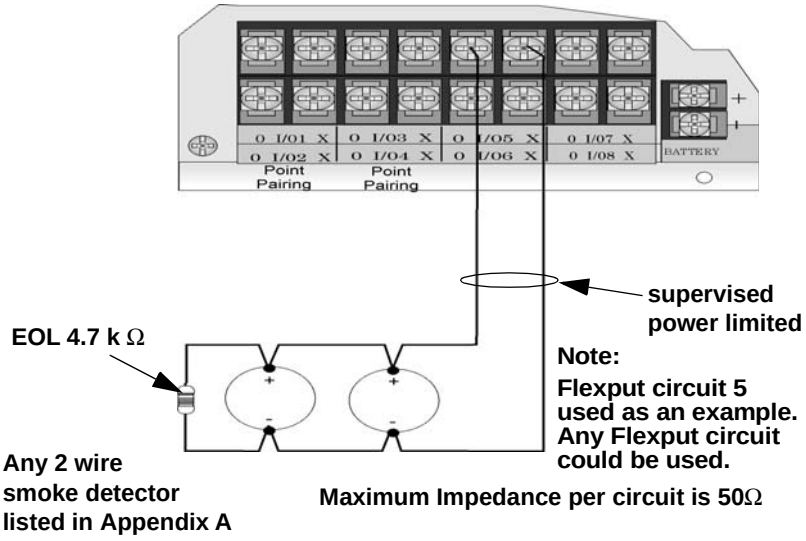


Figure 4-51 Two-Wire Class B Smoke Detector

4.15.3.2 Installing 2-Wire Class A Smoke Detectors

To install a Class A two-wire smoke detector, wire as shown in Figure 4-52.

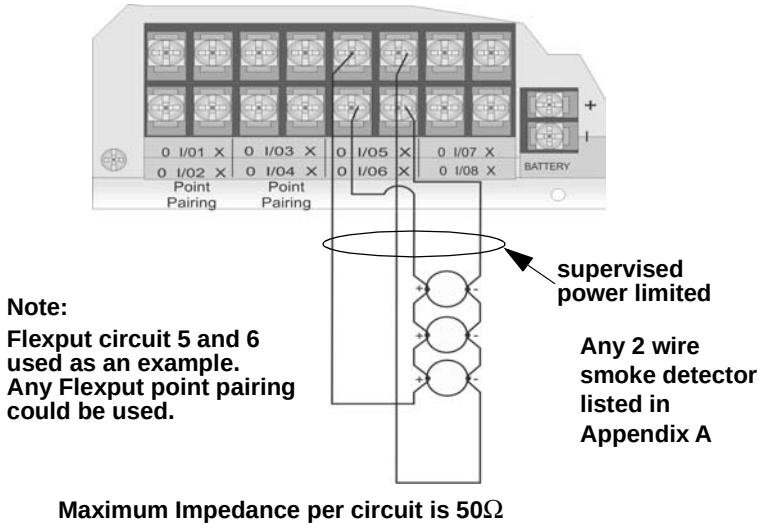


Figure 4-52 Two-Wire Class A Smoke Detector Connections

Note: In programming any point that uses multiple Flexput circuits, the lowest Flexput circuit number is used to refer to the circuit pair. For example, Figure 4-52 uses both Flexput circuit 5 and 6, so in programming it would be referred to as point 5.

4.15.4 Installing 4-Wire Smoke Detectors

Any compatible UL listed four-wire smoke detector can be used with the control panel (see Appendix A for list of compatible smoke detectors). Figure 4-53 and Figure 4-54 illustrate how to connect a UL listed four-wire

detector to the control panel.

4.15.4.1 Installing a Class B 4-Wire Smoke Detectors

Figure 4-53 illustrates how to install a 4-wire Class B smoke detector.

Conventions used for wiring 4-wire Class B loops:

1. Up to four Class B 4-wire smoke detector loops can be connected to the control panel at once.
2. Each Class B loop input is paired with a unique power source as shown in Figure 4-53.
3. Each loop gets smoke power from the even numbered Flexput circuit and the contact input is connected to the odd numbered Flexput circuit.

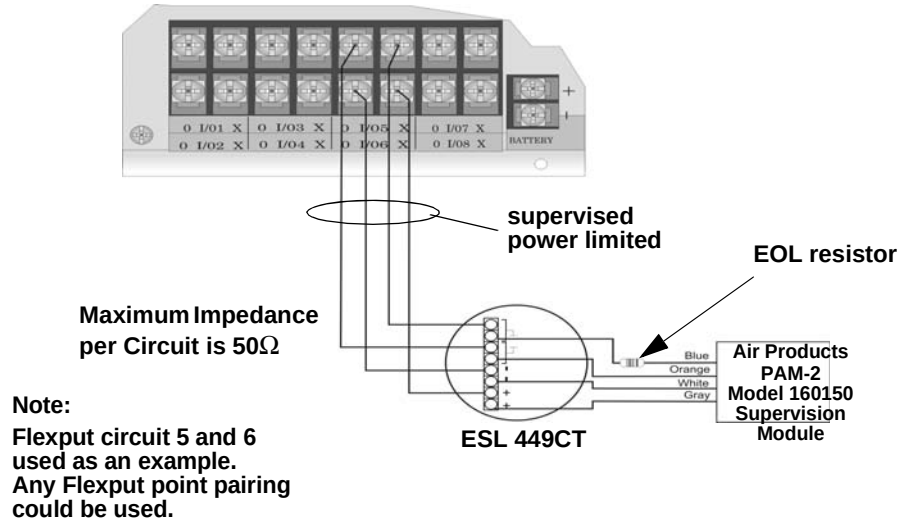


Figure 4-53 Class B 4-Wire Smoke Detector Connections

Note: In programming any point that uses multiple Flexput circuits, the lowest Flexput circuit number is used to refer to the circuit pair. For example, Figure 4-53 uses both Flexput circuit 5 and 6, so in programming it would be referred to as point 5.

4.15.4.2 Installing 4-Wire Class A Smoke Detectors

Figure 4-54 illustrates how to install 4-wire Class A detectors. Conventions used for wiring 4-wire Class A loops:

1. Up to two Class A 4-wire loops can be connected to the control panel at once.

2. Smoke power is supplied to each Class A loop as shown in Figure 4-54.

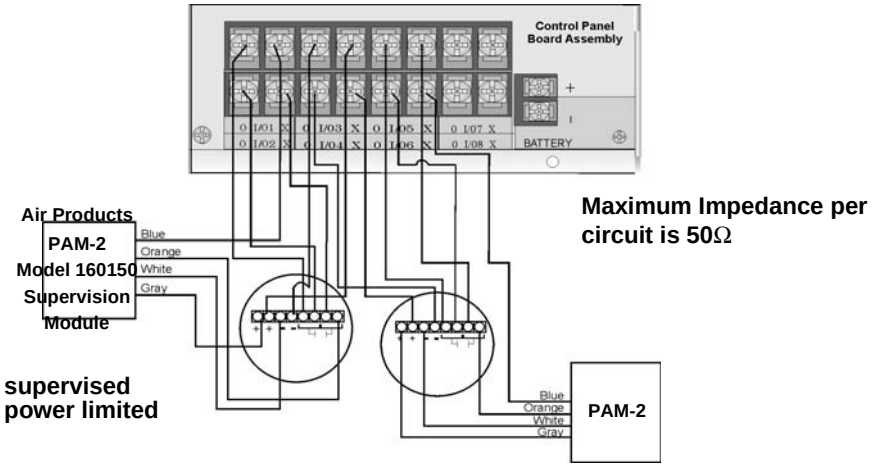


Figure 4-54 Class A 4-Wire Smoke Detector Connections

Note: In programming any point that uses multiple Flexput circuits are always referred to as the lowest Flexput circuit number used. For example, Figure 4-54 uses Flexput circuits 1, 2, 3 together and 4, 5, 6 together. In programming (1, 2, 3) would be referred to as point 1, and (4, 5, 6) would be referred to as point 4.

4.15.5 Auxiliary Power Installation

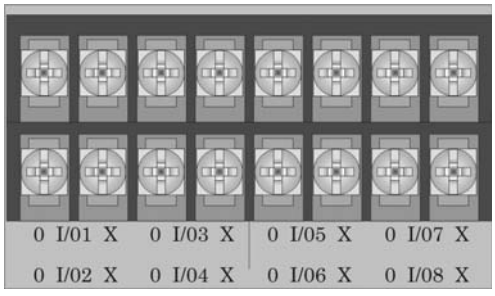
Flexput Circuits 1-8 on the control panel can be used as auxiliary power circuits. The three types of auxiliary power available are:

- Door Holder Power (see Section 4.15.5.1)
- Constant Power (see Section 4.15.5.2)
- Resettable Power (see Section 4.15.5.3)
- Sounder Sync Power (see Section 4.15.5.4)

Auxiliary power circuits are power limited. Each circuit can source up to 3A (total current for all Flexput circuits must not exceed 9.0 A in alarm, and 6A when used as constant auxiliary power in normal standby).

To install an auxiliary power circuit:

1. Wire the Flexput circuit(s) that will be used for auxiliary power. See Figure 4-55 for location of Flexput circuits.
2. Configure the auxiliary power output through programming (see Section 9.5).



When used as auxiliary power, terminals labeled "O" are negative, terminals labeled "X" are positive

Figure 4-55 Flexput Circuit Location

4.15.5.1 Door Holder Power

Door holder power is intended for fire door applications. When there are no fire system alarms in the system and the panel has AC power, door holder circuits have 24 volt power present at their terminals. Any fire system alarm will cause power to disconnect. Power will be re-applied when the fire system is reset. If AC power is not present, the auxiliary door holder power will be disconnected to conserve the battery backup. When AC power is restored, power is immediately restored to the door holder circuits.

Use a UL listed door holder such as ESL DHX-1224, for this application. See Table A-4 for compatible door holder list.

4.15.5.2 Constant Power

Use constant power for applications that require a constant auxiliary power source. Power is always present at constant circuits.

4.15.5.3 Resettable Power

Resettable power is typically used to power beam detectors, flame detectors and conventional 4-wire smoke detectors. For circuits selected as Resettable, 24 volt power is always present at the terminals unless a fire system reset occurs. If a fire system reset occurs, power is disconnected from the terminals for 30 seconds, then re-applied. See Table A-3 for compatible four wire smoke detectors.

4.15.5.4 Sounder Sync Power

Sounder Sync Power continuously outputs the System Sensor synchronization pattern and is intended for use with B200S sounder bases.

4.16 On-Board Relays (Conventional)

The control panel has two built-in programmable relays and a built-in trouble relay. All relays are Form C rated at 2.5 A @ 24VDC.

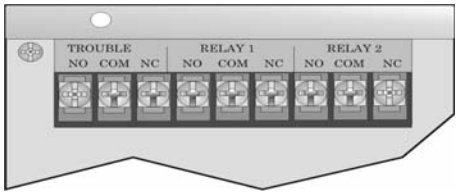


Figure 4-56 Location of Conventional Relay Circuits

4.16.1 Trouble Relay

The control panel has a dedicated Form C trouble relay built in. The relay provides a normally open and a normally closed contact. The trouble relay will deactivate under any trouble condition.

Note: The NC contact is the relay contact that is closed when the panel has power and there are no trouble conditions.

4.16.2 Programmable Relays

The control panel has two Form C programmable relays built in. Each relay provides a normally open and a normally closed contact.

To install one or two programmable relays, follow these steps.

1. Wire Relay 1 and/or Relay 2 as needed for your application. See Figure 4-56 for the location of the relay terminals.
2. Configure the relay through programming (see Section 9.5).

4.17 Remote Station Applications

4.17.1 Keltron Model 3158 Installation

The control panel is compatible with Keltron Model 3158, used for direct connection to a Keltron receiver. The 3158 reports alarms, supervisories, and troubles.

The steps for connecting the 3158 to the control panel. Refer to the 3158 installation instructions for complete information.

1. Wire the 3158 to the control panel as shown in the connection list.
2. Wire the 3158 within 20 feet of the control panel. Wiring must be enclosed in conduit.
3. Program control panel Relay 1 for alarm.
4. Program Flexput circuit 5 for alarm.
5. Program Flexput circuit 6 for supervisory non latching.

Table 4-6: Keltron 3158 to Control Panel Connections

Terminal #	Connects To
3158 Term. 1	To Keltron receiving equipment
3158 Term. 2	To Keltron receiving equipment
3158 Term. 3	Earth ground
3158 Term. 4	Not used; no connection.
3158 Term. 5	Control panel SBUS OUT +
3158 Term. 6	Control panel SBUS OUT –
3158 Term. 7	Control panel I/O5 O

Terminal #	Connects To
3158 Term. 8	Control panel Relay 1 COM
3158 Term. 9	Control panel I/O6 O
3158 Term. 10	Control panel I/O6 X
Control panel I/O5 X	Control panel Relay 1 NO
Control panel Relay 1 COM	Control panel Trouble COM
Control panel Relay 1 NO	Control panel Trouble NC

4.17.2 City Box Connection Using the 5220 Module

This section describes how to connect the control panel to a local energy municipal fire alarm box or “city box” as required by NFPA 72 Auxiliary Protected Fire Alarm systems for fire alarm service. The city (master) box is an enclosure that contains a manually operated transmitter used to send an alarm to the municipal communication center which houses the central operating part of the fire alarm system.

City Box Standby Current: 0 (Notification supervision current accounted for in control panel draw.)

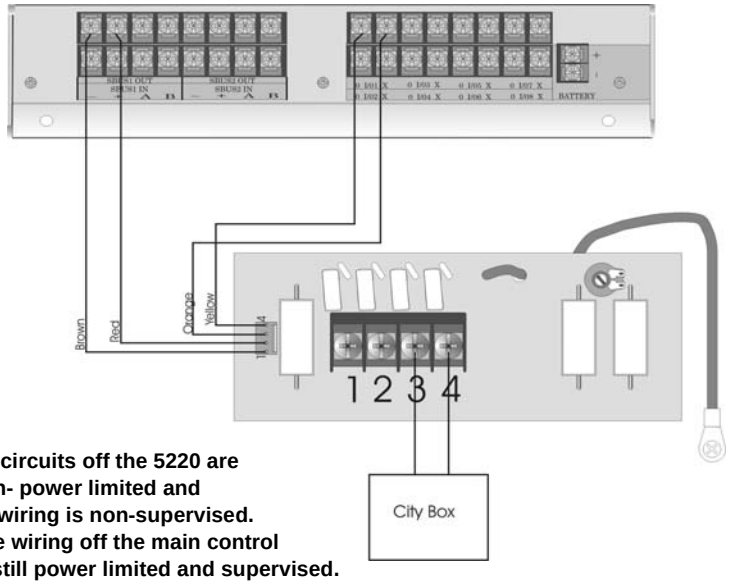
Alarm Current: 1 Amp for 1 second 27.2 VDC max.

The maximum coil and wire resistance (combined) must not exceed 30 ohms.

To install the 5220 for city box connection:

1. Use one of the knockouts on the right side of the control panel to connect the 5220 using a short piece of conduit (must not exceed 20 feet in length).
2. Wire the 5220 to the control panel as shown in Figure 4-57. This drawing also shows how to connect the city box coil to terminals 3 and 4 on the 5220. Do not install an EOL resistor in the terminals of the Flexput circuit used for this application.
3. Connect earth ground wire to the 5220 chassis with mounting screw.

4. Program the Flexput circuit as a notification circuit, Refer to Section 9.5.3. Assign this Flexput to an output group that is mapped to activate with non silenceable constant output in response to a system general alarm condition. It is not possible to reset the remote indication until you clear the condition and reset the control panel.



Not suitable for remote station protected premise service where separate transmission circuits are required for fire supervisory (if applicable), and trouble signals.

All circuits off the 5220 are non- power limited and all wiring is non-supervised. The wiring off the main control is still power limited and supervised.

Note: Flexput circuit 1 used as an example. Any Flexput circuit could be used

Figure 4-57 City Box Connection

4.17.3 Using the Addressable Relay Module for City Box Connection

Wire the Relay module as shown in Figure 4-58.

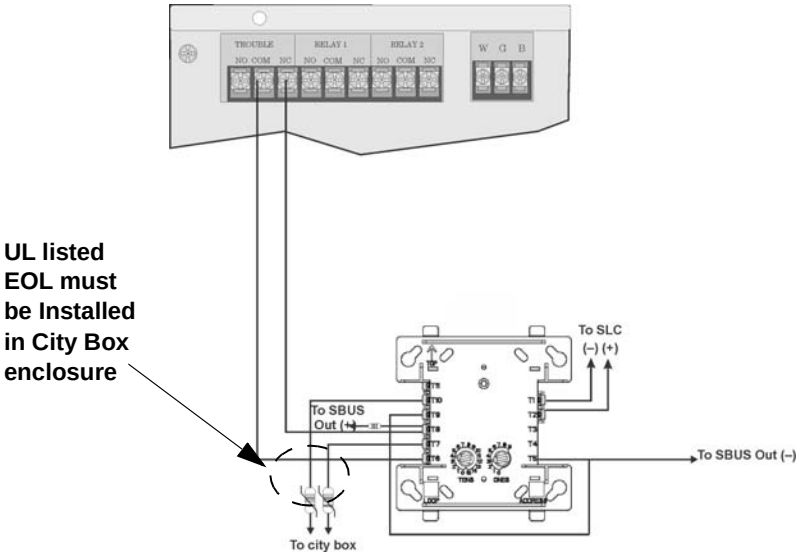


Figure 4-58 Relay Module for City Box Connection

4.17.4 NFPA 72 Polarity Reversal

Note: Intended for connection to a polarity reversal circuit of a control unit at the protected premises having

compatible rating.

4.17.4.1 Using the 5220 Module

When the 5220 is wired and programmed for polarity reversal, it reports alarm and trouble events to a remote site. Alarms will override trouble conditions and it will not be possible to reset the remote indicator until the condition is cleared and the control panel is reset.

If an alarm condition occurs, the alarm relay will close, overriding the trouble condition.

Standby Current:100 mA, 24 VDC
Alarm:100 mA, 24 VDC

To install the 5220 for polarity reversal, follow the steps below:

1. Locate the knockout on the right side of the control panel cabinet to connect the 5220 using a short piece of conduit (must not exceed 20 feet in length).
2. Wire the 5220 to the control panel using the four-wire pigtail provided as shown in Figure 4-59. This diagram also shows how to connect the 5220 to the remote indicator. Do not install an EOL resistor in the terminals of the Flexput circuit used for this application.
3. Connect earth ground wire to the 5220 chassis with mounting screw.
4. Program the Flexput circuit as a notification circuit, refer to Section 9.5.3. Assign this Flexput to an output group that is mapped to activate with non silenceable constant output in response to a system general alarm condition.
5. If necessary, adjust loop current using the potentiometer (R10) on the 5220 board. Normal loop current is 2-to-8 mA with a 1k ohm remote station receiving unit. Maximum loop resistance is 3k ohm.

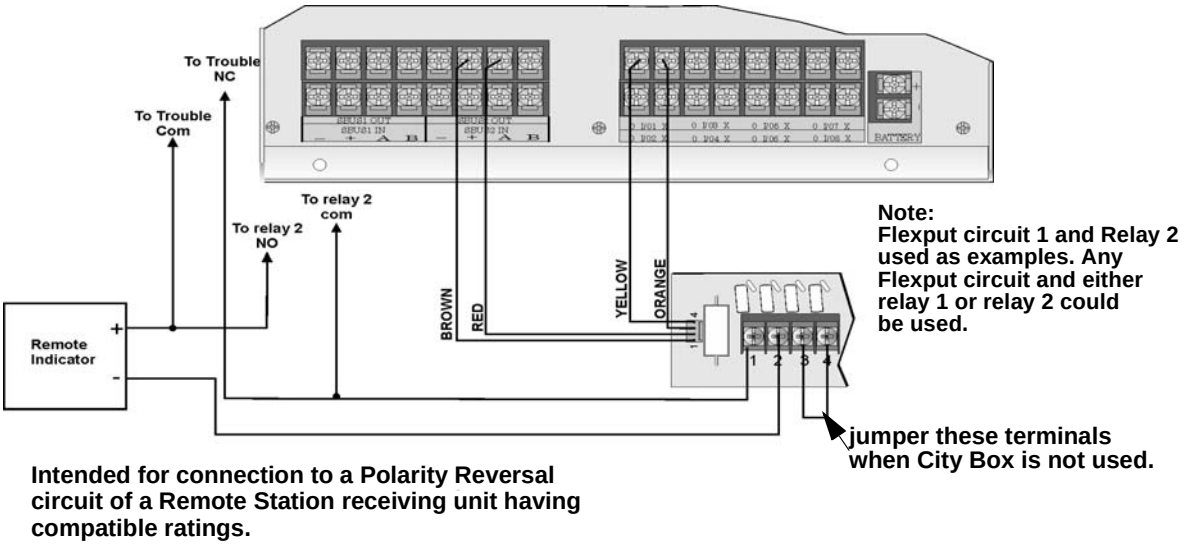


Figure 4-59 Polarity Reversal Connection Using the 5220 Module

4.17.4.2 Using the 7644-L8 Module

When the 7644-L8 is used for polarity reversal, it allows alarm and trouble events to be reported to a remote site. Alarms will override trouble conditions and it will not be possible to reset the remote indicator until the condition is cleared and the control panel is reset.

To install the 7644-L8 for polarity reversal:

1. Wire the 7644-L8 to the control panel as shown in Figure 4-60. Do not install an EOL resistor on the terminals of the Flexput circuit used.

   Note: Use only Flexput circuits on the control panel for reverse polarity.

2. Program the Flexput circuit as a notification circuit. See Section 9.5.3.
3. Map the group to activate non silenceable, constant on in response to a system general alarm, and to disconnect in response to a system trouble.
4. Intended for connection to a polarity reversal circuit of a remote station receiving unit having compatible rating.

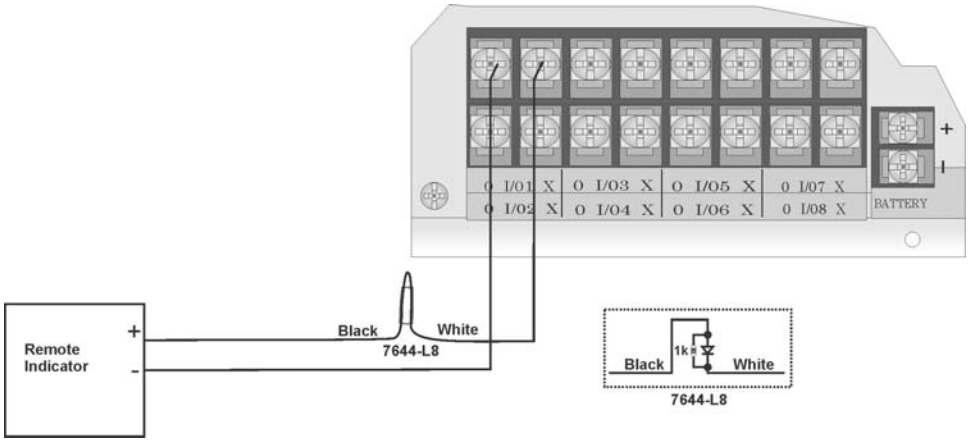


Figure 4-60 Polarity Reversal Connection Using the 7644-L8

4.17.5 Transmitter Activated by Dry Contacts

This section describes the connection of a UL 864 listed remote station transmitter to the IFP-2100/ECS dry relay contacts. The IFP-2100/ECS FACP contacts must be supervised by the remote station transmitter module using end-of-line resistors (ELRs) with a value determined by the transmitter manufacturer. Power is also provided by the remote station transmitter manufacturer. Refer to the remote station transmitter manufacturer's manual for details.

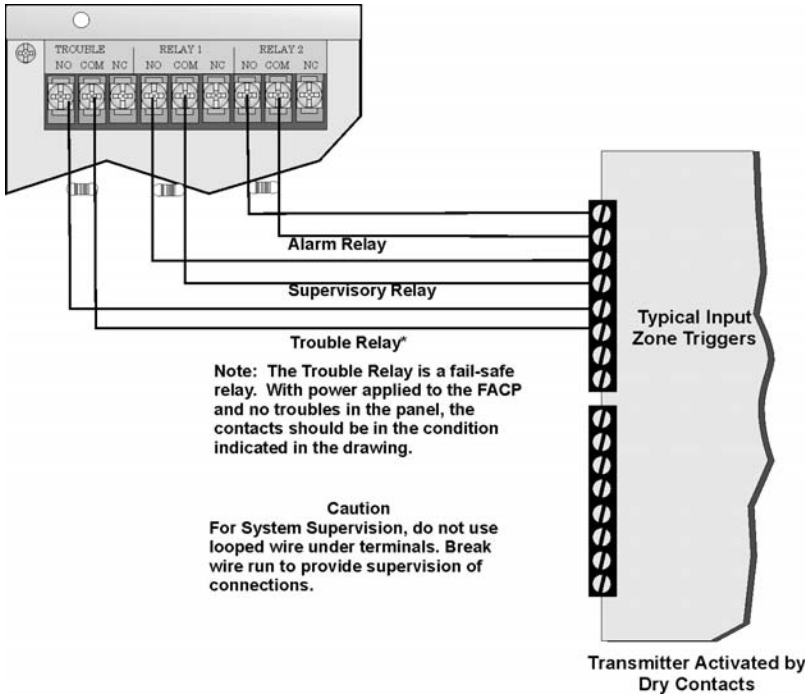


Figure 4-61 Transmitter Activated by Dry Contacts

Section 5
Networking

5.1 Network System Hardware Features

IFP-2100/ECS panels can be networked to create a virtual system that is larger than 2100 addressable points. Each additional IFP-2100/ECS or RFP-2100 provides another 2100 addressable points to the network total. For example, a network of 32- IFP-2100/ECS panels provides a maximum addressable point capacity of 67,200 points (2100 x 32 = 67,200).

5.1.1 Networked Sites

A networked site is a logical group of IFP-2100/ECS and/or RFP-2100 panels that behave as though the logical group is one large control panel. Each building is referred to as a "site." All panels in a site operate as a single panel. The control functions like reset, silence and alarm activation operate across the entire site. There can be one or more logical sites within a networked system. The maximum number of sites within a network system is limited to 32 panels in the network with each site comprised of only one panel.

5.1.2 Wiring Options to Connect Networked Panels

1. Fiber Optic Single Mode - must use the SK-NIC and SK-FSL for up to 30dB loss of signal separation. SK-FSL connects to the network using 9/125 micron single-mode fiber
2. Fiber Optic Multi-Mode - must use the SK-NIC and SK-FML for up to 8dB loss of signal separation. SK-FML connects to the network using 62.5/125 micron multi-mode fiber
3. Twisted Pair Copper Wire - must use the SK-NIC to provide up to 3000 feet of separation.

All methods of panel connectivity can be used within the same networked system. The network architecture provides true peer to peer capability allowing network survivability for all hardware that remains operational in the event of partial system failure.

5.2 Model RFP-2100

The model RFP-2100 provides the same power and point capacity of an IFP-2100/ECS panel, but does not include any user interface. It is used in networked systems where added power and/or point capacity is required but where additional user interface is not needed.

5.3 Network Wiring

When networking a group of IFP-2100/ECS and/or RFP-2100s, you must use the SK-NIC to link the panels together. See Figure 5-1 and Figure 5-2, for Internal mounting or external mounting of SK-NIC option.

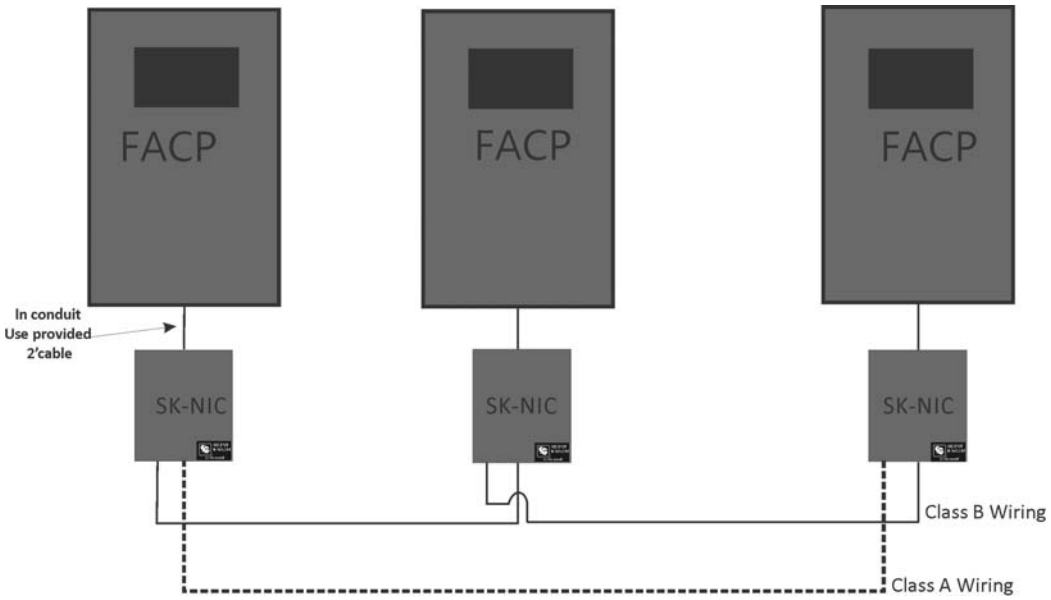


Figure 5-1 External SK-NIC Wiring Option

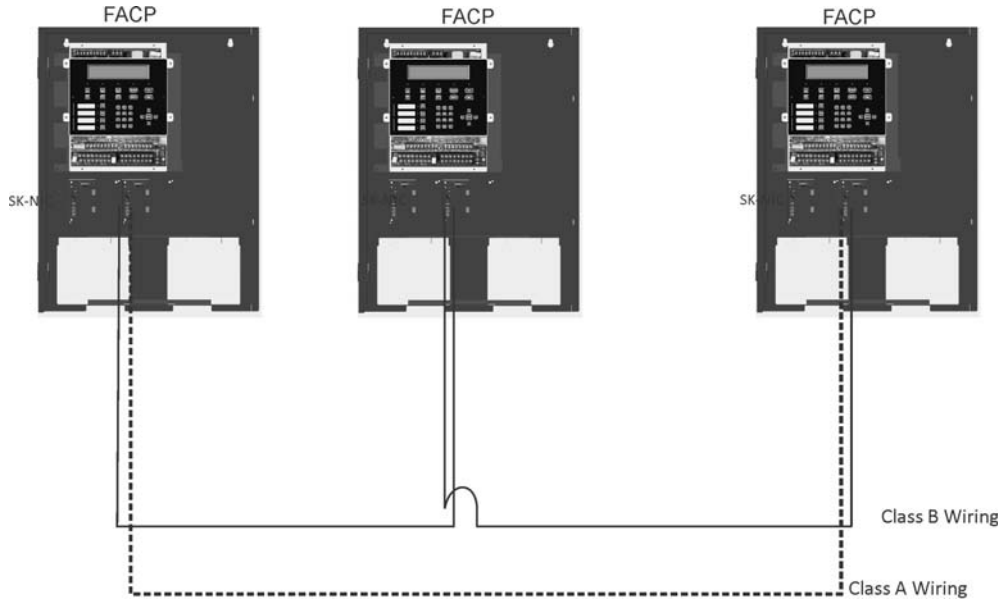


Figure 5-2 Internal SK-NIC Wiring Option

5.4 SK-NIC Wiring Options

Networking a group of IFP-2100/ECS requires the use of a network interface card with each panel. The SK-NIC connects to other networked units using unshielded, twisted-pair wiring or fiber optic cable.

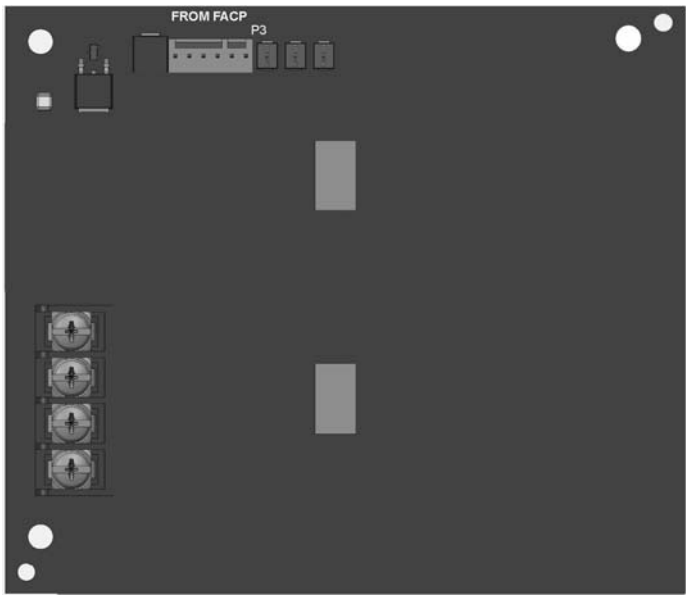
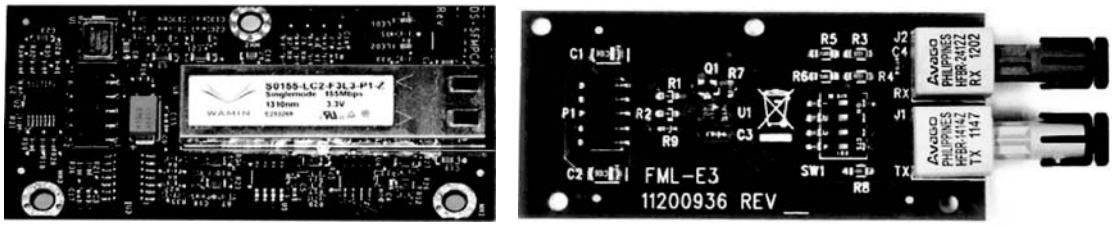


Figure 5-3 SK-NIC Network Interface Card

5.4.1 Fiber Loop Modules

Two types of fiber optic modules are available to use to transmit and receive communication with the SK-NIC. See Figure 5-4. For more information see SK-FML / SK-FSL installation sheet P/N LS10178-001SK-E.



SK-FSL Single-Mode Fiber **SK-FML Multi-Mode Fiber**

Figure 5-4 Types Fiber Loop Modules

The SK-FML (Fiber-Optic Multi-Mode) and SK-FSL (Fiber-Optic Single-Mode) are plug-in fiber loop modules. The two types of fiber optic modules are used as one channel to transmit or receive communications with the SK-NIC, ARCNET communication circuit.

The following describe the two types of fiber optic modules.

- The SK-FML is a fiber module that allows the multi-mode fiber to network between nodes.
- The SK-FSL is a fiber module that allows the single-mode fiber to network between nodes.

Each fiber loop module can Transmit (TX) and Receive (RX) fiber-optic cable connecting to the SK-NIC. Up to two fiber loop cards can be added to the SK-NIC, and both cards may be combined in the same configuration. See Figure 5-5.

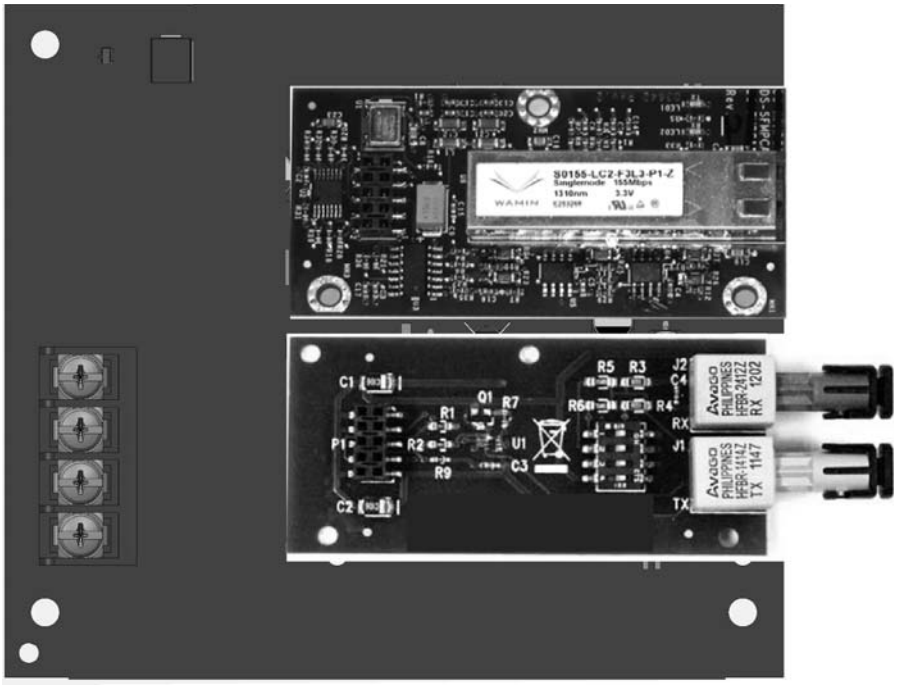


Figure 5-5 SK-NIC with Fiber Loop Modules

5.4.1.1 Accessory Mounting Kits

SK-NIC can be mounted within the IFP-2100/ECS cabinet or in the SK-NIC-KIT accessory cabinet. The accessory kits are available if you want to install the SK-NIC outside of the IFP-2100/ECS cabinet. The accessory kit part number is:

1. SK-NIC-KIT- which includes the SK-NIC, a small cabinet with door, cable, and mounting hardware.

5.4.2 SK-NIC Installation

The SK-NIC is designed to mount on one of the SLC expander standoff sets inside the cabinet or remotely using the accessory cabinet.

Use the following steps to mount the SK-NIC inside the IFP-2100/ECS.

1. Place the SK-NIC on one of the SLC expander standoff sets.

2. Use the 6-pin cable included with SK-NIC to connect the IFP-2100/ECS to the SK-NIC. Connect the SK-NIC to the pin connector on the control panel labeled Data Network. See Figure 5-6.

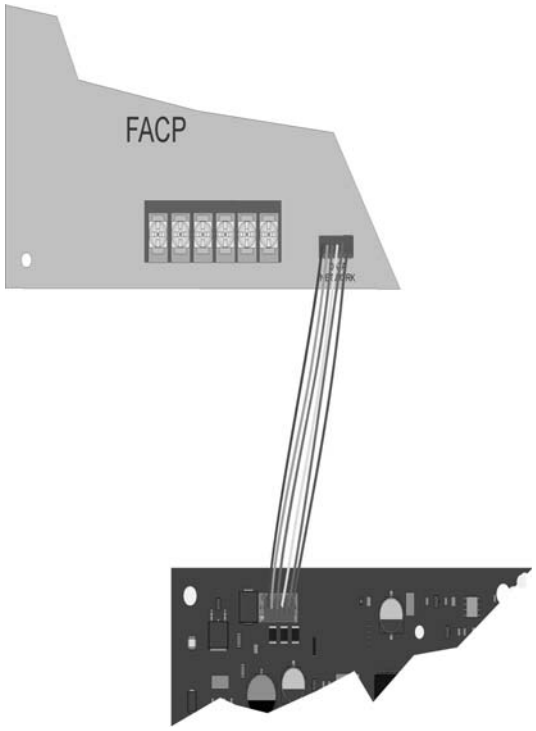


Figure 5-6 Panel to SK-NIC connection

3. Each SK-NIC has the ability to monitor for earth ground faults on the twisted pairs connected to Port 1 of its terminal block TB2. Earth fault detection for any wiring at Port 2 of TB2 is done at the next/previous SK-NIC due to these wiring connections being connected to Port 1 of TB2 at the next/previous SK-NIC.
4. Unused optic ports on fiber loop modules must have their dust caps placed on the port.
5. Based on the type of data medium chosen, run the twisted pair wiring/fiber optic cable to the next SK-NIC using a class B or class A wiring method. A combination of both medium types can be used. See Figure 5-7, Figure 5-8, Figure 5-9, and Figure 5-10 for SK-NIC wiring examples.

To mount the SK-NIC remotely:

Follow the steps above except; The 6-pin cable that runs from the SK-NIC to the IFP-2100/ECS, must be run in conduit. See Figure 5-1.

5.4.2.1 Unshielded Twisted Pair Wiring between Multiple Panels

Unshielded twisted pair wiring between multiple panels is shown in Figure 5-7. Class A wiring is shown with a dotted line.

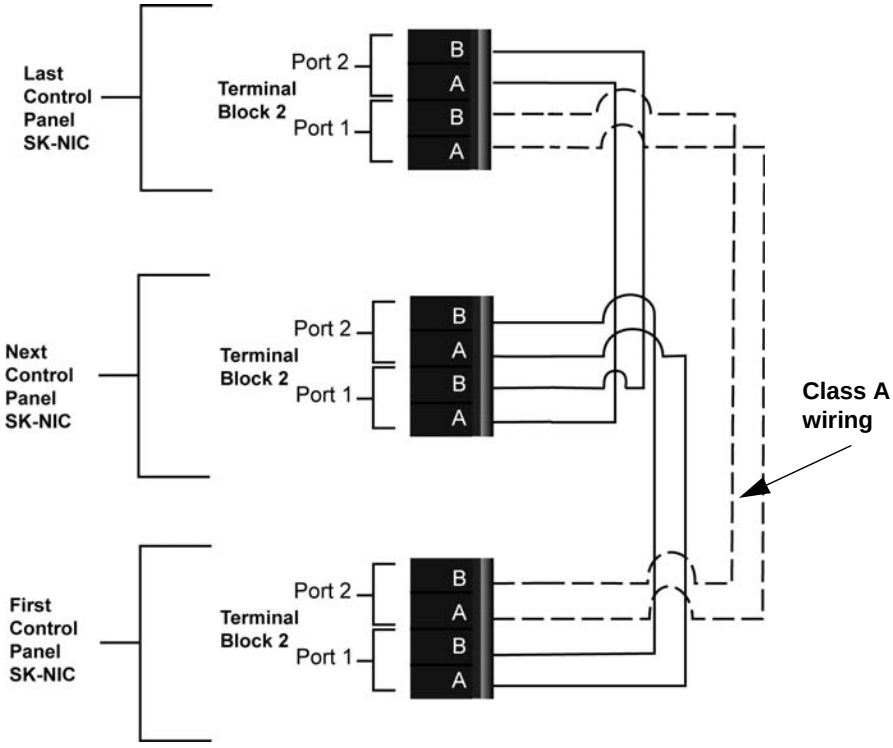


Figure 5-7 Twisted Pair Wiring Configuration

5.4.2.2 Fiber Optic Multi-Mode Wiring between Multiple Panels

Fiber optic cable between multiple panels is shown in Figure 5-8. Class A is shown with a dotted line.

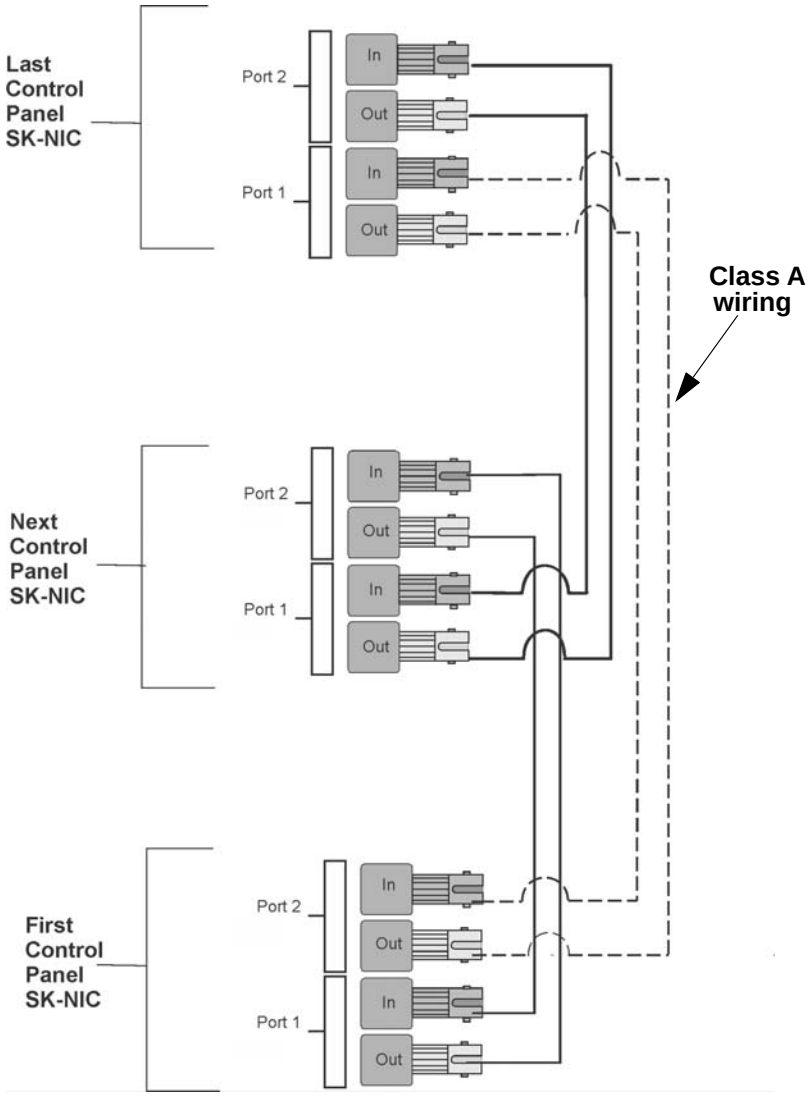


Figure 5-8 Fiber Optic Wiring Multi-Mode Example

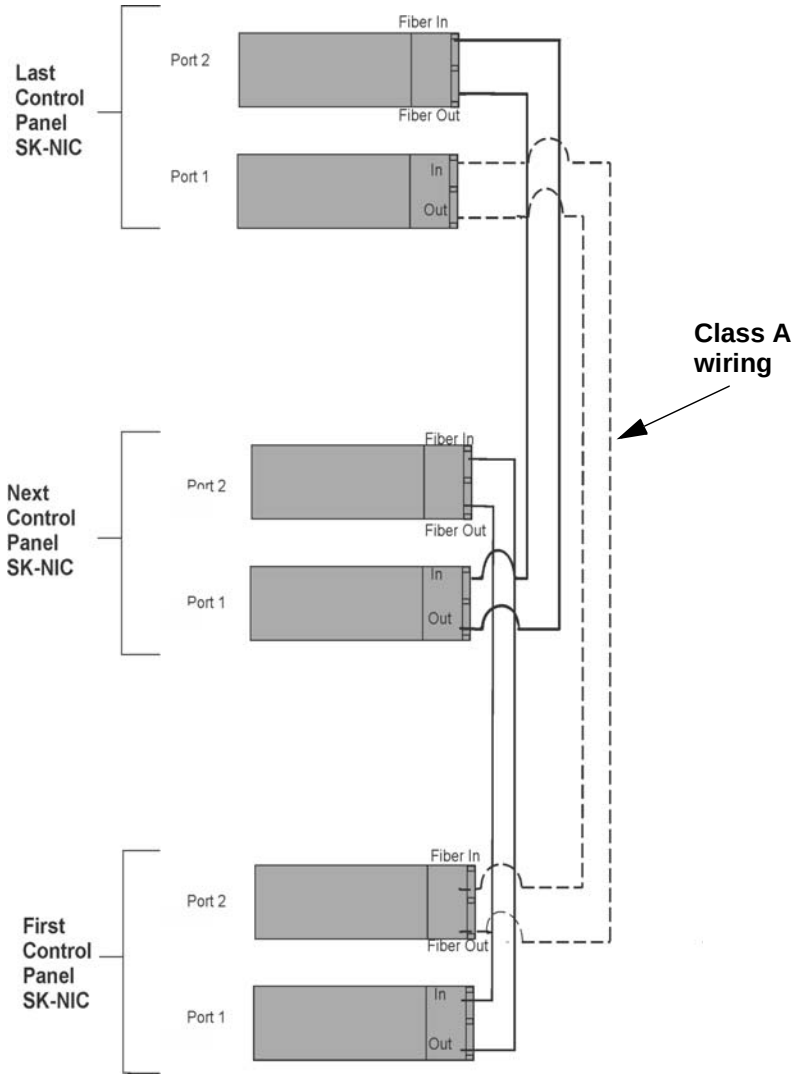


Figure 5-9 Fiber Optic Wiring Single-Mode Example

5.4.2.3 Fiber Optic and Twisted Pair Wiring between Multiple Panels

A mixture of fiber optic cable and twisted pair wiring between multiple panels is shown in Figure 5-10. Class A cabling is shown with dotted line.

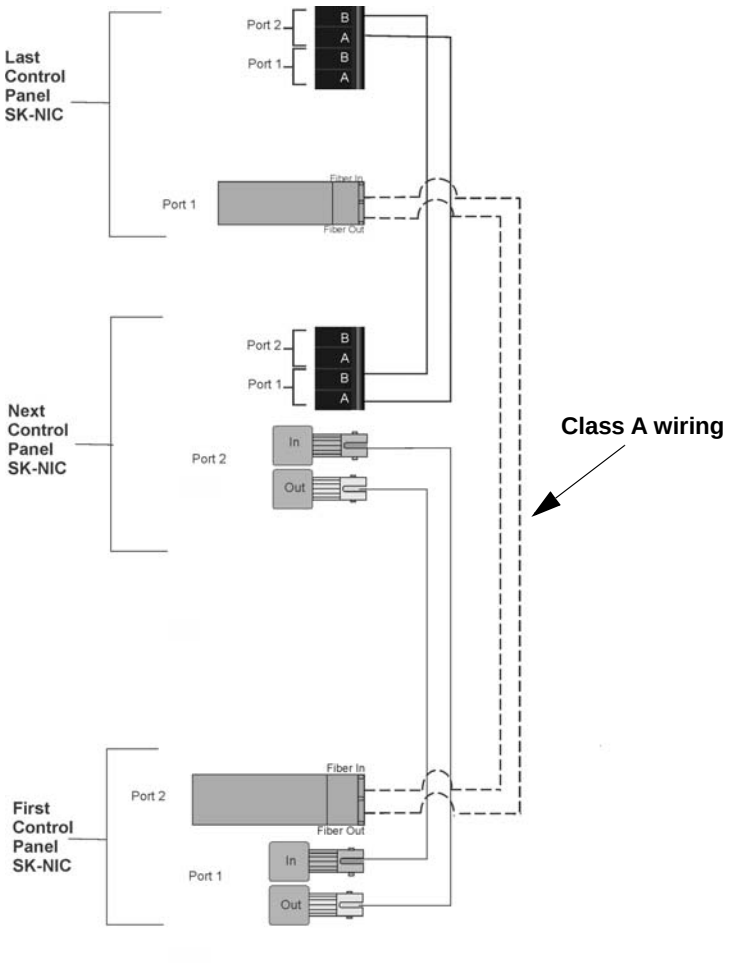


Figure 5-10 Twisted Pair and Fiber Optic Combination Wiring Example

5.5 Setting the Network ID for each Panel

Note: It is important that much thought is given when choosing the network IDs for each panel. It is difficult to change the IDs once panel programming has begun.

The network ID for each panel is set using DIP switch positions 1 through 5. See Figure 5-11 below for possible DIP switch settings.

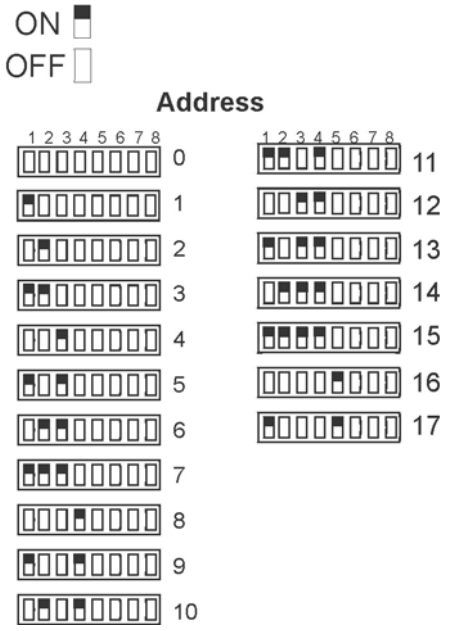


Figure 5-11 Network ID Settings

Section 6
Network Management

6.1 Network Diagnostics

6.1.1 Ping Panel

The Ping Panel menu allows you to continually ping any panel programmed into the network. As the selected panel is being pinged, the Ping Panel screen will display the reply time, minimum and maximum reply times, and sent and received counters.

1. Enter the Installer Code. The panel will automatically go to the main menu.
2. Select 5 for Network Diagnostics.
3. Press 1 to enter the Ping Panel Menu.
4. Press the up or down arrow key to select Network Panel ID. Press ENTER to Ping panel.

6.1.2 Data Network Status

The Data Network Status screen will display statistics that are indicators of Network performance.

1. Enter the Installer Code. The panel will automatically go to the main menu.
2. Select 5 for Network Diagnostics.
3. Press 2 to enter the Data Network Status menu.

6.1.3 Voice Network Status

The Voice Network Status screen will display statistics that are indicators of Network performance.

1. Enter the Installer Code. The panel will automatically go to the main menu.
2. Select 5 for Network Diagnostics.
3. Press 3 to enter the Voice Network Status menu.

6.2 Network Programming

This section of the manual describes how to program network options using the built-in annunciator. All options described in this section can be programmed using the HFSS Honeywell Fire Software Suite. To edit site assignments, HFSS must be utilized.

6.2.1 Learn Network

The Learn Network menu shows you all of the panels connected to the network. Any panel that has been programmed into the network will appear as a “member.” Any panel that is connected to the network but not programmed into the network will appear as a “guest.” You can add guest panels to the network by changing their status to member in this menu. Panels showing OK are currently responding on the network. Panels not showing OK have either been removed or are not responding due to networking problems. See Section

Figure 6.1 for Network Diagnostics.

1. Enter the Installer Code. The panel will automatically go to the main menu.
2. Select 6 for Network Programming.
3. Press 1 to enter the Learn Network menu.
4. Press ENTER to add or remove panels connected to the network as member or guest.

Note: If adding panels to network, the system will automatically run the Sync Network Options. You will be required to select which panel to distribute network options from. See Section 6.4.

6.2.2 Edit Network Names

The Edit Network menu allows you to edit the panel name and edit the panels site name.

To Edit Panel Names:

1. Enter the Installer Code. The panel will automatically go to the main menu.
2. Select 6 for Network Programming.
3. Press 2 to enter the Edit Network Names menu.
4. Press 1 to Edit Panel Name. Choose Panel to edit.

See Appendix B for a list of available characters and their numeric designators.

6.2.3 Edit Panel ID

This menu option allows you to change the current Network Panel ID. It is best to carefully consider the network ID setting for each panel. Take into account any future panels that will be added to the network (future wiring of two buildings together). The Network Panel ID setting has to be unique for each panel on the network.

This menu will allow you to change the currently assigned Network Panel ID to the current Network ID dip switch setting. The system will be down as the panel needs to reboot in order to complete the transition.

When using the PC configuration software to program the panels, the Network Panel ID will be locked from future editing. The only way to change it will be to restore defaults and use this menu again.

To Edit the Network Panel ID:

1. Enter the installer code. The panel will automatically go to the main menu.
2. Select 6 for Network Programming.
3. Press 3 to enter the Edit Panel ID menu.
4. If the Network Panel ID is changed and valid, the system will ask you to confirm the change. If it is not correct, you can change the dip switches at this time.
5. Press up to select YES and press ENTER to confirm.

6.2.4 Computer Access

An installer at the panel site can initiate communications between the panel and a computer running the HFSS Honeywell Fire Software Suite (see also Section 10.5). In order for this communication to function properly, both the computer (running the software) and the control panel must have matching computer access numbers and computer codes.

To program computer access information:

1. Enter the installer code. The panel will automatically go to the main menu.
2. Select 6 for Network Programming.
3. Press 4 to enter the Computer Access menu.
4. Enter the computer access number (up to 6-digits), then press ENTER.
5. Enter the computer code, then press ENTER.

6.2.5 Access Codes

Access codes provide the user access to the control panel functions. Each access code can be customized for each user. This allows some users the ability to access programming and other higher level panel functions, while other users may only need access to lower level functions such as preforming fire drills, or acknowledging trouble conditions.

Profile 1 is the profile that dictates what functions the Fire Fighter Key has access to. Because this is the profile for a key, the user name and the access code can not be edited for this profile.

Profile 2 is the profile for the installer and is referred to as the “Installer Code”. This profile’s user name and panel functions can not be edited. Table 7-9 lists the panel functions that can be selected for each user profile.

Table 6-1: User Profile Selectable Panel Functions

Type of Function	Selectable Functions
Panel Operations	System Reset
	System Silence
	System Ack
	Fire Drill Key
	Multi-site
	F1 Function Key
	F2 Function Key
	F3 Function Key
	F4 Function Key
	ECS Control Request Function
	ECS Super User Function
Panel Menus	System Tests
	Fire Drill Menu
	Indicator Test
	Walk Test-No Report
	Walk Test -With Report
	Communicator Test
	Clear History Buffer
	Point Functions
	Disable/Enable Point
	Point Status
	Set SLC Device Address
	SLC Single Device Locator
	SLC Multiple Device Locator
	I/O Point Control
	Event History

Table 6-1: User Profile Selectable Panel Functions

Type of Function	Selectable Functions
Panel Menus	Set Time & Date
	System Information
	Network Diagnostics
	Network Programming
	Panel Programming
	Send/Receive Firmware Update

To change an access code:

1. Enter the installer code. The panel will automatically go to the main menu.
2. Select 6 for Network Programming Menu.
3. Select 5 for Access Codes.

Display reads: *Select Profile 01*

Fire Fighter's Key

4. Select the access code you wish to edit by pressing the up or down arrow key.
5. Then press ENTER.

Profile Edit Menu

From the Profile Edit Menu you can change the users name, access code, and the panel functions that the user will have access to with their code.

Note: Profile 1 (Fire Fighter's Key) the user name and access code can not be edited. Profile 2 (Installer) the user name and panel functions can not be edited. Profile 3 (Multi-Site Installer) is defaulted with the Multi-Site access option, but the entire profile can be edited.

6.2.5.1 Edit Name

6. See Appendix B for a list of available characters and their numeric designators.
7. Then press ENTER to finish.

6.2.5.2 Edit Access Code

8. Enter new access code (minimum of 4 digits, maximum of 7 digit).
9. Press ENTER.
10. Enter code again. Press ENTER.

6.2.5.3 Panel Functions

11. Press the up or down arrow key to move through the list of available functions.
12. Then press right arrow to move to Y (yes) or N (no) selection column.
13. Press the up or down arrow key to select Y or N.
14. Press ENTER.
15. Repeat steps 12 through 15 until user profile is complete.

6.2.6 Communicator Options

Communicator options provides the configuration for reporting events to a central station.

1. From the main menu.
2. Select 6 for Network Programming.
3. Press 6 to enter Communicator Options menu.

6.2.6.1 Communicator Assignments

Each panel on the IFP-2100/ECS network specifies which network communicator is used for reporting. The network communicator capability of the IFP-2100/ECS system allows all panels to use the same communicator providing an economical solution for reducing the number of paths required for reporting purposes. A communicator is specified by panel number. The network communicators will be used to report events according to the communicator report table.

6.2.6.2 Communicator Miscellaneous

When using the SIA reporting format, the communicator sends information according to the SIA Reporting Type. The selections for this option are:

1. pi modifier (default)
2. Panel ID

6.2.6.3 Receiver Configuration

The IFP-2100/ECS network can report events to as many as 68 receivers. See Appendix D for panel/receiver relationship numbers. Each receiver can be assigned reporting credentials. When using a format that supports phone numbers, it can be up to forty digits long.

1. From the main menu.
2. Select 6 for Network Programming.
3. Press 6 to enter Communicator Options menu.
4. Select 3 for Receiver Configuration.
5. Select Panel to Program and press ENTER.
6. Enter the receiver number that you want to report to. The receiver numbers available will correspond with what panel number you entered. Receiver numbers are populated based on panel number and audited to allow only the 4 appropriate receivers. See Appendix D for receiver number.

Available Format choices are:

Reporting Format
Contact ID
SIA500
SIA8
SIA20
Ethernet
Cellular
eVance

Reporting Format
UNUSED

6.2.6.4 Communicator Reporting Table

The Communicator Report Table specifies event reporting for each panel on the network. Each row in the table specifies a panel, event types to report, primary and backup receiver numbers, and report by point or zone. Associated with the receivers are account number and daily test option. The table can have up to 99 rows.

1. From the main menu.
2. Select 6 for Network Programming.
3. Press 6 to enter Communicator Options menu.
4. Select 4 for Communicator Reporting Table.
5. Press * to add rows, Press ENTER to edit data

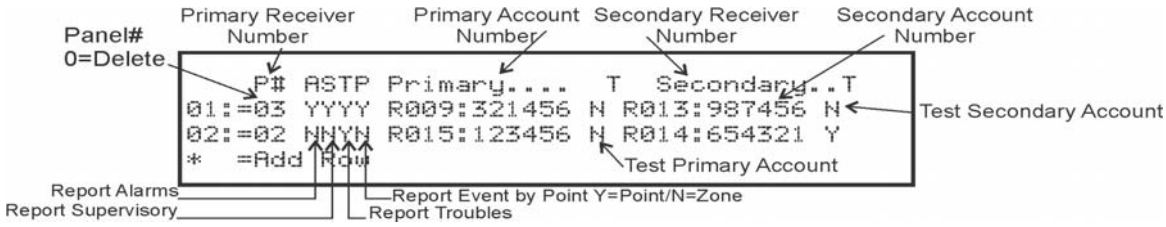


Figure 6-1 Communicator Reporting

6.3 Voice Options

6.3.1 Edit Timers

1. Enter the installer code. The panel will automatically go to the main menu.
2. Select 6 for Network Programming.
3. Select 7 for Voice Options.
4. Choose Site.
5. Select 1 for Edit Timers

6.3.1.1 Control Lockout

The Control Lockout countdown timer is set to the programmed value when an LOC gains ECS Control. The timer starts over upon any key press at the ECS Control LOC. While the Control Lockout timer is active, an LOC of equal priority must request ECS control. The Control Lockout timer is cleared when ECS Control is relinquished. The Control Lockout timer does not apply to ECS Super User control.

Select Immediate/Timer/Never

Range 0-720 min/0-59 sec

6.3.1.2 Auto Reset ECS MIC Triggered Event

If the Timer is selected, the event will automatically reset after being active for the programmed time. If Event Disabled is selected, the event will not be allowed to be activate from an LOC Station. Selecting Never will require an emergency system reset to be performed to reset the event.

Select Never/Timer/Event Disabled, Range from 1-240 min

Table 6-2 Auto Reset ECS MIC Triggered Event Timer Menu

ECS Timer	Option
Control Lockout	Immediate/Timer/Never
Auto Reset ECS MIC Triggered Event	Never/Timer/Event Disabled
Auto Reset ECS Event 1	Never/Timer/Event Disabled
Auto Reset ECS Event 2	Never/Timer/Event Disabled
Auto Reset ECS Event 3	Never/Timer/Event Disabled
Auto Reset ECS Event 4	Never/Timer/Event Disabled
Auto Reset ECS Event 5	Never/Timer/Event Disabled
Auto Reset ECS Event 6	Never/Timer/Event Disabled
Auto Reset ECS Event 7	Never/Timer/Event Disabled
Auto Reset ECS Event 8	Never/Timer/Event Disabled

6.3.2 Edit Voice Commands

When a voice output group is selected to be activated by a zone, the cadence pattern choice does not apply. For voice output groups, one of six system wide voice commands will activate instead of the cadence pattern.

1. Enter the installer code. The panel will automatically go to the main menu.
2. Select 6 for Network Programming Menu.
3. Select 7 for Voice Options.
4. Choose Site.
5. Select 2 for Edit Voice Commands.
6. Select the command you wish to edit:

Table 6-3 Voice Command Mapping

System Event
Fire Alarm
Fire System Aux 1
Fire System Aux 2
Fire Zone Aux 1
Fire Zone Aux 2
Fire Pre Alarm
Emergency Communication 1
Emergency Communication 2
Emergency Communication 3
Emergency Communication 4
Emergency Communication 5
Emergency Communication 6

Table 6-3 Voice Command Mapping

System Event
Emergency Communication 7
Emergency Communication 8
Fire Supervisory
System Alert 1-5
Trouble
Fire Interlock Release
Fire Interlock Alert
Custom Emergency Comm
Emergency Supervisory
CO Alarm
CO Supervisory

7. Select whether a Message or Tone Only should be played. If Message is selected, choose the desired message for the command.
8. Select the tone to be played between messages. (High-Lo, ANSI Whoop, Cont. Whoop, ANSI, March Code, California, Steady, Alert Tone, or No Tones).

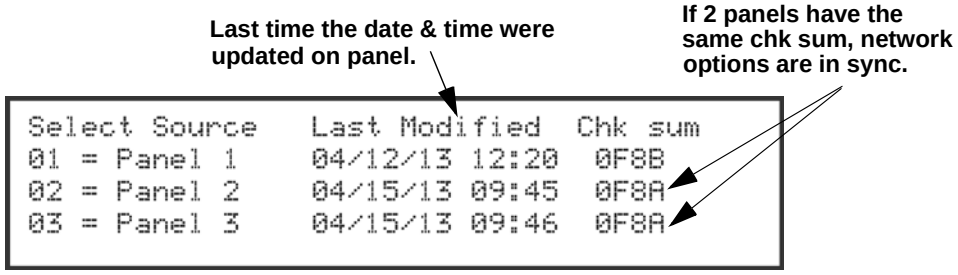
Note: 520Hz tones are available when using ECS-VCM, ECS-NVCM, ECS-INT50W or ECS-Dual50W AMP's. These include ANSI 520, Temp 4 520, Steady 520. See Table A-6 for a list of compatible speakers.

9. Select how many times you wish the message to repeat. (None, 1 - 14, or Continuous).
10. Select the initial delay time (0, 3, 4, 8, 12, 16, 20, 24, 28).
11. Select the inter message delay time (4 to 32 seconds, in 4 second increments).
12. Select Y or N to allow message to continue to play after Mic release.
13. Select Y or N to allow message to restart on a new activation.

6.4 Sync Network Options

If after making changes to network programming, the distribution of network options fail, the system will report a trouble of network options out of sync. Use this menu to redistribute changed options to the rest of the network. The user will be required to choose a panel to source the options from. Scroll down through the informational message and press ENTER to view the Select Source screen.

1. Enter the installer code. The panel will automatically go to the main menu.
2. Select 6 for Network Programming Menu.
3. Select 8 for Sync Network Options.
4. Select which panel to source the options from.



6.5 Network Management Quick Reference

	Menu	Options/Defaults			Comments
Network Programing	Learn Network	Guest or member	Add or remove panels into the network		See Section 6.2.1
	Edit Network Names	Panel Names	Network Panel ID	Edit Panel Names	See Section 6.2.2
		Site Names	Edit Site Member	Edit Site Names	
	Edit Panel ID	Change current panel ID			See Section 6.2.3
	Computer Access	Computer Access Number	*123456		See Section 6.2.4
		Computer Code	*0		
	Access Codes	Select Profile (01 - 20)	Edit Name		Profile 1 is the profile that dictates what functions the Firefighter Key has access to. Because this is the profile for a keys, the user name and the access code can not be edited for this profile. Profile 2 is the profile for the installer and is referred to as the “Installer Code”. This profile’s user name and panel functions can not be edited. See Section 6.2.5.
			Edit Access Code		
			Panel Functions	System Reset	
				System Silence	
				System ACK	
				Fire Drill Key	
				System Tests	
				Fire Drill Menu	
				Indicator Test	
				Walk Test-No Report	
				Walk Test-With Report	
				Communicator Test	
				Clear History Buffer	
				Point Functions	
				Disable/Enable Buffer	
				Point Status	
				Set SLC Device Address	
				SLC Single Device Locator	
				SLC Multi-Device Locator	
				I/O Point Control	
				Event History	
				Set Time & Date	
				Network Diagnostics	

	Menu	Options/Defaults				Comments
Network Programming (cont.)	Access Codes	Select Profile (01 - 20)	Panel Functions	Network Programming		Profile 1 is the profile that dictates what functions the Firefighter Key has access to. Because this is the profile for a keys, the user name and the access code can not be edited for this profile. Profile 2 is the profile for the installer and is referred to as the “Installer Code”. This profile’s user name and panel functions can not be edited. See Section 6.2.5.
				Panel Programming		
				System Information		
				Multi-Site		
				Upload/Download		
				F1 Function Key		
				F2 Function Key		
				F3 Function Key		
				F4 Function Key		
				ECS Control Request Function		
				ECS Super User Function		
				Send/Receive Firmware Update		
	Communicator Options	Communicator Assignments	Select Panel	Primary	0=unused	See Section 6.2.6
		Communicator Miscellaneous	SIA Options	Enable pi SIA Modifier		See Section 6.2.6.2
				Include Panel ID in SIA Reporting		
		Receiver Configuration	Select Panel	Select Receiver	Receiver Number	See Section 6.2.6.3
			Receiver Format	Contact ID		
				SIA500		
				SIA8		
				SIA20		
				eVance		
				Ethernet		
				Cellular		
				UNUSED		
			Receiver Credentials			
		Communicator Report Table		Panel		See Section 6.2.6.4
				Report Alarms		
				Report Supervisory		
				Report Troubles		
				Report Events by Point		
				Primary Receiver		
				Primary Account		
				Test Primary Account		
				Secondary Receiver		
				Secondary Account		
				Test Secondary Account		

	Menu	Options/Defaults			Comments	
Network Programming (cont.)	Voice Options	Choose Site	Edit Timers	Control Lockout	Immediate/Timer/ Never	See Section 6.3.1
				Auto Reset ECS Event 1-8	Never/ Timer/ Event Disabled	
				Auto Reset ECS MIC Triggered Event		
			Edit Voice Commands	Fire Alarm	See Section 6.3.2	
				Fire System Aux 1		
				Fire System Aux 2		
				Fire Zone Aux 1		
				Fire Zone Aux 2		
				Fire Supervisory		
				Fire Pre Alarm		
				Custom Emergency Comm		
				Emergency Communication 1-8		
				System Alert 1-5		
				Trouble		
				Fire Interlock Release		
		Choose Site	Edit Voice Commands	Fire Interlock Alert	See Section 6.3.2	
				Emergency Supervisory		
				CO Alarm		
				CO Supervisory		
	Sync Network Options				See Section 6.4	

Section 7
IDP, SK, SD and SWIFT™ SLC Device Installation

Caution!

To avoid the risk of electrical shock and damage to the unit, power should be OFF at the control panel while installing or servicing.

7.1 List of IDP SLC Devices

Table 7-1 list available IDP SLC devices can be used with the control panel. See the device installation instructions (packaged with the device) for more information.

Note: The control panel supports the use of either IDP*, SK, or SD SLC devices. You cannot install a mix of SLC device types on the control panel.* IDP *SLC devices can be used with IDP wireless devices.*

Table 7-1 IDP SLC Devices

Part Numbers	Model Name/Description	Install Sheet PN
IDP-Photo	Photoelectric smoke detector	I56-3611-000
IDP-Photo-T	Photoelectric smoke detector with thermal (135°F)	
IDP-Acclimate	Multi-criteria photoelectric smoke detector with thermal (135°F)	
IDP-PhotoR	Photoelectric replacement smoke detector with remote test capability in DNR	I56-3569-000
IDP-Beam	Reflected beam smoke detector without test feature	I56-2735-00
IDP-Beam-T	Reflected beam smoke detector with test feature	
DNR/DNRW	Duct smoke detector housing. Non-relay (photo sold separately)	I56-3051-000
IDP-Heat	Fixed temperature thermal detector (135°F)	I56-3608-000
IDP-Heat-ROR	Rate-of-rise thermal detector with 135° fixed temperature	
IDP-Heat-HT	Fixed high temperature thermal detector (190°F)	
IDP-Pull-SA	Addressable single action pull station	I56-3606-000
IDP-Pull-DA	Addressable dual action pull station	I56-3605-000
IDP-ISO	Fault isolator module	I56-2729-000
ISO-6	Six Fault isolator module	I56-4096-000
IDP-Monitor	Monitor module	I56-3603-000
IDP-Minimon	Mini monitor module	I56-2726-002
IDP-Monitor-2	Dual input monitor module	I56-2730-000
IDP-Monitor-10	10 input monitor module	I56-2731-000
IDP-Relay	Relay module	I56-2729-000
IDP-Relay-6	Six circuit relay module	I56-2729-000
IDP-RelayMon-2	Multi module with 2 relay outputs & 2 monitor inputs	I56-3734-000
IDP-Zone	Zone interface module	I56-3602-000
IDP-Zone-6	Six zone interface module	I56-2733-000
IDP-Control	Supervised control module	I56-3600-000
IDP-Control-6	Six circuit supervised control module	I56-2734-000
IDP-FIRE-CO	CO Smoke Detector	I56-3946-00
B200S	Intelligent sounder base	I56-3387-000

Table 7-1 IDP SLC Devices

Part Numbers	Model Name/Description	Install Sheet PN
B200SR	Intelligent sounder base	I56-3392-000
B210LP	6" mounting base	I56-0595-000
B224BI	6" isolator base	I56-0725-000
B224RB	6" relay base	I56-3737-000
B501	4" mounting base	I56-0357-000
B200SR-LF	Low Frequency Sounder Base	I56-4152-00
B200S-LF	Low Frequency Sounder Base	I56-4151-00

7.2 List of SK SLC Devices

Table 7-2 list available SK SLC devices can be used with the control panel. See the device installation instructions (packaged with the device) for more information.

The control panel supports the use of either IDP, SK, or SD SLC devices. You cannot install a mix of SLC device types on the control panel. SK SLC devices can be used with SK wireless devices.

Table 7-2 SK SLC Devices

Part Numbers	Model Name/Description	Install Sheet PN
SK-Photo	Photoelectric smoke detector	I56-3426-001
SK-Photo-T	Photoelectric smoke detector with thermal (135°F)	
SK-PhotoR	Photoelectric detector with remote test capability	
SK-Acclimate	Multicriteria photoelectric smoke detector with thermal (135°F)	
SK-Beam	Reflected beam smoke detector without test feature	I56-3433-001
SK-Beam-T	Reflected beam smoke detector with test feature	
SK-Duct	Photoelectric duct smoke detector with extended air speed range	I56-3432-000
SK-Heat	Fixed temperature thermal detector (135°F)	I56-3429-000
SK-Heat-ROR	Rate-of-rise thermal detector with 135° fixed temperature	
SK-Heat-HT	Fixed high temperature thermal detector (190°F)	
SK-Pull-SA	Addressable single action pull station	I56-3446-000
SK-Pull-DA	Addressable dual action pull station	I56-3447-000
SK-ISO	Fault isolator module	I56-3445-000
SK-Monitor	Monitor module	I56-3442-000
SK-Minimon	Mini monitor module	I56-3444-000
SK-Monitor-2	Dual input monitor module	I56-3435-000
SK-Mon-10	10 input monitor module	I56-3443-000
SK-Relay	Addressable relay module	I56-3438-000
SK-Relay-6	Six relay control module	I56-3439-000
SK-Relaymon-2	Dual relay/monitor module	I56-3735-000
SK-Zone	Addressable zone interface module	I56-3440-000
SK-Zone-6	Six zone interface module	I56-3441-000
SK-Control	Supervised control module	I56-3436-000
SK-Control-6	Six circuit supervised control module	I56-3437-000
SK-Fire-CO	CO Smoke Detector	I56-3945-000
B200S	Sounder Base	I56-3387-00

Table 7-2 SK SLC Devices

Part Numbers	Model Name/Description	Install Sheet PN
B201LP	6" mounting base	I56-0595-00
B224BI	6" isolator base	I56-0725-00
B224RB	6" relay base	I56-3737-00
B200SR	Sounder base	I56-3392-00
B501	4" mounting base	I56-0357-00
B200SR-LF	Low Frequency Sounder Base	I56-4152-00
B200S-LF	Low Frequency Sounder Base	I56-4151-00

7.3 List of SD SLC Devices

Table 7-3 list available SD SLC devices that can be used with the control panel. See the appropriate section number in this manual or the device installation instructions (packaged with the device) for more information.

Table 7-3 SD SLC Devices

Part Numbers	MODEL NAME/DESCRIPTION	Install Sheet PN
SD505-PHOTO	Photoelectric smoke detector.	150955
SD505-HEAT	Absolute temperature heat detector. Trip point range from 135°F–150°F (0°C–37°C).	
SD505-6AB	6" base	
SD505-6IB	6" short circuit isolator base	I56-3541-00
SD505-6RB	6" relay base	I56-3542-00
SD505-6SB	6" sounder base	I56-3540-00
SD505-DUCT	Duct Smoke Detector. Duct Housing including the SD505- Analog Photoelectric Smoke Sensor. Intake tubing for duct available in three lengths: SD505-T2 (2.5 foot); SD505-T5 (5 foot); SD505-T10 (10 foot)	1700-09882
SD505-DUCTR	Duct Detector housing with relay base. Duct housing with relay base including SD505- Analog Photoelectric Smoke detector pre-installed	1700-09882
SD500-PS/-PSDA	Single or dual action addressable pull station	I56-3632-00
SD500-AIM	Addressable input module (switch input), standard size, DIP switch configurable	I56-3547-00
SD500-MIM	Mini input monitor module (switch input), small size, DIP switch configurable.	
SD500-ANM	Addressable notification module	I56-3544-00
SD500-ARM	Addressable relay module DIP switch configurable.	I56-3545-00
SD500-SDM	Addressable smoke detector module.	I56-3546-00
SD500-LIM	Line isolator module. Fits in a double gang box.	I56-3543-00
SD505-DTS-K	Remote test switch & LED indicator for the SD505-DUCTR	1700-09882

7.4 List of SWIFT Wireless SLC Devices

Table 7-4 list available SWIFT Wireless SLC devices can be used with the control panel. See the appropriate section number in this manual or the device installation instructions (packaged with the device) for more information.

Table 7-4 SWIFT Wireless Devices

SWIFT Model Number	Model Name/Description	Install Sheet PN
WIDP-WGI	Wireless Gateway	LS10036-000FH-E
WIDP-PHOTO	Wireless Photoelectric Smoke Detector w/ 4" base	
WIDP-ACCLIMATE	Wireless Multi criteria photoelectric smoke detector with thermal (135°F) w/ 4" base	
WIDP-HEAT-ROR	Wireless Heat Rate of Rise Detector 135° fixed w/4" base	
WIDP-HEAT	Wireless Heat, 135° fixed Heat Detector w/4" base	
WIDP-MONITOR	Wireless Addressable Monitor module	
WIDP-RELAY	Wireless Addressable Relay module	
B210W	6" wireless base	
WSK-WGI	Wireless Gateway	LS10036-000SK-E
WSK-PHOTO	Wireless photo with 4" base	
WSK-PHOTO-T	Wireless Multi criteria photoelectric smoke detector with thermal (135°F) w/ 4" base	
WSK-HEAT-ROR	Wireless heat, ROR/ 135° fixed with 4" base	
WSK-HEAT	Wireless Heat, 135° fixed with 4" base	
WSK-MONITOR	Wireless monitor module	
WSK-RELAY	Wireless relay module	
B210W	6" wireless base	

7.5 Maximum Number of SLC Devices

The IFP-2100/ECS supports IDP, SK,SD, or Wireless SLC devices. The maximum number of SLC devices per panel is 2100 for IDP or SK devices, or 2032 if using SD devices. The number of SLC expanders is limited only by the SBUS bandwidth, point count, and 1A SBUS current limit. Device support is as follows:

- IDP or SK Devices - The IFP-2100/ECS supports a total of 2100 IDP or SK points. The SLC points can be all sensors or all modules or any combination of modules and sensors.

or

- SD Devices - The IFP-2100/ECS system can support a total of 2032 SD devices, in any combination. SD devices are only supported on the 5815XL.

or

- IDP SWIFT Wireless Devices–A SWIFT Gateway system supports up to 50 devices: 1 SWIFT Gateway and up to 49 (in any combination) wireless detectors and monitor modules. Multiple Gateways can be used. See the SWIFT manual P/N LS10036-000FH-E for more information.

7.6 Wiring Requirements for SLC Devices

The following information applies to SLC devices. Refer to the section that describes the type of device you are installing for details.

7.6.1 Wire Sizing on 5815XL for SD Devices

The wire can be untwisted, unshielded, solid or stranded as long as it meets the National Electric Code 760-51 requirements for power limited fire protective signaling cables. Wire distances are computed using copper wire.

Maximum wiring resistance is 50 ohms for SD devices.

Maximum loop length depends on the wire gauge. See Table 7-5 for SD.

Table 7-5 Maximum wiring distance for SD devices

Wire Gauge	Max. Distance for SD
22 AWG	1500 feet
18 AWG	3900 feet
16 AWG	6200 feet
14 AWG	10,000 feet

7.6.2 Wire Sizing for 6815

The SLC requires use of a specific wire type, depending on mode of operation, to ensure proper circuit functioning. Wire size should be no smaller than 18 AWG (.075 mm) and no longer that 12 AWG (3.25 mm) wire. The wire size depends on the length of the SLC circuit. It is recommended that all wiring be twisted-pair to minimize the effects of electrical interference.Shield Termination

7.6.3 Wiring Requirements for IDP or SK Modules

The IFP-2000/ECS SLC can be programmed to operate in IDP/SK mode. While shielded wire is not required, it is recommended that all SLC wiring be twisted-pair to minimize the effects of electrical interference. Use Table 7-6 to determine the specific wiring requirements for the SLC.

Table 7-6 SLC Wiring Requirements for IDP or SK modules

Wire Requirements	Distance in Feet (meters)	Wire Type
RECOMMENDED: Twisted-unshielded pair, 12 to 18 AWG (3.31mm^2 to 0.82 mm^2). 50 ohms, maximum per length of Style 6 & 7. 50 ohms per branch maximum for Style 4 loop.	12,500 ft. (3,810 m) 9,500 ft. (2895.6 m) 6,000 ft. (1,828.8 m) 3,700 ft. (1,127.76 m)	12 AWG (3.31 mm^2) 14 AWG (2.08 mm^2) 16 AWG (1.31 mm^2) 18 AWG (0.82 mm^2)
Untwisted, unshielded wire, in conduit or outside of conduit.	5,000 ft. (1,528 m) 3,700 ft. (,127.76 m)	12 to 16 AWG (3.31^2 mm to 1.31 mm^2) 18 AWG (0.82 mm)
Twisted, shielded pair **Note:** • Shields must be isolated from ground • Shields should be broken at each device	5,000 ft. (1524 m) 3,700 ft. (1,127.76 m)	12 to 16 AWG (3.31 mm^2 to 1.31 mm^2) 18 AWG (0.82 mm^2)
RECOMMENDED: Twisted-unshielded pair, 12 to 18 AWG (3.31mm^2 to 0.82 mm^2). 50 ohms, maximum per length of Style 6 & 7. 50 ohms per branch maximum for Style 4 loop.	12,500 ft. (3,810 m) 9,500 ft. (2895.6 m) 6,000 ft. (1,828.8 m) 3,700 ft. (1,127.76 m)	12 AWG (3.31 mm^2) 14 AWG (2.08 mm^2) 16 AWG (1.31 mm^2) 18 AWG (0.82 mm^2)

Figure 7-1 and Figure 7-2 show how wire length is determined for out & back tap and T-Tap.

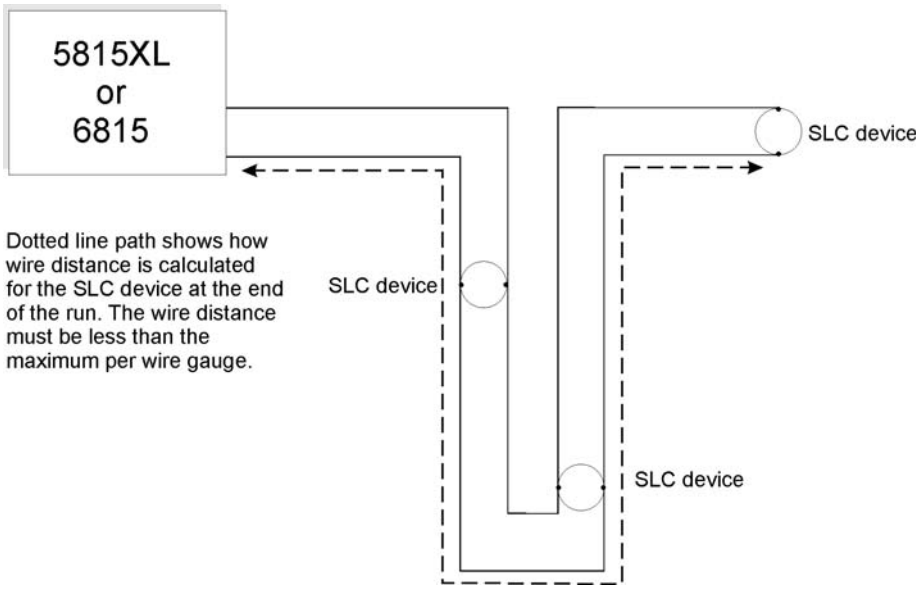


Figure 7-1 Calculating wire run length for a simple out and back

When using T-taps, the total length of all taps and the main bus must not exceed 40,000 feet. This requirement must be met in addition to the maximum distance requirements for the various wire gauges.

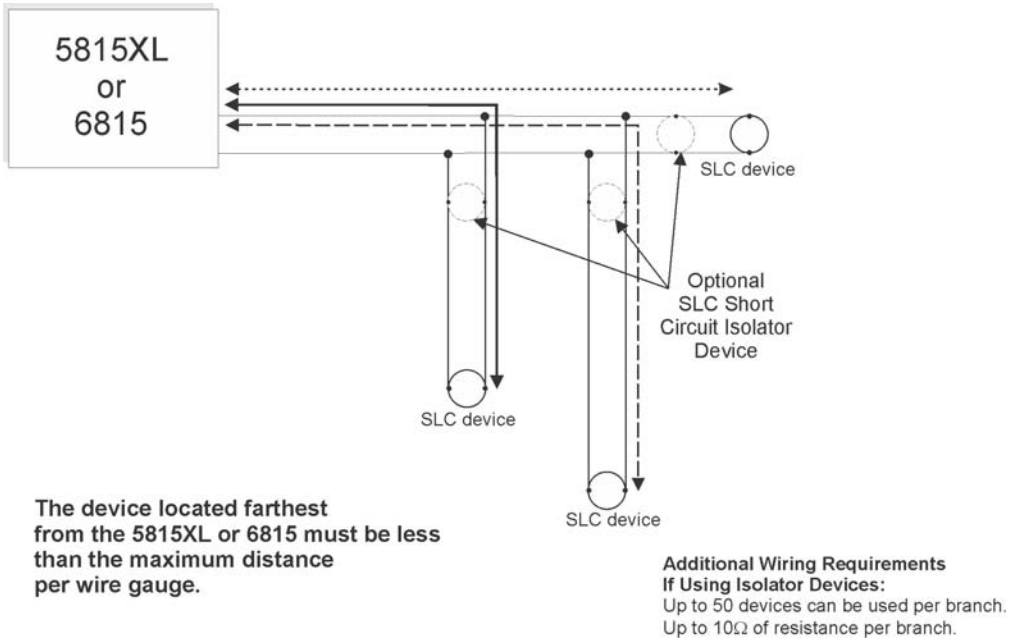


Figure 7-2 Calculating Wire Run Length for a T-tap

7.6.4 Wiring 5815XL or 6815 in Style 6 & 7 (Class A) Configuration

Figure 7-3 illustrates how to wire the SLC loop for Class A installations.

Note: Style 6 does not use short circuit isolator devices

Note: Style 7 requires an isolator module as the first device on the in and the out loop

Note: No t-taps allowed on class A SLC loops

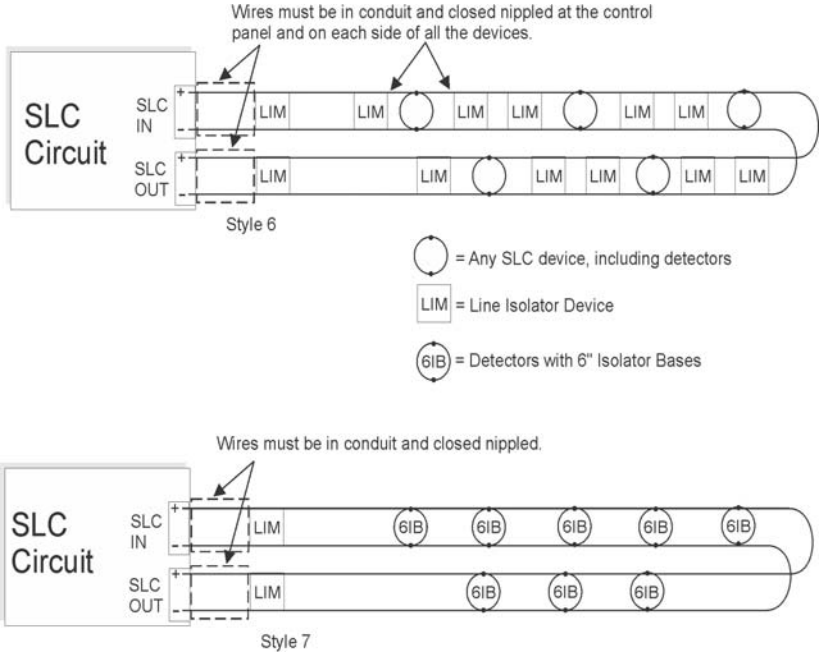


Figure 7-3 Class A SLC Configuration

7.7 Addressing IDP or SK SLC Devices

All IDP or SK devices are addressed using the two rotary dials that appear on the device board. Use the *ONES* rotary dial to set the ones place in a one or two digit number, and use the *TENS* rotary dial to set the tens place in a two or three digit number.

The control panel recognizes when an IDP /SK detector or IDP/SK module is installed. For this reason, IDP/SK detectors can be assigned any unique address from 1 to 159, and IDP/SK modules can be assigned any unique address from 1 to 159. There can be an IDP/SK detector using address 1 and an IDP/SK module using address 1. 0 is an invalid address. In order to set the sensor above address 99, carefully remove the stop on the upper rotary switch with thumb as shown in Example 2.

Example 1: To select device address 35, turn the ONES rotary dial to **5** and the *TENS* rotary dial to **3** as shown in Figure 7-4.

Example 2: To select device address 105, turn the ONES rotary dial to **5** and the *TENS* rotary dial to **10** as show

in Figure 7-4.

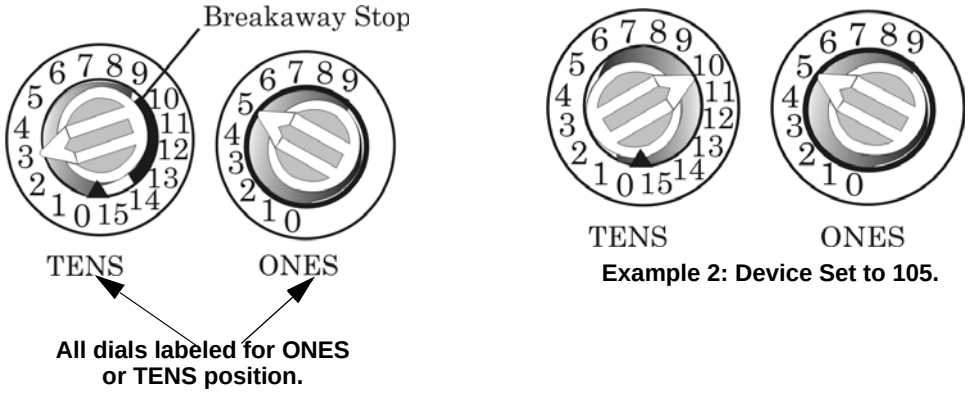


Figure 7-4 IDP or SK SLC Device Addressing Using Rotary Dials

7.8 Wiring SD Detectors

The information in this section applies to SD Detectors.See Table 7-3 for P/N's.

To Wire SD Detectors

1. Wire device bases as shown in Figure 7-5.
2. Set the address for each device as described in Section 7.9.

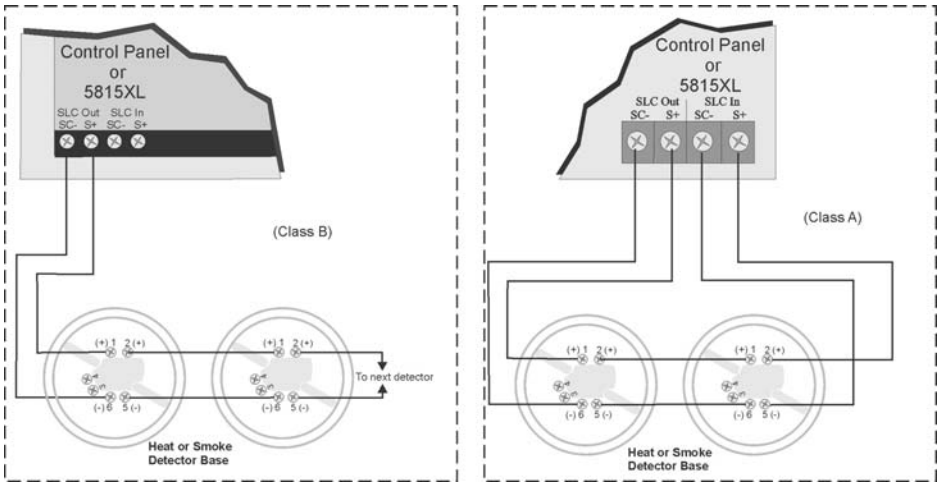


Figure 7-5 Heat or Smoke Detector Connection to the FACP

7.9 Addressing SD Devices

This section explains how to address SD detectors and modules. See Table 7-3 for a list of SD devices.

An access code with the option to set SLC Device Address enabled is required to perform this task.

To address a SD detectors:

1. Connect a detector base temporarily to the programming terminals as shown in Figure 7-6. (You can use the same base for each detector.)

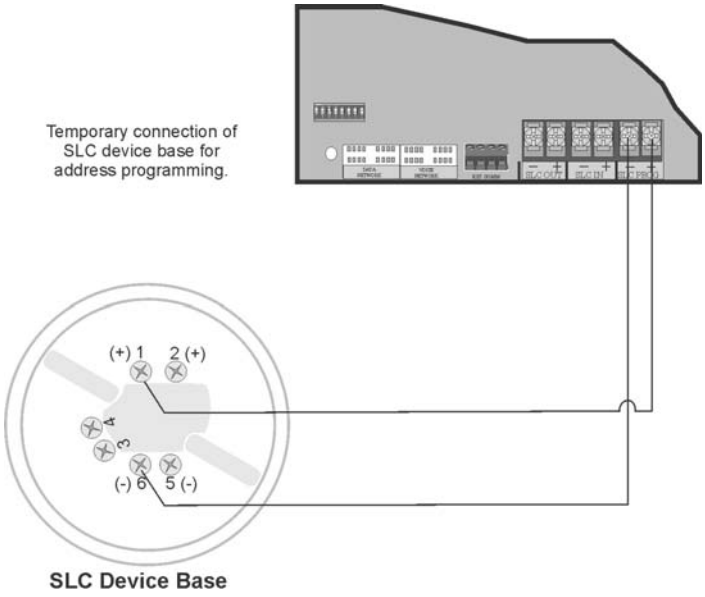


Figure 7-6 Temporary Connection of Detector Base to Panel for Addressing

2. Enter the Installer Code. The panel will automatically go to the main menu.
3. Select 2 for Point Functions.
4. Select 3 for Set SLC Dev Addr.
5. Select "Yes" by pressing the up arrow, then press ENTER. (The panel will go into trouble at this point. You can use the SILENCE key to stop the PZT. The trouble will clear automatically when the panel re-initializes when you finish programming.)
6. When the wait message clears, the following options display:
   - 1. for Read Address. Use to read (or check) a single detector's address.
   - 2. for Write Address. Use to program a single detector's address.
   - 3. for Seq. Programming. Use to program more than one detector in sequential order.
7. If you are changing addresses, write the programmed address on the back of the device.
8. To exit press left arrow until fully exited.

7.9.1 SLC Devices with DIP Switches

Input and relay module addresses are set using the DIP switches on the module board. The chart below shows the available addresses. For example, to select address 3, place DIP switches 1 and 2 in the up position. The range of valid addresses is 1-127. 0 is an invalid address.

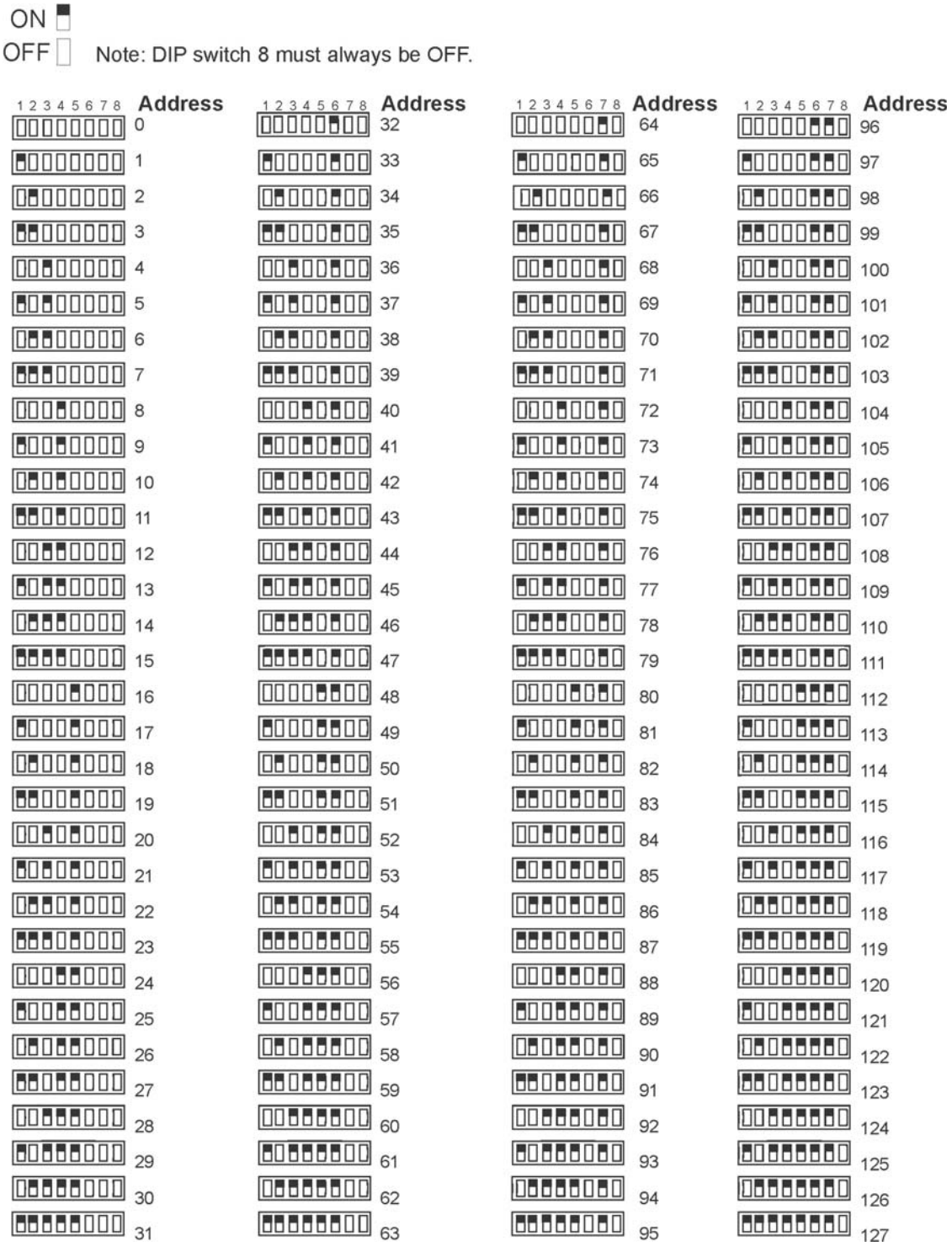


Figure 7-7 Device Addressing using DIP Switches

7.10 Wiring the WIDP-WGI or SK-WGI

Note: The WIDP-WGI or SK-WGI, as part of the wireless network, has been tested for compliance with the Federal Communications Commission (FCC) requirements of the United States Government. It has not been evaluated for use outside the USA. Use of this system outside the USA is subject to local laws and rules to which this product may not conform. It is the sole responsibility of the user to determine if this product may be legally used outside the USA.

Note: It is recommended to use the same wire gauge is there are multiple connections to the same terminal.

For more information regarding Gateway wiring instructions, see SWIFT manual LS10036-000FH-E or LS10036-000SK-E.

7.10.1 Power Connections for the Gateway

The WIDP-WGI or SK-WGI, Wireless Gateway acts as a bridge between a group of wireless fire devices and a SLC loop on the IFP-2100/ECS. It is powered by the SLC loops or by a regulated, external 24 VDC UL listed power supply. See Table 7-4 for available wireless devices & modules. For details about wireless devices, system setup, and operation, see the *SWIFT™ Smart Wireless Integrated Fire Technology Instruction Manual P/N LS10036-000FH-E* if *using IDP or P/N LS10036-000SKFL-E for SK*.

Section 8
Programming Overview

This section of the manual is intended to give you an overview of the programming process. Please read this section of the manual carefully, especially if you are programming the control panel for the first time.

The JumpStart® Autoprogramming feature automates many programming tasks and selects default options for the system. JumpStart® should be at least once when you are installing the system. See 8.1 for details. After you run JumpStart®, you may need to do some additional programming depending on your installation. Section 9 of this manual covers manual programmable options in detail.

Programming the panel can be thought of as a four part process. You must program:

- Network options. This affects how all panels in the network work together. (see Section 6 Network Management for details).
- System options. These are options that affect general operation of the panel. (see Section 9.6 for details).
- Options for input points and zones. These are primarily options that control the detection behavior of devices. (see Section 9.3 and Section 9.5 for details).
- Options for output points and groups. This includes selecting characteristics for output groups and mapping output circuits to output groups. (see Section 9.4 for details).

8.1 JumpStart® AutoProgramming

The JumpStart® AutoProgramming feature allows for faster system setup. When you run JumpStart® AutoProgramming, the panel searches for expanders and SLC devices not currently in the system. The new devices are added in their default configuration. At the end of the JumpStart® you can choose to not accept the new devices and go back to the configuration you had before. JumpStart saves the installer from having to program options for each device. Depending on the application, the installer may need to make some changes after JumpStart completes.

See Section 8.1.3 for complete details about running JumpStart.

8.1.1 Input Points

The first JumpStart® on the panel in default configuration will determine the number and type of input points (detectors or contact monitor modules) on each SLC loop. JumpStart® AutoProgramming assigns the correct detector type (heat, ionization or photoelectric), so the installer does not need to edit the device type for detectors. Any contact monitor modules on the system will be assigned type “Manual Pull.” The installer will need to manually change the switch type if manual pull is not correct.

The first JumpStart AutoProgramming creates one zone (Zone 1) and assigns all input points to Zone 1. Zone 1 is mapped to Output Group 1.

8.1.2 Output Points

The first JumpStart® AutoProgramming on a panel in default configuration creates three output groups and assigns output circuits as follows:

Internal Power Supply Circuits 1-8:
Configured as Notification and assigned to Group 1.

Internal Power Supply Circuit 9 (Relay 1):
Assigned to Group 998.

Internal Power Supply Circuit 10 (Relay 2):
Assigned to Group 999.

Addressable output points (Relay modules):
All addressable relay devices will be configured as “Output Pt” (general purpose output point) and assigned to Group 1.

Note: Relay output is constant even if the zone activating the relay is programmed with an output pattern.

8.1.3 Running JumpStart® AutoProgramming

Run JumpStart AutoProgramming immediately after you have addressed and connected all input devices (detectors, pull stations, and so on) and output devices (notification appliances, relays, and so on).

Note: If you need to install a few devices after you have run JumpStart, you can install them manually or run JumpStart again at a later time. JumpStart® will keep user options, such as names, for devices already installed. Follow instructions in Section 8 for configuration.

To run JumpStart AutoProgramming, follow these steps.

1. Select 7 for Panel Programming. Enter Access Code.
2. Select 6 for JumpStart AutoProgramming.
3. The message “The system will be shut down during JumpStart.” Press ENTER to accept.
4. When the message, “SLC FAMILY” message appears, select IDP, SK or SD; depending on the type of SLC devices the panel is using, and press ENTER to accept.
5. A series of messages displays for the next several seconds. JumpStart scans the SLC loops for devices. This can take several minutes, depending on the number of devices attached.
6. If a Temp Programming Display is being used to initially setup an RFP-2100, a message will appear for selecting to install the display or not. If the display is to stay in the system for normal annunciation, select “Yes”. Otherwise select “No” and the display will be removed.” See Section 4.5.3.
7. When the message “Configuring System Done” displays, press any key to continue.

8. Select one of the following options from the menu that displays.

1 - Review System	Press 1 if you need to review the JumpStart configuration. The Review System menu will appear. Press 1 to review Entire System or Press 2 for Changes Only.
2 - Repeat JumpStart	Press 2 if you need to rerun JumpStart for any reason.
3 - Accept Changes	1. If you are ready to make the JumpStart® configuration permanent, select 3. 2. The system will ask you if the installation contains any addressable duct detectors. If there are none, select 2 for No and skip to Step 8. If the system contains duct detectors, select 1 for Yes and continue with Step 3. 3. From the list that displays, select the SLC that contains the duct detectors. 4. The first photoelectric or ionization detector on the system will display. Select 1 for DUCT and 2 for NonDUCT. 5. Press up arrow to select the next detector. Select 1 for DUCT and 2 for NonDUCT. Continue until all duct detectors have been selected. (Note: You can move backwards through the list with down arrow). 6. When you reach the last detector on this device, press left arrow. 7. The system will ask you if there are any duct detectors used. If there are, select 1 for Yes and the message will ask, Have All Addressable Duct Detectors Been Identified? Left arrow for “No”, Right arrow for “Yes”. If there are no more duct detectors, continue with Step 8. 8. The system will restart with the saved JumpStart configuration. 9. After the system resets, it will use the new JumpStart configuration.
4 - Discard Changes	If you want to discard the changes, and keep the configuration you had before running this JumpStart press 4.

8.2 Mapping Overview

This section of the manual is a high level overview of mapping.

Mapping is an important concept with the control panel. In general terms, mapping is assigning or linking events to outputs that will activate when events occur. You do this by assigning input points to input zones, output points to output groups and then linking or mapping zones and output groups.

Figure 8-1 is a brief overview of the concept of mapping. The next several pages of the manual show these subjects in detail.

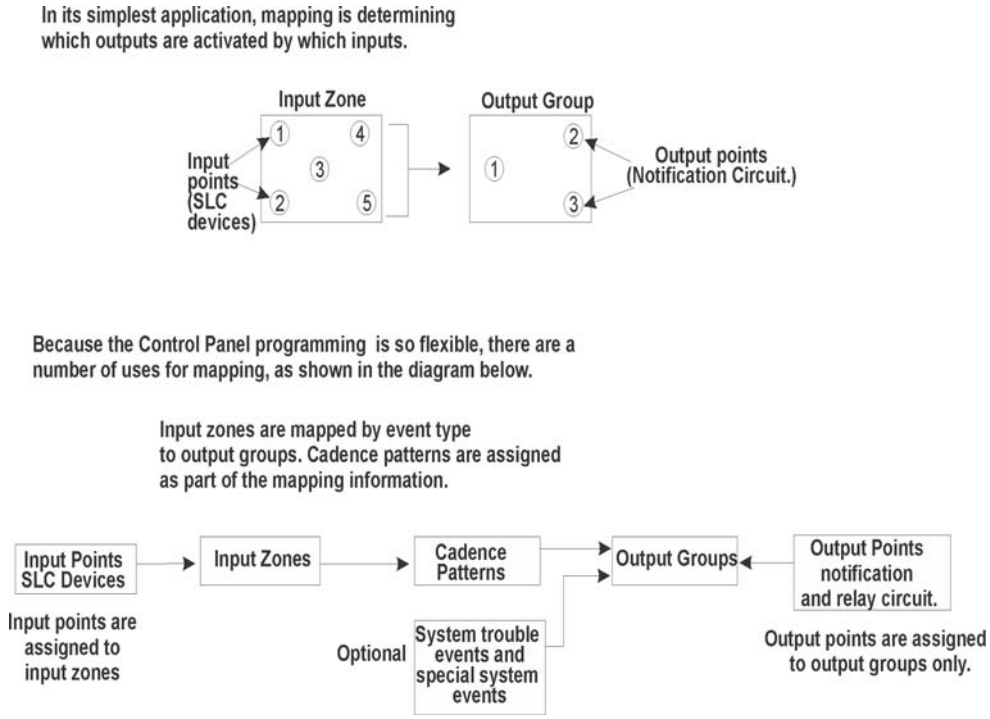


Figure 8-1 Mapping Overview

Note: Supervised notification Outputs mapped to General troubles on the NAC circuit should be made latching. Failing to do so will cause the circuit to continually cycle into and out of trouble until silenced or restored, if that circuit goes into trouble with an open of short condition.

8.2.1 Input Point Mapping

Input points are assigned to input zones, as the example if Figure 8-2 shows. Any input point can be assigned to any input zone. (Input points can be assigned to one zone only. An input point can be designated as “Unused,” which means it has not been assigned to a zone).

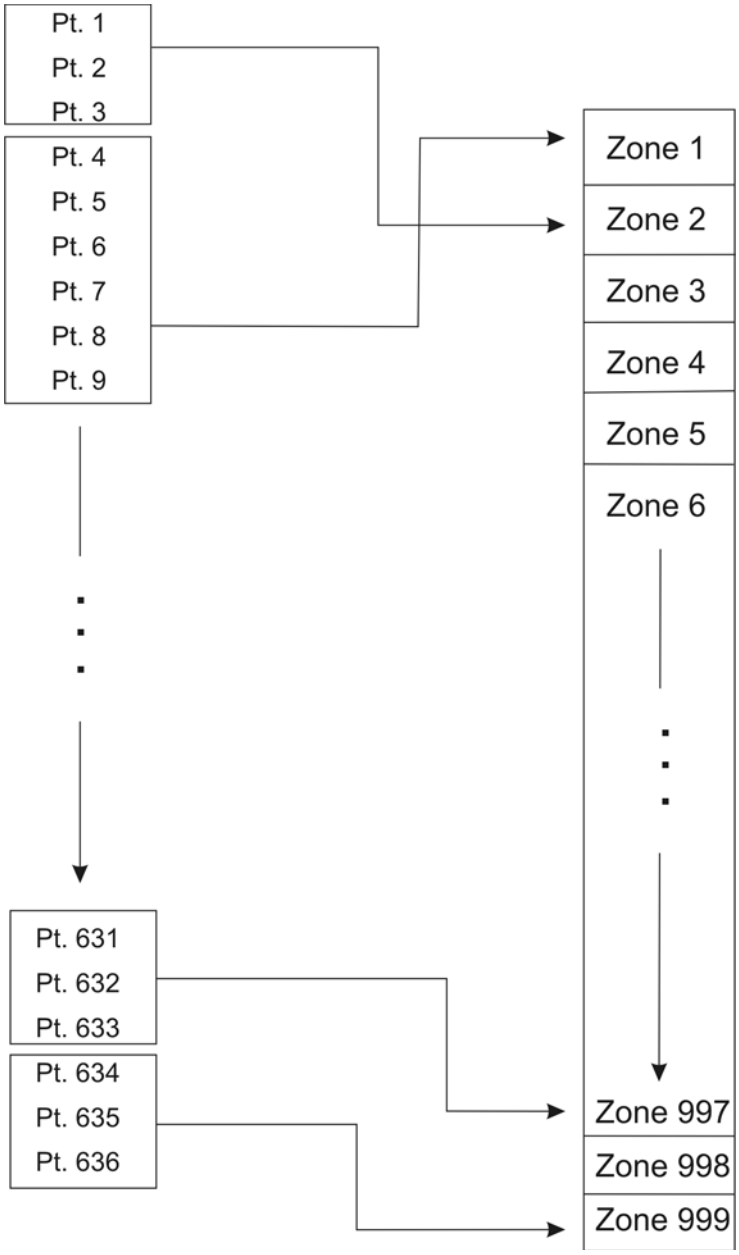


Figure 8-2 Example of Input Point Assignment

8.2.2 Output Circuit Mapping

Figure 8-3 is a simple example showing how to assign notification and relay output circuits to groups.

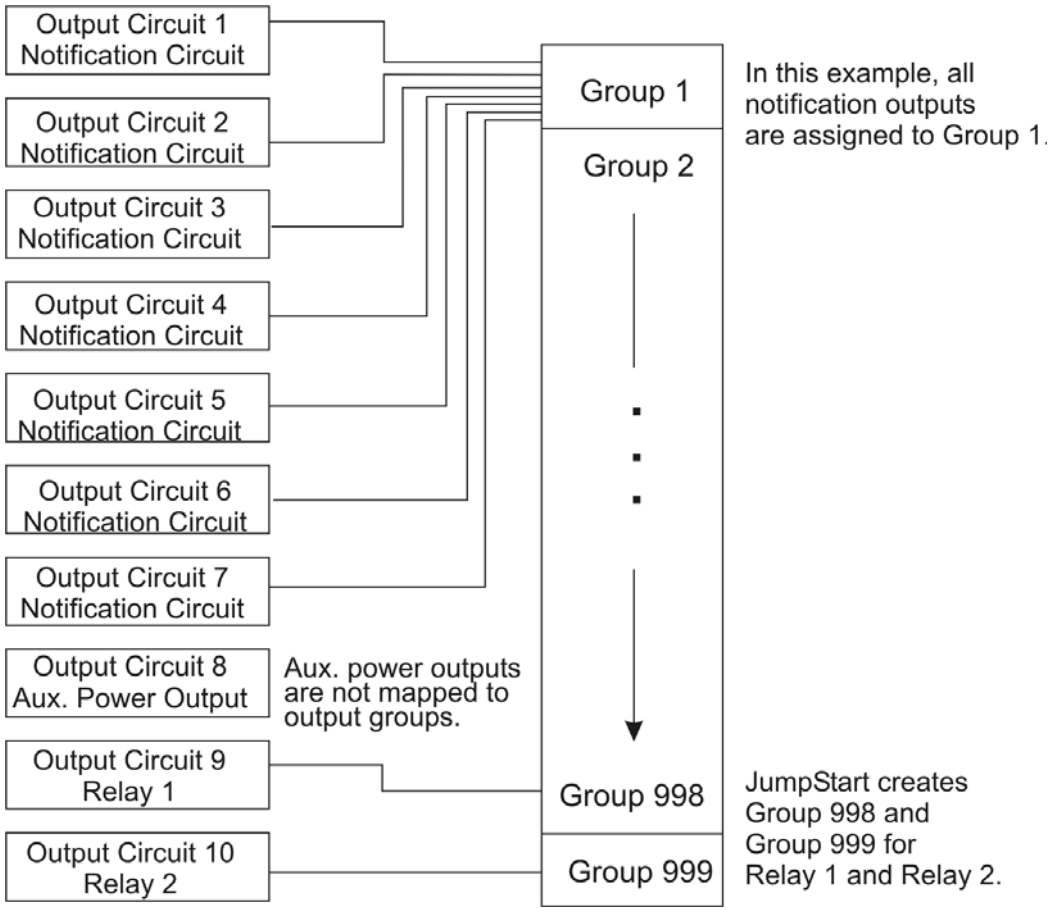


Figure 8-3 Example of Assigning Output Circuits to Groups

8.2.3 Event Mapping

There are 11 types of Zone events, 14 types of Panel events, and 40 types of Site events that can be mapped (see Table 8-1). For each event type, you can activate the output groups with specific output patterns. Mapping examples are shown in Figure 8-4, Figure 8-5, & Figure 8-6.

Table 8-1: Event Types

System	Zone	Panel	Site
Fire	Manual Pull Alarm	System Aux 1 Alarm	Fire Drill
	Water Flow Alarm	System Aux 2 Alarm	General Fire Alarm
	Detector Alarm (heat or smoke detectors)		General Fire Supervisory
	Zone Aux 1 Alarm		General Fire Pre-Alarm
	Zone Aux 2 Alarm		
	Interlock Alert		
	Interlock Release		
	Pre-Alarm		
	Fire Supervisory		
	Status Point		
	CO Alarm		
	CO Supervisory		
Emergency			LOC ECS 1-8 Alarm
			General ECS Alarm
			General ECS Supervisory
			Point ECS 1-8 Alarm
Advisory	Trouble	SBUS Expander Trouble	General Trouble
	Status Point Active	SBUS Class A Trouble	Site Silenced
		SLC Loop Trouble	Voice Aux In 1-8 Alarm
		AC Loss Trouble	F1 Key Active
		Battery Trouble	F2 Key Active
		Ground Fault Trouble	F3 Key Active
		Phone Line Trouble	F4 Key Active
		Reporting Account Trouble	Voice Aux in 1-2
		Printer Trouble	System Mic Active
		Aux Power Trouble	Background Music
		System Switch Trouble	
		Output Group Trouble	

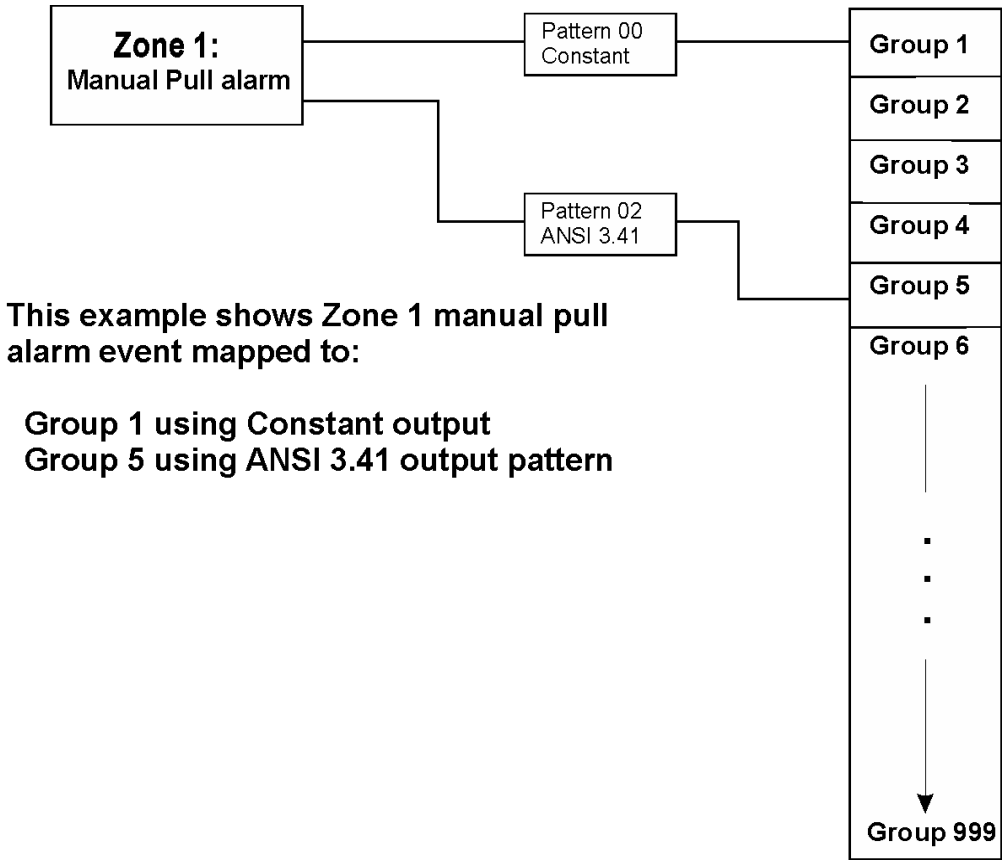


Figure 8-4 Example of Zone Events Mapped to output Groups and Patterns

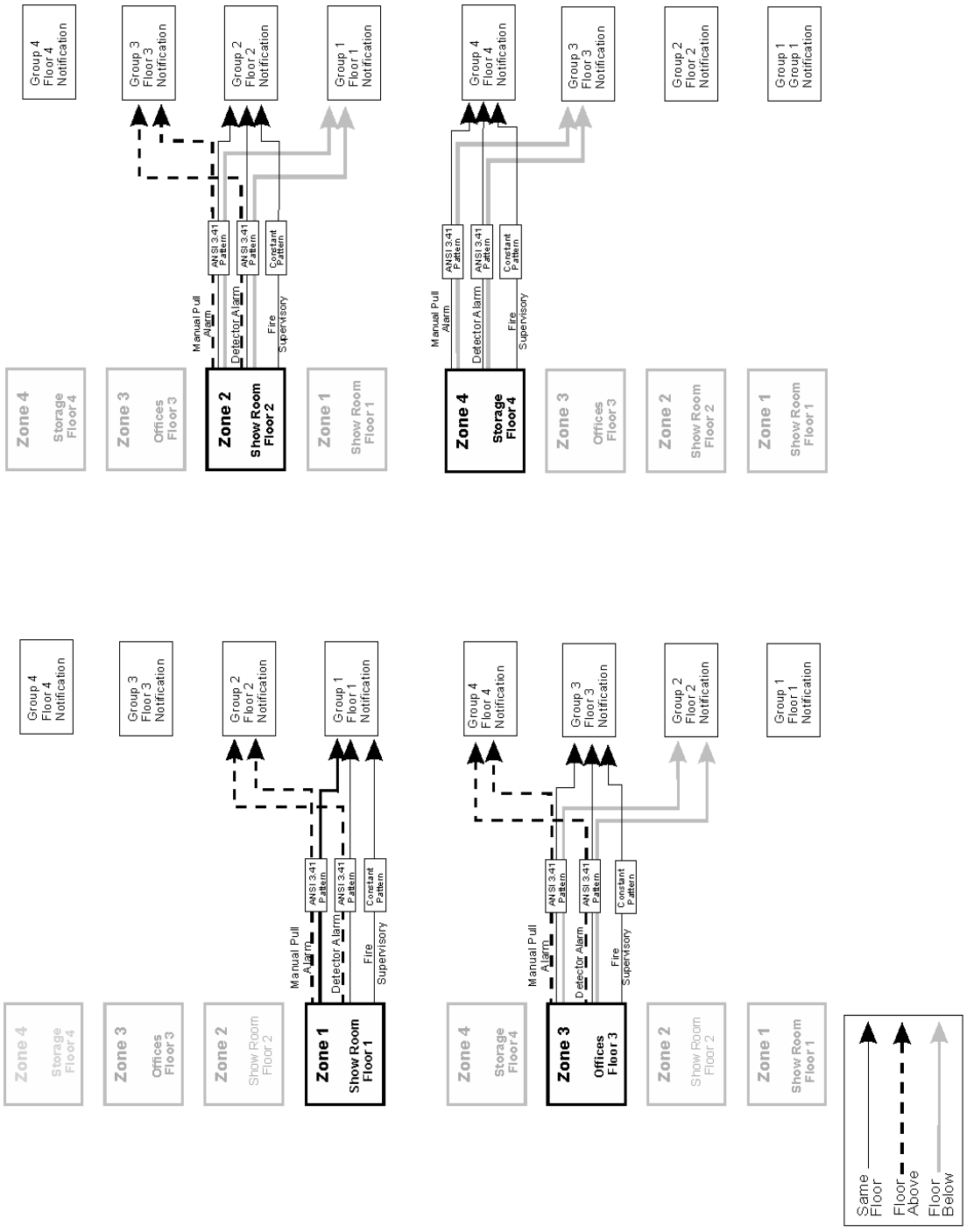


Figure 8-5 Example of Zone Events Mapped to Output Groups and Patterns on a Single Panel

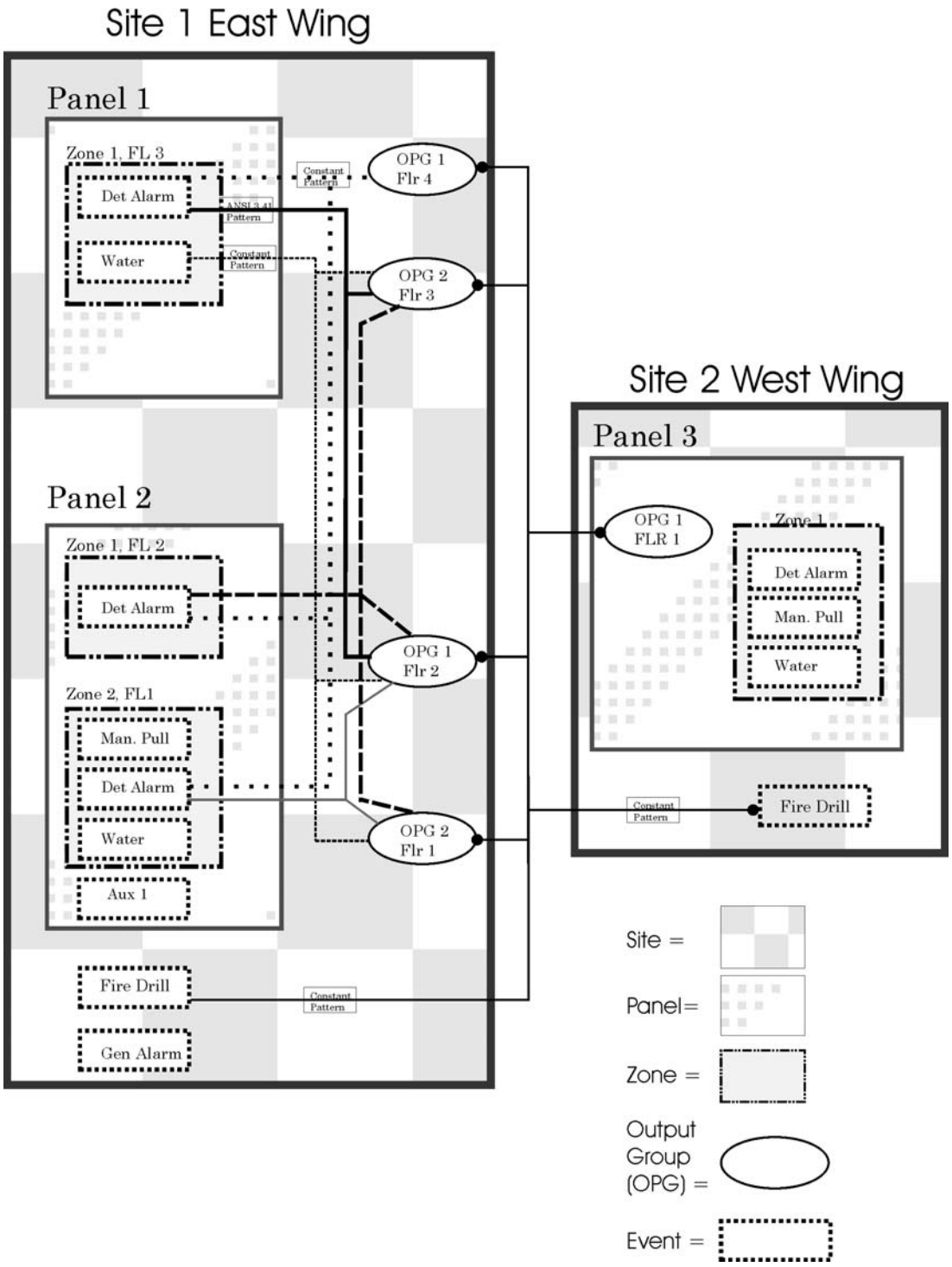


Figure 8-6 Example of Events Mapped to Output Groups and Patterns within a Networked Site

8.2.4 Mapping LED Points

Figure 8-7 is a simple example showing how LED points are mapped to zones and output groups. Typically you would create two output groups for each zone, one for alarms and one for troubles. (LED points are available when models 5865-3/4 and/or 5880 are used with the system).

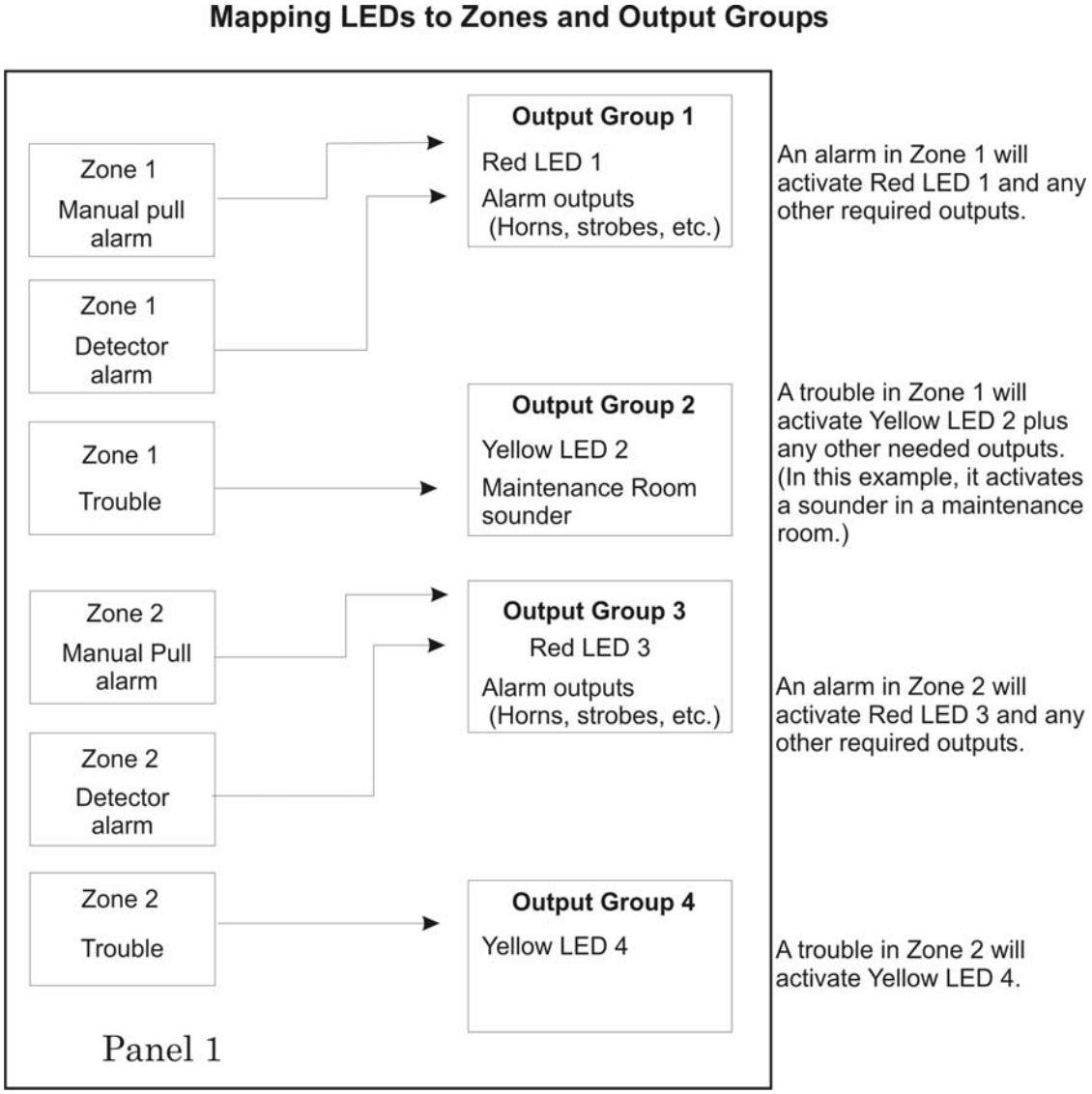


Figure 8-7 Example of LED Points Mapped to Output Groups (Applies to Models 5865-3/4 and 5880)

8.2.5 Mapping LED Points for a Networked System

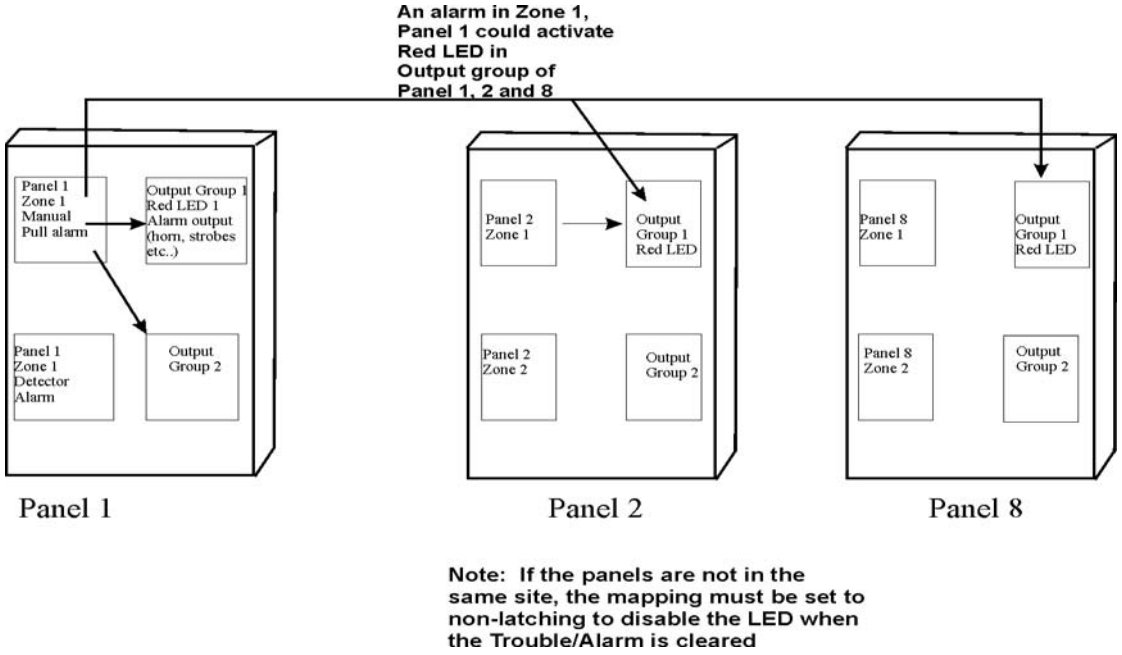


Figure 8-8 Example of Expanding Mapping of LED Points Across Panels

8.3 Programming Using the HFSS Honeywell Fire Software Suite

You can use the HFSS Honeywell Fire Software Suite software to program the control panel onsite (personnel will need to be onsite during the upload or download process). HFSS is a software package that lets you easily program the control panel using a Windows-based computer. HFSS is needed for Mapping. When using HFSS, you can set up the programming options for the panel, save the options in a file, then download the file to the panel. You can connect to the control panel directly using the onboard USB. Updates are available at www.farenhyt.com

8.4 Programming Using an Annunciator

Many of the features can be programmed through the system annunciator, using either the control panel's on-board annunciator or RA-2000, RA-1000, or RA-100 remote annunciators.

The following subsections describe programming basics, including a description of editing keys available for programming and how to move through programming menus. Section 9 contains specific information about individual programming options.

8.4.1 Entering / Exiting Panel Programming

To enter Program Mode:

1. Enter the Installer Code (factory programmed default code is 123456).
2. Select 7 for Programming Menu. See Section 9 for detailed menu information and Section 8.5 for a quick reference listing all programmable options and JumpStart® defaults.

To exit Program Mode:

When you have completed working with the menus, press left arrow several times until you are exited from programming mode. Two prompts will display. The first prompt is to make sure you intended to leave the panel programming (select Yes or No as appropriate). The second prompt is for accepting all changes. If you select No, any changes you have made since you entered panel programming will have no effect.

8.4.1.1 Moving through the Menus

Figure 8-9 shows how to move through the menu screens, using the main menu screen as an example.

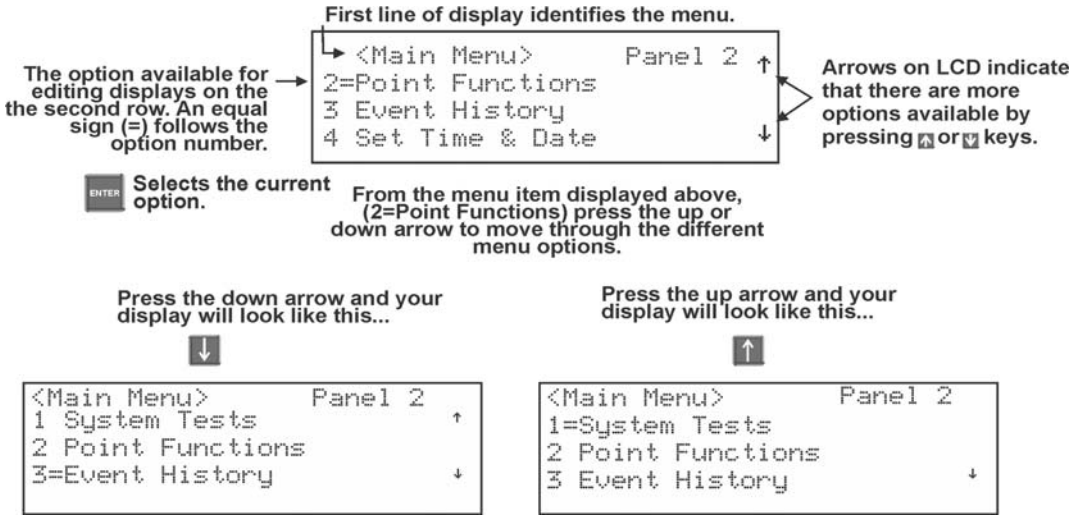


Figure 8-9 Moving through Main Menu (Main Menu used as an Example)

8.4.1.2 Selecting Options and Entering Data

There are several ways to make programming selections using the control panel depending on which screen you are currently viewing. The chart below is a generic explanation.

To	Press
Select from a menu.	The corresponding number on the annunciator.
Enter numeric data.	The appropriate number on the annunciator.
Enter text (alphanumeric data).	See Appendix B for complete list of characters.
Select from a scrolling list.	The up arrow or down arrow to move through the list of available options. When the option you want to select is displayed, press ENTER.

8.5 Programming Menu Quick Reference

This section of the manual lists all Panel Programming options in the order they appear on the sub-menus. Default settings are indicated in text or marked with an asterisk (*). The comments column provide quick information and a reference to a section (if applicable) which has more detailed information.

Menu		Options/Defaults		Comments
Module	Edit Module	Select Module	Edit Module ID	Section 9.2.1
			Enter Module Name	
			Edit Module specific options	
	Add Module	5824-Serial/Parallel/ IO		Section 9.2.2
		RA-2000 LCD Annunciator		
		RA-1000 LCD Annunciator		
		RA-100 LCD Annunciator		
		6815 SLC Loop Expander		
		5815XL-SLC Loop Expander		
		RPS-1000 Power Supply		
		5496 NAC Expander		
		5880-LED/IO Module		
		5865-LED Annunc. Module		
		ECS-50W -Voice Amplifier		
		ECS-125W-Voice Amplifier		
		ECS-DUAL50W - Voice Amplifier		
		ECS-INT50W-Voice Amplifier		
		ECS-NVCM -Network Voice Control Module		
		ECS-VCM-Voice Control Module		
		ECS-RVM Remote Voice Module		
Module	Add Module	SK-NIC Network Interface Card		Section 9.2.2
	Delete Module	Select Module		Section 9.2.3
	View Module List	Select Module		Section 9.2.4

Menu		Options/Defaults				Comments
Zone	Edit Zone	Select Zone	Edit Zone Name			Section 9.3.1.1
			Zone Properties	Verification Type	*1-Count	Section 9.3.1.2
					2-Count	
					Alarm Ver.	
					PAS	
					SNGL ILOCK	
					DBL ILOCK	
				Heat Temp Set	135° to 150°F	SD devices Section 9.3.1.2
					135° to 190°F	IDP or SK device Section 9.3.1.2
				Smoke Sensitivity	Low	Section 9.3.1.2
					Medium	
					High	
			Zone Accessory Opt	Single/Multi-station Cadence	00-23	Section 9.3.1.3
				CO Single/Multi station Cadence	00-23	
				Local Zone	Yes	
					No	
	View Zone Points	Select Zone				Section 9.3.2
Group	Edit Group	Select Group	Group Name			Section 9.4.1.1
			Group Properties	Voice Group	Y or N	Section 9.4.1.2
				Switch	1-64	
				Template Override	Y or N	
				Allow Sys Override	Y or N	
				Dynamic Act/ Template Override Cadence	00-23 (See Appendix C)	
	View Group Points	Select Group				Section 9.4.2
	Edit OPG Template	Select template	Modify name and which OPGs are in template			Section 9.4.3

Menu		Options/Defaults					Comments
Point	SD, SK and IDP Devices on Internal and External 6815 and External 5815XL	Enter Pt	Select Module[4,5]	UNUSED			Section 9.5
				SWITCH[1,2,3,4,5,6]	MANUAL PULL		
					WATER FLOW	*LATCH	
						NON-LATCH	
					FIRE SUPERVSY	*LATCH	
						NON-LATCH	
					FIRE DRILL		
					SILENCE		
					RESET		
					P.A.S. ACK		
					ZONE AUX1	*LATCH	
						NON-LATCH	
					ZONE AUX2	LATCH	
						NON-LATCH	
					SYSTEM AUX1	LATCH	
						NON-LATCH	
					SYSTEM AUX2	LATCH	
						NON-LATCH	
					DETECTOR		
					FIRE TAMPER	LATCH	
						NON-LATCH	
					MANUAL RELEASE		
					INTERLOCK		
					STATUS POINT		
					CO DETECTOR SWITCH		
					CO SUPERVISORY DETECTOR SWITCH	LATCH	
						NON-LATCH	
					ECS INPUT	LATCH	
						NON-LATCH	
					ECS TAMPER	LATCH	
						NON-LATCH	
					ECS SUPER-VISORY	LATCH	
						NON-LATCH	
				NOTIF[1,2,3,4,5,6]	OUTPUT PT	Select Group	
					AUX CONST		
					AUX RESET		
					AUX DOOR		

Menu		Options/Defaults					Comments
Point (cont.)	SD, SK and IDP Devices on Internal and External 6815 and External 5815XL	Enter Pt	Select Sensor [4,5]	RELAY[1,2,3,4,5,6]	OUTPUT PT	Select Group	Section 9.5
					AUX RESET		
					AUX DOOR		
				SLC LED [1,6]	LED Number	1-80	
					LED Function	Notif	
						Unused	
				DETECTOR 2,3,4,5	2-WIRE SMOKE	Select Zone	
				W. Gateway 2,3,4,5			
				W SWITCH 2,3,4,5, 8	Same as SWITCH		
				W-RELAY[2,3,4,5,8]	Same as Relay		
				UNUSED			
				DETECTOR[1,2,3,4,5,6]	PHOTO	No Accessory	
						SDR BAS 1,2,3,4,5,6	
						RLY BAS 1,2,3,4,5,6	
						I-SdrBa (Intelligent Sounder Base) [2,3,4,5,6]	
					ION	No Accessory	
						SDR BAS 1,2,3,4,5,6	
						RLY BAS 1,2,3,4,5,6	
						I-SdrBa (Intelligent Sounder Base) [2,3,4,5]	

Menu		Options/Defaults					Comments
Point (cont.)	SD, SK and IDP Devices on Internal and External 6815 and External 5815XL	Enter Pt	Select Sensor	DETECTOR 1,2,3,4,5,6	HEAT[1,2,3,4,5,6]	No Accessory	Section 9.5
						SDR BAS 1,2,3,4,5,6	
						RLY BAS 1,2,3,4,5,6	
						I-SdrBa (Intelligent Sounder Base) [2,3,4,5]	
					PHOTO DUCT 1,2,3,4,5,6	No Accessory	
						DCT RLY	
					ION DUCT[1,6]	No Accessory	
						DCT RLY	
					2-WIRE SMOKE[1,6]		
					ACCLIMATE 2,3,4,5	No Accessory	
						SDR BAS	
						RLY BAS	
						I-SdrBa (Intelligent Sounder Base)	
					HEAT HT 2,3,4,5	No Accessory	
						SDR base	
						RLY base	
						I-SdrBa (Intelligent Sounder Base)	
					PHOT-HEAT 2,3,4,5	No Accessory	
						SDR BAS	
						RLY BAS	
						I-SdrBa (Intelligent Sounder Base)	
					BEAM[2,3,4,5]		
				SUP DET 1,2,3,4,5,6	Same function as DETECTOR	LATCH	
						NON-LATCH	

Menu		Options/Defaults					Comments
Point (cont.)	SD, SK and IDP Devices on Internal and External 6815 and External 5815XL (cont.)	Enter Pt	Select Sensor[4, 5] (cont.)	CO FIRE [2, 3, 4, 5]	CO ALARM/ FIRE ALARM	No Accessory	
						SDR BAS	Single station or Multi station Silence or Non-Silence
						RLY BAS	
						I-SdrBA (Intelligent Sounder Base)	Latch or non-latch Single station or Multi station Silence or Non-Silence
					CO ALARM/ FIRE SUPR	No Accessory	
						SDR BAS	Single station or Multi station Silence or Non-Silence
						RLY BAS	
						I-SdrBA (Intelligent Sounder Base)	Latch or non-latch Single station or Multi station Silence or Non-Silence
					CO SUPR/ FIRE ALARM	No Accessory	
						SDR BAS	Single station or Multi station Silence or Non-Silence
						RLY BAS	
						I-SdrBA (Intelligent Sounder Base)	Latch or non-latch Single station or Multi station Silence or Non-Silence
					CO SUPR/ FIRE SUPR	No Accessory	Single station or Multi station
						SDR BAS	
						RLY BAS	
						I-SdrBA (Intelligent Sounder Base)	Latch or non-latch. Single station or Multi station. Silence or Non-Silence

Menu		Options/Defaults					Comments
Point (cont.)	SD, SK and IDP Devices on Internal and External 6815 and External 5815XL (cont.)	Enter Pt	Select Sensor[4, 5] (cont.)	W-Detector 2,3,4,5,8	Photo 2,3,4,5	Section 9.5.3	
					Acclimate 2,3,4		
					Photo-Heat 2,3,5		
					Heat 2,3,4,5		
				W-SUP DET 2,3,4,5,8	Same as W-Detector		
	Internal Power and External Power	Enter Pt /Select Function	Select Sensor	UNUSED			Section 9.5
				B NOTIF	NOTIF OUTPUT	Select Group Super-vised Yes or No	
					CONTROL CIRCUIT		
				A NOTIF	NOTIF OUTPUT	Select Group Super-vised Yes or No	
					CONTROL CIRCUIT		
				AUX PWR	CONSTANT		
					AUX RESET		
					AUX DOOR		
					AUX SYNC[9]		
				B SWITCH	MANUAL PULL	Latch and Non-Latch feature only appear for WATERFLOW,FIRE SUPERVISORY, FIRE TAMPER, ZONE AUX1, ZONE AUX2, SYSTEM AUX1, SYSTEM AUX2., ECS INPUT, ECS TAMPER, and ECS SUPERVISORY.	
					WATER-FLOW		
					FIRE SUPER-VISORY		
					FIRE TAMPER		
					FIRE DRILL		
					SILENCE		
					RESET		
					P.A.S. ACK		
					ZONE AUX 1		
					ZONE AUX2		
					SYSTEM AUX1		
					SYSTEM AUX2		
					MANUAL RELEASE		
					INTERLOCK		

Menu		Options/Defaults					Comments
Point (cont.)	Internal Power and External Power (cont.)	Enter Pt /Select Function	Select Sensor	B SWITCH	ECS INPUT	If ECS INPUT is selected choose associated EVENT	
					ECS TAMPER	Latch and Non-Latch feature only appear for WATERFLOW, FIRE SUPERVISORY, FIRE TAMPER, ZONE AUX1, ZONE AUX2, SYSTEM AUX1, SYSTEM AUX2., ECS INPUT, ECS TAMPER, and ECS SUPERVISORY	
					ECS SUPER-VISORY		
					STATUS POINT		
		Enter Pt /Select Function (cont.)		A SWITCH	Same as B SWITCH		Section 9.5.3
				B DETECT	2-WIRE SMOKE		
					4-WIRE SMOKE		
					CO 4 WIRE DET		
					CO 4 WIRE SUP DET	Latch	
						Non-Latch	
				A DETECT	2-WIRE SMOKE		
					4-WIRE SMOKE		
					CO 4 WIRE DET		
					CO 4 WIRE SUP DET	Latch	
						Non-Latch	
		Select Group or Zone Number				Group or Zone selection will appear depending on the function selected	
		Edit Name		Enter Name			
	5496	Edit Point #		UNUSED			Section 9.5.5
				B NOTIF	Control Circuit Notif Output	Select Group Super-vised Yes or No	
				A NOTIF			
				AUX_PWR	Constant	Edit Name	
					Aux Sync		
					Aux Door		
					Aux Reset		
	5880/5865/ECS-Series Amplifiers	Enter Point #		UNUSED		Section 9.5.4 and Section 9.5.6	
				NOTIF			
		Select Group					
		Edit Name		Enter Name			
	ECS-VCM/ECS-RVM/ECS/NVCM	Enter Pt /Select Function		UNUSED			Section 9.5.7
				SWITCH	MANUAL PULL		
					WATERFLOW		
					FIRE SUPERVISORY		
					FIRE TAMPER		
					FIRE DRILL		
					SILENCE		
					RESET		
					P.A.S. ACK		
					ZONE AUX1		
					ZONE AUX2		
					SYSTEM AUX1		
					SYSTEM AUX2		

Menu		Options/Defaults				Comments
Point (cont.)	ECS-VCM/ECS-RVM/ECS/NVCM	Enter Pt /Select Function	SWITCH	MANUAL RELEASE		Section 9.5.7
				INTERLOCK		
				STATUS POINT		
				ECS INPUT		
				ECS TAMPER		
				ECS SUPERVISORY		
				VOICE AUX STATUS 1-2		
				BACKGROUND MUSIC		
				VOICE AUX ECS 1-4		
System Options	Communication Options	Auto Time Test	Set the Hour	*02:00AM	Section 9.6.1.1	
			Set the Minutes			
			Select AM/PM			
			Enter Interval	24 hrs,12 hrs, *6 hrs, 4 hrs		
		Phone Lines	For each phone line (1 & 2) select:			
			Dialing Prefix	Up to 9 digits	*none	Section 9.6.1.2
			# of Answer Rings	Range: 00-15	*06	Number of rings before panel answers a call from a computer Section 9.6.1.2
			Select Dialing Option	TT	*TT	Touch Tone
				TT/PL		TouchTone alternating with pulse see Section 9.6.1.2
				PULSE		Pulse dialing
			Rotary Pulse Format	U = 60/40	*U	Section 9.6.1.2
				E = 66/34		
			Dial Tone Disabled	Y or N	*N	
			Monitor Line	Y or N	*N	Section 9.6.1.2
			Answering Machine Bypass	Y or N	*N	Section 9.6.1.2
			Phone Line Unused	Y or N	*N	Section 9.6.1.2
		Edit Ethernet	IP Address			Section 9.6.1.3
			Subn Mask SubNet			
			Default Gateway			
			DHCP Enable			
		AlarmNet Timers	Ethernet Supervise	75 sec, 90 Sec, 3 min, 5 min, 1 hr, 24 hrs, 30 days, None	*5 Minutes	Section 9.6.1.4
			Cellular Supervise	24Hrs, 30 days, none	*24 Hours	
			Old Alarm Time	10 min, 15 min, 30 Minutes, 1 hr, 2 hrs, 4 hrs, 8 hrs, 12 hrs, 24hrs, none	*30 Minutes	

Menu		Options/Defaults				Comments
System Options cont.	Communication Options	Phone Line Gains	Dialing	High	*High	Section 9.6.1.4
				Low		
				Normal		
			Reporting	Low	*Low	
				Normal		
				High		
	Daytime/ Nighttime Sensitivity	Enable/Disable	Yes		*No	Section 9.7
			No			
		Day Start	Enter time		*6:00AM	
		Night Start	Enter time		*6:00PM	
		Days of the Week	Select days		*-MTWTF-	
	Holiday Days	Holidays 1 to 18	Enter dates		*01/01, 07/ 04, 12/24, 12/25	Section 9.7
	Time Options	Water Flow Delay	0 - 90 Seconds	*1 sec	Water Flow delay is the number of seconds before a water flow alarm is generated. Section 9.7	
		Alarm Verify	60 to 250 seconds	*60 sec	Alarm Verification time section 9.6.4.2	
		Low AC Report Time	0 - 30 hours	*3 hrs	Low AC Report Delay. Section 9.6.4.3	
		AC Freq:	50 Hz	*60Hz	Section 9.6.4.4	
			60 Hz			
			Internal			
		Clock Display Format	AM/PM	*AM/PM	System Clock Format (AM/PM or military). Section 9.6.4.5	
			MIL			
		Auto-resound	4 hours	*24 hours	Section 9.6.4.6	
			24 hours			
	Miscellaneous Options	SYNC Strobes when Silenced	Y	*N	Section 9.6.5.1	
			N			
		Auto Display Events	Y	*N	Section 9.6.5.2	
			N			
	Daylight Saving Options	Auto Daylight Saving Time	Y	*Y	Section 9.6.6.1	
			N			
		DST Start	Select week: 1st, 2nd, 3rd, 4th or Last	Select month		Section 9.6.6.2
		DST End				
	Edit Banner	Refer to Appendix B			Section 9.7	
	SLC Family	IDP			Section 9.7	
		SD				
		SK				
Jump Start AutoPrg	Y (Yes) N (No)				See Section 9.7	
Restore Defaults	Y (Yes) N (No)				See Section 9.8	

Menu		Options/Defaults		Comments
Voice Options	VCM Maintenance	PC Connection		Section 9.7
		Local Recording		
	Edit Voice Settings	Enable Dual Channel System		
*Default				

1. Available on 5815XL External.
2. Available on 6815 External.
3. Available on 6815 Internal.
4. Available with SLC Family as IDP.
5. Available with SLC Family as SK.
6. Available with SLC Family as SD.
7. Requires ECS module programmed into the panel.
8. Requires wireless Gateway.
9. Aux Sync setting is only applicable for the B200S Sounder Base.

Section 9
Programming

This section of the manual describes how to manually program the control panel from the built-in annunciator. Each subsection discusses these menu options in detail. All options described in this section can be performed using the HFSS - Honeywell Fire Software Suite.

Important!

Before any customized programming is done, JumpStart AutoProgramming should be run first. After JumpStart is run, thoroughly test the system. The reason the system should be tested after JumpStart AutoProgramming is because JumpStart AutoProgramming automatically programs the system, searching for and configuring all SLC and SBUS devices it finds. JumpStart allows you to confirm the integrity of the installation prior to performing any custom programming. After determining that the hardware is properly installed, custom programming can be performed. Refer to Section 8.

9.1 UL 864 / UL 2572 Programming Requirements

NOTICE TO USERS, INSTALLERS, AUTHORITIES HAVING JURISDICTION, AND OTHER INVOLVED PARTIES: This product incorporates field programmable software. In order for the product to comply with the requirements in the Standard for Control Units and Accessories for Fire Alarm Systems, UL 864, and Stand for Mass Notifications Systems, UL 2572, certain programming features or options must be limited to specific values or not used at all as indicated below.

Programming Option	Menu Item	Permitted in UL 864 (Y/N)	Permitted in UL 2572 (Y/N)	Possible Settings	Settings Permitted in UL 864	Settings Permitted in UL 2572
Time Options	Auto-resound	Yes	Yes	4 hrs, 24hrs	4 hours if using SWIFT devices	4 hours if using SWIFT devices
Time Options	Low AC Report Delay	Yes	Yes	0–30 hours	1–3	1–3
Display Oldest Event	Y (Enabled)	Yes	Yes	Yes & No	Yes	Yes
	N (Disabled)	No	No	Yes & No	No	No
Initial Delay	0-28	Yes	Yes	0-28	3	3
Inter Message Delay	4-32	Yes	Yes	4-32	4-32	4-28
Alarm Verification	Alarm Verification	Yes	Yes	60-250 (confirmation period)	60	60
Auto Reset ECS MIC Triggered Event	Auto Reset ECS Custom Event	Yes	Yes	Never Timer Event Disabled	Never Timer Event Disabled	Never Timer Event Disabled
ECS Input	ECS Input	Yes	Yes	Latching Non-Latching	Latching	Latching
Event Priority	CO Alarm	No	No	Yes & No	No	No

9.2 Modules

This section lists the options available under the module option in the Panel Programming. The following modules are available for the control panel: 5824 serial/parallel/IO printer interface module, RA-2000, RA-1000 & RA-100 LCD remote annunciators, 5815XL SLC Loop expander for SD devices, 6815 SLC Loop Expander for IDP or SK, RPS-1000 power supply, 5496 NAC expander, 5880 LED I/O module, 5865 LED annunciator Module, ECS-50W, ECS-125W, or ECS-INT50W watt voice amplifiers, ECS-AMP audio/voice amplifier, ECS-DUAL50W dual channel amplifier, ECS-VCM voice control module, ECS-NVCM network voice control module, ECS-RVM remote voice module, and SK-NIC network Interface card.

9.2.1 Edit Modules

The features that can be edited when this option is selected are module ID, module name, or features that are specific to the module to be edited.

To edit an existing module:

1. Enter the installer code. The panel will automatically go to the main menu.
2. Select 7 for Panel Programming.

Note: If you are working on a networked system you will need to select which panel you want to program

3. Press 1 to enter module menu.
4. Press 1 to edit a module.
5. Use the up or down arrow key to select the module you wish to edit.Then press ENTER.

9.2.1.1 Editing Module ID

6. Press the up or down arrow key to modify the module ID.

Note: Internal devices, SK-NIC and ECS-NVCM are not able to have their module ID edited.

9.2.1.2 Naming Modules

You can assign an English name to a system hardware module to make it easier to recognize on a display.

7. If you wish to edit the module's name, press ENTER on the module's name. Then, press the number keys corresponding to the character for the module's, name (or press right arrow key to bypass editing the name).

Note: See Appendix B for editing names.

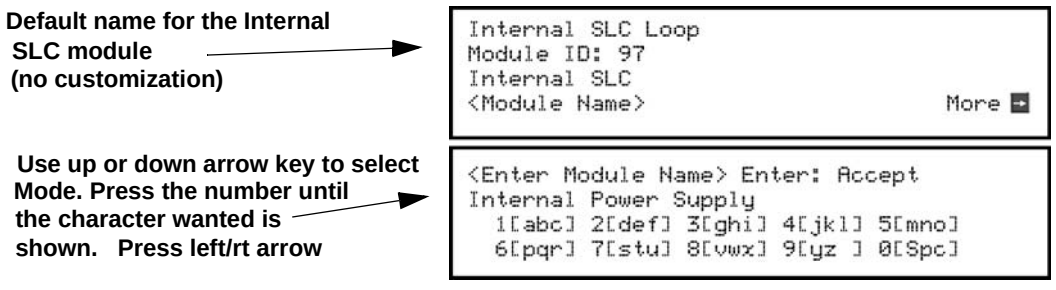


Figure 9-1 Edit module Name Programming Screen Example

9.2.1.3 Changing Module Options

Each module has a unique set of options that specifically applies to the functionality of the module being edited.

8. Use the left and right arrow keys to move between available options.
9. Option settings are edited by pressing the up or down arrow key or using the keypad for numerical entry.

9.2.2 Adding a Module

To add a new hardware module to the system, follow these steps:

You must be in the Main Menu to perform this task. If necessary, enter the Installer Code.

1. Select 7 for Panel Programming.
2. Press 1 to enter module menu.
3. Press 2 to add a module.
4. From the next screen, select the number that corresponds to the type of module you are adding from the <New Module Type> screen.

   The screen will display “Adding module [#]...” for a few moments. You will be returned to the <New Module Type> screen where you can add additional modules if desired.

You must save changes when you exit the Panel Programming or the new module will not be added.

Note: If you Add a Module that has not been physically connected, the panel will go into trouble after it reinitializes (when you exit the Panel Programming). When the new module is attached, the trouble will correct itself automatically.

9.2.3 Deleting a Module

To delete a module, follow these steps:

You must be in the Main Menu to perform this task. If necessary, enter the Installer Code.

1. Select 7 for Panel Programming.
2. Press 1 to enter module menu.
3. Press 3 to delete a module.
4. Select the module to be deleted.
5. A warning screen will display. If you want to proceed with deleting the module, select Yes. To cancel, select No.

9.2.4 View Module List

To view a list of all modules, follow these steps:

You must be in the Main Menu to perform this task. If necessary, enter the Installer Code.

1. Select 7 for Panel Programming.
2. Press 1 to enter module menu.
3. Press 4 to view list. Use the up or down arrow key to scroll though list.

9.3 Zone

Through the zone option in Panel Programming you can edit and view zone points. Selections made here affect all detectors and switches in the zone. Up to 999 zones can be used in each panel.

9.3.1 Edit Zone

Features that can be edited through the edit zone option are, edit zone name, zone properties (which includes zone type and detector sensitivity), and zone accessory options.

To edit a zone, follow these steps:

1. Enter the installer code. The panel will automatically go to the main menu.
2. Select 7 for Panel Programming.
3. Press 2 to enter zone menu.
4. Press 1 to edit a zone.
5. Enter the zone number, then press ENTER.

9.3.1.1 Edit Zone Name

6. Press 1 to edit the selected zone name.

You can use words to display a descriptive name for a zone.

Note: See Appendix B for editing names.

9.3.1.2 Edit Zone Properties

Zone properties consist of alarm delay characteristics, heat detector sensitivity, and smoke detector sensitivity.

1. Do steps 1 through 5 of Section 9.3.1.
2. Press 2 to edit the properties of the selected zone.

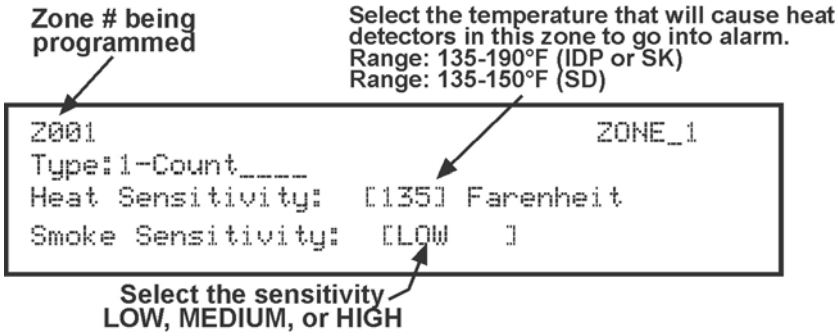


Figure 9-2 Editing Zone Properties

Note: You only see smoke sensitivity on the IFP-2100/ECS if the daytime/nighttime sensitivity is off under System Options. (See Section 9.6.2). Otherwise if you have Daytime/Nighttime sensitivity on, this will bring up a Smoke Sens Day and Night, 2 separate widgets with sensitivity selection being either low, med or high for each.

Alarm Delay Characteristics

The programmed zone type is provided for user reference only. To modify the zone type use the HFSS Software Suite.

Table 9-1 list the detector characteristics and a description of each.

Table 9-1: Detector Characteristics

Type of Delay	Description
1-Count	One Count (No Delay). When this option is enabled, an alarm occurs immediately when a single device of any of the following types goes into alarm: detector, manual pull, water flow, Zone Aux1 or Zone Aux2. This is considered the most typical operation and is the default for all zones.
2-Count	When this type of alarm delay is used, two or more detectors within the zone must go into alarm in order for the zone to report an alarm. Switches of type manual pull, Detector switch, water flow, Zone Aux1 and Zone Aux2 are an exception; they will cause an alarm when only one switch is in alarm. When a single detector is in alarm in a 2-Count zone, the system enters a prealarm condition. In a prealarm condition, the touchpad PZT beeps and the annunciator display indicates that a prealarm has occurred. If the zone has been mapped to an output group for the prealarm event, the output group will activate. The prealarm will not be reported to the central station.
Alarm Verification	Alarm verification is an optional false alarm prevention feature that verifies an alarm condition by resetting the smoke detector. If the alarm condition still exists by the time the reset cycle has completed, the detector will go into alarm. If the detector is no longer in alarm, no report will go to the central station. The alarm verification sequence is ignored if the zone is already in alarm.
P.A.S.- Positive Alarm Sequence	This option is intended to be used with an acknowledge switch. An alarm is delayed for 15 seconds, giving on-site personnel a chance to investigate the alarm. If the acknowledge switch is not activated within 15 seconds, an alarm occurs automatically. If this option is enabled for a zone, the zone will respond to an alarm condition as follows: • The zone will not go into alarm for 15 seconds to allow an on-site operator to activate the acknowledge switch. • If the operator does not press the acknowledge switch within 15 seconds, the zone will go into alarm. • If the operator presses the acknowledge switch within 15 seconds, a 180-second time-frame will begin counting down. This time-frame allows the operator to investigate the cause of the alarm. • If the operator performs a reset within 180 seconds, the alarm will not occur. If the operator does not perform a reset within 180 seconds, an alarm will occur automatically. • The P.A.S. feature will be overridden if another alarm occurs.
Single Interlock	See Section 10.7.1 for single interlock releasing operation.
Double Interlock	See Section 10.7.2 for double interlock releasing operation.

Note: IDP-FIRE-CO, SK-FIRE-CO and other CO detectors can only be installed in a 1 count zone; they will operate as a 1-count point regardless of the programmed zone type (i.e. Alarm Verification, 2 count etc.).

Heat Detector Sensitivity

Use this feature to set the temperature at which high temperature detectors will respond.All detectors in the zone will respond in the same way.The range for IDP-Heat-HT or SK-Heat-HT heat detector is from 135°F to 190°F, for SD505-HEAT the range is 135° to 150°F.

The high temperature IDP or SK heat detectors are absolute temperature devices. This means that they respond to an alarm immediately if the temperature in the zone goes above the programmed temperature.

3. Enter the temperature at which the heat detector will respond, or use the up or down arrow key to scroll through the range, or enter directly from the number keys on the annunciator, then press ENTER.

Smoke Detector Sensitivity

IMPORTANT!

Drift compensation is automatic for all smoke detectors (photoelectric and ionization). The feature is always in effect, no programming is required. See Section 10.4.11 for information about how to check if a detector is in UL compliance.

All detectors in the zone will respond as programmed in this menu location.

Table 9-2: IDP/SK and SD Sensitivity Choices*

Detector Protocol	Type of Smoke Detector	Choices	Comments
IDP/SK	Photo, Acclimate, & Photo-T	Low (3.5% obscurity)	If the day/night sensitivity option is selected, you can have different sensitivity settings during the day and at night. You can program the days of the week that Day/Night Sensitivity will automatically adjust. You can also designate specific days as holidays. Holiday and weekend days use night sensitivity for the entire day.
		Medium (2.5% obscurity)	
		High (1.5% obscurity)	
	DNR with PhotoR or Photo	Low (2.5% obscurity)	
		Medium (2.0% obscurity)	
		High (1.5% obscurity)	
SD	SD505-PHOTO	Low	If the day/night sensitivity option is selected, you can have different sensitivity settings during the day and at night. You can program the days of the week that Day/night sensitivity will automatically adjust. You can also designate specific days as holidays. Holiday and weekend days use night sensitivity for the entire day.
		Medium	
		High	
	SD505-DUCT with SD505-DUCTR	Fixed	Low, Medium and High settings have no effect for photoelectric duct detectors. Photoelectric duct detector sensitivity is always 1.1% per foot. Day and night settings also have no effect on these detectors.
	SD505-DUCT with SD505-DUCTR	Fixed	Low, Medium, or High settings have no effect for ionization duct detectors. Ionization duct detector sensitivity is always 75 MIC (0.8%) regardless of Low, Medium or High setting. Day and night settings also have no effect on these detectors.

** Automatic drift compensation is always in effect for all detectors. See Section 10.4.11 for information about how to check if a detector is in compliance.*

4. Use the up or down arrow key to scroll through the range or enter directly from the number keys on the annunciator, then press ENTER.

Note: If the SLC protocol is changed from IDP/SK to SD and a zone's sensitivity is higher than the SD limit, the zone sensitivity will be set to the max value, 150, for the SD family.

9.3.1.3 Zone Accessory Options

1. Do steps 1 through 5 of Section 9.3.1.
2. Press 3 to edit the Zone's Accessory options.

Single or Multi-Station cadence pattern (choose from Patterns 00 to 02, 23 if using IDP or SK. Choose from 00-16, 23 if using SD devices). See Appendix C.

CO Single and Multistation Cadence (choose from Cadence Patterns 00 to 02, 23 for IDP or SK devices).

Note: The B200S Sounder base provides the recommended CO cadence pattern.

Local Zone (choose Y or N, for Yes or No).

Note: If the SLC protocol is changed from SD to IDP/SK series and the cadence is no longer valid for IDP/SK, the zone cadence will be set to constant on.

9.3.2 View Zone Points

To view the points in a zone, follow these steps:

1. Enter the installer code. The panel will automatically go to the main menu.
2. Select 7 for Panel Programming.
3. Press 2 to enter zone menu.
4. Press 2 to view zone points.
5. Enter the number of the zone you wish to view, then press ENTER.

9.4 Group

An output group is made up of output points that have been programmed to respond in the same way. Output groups simplify programming because you only have to program the output characteristics that are common to all of the group points once, instead of programming each individual point. Once you have defined the characteristics of output groups, you can assign each point to the appropriate group. All valid output points are assigned to only one output group. Unused points are not assigned to any output group. Up to 999 output groups can be defined per pane

9.4.1 Edit Group

In the edit group option you can program the name of an output group (Section 9.4.1.1) and change the properties (Section 9.4.1.2) of that group.

To edit a group, follow these steps:

1. Enter the installer code. The panel will automatically go to the main menu.
2. Select 7 for Panel Programming.
3. Press 3 to enter group menu.
4. Press 1 to edit group.
5. Enter the number of the group you wish to edit, then press ENTER.

9.4.1.1 Edit Group Name

6. To edit the group name, press 1.

You can use words to display a descriptive name for a group.

Note: See Appendix B for editing names.

9.4.1.2 Edit Group Properties

7. To edit the group properties, Press 2 from the edit group menu.

The Edit Group Menu allows you to select options for each group for the following items:

Note: These settings only apply to non-voice groups

- Select Y for voice group and N for non-voice group.
- Select / Dynamic Activation switch number: used when the group is defined as a voice group; or as a non-voice group where Dynamic Activation is used. This option links the output group with a voice select switch on a VCM, RVM, or switch expander for dynamic activation/deactivation. See Section 11.2.3.2 for more information.

- Template Override is shown when set to Yes.
- Dynamic Activation -Is shown if a non-voice group is assigned to a Select/Dynamic Activation switch number
- Dynamic Activation / Template Override Cadence. (This is shown when the Template override is set to Yes and Dynamic Activation is Yes): this setting sets the cadence of the non-voice group mapped to voice select switch when activated using dynamic activation or by a template. See Sections 11.2.3.2 and 9.4.3 for more information.

Defining Output Group Type

Each output group is defined as either a voice output group or a non-voice output group. Output points that are audio circuits (all circuits on the ECS-50W, ECS-125W, ECS-DUAL50W, ECS-INT50W and ECS-CE4) can only be assigned to voice output groups. Output points that are non-voice circuits (all other points and circuits that are on all modules except the ECS-50W, ECS-125W, ECS-DUAL50W, ECS-INT50W and ECS-CE4) are assigned to non-voice output groups.

Each of the output groups defined as voice can be mapped to a particular switch and LED on the ECS-VCM/ ECS-NVMC, ECS-RVM and ECS-SW24. This allows the user to see the state of the voice groups assigned to the switches.
This also lets the user individually select which areas they want to do a live page into. Output groups not defined as voice groups can also be assigned to these switches as long as there is a voice group already assigned to the group. This allows for dynamically activating/deactivating both voice and strobes/other outputs in an area with a single button press. See 11.2.3.2.

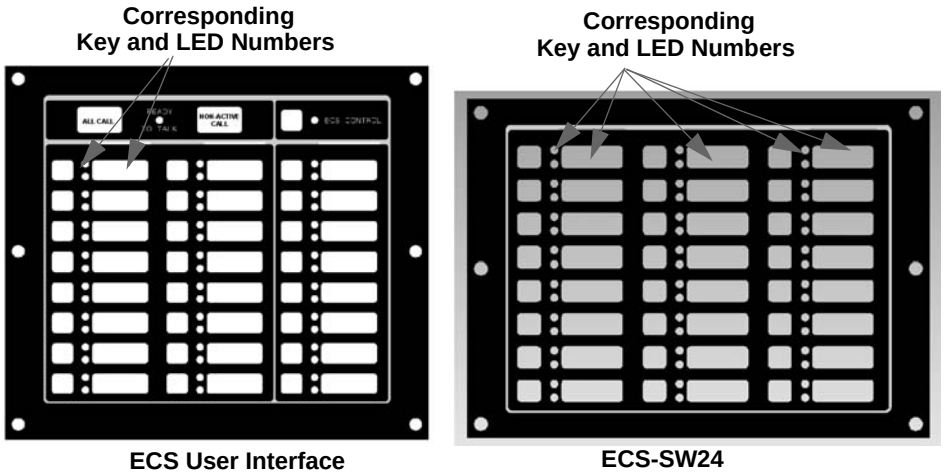


Figure 9-3 Corresponding Key and LED for Mapping Output Groups

Silencing Options

The following silencing options are available for each output group.

Table 9-3: Silencing Options

Optional Timers	Description
Silence Inhibit	Timed Silence after Inhibit. If this option is selected, the output group must be audible for a programmed number of minutes before it can be silenced. If the condition that caused the output to activate has not cleared during the time-frame, the output can be silenced. If you select this option, select the timeframe in the delay field. Range is 0-60 minutes.
Auto Silence	Silenceable. The output group will automatically silence after the timer expires. Range is 0-60 minutes.

Table 9-3: Silencing Options

Optional Timers	Description
Auto Unsilence	If this option is selected, the output group can be silenced for a programmed time-frame. If the condition that caused the output to activate has not cleared during the time-frame, the output reactivates. If you select this option, select the time-frame in the delay field. Range is 0-60 minutes.
Startup Delay	When a alarm is generated, the Output group will not activate until the timer expires assuming the event is still active. Range is 0-120 Seconds

9.4.2 View Group Points

1. Enter the installer code. The panel will automatically go to the main menu.
2. Select 7 for Panel Programming.
3. Press 3 to enter group menu.
4. Press 2 to view group points.
5. Enter the group number, then press ENTER.

9.4.3 Edit OPG Template

1. Enter the installer code. The panel will automatically go to the main menu.
2. Select 7 for Panel Programming.
3. Press 3 to enter group menu.
4. Press 3 to edit OPG Template.
5. Enter the Template number, then press ENTER
6. Press ENTER on the template name to edit the name.

You can use words to display a descriptive name for a group.

Note: See Appendix B for editing names.

7. Right arrow to the OPG and select YES or NO to select which output groups to include in the template.

9.5 Point

You may need to change characteristics of individual input points (detectors and switches) even after using JumpStart AutoProgramming. This section explains how to change options for: type of input point; latching/non-latching status (switches); and name and zone/group assignment of a point.

9.5.1 Point Programming For 5815XL Module

To program for points on an 5815XL module, follow these steps:

1. Enter the installer code. The panel will automatically go to the main menu.
2. Select 7 for Panel Programming.
3. Press 4 to enter point menu.
4. Press the up or down arrow key to select the desired module. Refer to Section 8.5 Quick Reference Table for available choices. Then press ENTER.
5. Enter the number of the point you wish to edit, then press ENTER.

6. Select the type of device by pressing the up or down arrow key. Refer to Table 9-4 under the column heading "Type Selection" for a list of choices.

Table 9-4: Programming Options for 5815XL Modules

Type Selection	Function	Latching Option	Comments
UNUSED			Select for SLC points that are unused.
DETECTOR	PHOTO		Spot photoelectric detectors.
	ION		Spot ionization detector.
	HEAT		Spot heat detector.
	PHOTO DUCT		Duct photoelectric detector.
	ION DUCT		Duct Ion detector.
	2-WIRE SMOKE		2-wire smoke detector.
SUP DET	PHOTO	Latching Non Latching	Use this option when you want a detector to indicate a supervisory alarm.
	ION		
	HEAT		
	PHOTO DUCT		
	ION DUCT		
SWITCH	MANUAL PULL		Use this switch type for manual pull stations. This input is always latched. The switch can clear only when an alarm is reset. This switch type has the highest fire priority; it overrides any other type of fire alarm.
	WATERFLOW	Latching Non Latching	Use this switch type for monitoring water flow in a sprinkler system. Switch closure will cause a sprinkler alarm. Water flow switches can be programmed as latching or non-latching. You can program a delay of up to 90 seconds to be used with a water flow switch. The delay allows for normal, brief changes in sprinkler system water pressure. The water flow alarm will not activate unless the switch is active for the programmed delay time. If a delay is used, the system begins counting down when the switch closes. If the switch opens (restores) before the timer expires, a water flow alarm is not generated. If the water flow switch remains closed after the timer expires, a water flow alarm will be generated.
	FIRE SUPER-VISORY	Latching Non Latching	Use this switch type for tamper monitoring of sprinklers and other fire protection devices. If a contact closes, a sprinkler supervisory event will be generated. Supervisory switches can be latching or non-latching.
	FIRE DRILL		System-level, non latching switch. This switch is an alternative way of causing a fire drill. It has the same operation as the fire drill option available from the annunciator. When the switch is activated, a fire drill begins; when the switch is de-activated, the fire drill ends.
	SILENCE		This system-level switch is an alternative way to silence the fire system. It has the same effect as pressing the Silence key.
	RESET		This system-level switch is an alternative way to reset the fire system. It has the same effect as pressing the Reset key.

Table 9-4: Programming Options for 5815XL Modules

Type Selection	Function	Latching Option	Comments
SWITCH (cont.)	P.A.S. ACK		Positive acknowledge switch. This switch must be used in zones programmed as Positive Alarm Sequence (see 9.3.1.2). If an acknowledge switch closes when an alarm or trouble condition is not already in progress, a trouble will occur. You must use a UL listed normally open, momentary switch type. The switch must be rated at 5V, 100 mA (minimum) and be used with an EOL resistor for supervision.
	ZONE AUX1	Latching	Use these switch types if you want to monitor special zone-level conditions (such as dry contact from a remote power supply).
		Non Latching	
	ZONE AUX2	Latching	
		Non Latching	
	SYSTEM AUX1	Latching	Use these switch types if you want to monitor special system-wide conditions (such as dry contact from a remote power supply).
		Non Latching	
	SYSTEM AUX2	Latching	
		Non Latching	
	DETECTOR		Used to monitor conventional 4-wire detectors, a contact closure will generate a detector alarm event.
	FIRE TAMPER	Latching	Performs identically to a supervisory switch, but will be indicated as a tamper switch on the LCD annunciator.
		Non Latching	
	MANUAL RELEASE		Manual release switch
	INTERLOCK		Interlock release switch input.
	STATUS POINT		
	ECS INPUT	Latching	User also has ECS Event Number 1-8 option for ECS INPUT. Only available when an ECS-VCM is installed in the system.
		Non Latching	
	ECS TAMPER	Latching	
		Non Latching	
	ECS SUPER-VISORY	Latching	
		Non Latching	
	CO DETECT SWITCH		CO Detector Switch
	CO SUPERVISORY DETECT SWITCH	Latching	CO Supervisory Detector Switch
		Non Latching	
NOTIF	OUTPUT PT	Select Group	Output point, a general use notification type. Use for driving standard notification appliances.
	AUX CONST		Use constant power for applications that require a constant auxiliary power source. Power is always present at constant circuits.
	AUX RESET		Use for auxiliary power, resettable applications. See Section 4.15.5 for a description of how this option operates.
	AUX DOOR		Use for auxiliary power, door holder applications. For example, if you were using an auxiliary power supply for door holders, you would use this option. See Section 4.15.5.1 for a description of how this option operates.

Table 9-4: Programming Options for 5815XL Modules

Type Selection	Function	Latching Option	Comments
RELAY	OUTPUT PT	Select Group	Output point, a general use relay type. Use for applications requiring a relay, such as fan shutdown, elevator recall, and so on.
	AUX RESET		Use for auxiliary power, resettable applications. See Section 4.15.5 for a description of how this option operates.
	AUX DOOR		Use for auxiliary power, door holder applications. For example, if you were using an auxiliary power supply for door holders, you would use this option. See Section 4.15.5.1 for a description of how this option operates.
SLC LED	LED NUMBER	01-80	For use with SD devices only. 80 sub addresses on LED.
	LED FUNCTION	Unused	
		NOTIF	Notification can have group number.

9.5.2 Point Programming For 6815 Module

To program for points on an 6815 module, follow these steps:

1. Enter the installer code. The panel will automatically go to the main menu.
2. Select 7 for Panel Programming.
3. Press 4 to enter point menu.
4. Press the up or down arrow key to select the desired module. Refer to Section 8.5 Quick Reference Table for available choices. Then press ENTER.
5. Select S for sensor or M for module. (IDP or SK Only)
6. Enter the number of the point you wish to edit, then press ENTER.
7. Select the type of device by pressing the up or down arrow key. Refer to Table 9-5 under the column heading “Type Selection” for a list of choices.

Table 9-5: Programming Options for 6815 Modules

Type Selection	Function	Latching Option	Comments
UNUSED			Select for SLC points that are unused.
DETECTOR	PHOTO		Spot photoelectric detectors.
	ION		Spot ION detectors
	HEAT		Spot heat detector.
	PHOTO DUCT		Duct photoelectric detector.
	ACCLIMATE		Acclimate photoelectric detector.
	HEAT HT		High temperature heat detector.
	PHOTO-HEAT		Photoelectric detector with heat sensor.
	BEAM		Beam smoke detector.

Table 9-5: Programming Options for 6815 Modules

Type Selection	Function	Latching Option	Comments
SUP DET	PHOTO	Latching Non Latching	Use this option when you want a detector to indicate a supervisory alarm.
	ION		
	HEAT		
	PHOTO DUCT		
	ACCLIMATE		
	HEAT HT		
	PHOTO-HEAT		
	BEAM		
CO SMOKE DETECTOR	CO ALRM / FIRE ALRM		No Accessory, Sounder base, Relay Base Intelligent Sounder base.
	CO ALRM / FIRE SUPR		
	CO SUPR / FIRE ALRM		
	CO SUPR / FIRE SUPR	Latching Non Latching	Supervisory switches can be latching or non-latching.
W-DETECTOR	PHOTO		Wireless photoelectric detectors.
	ACCLIMATE (IDP)		Wireless acclimate photoelectric detector.
	PHOTO-HEAT (SK)		Wireless heat detector.
	HEAT		
W-SUP DET	Same as W-Detector	Latching Non Latching	Wireless photoelectric detectors.
SWITCH	MANUAL PULL		Use this switch type for manual pull stations. This input is always latched. The switch can clear only when an alarm is reset. This switch type has the highest fire priority; it overrides any other type of fire alarm.
	WATERFLOW	Latching Non Latching	Use this switch type for monitoring water flow in a sprinkler system. Switch closure will cause a sprinkler alarm. Water flow switches can be programmed as latching or non-latching. You can program a delay of up to 90 seconds to be used with a water flow switch. The delay allows for normal, brief changes in sprinkler system water pressure. The water flow alarm will not activate unless the switch is active for the programmed delay time. If a delay is used, the system begins counting down when the switch closes. If the switch opens (restores) before the timer expires, a water flow alarm is not generated. If the water flow switch remains closed after the timer expires, a water flow alarm will be generated.
	FIRE SUPER-VISORY	Latching Non Latching	Use this switch type for tamper monitoring of sprinklers and other fire protection devices. If a contact closes, a sprinkler supervisory event will be generated. Supervisory switches can be latching or non-latching.
	FIRE DRILL		System-level, non latching switch. This switch is an alternative way of causing a fire drill. It has the same operation as the fire drill option available from the annunciator. When the switch is activated, a fire drill begins; when the switch is de-activated, the fire drill ends.
	SILENCE		This system-level switch is an alternative way to silence the fire system. It has the same effect as pressing the Silence key.
	RESET		This system-level switch is an alternative way to reset the fire system. It has the same effect as pressing the Reset key.

Table 9-5: Programming Options for 6815 Modules

Type Selection	Function	Latching Option	Comments
SWITCH (cont.)	P.A.S. ACK		Positive acknowledge switch. This switch must be used in zones programmed as Positive Alarm Sequence (see 9.3.1.2). If an acknowledge switch closes when an alarm or trouble condition is not already in progress, a trouble will occur. You must use a UL listed normally open, momentary switch type. The switch must be rated at 5V, 100 mA (minimum) and be used with an EOL resistor for supervision.
	ZONE AUX1	Latching	Use these switch types if you want to monitor special zone-level conditions (such as dry contact from a remote power supply).
		Non Latching	
	ZONE AUX2	Latching	
		Non Latching	
	SYSTEM AUX1	Latching	Use these switch types if you want to monitor special system-wide conditions (such as dry contact from a remote power supply).
		Non Latching	
	SYSTEM AUX2	Latching	
		Non Latching	
	DETECTOR		Used to monitor conventional 4-wire detectors, a contact closure will generate a detector alarm event.
	FIRE TAMPER	Latching	Performs identically to a supervisory switch, but will be indicated as a tamper switch on the LCD annunciator.
		Non Latching	
	MANUAL RELEASE		Manual release switch
	INTERLOCK		Interlock release switch input.
	STATUS POINT		
	ECS INPUT	Latching	User also has ECS Event Number 1-8 option for ECS INPUT. Only available when an ECS-VCM or ECS-NVCM is installed in the system.
		Non Latching	
	ECS TAMPER	Latching	
		Non Latching	
	ECS SUPER-VISORY	Latching	
		Non Latching	
	CO DETECT SWITCH		CO Detector Switch
	CO SUPERVISORY DETECT SWITCH	Latching	CO Supervisory Detector Switch
		Non Latching	
NOTIF	OUTPUT PT	Select Group	Output point, a general use notification type. Use for driving standard notification appliances.
	AUX CONST		Use constant power for applications that require a constant auxiliary power source. Power is always present at constant circuits.
	AUX RESET		Use for auxiliary power, resettable applications. See Section 4.15.5.3 for a description of how this option operates.
	AUX DOOR		Use for auxiliary power, door holder applications. For example, if you were using an auxiliary power supply for door holders, you would use this option. See Section 4.15.5.1 for a description of how this option operates.

Table 9-5: Programming Options for 6815 Modules

Type Selection	Function	Latching Option	Comments
RELAY	OUTPUT PT	Select Group	Output point, a general use relay type. Use for applications requiring a relay, such as fan shutdown, elevator recall, and so on.
	AUX RESET		Use for auxiliary power, resettable applications. See Section 4.15.5.3 for a description of how this option operates.
	AUX DOOR		Use for auxiliary power, door holder applications. For example, if you were using an auxiliary power supply for door holders, you would use this option. See Section 4.15.5.1 for a description of how this option operates.
Detector	2-Wire Smoke		
W-Gateway			Wireless Gateway
W-SWITCH	Same as SWITCH		
W-Relay	Same as Relay		When a wireless relay is in use, module device count must be limited to 109 modules per loop. This includes wired and wireless modules that are on the same loop. The module address must be within 1-109.

9.5.3 Point Programming For Internal or External Power Module (RPS-1000)

To program for an internal or external power module points:

1. Enter the installer code. The panel will automatically go to the main menu.
2. Select 7 for Panel Programming.
3. Press 4 to enter point menu.
4. Press the up or down arrow key to select the desired module. Refer to Section 8.5 for available choices, then press ENTER.
5. Enter the number of the circuit or point you wish to edit, then press ENTER.
6. Select the type by pressing the up or down arrow key, then press ENTER.
7. Select the function by pressing the up or down arrow key, then press ENTER.
8. If the point supports latching press the up or down arrow key to select latching or non-latching, then press ENTER.
9. Select the zone or group by pressing the up or down arrow key, then press ENTER.
10. If the point supports not being supervised, press the up or down arrow key to select supervised or non-supervised, then press ENTER.
11. Press ENTER to edit point name. See Appendix B. Or, Press right arrow key to skip point name edit.
12. Repeat Steps 1 through 11 for all circuits.

Table 9-6: Menu choices for Internal/External Power Module

Choices	Type Selections	Function Selections for each Type	Comments
Enter Point			

Table 9-6: Menu choices for Internal/External Power Module

Choices	Type Selections	Function Selections for each Type	Comments
Select Type	UNUSED		
	B NOTIF	NOTIF OUTPUT	User also has Supervised/ Unsupervised option
		CONTROL CIRCUIT	
	A NOTIF	Same as B NOTIF	
	AUX_PWR	CONSTANT	Constant auxiliary power.
		AUX RESET	Resettable auxiliary power.
		AUX DOOR	Door holder auxiliary power.
		AUX SYNC	
Select Type	B SWITCH	MANUAL PULL	Refer to comments column of Table 9-4 for description of these options. Latch or Non-latching feature only appears for WATERFLOW, FIRE SUPERVISORY, FIRE TAMPER, ZONE AUX1, ZONE AUX2, SYSTEM AUX1, SYSTEM AUX2, ECS INPUT, ECS TAMPER, and ECS SUPERVISORY.
		WATERFLOW	
		FIRE SUPERVISORY	
		FIRE TAMPER	
		FIRE DRILL	
		SILENCE	
		RESET	
		P.A.S. ACK	
		ZONE AUX1	
		ZONE AUX2	
		SYSTEM AUX1	
		SYSTEM AUX2	
		MANUAL RELEASE	
		INTERLOCK	
		STATUS POINT	
		ECS INPUT	User also has ECS Event Number 1-8 option for ECS INPUT. Only available when a ECS-VCM or ECS-NVCM is installed in the system.
		ECS TAMPER	
		ECS SUPERVISORY	
	A SWITCH	Same as B SWITCH	
	B DETECT	2-WIRE SMOKE	Used for Class B, 2-wire detectors.
		4-WIRE SMOKE	Used for Class B, 4-wire detectors.
		CO 4-WIRE DET	Used for Class B, 4-wire CO detectors.
		CO 4-WIRE SUP DET	Latching or Non-latching used for Class B, 4-wire CO Supervisory detectors
	A DETECT	2-WIRE SMOKE	Used for Class A, 2-wire detectors.
		4-WIRE SMOKE	Used for Class A, 4-wire detectors.
		CO 4-WIRE DET	Used for Class A, 4-wire CO detectors.
		CO 4-WIRE SUP DET	Latching or Non-latching used for Class A, 4-wire CO Supervisory detectors
Select Zone/Group			Group or Zone selection will appear depending on the type selected.
Edit Name			See Appendix B

9.5.4 Point Programming For 5880/5865 Modules

To program the 5880/5865 module output points:

1. Enter the installer code. The panel will automatically go to the main menu.
2. Select 7 for Panel Programming.
3. Press 4 to enter point menu.
4. Press the up or down arrow key to select the desired module. Refer to Section 8.5 for available choices. Then press ENTER.

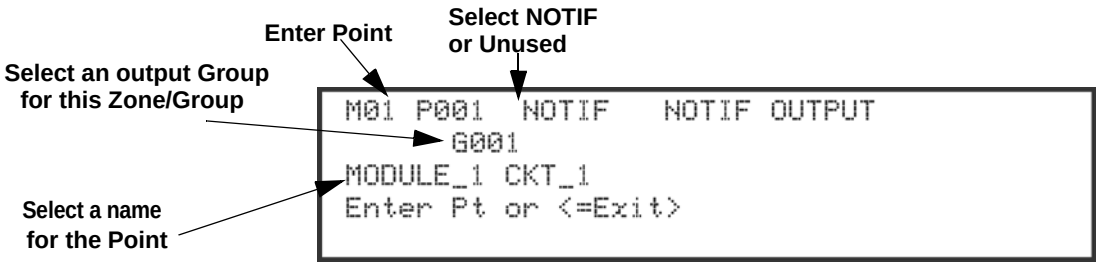


Figure 9-4 Programming Points as Outputs for the 5880 Module

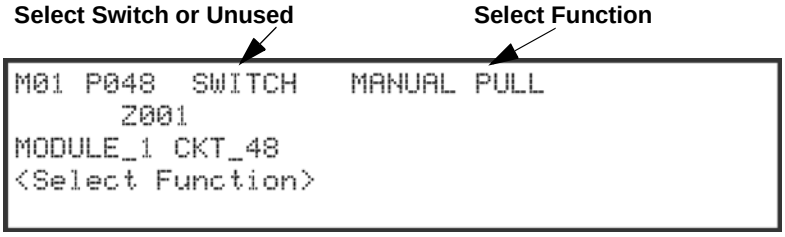


Figure 9-5 Programming Points as Inputs for the 5880 Module

5. Enter the point number, then press ENTER.
6. Press the up or down arrow key to select the type (notification or unused)., then press ENTER.
7. Press the up or down arrow key to select the desired group., then press ENTER.
8. Press ENTER to edit point name. See Appendix B. Or, Press right arrow key to skip point name edit.
9. Repeat Steps 1 through 8 for all output points.
10. To use 5880 as Input point, Enter point number 41 - 48. (See Figure 9-5 on page 17). Then press ENTER.
11. Press the up or down arrow key to select type (switch or unused), then press ENTER.
12. Press the up or down arrow key to select the desired function. (See Figure 9-7 on page 20), then press ENTER.
13. If the point supports latching press the up or down arrow key to select latching or non-latching, then press ENTER.
14. Press the up or down arrow key to select the desired group/zone, then press ENTER.
15. Edit point name Or Press right arrow key to skip module name edit.
16. Repeat steps 10 through 15 for all input points.

9.5.5 Point Programming for 5496

To program module points:

1. Enter the installer code. The panel will automatically go to the main menu.
2. Select 7 for Panel Programming.
3. Press 4 to enter point menu.
4. Press the up or down arrow key to select the desired module. Refer to Section 8.5 for available choices, then press ENTER.

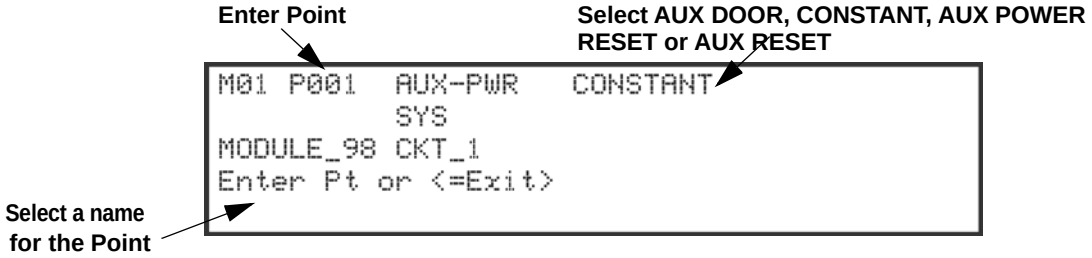


Figure 9-6 Programming Points Screen for the 5496 Module

5. Enter the point number, then press ENTER.
6. Press the up or down arrow key to select the type (See Figure 9-6). Then press ENTER.
7. Press ENTER to edit point name. See Appendix B. Or, Press right arrow key to skip point name edit.
8. Repeat Steps 1 through 7 for all points.

9.5.6 Point Programming for ECS-AMP

To program module points:

1. Enter the installer code. The panel will automatically go to the main menu.
2. Select 7 for Panel Programming.
3. Press 4 to enter point menu.
4. Press the up or down arrow key to select the desired module. Refer to Section 8.5 for available choices. Then press ENTER.

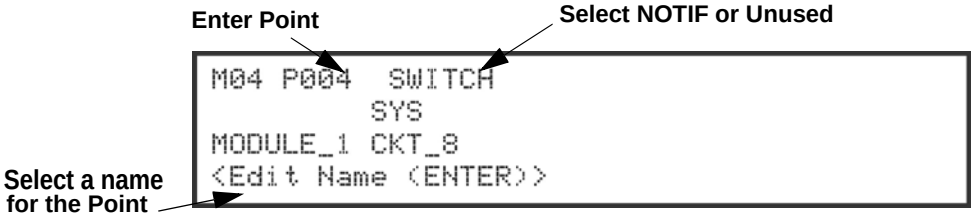


Figure 9-7 Programming Points Screen for the ECS-AMP Module

5. Enter the point number, then press ENTER. Points 5-8 on ECS-50W or ECS-125W will not be available unless the ECS-CE4 is installed.
6. Press the up or down arrow key to select the type (notification or unused), then press ENTER.
7. Press ENTER to edit point name. See Appendix B. Or Press right arrow key to skip point name edit.
8. Repeat Steps 1 through 7 for all points.

9.5.7 Point Programming for ECS-VCM, ECS-NVCM or ECS-RVM

To program module points:

1. Enter the installer code. The panel will automatically go to the main menu.
2. Select 7 for Panel Programming.
3. Press 4 to enter point menu.
4. Press the up or down arrow key to select the desired module. Refer to Section 8.5 for available choices. Then press ENTER.

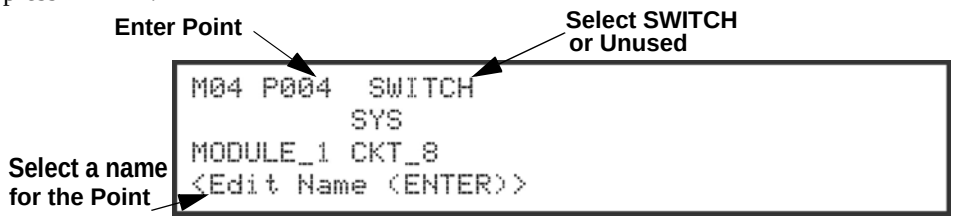


Figure 9-8 Programming Points Screen for the ECS-VCM, ECS-NVCM or ECS-RVM Modules

5. Enter the point number. Press ENTER.
6. Press the up or down arrow key to select the type (switch or unused). Press ENTER.
7. Press the up or down arrow key to select the desired Function (See Table 9-7). Press ENTER.
8. Press ENTER to edit point name. See Appendix B or Press right arrow key to skip point name edit.
9. Repeat Steps 1 through 8 for all points.

Table 9-7 Choices for Point Programming Modules

Choices	Type Selections	Function Selections for each Type	Comments
5880 (output)	UNUSED		
	NOTIF (outputs pt 1-40)	NOTIF OUTPUT	
		CONTROL CIRCUIT	
5880 (input 41-48)	SWITCH	MANUAL PULL	Refer to comments column of Table 9-4 for description of these options. Latch or Non-latching feature only appears for WATERFLOW, FIRE SUPERVISORY, FIRE TAMPER, ZONE AUX1, ZONE AUX2, SYSTEM AUX1, SYSTEM AUX2, ECS INPUT, ECS TAMPER, and ECS SUPERVISORY.
		WATERFLOW	
		FIRE SUPERVISORY	
		FIRE TAMPER	
		DETECTOR	
		FIRE DRILL	
		SILENCE	
		RESET	
		P.A.S. ACK	
		ZONE AUX1	
		ZONE AUX2	
		SYSTEM AUX1	
		SYSTEM AUX2	
		MANUAL RELEASE	
		INTERLOCK	
		STATUS POINT	
		ECS INPUT	User also has ECS Event Number 1-8 option for ECS INPUT, ECS TAMPER, and ECS SUPERVISORY functions in both 5880 and ECS-VCM/ECS-RVM choices. Only available when an ECS-VCM is installed in the system to the ECS-VCM/ECS-RVM choice part.
		ECS TAMPER	
		ECS SUPERVISORY	
5496	UNUSED		
	B NOTIF	NOTIF OUTPUT	supervised not supervised
		CONTROL CIRCUIT	
	A NOTIF	NOTIF OUTPUT	
		CONTROL CIRCUIT	
	AUX_PWR	CONSTANT	
		AUX RESET	
		AUX DOOR	
		AUX SYNC	Can not be supervised
5865	UNUSED		
	NOTIF	NOTIF OUTPUT	
		CONTROL CIRCUIT	
ECS-AMP	UNUSED		
	NOTIF		

Table 9-7 Choices for Point Programming Modules

Choices	Type Selections	Function Selections for each Type	Comments
ECS-VCM/ECS-RVM/ ECS/NVCM	UNUSED		
	SWITCH	MANUAL PULL	Refer to comments column of Table 9-4 for description of these options. Latch or Non-latching feature only appears for WATERFLOW, FIRE SUPERVISORY, FIRE TAMPER, ZONE AUX1, ZONE AUX2, SYSTEM AUX1, SYSTEM AUX2, ECS INPUT, ECS TAMPER, and ECS SUPERVISORY
		WATERFLOW	
		FIRE SUPERVISORY	
		FIRE TAMPER	
		FIRE DRILL	
		SILENCE	
		RESET	
		P.A.S. ACK	
		ZONE AUX1	
		ZONE AUX2	
		SYSTEM AUX1	
		SYSTEM AUX2	
		MANUAL RELEASE	
		INTERLOCK	
		STATUS POINT	
		ECS INPUT	User also has ECS Event Number 1-8 option for ECS INPUT. Only available when an ECS-VCM or ECS-NVCM is installed in the system to the ECS-VCM or ECS-NVCM or ECS-RVM choice part.
		ECS TAMPER	
		ECS SUPERVISORY	
		VOICE AUX STATUS 1-2	
		BACKGROUND MUSIC	
		VOICE AUX ECS 1-4	

9.6 System Options

This section of the manual explains how to customize software options that affect general operation of the system. This includes such items as: Communication Options, Daytime/Nighttime Sensitivity, Holiday Days, Time Options, Miscellaneous Options, Daylight Saving Options, Edit Banner, and SLC Family. Refer to each individual subsection for complete instructions.

9.6.1 Communication Options

9.6.1.1 Auto Test Time

To access the Auto Test Time screen:

1. Enter the installer code. The panel will automatically go to the main menu.
2. Select 7 for Panel Programming.
3. Select 5 for System Options.
4. From the next menu, select 1 for Communication Options.

5. Select 1 for Auto Test Time.
6. Enter the hour you desire the control panel to send an automatic test report (or press the up or down arrow key), then press ENTER.
7. Enter the minutes (or press the up or down arrow key), then press ENTER.
8. Select AM or PM by pressing the up or down arrow key, then press ENTER.
9. Select Report Time Interval by pressing the up or down arrow key, then press ENTER. Time Interval selections are 24hr, 12hr, 6hr and 4 hr.

Note: AM and PM are only available if the panel "Clock Options" are set for AMPM mode. Otherwise the clock is in military time and AMPM is not selectable.

9.6.1.2 Phone Lines

To access the phone lines screen:

1. Enter the installer code. The panel will automatically go to the main menu.
2. Select 7 for Panel Programming.
3. Select 5 for System Options.
4. From the next menu, select 1 for Communication Options.
5. Select 2 for the phone Lines.
6. Select Phone Line to be edited (1 or 2) by pressing the up or down arrow key, then press ENTER.

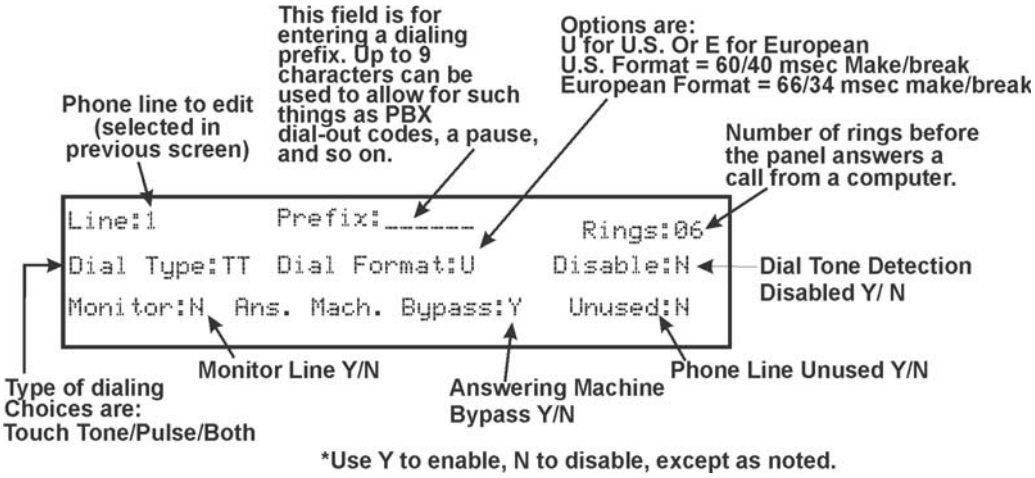


Figure 9-9 Phone Lines Editing Screen

Dialing Prefix

Enter up to 9 characters to be used for such things as PBX dial-out codes, a pause, and so on. The following special characters are available:

#	Pound (or number) key on the telephone
*	Star key on the telephone
,	Comma (character for 2-second pause)

Use the number buttons on the annunciator or the up- and down-arrow keys to select special characters. Special

characters begin displaying after “9”.

7. Enter a dialing prefix (if needed), then press ENTER. Or Press the right arrow to bypass the dialing prefix option.

Number of Answer Rings

This option is used in conjunction with HFSS Honeywell Fire Software Suite. Use this option to determine the number of rings before the panel answers a call from the computer. Range is 00-15 rings. This option is factory-programmed as 06 rings, which should be compatible for most installations where the answering machine bypass feature is used. You may need to adjust it depending on the installation’s telephone system.

The selection made here must match the programming for this option in the Communication Configuration dialog box of HFSS.

8. Enter the desired number of answer rings, then press ENTER.

Dial Option (TouchTone or Pulse, or TT/PL)

9. Press the up or down arrow key to select the dial option, then press ENTER.

Dial Option	Description
PULSE	If this option is selected, only pulse dialing will be used for this phone line.
TT	TouchTone dialing. If this option is selected, only TouchTone dialing will be used for this phone line.
TT/PL	TouchTone alternating with pulse. If this option is selected, the communicator will first attempt to use TouchTone. It will switch to pulse if TouchTone is not successful on the first attempt. It will continue to alternate between TT and pulse for additional attempts.

Dial Format

10. Press the up or down arrow key to select the pulse ratio for rotary dialing option, then press ENTER.

Options are:

U	U.S. standard format. Uses the 60 msec / 40 msec make/break ratio.
E	European format. Uses the 66 msec / 34 msec make/break ratio.

Dial Tone Detection Disabled

11. Select Y (do disable) or N (don’t disable) by pressing the up or down arrow key, then press ENTER.

Monitor Line

Enable the line monitor for each phone line that will be used. See Figure 9-9 for location of this field on the phone lines screen. When the phone line monitor has been enabled for a phone line, a trouble condition will occur if the line is not connected. If a phone line will not be used, it must be disabled.

12. Select Y (monitor line) or N (don’t monitor line) by pressing the up or down arrow key, then press ENTER.

Answering Machine Bypass

This option is used in conjunction with HFSS Honeywell Fire Software Suite. This feature ensures that an answering machine will not interfere with communication between the panel and the computer. If an answering machine is used at the panel site, enable this feature; if an answering machine is not used, disable the feature.

This option is factory-programmed as No (disabled).

The selection made here must match the programming for this option in the Communication Configuration dialog box of HFSS.

13. Select Y (answering machine bypass enabled) or N (answering machine bypass disabled) by pressing the up or down arrow key, then press ENTER.

Phone Line Unused

This option is used so that you can set unused phones lines to “Yes”, so no auto-test will be sent through that line.

This option is factory programmed as No.

14. Select Y or N by pressing the up or down arrow key, then press ENTER.

9.6.1.3 Edit Ethernet

1. Enter the installer code. The panel will automatically go to the main menu.
2. Select 7 for Panel Programming.
3. Select 5 for System Options.
4. From the next menu, select 1 for Communication Options.
5. Select 3 for Edit Ethernet.

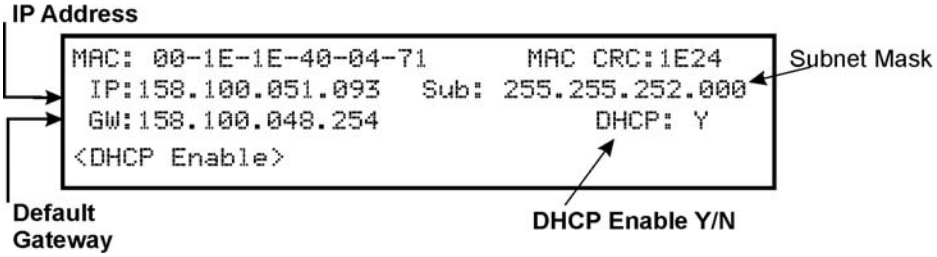


Figure 9-10 Edit Ethernet Message

9.6.1.4 AlarmNet Timers

1. Enter the installer code. The panel will automatically go to the main menu.
2. Select 7 for Panel Programming.
3. Select 5 for System Options.
4. From the next menu, select 1 for Communication Options.
5. Select 4 for AlarmNet Timers.
6. The available options for AlarmNet Timers are as follows: *default

   • Ethernet: None, 75 seconds, 90 seconds, 3 minutes, *5 minutes, 1 hour, 24 hours,30 days.
   • Cellular: None, *24 hours, 30 days
   • Old Alarm: None, 10 minutes, 15 Minutes,*30 Minutes, 1 Hour, 2 Hours, 4 Hours, 6 Hours, 12 Hours, 24 Hours. (Sets how long an undeliverable alarm is retried for delivery to the central station. If the message is not validated, it is retried until the

old alarm time is reached or the message is validated).



Figure 9-11 AlarmNet Timers

9.6.1.5 Phone Line Gains

1. Enter the installer code. The panel will automatically go to the main menu.
2. Select 7 for Panel Programming.
3. Select 5 for System Options.
4. From the next menu, select 1 for Communication Options.
5. Select 5 for Phone Line Gains
6. The available options: *default

- Dialing Gain:
  - Low = 9 DB Attenuation
  - Normal = 6 DB Attenuation
  - *High = 3 DB Attenuation
- Reporting Gain:
  - *Low = 9 DB Attenuation
  - Normal = 6 DB Attenuation
  - High = 3 DB Attenuation

9.6.2 Daytime/Nighttime Sensitivity

If you need to change the time that sensitivity levels take effect (that is, the time that “Day” and “Night” begin), follow these steps.

1. Enter the installer code. The panel will automatically go to the main menu.
2. Select 7 for Panel Programming.
3. Select 5 for System Options.
4. Select 2 for Daytime/Nighttime Sensitivity.

A screen similar to the one shown in Figure 9-12 will display.

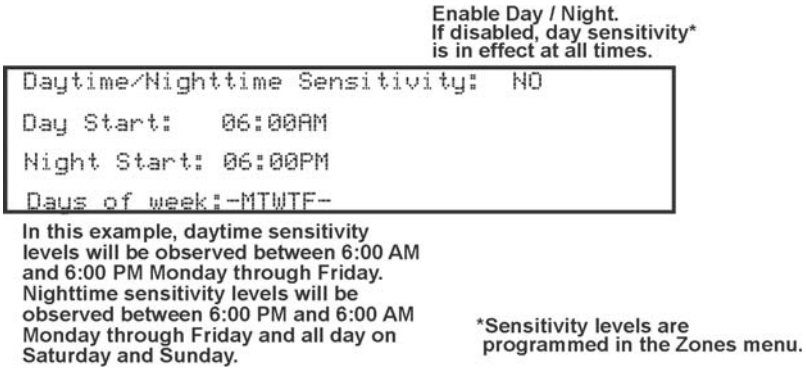


Figure 9-12 Changing Day/Night Sensitivity Time

9.6.3 Holiday Days

Up to 18 dates can be designated as holidays. When day/night sensitivity is enabled, all photoelectric smoke detectors in the system will use night sensitivity for the entire day on days designated as holidays.

To add or change a holiday, follow these steps:

1. Enter the installer code. The panel will automatically go to the main menu.
2. Select 7 for Panel Programming.
3. Select 5 for System Options.
4. Select 3 for Holiday Days. A screen similar to that shown in Figure 9-13 will display.
5. Edit the holiday schedules you wish to change or add holidays as needed in the programmable holiday locations.



Figure 9-13 Edit Holidays Screen

6. Enter the month of the holiday, then press ENTER. Enter the day of the month for the holiday, then press ENTER.
7. Repeat steps 6 for any remaining holidays you wish to program.

9.6.4 Time Options

Through this programming option you can set the water flow delay time, alarm verification time, AC report delay, AC-Frequency, Auto-Resound, and Clock Format.

9.6.4.1 Water Flow Delay

You can program a delay of 0-90 seconds (zero means no delay) to be used in conjunction with a water flow switch. The delay is system-wide. All water flow switches on the system will use the same delay period.

To access the screen for programming water flow delay, follow these steps:

1. Enter the installer code. The panel will automatically go to the main menu.
2. Select 7 for Panel Programming.
3. Select 5 for System Options.
4. Select 4 for Time Options.

   A screen similar to the one shown in Figure 9-14 will display.

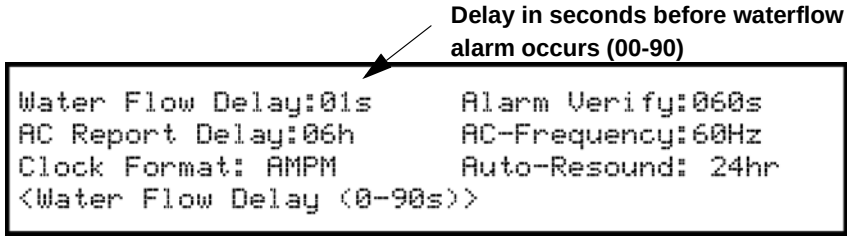


Figure 9-14 Water Flow Delay Programming Screen

5. Enter the number of seconds (0 to 90) to delay a water flow switch alarm, then press ENTER.

9.6.4.2 Alarm Verify

You can set the alarm verification time from 60 to 250 seconds (default is 60 seconds).

To set the alarm verification:

6. Enter the desired number of seconds for the alarm verification time.
7. Press right arrow key or ENTER to make your selection and move to the next programming option.

9.6.4.3 AC Report Delay

Note: You must select 1-3 hours in UL central station installations and UL remote signaling installations.

You can adjust the number of hours before a low AC report will be sent to the central station.

To program low AC report delay, follow these steps:

Note: Steps continued from step 7 of Section 9.6.4.2.

8. Enter the number of hours (0-30) before a low AC report will be sent to the central station, then press ENTER.

9.6.4.4 Change AC Line Frequency

The panel's AC line frequency is selectable for 50, 60 Hz, or Internal. AC Frequency feature dictates how the control panel will calculate time based on the AC line frequency used in the installation site. The "Internal" option can be used in areas where the AC line frequency is not dependable and you want the panel to calculate time from the internal crystal. The internal crystal is not as accurate as the AC power source and internal 60 Hz or 50 Hz should normally be selected. The panel defaults to the 60 Hz selection.

To change the AC line frequency:

9. Select 50Hz, 60Hz or Intl, by pressing the up or down arrow key, then press ENTER.

9.6.4.5 Clock Format (AM/PM or Military)

To change the system clock display format:

10. Select AMPM (for AM/PM display format) or MIL (for military or 24 hr display format) by pressing the up or down arrow key, then press ENTER.

9.6.4.6 Auto-Resound (4 or 24 hours)

The system resound time period can be modified from the default value 24 hours to 4 hours. This setting adjusts when the FACP will automatically resound events after being silenced. Set this option to 4 hours when using SWIFT devices

9.6.5 Miscellaneous Options

Through this programming option you can do strobe synchronization during silence, and auto display event.

To edit Miscellaneous options:

1. Enter the installer code. The panel will automatically go to the main menu.
2. Select 7 for Panel Programming.
3. Select 5 for System Options.
4. Select 5 for Miscellaneous Options

9.6.5.1 Strobes Active when Silenced

When "SYNC Strobe:" is selected as Y (Yes), the strobes will continue to flash when the system is silenced and will stop flashing when the system is reset.

Note: The "SYNC Strobe:" only functions with outputs that use a synchronized output pattern.

5. Press the up or down arrow key to toggle this selection between Y (Yes) or N (No).
6. Press right arrow key or ENTER to make your selection and move to the next programming option.

9.6.5.2 Auto Display Events

When this feature is programmed Y (Yes), the highest priority event of the system in control will automatically display on the control panel and remote annunciators after there has been no activity on any system touch pad for two minutes.

7. Press the up or down arrow key to toggle this selection between Y (Yes) or N (No).
8. Press right arrow key or ENTER to make your selection and move to the next programming option.

9.6.6 Daylight Saving Options

To edit Daylight Saving Time:

1. Enter the installer code. The panel will automatically go to the main menu.
2. Select 7 for Panel Programming.
3. Select 5 for System Options.
4. Select 6 for Daylight Saving Option.

9.6.6.1 Automatic Daylight Saving Adjustment

The control panel has an automatic DST (Daylight Saving Time) adjustment feature. If this feature is not enabled (set to *No*), the Daylight Saving Time change is not made to the system clock.

To enable or disable DST adjustment continue programming:

5. Select Y (enabled) or N (disabled) by pressing the up or down arrow key, then press ENTER.

9.6.6.2 Daylight Saving Time Start and End

This option lets you to adjust the week and month Daylight Saving Time (DST) starts and ends. For this feature to work, you must enable (set to *Yes*) the Automatic Daylight Savings Adjustment option under Daylight Savings Options. The default values for the DST Start and End are:

DST Start: The second Sunday in March
DST End: The first Sunday in November

To set the start and end for Daylight Saving Time:

6. Press the up or down arrow key to select the week (1st, 2nd, etc.) Daylight Saving Time starts, then press ENTER to make your selection and move to the month setting.
7. Press the up or down arrow key to select the month (January – December) Daylight Saving Time starts, then press ENTER to make your selection and move to the DST End option.
8. Press the up or down arrow key to select the week (1st, 2nd, etc.) Daylight Saving Time ends, then press ENTER to make your selection and move to the month setting.
9. Press the up or down arrow key to select the month (January – December) Daylight Saving Time ends, then press ENTER.

9.6.7 Edit Banner

The banner is the message that displays on the panel LCD when the system is normal; that is, when no alarms or troubles exist and the system menus are not in use. A custom banner of up to 40 characters can be created. This will automatically be centered when shown.

If a custom message is not created, the system will use the internal banner. You cannot change the internal banner.

To customize the banner display message:

1. Enter the installer code. The panel will automatically go to the main menu.
2. Select 7 for Panel Programming.
3. Select 5 for System Options.
4. Select 7 for Edit Banner.

Note: See Appendix B for instructions on how to edit the banner.

5. Select each letter by pressing the up or down arrow key to change modes and using the number keys to select characters, then press right arrow key to move to the next character.
6. When done, press ENTER to save the custom banner.

9.6.8 SLC Family

The IFP-2100/ECS supports SD series, SK Series or IDP (Intelligent Device Protocol) series SLC devices. You must configure the IFP-2100/ECS to accept the family of the devices you are installing.

Note: You cannot mix SD, SK and IDP series SLC devices on the same system.

1. Enter the installer code. The panel will automatically go to the main menu.
2. Select 7 for Program Menu.
3. Select 5 for System Options.
4. Press 8 to edit SLC Family.
5. Press UP arrow to select the desired SLC family.

6. Press ENTER to accept the displayed SLC family.

Note: When changing SLC type the following message will appear:

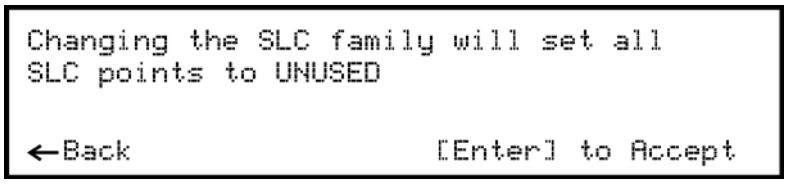


Figure 9-15 SLC family change

Note: Message when changing SLC family from IDP or SK to SD: Changing to this SLC family will remove all external 6815's.

Note: Message when changing from SD to IDP or SK SLC family will remove all 5815XL's on the system.

9.7 JumpStart® AutoProgramming

IMPORTANT!

JumpStart AutoProgramming is used to auto learn the system hardware after devices have been added or removed from the system. Hardware devices which remain the same between repeat JumpStarts will retain any customized text or options associated with the device. It is best to carefully consider the network ID setting for each panel before the first JumpStart AutoProgramming is performed. Once this is done the panel must be defaulted back to factory defaults if the network ID settings need to change.

To run JumpStart:

1. Enter the installer code. The panel will automatically go to the main menu.
2. Select 7 for Panel Programming.
3. Select 6 for JumpStart®.
4. Press ENTER to accept the warning screen.
5. Follow the remaining on screen instructions.
6. Press ENTER to confirm. See Section 8.1.3.

9.8 Restore Defaults

This option allows you to restore the panel back to factory defaults. All programming will be lost.

1. Enter the installer code. The panel will automatically go to the main menu.
2. Select 7 for Panel Programming.
3. Select 7 for Restore Defaults.
4. Press the up or down arrow key to select YES or NO from the warning screen. Then press ENTER.

9.9 Voice Options

Through this programming menu you can modify the messages programmed into an VCM. You can also modify other voice settings.

9.9.1 VCM Maintenance

The VCM Maintenance menu is used to program custom messages into the VCM. Messages can be recorded locally using the microphone.

1. Select 7 for Panel Programming.
2. Select 8 for Voice Options.
3. Select 1 for VCM Maintenance.

9.9.2 Voice Settings

1. Select 7 for Panel Programming.
2. Select 8 for Voice Options.
3. Select 2 for Voice Settings.

9.9.2.1 Enable Dual Channel System

This option allows you to select whether dual channel is enabled in the system. For dual channel capabilities the system must only contain dual channel voice hardware.

1. Press the up or down arrow key to select YES or NO for enabling the system as dual channel. Then press ENTER.

Section 10
System Operation

Operation of the control panel is user friendly. Menus guide you step-by-step through operations. This section of the manual is an overview of the operation menus. Please read this entire section carefully before operating the panel.

Note: See Section 6.2.5 for information on how to modify user access code profiles.

10.1 Default User and Installer Codes

Installer Code: Factory-programmed as 123456.

Multi-site Installer Code: Factory-programmed as 654321.

10.2 Annunciator Description

Figure 10-1 shows the annunciator that is part of the control panel board assembly.

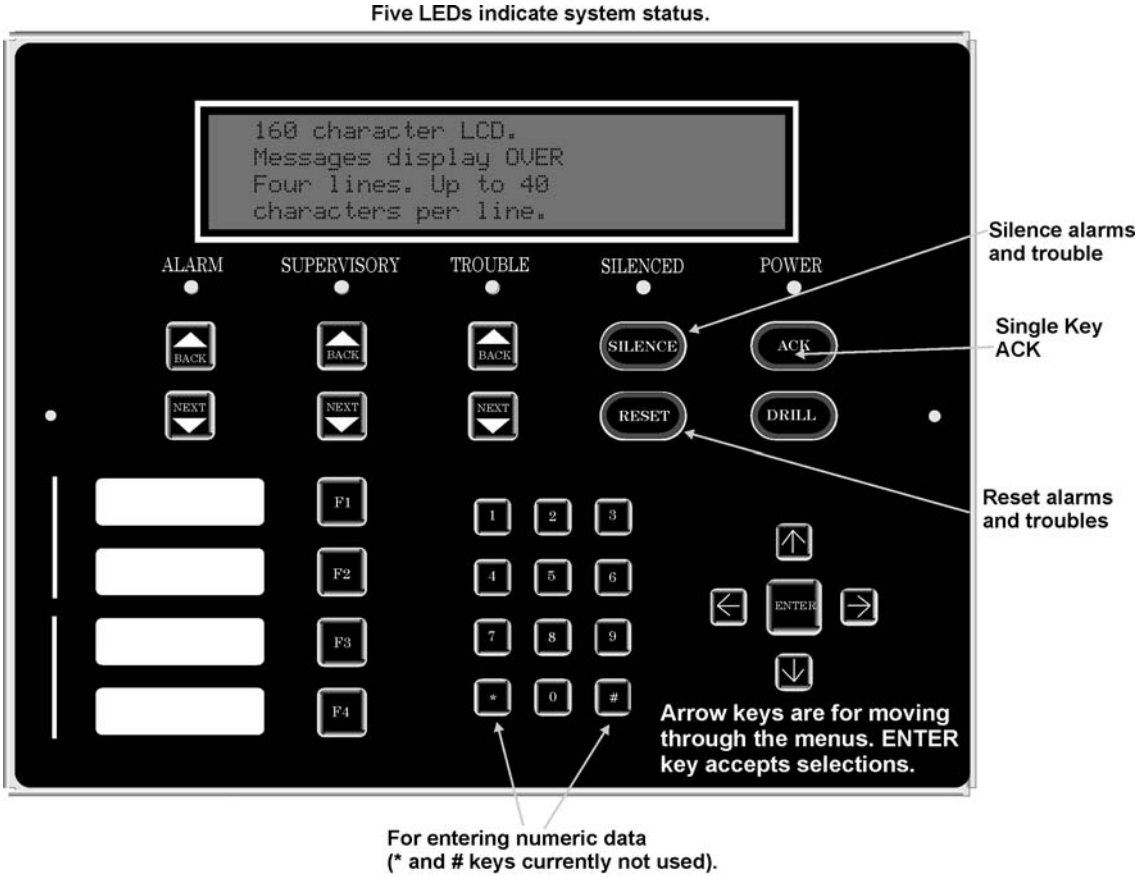


Figure 10-1 Control Panel Annunciator

10.2.1 LCD Display

The control panel LCD displays system messages, annunciates alarms, supervisories and troubles, provides status information, and prompts for input. These messages can be up to 160 characters, displaying over four lines of 40 characters each. Annunciator keys beep when they are pressed.

10.2.2 Banner

The banner is the message that displays on the control panel when the system is in normal mode (no alarm or trouble condition exists and menus are not in use). A customize message can be created that will display instead of the internal (default) message. See Section 9.7 for information on editing the banner.

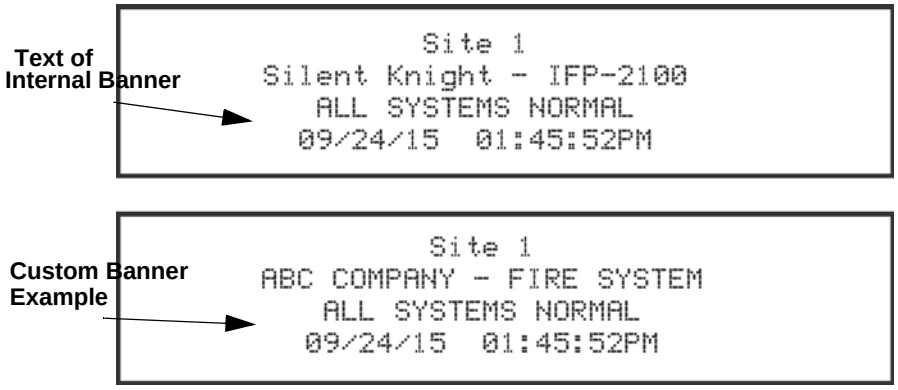


Figure 10-2 Banner Display Examples

10.2.2.1 Single Key Acknowledge

This feature allows the user to press the ACK and display the oldest un-acknowledged event in the system. Pressing ACK again will acknowledge the event, then display the next oldest un-acknowledged event without pressing the arrow keys.

10.3 Menu System

The control panel is easy to operate from the Main Menu. To view the Main Menu press the ENTER or right arrow key on the control panel or remote annunciator. The Main Menu will appear as shown in Section 10.3.1. Select the desired option. You will be prompted for as access code if required.

The control panel supports up to 20 access codes. The profile for each access code (or user) can be modified through the network programming option (see Section 6.2.5 for access code programming).

10.3.1 Main Menu Overview

The chart below is a brief overview of the Main Menu. These options are described in greater detail throughout this section of the manual.

Main Menu Options	Description
1- System Tests	Access to Fire Drill, Indicator Test, Walk Tests, Communicator Test, Clear History Buffer, Manual AlarmNet Registration and Manual Communicator Reset.
2- Point Functions	Enable/disable points, Point Status, SLC Single Device Locator, SLC Multiple Device Locator, and I/O Point Control.
3- Event History	Display event history on the LCD. See Section 10.4.3 for more information.

Main Menu Options	Description
4- Set Time & Date	Set time and date for the system.
5- Network Diagnostics	Ping Panel, Data Network Status and Voice Network Status.
6- Network Programming	Access Learn Network, Edit Network Names, Edit Panel ID, Computer Access, Access Codes, Communicator Options, Voice Options, Sync Network Options.
7- Panel Programming	Brings up a set of menus for programming the panel. These options are described in detail in Section 9.
8- System Information	Menus to view information about the panel such as model, ID, serial number, revision, send or receive firmware updates and feature registration activation.

10.3.2 Using the Menus

To move through the menus:	Use the up or down arrow key to move through the options in a menu.
To select an option:	Enter the number of the option, OR press ENTER if the option has the = symbol next to it.
Exit Menu	Left arrow

10.4 Basic Operation

10.4.1 Setting Time and Date

1. Select 4 for Set Date & Time.
2. Make changes in the fields on the screen. Use right arrow to move through the fields. Use the up or down arrow key to select options in the fields.
3. When the date and time are correct, press ENTER.

10.4.2 Disable / Enable a Point

1. Select 2 for Point Functions.
2. Select 1 for Disable/Enable Point.

10.4.2.1 Disable / Enable NACs by Template

1. Press 1 for Disable NACs by Template, or press 2 to Enable NACs by Template.
2. Use the up or down arrow key to move through the list of templates. Press ENTER to select the current template.

10.4.2.2 Disable / Enable NACs by Group

1. Press 3 to Disable NACs by Group, or press 4 to Enable NACs by Group.
2. Use the up or down arrow key to move through the list of groups. Press ENTER to select the group highlighted.

10.4.2.3 Disable / Enable Zone Points

1. Press 5 to Disable Zone Points, press 6 to Enable Zone Points.

2. Use the up or down arrow key to move through the list of zones. Press ENTER to select the zone highlighted.

10.4.2.4 Disable / Enable Point

1. Press 7 to Disable /Enable Point.
2. Choose Module.
3. Use the up or down arrow key to choose point and press ENTER.
4. Press right arrow to disable or enable point.

10.4.2.5 Inhibit Output Group

Inhibiting an output group prevents the group from being utilized by system mapping. While inhibited no event in the system can activate the output group.

1. Press 8 to inhibit output group.
2. Use the up or down arrow key to select the group to be inhibited.
3. Press right arrow to inhibit the group.
4. Press right arrow again to enable the group.

10.4.3 View Event History

Use the View Event History feature to display events on LCD. From the Main Menu, press 3 to select Event History. Events will begin displaying with most recent events first.

The panel can store up to 1000 events. When it reaches its 1000-event capacity, it will delete the oldest events to make room for the new events as they occur. In networked setups, each panel stores up to 1000 of its own events. When viewing Event History in the panel, the newest 500 events from every panel in the site will be displayed. When using HFSS Honeywell Fire Software Suite, all 1000 events from every panel in the network will be uploaded.

On multi-site displays, pressing ENTER or right arrow brings you directly into View Event History and allows you to view the Event History from every panel in each of the sites that the multi-site display is assigned to.

10.4.3.1 To clear the event history

From the Installer menu select 1 for System Tests. From the test menu select 6 Clear History Buffer. In network systems, this clears the History Buffer of all panels in the site.

10.4.4 Conduct a Fire Drill

This system test initiates a Fire Drill alarm and activates Fire Drill mapping for 10 minutes or until a user manually exits the fire drill.

1. From the Main Menu, press 1 for System Tests.
2. Press 1 for Fire Drill. You will be prompted to press ENTER.
3. The drill will begin immediately after you press ENTER.
4. Press any key to end the drill. (If you do not press any key to end the fire drill manually, it will time out automatically after ten minutes.)

If a fire drill switch has been installed, activating the switch will begin the drill; deactivating the switch will end

the drill.

10.4.5 Conduct an Indicator Test

The indicator test checks the annunciator LEDs, PZT, and LCD display.

1. From the Main Menu, press 1 for System Tests.
2. Press 2 for Indicator Test. The system turns on each LED several times, beeping the PZT as it does so. At the same time it scrolls each available character across the LCD. A problem is indicated if any of the following occurs:

- An LED does not turn on.
- You do not hear a beep.
- All four lines of the LCD are not full.

This test will run for approximately 15 minutes or until the user manually exits. You can press any key to end manually while the test is still in progress. When the test ends, you will be returned to the <Test Menu>.

10.4.6 Conduct a Walk Test

Walk Test is a feature which allows one person to test the fire alarm system. The Walk Test will run for 4 hours or until the user manually exits. If an alarm or pre-alarm condition is occurring in the system, you will not be able to enter the walk test. A walk test may only be initiated if the test is enabled in the user profile.

1. From the Main Menu, press 1 for System Tests.

Important
If any alarm verification zones are being used, the user will be asked if they wish to disable alarm verification during walk test. This occurs for either walk test option.

2. Select 3 for Walk Test-No Report. The LCD will display “WALK TEST STOPPED” on Line 1 and “ENTER = start test” on Line 3. Enter the time period you wish the NAC circuit to be active for each alarm (06 to 180 second), if you select this option, central station reporting will be disabled while the test is in progress.

   Select 4 for Walk Test-with Report. The LCD will display “WALK TEST STOPPED” on Line 1 and “ENTER = start test” on Line 3. Enter the time period you wish the NAC circuit to be active for each alarm (06 to 180 seconds) If you select this option, central station reporting will occur as normal during the walk test.
   The panel generates a TEST report to the central station when the walk test begins. During a walk test, the panel’s normal fire alarm function is completely disabled, placing the panel in a local trouble condition. All zones respond as 1-Count zones (respond when a single detector is in alarm) during a walk test. Each alarm initiated during the walk test will be reported and stored in the event history buffer.
3. Press ENTER to end the walk test. The system will reset. The panel will send a “TEST RESTORE” report to the central station.

Note: The panel does not do a full 30 second reset on resettable power outputs. As soon as the device is back to normal, the panel is ready to go to the next device.

10.4.7 Conduct a Communicator Test

1. From the Main Menu, press 1 for System Tests.

2. Select 5 for Communicator Test. The screen will display “Manual communicator test started”. When the test is completed, you will be returned to the <Test Menu>. A manual communicator test requires that at least one daily test in the network be enabled in communicator programming.
3. The Manual communicator test will be communicated out both Phone Lines and Ethernet/Cellular paths if they are all programmed. Each manual communicator test will alternate between one of the Phone Line paths and one of the AlarmNet paths.

10.4.8 Manual AlarmNet Registration

1. From the Main Menu, press 1 for System Tests.
2. Select 8 for Register AlarmNet. The screen will display and ask for confirmation. Feedback will be given if the command was sent or not.

10.4.9 Silence Alarms or Troubles

Press SILENCE to turn off silenceable outputs and annunciator PZTs. If an external silence switch has been installed, activating the switch will silence alarms or troubles. If you are already using system menus when you press SILENCE, you will not need to enter your code.

Note: Alarm and trouble signals that have been silenced, but the detector remains un-restored, will un-silence every 4 or 24 hours depending on user selection (see section 9.6.4.6*) until the detector is restored.*

Note: Multi-Site displays do not allow for silencing multiple sites. Pressing SILENCE will only locally silence the PZT built into the annunciator. To silence a site, enter a multi-site access password, select a site, and then press SILENCE.

Note: For ECS systems, pressing silence at an LOC will only silence the System in Control. See Section 10.5.1.

10.4.10 Reset Alarms

Press RESET to perform a control panel reset. If an external reset switch has been installed, activating the switch will reset fire alarms.

Note: Multi-Site displays do not allow for resetting multiple sites. To reset a site, enter a multi-site access password, select a site, and then press RESET.

Note: For ECS systems, pressing reset at an LOC will prompt the user for which system they desire to reset. See Section 10.5.1.

10.4.10.1 Reset Communicator

This options allows the user to Reset the communicator. The LCD will display:

“Resetting Communicator… Please Wait“

You will be returned to the Main Menu when the reset is complete.

The communicator is not allowed to be reset when alarms or supervisories are active. Communicator reset is not allowed if any of the following are active:

- Fire Alarm
- Fire Supervisory
- Fire Pre-Alarm
- CO Alarm
- CO Supervisory
- ECS Alarm
- ECS Supervisory

10.4.11 Check Detector Sensitivity Through Point Status

The control panel constantly monitors smoke detectors to ensure that sensitivity levels are in compliance with NFPA 72. Detectors are sampled every three hours.

If sensitivity for a detector is not in compliance, the panel goes into trouble, generating a Calibration Trouble condition. A detector enters a Calibration Maintenance state to indicate that it is approaching an out of compliance condition (but is currently still in compliance).

When a Calibration Trouble condition occurs, the central station receives a detector trouble report ("373" + Zone # for Contact ID format; "FT" + Zone # in SIA format).

To check sensitivity for an individual detector, follow the steps below.

1. From the Main Menu, press 2 for Point Functions.
2. Press 2 for Point Status.
3. Select the module where the point you want to check is located.
4. Enter the number of the point you want to check and press ENTER.
5. A screen similar to those shown in Figure 10-3 will display.

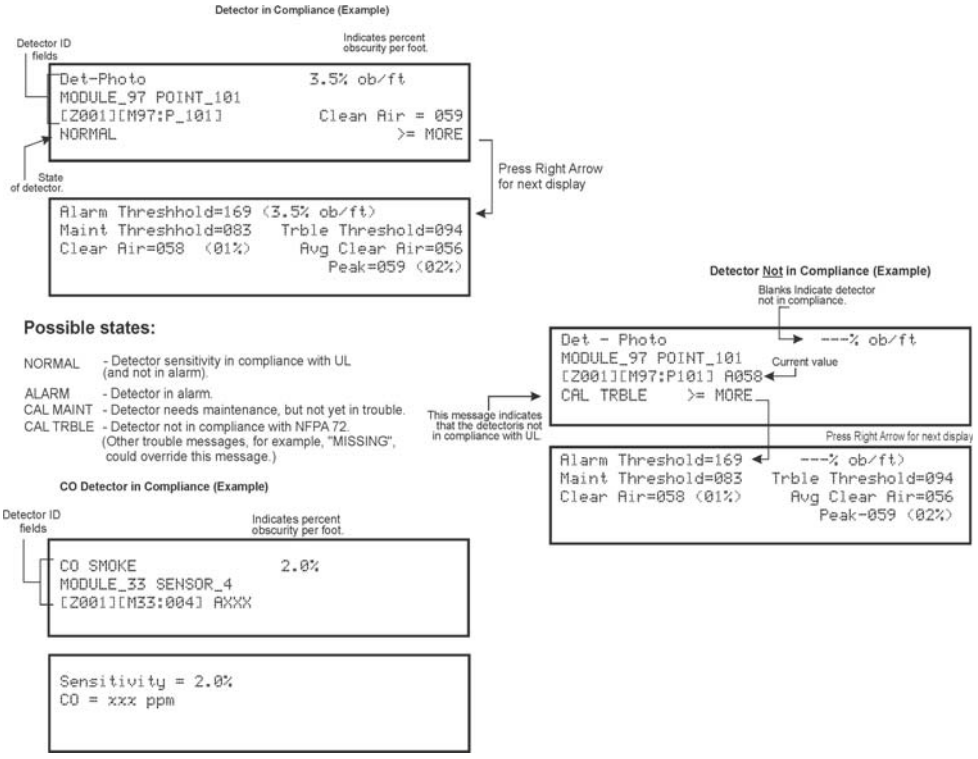


Figure 10-3 Checking Detector Sensitivity Compliance

You can print detector status by uploading the detector status to and printing from HFSS Honeywell Fire Software Suite.

10.4.12 View Status of a Point

1. From the Main Menu, press 2 for Point Status.

2. From the list that displays, press ENTER to select the module where this point is located. The screen that displays will show you if the point has a trouble and will provide sensitivity compliance information. (See Section 10.4.11 for complete information about detector sensitivity compliance.)

10.4.13 View Alarms or Troubles

When the system is in alarm or trouble, you can press down arrow to view the location of an alarm or trouble.

10.4.14 System Information

1. From the Main Menu, press 8 to access the System Information menu.

About Panel

Press 1 to access About Panel to view the panel model, serial number and system version number and date.

Send/Receive firmware updates

The IFP-2100/ECS or RFP-2100 has the ability to be updated in the field. The latest IFP-2100/ECS or RFP-2100 Firmware Update Utility can be downloaded from the Farenhyt Web Site. Once a panel has been updated using the Firmware Update Utility, you can use Send/Receive firmware updates to propagate the firmware to the other panels in the network.

1. Press 2 to send a firmware update or press 3 to receive a firmware update from the System Information menu. Available panels are listed in the menu.
2. Use the up or down arrow key to select a panel to send/receive an update to/from. Press ENTER to start the update process.

Feature Activation

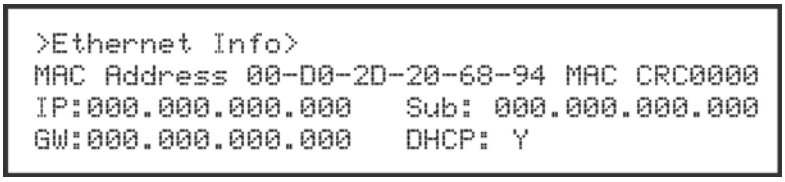
This menu is used to activate/register additional features.

1. Press 4 from the System Information menu. This will bring up the Feature Activation menu.

2. Press 1 to enter a six digit activation code or press 2 to review features already activated in this panel.

Ethernet Info

1. Press 5 from the System Information menu for Ethernet Information.



AlarmNet Info

1. Press 6 from the System Information menu for AlarmNet Info
2. Cell Strength: 0 to 100%
3. Status: Registered/Not Registered

AlarmNet Temporary PIN

1. Press 7 from the System Information menu for AlarmNet Temporary PIN. This is used in case the FACP is replaced on the CCP.

10.5 Event Priority

This section goes over how event activations are handled by the control panel with regards to priority.

10.5.1 System Control

The IFP-2100/ECS control panel integrates both a fire and emergency system into one. When events are active from both systems the control panel makes intelligent decisions to determine which system should be controlling outputs. This is called System Control. This manual will refer to the fire or emergency systems having System Control, this means that the system has an active alarm or supervisory event that has a higher event priority than an active alarm or supervisory event from the other system. For this consideration, the control panel looks at the highest priority event active on each system. When both systems are active, the system with control will activate System Override. System Override is activated on the lower priority, non-System Control panel system (fire or emergency system.)

10.5.2 System Override

System Override temporarily disengages output group activations from the system being overridden. This is done to not provide conflicting messages and signaling and help with reducing confusion of the building occupants.

When output groups are supposed to be active but are not because System Control has activated System Override, they are re-activated every 30 seconds for 2-3 seconds to indicate to the building occupants that there is still an event active. This will only occur when the system with System Control is not using the output group. The System Override option is programmable for non-voice output groups on a per output group basis through the panel output group programming menus and in HFSS Honeywell Fire Software Suite. In these places the option is called Allow System Override and defaults to YES. It is also possible to not reactivate the output groups every 30 seconds when System Override is active on a per system basis. This option is programmable in HFSS.

There are times when you would not want to allow System Override for an output group. For example: fire is programmed to an elevator relay to bring the elevator to the bottom floor for fire only. If fire and ECS are active with ECS being the higher priority event, you still need the elevator to move to the bottom floor and only audible and visual notification appliances must be overridden. In this case, the output group assigned to the relay would be set to NO on the Allow System Override setting. See Section 9.4.1.2 to edit group properties.

10.5.3 Event Priority

Each event type (see Table 10-1) has a priority level assigned to it. When more than one event type is active, the panel uses the Event Priority Table to determine which event mapping to use to control output groups. The Event Priority Table can be modified using HFSS Honeywell Fire Software Suite. It is strongly recommended that before each installation a risk analysis is done by the stake holders (property owners, AHJ, occupants, etc…) to determine which events take precedence over others.

The Emergency LOC Alarm entry in the Event Priority Table encompasses all ECS Alarm Events that can be activated from an LOC (LOC Mic Triggered ECS Alarm and LOC ECS 1 Alarm through LOC ECS 8 Alarm). By default, these events do not have a priority - they can be activated in any order. A programming option in HFSS exists to force a priority scheme for the LOC ECS Alarm Events. When this option is enabled, the lower numbered the ECS event is, the higher priority it has (e.g. LOC ECS 1 Alarm is higher priority than LOC ECS 8 Alarm). With this priority scheme, once a higher priority ECS Event has been activated, an ECS reset must be performed before a lower priority ECS Event can be activated.

The Event Priority Table contains the following events for modification:

Table 10-1: Event Priority Table

Fire System	Emergency System
Fire Manual Pull Alarm	Emergency LOC Alarm
Fire Detector Alarm	Emergency 1 Point Alarm
Fire Water Flow Alarm	Emergency 2 Point Alarm
Fire Interlock Release Alarm	Emergency 3 Point Alarm
Fire Zone Aux 1 Alarm	Emergency 4 Point Alarm
Fire Zone Aux 2 Alarm	Emergency 5 Point Alarm
Fire System Aux 1 Alarm	Emergency 6 Point Alarm
Fire System Aux 2 Alarm	Emergency 7 Point Alarm
	Emergency 8 Point Alarm
	Emergency Voice Aux 1 Alarm
	Emergency Voice Aux 2 Alarm
	Emergency Voice Aux 3 Alarm
	Emergency Voice Aux 4 Alarm
CO Alarm	
Fire Pre-Alarm	
Fire Interlock Alert	
	Emergency Supervisory
Fire Supervisory	
CO Supervisory	
Trouble	
Site F Key Status	
System Status	

Note: Status Points, Status Voice Aux 1, Status Voice Aux 2, and Background Music are contained within the System Status event priority.

Note: All fire, emergency and system troubles are prioritized into the Trouble event priority.

10.5.4 Priority Rules

1. Event priorities can be changed only within, not between, priority levels (defined by bold lines in Table 10-1).
2. Emergency LOC Alarm must always higher than Emergency 1-8 Point Alarm and Emergency Voice Aux 1-4 Alarm.
3. ECS events do not need to be in order by ECS number.

10.5.5 Other Priority Considerations

There are other considerations to take into account when the same event is acting on the same output group (an event being mapped to an output group.) These are prioritized in order of appearance:

- For voice system utilizing dual channel, normal mapping takes priority over alert mapping. Example: Zone 1 Manual Pull is mapped to Voice Group 1 as an Alert 1 mapping and Zone 2 Manual Pull is mapped to Voice Group 1 as a normal mapping. If Zone 1 and Zone 2 Manual Pull events are active, Voice Group 1 will annunciate the Fire Alarm message defined in the Voice Settings for the panel's assigned site.
- Event priority is considered here based on the Event Priority Table.
- If an output group is mapped both directly and through an output group template to an event, the direct map

gets priority. Example: Template 1 Contains Group 1. Zone 1 Manual Pull is mapped to Template 1 and Group 1 using constant and ANSI patterns respectively. If Zone 1 Manual Pull is active, Group 1 will output ANSI.

- When an event is mapped to an output group from multiple zones, the lower numbered zone gets priority. Example: Zone 1 Manual Pull and Zone 2 Manual Pull are mapped to Group 1 using constant and ANSI patterns respectively. If Zone 1 and Zone 2 Manual Pull events are active, Group 1 will output constant.

Note: Status Points, Status Voice Aux 1, Status Voice Aux 2, and Background Music are contained within the System Status event priority.

Note: All fire, emergency and system troubles are prioritized into the Trouble event priority.

10.6 Operation Mode Behavior

The control panel can be in one or more of seven conditions at any given moment: Normal, Alarm, Prealarm, Supervisory, Trouble, Silenced, and Reset. Table 10-2 describes the behavior of the panel in each of these modes.

When looking at the LCD, the screen will display FS for the “Fire System”, or CO for the “CO System”. The highest priority event will display first and include the event count (see Figure 10-4).

Press the down arrow to view the location and type of alarm supervisory or trouble. If the panel is programmed to Auto Display Event, information describing the highest priority active event will display on the first two lines.

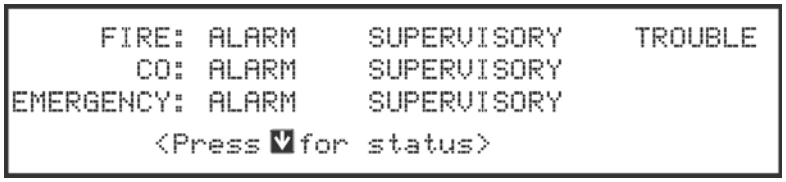


Figure 10-4 Highest Priority Event Display

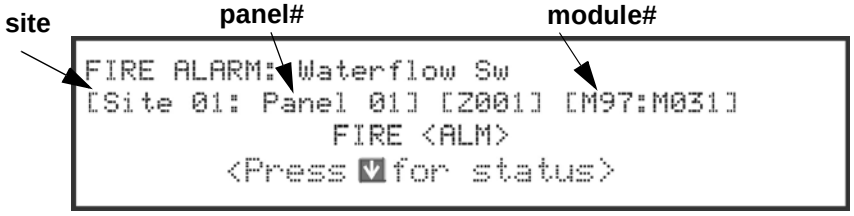


Figure 10-5 Event Display after Two Minutes Sitting idle

Table 10-2: Operations Mode Behavior

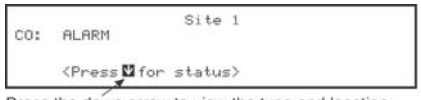
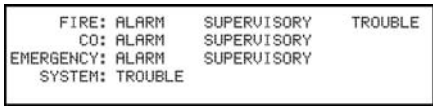
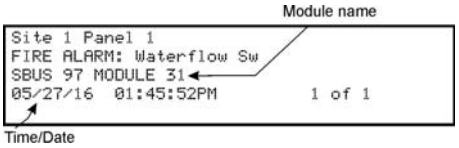
Operation Mode	Occurs When	System Behavior	In This Mode You Can
Normal	No alarm or trouble condition exists and menus are not in use.	SYSTEM POWER LED is on. The All Systems Normal display indicates that the system is in normal mode. The current date and time display on the last line of the LCD.	Enter the appropriate code to activate the User or Installer Menu.
Alarm	A smoke detector goes into alarm or a pull station is activated. If more than 3 categories are active at a single time and ECS is enabled.	The system seizes control and will the central station. The on-board annunciator will sound loud, steady beeps to distinguish Alarm signals. For Fire Alarm, the sequence is a loud steady beep.(Any notification devices attached to the system will also sound). For ECS Alarm, the sequence is four seconds on, one second off. GENERAL ALARM LED is on. The LCD displays a screen similar to this one.   Press the down arrow to view the type and location of alarm. (Message alternates with the date/time display). 	Press the down arrow to view the alarm. A screen similar to this one displays.  Press SILENCE to silence the annunciator (and any notification devices attached to the system). When the alarm condition clears, press RESET to restore the panel to normal.

Table 10-2: Operations Mode Behavior

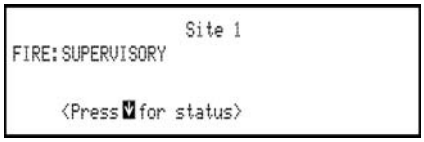
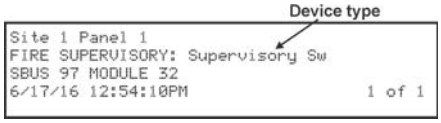
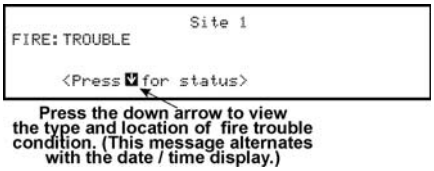
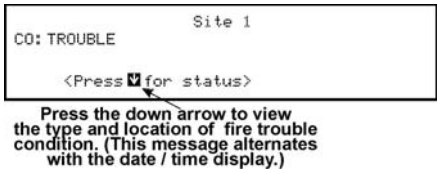
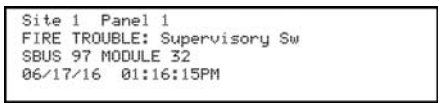
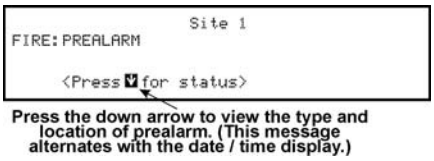
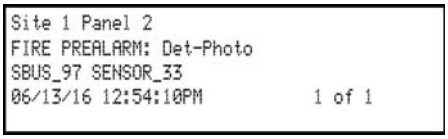
Operation Mode	Occurs When	System Behavior	In This Mode You Can
Supervisory	The system detects a supervisory condition. A Supervisory with a CO detector.	The system seizes control and will the central station. The on-board annunciator sounds a loud, pulsing beep to distinguish supervisory signals. For Fire Supervisory the sequence is two seconds on, two seconds off. For ECS Supervisory, the sequence is two seconds on, three seconds off. SUPERVISORY LED is on. The LCD displays a screen similar to this one.  	Press down arrow to view the fire supervisory condition. A screen similar to this one displays.  Press SILENCE to silence the annunciator.
Trouble	CO Detector goes into Alarm A system trouble condition occurs. A trouble condition with a CO detector.	The system seizes control and will the central station. The on-board annunciator sounds a loud, pulsing beep in the sequence ¾ of second on, eight seconds off. SYSTEM TROUBLE LED is on. The LCD displays a screen similar to this one.  	Press down arrow to view the fire trouble. A screen similar to this one displays.  Press SILENCE to silence the annunciator. Once the trouble condition has been fixed, the system will restore itself automatically.
Prealarm	A single detector trips in a 2-Count zone. (2-Count means two detectors must trip before an alarm is reported.)	Touchpad PZT beeps. The LCD displays a screen similar to this one. 	Press down arrow to view the Prealarm. A screen similar to this one.  All system operations are available in this mode.

Table 10-2: Operations Mode Behavior

Operation Mode	Occurs When	System Behavior	In This Mode You Can
Reset	The RESET button is pressed followed by a valid code, if necessary.	All LEDs are on briefly then the LCD displays “RESET IN PROGRESS”. If the reset process completes normally, the date and time normal mode screen displays.	Menus are not available during the reset process.
Silenced	An alarm or trouble condition has been silenced but still exists. To silence alarms and troubles, press SILENCE followed by the Installer or User Code, if necessary.	SYSTEM SILENCE LED is on. SYSTEM TROUBLE, SUPERVISORY and/or GENERAL ALARM LED (depending on condition) is on. The annunciator (and any notification devices attached to the system) will be silenced.	Press down arrow to view the location of the alarm, supervisory or trouble. When the condition no longer exists, the SYSTEM SILENCED and SYSTEM TROUBLE LED, SUPERVISORY and/or GENERAL ALARM LEDs turn off.

10.6.1 Multi-Site Annunciator and Multi-Site User Access

Multi-site Annunciators are unique as they can display the status and event history of all sites they are assigned to. These displays can be especially useful in guard shacks or security centers. A multi-site display is indicated by the words “Multi-Site Display” at the top of the idle screen.

1. The ACK, DRILL, RESET and F-Macro keys are disabled until a multi-site user access code has been entered and a specific site has been selected.
2. Multi-site Annunciator silencing rules:
   - If any of the assigned sites are silenced, the Silenced LED will be lit.
   - Silence key will only silence the sound from the multi-site annunciator on which the silence key was pressed. This is called being Locally Silenced. If Locally Silenced is enabled on a multi-site annunciator, it will be indicated by a blinking Silenced LED.
   - If any new troubles, supervisory, pre-alarms, or alarms are triggered in any assigned sites, Locally Silenced annunciator will resound.
   - If a multi-site annunciator is locally silenced for 4 or 24 hours depending on user selection (see section 9.6.4.6), the locally silenced annunciator will resound.
3. The IFP-2100/ECS menu system is disabled on a multi-site annunciator. Pressing the Right or Enter keys will bring you straight into event history for assigned sites. To get into the menu system, a multi-site user password must be entered and then a site must be selected from the site selection menu. Once this is done you will have access to the idle screen of that site and the annunciator will temporarily act like a single site annunciator.
4. A multi-site annunciator will sound the highest priority tone from the sites it is assigned to.

Note: A multi-site display is created in Module programming in the edit properties menu for an annunciator. See section 9.2.1.

Note: An annunciator cannot be programmed as a multi-site display when it is associated with an ECS-VCM, NVCM or RVM in a ECS system.

Note: Status Points, Status Voice Aux 1, Status Voice Aux 2, and Background Music are contained within the Sys-

tem Status event priority.

Note: All fire, emergency and system troubles are prioritized into the Trouble event priority.

10.7 Releasing Operations

The control panel supports two types of releasing: Double Interlock Zone, and Single Interlock Zone. The Double Interlock Zone operation requires an interlock switch input in the system, and the Single Interlock Zone does not. An interlock switch is typically a dry-contact pressure switch.

When Single or Double Interlock Zone releasing is selected using HFSS Honeywell Fire Software Suite, the software suite will automatically default the following system parameters:

Note: The defaults created can be modified through programming if desired.

- Output Group 2 is created. Output Group 2 will be defaulted as a “Detector Alarm” output group for all releasing zones. NAC [98:001] is assigned to Output Group 2.
- Output Group 3 is created. Output Group 3 will be defaulted as a “Interlock Release Alert” output group for all releasing zones. NAC [98:002] is assigned to Output Group 3.
- Output Group 4 is created. Output Group 4 will be defaulted as “Interlock Release Alarm” output group for all releasing zones. NAC circuit [98:003] is assigned to Output Group 4.

Note: The installer must define which input points will be used for detectors, manual release switches, or interlock/pressure switches.

Note: For manual release operation, Installer must use an FM approved/ UL listed releasing manual station.

Table 10-3: Approved Releasing Solenoids

Manufacturer	Part Number	Rated Voltage, DC	Rated Current, Milliamp
Asco	T8210A107	24 VDC	700
	8210G207	24 VDC	442
	HV2740607	24 VDC	375
	HV2838521	24 VDC	375
	HV2740608	24 VDC	375
Honeywell/Skinner	701X7028	24 VDC	917
Barnbrook System	EA45	24 VDC	200
Kidde Fenwal	890181	24 VDC	2000
	486500	24 VDC	290
	895630	24 VDC	2000
	897494	24 VDC	1500
Minimax	88 7363	24 VDC	1040
	88 5738	24 VDC	1040
	88 9323	24 VDC	500
Nohmi Bosai	R85M10	24 VDC	1200
Parker Hannifin	70610006	24 VDC	417
	10610707	24 VDC	417
Snap-tite	2823A-2NB-A4F6	24 VDC	458
	2823A-2NB-A4F5	12 VDC	917
TLX	PA0036-A	24 VDC	600
Versa Valves	CGS-4232-NB3-S2	24 VDC	438
Victaulic	753E	24 VDC	364
	767	24 VDC	364

Table 10-3: Approved Releasing Solenoids

Viking	11591	24 VDC	417
	11595	24 VDC	417
	11592NC	24 VDC	416
	16360	24VDC	500

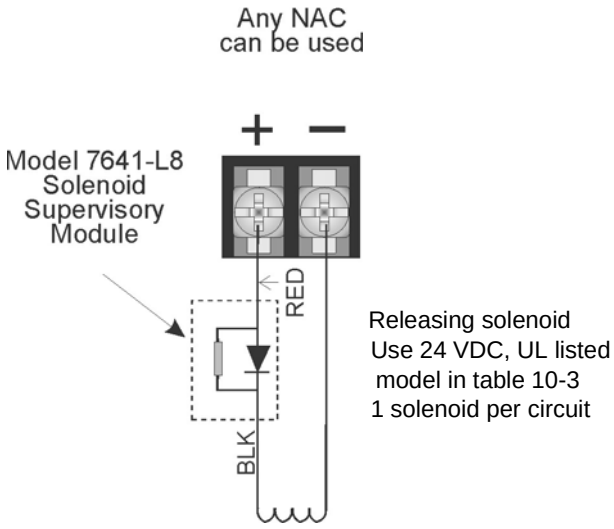


Figure 10-6 Wiring Configuration for Solenoid

*When ordering, order as P/N 7641-L8

10.7.1 Single Interlock Zone Releasing

A single interlock zone utilizes a minimum of two addressable detectors and a designated manual release switch.

Important!
Only addressable detectors can be used. No conventional detectors can be used.
Each Single Interlock Zone input requires at least one manual release switch.

Conditions Required for an Interlock Release Alert Output Activation

If any single addressable detector is activated, the “Interlock Release Alert” output will activate. This alerts the user that the initial stages required for a release condition are present. (Also refer to Table 10-4).

Conditions required for a Detector Alarm and Interlock Release Alarm Output Activation

If two or more addressable detectors, or a manual release switch activate, the “Detector Alarm” and “Interlock

Release Alarm" outputs will activate. (Also refer to Table 10-4).

Table 10-4: Single Interlock Zone Operation

Inputs	Output Results							
1st Addressable Detector		X		X		X		X
2nd Addressable Detector			X	X			X	X
Manual Release Station					X	X	X	X
	Normal	**Interlock Release Alert**	**Interlock Release Alert**	**Interlock Release Alarm and Detector Alarm**	**Interlock Release Alarm and Detector Alarm**	**Interlock Release Alarm and Detector Alarm**	**Interlock Release Alarm and Detector Alarm**	**Interlock Release Alarm and Detector Alarm**

10.7.2 Double Interlock Zone Releasing

A Double Interlock Zone uses a minimum of two addressable detectors, a designated manual release switch, and an interlock switch input. An interlock switch is typically a dry-contact pressure switch and will be referred to as an interlock/pressure switch in this document.

Important!
Only addressable detectors can be used. No conventional detectors can be used.
Each Double Interlock Zone input requires at least one Interlock/pressure switch and at least one manual release switch.

Conditions Required for a Interlock Release Alert Output Activation

If any single addressable detector is activated, the "Interlock Release Alert" output will activate. This alerts the user that the initial stages required for a release condition are present. (Also refer to Table 10-5).

Conditions Required for a Detector Alarm Output Activation

If two addressable detectors, a manual release switch is activated, or an interlock switch is active, the "Interlock Release Alert", and "Detector Alarm" outputs will activate.

Conditions Required for a Interlock Release Alarm Output Activation

Any release requires the activation of an interlock switch, and either a manual release switch or 2 activated addressable detectors. When these conditions are met, the "Interlock Release Alarm" and "Detector Alarm" outputs will activate, and the "Interlock Release Alert" outputs will deactivate.

Table 10-5 Double Interlock Zone Operation

Inputs	Output Results															
1st Addressable Detector		X		X		X		X		X		X		X		X
2nd Addressable Detector			X	X			X	X			X	X			X	X

Table 10-5 Double Interlock Zone Operation

Inputs	Output Results															
Manual Release Station					X	X	X	X					X	X	X	X
Interlock/ Pressure Switch									X	X	X	X	X	X	X	X
	Normal	Interlock Release Alert	Interlock Release Alert	Interlock Release Alert and Detector Alarm	Interlock Release Alert and Detector Alarm	Interlock Release Alert and Detector Alarm	Interlock Release Alert and Detector Alarm	Interlock Release Alert and Detector Alarm	Interlock Release Alert and Detector Alarm	Interlock Release Alert and Detector Alarm	Interlock Release Alert and Detector Alarm	Interlock Release Alarm and Detector Alarm	Interlock Release Alarm and Detector Alarm	Interlock Release Alarm and Detector Alarm	Interlock Release Alarm and Detector Alarm	Interlock Release Alarm and Detector Alarm

10.8 Smoke Alarm Verification

Figure 10-7 illustrates how the Smoke Alarm Verification cycle operates.

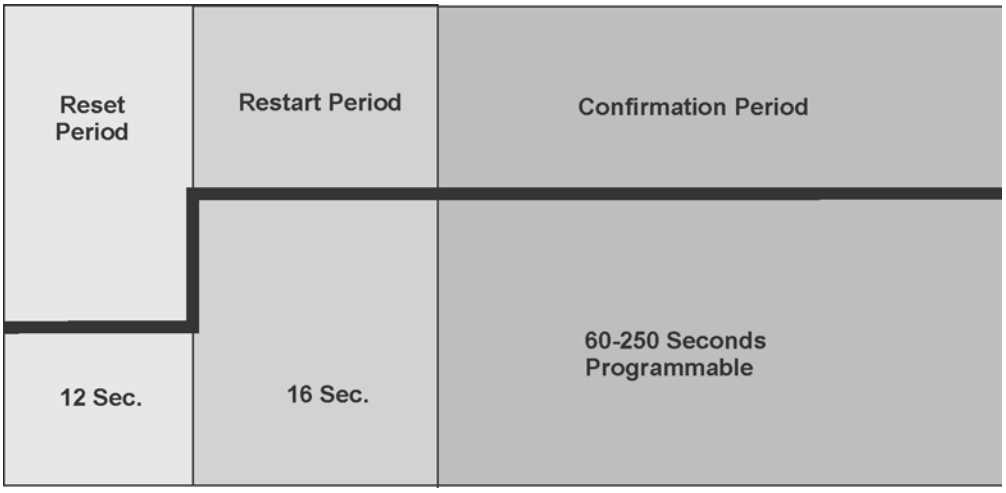


Figure 10-7 Smoke Verification Cycle

During the Confirmation Period if there is no alarm indication then the system will return to normal operation.

10.9 Function Keys

The function keys on the IFP-2100/ECS have multiple features. Their macro key functionality can simplify the disabling, activating, or inhibiting points or groups respectively. They can also be used as a status type activation event and for activating Map Inhibit. Each F-Key macro can hold 50 events.

To access the F-Key Recording menu:

1. From the idle screen, press and hold the F-Key for 5 seconds.
2. Enter a PIN with F-Key macro recording privileges, if prompted.

10.9.1 Recording an F-Key Macro

1. Access the F-Key Recording menu and select the 'Start FKEY Recording' option.
2. The panel will return to the idle screen. Notice the 4th line on the display now alternates with <F# Key Recording>, where # is the number of the F-Key being recorded.
3. Any Disabling or Activating of points, output groups, or templates from the site at this point will be programmed into the macro. Do this by going to any annunciator within the site and entering Main Menu -> Point Functions and use Disable/Enable Point or use I/O Point Control to: disable output groups or individual points, or activate individual points.
4. Once you are finished with disabling or activating points/output groups, enter the F-Key Recording Menu again and select the 'End F-KEY Recording' option.
5. The panel will return to the idle screen.

10.9.2 Aborting an F-Key Macro Recording Session

1. After an F-Key macro recording session has been started, the session can be canceled at any time by accessing the F-Key Recording menu and selecting 'Abort F-KEY Recording' option.
2. The panel will return to the idle screen.

10.9.3 Erasing an F-Key Macro

1. If an F-Key macro has already been recorded, you can erase it by accessing the F-Key Recording menu and selecting the 'Erase F-KEY Macro' option.
2. The panel will return to the idle screen.

10.9.4 Using a Recorded F-Key Macro

1. From the idle screen on any annunciator in the site, press the F-Key you want to activate.
2. Once finished, to de-activate the macro press the F-Key again.

10.9.5 F-Key Status Event

When an F-Key is enabled, it activates its corresponding F-Key Active event. This is a status type event that can activate outputs without showing any status on annunciator displays. This should be used for ancillary purposes only.

10.9.6 F-Key Map Inhibit

The F-Keys have the ability to disable event - output group mapping for the purpose of simulating that the map doesn't exist. This can be setup to allow for testing purposes where notification of an entire building is not desired during the test. This option is programmable for each output group map through HFSS Honeywell Fire Software Suite.

When an F-Key is active and a map in the system is set to be disable by Map Inhibit, the system will show a trouble event indicating it as such.

Section 11
Emergency Communication System Operation

11.1 Overview

The IFP-2100/ECS control panel and accessories provides features to meet the requirements for a Mass Notification Systems as described in NFPA 72 and is compliant with the UL 2572 standard. The ECS (Emergency Communication System) is integrated with the fire alarm and voice evacuation functions of the control panel. In a networked panel system, only one panel can be chosen to be the voice evacuation/ECS panel for the site.

There are two ways for activating ECS in the IFP-2100/ECS panel:

ECS Point Activations

ECS Point Activation involves using pre-determined ECS Alarm input points to activate ECS Alarm events. These events cause output areas to activate based on mapping that is programmed into the system at installation. This is very similar to the traditional mapping that the fire system has utilized to date.

Manual LOC Activations

Manual LOC Activation involves using the LOC ECS interface to activate ECS Events, choose output areas, and speak through a microphone. These selections are not pre-determined and allow the user to make system functionality decisions when the event is actually happening. This requires the activation of Manual ECS State which bypasses ECS Point Activations. See section 11.2.3.

11.2 LOC Functionality

An LOC (Local Operating Console) consists of either the ECS series panel (ECS-VCM Voice Control Module, or ECS-NVCM Network Voice Control Module, and the Alarm Control Panel), or the ECS-LOC Local Operating Console (ECS-RVM Remote Voice Module and its associated RA-2000 keypad.) An LOC is created by adding a VCM, NVCM or RVM to the system and associating a keypad to it. The LOC provides eight buttons for activating the ECS messages, a button to gain and request ECS Control, and a microphone for live paging. There can be up to 16 LOC devices in the system. In a networked panel system, all of the LOCs must be connected through SBUS to the panel that includes the VCM or NVCM.

11.2.1 Keys and LEDs

This section outlines the functionality of the keys and LEDs on the ECS-VCM or ECS-NVCM and ECS-RVM expander modules.

11.2.1.1 ECS Control Key

Pressing the ECS Control Key will do one of two things:

1. Enter Message Mode of the LOC ECS interface (including trying to gain ECS Control if the user doesn't have it already).
2. Relinquish ECS Control if pressed while in Message Mode.

11.2.1.2 ECS Control LED

The ECS Control LED is used to indicate the status of ECS Control in the system. When the LED is on solid, the LOC has ECS Control within the system. When the LED is blinking, another LOC has gained ECS Control in the system.

11.2.1.3 ECS Message Keys

ECS Message Keys are used in Message Mode to select which ECS Message is to be played. If pressed when the LOC does not have ECS Control, the system will automatically try to gain ECS Control before allowing the ECS Event to be activated. See section 11.2.2.

11.2.1.4 ECS Message LEDs

The red ECS Message LEDs indicate the active ECS Message and any previously active ECS messages. The green LEDs indicate the ECS Message was selected in message mode and that the LOC has ECS control.

1. For ECS Point Activation, the red ECS Message LEDs will illuminate on each LOC to indicate which ECS messages have been activated in automatic ECS state.
2. In Manual ECS State, the red ECS Message LEDs will indicate which ECS message has been activated at an LOC. See section 11.2.3.
3. The green ECS Message LEDs will activate for the LOC that activated the ECS Message.

11.2.1.5 Select Keys

The Select Keys are used to toggle which output areas are active.

1. If Message Mode is active (see Section 11.2.3), the Select Keys will activate output which areas for the active message to be played in (also activates the red Select Key LED).

Note: For LOC activated emergency alarm events, if an area is programmed through mapping to be active that area is automatically selected and can not be deactivated using the Select Keys.

2. If Microphone Mode is active (see Section 11.2.3), the Select Keys will toggle which areas the microphone audio is distributed to (also toggles the green Select Key LED).

11.2.1.6 Select Key LEDs

The Select Key LEDs are used to indicate which output areas are active for a microphone page (see Section 11.7.4.1) or system events.

1. Green LEDs: active areas for microphone paging.

Note: These are only active when the microphone PTT (Push To Talk) is engaged. Blinking indicates one or more associated network page destination panels are unable to output the page.

2. Red LEDs: active areas for system events.

Note: When system is Dual Channel Enabled, blinking indicates the area is active for an alert message.

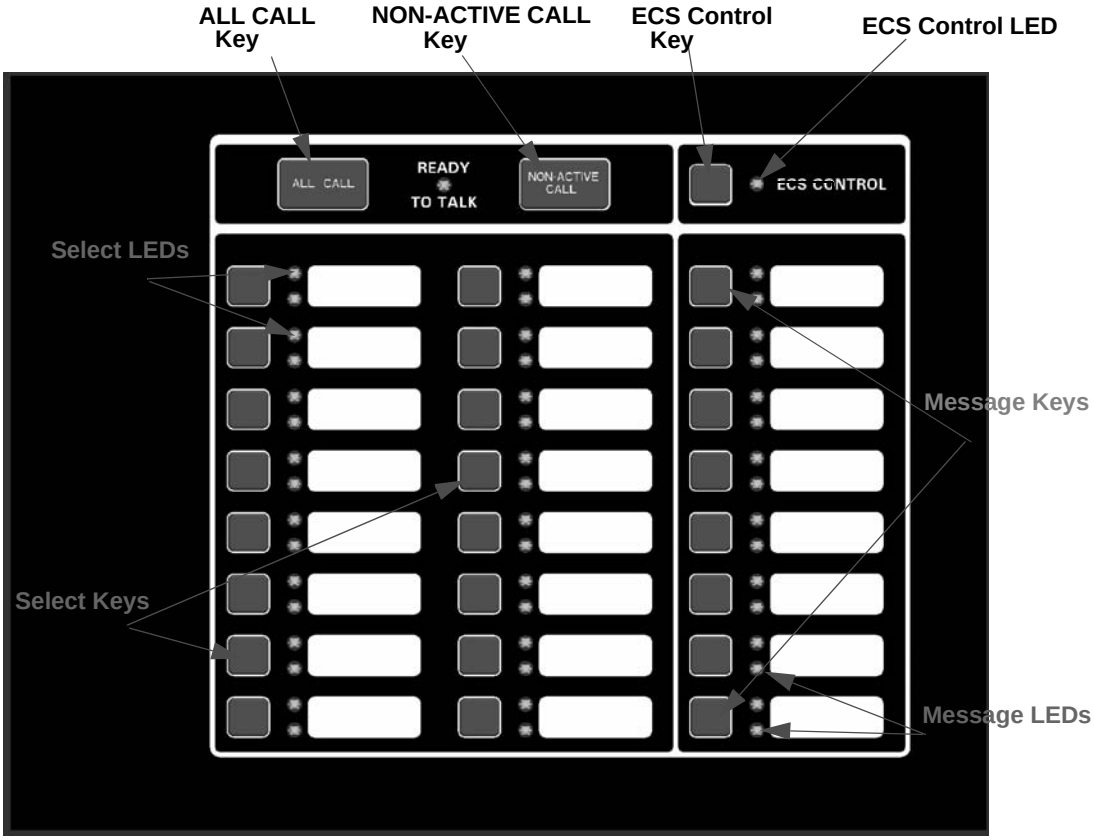


Figure 11-1 ECS-VCM or ECS-NVCM / ECS-RVM Front View

11.2.2 Gaining ECS Control

When attempting to gain ECS Control, there are three things that govern whether or not ECS Control can be obtained:

1. LOC Priority.
2. LOC Lockout.
3. User profile access control.

11.2.2.1 LOC Priority

LOCs are assigned (through panel or HFSS Honeywell Fire Software Suite of the ECS-VCM, ECS-NVCM or ECS-RVM) an LOC priority of low, normal, or high. LOCs with a higher priority are always able to gain control from a lower priority LOC.

11.2.2.2 LOC Lockout

When LOCs are programmed to the same priority, the setting LOC lockout applies. LOC lockout will not allow an LOC to gain ECS Control from the LOC with ECS Control until one of three things happen:

1. The LOC lockout timer expires. Once the LOC lockout timer expires, an attempt to gain ECS Control can be made again.

Note: The lockout timer must be programmed to expire sometime other than Never.

2. The user at the second LOC requests ECS Control from the LOC with ECS Control and that LOC grants the request. (See Section 11.2.7). If the ECS lockout timer expires while an ECS Control request is in progress, the system will automatically pass ECS Control to the requesting LOC.
3. The user at the second LOC enters an access code with the ECS Super User profile option.

The LOC lockout timer can be set between immediate and 12 hours in increments of 1 second or it can be set to never expire. The default setting is 30 seconds. The LOC lockout timer is restarted upon any key press at the LOC with ECS control. The LOC lockout timer is cleared when ECS Control is relinquished.

11.2.2.3 User Profile Access Control

The user will need to enter an access code containing the ECS Control Request or ECS Super User profile option to gain ECS Control. ECS Control Request and ECS Super User profile options will be mutually exclusive to the system. If the access code has ECS Super User, the ECS Control Request is ignored and activations by that user are always as ECS Super User.

11.2.3 Manual ECS

After gaining ECS Control the system enters the LOC ECS interface which allows you to activate the Emergency System and allows for Emergency Paging. Once an emergency event has been activated the panel enters a Manual ECS State. In this state, all ECS Alarm programmed points that are currently in alarm in the system are changed to an active state. The display status screen reflects this when viewing the system for status. Any outputs that were activated by the ECS Alarm programmed points are deactivated until Manual ECS state is exited. Only an ECS Reset can exit the Manual ECS State. If a user gains ECS Control at an LOC and does not activate an ECS message, the system will automatically generate an ECS Supervisory indicating such. This prevents an LOC from being in an undesired state of ECS Control when an actual event emerges.

There are two modes for interacting with the LOC ECS interface when in Manual ECS State:

1. Message Mode
2. Microphone Mode

These two modes allow you to quickly toggle areas of output for a desired message or to speak to a microphone for ECS Paging.

After gaining ECS Control, the system is in Message Mode of the Manual ECS State.

11.2.3.1 Switching between Microphone Mode and Message Mode

At any time while in ECS Control, you can switch between Microphone Mode and Message Mode. Microphone Mode is entered by simply engaging the microphone.

1. Message Mode: Use the ECS Message keys to toggle which message/event to output to the system. Use the Select Keys to toggle output areas to play the current ECS Message in. The Select Key's red LED will toggle on/off with the activation/deactivation of the area is now receiving the message. Any non-voice groups assigned to this Select Key will also toggle with their Activation Cadence. See Section11.2.3.2.
2. Microphone Mode: Use the Select Keys while the microphone is active to toggle which areas to do an ECS Microphone Page to. The Select Key's green LED will toggle on/off with the activation/deactivation of the ECS Microphone Page to the area.

11.2.3.2 Activating Output Groups Dynamically

This method allows the system to be setup with minimal or no system mapping. When in Manual ECS State and

operating in Message Mode the user can dynamically activate/deactivate output areas for system notification to take place in. The Select Key red LED will become lit and the circuits in the output group(s) will become active and play the currently active ECS event message when activated. When deactivated, the Select Key red LED will become unlit and the circuits in the output group(s) will become inactive. Non-voice output groups can also be assigned to Select Keys and will toggle on/off using the activation cadence assigned to it in output group programming. This is available in the panel and in HFSS Honeywell Fire Software Suite. See Section 9.4.1.2.

11.2.4 Microphone Mode

Microphone Mode allows the user to press the Select Keys to toggle which output areas to speak to over the microphone. The green LEDs next to the Select Keys will activate or deactivate.

```
MICROPHONE MODE
SELECT KEYS: Toggle Output Areas
Microphone Active
Release Microphone for MESSAGE MODE
```

11.2.5 Message Mode

In Message Mode, the user is able to press the ECS message Keys to choose a message and press the Select Keys to activate or deactivate which output areas the message will be played. This will activate or deactivate the green and red LEDs next to the ECS Message Keys and the red LEDs next to the Select Keys.

11.2.6 Custom ECS Event

Custom ECS events allows the user to generate an ECS event and speak a custom message using the microphone. Once the user is done speaking the message, the tone and any associated strobes will continue to be active in the output areas.

To generate a Custom ECS Event:

1. Gain ECS Control using the ECS Control Key when there is not an ECS Event active.
2. Activate the microphone.
3. Choose desired output areas using the Select Keys.
4. Speak custom message into microphone.

11.2.7 Passing ECS Control

Passing of ECS Control is allowed when two LOCs have the same priority. When it is possible to pass control, a prompt (similar to Figure 11-2) will display in which the user can: request control from the LOC with ECS Control, enter an access code with the ECS Super User profile option to override the other LOC, or wait for the lockout timer to expire (if applicable).

```
GAIN ECS CONTROL OPTIONS MENU
1=Request ECS Control From LOC
2 Gain ECS Control as ECS Super User
3 Wait for Lockout Timer to Expire 30
```

Figure 11-2 Request ECS Control with Lockout Timer Active

When passing ECS Control between two ECS Super Users, the user is not shown the prompt screen. Instead, a

request for ECS Control is automatically made. Additionally, the lockout timer does not apply for ECS Super User.

When a request for ECS Control is made, the LOC with ECS Control will be shown a screen (similar to Figure 11-3), even when in another menu, except programming menus, indicating that another LOC is requesting ECS Control. The piezo buzzer on the LOC with ECS Control sound when an ECS Control request is active to alert a nearby operator of the request.

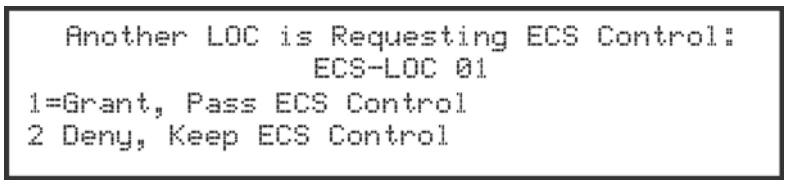


Figure 11-3 ECS Control Request on LOC with ECS Control

Once ECS Control is passed to another LOC, the new user will assume the system AS IS. This means that the event that was set to be playing at the previous LOC and all output areas it was playing in do not change.

11.2.8 Exit ECS Control Menu

The user can exit the LOC ECS interface by pressing the left arrow key. The user will be returned to the idle screen which indicates that the LOC still has ECS control.

11.2.9 Relinquish ECS Control

Relinquishing ECS Control is accomplished by pressing the ECS Control Key from within Message Mode. A screen will be displayed to ensure the user wants to relinquish ECS Control. ECS Control will be automatically relinquished after a time-out on this screen. When ECS Control is relinquished, the system stays in the Manual ECS State. ECS Control can then be gained by another LOC or again at the same LOC.

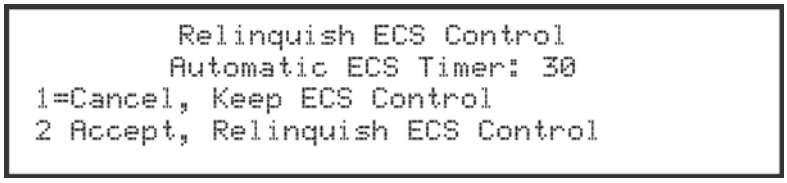


Figure 11-4 Relinquish ECS Control Screen

11.2.10 ECS Reset

An ECS reset is accomplished by pressing the RESET button from an LOC. The user will be prompted to reset either the fire system or emergency system. After an ECS reset, the LOC will automatically exit the LOC ECS interface.

Note: In order to perform an ECS reset, the display must be associated with the ECS-VCM or ECS-NVCM / ECS-RVM. See Section 11.6.2.2.

11.3 ECS Super User

The ECS Super User access code profile function provides the ability to override all ECS Control rules and gain ECS Control. The ECS Super User is the highest priority user in the system. The ECS Super User has several features that differ from the normal user:

1. Any alarm activated while under ECS Super User Control needs to be reset using an ECS Super User function enabled access code.
2. LOC priority and LOC lockout timer are ignored when passing ECS Control between ECS Super Users at LOCs. If another ECS Super User attempts to gain ECS Control from an LOC, an ECS Control request is presented to the ECS Super User at the LOC that currently has ECS Control.

11.4 ECS Point Functionality

Any input point in the system can be configured as an ECS input. The Point ECS 1-8 Alarm input types can be used to trigger predetermined ECS events for output areas. ECS-VCM, ECS-NVCM or ECS-RVM points can be programmed to trigger Voice Aux events that can allow external audio to be played through the emergency system.

11.4.1 ECS Point Activations

ECS points can only activate outputs and be placed into an alarm state if the system is not in Manual ECS State. ECS points have no priority and all are allowed to be activated. If the ECS point is a higher priority than the Fire System, then the system will play the highest event message through all ECS mapped outputs.

For example: Emergency 1 Point Alarm is higher priority than Emergency 2 Point Alarm. Emergency 1 Point Alarm has message 1 mapped to through groups 1 and 2. Emergency 2 Point Alarm has message 2 playing through groups 2 and 3. If a point for Emergency 1 Point Alarm and a point for Emergency 2 Point Alarm are both active, the system will play message 1 through groups 1, 2, and 3.

Once Manual ECS State is active, points in Alarm state switch to an Active state. When the points are changed to the Active state, they do not activate any system mapping or turn any outputs on. Any points that are activated while in Manual ECS are also placed into the Active state and are not allowed to activate any mapping. The system idle screen will show an ECS Alarm for any points in the Active state, and the detailed description of the point will show the point as Active.

After an ECS Reset, any ECS points that are still active will again be put into Alarm.

11.4.2 ECS-VCM, ECS-NVCM & ECS-RVM Points

The ECS-VCM, ECS-NVCM & ECS-RVM modules contain two programmable input points. These can be programmed as any conventional switch input type. These also have the ability to be programmed as a trigger for bringing external audio into the system. These special point types are: ECS Voice Aux In 1-4 Alarm, Voice Aux In 1-2 Status, Background Music. When activated if the event has the highest Event Priority of all activated events, it will activate the Aux In input to all outputs defined by the respective event program mapping.

Note: Background Music is only allowed to be mapped to circuit 8 of the ECS-DUAL50W amplifiers to ensure correct active supervision.

11.5 Amplifier Programming

11.5.1 Adding an Amplifier

To add a new amplifier to the system, follow these steps:

1. Enter the installer code. The panel will automatically go to the main menu.
2. Select 7 for Panel Programming menu.
3. Press 1 to enter Module menu.
4. Press 2 to add a module.

5. From the next screen, add an ECS-AMP.

   The screen will display “Adding module [#]...” for a few moments. You will be returned to the <New Module Type> screen where you can select another a name for the module(s) if desired.

You must save changes when you exit the Program Menu or the new module will not be added. For more information see section 9.2.2.

If you Add a Module that has not been physically connected, the panel will go into trouble after it re-initializes (when you exit the Program Menu with changes accepted). When the new module is attached, the trouble will restore automatically the next time you power up the FACP.

11.5.2 Editing an Amplifier

When editing AMPs, the features that may be edited are: module ID, module name, amplifier mod, ECS-CE4 installed (Yes or No), and output voltage. To edit an existing module:

1. Enter the installer code. The panel will automatically go to the main menu.
2. Select 7 for Program Menu.
3. Press 1 to enter module menu.
4. Press 1 to edit a module.
5. Use the up or down arrow key to select the module you wish to edit.
6. Press the right arrow key or ENTER to move to next selection.

11.6 LOC Programming

LOC Priority is a programmable option for the following ECS devices:

- ECS-VCM
- ECS-NVCM
- ECS-RVM

11.6.1 Adding an LOC

To add new LOCs to the system, follow these steps:

1. Enter the installer code. The panel will automatically go to the main menu.
2. Select 7 for Panel Programming menu.
3. Press 1 to enter Module menu.
4. Press 2 to add a module.
5. From the next screen, add either an ECS-VCM or ECS-NVCM* or ECS-RVM**.

** Only 1 ECS-VCM or ECS-NVCM may be installed per site.*

*** Up to 15 ECS-RVMs may be installed per site.*

   The screen will display “Adding module [#]...” for a few moments. You will be returned to the <New Module Type> screen where you can select another a name for the module(s) if desired.

6. Add a compatible LCD Annunciator, if desired, to associate with each ECS-VCM, ECS-NVCM or ECS-RVM.

You must save changes when you exit the Program Menu or the new module will not be added. For more information see section 9.2.2.

Note: If you Add a Module that has not been physically connected, the panel will go into trouble after it re-initializes (when you exit the Program Menu). When the new module is attached, the trouble will restore automatically the next time you power up the system.

11.6.2 Editing an LOC

Settings that are specific to an LOC are modified by editing the ECS-VCM, ECS-NVCM or ECS-RVM expander module of the LOC. These options may include: number of switch expanders installed, microphone type, microphone gain, auxiliary gain, tone gain, message gain, keypad priority, associated keypad, Port 1 used, Port 2 used, Select Switch, Panel, and Network Paging.

Note: An LOC specific name can also be editing using HFSS Honeywell Fire Software Suite.

To edit an existing module:

1. Enter the installer code. The panel will automatically go to the main menu.
2. Select 7 for Program Menu.
3. Press 1 to enter module menu.
4. Press 1 to edit a module.
5. Use the up or down arrow key to select the module you wish to edit.
6. Press the right arrow key or ENTER to move to next selection.

11.6.2.1 LOC Priority

Each device is assigned a Priority level: Low, Normal, or High. This is modified by editing the LOC's ECS-VCM, ECS-NVCM or ECS-RVM module. By default, the ECS-VCM or ECS-NVCM has a high LOC priority. The ECS-RVM is defaulted to normal LOC priority.

11.6.2.2 LOC Association

In order to created an LOC, an annunciator must be associated to an ECS-VCM, ECS-NVCM or ECS-RVM. This done by editing the ECS-VCM, ECS-NVCM or ECS-RVM module and selecting the correct annunciator for the associated device. During JumpStart, the ECS-VCM or ECS-NVCM is automatically associated with the internal annunciator. The association for other LOCs in the system must be performed in programming.

11.7 Using the Microphone

11.7.1 Microphone Functionality

Each microphone in the system is capable of providing convenience, fire or emergency paging. A convenience or fire page can be made anytime the emergency system does have System Control (see Section 10.5.1). When the emergency system has been activated and has System Control, the user must gain ECS Control to do an emergency page.

The microphones are housed within the ECS-Series panel enclosure and the ECS-LOC/ECS-RPU cabinets. A maximum of 16 microphones can be installed in the system.

11.7.2 Custom ECS Event

This event is activated by gaining ECS Control at a LOC and using the microphone without any ECS event already active in the Manual ECS State. In this case, the Mic Triggered ECS Alarm mapping and General ECS Alarm mapping will be activated and stay activated until a different ECS event is activated at the LOC or the user resets the Emergency Communication System.

11.7.3 Fire Page

A fire page can only occur when:

1. Only the fire system is active.
2. Both fire and the emergency systems are active and the highest priority active fire event is programmed to be of higher priority than the highest priority active emergency event.
3. Only the fire system is active, the user has gained ECS Control, and custom ECS event is a lower priority than the fire alarm.

Note: If fire and emergency systems are active and emergency system is of a higher priority, a fire page is NOT allowed. An LOC must gain ECS Control in order to do any live voice.

11.7.4 Emergency Page

An emergency page can occur when:

1. Only the emergency system is active and the user has gained ECS Control.
2. Both fire and the emergency systems are active and the highest priority active emergency event is programmed to be of higher priority than the highest priority active fire event and the user has gained ECS Control.
3. Only fire system is active, the Emergency LOC Alarm priority is higher than the active fire system event and the user has gained ECS Control.
    - This will trigger the ECS system and enable mapping for 'Mic Triggered ECS Alarm' and 'General ECS Alarm'.

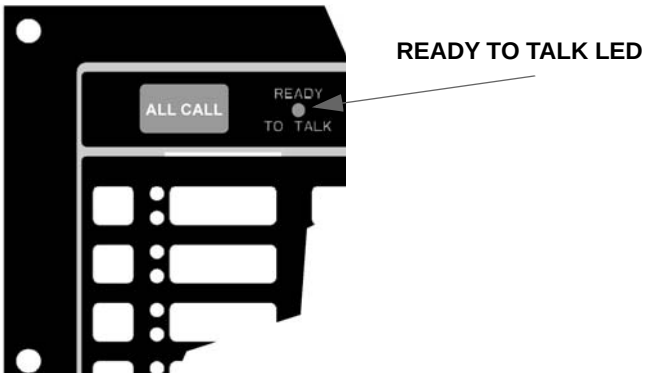
11.7.4.1 Paging

If there are no active emergency or fire system events, the microphone at an LOC can be used for paging by following these steps:

1. Push the PTT (push to talk) button on the microphone.
2. Use the Select Keys on the LOC to toggle the output areas to page to with the microphone (illuminates the green LEDs).

Note: The Ready to Talk LED will illuminate after an output area has been activated.

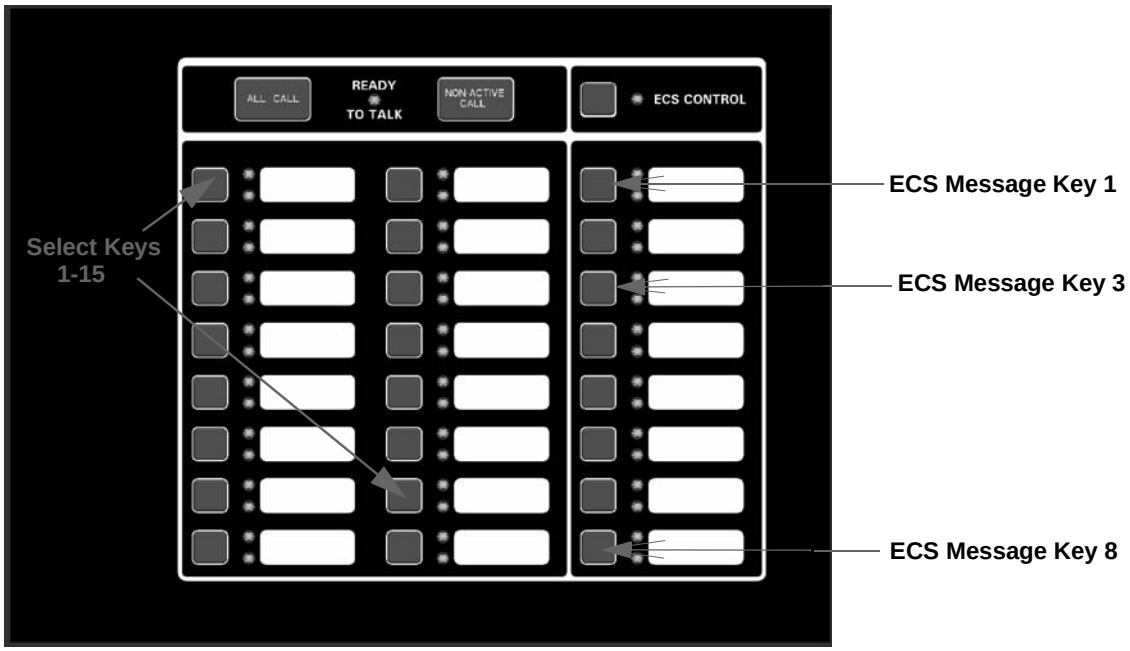
3. Speak into the microphone.
4. Release PTT button when finished.



11.8 Recording Custom Messages

The ECS-Series VCM or ECS-NVCM comes with 15 recordable message slots. Message 1-15 can be recorded from: the microphone, Aux Input, or by using the ECS Message Management utility of HFSS Honeywell Fire Software Suite. All messages can be a maximum of one minute.

When in the record mode, the ECS-VCM or ECS-NVCM keys will function as follows:



Key	Function
ECS Message Key 1	Select message slot to record to.
ECS Message Key 3	Start and stop recording from Aux. Audio Input
ECS Message Key 8	Erase user message 1-15
Select Keys 1-15	Message slot 1-15

While in the Local Record mode, Select Keys 1-15 will be used to reference message slots 1-15. The associated

green Select Key LED will indicate that a message is currently programmed in the corresponding slot. When there is no message recorded (or the message is erased), the associated green Select Key LED will be off. While recording a particular message, the associated red Select Key LED will turn on until recording is completed. The Select Key 1-15 will be used to playback a recorded message or to select the message slot to record to or erase.

When in the Local Record mode, the ECS-VCM or ECS-NVCM LEDs will function as follows:

Table 11-1: LED Functions During Programming

LED	LED State	Meaning
Select Key 1-15 Green LED	On	Message is currently programmed in this slot
Select Key 1-15 Red LED	On	Message recording is in progress
Select Key 1-15 Green/Red LED	Off/Off	Message slot is empty
Select Key 1-15 Red LED	Flashing	Message is being played back or message is selected for recording

11.8.1 Recording Messages 1-15 Using Aux Audio Input

Recording messages from the Aux Audio Input enables you to load customized, pre-recorded messages into an ECS message location.

Follow these steps to record a user message using Aux Audio Input:

Note: Refer to section 9 for detailed programming information.

1. Wire a speaker cable with 1/8” mini plug to the Aux AUDIO GND and IN terminals. Refer to Figure 11-5.

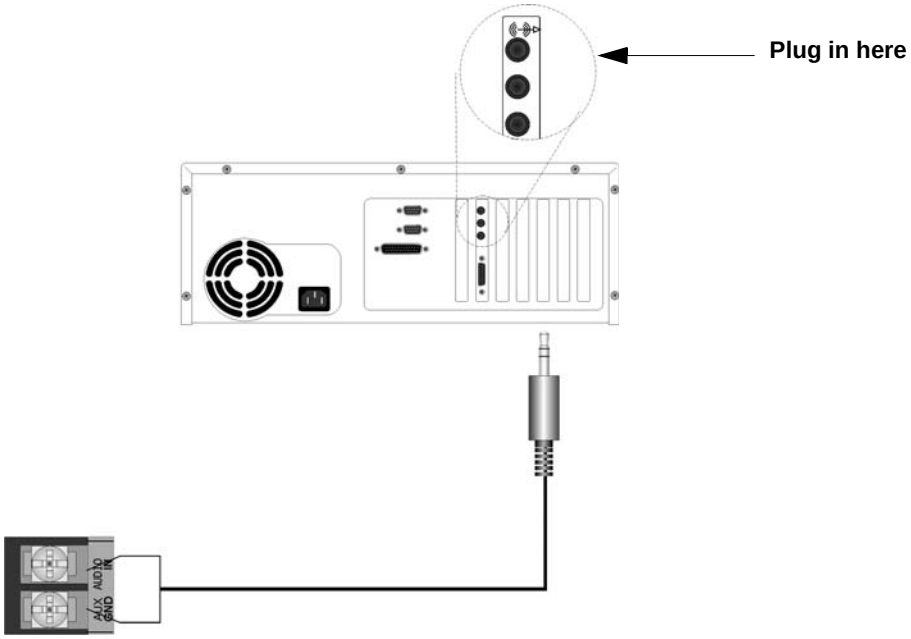


Figure 11-5 Aux Audio Connection for Recording

2. Plug the mini plug into the Line Out/Headphone jack on a PC or laptop. See Figure 11-5.
3. Enter programming mode at main control panel.
4. Select 8 for Voice Options.
5. Select 1 for VCM Maintenance.
6. Select 2 Local Recording.

7. Select the amplifier and circuit for the audio to play through during programming. A user would generally pick the audio circuit that is in closest proximity to them.

Note: The VCM will light the green Select Key LED for message slots that are occupied. If a message is already stored in the desired slot, then you must erase the message first. (see Section 11.8.3).

8. Press ECS Message Key 1 to enter the message slot selection mode. Then, press the Select Key 1-15 that corresponds to the message slot that you wish to record to. The associated Select Key red LED will begin flashing, indicating that the message slot is ready for recording.
9. Simultaneously press ECS Message Key 3 and start playing the audio source on the PC or laptop.
10. When the audio file from the PC is finished playing, press ECS Message Key 3 again to stop the recording. The Select Key green LED will come on.
11. To playback the recorded message, press the Select Key 1-15 that was just recorded to.

Recording with Aux Audio Input Example:

The user wants to record into memory slot 2 via the Aux Audio Input channel.

Upon entering the Local Recording mode via the keypad menu, the VCM will light the Select Key green LEDs 1-15 for each occupied message slot.

If a message already exists in message slot 2, it must first be erased. Press ECS Message Key 8, then press Select Key 2, (see Section Figure 11.8.3 on page 15). When the message has been erased Select Key 2's green LED will turn off.

To record a message, press ECS Message Key 1, then press Select Key 2 (this will use message slot 2 for the recording). Select Key 2's red LED will begin flashing.

Press ECS Message Key 3 while simultaneously pressing play on the PC to start recording the Aux Audio Input. When the PC message is done, press ECS Message Key 3 to stop recording. Select Key 2's red LED will stay on until processing is completed. Select Key 2's green LED comes on after the recording is completed.

Pressing Select Key 2 will start a playback of the recorded message.

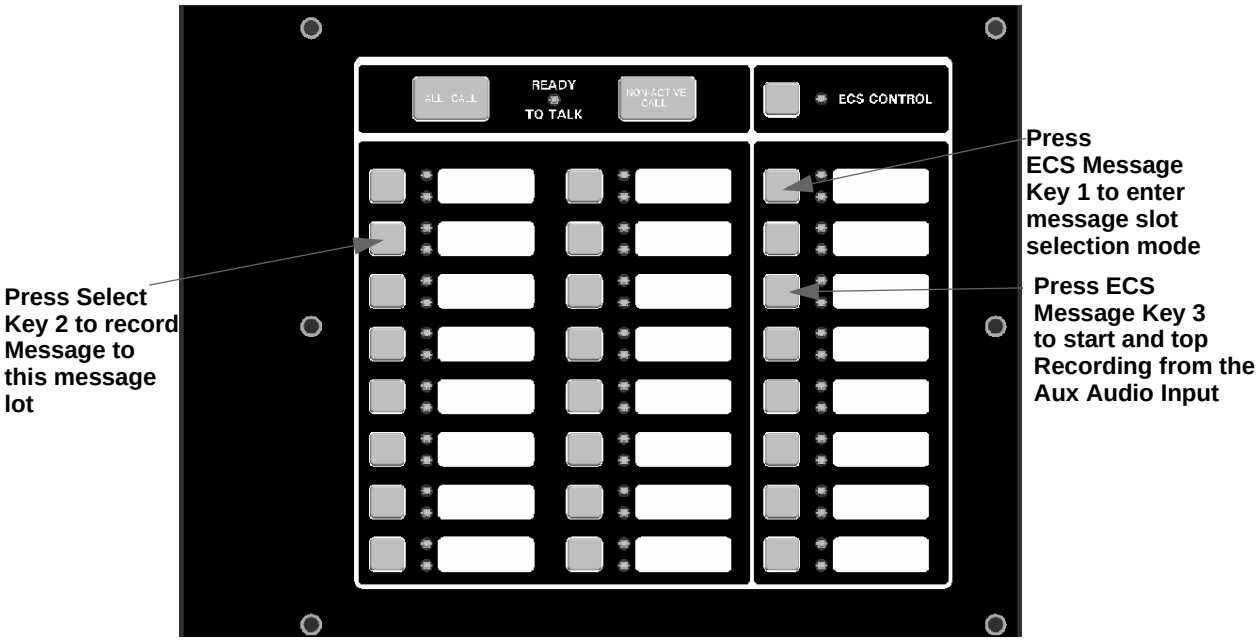


Figure 11-6 Aux Audio Input Example

11.8.2 Recording Messages 1-15 Using the Microphone

Messages can be recorded into the ECS system by using the on-board microphone.

Follow these steps to use the microphone to record your message:

1. Enter programming mode at main control panel.
2. Select 8 for Voice Options.
3. Select 1 for VCM Maintenance.
4. Select 2 Local Recording.
5. Select the amplifier and circuit for the audio to play through during programming. A user would generally pick the audio circuit that is in closest proximity to them.

Note: The VCM will light the green Select Key LED for message slots that are occupied. If a message is already stored in the desired slot, then you must erase the message first. (see Section 11.8.3).

6. Press ECS Message Key 1 to enter the message slot selection mode. Then, press the Select Key 1-15 that corresponds to the message slot that you wish to record to. The associated Select Key red LED will begin flashing, indicating that the message slot is ready for recording.
7. Press the push-to-talk (PTT) button on the microphone and speak your message.
8. Release the PTT button on the microphone to save your message. The Select Key green LED for this location will turn on.
9. To playback the recorded message, press the Select Key 1-15 that was just recorded to.
10. If you are not satisfied with the recorded message, erase it (see Section 11.8.3) and then repeat steps 1 through 7.

Recording with Microphone Example:

User wants to record a message to message slot 5 via the microphone.

Upon entering the Local Recording mode via the keypad menu, the VCM will light the Select Key green LEDs for 1-15 for each occupied message slot.

If a message already exists in message slot 5, it must first be erased. Press ECS Message key 8, then press Select Key 5, (see Section Figure 11.8.3 on page 15). When the message has been erased Select Key 5's green LED will turn off.

To record a message, press ECS Message Key 1, press Select Key 5 (this will use message slot 5 for the recording). Select Key 5's red LED will begin flashing.

Press the push-to-talk button on the microphone and speak your message. Release the PTT button to save your message. Select Key 5's red LED stays on until processing is completed. Select Key 5's green LED comes on after the recording is completed.

Pressing Select Key 5 will start a playback of the recorded message.

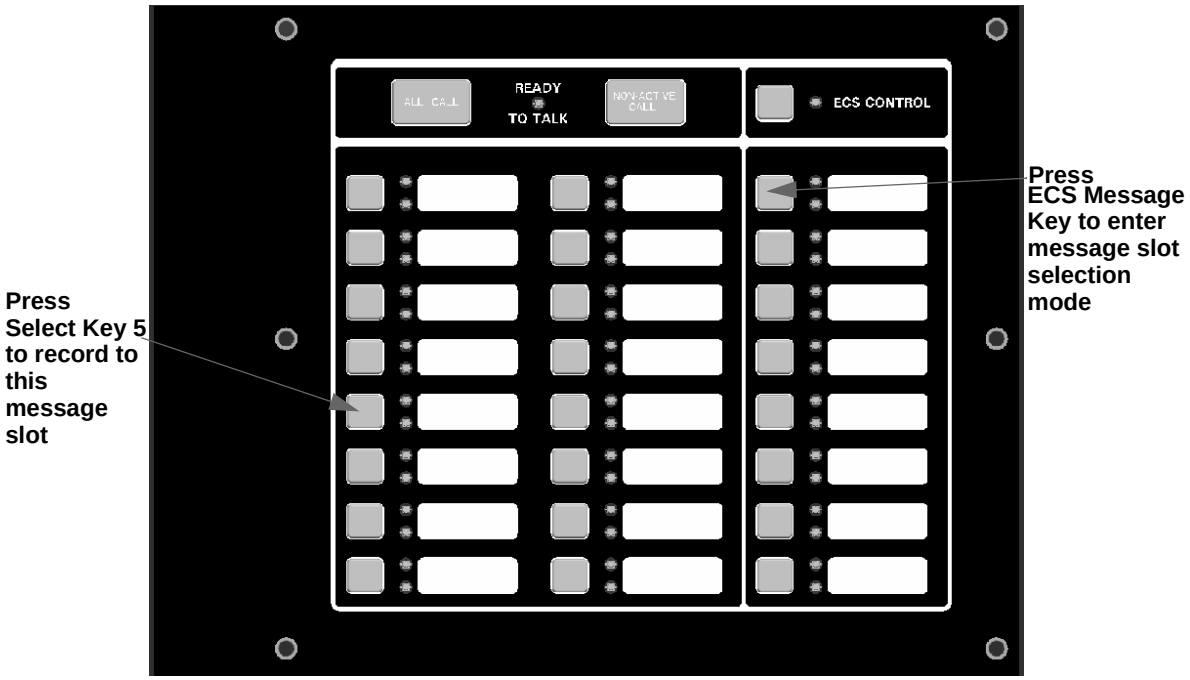


Figure 11-7 Recording with Microphone Example

11.8.3 Erasing User Message

To erase the message stored in message slot 1-15, follow these steps:

1. Enter programming mode at main control panel.
2. Select 8 for Voice Options.
3. Select 1 for VCM Maintenance.

Note: The VCM will light the green Select Key LEDs for message slots that are occupied (can be erased).

4. Select 2 Local Recording.
5. Select the amplifier and circuit for the audio to play through during programming. A user would generally pick the audio circuit that is in closest proximity to them.
6. Press ECS Message Key 8 on the VCM, press the Select Key 1-15 that you wish to erase. The Select Key red LED will stay on until the erase is done. When erased, the Select Key green LED by corresponding to the message slot you erased will go off.

11.8.4 Using HFSS Voice Message Load Software

The HFSS Voice Message Load Software is a software support utility that is used to download recorded messages (in .SKE format stored on your PC hard drive) to the various message locations of the ECS-Series VCM or ECS-NVCM. Messages can be uploaded from the ECS-VCM or ECS-NVCM, stored, and used again in similar installations.

To read/write .SKE formatted messages to and from the main panel, follow these steps:

1. Make sure that panel is in Normal mode.

2. Connect the PC to the FACP USB port using a standard USB cable. ECS-NVCM will use the USB on the FACP (See Figure 11-8). ECS-VCM will use the USB port on the ECS-VCM.

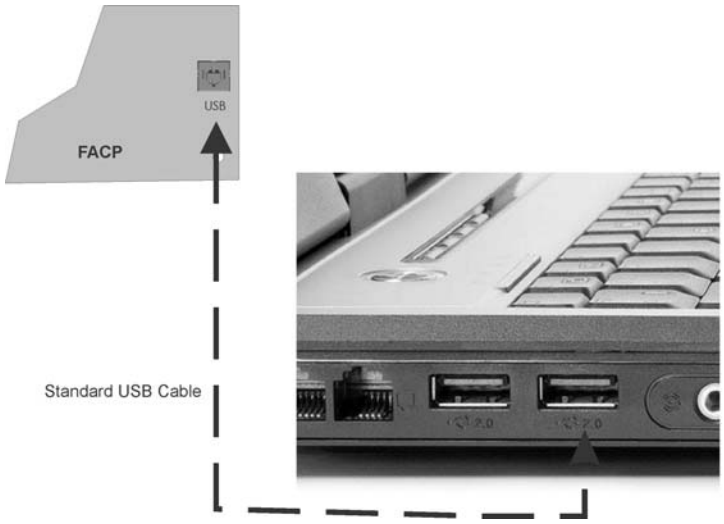


Figure 11-8 USB Cable Connections

3. Run the Voice Message Load software.
4. Select “Read from Panel” to read a message and store onto your hard drive, or “Write to Panel” to transfer a .SKE formatted message to the panel.
5. Select the appropriate message location you wish to read/write.
6. Enter the file name you wish to transfer (Press “Browse” to display a list of files.)
7. Press “Start” to start the transfer.

11.9 Network Paging

For Network Paging Network paging allows live voice paging between panels across the network. The ECS-NVCM, Network Voice Control Module, is needed for network paging. For more information see ECS-Series installation manual P/N 151455.

The network paging source panel is the panel in the network that the microphone network paging audio is originating from. One panel in the network can be the source panel at a time.

A network paging destination panel is a panel in the network that is receiving the network paging. Many panels can be selected as a destination panel for the network paging. Network paging functions as an all call on the destination panel(s) - all speaker circuits will be activated with the network paging audio on a destination panel.the following need to be considered:

11.9.0.1 Priority

1. Local microphone is higher priority than network paging (a user can page from their local panel even if the local panel is currently receiving a network voice page).
2. Network Paging is higher priority than alarm and alert messages/tones
3. Network paging uses a VBus channel. In a dual channel system, network paging will use either VBus 1 or VBus 2. If both buses are in use, network paging will overtake one of them.

11.9.0.2 Configuration

1. The ECS-NVCM Select Switches need to be programmed for network paging.
   - Program the switches to select one or more panels as destination panels.
   - Each switch can only be programmed for either output group activation or network paging activation.
2. To use network paging: Cue the microphone and press the Select Switch(es) that correspond to the panel(s) desired to receive network paging
   - Only one panel can source network paging at a time. The first panel to activate network paging is the source until that panel discontinues use of network paging
3. The panel that is the Network Paging source will continue to play any alarms that are active as long as the alarm circuits aren't outputting the microphone page

Section 12
Reporting

This section lists receivers that are compatible with this control panel, and the reporting codes sent by the control panel for SIA and Contact ID formats.

12.1 Receivers Compatible with the Control Panel

Table 12-1 shows receivers compatible with the control panel.

Table 12-1: Receivers Compatible with the Control Panel

Manufacturer	Model	Format
Silent Knight by Honeywell	Model 9800	SIA and Contact ID
	Model 9000 (SIA formats)	SIA
Honeywell Security	AlarmNet 7810-ir	IP and Cellular Receiver, Contact ID only
Ademco	MX8000	SIA and Contact ID
Ademco	Model 685 (Contact ID)	Contact ID
Sur-Gard	SG-MLR2-DG (V. 1.64 or higher)	SIA and Contact ID
Osborne Hoffman	Quickalert	SIA and Contact ID

Table 12-2: Reporting Formats Table

	SIA Reporting Format				Contact ID Reporting Format			
	SIA pi Modifier			SIA IFP-2100/ECS				
Event Description	Module ID # (If Any)	SIA Event Codes	Parameter	Fixed Length Format NN - panel ID XX- SBUS ID ZZZ- Zone # PPPP- Point # GGG- Group # E- Emergency # RRRR-Receiver #	Qualifier	Event Code	Group #	Contact #
System Events	***Note:*** **System Events are reported when either "Report by Point" or Report by Zone is selected**							
AC power low trouble		AT	0	ATNN000000	1	301	00	000
AC power low trouble restore		AR	0	ARNN000000	3	301	00	000
Auto dialer test communications trouble line 1		YC	1	YCNN000001	1	350	Receiver #	001
Auto dialer test communications trouble line 1 restore		YK	1	YKNN000001	3	350	Receiver #	001
Auto dialer test communications trouble line 2		YC	2	YCNN000002	1	350	Receiver #	002
Auto dialer test communications trouble line 2 restore		YK	2	YKNN000002	3	350	Receiver #	002
Automatic test normal		RP	0	RPNN000000	1	602	00	000

Table 12-2: Reporting Formats Table

	SIA Reporting Format				Contact ID Reporting Format			
	SIA pi Modifier			SIA IFP-2100/ECS				
Event Description	Module ID # (If Any)	SIA Event Codes	Parameter	Fixed Length Format NN - panel ID XX- SBUS ID ZZZ- Zone # PPPP- Point # GGG- Group # E- Emergency # RRRR-Receiver #	Qualifier	Event Code	Group #	Contact #
Automatic test off normal		RY	0	RYNN000000	1	608	00	000
Battery voltage trouble		YT	Exp. ID	YTNNXX0000	1	302	Exp. ID	000
Battery voltage trouble restore		YR	Exp. ID	YRNNXX0000	3	302	Exp. ID	000
Date changed event		JD	0	JDNN000000	1	625	00	000
ECS Reset		OR	1	ORNN000001	1	401	00	001
Emergency System Overridden		QS	0	QSNN000000	1	244	00	000
Emergency System Overridden Restore		QR	0	QRNN000000	3	244	00	000
Fire drill has begun		FI	0	FINN000000	1	604	00	000
Fire drill has ended		FK	0	FKNN000000	3	604	00	000
F1 Mapping Inhibited		FT	2001	FTNN002001	1	570	00	001
F1 Mapping Inhibited Restoral		FJ	2001	FJNN002001	3	570	00	001
F2 Mapping Inhibited		FT	2002	FTNN002002	1	570	00	002
F2 Mapping Inhibited Restoral		FJ	2002	FJNN002002	3	570	00	002
F3 Mapping Inhibited		FT	2003	FTNN002003	1	570	00	003
F3 Mapping Inhibited Restoral		FJ	2003	FJNN002003	3	570	00	003
F4 Mapping Inhibited		FT	2004	FTNN002004	1	570	00	004
F4 Mapping Inhibited Restoral		FJ	2004	FJNN002004	3	570	00	004
Fire Reset		OR	0	ORNN000000	1	401	00	000
Fire System Overridden		FS	0	FSNN000000	1	245	00	000
Fire System Override Restore		FR	0	FRNN000000	3	245	00	000
Ground fault condition trouble		YP	Exp. ID	YPNNXX0000	1	310	Exp. ID	000
Ground fault condition trouble restore		YQ	Exp. ID	YQNNXX0000	3	310	Exp. ID	000
Initial power up		RR	0	RRNN000000	1	305	00	000
Local programming aborted or ended with errors		LU	0	LUNN000000	1	628	00	000
Local programming begin		LB	0	LBNN000000	1	627	00	000
Local programming ended normally		LS	0	LSNN000000	1	628	00	000
Network node trouble (panel missing)		EM	Panel ID	EMNNNN0000	1	334	Panel ID	000
Network node trouble restore (panel no longer missing)		EN	Panel ID	ENNNNN0000	3	334	Panel ID	000
OPG Inhibit Trouble		FT	Group # + 1000	FTNN001GGG	1	320	00	Group #

Table 12-2: Reporting Formats Table

	SIA Reporting Format				**Contact ID Reporting Format**			
	SIA pi Modifier			**SIA** IFP-2100/ECS				
Event Description	Module ID # (If Any)	SIA Event Codes	Parameter	Fixed Length Format NN - panel ID XX- SBUS ID ZZZ- Zone # PPPP- Point # GGG- Group # E- Emergency # RRRR-Receiver #	Qualifier	Event Code	Group #	Contact #
OPG Inhibit Trouble Restore		FJ	Group # + 1000	FJNN001GGG	3	320	00	Group #
OPG Inhibit of Releasing Group		SS	Group # + 1000	SSNN001GGG	1	203	00	Group #
OPG Inhibit of Releasing Group Restore		SR	Group # + 1000	SRNN001GGG	3	203	00	Group #
Phone line 1 trouble detected		LT	1	LTNN000001	1	351	00	000
Phone line 1 trouble restore		LR	1	LRNN000001	3	351	00	000
Phone line 2 trouble detected		LT	2	LTNN000002	1	352	00	000
Phone line 2 trouble restore		LR	2	LRNN000002	3	352	00	000
Printer is off-line trouble		VZ	Exp. ID	VZNNXX0000	1	336	Exp. ID	000
Printer is off-line trouble restore		VY	Exp. ID	VYNNXX0000	3	336	Exp. ID	000
Printer is out of paper trouble		VO	Exp. ID	VONNXX0000	1	335	Exp. ID	000
Printer is out of paper trouble restore		VI	Exp. ID	VINNXX0000	3	335	Exp. ID	000
Releasing Notif/Control Circuit Disabled	pi Exp. ID	SS	Point #	SSNNXXPPPP	1	203	Exp. ID	Point #
Releasing Notif/Control Circuit enabled	pi Exp. ID	SR	Point #	SRNNXXPPPP	3	203	Exp. ID	Point #
Remote programming aborted or ended with errors		RU	0	RUNN000000	1	413	00	000
Remote programming ended normally		RS	0	RSNN000000	1	412	00	000
Repeater ground fault trouble		EM	0103	EMNN000103	1	334	Panel ID	103
Repeater ground fault trouble restore		EN	0103	ENNN000103	3	334	Panel ID	103
Repeater missing trouble		EM	0100	EMNN000100	1	334	Panel ID	100
Repeater missing trouble restore		EN	0100	ENNN000100	3	334	Panel ID	100
Repeater Rx1 communication trouble		EM	0101	EMNN000101	1	334	Panel ID	101
Repeater Rx1 communication trouble restore		EN	0101	ENNN000101	3	334	Panel ID	101
Repeater Rx2 communication trouble		EM	0102	EMNN000102	1	334	Panel ID	102
Repeater Rx2 communication trouble restore		EN	0102	ENNN000102	3	334	Panel ID	102
SBUS Class A supervision lost		ET	Exp. ID	ETNNXX0000	1	333	Exp. ID	000
SBUS Class A supervision restore		ER	Exp. ID	ERNNXX0000	3	333	Exp. ID	000

Table 12-2: Reporting Formats Table

	SIA Reporting Format				Contact ID Reporting Format			
	SIA pi Modifier			SIA IFP-2100/ECS				
Event Description	Module ID # (If Any)	SIA Event Codes	Parameter	Fixed Length Format NN - panel ID XX- SBUS ID ZZZ- Zone # PPPP- Point # GGG- Group # E- Emergency # RRRR-Receiver #	Qualifier	Event Code	Group #	Contact #
SBUS expander trouble		ET	Exp. ID	ETNNXX0000	1	333	Exp. ID	000
SBUS expander trouble restore		ER	Exp. ID	ERNNXX0000	3	333	Exp. ID	000
SLC class A supervision trouble		ET	Exp. ID	ETNNXX0000	1	331	Exp. ID	000
SLC class A supervision trouble restore		ER	Exp. ID	ERNNXX0000	3	331	Exp. ID	000
SLC programming ended, system active		TE	0	TENN000000	3	607	00	000
SLC programming started, system shut down		TS	0	TSNN000000	1	607	00	000
SLC short circuit trouble		ET	Exp. ID	ETNNXX0000	1	332	Exp. ID	000
SLC short circuit trouble restore		ER	Exp. ID	ERNNXX0000	3	332	Exp. ID	000
Time changed event		JT	0	JTNN000000	1	625	00	000
Unable to report to account trouble		RT	Receiver #	RTNN00RRRR	1	354	00	Receiver #
Unable to report to account trouble restore		YK	Receiver #	YKNN00RRRR	3	354	00	Receiver #
User access code changed		JV	0	JVNN000000	1	602	00	000
User initiated manual dialer test		RX	0	RXNN000000	1	601	00	000
Walk test begin		TS	0	TSNN000000	1	607	00	000
Walk test end		TE	0	TENN000000	3	607	00	000
Zone Events	***Note:*** Zone events are reported only when “Report by Zone” is selected							
Auxiliary power trouble		FT	0000	FTNN000000	1	320	00	000
Auxiliary power trouble restore		FJ	0000	FJNN000000	3	320	00	000
CO Detector Alarm		GA	Zone #	GANN000ZZZ	1	162	00	Zone #
CO Detector Alarm Restore		GH	Zone #	GHNN000ZZZ	3	162	00	Zone #
CO Detector Supervisory Alarm		GS	Zone #	GSNN000ZZZ	1	200	00	Zone #
CO Detector Supervisory Alarm Restore		GR	Zone #	GRNN000ZZZ	3	200	00	Zone #
CO Detector Trouble		GT	Zone #	GTNN000ZZZ	1	373	00	Zone #
CO Detector Trouble Restore		GJ	Zone #	GJNN000ZZZ	3	373	00	Zone #
Detector Alarm		FA	Zone #	FANN000ZZZ	1	110	00	Zone #
Detector Alarm Restore		FH	Zone #	FHNN000ZZZ	3	110	00	Zone #
Detector trouble		FT	Zone #	FTNN000ZZZ	1	373	00	Zone #
Detector trouble restore		FJ	Zone #	FJNN000ZZZ	3	373	00	Zone #
ECS Switch Trouble		QT	0	QTNN000000	1	242	00	000
ECS Switch Trouble Restore		QJ	0	QJNN000000	3	242	00	000

Table 12-2: Reporting Formats Table

	SIA Reporting Format				**Contact ID Reporting Format**			
	SIA pi Modifier			**SIA** IFP-2100/ECS				
Event Description	Module ID # (If Any)	SIA Event Codes	Parameter	Fixed Length Format NN - panel ID XX- SBUS ID ZZZ- Zone # PPPP- Point # GGG- Group # E- Emergency # RRRR-Receiver #	Qualifier	Event Code	Group #	Contact #
ECS Supervisory/Tamper Alarm		QS	0	QSNN000000	1	241	00	000
ECS Supervisory/Tamper Alarm Restore		QR	0	QRNN000000	3	241	00	000
ECS Output Group Trouble		QT	Group # +1000	QTNN001GGG	1	320	00	Group #
ECS Output Group Trouble Restore		QJ	Group # +1000	QJNN001GGG	3	320	00	Group #
External Reset/Silence/Fire Drill switch trouble		UT	0000	UTNN000000	1	373	00	000
External Reset/Silence/Fire Drill switch trouble restore		UJ	0000	UJNN000000	3	373	00	000
LOC Mic Activated ECS Alarm		QA	0	QANN000000	1	220	00	000
LOC Mic Activated ECS Alarm Restore		QH	0	QHNN000000	3	220	00	000
LOC/Point ECS # Alarm		QA	Emergency #	QANN0E0000	1	220 + Emergency #	00	000
LOC/Point ECS # Alarm Restore		QH	Emergency #	QHNN0E0000	3	220 + Emergency #	00	000
Manual pull switch alarm		FA	Zone #	FANN000ZZZ	1	115	00	Zone #
Manual pull switch alarm restore		FH	Zone #	FHNN000ZZZ	3	115	00	Zone #
Manual pull switch trouble		FT	Zone #	FTNN000ZZZ	1	373	00	Zone #
Manual pull switch trouble restore		FJ	Zone #	FJNN000ZZZ	3	373	00	Zone #
Notification output trouble		FT	Group # + 1000	FTNN001GGG	1	320	00	Group #
Notification output trouble restore		FJ	Group # + 1000	FJNN001GGG	3	320	00	Group #
Positive Alarm Sequence acknowledge switch trouble		FT	Zone #	FTNN000ZZZ	1	373	00	Zone #
Positive Alarm Sequence acknowledge switch trouble restore		FJ	Zone #	FJNN000ZZZ	3	373	00	Zone #
SLC LED Module trouble		ET	0000	ETNN000000	1	333	00	000
SLC LED Module trouble restore		ER	0000	ERNN000000	3	333	00	000
Status Point Types Trouble		UT	0	UTNN000000	1	379	00	000
Status Point Types Trouble Restore		UJ	0	UJNN000000	3	379	00	000
Supervisory Detector Alarm		FS	Zone #	FSNN000ZZZ	1	200	00	Zone #

Table 12-2: Reporting Formats Table

	SIA Reporting Format				Contact ID Reporting Format			
	SIA pi Modifier			SIA IFP-2100/ECS				
Event Description	Module ID # (If Any)	SIA Event Codes	Parameter	Fixed Length Format NN - panel ID XX- SBUS ID ZZZ- Zone # PPPP- Point # GGG- Group # E- Emergency # RRRR-Receiver #	Qualifier	Event Code	Group #	Contact #
Supervisory Detector Alarm Restore		FR	Zone #	FRNN000ZZZ	3	200	00	Zone #
Supervisory/Tamper Alarm		FS	Zone #	FSNN000ZZZ	1	200	00	Zone #
Supervisory/Tamper alarm condition restore		FR	Zone #	FRNN000ZZZ	3	200	00	Zone #
Supervisory/Tamper switch trouble		FT	Zone #	FTNN000ZZZ	1	373	00	Zone #
Supervisory/Tamper switch trouble restore		FJ	Zone #	FJNN000ZZZ	3	373	00	Zone #
System-based AUX1 switch alarm		UA	1000	UANN001000	1	140	01	000
System-based AUX1 switch alarm restore		UH	1000	UHNN001000	3	140	01	000
System-based AUX1 switch trouble		UT	1000	UTNN001000	1	373	01	000
System-based AUX1 switch trouble restore		UJ	1000	UJNN001000	3	373	01	000
System-based AUX2 switch alarm		UA	2000	UANN002000	1	140	02	000
System-based AUX2 switch alarm restore		UH	2000	UHNN002000	3	140	02	000
System-based AUX2 switch trouble		UT	2000	UTNN002000	1	373	02	000
System-based AUX2 switch trouble restore		UJ	2000	UJNN002000	3	373	02	000
Voice Aux ECS 1 Alarm		UA	3	UANN003000	1	171	00	000
Voice Aux ECS 1 Alarm Restore		UH	3	UHNN003000	3	171	00	000
Voice Aux ECS 2 Alarm		UA	4	UANN004000	1	172	00	000
Voice Aux ECS 2 Alarm Restore		UH	4	UHNN004000	3	172	00	000
Voice Aux ECS 3 Alarm		UA	5	UANN005000	1	173	00	000
Voice Aux ECS 3 Alarm Restore		UH	5	UHNN005000	3	173	00	000
Voice Aux ECS 4 Alarm		UA	6	UANN006000	1	174	00	000
Voice Aux ECS 4 Alarm Restore		UH	6	UHNN006000	3	174	00	000
Water flow switch alarm		SA	Zone #	SANN000ZZZ	1	113	00	Zone #
Water flow switch alarm Restore		SH	Zone #	SHNN000ZZZ	3	113	00	Zone #
Water flow switch trouble		ST	Zone #	STNN000ZZZ	1	373	00	Zone #
Water flow switch trouble Restore		SJ	Zone #	SJNN000ZZZ	3	373	00	Zone #

Table 12-2: Reporting Formats Table

	SIA Reporting Format				**Contact ID Reporting Format**			
	SIA pi Modifier			**SIA** IFP-2100/ECS				
Event Description	Module ID # (If Any)	SIA Event Codes	Parameter	Fixed Length Format NN - panel ID XX- SBUS ID ZZZ- Zone # PPPP- Point # GGG- Group # E- Emergency # RRRR-Receiver #	Qualifier	Event Code	Group #	Contact #
Zone-based AUX1 switch alarm		UA	Zone # + 1000	UANN001ZZZ	1	140	01	Zone #
Zone-based AUX1 switch alarm restore		UH	Zone # + 1000	UHNN001ZZZ	3	140	01	Zone #
Zone-based AUX1 switch trouble		UT	Zone # + 1000	UTNN001ZZZ	1	373	01	Zone #
Zone-based AUX1 switch trouble restore		UJ	Zone # + 1000	UJNN001ZZZ	3	373	01	Zone #
Zone-based AUX2 switch alarm		UA	Zone # + 2000	UANN002ZZZ	1	140	02	Zone #
Zone-based AUX2 switch alarm restore		UH	Zone # + 2000	UHNN002ZZZ	3	140	02	Zone #
Zone-based AUX2 switch trouble		UT	Zone # + 2000	UTNN002ZZZ	1	373	02	Zone #
Zone-based AUX2 switch trouble restore		UJ	Zone # + 2000	UJNN002ZZZ	3	373	02	Zone #
Point Events	***Note:*** For IDP or SK devices, sensors 1–159 are reported as Points 1–159, modules 1–159 are reported as Points 201–359.							
An unexpected SLC device has been detected	pi Exp. ID	XE	Point #	XENNXXPPPP	1	380	Exp. ID	Point #
An unexpected SLC device has been removed	pi Exp. ID	XI	Point #	XINNXXPPPP	3	380	Exp. ID	Point #
Auxiliary power disabled	pi Exp. ID	FB	Point #	FBNNXXPPPP	1	571	Exp. ID	Point #
Auxiliary power enabled	pi Exp. ID	FU	Point #	FUNNXXPPPP	3	571	Exp. ID	Point #
Auxiliary power Trouble	pi Exp. ID	FT	Point #	FTNNXXPPPP	1	320	Exp. ID	Point #
Auxiliary power trouble restore	pi Exp. ID	FJ	Point #	FJNNXXPPPP	3	320	Exp. ID	Point #
Background Music Switch is Trouble	pi Exp. ID	UT	Point #	UTNNXXPPPP	1	379	Exp. ID	Point #
Background Music Switch is Trouble Restored	pi Exp. ID	UJ	Point #	UJNNXXPPPP	3	379	Exp. ID	Point #
Background Music Switch is Disabled	pi Exp. ID	UB	Point #	UBNNXXPPPP	1	580	Exp. ID	Point #
Background Music Switch is Enabled	pi Exp. ID	UU	Point #	UUNNXXPPPP	3	580	Exp. ID	Point #
CO Detector Trouble	pi Exp. ID	GT	Point #	GTNNXXPPPP	1	373	Exp. ID	Point #
CO Detector Trouble Restore	pi Exp. ID	GJ	Point #	GJNNXXPPPP	3	373	Exp. ID	Point #
CO Detector Disabled	pi Exp. ID	GB	Point #	GBNNXXPPPP	1	571	Exp. ID	Point #
CO Detector Enabled	pi Exp. ID	GU	Point #	GUNNXXPPPP	3	571	Exp. ID	Point #
Detector Alarm	pi Exp. ID	FA	Point #	FANNXXPPPP	1	110	Exp. ID	Point #

Table 12-2: Reporting Formats Table

	SIA Reporting Format				Contact ID Reporting Format			
	SIA pi Modifier			SIA IFP-2100/ECS				
Event Description	Module ID # (If Any)	SIA Event Codes	Parameter	Fixed Length Format NN - panel ID XX- SBUS ID ZZZ- Zone # PPPP- Point # GGG- Group # E- Emergency # RRRR-Receiver #	Qualifier	Event Code	Group #	Contact #
Detector Alarm restore	pi Exp. ID	FH	Point #	FHNNXXPPPP	3	110	Exp. ID	Point #
Detector Disabled	pi Exp. ID	FB	Point #	FBNNXXPPPP	1	571	Exp. ID	Point #
Detector Enabled	pi Exp. ID	FU	Point #	FUNNXXPPPP	3	571	Exp. ID	Point #
Detector Trouble	pi Exp. ID	FT	Point #	FTNNXXPPPP	1	373	Exp. ID	Point #
Detector Trouble restore	pi Exp. ID	FJ	Point #	FJNNXXPPPP	3	373	Exp. ID	Point #
Detector CO Alarm	pi Exp. ID	GA	Point #	GANNXXPPPP	1	162	Exp. ID	Point #
Detector CO Alarm Restore	pi Exp. ID	GH	Point #	GHNNXXPPPP	3	162	Exp. ID	Point #
Detector CO Supervisory Alarm	pi Exp. ID	GS	Point #	GSNNXXPPPP	1	200	Exp. ID	Point #
Detector CO Supervisory Alarm Restore	pi Exp. ID	GR	Point #	GRNNXXPPPP	3	200	Exp. ID	Point #
ECS Alarm # Point Alarm	pi Exp. ID	QA	(EPPP) E - Emergency # PPP - Point #	QANNXXEPPP	1	220 + Emergency #	Exp. ID	Point #
ECS Alarm # Point Alarm Restore	pi Exp. ID	QH	(EPPP) E - Emergency # PPP - Point #	QHNNXXEPPP	3	220 + Emergency #	Exp. ID	Point #
ECS Alarm # Point Trouble	pi Exp. ID	QT	Point #	QTNNXXPPPP	1	242	Exp. ID	Point #
ECS Alarm # Point Trouble Restore	pi Exp. ID	QJ	Point #	QJNNXXPPPP	3	242	Exp. ID	Point #
ECS Alarm # Point Disabled	pi Exp. ID	QB	Point #	QBNNXXPPPP	1	243	Exp. ID	Point #
ECS Alarm # Point Enabled	pi Exp. ID	QU	Point #	QUNNXXPPPP	3	243	Exp. ID	Point #
ECS Supervisory/Tamper Alarm	pi Exp. ID	QS	Point #	QSNNXXPPPP	1	241	Exp. ID	Point #
ECS Supervisory/Tamper Alarm Restore	pi Exp. ID	QR	Point #	QRNNXXPPPP	3	241	Exp. ID	Point #
ECS Supervisory/Tamper Trouble	pi Exp. ID	QT	Point #	QTNNXXPPPP	1	242	Exp. ID	Point #
ECS Supervisory/Tamper Trouble Restore	pi Exp. ID	QJ	Point #	QJNNXXPPPP	3	242	Exp. ID	Point #
ECS Supervisory/Tamper Disabled	pi Exp. ID	QB	Point #	QBNNXXPPPP	1	243	Exp. ID	Point #
ECS Supervisory/Tamper Enabled	pi Exp. ID	QU	Point #	QUNNXXPPPP	3	243	Exp. ID	Point #
ECS NAC Trouble	pi Exp. ID	QT	Point #	QTNNXXPPPP	1	320	Exp. ID	Point #
ECS NAC Trouble Restored	pi Exp. ID	QJ	Point #	QJNNXXPPPP	3	320	Exp. ID	Point #

Table 12-2: Reporting Formats Table

	SIA Reporting Format				**Contact ID Reporting Format**			
	SIA pi Modifier			**SIA** IFP-2100/ECS				
Event Description	Module ID # (If Any)	SIA Event Codes	Parameter	Fixed Length Format NN - panel ID XX- SBUS ID ZZZ- Zone # PPPP- Point # GGG- Group # E- Emergency # RRRR-Receiver #	Qualifier	Event Code	Group #	Contact #
ECS Control Circuit Trouble	pi Exp. ID	QT	Point #	QTNNXXPPPP	1	320	Exp. ID	Point #
ECS Control Circuit Trouble Restored	pi Exp. ID	QJ	Point #	QJNNXXPPPP	3	320	Exp. ID	Point #
ECS Relay Trouble	pi Exp. ID	QT	Point #	QTNNXXPPPP	1	320	Exp. ID	Point #
ECS Relay Trouble Restored	pi Exp. ID	QJ	Point #	QJNNXXPPPP	3	320	Exp. ID	Point #
ECS Notification Trouble	pi Exp. ID	QT	Point #	QTNNXXPPPP	1	320	Exp. ID	Point #
ECS Notification Trouble Restored	pi Exp. ID	QJ	Point #	QJNNXXPPPP	3	320	Exp. ID	Point #
External Reset/Silence/Fire Drill switch disabled	pi Exp. ID	UB	Point #	UBNNXXPPPP	1	571	Exp. ID	Point #
External Reset/Silence/Fire Drill switch enabled	pi Exp. ID	UU	Point #	UUNNXXPPPP	3	571	Exp. ID	Point #
External Reset/Silence/Fire Drill switch trouble	pi Exp. ID	UT	Point #	UTNNXXPPPP	1	373	Exp. ID	Point #
External Reset/Silence/Fire Drill switch trouble restore	pi Exp. ID	UJ	Point #	UJNNXXPPPP	3	373	Exp. ID	Point #
Interlock switch alarm (Water Release Zone)	pi Exp. ID	FA	Point #	FANNXXPPPP	1	110	Exp. ID	Point #
Interlock switch alarm restore (Water Release Zone)	pi Exp. ID	FH	Point #	FHNNXXPPPP	3	110	Exp. ID	Point #
Interlock switch disabled	pi Exp. ID	FB	Point #	FBNNXXPPPP	1	571	Exp. ID	Point #
Interlock switch enabled	pi Exp. ID	FU	Point #	FUNNXXPPPP	3	571	Exp. ID	Point #
Interlock switch trouble (Water Release Zone)	pi Exp. ID	FT	Point #	FTNNXXPPPP	1	373	Exp. ID	Point #
Interlock switch trouble restore (Water Release Zone)	pi Exp. ID	FJ	Point #	FJNNXXPPPP	3	373	Exp. ID	Point #
LOC Mic Activated ECS Alarm	pi Exp. ID	QA	0	QANNXX0000	1	220	Exp. ID	000
LOC Mic Activated ECS Alarm Restore	pi Exp. ID	QH	0	QHNNXX0000	3	220	Exp. ID	000
LOC ECS # Alarm	pi Exp. ID	QA	Emergency #	QANNXXE000	1	220 + Emergency #	Exp. ID	000
LOC ECS # Alarm Restore	pi Exp. ID	QH	Emergency #	QHNNXXE000	3	220 + Emergency #	Exp. ID	000
Manual pull switch alarm	pi Exp. ID	FA	Point #	FANNXXPPPP	1	115	Exp. ID	Point #
Manual pull switch alarm restore	pi Exp. ID	FH	Point #	FHNNXXPPPP	3	115	Exp. ID	Point #
Manual pull switch disabled	pi Exp. ID	FB	Point #	FBNNXXPPPP	1	571	Exp. ID	Point #
Manual pull switch enabled	pi Exp. ID	FU	Point #	FUNNXXPPPP	3	571	Exp. ID	Point #

Table 12-2: Reporting Formats Table

	SIA Reporting Format				Contact ID Reporting Format			
	SIA pi Modifier			SIA IFP-2100/ECS				
Event Description	Module ID # (If Any)	SIA Event Codes	Parameter	Fixed Length Format NN - panel ID XX- SBUS ID ZZZ- Zone # PPPP- Point # GGG- Group # E- Emergency # RRRR-Receiver #	Qualifier	Event Code	Group #	Contact #
Manual pull switch trouble	pi Exp. ID	FT	Point #	FTNNXXPPPP	1	373	Exp. ID	Point #
Manual pull switch trouble restore	pi Exp. ID	FJ	Point #	FJNNXXPPPP	3	373	Exp. ID	Point #
Manual release switch alarm (Water Release Zone)	pi Exp. ID	FA	Point #	FANNXXPPPP	1	110	Exp. ID	Point #
Manual release switch alarm restore (Water Release Zone)	pi Exp. ID	FH	Point #	FHNNXXPPPP	3	110	Exp. ID	Point #
Manual release switch disabled	pi Exp. ID	FB	Point #	FBNNXXPPPP	1	571	Exp. ID	Point #
Manual release switch enabled	pi Exp. ID	FU	Point #	FUNNXXPPPP	3	571	Exp. ID	Point #
Manual release switch trouble (Water Release Zone)	pi Exp. ID	FT	Point #	FTNNXXPPPP	1	373	Exp. ID	Point #
Manual release switch trouble restore (Water Release Zone)	pi Exp. ID	FJ	Point #	FJNNXXPPPP	3	373	Exp. ID	Point #
Notification output point disabled	pi Exp. ID	FB	Point #	FBNNXXPPPP	1	571	Exp. ID	Point #
Notification output point enabled	pi Exp. ID	FU	Point #	FUNNXXPPPP	3	571	Exp. ID	Point #
Notification output point trouble	pi Exp. ID	FT	Point #	FTNNXXPPPP	1	320	Exp. ID	Point #
Notification output point trouble restore	pi Exp. ID	FJ	Point #	FJNNXXPPPP	3	320	Exp. ID	Point #
Positive Alarm Sequence acknowledge switch disabled	pi Exp. ID	FB	Point #	FBNNXXPPPP	1	571	Exp. ID	Point #
Positive Alarm Sequence acknowledge switch enabled	pi Exp. ID	FU	Point #	FUNNXXPPPP	3	571	Exp. ID	Point #
Positive Alarm Sequence acknowledge switch trouble	pi Exp. ID	FT	Point #	FTNNXXPPPP	1	373	Exp. ID	Point #
Positive Alarm Sequence acknowledge switch trouble restore	pi Exp. ID	FJ	Point #	FJNNXXPPPP	3	373	Exp. ID	Point #
Status Point Trouble	pi Exp. ID	UT	Point #	UTNNXXPPPP	1	379	Exp. ID	Point #
Status Point Trouble Restored	pi Exp. ID	UJ	Point #	UJNNXXPPPP	3	379	Exp. ID	Point #
Status Point is Disabled	pi Exp. ID	UB	Point #	UBNNXXPPPP	1	580	Exp. ID	Point #
Status Point is Enabled	pi Exp. ID	UU	Point #	UUNNXXPPPP	3	580	Exp. ID	Point #
Supervisory/Tamper Alarm	pi Exp. ID	FS	Point #	FSNNXXPPPP	1	200	Exp. ID	Point #
Supervisory/Tamper Alarm Restore	pi Exp. ID	FR	Point #	FRNNXXPPPP	3	200	Exp. ID	Point #
Supervisory/Tamper point disabled	pi Exp. ID	FB	Point #	FBNNXXPPPP	1	571	Exp. ID	Point #
Supervisory/Tamper point enabled	pi Exp. ID	FU	Point #	FUNNXXPPPP	3	571	Exp. ID	Point #
Supervisory/Tamper point trouble	pi Exp. ID	FT	Point #	FTNNXXPPPP	1	373	Exp. ID	Point #

Table 12-2: Reporting Formats Table

	SIA Reporting Format				**Contact ID Reporting Format**			
	SIA pi Modifier			**SIA** IFP-2100/ECS				
Event Description	Module ID # (If Any)	SIA Event Codes	Parameter	Fixed Length Format NN - panel ID XX- SBUS ID ZZZ- Zone # PPPP- Point # GGG- Group # E- Emergency # RRRR-Receiver #	Qualifier	Event Code	Group #	Contact #
Supervisory/Tamper point trouble restore	pi Exp. ID	FJ	Point #	FJNNXXPPPP	3	373	Exp. ID	Point #
System-based AUX1 switch alarm	pi Exp. ID	UA	Point #	UANNXXPPPP	1	140	Exp. ID	Point #
System-based AUX1 switch alarm restore	pi Exp. ID	UH	Point #	UHNNXXPPPP	3	140	Exp. ID	Point #
System-based AUX1 switch disabled	pi Exp. ID	UB	Point #	UBNNXXPPPP	1	571	Exp. ID	Point #
System-based AUX1 switch enabled	pi Exp. ID	UU	Point #	UUNNXXPPPP	3	571	Exp. ID	Point #
System-based AUX1 switch trouble	pi Exp. ID	UT	Point #	UTNNXXPPPP	1	373	Exp. ID	Point #
System-based AUX1 switch trouble restore	pi Exp. ID	UJ	Point #	UJNNXXPPPP	3	373	Exp. ID	Point #
System-based AUX2 switch alarm	pi Exp. ID	UA	Point #	UANNXXPPPP	1	140	Exp. ID	Point #
System-based AUX2 switch alarm restore	pi Exp. ID	UH	Point #	UHNNXXPPPP	3	140	Exp. ID	Point #
System-based AUX2 switch disabled	pi Exp. ID	UB	Point #	UBNNXXPPPP	1	571	Exp. ID	Point #
System-based AUX2 switch enabled	pi Exp. ID	UU	Point #	UUNNXXPPPP	3	571	Exp. ID	Point #
System-based AUX2 switch trouble	pi Exp. ID	UT	Point #	UTNNXXPPPP	1	373	Exp. ID	Point #
System-based AUX2 switch trouble restore	pi Exp. ID	UJ	Point #	UJNNXXPPPP	3	373	Exp. ID	Point #
Voice Aux ECS 1 Point Alarm	pi Exp. ID	UA	(3PPP) PPP - Point #	UANNXX3PPP	1	171	Exp. ID	Point #
Voice Aux ECS 1 Point Alarm Restore	pi Exp. ID	UH	(3PPP) PPP - Point #	UHNNXX3PPP	3	171	Exp. ID	Point #
Voice Aux ECS 2 Point Alarm	pi Exp. ID	UA	(4PPP) PPP - Point #	UANNXX4PPP	1	172	Exp. ID	Point #
Voice Aux ECS 2 Point Alarm Restore	pi Exp. ID	UH	(4PPP) PPP - Point #	UHNNXX4PPP	3	172	Exp. ID	Point #
Voice Aux ECS 3 Point Alarm	pi Exp. ID	UA	(5PPP) PPP - Point #	UANNXX5PPP	1	173	Exp. ID	Point #

Table 12-2: Reporting Formats Table

	SIA Reporting Format				Contact ID Reporting Format			
	SIA pi Modifier			SIA IFP-2100/ECS				
Event Description	Module ID # (If Any)	SIA Event Codes	Parameter	Fixed Length Format NN - panel ID XX- SBUS ID ZZZ- Zone # PPPP- Point # GGG- Group # E- Emergency # RRRR-Receiver #	Qualifier	Event Code	Group #	Contact #
Voice Aux ECS 3 Point Alarm Restore	pi Exp. ID	UH	(5PPP) PPP - Point #	UHNNXX5PPP	3	173	Exp. ID	Point #
Voice Aux ECS 4 Point Alarm	pi Exp. ID	UA	(6PPP) PPP - Point #	UANNXX6PPP	1	174	Exp. ID	Point #
Voice Aux ECS 4 Point Alarm Restore	pi Exp. ID	UH	(6PPP) PPP - Point #	UHNNXX6PPP	3	174	Exp. ID	Point #
Voice Aux ECS Point Trouble	pi Exp. ID	UT	Point #	UTNNXXPPPP	1	379	Exp. ID	Point #
Voice Aux ECS Point Trouble Restore	pi Exp. ID	UJ	Point #	UJNNXXPPPP	3	379	Exp. ID	Point #
Voice Aux ECS Point Disabled	pi Exp. ID	UB	Point #	UBNNXXPPPP	1	580	Exp. ID	Point #
Voice Aux ECS Point Enabled	pi Exp. ID	UU	Point #	UUNNXXPPPP	3	580	Exp. ID	Point #
Voice Aux Status 1 Switch is Trouble	pi Exp. ID	UT	Point #	UTNNXXPPPP	1	379	Exp. ID	Point #
Voice Aux Status 1 Switch is Trouble Restored	pi Exp. ID	UJ	Point #	UJNNXXPPPP	3	379	Exp. ID	Point #
Voice Aux Status 1 Switch is Disabled	pi Exp. ID	UB	Point #	UBNXXPPPP	1	580	Exp. ID	Point #
Voice Aux Status 1 Switch is Enabled	pi Exp. ID	UU	Point #	UUNXXPPPP	3	580	Exp. ID	Point #
Voice Aux Status 2 Switch is Trouble	pi Exp. ID	UT	Point #	UTNNXXPPPP	1	379	Exp. ID	Point #
Voice Aux Status 2 Switch is Trouble Restored	pi Exp. ID	UJ	Point #	UJNNXXPPPP	3	379	Exp. ID	Point #
Voice Aux Status 2 Switch is Disabled	pi Exp. ID	UB	Point #	UBNNXXPPPP	1	580	Exp. ID	Point #
Voice Aux Status 2 Switch is Enabled	pi Exp. ID	UU	Point #	UUNNXXPPPP	3	580	Exp. ID	Point #
Water flow switch alarm	pi Exp. ID	SA	Point #	SANNXXPPPP	1	113	Exp. ID	Point #
Water flow switch alarm restore	pi Exp. ID	SH	Point #	SHNNXXPPPP	3	113	Exp. ID	Point #
Water flow switch disabled	pi Exp. ID	SB	Point #	SBNNXXPPPP	1	571	Exp. ID	Point #
Water flow switch enabled	pi Exp. ID	SU	Point #	SUNNXXPPPP	3	571	Exp. ID	Point #
Water flow switch trouble	pi Exp. ID	ST	Point #	STNNXXPPPP	1	373	Exp. ID	Point #
Water flow switch trouble restore	pi Exp. ID	SJ	Point #	SJNNXXPPPP	3	373	Exp. ID	Point #
Zone-based AUX1 switch alarm	pi Exp. ID	UA	Point #	UANNXXPPPP	1	140	Exp. ID	Point #
Zone-based AUX1 switch alarm restore	pi Exp. ID	UH	Point #	UHNNXXPPPP	3	140	Exp. ID	Point #

Table 12-2: Reporting Formats Table

	SIA Reporting Format				**Contact ID Reporting Format**			
	SIA pi Modifier			**SIA** IFP-2100/ECS				
Event Description	Module ID # (If Any)	SIA Event Codes	Parameter	Fixed Length Format NN - panel ID XX- SBUS ID ZZZ- Zone # PPPP- Point # GGG- Group # E- Emergency # RRRR-Receiver #	Qualifier	Event Code	Group #	Contact #
Zone-based AUX1 switch disabled	pi Exp. ID	UB	Point #	UBNNXXPPPP	1	571	Exp. ID	Point #
Zone-based AUX1 switch enabled	pi Exp. ID	UU	Point #	UUNNXXPPPP	3	571	Exp. ID	Point #
Zone-based AUX1 switch trouble	pi Exp. ID	UT	Point #	UTNNXXPPPP	1	373	Exp. ID	Point #
Zone-based AUX1 switch trouble restore	pi Exp. ID	UJ	Point #	UJNNXXPPPP	3	373	Exp. ID	Point #
Zone-based AUX2 switch alarm	pi Exp. ID	UA	Point #	UANNXXPPPP	1	140	Exp. ID	Point #
Zone-based AUX2 switch alarm restore	pi Exp. ID	UH	Point #	UHNNXXPPPP	3	140	Exp. ID	Point #
Zone-based AUX2 switch disabled	pi Exp. ID	UB	Point #	UBNNXXPPPP	1	571	Exp. ID	Point #
Zone-based AUX2 switch enabled	pi Exp. ID	UU	Point #	UUNNXXPPPP	3	571	Exp. ID	Point #
Zone-based AUX2 switch trouble	pi Exp. ID	UT	Point #	UTNNXXPPPP	1	373	Exp. ID	Point #
Zone-based AUX2 switch trouble restore	pi Exp. ID	UJ	Point #	UJNNXXPPPP	3	373	Exp. ID	Point #
System-based Wireless Gateway Trouble	pi Exp. ID	UT	Point #	UTNNXXPPPP	1	373	Exp. ID	Point #
System-based Wireless Gateway Trouble - restore	pi Exp. ID	UJ	Point #	UJNNXXPPPP	3	373	Exp. ID	Point #
Wireless Gateway Trouble	pi Exp. ID	UT	Point #	UTNNXXPPPP	1	373	Exp. ID	Point #
Wireless Gateway Trouble restore	pi Exp. ID	UJ	Point #	UJNNXXPPPP	3	373	Exp. ID	Point #

12.2 SIA - IntelliKnight / IFP-2100/ECS Panels PI Modifier Reporting:

Events are sent to the central station as a variable length string:

The event format is:

EEZZZZ

Where:

EE Event code (2 characters)
ZZZZ Event parameter (up to four digits – not zero filled)

1. The account number is sent using an account block that is separate from the event block

2. Multiple events can be sent within a single event block. Events are separated by a "/" character.
3. Event parameter can be either a zone, point or module number.
4. When reporting by point is enabled, the communicator uses a "pi" event to supersedes the actual point event to report the module the point is linked to.
5. Panel ID is not sent in the SIA event parameters.

For Example see Table 12-3:

Table 12-3: SIA- IntelliKnight / IFP-2100/ECS Panels - PI Modifier Reporting Examples

Event	Report Zone/ Point	Panel ID	Module	Zone ZZZZ	Point ZZZZ	Fields Sent	SIA Event Data
Fire Alarm-Zone	Zone	n/a	n/a97	15	n/a	EE-ZZ	FA15
Fire Alarm-Zone	Zone	n/a	n/a	05	n/a	EE-Z	FA5
Fire Alarm-Point	Point	n/a	01	n/a	123	EE-ZZ /EE-ZZZ	pi01/FA123
Fire Alarm-Point	Point	n/a	33	n/a	203	EE-ZZ /EE-ZZZ	pi11/FA203
Expander Trouble	n/a	n/a	11	n/a	n/a	EE-ZZ	ET11
Auto Test	n/a	n/a	n/a	n/a	n/a	EE-Z	RP0
Battery Trouble-Panel 32	n/a	n/a	98	n/a	n/a	EE-ZZ	YT98
Battery Trouble-Expander 18	n/a	n/a	18	n/a	n/a	EE-ZZ	YT18
SLC Loop Shorted	n/a	n/a	44	n/a	n/a	EE-ZZ	ET44
Program Begin Panel ID=32	n/a	n/a	n/a	n/a	n/a	EE-Z	LB0
Program Begin Panel ID= 22	n/a	n/a	n/a	n/a	n/a	EE-Z	LB0
AC Power Loss - Panel 22	n/a	n/a	98	n/a	n/a	EE-Z	AT0
Fire Trouble	Point	n/a	97	n/a	200	EE-ZZ /EE-ZZZ	pi97/FT200
Fire Trouble	Zone	n/a	97	01	n/a	EE-Z	FT1
Fire Trouble-Nac	Point	n/a	98	n/a	Nac Circuit 7	EE-ZZ /EE-Z	pi98/FT7 Z=Pt. #
Fire Trouble-Nac	Zone	n/a	98	n/a	Nac Circuit 7	EE-ZZZ	FT400 ZZZ=OPG#

12.3 SIA – IFP-2100/ECS Panel Communicator:

(Differences/additional features are underlined)

Events are sent to the Central Station Receiver as a fixed length string:

The event format is:

EEPPMMZZZZ

Where

EE Event code (2 characters)
PP Panel number (2 digits – Zero Filled) (valid range from 1 to 64)
MM Module number (2 digits – Zero Filled) (valid range from 1 to 98, typically

Module information)

ZZZZ Event parameter (4 digits – Zero Filled) (typically Point, Zone or Circuit information)

1. The Event field will contain 10 digits including the 2 digit event code (EE), 2 digit panel ID (PP), 2 digit Module Number (MM) and a 4 digit Event Parameter (ZZZZ).
2. Based on the actual Event Code, the Module Number or Event Parameter fields might not contain pertinent information. In that case the field will contain zeros.
3. The account number is sent using an account block that is separate from the event block.
4. Multiple events can be sent within a single event block. Events are separated by a "/" character.
5. Event parameter can be a Zone, Point or Circuit Number.
6. "pi" modifier event is not used.
7. Panel can be set to report by either Point or Zone.

For examples see Table 12-4.

Table 12-4: IFP-2100/ECS SIA REPORTING EXAMPLES

Event	Report Zone/ Point	Panel ID PP	Module MM	Zone ZZZZ	Point ZZZZ	Fields Sent	SIA Event Data
Fire Alarm-Zone	Zone	32	n/a	15	n/a	EE-PP-MM-ZZZZ	FA32000015
Fire Alarm-Zone	Zone	32	n/a	05	n/a	EE-PP-MM-ZZZZ	FA32000005
Fire Alarm-Point	Point	32	01	n/a	123	EE-PP-MM-ZZZZ	FA32010123
Fire Alarm-Point	Point	21	33	n/a	203	EE-PP-MM-ZZZZ	FA21330203
Expander Trouble	n/a	15	11	n/a	n/a	EE-PP-MM-ZZZZ	ET15110000
Auto Test	n/a	32	n/a	n/a	n/a	EE-PP-MM-ZZZZ	RP32000000
Battery Trouble-Panel 32	n/a	32	98	n/a	n/a	EE-PP-MM-ZZZZ	YT32980000
Battery Trouble-Expander 18	n/a	32	18	n/a	n/a	EE-PP-MM-ZZZZ	YT32180000
SLC Loop Shorted	n/a	01	44	n/a	n/a	EE-PP-MM-ZZZZ	ET01440000
Program Begin	n/a	32	n/a	n/a	n/a	EE-PP-MM-ZZZZ	LB32000000
Program Begin	n/a	22	n/a	n/a	n/a	EE-PP-MM-ZZZZ	LB22000000
AC Power Loss- Panel 22	n/a	22	98	n/a	n/a	EE-PP-MM-ZZZZ	AT22980000 MM = 00
Fire Trouble	Point	22	97	n/a	200	EE-PP-MM-ZZZZ	FT22970200
Fire Trouble	Zone	22	97	1	n/a	EE-PP-MM-ZZZZ	FT22970001 MM = 00
Fire Trouble-Nac	Point	22	98	n/a	Nac Circuit 7	EE-PP-MM-ZZZZ	FT22980007 ZZZZ=Pt. #
Fire Trouble-Nac	Zone	22	98	n/a	Nac Circuit 7	EE-PP-MM-ZZZZ	FT22980007 ZZZZ=OPG #

Section 13
Testing and Troubleshooting

13.1 Troubleshooting

This section of the manual offers suggestions for troubleshooting hardware problems. Please read this section if you encounter a problem when installing the control panel. If these suggestions do not solve your problem or if you encounter a problem that is not listed here, contact Technical Support at 800-446-6444 for assistance.

13.2 Common Problems

Problem	Possible Cause / Suggested Actions
Trouble message "DBL ADDR" (Double Address) displays on LCD.	An address has been assigned to more than one detector. Correct the address following the procedure described in Section 7.9 if using SD devices or Section 7.7 if using IDP devices
Auxiliary power or notification circuits have incorrect polarity.	Correct polarity. For notification and auxiliary power circuits: When in alarm or powered, terminals labeled “X” are positive, terminals labeled “O” are negative.
SLC devices are not being recognized (trouble message “Missing” displays).	Check hardware connections. If devices are physically connected, make sure wiring is correct (see Section 7.8 if using SD devices or Section 7.7 if using IDP or SK devices). For 6815 devices, make sure the device connects to the 6815 via the SLC OUT terminals. There can be only one SLC loop on the main panel and on each 6815 module. Do not connect devices to terminals labeled SLC IN.
	Make sure SLC devices have been addressed properly following the procedure described in Section 7.9 if using SD devices or Section 7.7 if using IDP or SK devices.
	Make sure correct polarity has been observed for SLC device wiring. See Section 7.8 if using SD devices or Section 7.7 for IDP or SK devices.
SLC devices are not being recognized (trouble message “Missing” displays on the annunciator).	Check that SLC loop impedance is within the required range. To measure impedance, use the following procedure: 1. Disconnect both wires from the terminal block at the panel (SLC devices can remain connected). 2. Measure the impedance from positive to negative and from negative to positive. Both measurements should be greater than 500 K ohms. If the installation uses T-taps, test each T-tap individually. 3. Temporarily connect the positive wire to the negative wire of the SLC loop at the point farthest from the panel (SLC devices can remain connected). 4. Measure the impedance from positive to negative and from negative to positive wires that were disconnected from the panel in step 1. Both measurements must be less than 50 ohms.
The panel indicates a ground fault trouble condition (trouble message “GROUND FAULT” displays).	An earth ground fault occurs when the panel senses an unexpected flow of current from one or more of its terminals to the earth connection (Terminal 2). Isolate the wiring that is causing the fault by removing wiring connections one at a time until the earth fault is no longer present. Pause at least five seconds after removing a wire before removing the next one.

Problem	Possible Cause / Suggested Actions
5815XL module that has been physically connected to the panel but is not being recognized.	Check the status of the 5815XL green LED. If it flashes in the pattern .5 sec. on / .5 sec. off, it is likely that the 5815XL has not been added to the system through programming. JumpStart will add any 5815XLs connected to the panel. 5815XLs can be added manually (see Section 9.2.2). Check that the correct ID for the 5815XL module has been set through the DIP switches. Assign ID#1 to the first 5815XL and ID#2 to the second 5815XL. See Section 4.13.1 for complete details. If the wiring between the 5815XL and the panel is correct, measure the voltage from 5815XL Terminal (+) to Terminal (-). Voltage should be in the range 27.2-27.4V when AC power is present. If the green LED is not flashing, the likely cause is incorrect wiring from between the 5815XL and the panel. See Section 4.8.1 for wiring details. *Note: 5815XL will only support SD devices*
6815 module that has been physically connected to the panel but is not being recognized.	Check the status of the 6815 green LED. If it flashes in the pattern .5 sec. on / .5 sec. off, it is likely that the 6815 has not been added to the system through programming. JumpStart will add any 6815s connected to the panel. 6815s can be added manually (see Section 9.2.2). Check that the correct ID for the 6815 module has been set through the DIP switches. Assign ID#1 to the first 6815and ID#2 to the second 6815. See Section 4.13.1 for complete details. If the wiring between the 6815 and the panel is correct, measure the voltage from 6815 Terminal (+) to Terminal (-). Voltage should be in the range 27.2-27.4V when AC power is present. If the green LED is not flashing, the likely cause is incorrect wiring from between the 6815 and the panel. See Section 4.8.1 for wiring details.

13.3 Periodic Testing and Maintenance

To ensure proper and reliable operation, it is recommended that system inspection and testing be scheduled monthly or as required by national and/or local fire codes. Testing should be done by a qualified service representative if a malfunction is encountered.

Before testing:

1. Notify the fire department and/or central alarm receiving station.
2. Notify facility personnel of a test so that alarm sounding devices are ignored during the test period.
3. When necessary, activation of Notification Appliances can be prevented by the DISABLE function.

Testing:

1. Activate a input via an alarm initiating device and check that the correct outputs activate (Notification Appliances sound/flash, relays activate, alarm indicator lights). Reset system. Repeat for each alarm initiating device.
2. Momentarily open the following circuits one at a time and check for a trouble sign:
   - Notification Appliance Circuits
   - Initiating devices
3. If new batteries were installed, wait 48 hours before completing this step. Remove AC power, activate initiating device and check that:
   - The alarm indicator lights
   - All active Notification Appliances sound

Measure battery voltage while the Notification Appliances are sounding. Replace any battery with terminal voltage less than 85% of rating. Reapply AC power and reset the system.

13.4 Event History

The event history can be useful for tracking or recalling a trouble condition.

To view event history:

1. Press 3 to select Event History.
2. Press the up or down arrow key to view events in the history buffer.

13.5 Built-in Troubleshooting and Testing Tools

The fire control panel has several built-in testing and troubleshooting tools that can be utilized to save time while testing and troubleshooting points and SLC devices.

13.5.1 SLC Device Locator

SLC device locator can be used to locate a device on a SLC loop.

Follow these steps to locate a particular SLC device:

1. Select 2 for Point Functions from the Main Menu.
2. Select 4 for SLC Single Device Locator.

   A message similar to the one shown in Figure 13-1 will display.

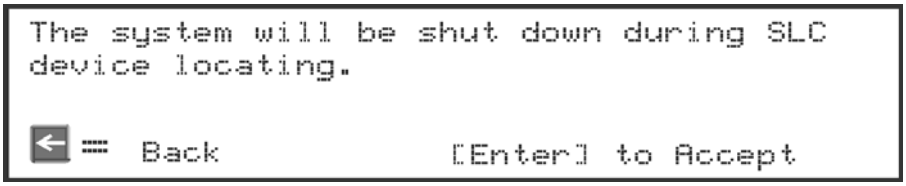


Figure 13-1 Shut Down Warning

3. Press ENTER to accept, or left arrow to Exit.

   If left arrow is chosen you will exit back to the Point Function menu.
   If ENTER is chosen the system will cease normal operation leaving the premise unprotected.
4. Select the SLC loop.
5. Enter the SLC address of the device you wish to locate.

   The LED on the selected device will start flashing.
6. Press left arrow key to exit the SLC Device Locator.

Note: Once you exit, the system will resume normal operation.

13.5.2 SLC Multiple Device Locator

This feature is the same as SLC Single Device Locator, except you can locate up to 8 devices on a single search.

Follow these instructions to locate multiple SLC devices:

1. Select 2 for Point Functions from the Main Menu.
2. Select 5 for SLC Multiple Device Locator.

   A message similar to the one shown in Figure 13-2 will display.

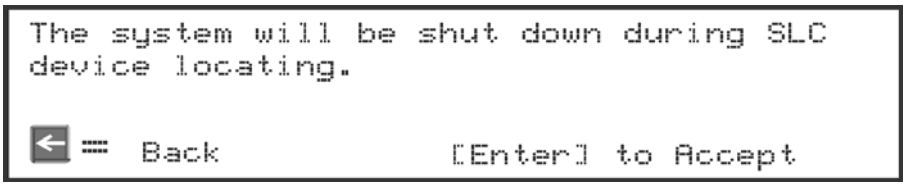


Figure 13-2 Shut Down Warning

3. Press ENTER to accept, or left arrow to Exit.

   If left arrow is chosen you will exit back to the Point Function menu.
   If ENTER is chosen the system will cease normal operation leaving the premise unprotected.
4. Select the SLC loop.
5. Enter up to 8 SLC addresses for the devices you wish to locate.

   The LEDs on the selected devices will start flashing.
6. Press the left arrow key to exit SLC Multiple Device Locator.

Note: Once you exit, the system will resume normal operation.

13.5.3 I/O Point Control

This feature allows you to toggle any output on or off and trip any input device. This can be useful to test a point's output mapping. I/O Point Control shall only be allowed to be accessed if enabled by the user profile.

Follow these steps to control an I/O point:

1. Select 2 (Point Functions) from the Main Menu.
2. Select 6 (I/O Point Control).
3. Select the module the point is on.
4. Make any selections specific to the module selected in the previous step.
5. Use the up or down arrow key to select the point you wish to test.
6. Press ENTER to toggle (Active/Inactive) Output.
7. Press the left arrow key to exit.

13.5.4 Earth Fault Resistance

Table 13-1 lists the earth fault resistance detection for each applicable terminal on the FACP.

Table 13-1: Earth Fault Resistance Values by Terminal

Function	Terminal Label (Values in Ohms)		Low Biased		High Biased	
			High Trip	High Restore	Low Trip	Low Restore
Flexput™ Notification Circuits	X	I/O 8	–	–	0	0
	O		0	0	–	–
	X	I/O 7	–	–	0	0
	O		0	0	–	–
	X	I/O 6	-	-	0	0
	O		0	0	-	-
	X	I/O 5	-	-	0	0
	O		0	0	-	-
	X	I/O 4	-	-	0	0
	O		0	0	-	-
	X	I/O 3	-	-	0	0
	O		0	0	-	-
	X	I/O 2	-	-	0	0
	O		0	0	-	-
	X	I/O 1	-	-	0	0
	O		0	0	-	-
SBUS Communication	B	SBUS1 OUT	-	-	0	0
	A		-	-	0	0
SBUS Power	+		0	0	-	-
	-		-	-	0	0
SBUS Communication	B	SBUS1 IN	-	-	0	0
	A		-	-	0	0
SBUS Power	+		0	0	-	-
	-		-	-	0	0
SBUS Communication	B	SBUS2 OUT	–	–	0	0
	A		–	–	0	0
SBUS Power	+		0	0	–	–
	–		–	–	0	0
SBUS Communication	B	SBUS 2 IN	–	–	0	0
	A		–	–	0	0
SBUS Power	+		0	0	–	–
	–		–	–	0	0
SLC Terminals	-	SLC OUT	-	-	0	0
	+		0	0	-	-
	-	SLC IN	-	-	0	0
	+		0	0	-	-

Note: Any wire to wire fault impedance is 0 ohms

Section 14
Installation Records

This section of the manual is for you to use if you wish to track how points, zones, and groups have been programmed.

14.1 Detector and Module Point Record

If installing IDP or SK SLC devices, use Table 14-1 to record detector points (up to 159 per SLC loop) installed on the on-board SLC loop and make a copy of Table 14-2 to record installed modules (up to 159 per SLC loop).

Table 14-1: Installation Record of Onboard Devices

Module	Addr	Zone / Group	Description	Module	Addr	Zone/ Group	Description
On-board	1			On-board	31		
On-board	2			On-board	32		
On-board	3			On-board	33		
On-board	4			On-board	34		
On-board	5			On-board	35		
On-board	6			On-board	36		
On-board	7			On-board	37		
On-board	8			On-board	38		
On-board	9			On-board	39		
On-board	10			On-board	40		
On-board	11			On-board	41		
On-board	12			On-board	42		
On-board	13			On-board	43		
On-board	14			On-board	44		
On-board	15			On-board	45		
On-board	16			On-board	46		
On-board	17			On-board	47		
On-board	18			On-board	48		
On-board	19			On-board	49		
On-board	20			On-board	50		
On-board	21			On-board	51		
On-board	22			On-board	52		
On-board	23			On-board	53		
On-board	24			On-board	54		
On-board	25			On-board	55		
On-board	26			On-board	56		
On-board	27			On-board	57		
On-board	28			On-board	58		
On-board	29			On-board	59		
On-board	30			On-board	60		

Table 14-1: Installation Record of Onboard Devices

Module	Addr	Zone / Group	Description
On-board	60		
On-board	61		
On-board	62		
On-board	63		
On-board	64		
On-board	65		
On-board	66		
On-board	67		
On-board	68		
On-board	69		
On-board	70		
On-board	71		
On-board	72		
On-board	73		
On-board	74		
On-board	75		
On-board	76		
On-board	77		
On-board	78		
On-board	79		
On-board	80		
On-board	81		
On-board	82		
On-board	83		
On-board	84		
On-board	85		
On-board	86		
On-board	87		
On-board	88		
On-board	89		
On-board	90		
On-board	91		
On-board	92		
On-board	93		
On-board	94		
On-board	95		
On-board	96		
On-board	97		
On-board	98		
On-board	99		
On-board	100		
On-board	101		
On-board	102		

Module	Addr	Zone/ Group	Description
On-board	104		
On-board	105		
On-board	106		
On-board	107		
On-board	108		
On-board	109		
On-board	110		
On-board	111		
On-board	112		
On-board	113		
On-board	114		
On-board	115		
On-board	116		
On-board	117		
On-board	118		
On-board	119		
On-board	120		
On-board	121		
On-board	122		
On-board	123		
On-board	124		
On-board	125		
On-board	126		
On-board	127		
On-board	128		
On-board	129		
On-board	130		
On-board	131		
On-board	132		
On-board	133		
On-board	134		
On-board	135		
On-board	136		
On-board	137		
On-board	138		
On-board	139		
On-board	140		
On-board	141		
On-board	142		
On-board	143		
On-board	144		
On-board	145		
On-board	146		

Table 14-1: Installation Record of Onboard Devices

Module	Addr	Zone / Group	Description	Module	Addr	Zone/ Group	Description
On-board	147			On-board	154		
On-board	148			On-board	155		
On-board	149			On-board	156		
On-board	150			On-board	157		
On-board	151			On-board	158		
On-board	152			On-board	159		
On-board	153						

Additional SLC Devices

Use the table below to record devices installed on additional 5815XL's. Make a copy of this page if additional pages are needed.

Table 14-2: Installation Record of Devices Installed on 5815XL

Module	Addr	Zone / Group	Description	Module	Addr	Zone/ Group	Description

Table 14-2: Installation Record of Devices Installed on 5815XL

Module	Addr	Zone / Group	Description

Module	Addr	Zone/ Group	Description

14.2 Conventional Output Point Record

This chart can be used to keep track of how conventional output points (circuits) have been configured.

Point/Circuit	Group	Description
1		
2		
3		
4		
5		
6		
7		
8		

Appendix A
Compatible Devices

A.1 Notification Appliances

For proper operation, you must use polarized devices with a model 7628 4.7k ohm EOL resistor on each loop. All supervised notification appliances used with the control panel must be polarized.

Note: Not all devices can use the Sync feature, be sure to check Table A-1 to ensure the devices you have chosen will work with this feature. This control is UL listed for panel wide Synchronization.

Table A-1 below lists notification appliances compatible with the fire alarm control panel. Appliances which can be synchronized indicate the type of SYNC available in the columns marked Audio and Visual.

Table A-1 Compatible Notification Appliances

Manufacturer	Model	Audio	Visual	Type
AMSECO	SH24W-153075	X	X	Horn/Strobe
	SAD24-153075		X	Strobe
	SAD24-75110		X	Strobe
	SL24W-75110		X	Strobe
	SL24C-3075110		X	Strobe
	SLB24-75		X	Strobe
	RSD24-153075		X	Strobe
	RSD24-75110		X	Strobe
	SH24W-75110	X	X	Horn/Strobe
	SH24W-3075110	X	X	Horn/Strobe
	SHB24-75	X	X	Horn/Strobe
	SCM24W-153075	X	X	Chimes/Strobe
	SCM24W-75110	X	X	Chimes/Strobe
	SCM24C-3075110	X	X	Chimes/Strobe
	SCM24C-177	X	X	Chimes/Strobe
	H24W	X		Horn
	H24R	X		Horn
FCI	S2415-FC		X	Strobe
	S241575-FC		X	Strobe
	S2430-FC		X	Strobe
	130-3117C	X		Mini Horn
	130-3147C	X		Mini Horn
	BLV-6	X		Vibrating Bell
	BLV-10	X		Vibrating Bell
	BLVCH	X		Vibrating Chime
	H12/24-FC	X		Horn
	H12/24W-FC	X		Horn

Table A-1 Compatible Notification Appliances

Manufacturer	Model	Audio	Visual	Type
FCI (cont.)	H12/24K-FC	X		Horn
	HC12/24-FC	X		Horn
	HC12/24W-FC	X		Horn
	HC12/24K-FC	X		Horn
	P2415-FC	X	X	Horn/Strobe
	P2415W-FC	X	X	Horn/Strobe
	P2415K-FC	X	X	Horn/Strobe
	P241575-FC	X	X	Horn/Strobe
	P241575W-FC	X	X	Horn/Strobe
	P241575F-FC	X	X	Horn/Strobe
	P241575K-FC	X	X	Horn/Strobe
	P2430-FC	X	X	Horn/Strobe
	P2430W-FC	X	X	Horn/Strobe
	P2430K-FC	X	X	Horn/Strobe
	P2475-FC	X	X	Horn/Strobe
	P2475W-FC	X	X	Horn/Strobe
	P2475K-FC	X	X	Horn/Strobe
	P24110-FC	X	X	Horn/Strobe
	P24110W-FC	X	X	Horn/Strobe
	P24110K-FC	X	X	Horn/Strobe
	S2430W-FC	X		Strobe
	S2430K-FC	X		Strobe
	S2475-FC	X		Strobe
	S2475W-FC	X		Strobe
	S2475K-FC	X		Strobe
	S24110-FC	X		Strobe
	S24110W-FC	X		Strobe
	S24110K-FC	X		Strobe
Federal Signal	450	X		Horn
	VALS	X	X	Horn/Strobe
Gentex	GEC-24-15	X	X	Horn/Strobe
	GEC-24-30	X	X	Horn/Strobe
	GEC-24-60	X	X	Horn/Strobe
	GEC-24-75	X	X	Horn/Strobe
	GEC-24-177	X	X	Horn/Strobe
	GX91	X		Mini Horn Steady Tone
	GX93	X		Mini Horn Temporal Tone
	HG124	X		Horn
	HS24-15	X	X	Horn/Strobe
	HS24-30	X	X	Horn/Strobe
	HS24-60	X	X	Horn/Strobe

Table A-1 Compatible Notification Appliances

Manufacturer	Model	Audio	Visual	Type
Gentex	HS24-75	X	X	Horn/Strobe
	HS24-110	X	X	Horn/Strobe
	HS24-1575	X	X	Horn/Strobe
	GCC24	X	X	Multi Candella Horn/Strobe Ceiling Mount
	GCCR24	X	X	Multi Candella Horn/Strobe Ceiling Mount
	GCS24		X	Multi Candella Strobe Ceiling Mount
	GCSR24		X	Multi Candella Strobe Ceiling Mount
	GECR-24	X	X	Multi Candella Horn/Strobe
	GES24-15		X	Strobe
	GES24-30		X	Strobe
	GES24-60		X	Strobe
	GES24-75		X	Strobe
	GES24-110		X	Strobe
	GES24-15/75		X	Strobe
	GES24-177		X	Strobe
	GES3-24		X	Multi Candella Strobe
	GESR-24		X	Multi Candella Strobe
	GEH-24	X		Horn
	ST24-30		X	Strobe
	ST24-60		X	Strobe
	ST24-75		X	Strobe
	ST24-110		X	Strobe
	ST24-1575		X	Strobe
	WGEC24-75W	X	X	Weatherproof Horn/Strobe
	WGES24-75W		X	Weatherproof Strobe
	WGMS-24-X	X	X	Horn/Strobe
	GEC-24-110	X	X	Horn/Strobe
	GEC-24-15/75	X	X	Horn/Strobe
System Sensor	CHR	X		Chime
	CHW	X		Chime
	CHSR	X	X	2-Wire Chime/Strobe
	CHSW	X	X	2-Wire Chime/Strobe
	HR	X	X	Horn
	HW		X	Horn
	HRK		X	Horn
	HWL		X	Horn WHT Wall 4x4
	HRL		X	Horn Red Wall 4x4
	HGRL		X	Horn Red Wall 2x4
	HGWL		X	Horn WHT Wall 2x4
	CHWL	X		Chime WHT Wall 4x4
	CHRL	X		Chime Red Wall 4x4
	CHSRL	X	X	Chime/Strobe Red Wall 4x4
	CHSWL	X	X	Chime/Strobe WHT Wall 4x4

Table A-1 Compatible Notification Appliances

Manufacturer	Model	Audio	Visual	Type
System Sensor (cont.)	CHSCRL	X	X	Chime/Strobe Red Ceil 4x4
	CHSCWL	X	X	Chime/Strobe WHT Ceil 4x4
	P2R	X	X	2-Wire Horn/Strobe
	P2R-P	X	X	2-Wire Horn/Strobe
	PC2R	X	X	2-Wire Horn/Strobe
	PC2R-P	X	X	2-Wire Horn/Strobe
	P2RH	X	X	2-Wire Horn/Strobe High Candela
	P2RH-P	X	X	2-Wire Horn/Strobe High Candela
	PC2RH	X	X	2-Wire Horn/Strobe High Candela
	PC2RH-P	X	X	2-Wire Horn/Strobe High Candela
	P2W	X	X	2-Wire Horn/Strobe
	P2W-P	X	X	2-Wire Horn/Strobe
	PC2W	X	X	2-Wire Horn/Strobe
	PC2W-P	X	X	2-Wire Horn/Strobe
	P2WH	X	X	2-Wire Horn/Strobe High Candela
	P2WH-P	X	X	2-Wire Horn/Strobe High Candela
	PC2WH	X	X	2-Wire Horn/Strobe High Candela
	PC2WH-P	X	X	2-Wire Horn/Strobe High Candela
	P2RK	X	X	2-Wire Horn/Strobe
	PC2RK	X	X	2-Wire Horn/Strobe
	P2RHK	X	X	2-Wire Horn/Strobe High Candela
	PC2RHK	X	X	2-Wire Horn/Strobe High Candela
	P4R	X	X	4-Wire Horn/Strobe
	PC4R	X	X	4-Wire Horn/Strobe
	P4RH	X	X	4-Wire Horn/Strobe High Candela
	P4W	X	X	4-Wire Horn/Strobe
	PC4W	X	X	4-Wire Horn/Strobe
	P4WH	X	X	4-Wire Horn/Strobe High Candela
	PC4WH	X	X	4-Wire Horn/Strobe High Candela
	P4RK	X	X	4-Wire Horn/Strobe
	PC4RK	X	X	4-Wire Horn/Strobe
	P4RHK	X	X	4-Wire Horn/Strobe High Candela
	PC4RHK	X	X	4-Wire Horn/Strobe High Candela
	PC4RH	X	X	4-Wire Horn/Strobe High Candela
	P2RL, P2RL-P, P2RL-SP*	X	X	Horn/Strobe 2W Red Wall 4x4
	P2WL, P2WL-P, P2WL-SP*	X	X	Horn/Strobe 2W WHT Wall 4x4
	PC2RL	X	X	Horn/Strobe 2W Red Ceil 4x4
	PC2WL	X	X	Horn/Strobe 2W WHT Ceil 4x4
	P2GRL	X	X	Horn/Strobe 2W Red Wall 2x4
	P2GWL	X	X	Horn/Strobe 2W WHT Wall 2x4
	P4RL	X	X	Horn/Strobe 4W Red Wall 4X4
	P4WL	X	X	Horn/Strobe 4W WHT Wall 4X4
	PC4RL	X	X	Horn/Strobe 4W Red Ceil 4X4

Table A-1 Compatible Notification Appliances

Manufacturer	Model	Audio	Visual	Type
System Sensor (cont.)	PC4WL	X	X	Horn/Strobe 4W WHT Ceil 4X4
	SR		X	Strobe
	SR-P		X	Strobe
	SCR		X	Strobe
	SCR-P		X	Strobe
	SRH		X	Strobe High Candela
	SRH-P		X	Strobe High Candela
	SCRH		X	Strobe High Candela
	SCRH-P		X	Strobe High Candela
	SW		X	Strobe
	SW-P		X	Strobe
	SCW		X	Strobe
	SCW-P		X	Strobe
	SWH		X	Strobe High Candela
	SWH-P		X	Strobe High Candela
	SCWH		X	Strobe High Candela
	SCWH-P		X	Strobe High Candela
	SRK		X	Strobe
	SCRK		X	Strobe
	SRHK		X	Strobe High Candela
	SCRHK		X	Strobe High Candela
	SRL, SRL-P, SRL-SP*		X	Strobe Red Wall 4x4
	SWL, SWL-P, SWL-ALERT SWL-CLR-ALERT*		X	Strobe White Wall 4x4
	SCRL		X	Strobe Red Ceil 4x4
	SCWL		X	Strobe White Ceil 4x4
	SCWL-CLR-ALERT		X	Strobe WHT Ceil CLR Lens 4x4
	SGRL		X	Strobe Red Wall 2x4
	SGWL		X	Strobe White Wall 2x4
	P2RH-LF	X	X	2-Wire Low Frequency Sounder Strobe
	P2WH-LF	X	X	2-Wire Low Frequency Sounder Strobe
	HR-LF	X		Low Frequency Sounder
	HW-LF	X		Low Frequency Sounder
	SPRL	x		Wall High-Fidelity Speaker, Red
	SPWL	x		Wall High-Fidelity Speaker, White
	* P=Plain, ALERT=Pad Printing ALERT, SP=Fuego			

Table A-1 Compatible Notification Appliances

Manufacturer	Model	Audio	Visual	Type
Wheelock	AH-12	X		Horn
	AH-24	X		Horn
	AH-12WP	X		Horn Weatherproof
	AH-24WP	X		Horn Weatherproof
	AMT-241575W	X	X	Multi-Tone Horn Strobe
	AMT-24MCW		X	Multi-Tone Horn Strobe
	AMT-241575W-NYC	X	X	Multi-Tone Horn Strobe
	AMT-12/24	X		Multi-tone Horn
	AMT-12/24 NYC	X		Multi-tone Horn
	AS-121575W		X	Horn/Strobe
	NH-12/24	X		Horn
	AS-241575W	X	X	Horn/Strobe
	AS-24MCC	X	X	Horn/Strobe
	AS-24MCCH	X	X	Horn/Strobe
	AS-24MCW	X	X	Horn/Strobe
	AS-24MCWH	X	X	Horn/Strobe
	ASWP-2475W	X	X	Horn/Strobe Weatherproof
	ASWP-2475C	X	X	Horn/Strobe Weatherproof
	ASWP-24MCWH	X	X	Horn/Strobe
	ASWP-24MCCH	X	X	Horn/Strobe
	CH-70	X		Chime
	CH-90	X		Chime
	CH70-241575W		X	Chime/Strobe
	CH70-24MCW		X	Chime/Strobe
	CH70-24MCWH		X	Chime/Strobe
	CH90-24MCC		X	Chime/Strobe
	CH90-24MCCH		X	Chime/Strobe
	HS-24	X		Horn
	HS4-241575W	X	X	Horn/Strobe
	HS4-24MCW	X	X	Horn/Strobe
	HS4-24MCWH	X	X	Horn/Strobe
	HS4-24MCC	X	X	Horn/Strobe
	MIZ-24S	X	X	Mini Horn Strobe
	MT-121575W		X	Multi-tone Horn Strobe

Table A-1 Compatible Notification Appliances

Manufacturer	Model	Audio	Visual	Type
Wheelock (cont.)	MT-241575W	X	X	Multi-tone Horn Strobe
	MT-24MCW		X	Multi-tone Horn Strobe
	MTWP-2475W		X	Multi-tone Horn Strobe
	MTWP-2475C		X	Multi-tone Horn Strobe
	MTG-121575W	X	X	Multi-tone Horn Strobe
	MTR-121575W	X	X	Multi-tone Horn Strobe
	MTWPA-2475W	X	X	Multi-tone Horn Strobe
	MTWPB-2475W	X	X	Multi-tone Horn Strobe
	MTWPG-2475W	X	X	Multi-tone Horn Strobe
	MTWPR-2475W	X	X	Multi-tone Horn Strobe
	MTWPA-24MCCH	X	X	Multi-tone Horn Strobe
	ZNH	X		Horn
	NS-121575W	X	X	Horn/Strobe
	NS-241575W	X	X	Horn/Strobe
	NS-24MCW	X	X	Horn/Strobe
	NS-24MCC	X	X	Horn/Strobe
	NS-24MCCH	X	X	Horn/Strobe
	ZNS-MCW	X	X	Horn/Strobe
	ZNS-MCWH	X	X	Horn/Strobe
	ZNS-24MCC	X	X	Horn/Strobe
	ZNS-24MCCH	X	X	Horn/Strobe
	RSS-121575W		X	Strobe
	RSS-241575W		X	Strobe
	RSS-24MCC		X	Strobe
	RSS-24MCCR		X	Strobe
	RSS-24MCCH		X	Strobe
	RSS-24MCCHR		X	Strobe
	RSS-24MCW		X	Strobe
	RSS-24MCWH		X	Strobe
	RSSP-121575W		X	Strobe
	RSSP-241575W		X	Strobe
	RSSR-2415W		X	Strobe
	RSSR-2415C		X	Strobe
	RSSR-2475W		X	Strobe
	RSSR-2475C		X	Strobe
	RSSR-24110C		X	Strobe
	RSSA-24110W		X	Strobe
	RSSB-24110W		X	Strobe
	RSSG-24110W		X	Strobe
	RSSR-24110W		X	Strobe
	RSSA-24MCC		X	Multi Candela Strobe
	RSSB-24MCC		X	Multi Candela Strobe
	RSSG-24MCC		X	Multi Candela Strobe

Table A-1 Compatible Notification Appliances

Manufacturer	Model	Audio	Visual	Type
Wheelock (cont.)	RSSR-24MCC		X	Multi Candela Strobe
	RSSWPA-2475W		X	Strobe Weatherproof
	RSSWPA-24MCCH		X	Strobe Weatherproof
	RSSWPG-24MCCH		X	Strobe Weatherproof
	RSSWPR-24MCCH		X	Strobe Weatherproof
	RSSWP-2475W		X	Strobe Weatherproof
	RSSWP-2475C		X	Strobe Weatherproof
	RSSWP-24MCWH		X	Strobe Weatherproof
	ZRS-MCWH		X	Strobe
	ZRS-24MCC		X	Strobe
	ZRS-24MCCH		X	Strobe
	MB-G6-24			Motor Bell
	MB-G10-24			Motor Bell
	MB-G6-12			Motor Bell
	MB-G10-12			Motor Bell
	MIZ-24-R			Mini Horn
	MT-12/24-R	X	X	Multi-tone Horn
	MT4-12/24	X	X	Multi-tone Horn
	ZRS-MCW		X	Strobe
	MTWPR-24MCCH	X	X	Multi-tone Horn Strobe
	NH-12/24R	X		Horn
	HSR		X	Horn Strobe
	HSW		X	Horn Strobe
	STR		X	Strobe
	STW		X	Strobe
	HNR		X	Horn

A.2 Two Wire Detectors

Table A-2 lists two-wire smoke detectors that are compatible with the fire control panel. The table is organized by manufacturer. The columns show the number of detectors per loop that can be used.

	IFP-2100/ECS
Identifier	24H
Operating voltage Range	17.1 - 27.3 VDC

Note: The maximum number of smoke detectors per zone is determined by both the current draw and the impedance of the smoke detector. If too many smoke detectors are used on any zone, false alarms could occur.

Do not mix different models of detectors on any zone; false alarms could occur.

Control unit Smoke Reset Time must be programmed for a number greater than or equal to the maximum

reset time of the smoke detector.

Table A-2: Compatible Two-Wire Smoke Detectors

Manufacturer	Model Name or Number *(Base model name or number in parenthesis.)*	Compatibility ID		# per Loop
		Head	Base	
Apollo	55000-350 (45681-200)	55000-350	45681-200	15 / loop
	55000-250 (45681-200)	55000-250	45681-200	24 / loop
	55000-225	55000-225	45681-255, 256	15 / loop for Ion Detectors
	55000-226	55000-226		
	55000-227	55000-227	45681-200, 220, 232, 251, 252	15 / loop for Photo Electric Detectors
	55000-325	55000-325		
	55000-326	55000-326		
	55000-327	55000-327		
	55000-328	55000-328		
Hochiki	SLR-24	HD-3	HSC-220R(HB-72) NS6-220 OR NS4-220 (HB-3)	15 / loop
	SLR-24H			
	SLR-24V			
	SLR-835	HD-3		14 / loop
	SLR-835H	HD-5		
System Sensor	1400	A	N/A	16 / loop
	1451 (B401B)	A	N/A	16 / loop
	2100	A	N/A	20 / loop
	2100T	A	N/A	20 / loop
	2151 (B401)	A	N/A	16 / loop
	2151T (B401)	A	N/A	16 / loop
	2400	A	N/A	16 / loop
	2400TH	A	N/A	16 / loop
	2451 (B401B)	A	N/A	16 / loop
	2451TH (B401B)	A	N/A	16 / loop
	2W-B	A	N/A	20 / loop
	2WT-B	A	N/A	20 / loop
	2WTA-B	A	N/A	20 / loop
	2WTR-B	A	N/A	20 / loop

A.3 Four-Wire Smoke Detectors/Devices (UL Listed)

Table A-3 Compatible Four-Wire Smoke Detectors

Smoke Detector/Base	Detector Type	Max Standby Current (mA)	Alarm Current (mA)
Fenwal CPD-7021 (w/70-201000-005 Base)	Ionization	0.10	*
Fenwal PSD-7125	Photoelectric	0.10	*
Fenwal PSD-7126 (w/70-201000-005 Base)	Photoelectric	0.10	*
Fire-Lite BLP-12-4W	Base	*	*
Gentex 824	Photoelectric	0.50	*
Gentex 824T	Photoelectric	0.50	*

Smoke Detector/Base	Detector Type	Max Standby Current (mA)	Alarm Current (mA)
Gentex 824CP	Photoelectric	0.50	*
Gentex 824CPT	Photoelectric	0.50	*
Hochiki HSC-4R	Base	*	*
Hochiki SPB-24	Projected Beam	0.25	*
System Sensor B112LP	Base	0.12	36
System Sensor B114LP	Base	*	*
System Sensor B404B	Base	*	*
System Sensor DH100ACDC	Photoelectric	0.15	0.70
System Sensor DH100ACDCLP	Photoelectric	0.15	0.70
System Sensor DH100ACDCLWP	Photoelectric	0.15	0.70
System Sensor DH400ACDCI	Ionization Duct	25	95
System Sensor DH400ACDCP	Photoelectric Duct	25	95
System Sensor 1112/24/D	Ionization	0.05	50
System Sensor 1424	Ionization	0.10	41
System Sensor 1451 (w/B402B Base)	Ionization	0.10	39
System Sensor 2112/24ATR	Photoelectric	0.50	60/70
System Sensor 2112/24AITR	Photoelectric	0.50	60/70
System Sensor 2112/24/D	Photoelectric	0.05	50
System Sensor 2112/24R	Photoelectric	0.50	60/70
System Sensor 2112/24TR	Photoelectric	0.50	60/70
System Sensor 2112/24T/D	Photoelectric w/135° Thermal	0.05	50
System Sensor 2112/24TSRB	Photoelectric w/135° Thermal Supervisory Relay	15	45
System Sensor 2312/24TB	Photoelectric	0.12	50
System Sensor 2412 (12 volt)	Photoelectric	0.12	77
System Sensor 2412AT (12 volt)	Photoelectric	0.12	58
System Sensor 2412TH (12 volt)	Photoelectric	0.12	77
System Sensor 2424	Photoelectric	0.10	41
System Sensor 2424TH	Photoelectric	0.10	41
System Sensor 2451	Photoelectric	0.10	39
System Sensor 2451TH (with/B402B Base)	Photoelectric	0.10	39
System Sensor 2W-MOD	Loop Test/Maintenance Mod.	30	50
System Sensor 4W-B (12/24 Volt)	Photoelectric I^3	.05	23
System Sensor4WT-B (12/24 Volt)	Photoelectric I^3 w/Therm	.05	23
System Sensor 4WTA-B (12/24 Volt)	I^3 Photo w/ Therm Sounder	.05	35
System Sensor 4WTR-B (12/24 Volt)	I^3 Photo w/ Therm/Relay	.05	35
System Sensor 4WTAR-B (12/24 Volt)	I^3 Photo w/ Therm/Sounder/ Relay	.05	50
System Sensor 4WITAR-B (12/24 Volt)	I^3 Photo w/ Isolated Therm/ Sounder/Relay	.05	50
System Sensor 2W-MOD2	I^3 Loop Test/Maintenance Mod.	.05	*
System Sensor RRS-MOD	I^3 Reversing Relay/Sync Module	.05	*
System Sensor 6424	Projected Beam	10	28.4
System Sensor Beam 1224(S)	Projected Beam	17	38.5
* Contact manufacturer for current draws			

A.4 Door Holders (UL Listed)

Table A-4 lists door holders that are compatible with the fire control panel.

Table A-4 Compatible Door Holders

Manufacturer	Model	Type	Current (mA)
Edwards	DH150A	Floor Mount	96
Edwards	DH154A	Flush Mount	96
Edwards	DH158A	Surface Mount	96
Rixon Firemark	FM-980	Floor Mount, single	68
Rixon Firemark	FM-996	Surface Wiring	68
Rixon Firemark	FM-998	Concealed Wiring	68

A.5 Relays (UL Listed)

Table A-5 lists relays compatible with the fire control panel.

Table A-5 Compatible Relays

Manufacturer	Model	Current (mA)
Air Products & Controls, LTD	MR-101/C MR-201/C PAM-1 PAM-2 PAM-SD	15 35 15 15 15
System Sensor	A77-716B PR-1 PR-2 PR-3 EOLR-1 R-10T R-14T R-20T R-24T R-10E R-14E R-20E R-24E	20 15 30 30 30 23 23 40 40 23 23 40 40

A.6 Compatible 520Hz Signaling Speakers

Table A-6 520Hz Speakers

Model Number	Description
SPR	Wall High-Fidelity Speaker, Red
SPW	Wall High-Fidelity Speaker, White
SPCR	Ceiling High-Fidelity Speaker, Red
SPCW	Ceiling High-Fidelity Speaker, White

Table A-6 520Hz Speakers

Model Number	Description
SPSR	Wall High-Fidelity Speaker Strobe, Red
SPSRH	Wall High-Fidelity Speaker Strobe, High Candela, Red
SPSW	Wall High-Fidelity Speaker Strobe, White
SPSCR	Ceiling High-Fidelity Speaker Strobe, Red
SPSCW	Ceiling High-Fidelity Speaker Strobe, White
SPSCWH	Ceiling High-Fidelity Speaker Strobe, High Candela, White
SPSCRH	Ceiling High-Fidelity Speaker Strobe, High Candela, Red
SPSCW-CLR-ALERT	Ceiling High-Fidelity Speaker Strobe, Clear Lens, ALERT, White
SPSCW-P	Ceiling High-Fidelity Speaker Strobe, Plain, White
SPSCWH-P	Ceiling High-Fidelity Speaker Strobe, High Candela, Plain, White
SPSR-P	Wall High-Fidelity Speaker Strobe, Plain, Red
SPSRH-P	Wall High-Fidelity Speaker Strobe, High Candela, Plain, Red
SPSCWH-P	Ceiling High-Fidelity Speaker Strobe, High Candela, Plain, White
SPSW-ALERT	Wall High-Fidelity Speaker Strobe, Amber Lens, ALERT, White
SPSW-CLR-ALERT	Wall High-Fidelity Speaker Strobe, Clear Lens, ALERT, White
SPSW-P	Wall High-Fidelity Speaker Strobe, Plain, Red
SPSWH	Wall High-Fidelity Speaker Strobe, High Candela, White
SPSWH-P	Wall High-Fidelity Speaker Strobe, High Candela, Plain, Red
SPRL	Wall High-Fidelity Speaker, Red
SPWL	Wall High-Fidelity Speaker, White
SPCRL	Ceiling High-Fidelity Speaker, Red
SPCWL	Ceiling High-Fidelity Speaker, White
SPSCRL	Ceiling High-Fidelity Speaker Strobe, Red
SPSCWL	Ceiling High-Fidelity Speaker Strobe, White
SPSRL	Wall High-Fidelity Speaker Strobe, Red
SPSRL-SP	Wall High-Fidelity Speaker Strobe-FUEGO
SPSWL	Wall High-Fidelity Speaker Strobe, White
SPSCWL-P	Ceiling High-Fidelity Speaker Strobe, Standard, White, Plain
SPSRL-P	Ceiling High-Fidelity Speaker Strobe, Standard, Red, Plain
SPSWL-P	Wall High-Fidelity Speaker Strobe, Standard, White, Plain
SPSCWL-CLR-ALERT	Ceiling High-Fidelity Speaker Strobe, Clear Lens, Standard, White, ALERT
SPSWL-ALERT	Wall High-Fidelity Speaker Strobe, Amber Lens, ALERT, White
SPSWL-CLR-ALERT	Wall High-Fidelity Speaker Strobe, Clear Lens, Standard, ALERT, White
*F=FIRE, P=PLAIN, AL=ALERT, AG=AGENT, EV=EVAC, SP=FUEGO, PG=FOGO	

A.7 Compatible 520Hz Low Frequency Bases

Table A-7 Low Frequency Bases

Model Number	Description
B200S-LF	Low Frequency Intelligent Sounder Base
B200SR-LF	Low Frequency Intelligent Sounder Base

Appendix B
Editing Text Using the Built-In Programmer

This section contains tables of programmable characters that may be used for device, module, site, template, group, and zone names or phone numbers.T9 style editing is used.

B.1 Characters Used for Editing Text

Table B-1 lists the available characters and their associated numeric designator. When programming:

1. Use the Up or Down arrow key to scroll to the mode wanted.
2. Press the number shown in Table B-1 until the character wanted is shown.
3. Arrow left and right for position, and press enter to accept.

Table B-1: Character Table

Lower Case Letters			
abc 1	def 2	ghi 3	jkl 4
mno 5	pqr 6	stu 7	vwx 8
yz 9	Spc 0		
Upper Case Letters			
ABC 1	DEF 2	GHI 3	JKL 4
MNO 5	PQR 6	STU 7	VWX 8
YZ 9	Spc 0		
Numbers and Special Characters			
1 [ ] 1	2 ( ) 2	3 . , 3	4 : ; 4
5 ' " 5	6 ? ! 6	7 ‘ / 7	8 – + 8
9 = - 9	0 0	* & @ *	# $ #

B.2 Example Name Edit

1. Press the up or down arrow to select upper case letters mode, Press 2 until “F” appears.
2. Press the up or down arrow to change mode to lower case letters, Press 3 until “i” appears.
3. Press 6 until “r” appears.
4. Press 2 until “e” appears.
5. Press 0 to space, then continue to next word using the same process.
6. Press ENTER to accept.

Note: After three seconds of no change, letter will automatically be accepted. Also pressing next number will automatically accept previous choice.

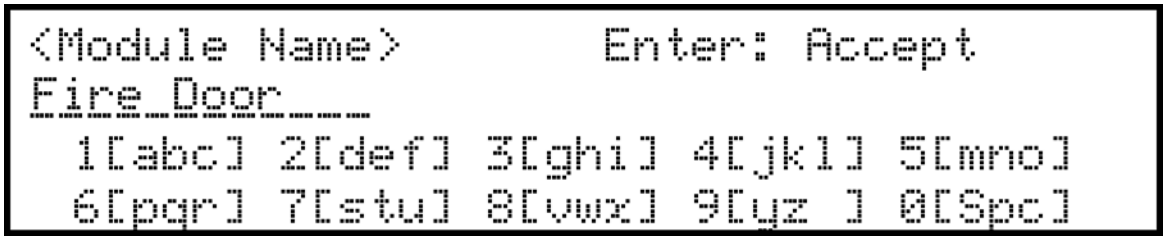


Figure B-1 Edit Name Example

Appendix C
Cadence Patterns

The cadence patterns shown in Appendix C are available for use with the control panel.

#	Name	Pattern Description — Patterns repeat until condition is cleared.
00	Constant	Continuous sound — Note: This is the only pattern that can be used for relay circuits. The system will override any other choice.
01	March Code	.5 sec on, .5 sec off
02	ANSI 3.41	.5 sec off, 1.5 sec off, .5 sec on
03	Single Stroke	.1 sec on, 3 sec off, 1 sec off
04	California	5 sec. on, 10 sec. off
05 : 16	Zone Coded	.5 sec on, .5 sec off → This pattern multipled by # of zone in alarm, followed by 3 seconds off. **EXAMPLE:** Pattern 06, Zone 2 coded: Zone 1, Zone 2, Off, Zone 1, Zone 2
17 . . . 21	Sync Type	These outputs provide synchronization for AMSECO, Gentex, System Sensor, or Wheelock synchronized appliances.
22	Power Isolated	Disconnected, no voltage at terminals
23	Temporal 4	100ms off, 100ms on, Off 5 seconds

Zone Coded

Pattern#	Zone
5	Zone 1
6	Zone 2
7	Zone 3
8	Zone 4
9	Zone 5
10	Zone 6
11	Zone 7
12	Zone 8
13	Custom 1
14	Custom 2
15	Custom 3
16	Custom 4

Pattern #	Sync Type
17	Faraday- not allowed
18	Gentex
19	System Sensor
20	Wheelock
21	Amesco

Figure C-1 Cadence Patterns Available with the Control Panel

Appendix D
Expanded Receiver/Panel Relationship

The available receiver number will correspond with what panel number you entered. Receiver numbers are populated based on panel number and audited to allow only the 4 appropriate receivers. See Section 6.2.6.3.

Table D-1 Receiver/panel relationship

Panel	Available receiver numbers			
1	1	2	3	4
2	5	6	7	8
3	9	10	11	12
4	13	14	15	16
5	17	18	19	20
6	21	22	23	24
7	25	26	27	28
8	29	30	31	32
9	33	34	35	36
10	37	38	39	40
11	41	42	43	44
12	45	46	47	48
13	49	50	51	52
14	53	54	55	56
15	57	58	59	60
16	61	62	63	64
17	65	66	67	68

Panel Security

Panel installation / maintenance security checklist

System Description: _____

System Location: _____

Installer: _____ Date: _____

Complete the following Cyber security tasks for each panel Install

- Install the panel in a secure location considering both software and hardware vulnerabilities.
- Change the default password to a unique password
- Securely configure networks and firewalls
- Assess security risks
- Develop a Disaster and Recovery Plan
- Develop a Backup and Recovery Strategy
- Install, configure and keep anti virus software updated on all computers which access the panel
- Keep operating system updated on all computers which access the panel
- Deliver all required system information upon delivery to the system owner
- Train end-users on security maintenance tasks upon system delivery
- For decommissioning, dispose of data securely.
- Ensure the Ethernet cable is removed from the FACP when not being utilized for configuration or for reporting purposes.

Security and Data Protection

Communication Security - Level 1

Stored Data Security - Level 0

Physical Security - Level 1

Access Control Security - Level 1

Manufacturer Warranties and Limitation of Liability

Manufacturer Warranties. Subject to the limitations set forth herein, Manufacturer warrants that the Products manufactured by it in its Northford, Connecticut facility and sold by it to its authorized Distributors shall be free, under normal use and service, from defects in material and workmanship for a period of thirty six months (36) months from the date of manufacture (effective Jan. 1, 2009). The Products manufactured and sold by Manufacturer are date stamped at the time of production. Manufacturer does not warrant Products that are not manufactured by it in its Northford, Connecticut facility but assigns to its Distributor, to the extent possible, any warranty offered by the manufacturer of such product. This warranty shall be void if a Product is altered, serviced or repaired by anyone other than Manufacturer or its authorized Distributors. This warranty shall also be void if there is a failure to maintain the Products and the systems in which they operate in proper working conditions.

MANUFACTURER MAKES NO FURTHER WARRANTIES, AND DISCLAIMS ANY AND ALL OTHER WARRANTIES, EITHER EXPRESSED OR IMPLIED, WITH RESPECT TO THE PRODUCTS, TRADEMARKS, PROGRAMS AND SERVICES RENDERED BY MANUFACTURER INCLUDING WITHOUT LIMITATION, INFRINGEMENT, TITLE, MERCHANTABILITY, OR FITNESS FOR ANY PARTICULAR PURPOSE. MANUFACTURER SHALL NOT BE LIABLE FOR ANY PERSONAL INJURY OR DEATH WHICH MAY ARISE IN THE COURSE OF, OR AS A RESULT OF, PERSONAL, COMMERCIAL OR INDUSTRIAL USES OF ITS PRODUCTS.

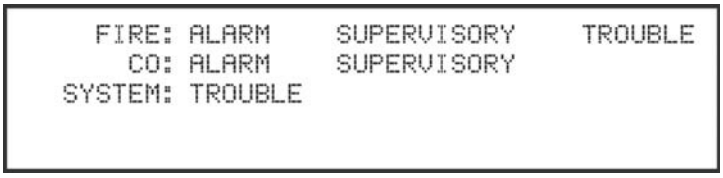
This document constitutes the only warranty made by Manufacturer with respect to its products and replaces all previous warranties and is the only warranty made by Manufacturer. No increase or alteration, written or verbal, of the obligation of this warranty is authorized. Manufacturer does not represent that its products will prevent any loss by fire or otherwise.

Warranty Claims. Manufacturer shall replace or repair, at Manufacturer's discretion, each part returned by its authorized Distributor and acknowledged by Manufacturer to be defective, provided that such part shall have been returned to Manufacturer with all charges prepaid and the authorized Distributor has completed Manufacturer's Return Material Authorization form. The replacement part shall come from Manufacturer's stock and may be new or refurbished. THE FOREGOING IS DISTRIBUTOR'S SOLE AND EXCLUSIVE REMEDY IN THE EVENT OF A WARRANTY CLAIM.

Model IFP-2100 Basic Operating Instructions

Honeywell

These instructions must be framed and displayed next to the IFP-2100 panel in accordance with NFPA 72 fire code for Local Protected Fire Alarm Systems. Test the system in accordance to NFPA 72.

Operation	Task to Perform
Silence Alarms and Troubles	Press SILENCE then enter a code if prompted. Silence LED will light.
Reset Alarms	Press RESET then enter a code if prompted.
View Alarms, Supervisories, and Troubles	For each type of condition, press the up or down arrow associated with Alarm, Supervisory, or Trouble. 
View status of Point	1. Enter the installer code. The panel will automatically go to the main menu. 2. Press 2 to select Point Functions. 3. Enter code if prompted, then press 2 to select Point Status. 4. Select the module the device is located on by using the up or down arrow. Then press ENTER. 5. Enter the point number.
Conduct a Fire Drill	Hold the DRILL button and then enter a code if prompted. OR 1. Enter the installer code. The panel will automatically go to the main menu. 2. Press 1 to select System Tests. 3. Enter code if prompted, then press 1 to select Fire Drill. 4. Press ENTER to start the fire drill., and Press ENTER to end the fire drill.
Check Detector Sensitivity	1. Follow steps 1 through 5 for viewing a point's status. 2. Press the right arrow to view detector sensitivity.
Set Time and Date	1. Enter the installer code. The panel will automatically go to the main menu. 2. Press 4 to select Set Time & Date. Enter a code if prompted. 3. Make changes to the fields on the screen as necessary. 4. Press ENTER if you wish to keep the changes. 5. Press ENTER to set the entered time and date.
Enable / Disable a Point	1. Enter the installer code. The panel will automatically go to the main menu. 2. Press 2 to select Point Functions. 3. Press 1 to select Disable / Enable Point. 4. Press 7 to select Disable/Enable Point. 5. Select the module the point is located on by using the up or down arrow. Then press ENTER. 6. Enter the point number then press ENTER. 7. Press the right arrow to Disable/Enable Point.
View Event History	1. Enter the installer code. The panel will automatically go to the main menu. 2. Press 3 to select Event History. 3. Enter code if prompted. 4. Press the up or down arrow to view events in the history buffer.
For Service call:	

P/N LS10149-001SK-E Rev A

ECN: 16-0218

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Cut Along the Dotted Line

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Model IFP-2100ECS
Basic Operating Instructions

These instructions must be framed and displayed next to the IFP-2100ECS panel in accordance with NFPA 72 fire code for Local Protected Fire Alarm Systems.

FS = Fire System ECS = Emergency Communication System	
Operation	**Task to Perform**
Silence Alarms and Troubles	Press SILENCE then enter a code if prompted. Silence LED will light.
Reset Alarms	1. Press RESET. 2. Press 1 to Reset Fire System. 3. Press 2 to Reset Emergency Communication. System. *Note: To reset ECS at an LOC, the user must gain ECS Control (See Figure 1).*
View all active alarms, troubles, and supervisory signals	The highest priority event will display first. Press the Down arrow to view location and type of alarm or trouble. FIRE: ALARM SUPERVISORY TROUBLE CO: ALARM SUPERVISORY EMERGENCY: ALARM SUPERVISORY <Press ▼ for status>
View a Point's Status	1. Press ENTER to access Main Menu. 2. Press 2 to select Point Functions. 3. Then press 2 to select Point Status. 4. Select the module the device is located on by using the Up or Down button. Then press ENTER. 5. Enter the point number.
Conduct a Fire Drill	Hold the DRILL button and then enter a code if prompted. OR 1. Enter the installer code. The panel will automatically go to the main menu. 2. Press 1 to select System Tests. 3. Enter code if prompted, then press 1 to select Fire Drill. 4. Press ENTER to start the fire drill, and Press ENTER to end the fire drill.
Set Time and Date	1. Enter the installer code. The panel will automatically go to the main menu. 2. Press 4 to select Set Time & Date. Enter a code if prompted. 3. Make changes to the fields on the screen as necessary. 4. Press ENTER if you wish to keep the changes. 5. Press ENTER to set the entered time and date.
Enable / Disable a Point	1. Enter the installer code. The panel will automatically go to the main menu. 2. Press 2 to select Point Functions. 3. Enter code if prompted, then press 1 to select Disable / Enable Point. 4. Press 7 to select Disable/Enable Point. 5. Select the module the point is located on by using the up or down arrow. Then press ENTER. 6. Enter the point number then press ENTER. 7. Press the right arrow to Disable/Enable Point.
To Gain /Request ECS Control	1. Press the  Button and follow the on-screen Instructions. *Note: When ECS Control LED is blinking, another LOC has ECS Control. ECS Control LED is on steady when the LOC has ECS Control.*
For Service call:	

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Cut Along the Dotted Line

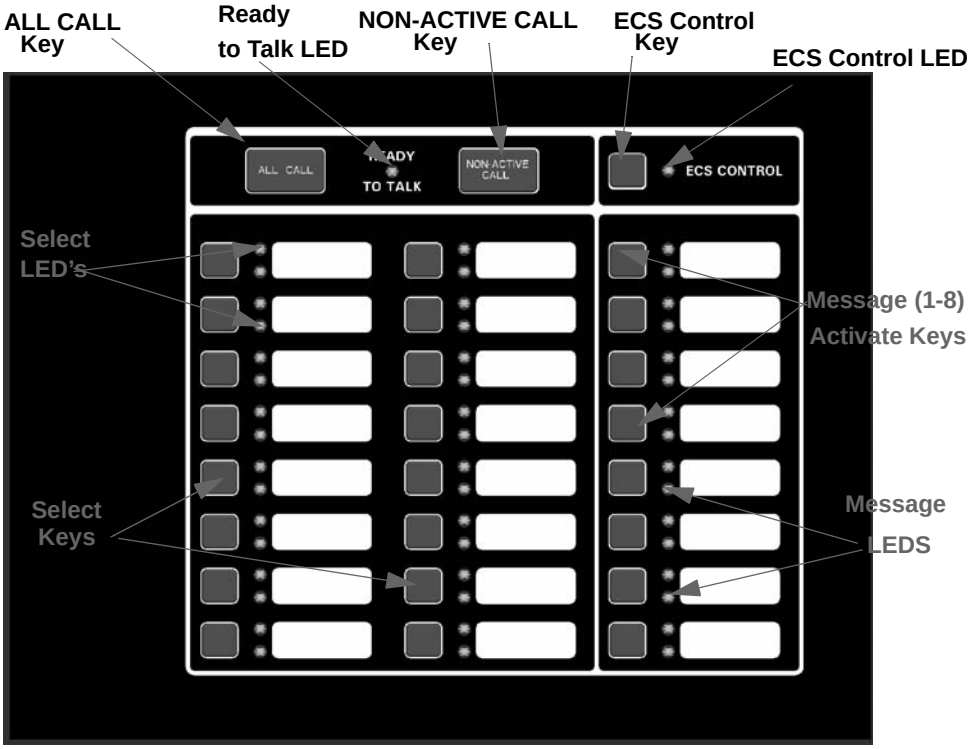


Figure 1-1: ECS Front view

Table 1-1: LED Conditions

LED	Color	States	Meaning
Select Keys	Red	On	The corresponding area is active for the currently playing ECS message.
		Off	The corresponding area is not active.
	Green	On	The corresponding area is active for the microphone.
		Off	The corresponding area is not active for the microphone.
		Blink	One or more associated network page destination panels are unable to output the page.
ECS Control LED	Green	Blink	When this LED is blinking, someone has requested control of the ECS System.
		On	LOC has ECS Control and the user is able to make changes to the ECS.
		Off	LOC does not have ECS Control.
ECS Message LED	Red	On	The corresponding ECS event was activated by an ECS device.
		Off	The corresponding ECS event was not activated from this LOC.
	Green	On	The corresponding ECS event is active and was generated from the LOC (or was activated from another LOC, but this LOC now has ECS Control).

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Table 1-2: ECS Control Request

Operation	Task
Gain ECS Control at an LOC	Press the ECS Control Key and enter a code if prompted. If ECS Control is available, the ECS Control LED will illuminate. If another LOC has ECS Control, the display will be similar to the one shown. Press 1 to request control. The LOC with ECS Control will then be able to allow or deny the request.
Gain ECS Control as ECS Super User at an LOC (only one ECS Super User is allowed ECS Control in the system at a time).	From the idle screen, enter an ECS Super User access code and then press the ECS Control Key. If ECS Control as Super User is available, the ECS Control LED will illuminate. If another LOC has Super User ECS Control, a request for Super User ECS Control will automatically be made to the LOC with control. The LOC with Super User ECS Control will then be able to allow or deny the request. (See Figure 1-2 for screen display example).
Select all output group for microphone override	Key the microphone, wait for the Ready-to-Talk LED to light, press the All Call Key, and then deliver your verbal message.
Select all non-activated output groups for microphone override	Key the microphone, wait for the Ready-to-Talk LED to light, press the Non-Active Call Key, and then deliver your verbal message.

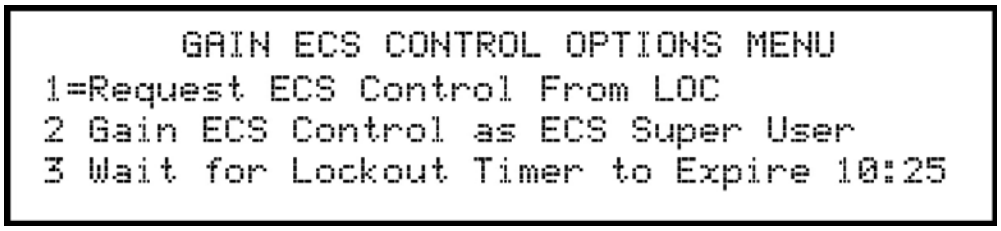


Figure 1-2: Gain ECS Control as ECS Super User Screen

How to Operate the Microphone:

1. Press the ECS Control button
2. Key the Microphone
3. Press the All Call button

How to Reset the ECS System

1. Press The Reset Button
2. Select 2 to Reset the Emergency system

ECS-LOC2100 Operating Instruction

For Live Message

1. Key the Microphone.
2. Press the All Call Key or select desired output area using select keys.
3. Deliver your verbal message.

For Pre-recorded Message

1. Select desired ECS Message Key 1-8.

- If ECS Control LED is on steady, the LOC has ECS Control.
- If ECS Control LED is Blinking, another LOC has ECS Control.

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Farenhyt™ Series

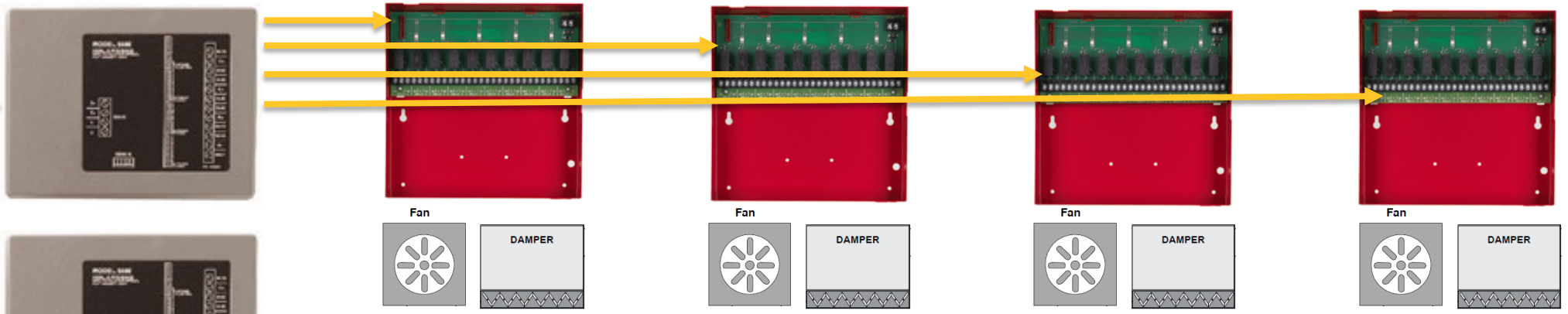
Honeywell Farenhyt
12 Clintonville Road
Northford, CT 06472-1610
203-484-7161
Fax: 203-484-7118

www.farenhyt.com

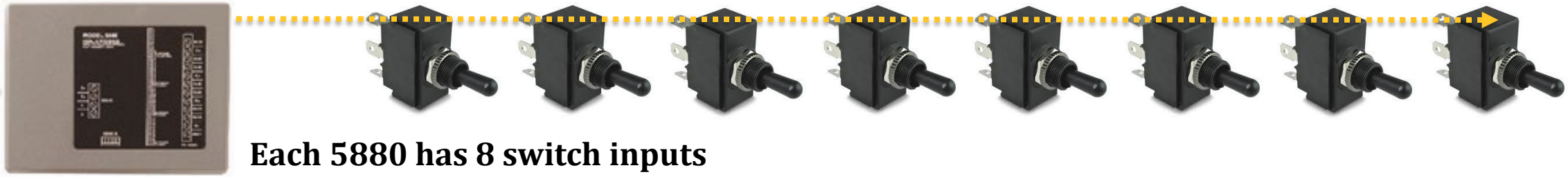
8. Smoke Control Management System

(Smoke Control) 5883 Relay Interface Board + 5880 LED / IO Module

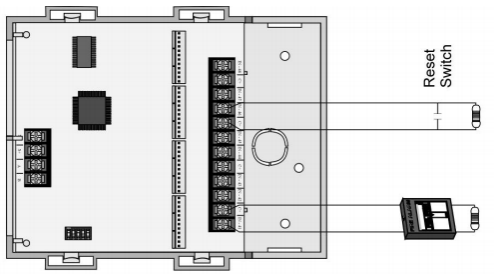
SBUS – to main Fire Alarm Control Panel



Each 5880 can control either 40 output LED's or Relays



Each 5880 has 8 switch inputs



- 10 general purpose Form C relays
- Relays rated at 5.0A @ 30 VDC or 250 VAC resistive
- 5880 programmable LED outputs drive the relays (40 LED's)
- 8 Switch inputs on the 5880
- Up to four 5883s can be connected to the 5880 LED driver module

Honeywell

Manufacturer Recommendation

Recommended Cables

SLC Wiring requirement for IDP Modules

Wire Requirements	Distance in Feet (meters)	Wire Type
RECOMMENDED: Twisted-unshielded pair, 12 to 18 AWG (3.31mm^2 to 0.82 mm^2). 50 ohms, maximum per length of Style 6 & 7. 50 ohms per branch maximum for Style 4 loop.	12,500 ft. (3,810 m) 9,500 ft. (2895.6 m) 6,000 ft. (1,828.8 m) 3,700 ft. (1,127.76 m)	12 AWG (3.31 mm^2) 14 AWG (2.08 mm^2) 16 AWG (1.31 mm^2) 18 AWG (0.82 mm^2)
Untwisted, unshielded wire, in conduit or outside of conduit.	5,000 ft. (1,528 m) 3,700 ft. (,127.76 m)	12 to 16 AWG (3.31^2 mm to 1.31 mm^2) 18 AWG (0.82 mm)
Twisted, shielded pair **Note:** • Shields must be isolated from ground • Shields should be broken at each device	5,000 ft. (1524 m) 3,700 ft. (1,127.76 m)	12 to 16 AWG (3.31 mm^2 to 1.31 mm^2) 18 AWG (0.82 mm^2)
RECOMMENDED: Twisted-unshielded pair, 12 to 18 AWG (3.31mm^2 to 0.82 mm^2). 50 ohms, maximum per length of Style 6 & 7. 50 ohms per branch maximum for Style 4 loop.	12,500 ft. (3,810 m) 9,500 ft. (2895.6 m) 6,000 ft. (1,828.8 m) 3,700 ft. (1,127.76 m)	12 AWG (3.31 mm^2) 14 AWG (2.08 mm^2) 16 AWG (1.31 mm^2) 18 AWG (0.82 mm^2)

Table 4 SLC Wiring requirement for IDP Modules

Wire sizing for 6815 SLC circuit

The SLC requires use of a specific wire type, depending on mode of operation, to ensure proper circuit functioning. Wire size should be no smaller than 18 AWG (.075 mm) and no longer that 12 AWG (3.25 mm) wire. The wire size depends on the length of the SLC circuit. It is recommended that all wiring be twisted-pair to minimize the effects of electrical interference. Shield Termination

Wiring Distance for SBUS Modules

The IFP-2100/ECS panel has two SBUS circuits which can support up to 1.0A of module load per SBUS circuit.

When determining the type of wire and the maximum wiring distance that can be used, you will need to calculate loads for each SBUS to ensure that each SBUS does not exceed 1.0A.

After calculating the total worst case current draw, refer to the table below for the maximum distance the modules can be located from the panel on a single wire run.

Wiring Distance: SBUS Modules to Panel				
Total Worst Case Current Draw (amps)	**22 Gauge**	**18 Gauge**	**16 Gauge**	**14 Gauge**
0.100	1852 ft.	4688 ft.	* 6000 ft.	* 6000 ft.
0.200	926 ft.	2344 ft.	3731 ft.	5906 ft.
0.300	617 ft.	1563 ft.	2488 ft.	3937 ft.
0.400	463 ft.	1172 ft.	1866 ft.	2953 ft.
0.500	370 ft.	938 ft.	1493 ft.	2362 ft.
0.600	309 ft.	781 ft.	1244 ft.	1969 ft.
0.700	265 ft.	670 ft.	1066 ft.	1687 ft.
0.800	231 ft.	586 ft.	933 ft.	1476 ft.
0.900	206 ft.	521 ft.	829 ft.	1312 ft.
1.000 (Max)	185 ft.	469 ft.	746 ft.	1181 ft.

Table 5 Wiring Distance for SBUS Modules to Panel.

Note

Refer to the installation manual for more details and related calculations.

10. Devices Wiring

IDP-PHOTO-R Wiring

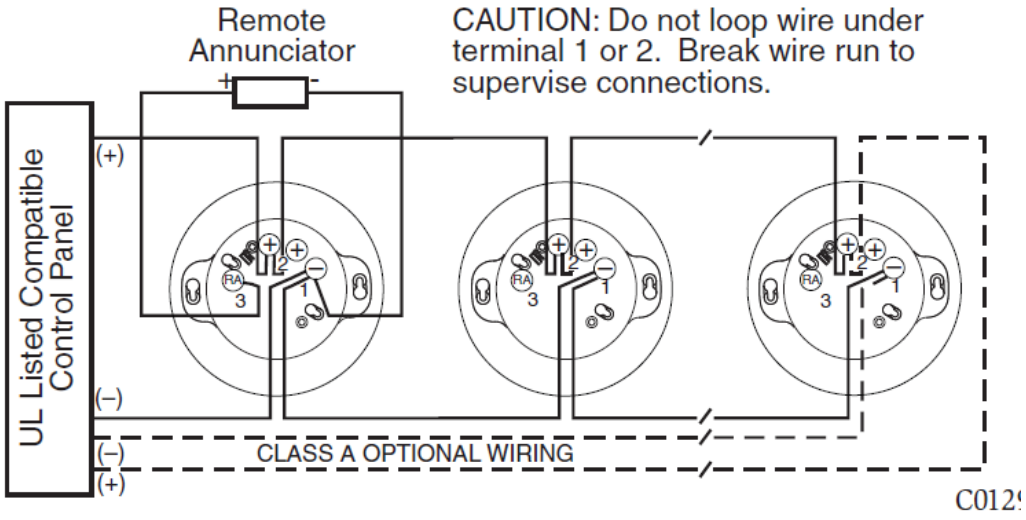


Figure 4 IDP-PHOTO-R Duct wiring

IDP-Photo / IDP-Photo-T and IDP-Acclimate Wiring:

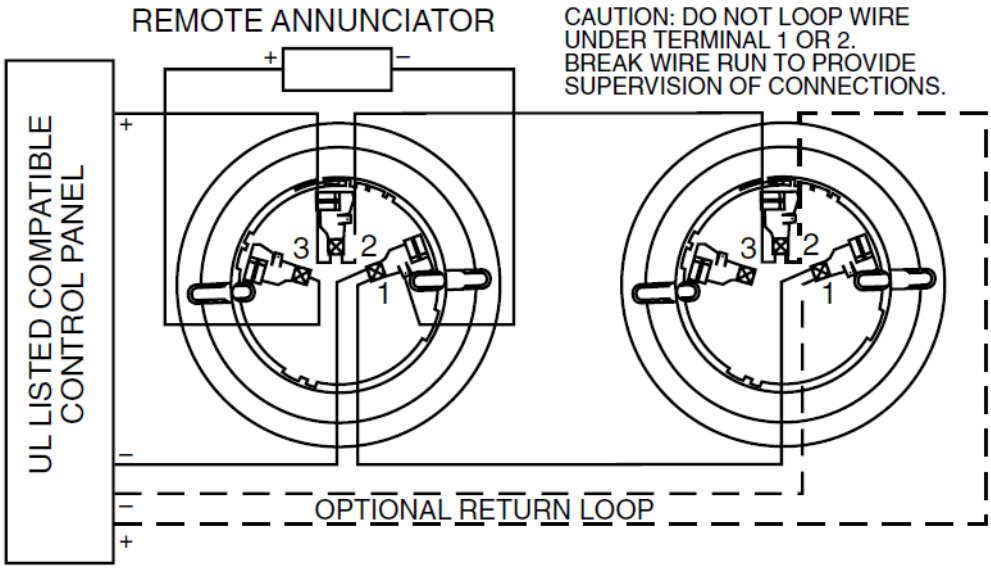


Figure 5 IDP-PHOTO / IDP-PHTOT-T & IDP-Acclimate wiring

IDP-Beam wiring:

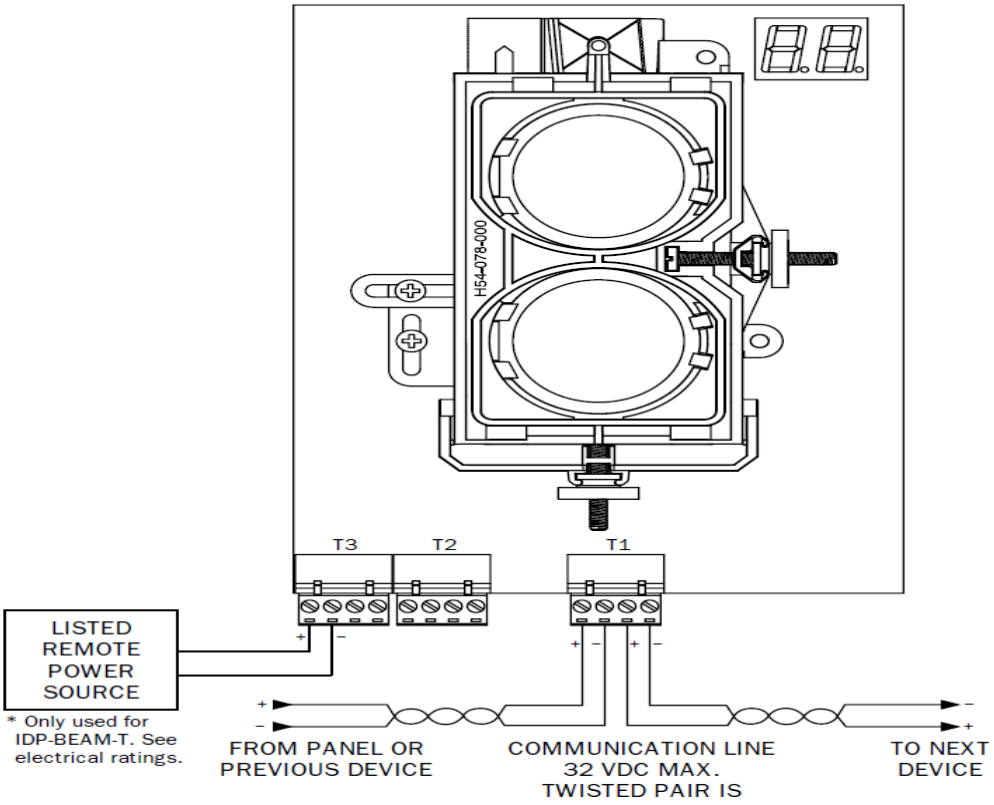


Figure 6 BEAM Detector wiring

IDP-Relay Wiring

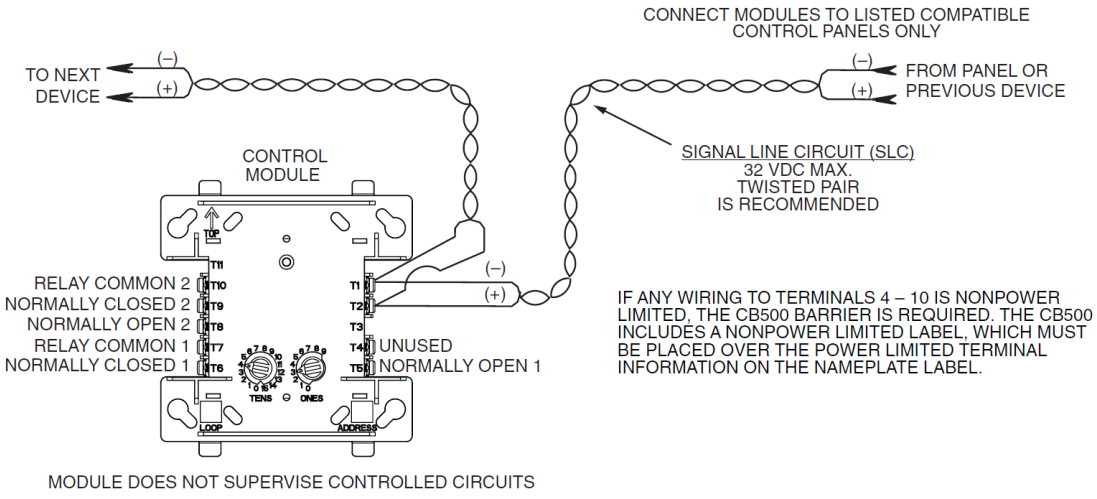


Figure 7 IDP-Relay Module wiring

Isolator Module wiring

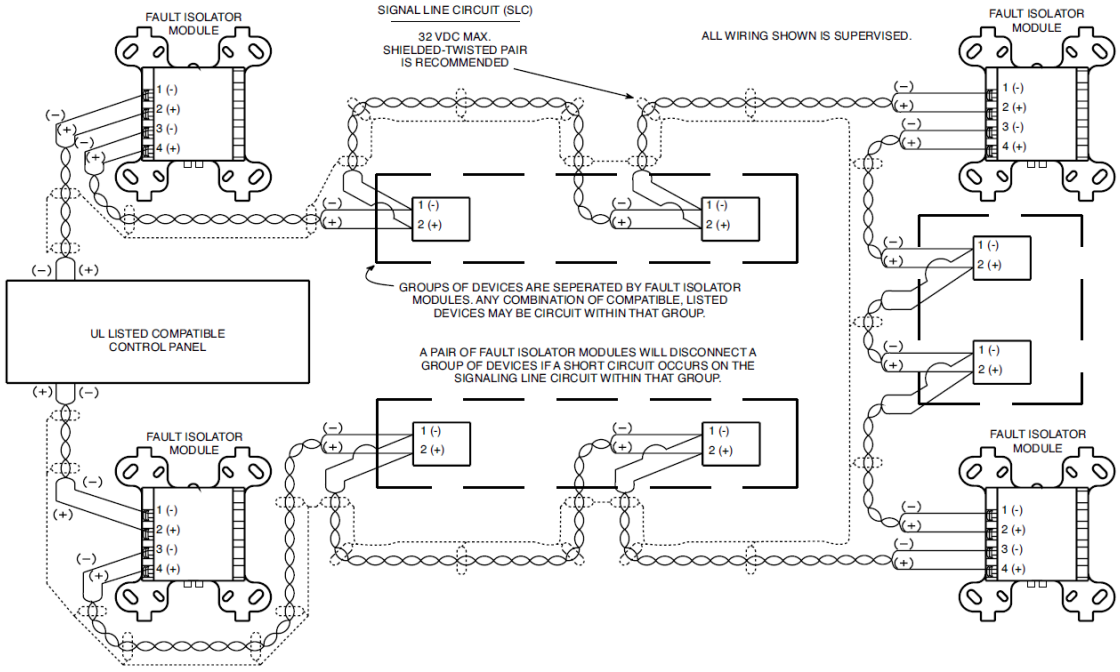


Figure 8 Isolator Module wiring

Pull Station wiring:

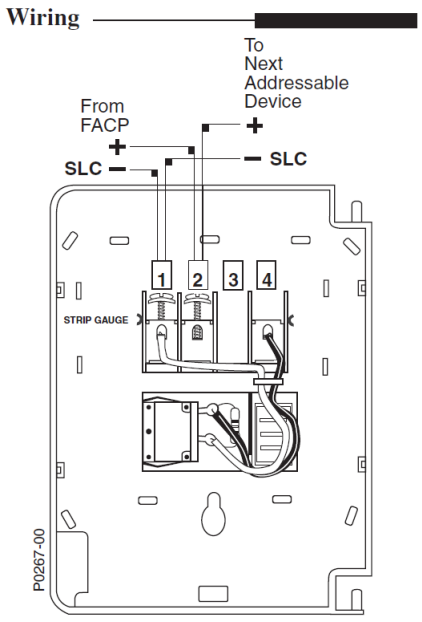
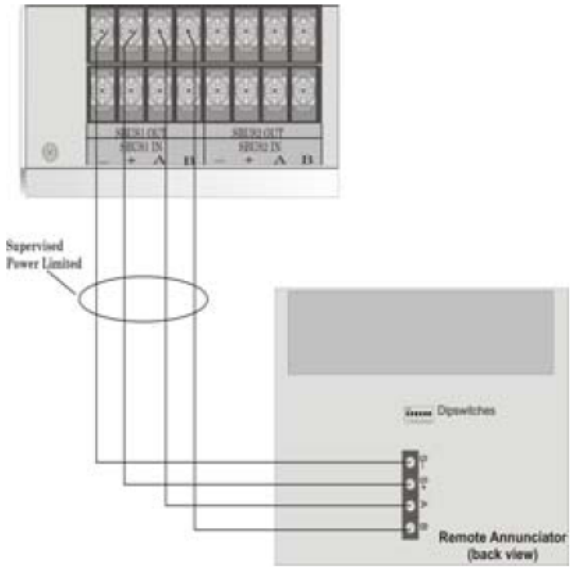


Figure 9 Pull Station wiring

RA2000 wiring:



2.

Figure 10 RA2000 wiring

Note: All devices wiring are also available in related installation manuals24][‘; 7

11. Certificates

ONLINE CERTIFICATIONS DIRECTORY



PGWM.S2766
Control and Communication Equipment

Page Bottom

Control and Communication Equipment

See General Information for Control and Communication Equipment

SILENT KNIGHT BY HONEYWELL S2766
1985 Douglas Dr
MN10-212A
Golden Valley, MN 55422 USA

Amplifiers, Model(s) ECS-125W+ (c) , EVS-125W +(c), ECS-125WHV+ (c), ECS-50W+ (c), EVS-50W +(c), ECS-50WHV+ (c), VIP-125+ (c), VIP-125HV+ (c), VIP-50+ (c), VIP-50HV+ (c)

Amplifiers - Subassembly, Model(s) ECS-INT50W (c), EVS-INT50W (c), EVS-125WBD

Analog loop expander, Model(s) 5815XL+ (c)

Annunciator boards, Model(s) 6861BIA (d), 6861GIA (d)

Autonomous control unit, Model(s) IFP-300ECSB (a)

Autonomous control units, Model(s) 6820-EVS (d), ECS-DUAL50W(b)(c), ECS-DUAL50WHV(b)(c), ECS-RCU2000 (b)(c), IFP-1000ECS (c) (a), 5820XL-EVS (c) (a), IFP-1000ECSHV (c) (a), IFP-100ECS (c) (a), IFP-2000/ECS (b)(c), IFP-2000/ECSHV (b)(c)

Autonomous control units, Model(s) IFP-2100ECS, IFP-2100ECSB, IFP-2100ECSHV, IFP-2100ECSHVB (d)

Autonomous control units, Model(s) IFP-300ECS (a)

Back Up Amplifier, Model(s) ECS-50WBU (b) (c)

Enclosures, Model(s) 00VIP-125CB+ (c), 00VIP-50CB+ (c), 122773+ (c), 122774+(c), 6820EVSCB, IFP-300ECSCB, and IFP-300ECSSBCB, IFP-2100ECSCB (d), I FP-2100ECSBCB (d)

LED/Switch card, Model(s) ECS-EMG (d)

LOC, Model(s) EVS-LOC (a)

Network Voice Control Module, Model(s) ECS-NVCM

Remote command unit, Model(s) ECS-RCU+ (c), EVS-RCU +(c)

Remote voice module, Model(s) ECS-RVM+ (c), EVS-RVM +(c)

Speaker Expander module, Model(s) ECS-CE4+ (c), EVS-CE4 +(c)

Switch card, Model(s) ECS-SW24+ (c), EVS-SW24 +(c)

Voice control module, Model(s) ECS-VCM + (c), EVS-VCM +(c)

Model(s) ECS-AVCM, EVS-AVCM, Models ECS-RPU, EVS-RPU Remote Paging Units

Model(s) ECS-LOC (d), ECS-LOC2100 (d)

(a) - Complementary Listed to FSZI, UOQY, SYZV and UOJZ

(b) - Complementary Listed under UOJZ, SYZV

(c) - Investigated to ANSI/UL 2572, "Mass Notification Systems"

(d) - Complementary Listed to FSZI, SYZV and UOJZ

+ - Complementary Listed under UOJZ, UOQY,SYZV

Last Updated on 2018-04-16

ONLINE CERTIFICATIONS DIRECTORY



UNIU.S6012
Boxes, Noncoded

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Boxes, Noncoded

See General Information for Boxes, Noncoded

SILENT KNIGHT BY HONEYWELL S6012
1985 Douglas Dr
MN10-212A
Golden Valley, MN 55422 USA

Models IDP-PULL-SA, IDP-PULL-DA, SK-PULL-SA, SK-PULL-DA, PS-DA, PS-DASP, PS-SA.

Models PS-DAH, PS-DALOB.

Boxes, non-coded, Models SD500-PS, SD500-PSDA.

Models PS-SATK, PS-SAWH, PS-DATK, PS-SATH PS-DATH.

Fire alarm pull boxes, Models PS-BB, PS-WPB.

Accessory, Model SD500-LK.

Boxes, non-coded , Models WSK-PULL-DA, WIDP-PULL-DA.

Last Updated on 2017-12-22

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ONLINE CERTIFICATIONS DIRECTORY



UOJZ.S2766
Control Units, System

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Control Units, System

See General Information for Control Units, System

SILENT KNIGHT BY HONEYWELL S2766
1985 Douglas Dr
MN10-212A
Golden Valley, MN 55422 USA

UL 864 10th Edition Listed

Model	Control Unit System Type(s)	Initiating Device Type(s)	Signaling Type(s)
Control Unit			
IFP-300ECSB (a)(b)(d)(j)(k)(l)	AUX, CS (PPU), L, RS (PPU)	A, CO, M, SS, WF	C, DAC, NC, PB, Rev Pol
RFP-2100, RFP-2100B, RFP-2100HV, RFP-2100HVB	AUX, CS (PPU), L, RS (PPU)	A, CO, M, SS, WF	DAC, NC, PB

UL 864 9th Edition Listed

Model	Control Unit System Type(s)	Initiating Device Type(s)	Signaling Type(s)
Control Unit			
IFP-1000ECS (c) (k) (l)	L	A, M, SS, WF	March, NC
	AUX	A, M, WF	-
	RS (PPU)	A, M, SS, WF	DAC
	CS (PPU)	A, M, SS, WF	DAC
IFP-1000ECSHV (c) (k) (l)	L	A, M, SS, WF	March, NC
	AUX	A, M, WF	-
	RS (PPU)	A, M, SS, WF	DAC
	CS (PPU)	A, M, SS, WF	DAC
IFP-100ECS (c) (k) (l), 5820XL-EVS (c), (k), (l)	L	A, M, WF	C, March, NC
	AUX	A, M, WF	-
	RS (PPU)	A, M, SS, WF	DAC, Rev Pol
	CS (PPU)	A, M, SS, WF	DAC
IFP-2000/ECS (b)(k), ECS-DUAL50W (b)(k), ECS-DUAL50WHV (b)(k), ECS-RCU2000 (b)(k)			
	L	A, M, SS, WF	March, NC

	AUX	A, M, WF	NC
	RS (PPU)	A, M, SS, WF	DAC, OT, Rev Pol
	CS (PPU)	A, M, SS, WF	DAC
IFP-2000/ECSHV (b)(k)	AUX	A, M, WF	NC
	CS (PPU)	A, M, SS, WF	DAC
	L	A, M, SS, WF	March, NC
	RS (PPU)	A, M, SS, WF	DAC, OT, Rev Pol
IFP-300B	AUX, CS (PPU), L, RS (PPU)	A, CO, M, SS, WF	C, DAC, NC, PB, Rev Pol
IFP-75B (a)(b)(d)(l)	AUX, CS (PPU), L, RS (PPU)	A, CO, M, SS, WF	C, DAC, NC, PB, Rev Pol
00IFP-1000xxHV (a) (b) (d)	AUX	A, M, WF	NC
	CS (PPU)	A, M, SS, WF	DAC, OT
	L	A, M, SS, WF	March, NC
	RS (PPU)	A, M, SS, WF	DAC, OT, Rev Pol
058200IFPxxHV (a) (b) (d) (l)	AUX	A, M, WF	NC
	CS (PPU)	A, M, SS, WF	DAC, OT
	L	A, M, SS, WF	March, NC
	RS (PPU)	A, M, SS, WF	DAC, OT, Rev Pol
5104B (d) (e)	CS (PPU)	A, M, SS, WF	DAC, OT
	RS (PPU)	A, M, SS, WF	DAC, OT
5700 (a) (d) (l)	AUX	A, M, WF	NC
	CS (PPU)	A, M, SS, WF	DAC, OT
	L	A, M, SS, WF	C, March, NC
	RS (PPU)	A, M, SS, WF	DAC, OT, Rev Pol
5808 (a) (b) (d) (l)	AUX	A, M, WF	NC
	CS (PPU)	A, M, SS, WF	DAC, OT
	L	A, M, SS, WF	C, March, NC
	RS (PPU)	A, M, SS, WF	DAC, OT, Rev Pol
5820XL (a) (b) (d) (l)	AUX	A, M, WF	NC
	CS (PPU)	A, M, SS, WF	DAC, OT
	L	A, M, SS, WF	March, NC
	RS (PPU)	A, M, SS, WF	DAC, OT, Rev Pol
6700	AUX, CS (PPU), L, RS (PPU)	A, CO, M, SS, WF	DAC, NC, PB, Rev Pol
6808	AUX, CS (PPU), L, RS (PPU)	A, CO, M, SS, WF	C, DAC, NC, PB, Rev Pol
6820	AUX, CS (PPU), L, RS (PPU)	A, CO, M, SS, WF	C, DAC, NC, PB, Rev Pol
6820-EVS (a)(b)(d)(j)(k)(l)	AUX, CS (PPU), L, RS (PPU)	A, CO, M, SS, WF	C, DAC, NC, PB, Rev Pol
IFP-100 (a) (b) (d) (l)	AUX	A, M, WF	NC
	CS (PPU)	A, M, SS, WF	DAC, OT
	L	A, M, SS, WF	C, March, NC
	RS (PPU)	A, M, SS, WF	DAC, OT, Rev Pol

IFP-1000 (a) (b) (d) (l)	AUX	A, M, WF	NC
	CS (PPU)	A, M, SS, WF	DAC, OT
	L	A, M, SS, WF	March, NC
	RS (PPU)	A, M, SS, WF	DAC, OT, Rev Pol
IFP-1000HV (a) (b) (d) (l)	AUX	A, M, WF	NC
	CS (PPU)	A, M, SS, WF	DAC, OT
	L	A, M, SS, WF	March, NC
	RS (PPU)	A, M, SS, WF	DAC, OT, Rev Pol
IFP-2000 (a) (b) (d)	AUX	A, M, WF	NC
	CS (PPU)	A, M, SS, WF	DAC, OT
	L	A, M, SS, WF	March, NC
	RS (PPU)	A, M, SS, WF	DAC, OT, Rev Pol
IFP-2000-VIP (a) (c) (d)	AUX	A, M, WF	NC
	CS (PPU)	A, M, SS, WF	DAC, OT
	L	A, M, SS, WF	March, NC
	RS (PPU)	A, M, SS, WF	DAC, OT, Rev Pol
IFP-2000HV (a) (b) (d)	AUX	A, M, WF	NC
	CS (PPU)	A, M, SS, WF	DAC, OT
	L	A, M, SS, WF	March, NC
	RS (PPU)	A, M, SS, WF	DAC, OT, Rev Pol
IFP-2100, IFP-2100HV, IFP-2100B, IFP-2100HVB (a) (b)(d)(l)	AUX, CS (PPU), L, RS (PPU)	A, CO, M, SS, WF	C, DAC, NC, PB, Rev Pol
IFP-2100ECS, IFP-2100ECSB, IFP-2100ECSHV, IFP-2100ECSHVB (a)(b)(d)(k)(l)			
	AUX, CS (PPU), L, RS (PPU)	A, CO, M, SS, WF	C, DAC, NC, PB, Rev Pol
IFP-25, 5600 , IFP-25HV, 5600HV	AUX	A, M, WF	-
	L	A, M, SS, WF	C, NC
	RS (PPU)	A, M, SS, WF	DAC, OT, Rev Pol
	CS (PPU)	A, M, SS, WF	DAC, OT
IFP-300	AUX, CS (PPU), L, RS (PPU)	A, CO, M, SS, WF	C, DAC, NC, PB, Rev Pol
IFP-300ECS (a)(b)(d)(j)(k)(l)	AUX, CS (PPU), L, RS (PPU)	A, CO, M, SS, WF	C, DAC, NC, PB, Rev Pol
IFP-50 (a) (d) (l)	AUX	A, M, WF	NC
	CS (PPU)	A, M, SS, WF	DAC, OT
	L	A, M, SS, WF	C, March, NC
	RS (PPU)	A, M, SS, WF	DAC, OT, Rev Pol
IFP-75 (a)(b)(d)(l)	AUX, CS (PPU), L, RS (PPU)	A, CO, M, SS, WF	C, DAC, NC, PB, Rev Pol
IFPNET (f)	P (RU)	A, M, SS, WF	MX, OT
	P (RU)	A, M, SS, WF	MX
	CS (RU)	A, M, SS, WF	DAC
RPS-2000 (a) (b) (d) (h)	AUX	A, M, WF	NC
	CS (PPU)	A, M, SS, WF	DAC, OT

	L	A, M, SS, WF	March, NC
	RS (PPU)	A, M, SS, WF	DAC, OT, Rev Pol
RPS-2000HV (a) (b) (d) (h)	AUX	A, M, WF	NC
	CS (PPU)	A, M, SS, WF	DAC, OT
	L	A, M, SS, WF	March, NC
	RS (PPU)	A, M, SS, WF	DAC, OT, Rev Pol
SK-2 (e), SK-2E (e)	AUX	A, M, WF	NC
	CS (PPU)	A, M, SS, WF	DAC
	L	A, M, SS, WF	March, NC
	P	A, M, SS, WF	C
SK-4 (e), SK-4E (e)	AUX	A, M, WF	NC
	CS (PPU)	A, M, SS, WF	DAC
	L	A, M, SS, WF	March, NC
	P	A, M, SS, WF	C
	RS (PPU)	A, M, SS, WF	Rev Pol
SK-5208 (a) (b)	AUX	A, M, WF	NC
	CS (PPU)	A, M, SS, WF	DAC, OT
	L	A, M, SS, WF	March, NC
	RS (PPU)	A, M, SS, WF	DAC, OT, Rev Pol
SK-5UD (a) (g) (i)	AUX	A, M, WF	NC
	CS (PPU)	A, M, SS, WF	DAC
	L	A, M, SS, WF	March, NC
	P (PPU)	A, M, SS, WF	C
	RS (RU)	A, M, SS, WF	DAC, NC, Rev Pol
SK-5UDE (a) (g) (i)	AUX	A, M, WF	NC
	CS (PPU)	A, M, SS, WF	DAC
	L	A, M, SS, WF	March, NC
	P (PPU)	A, M, SS, WF	C
	RS (PPU)	A, M, SS, WF	DAC, NC, Rev Pol
SK-WKS	P (RU)	A, M, SS, WF	OT
	CS (RU)	A, M, SS, WF	DAC
	P (PPU)	A, M, SS, WF	OT

UL 864 10th Edition Listed

Local Operating Console, Model(s) EVS-LOC(k)(l)

UL 864 9th Edition Listed

Annunciator boards, Model(s) 6861BIA, 6861GIA

Control Unit Subassemblies, Model(s) 006700CB, IFP-75CB, and IFP-75BCB enclosures, 021000 mainboard, 067000 mainboard, 068080 mainboard, 068200 mainboard, 6815, ECS-INT50W, EVS-INT50W, EVS-125WBD amplifier board, SK-NIC, SP-TR / SP-TRB trim rings

Control Unit Subassemblies - enclosures, Model(s) 006820CB, IFP-300CB, IFP-300BCB, and 006808CB

Control Unit Subassemblies - Intended for use with compatible control units as described in the control unit installation manual, Model(s) 00VIP-125CB enclosure (j), 00VIP-50CB enclosure (j), 052080 main board (b), 052090 main board, 056000 main board, 057000 main board (b), 058080 main board (b), 058631 user interface (b), 068200 main board, 0IFP-100-IA user interface (b), 0IFP-100BD main board (b), 122509 enclosure (b), 122723 enclosure (b), 122740 enclosure (b), 122773 enclosure (c), 122774 enclosure (c), 122950 enclosure (c), 122963 enclosure (c), SK-4XLM LED interface module, SK-4XTM transmitter module, SK-4XZM zone relay module, VIP-125 amplifier (j), VIP-125HV

amplifier (j), VIP-50 amplifier (j), VIP-50HV amplifier (j), VIP-CE4 speaker expander module (j), EVS-CE4 speaker expander module (i), VIP-SW16 switch annunciator (j), VIP-VCM voice control module (j), EVS-VSM Voice Control Module (i)

Enclosures, Model(s) 6820EVSCB, IFP-300ECSCB, IFP-300ECSSBCB, IFP-2100CB, IFP-2100BCB, RFP-2100CB, RFP-2100BCB, IFP-2100ECSCB, IFP-2100ECSBCB

Fire Alarm and Emergency Signaling Subassembly, Model(s) ECS-AVCM, EVS-AVCM

LED/Switch cards, Model(s) ECS-EMG

LOC, Model(s) ECS-LOC, ECS-LOC2100

Network Voice Control Module, Model(s) ECS-NVCM

Repeaters, Model(s) IFP-RPT-UTP

Subassembly, Fiber Optic Multi Mode Board, Model(s) SK-FML

Subassembly, Fiber Optic Single Model Board, Model(s) SK-FSL

Supplementary Network Bridge, Model(s) SK-WEBPORTAL

Model(s) ECS-RPU, EVS-RPU Remote Paging Units

AUX - Auxiliary System

CS (PPU) - Central Station System (Protected Premises Unit)

L - Local System

RS (PPU) - Remote Station System (Protected Premises Unit)

A - Automatic Fire Alarm: thermostats, smoke detectors, etc.

CO - Carbon Monoxide Alarm: carbon monoxide detectors

M - Manual Fire Alarm: manually operated boxes

SS - Supervisory: gate valves, water-level switches, temperature switches, carbon monoxide alarm, residential fire alarm control units, etc.

WF - Waterflow Alarm: waterflow switches

C - Coded

DAC - Digital Alarm Communicator

NC - Noncoded, Steady, Temporal 3 Pattern, etc.

PB - Performance Based Technologies

Rev Pol - Reverse Polarity

March - March Time

OT - Other Transmission Technologies

P (RU) - Proporiety System (Supervising Station Receiving Unit)

MX - Multiplex

CS (RU) - Central Station System (Supervising Station Receiving Unit)

P - Proprietary System

P (PPU) - Proporiety System (Protected Premises Unit)

RS (RU) - Remote Station System (Supervising Station Receiving Unit)

(a) - Requires separately Listed equipment when System Type is Auxiliary or Type Signaling is Reverse Polarity.

(b) - Complementary Listed to SYZV for Releasing Service.

(c) - Complementary Listed to SYZV for Releasing Service and UOQY.

(d) - Requires separately Listed equipment when Type Signaling is Other Transmission Technologies (OT).

(e) - Requires separately Listed equipment when the Type Signaling is Digital Alarm Communicator (DAC), Reverse Polarity or Coded (C) or if the System Type is Auxiliary (AUX).

(f) - Also suitable for releasing device service when Type Signaling is Digital Alarm Communicator (DAC).

(g) - Requires separately Listed equipment when System Type is Proprietary (PPU), or is Remote Station (PPU) and Type Signaling is Noncoded (NC) or Reverse Polarity.

(h) - Requires separately Listed Model RA-2000 annunciator display when System Type is Local (L).

(i) - Complementary Listed to FSZI and QVAX.

(j) - Complementary Listed to UOQY

(k) - Complementary Listed for PGWM

(l) - Complementary Listed to FSZI

xx - Represents two letters signifying a foreign country.

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ONLINE CERTIFICATIONS DIRECTORY



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Control Unit Accessories, System

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Control Unit Accessories, System

See General Information for Control Unit Accessories, System

SILENT KNIGHT BY HONEYWELL S3511
1985 Douglas Dr
MN10-212A
Golden Valley, MN 55422 USA

Investigated to UL 864 (9th edition)

Accessory Mounting cabinets Model(s) IDP-ACB

Accessory cabinets Model(s) AB-55, RBB, SK2190

Addressable input modules Model(s) SD500-AIM(f01), SD500-MIM(f01)

Addressable NAC modules Model(s) SD500-ANM

Amplifier Model(s) ECS-Dual50W (F20), ECS-Dual50WHV (F20), EVS-100W, EVS-100W (F20)

Amplifier - subassembly Model(s) ECS-50WBU (F20), ECS-BD50-70V (f20), ECSBD-50-25V (f20), EVS-100WBU (F20)

Automatic fire alarm warden stations Model(s) FFT-STSR, FFT-STSS

Circuit Expander - subassembly Model(s) ECS-550CE6 (f20)

Control modules Model(s) IDP-Control, IDP-Relay, SK-CONTROL, SK-RELAY

Dialer Cards Model(s) 5128, 5130

Digital alarm communicator transmitters Model(s) 5129(f04), 5135

Direct connect modules Model(s) 5220(f05)

Dual monitor modules Model(s) IDP-Monitor 2, SK-MONITOR-2

Emergency Command Center - ACU Model(s) ECS-550 (f20), ECS-550HV (f20)

Enclosures Model(s) 122417, 122599, 122727, 122735, 122955, 5895XLCB

End-of-line devices Model(s) 7641, 7643, 7644

End-of-line resistors Model(s) 7628

Fault isolator modules Model(s) IDP-Iso, SK-ISO

Fiber to SBUS Converter Model(s) SK-F485C

Fire fighter handset cabinets Model(s) FFT-HSC

Fire fighter telephone jacks Model(s) FFT-FPJ

Fire fighter telephone module subassemblies Model(s) 007880-BD, 007880-BD-SK

Fire fighter telephone modules Model(s) IFP-FFT, SK-FFT

Indicating circuit expanders Model(s) 5495, 5496, 5499

Input monitor modules Model(s) IDP-Monitor-10, SK-MON-10

Input/Output Module Model(s) IDP-RELAYMON-2, SK-RELAYMON-2

LED drivers Model(s) SD500-LED

Line isolator devices Model(s) SD500-LIM(f06), SD505-6IB(f06)

Local Operator Console Model(s) ECS-550LOC (f20), ECS-RCU2000 (f20)

Main board Model(s) 051282

Main Board Model(s) 058950, 068600, 077500, 100BD

Main Boards Model(s) 054950, 054960, 054990

Monitor modules Model(s) IDP-Minimon, IDP-Monitor, IDP-Zone, SD500-FRCM, SD500-FRCM-4, SK-MINIMON, SK-MONITOR, SK-ZONE

Power expander/supplies Model(s) 5895XL, RPS-1000, RPS-1000B, RPS-1000HV

Printers Model(s) IFPN-PRN6

Relay modules Model(s) 5883, IDP-Relay-6, SD500-ARM, SK-RELAY-6

Remote annunciator Model(s) RA-1000R (f08), RA-2000GRAY (f13)

Remote annunciators Model(s) 5635, 5860(f07), 5860R(f07), 5865-3(f01), 5865-4(f01), RA-100(f10), RA-1000(f08), RA-2000(f13), SK-5235(f09)

Remote annunciators, input 24VDC, 200mA Model(s) 5880(f01)#

Remote keystation/annunciators Model(s) 5230(f05)

Remote microphone modules Model(s) ECS-550RM

Remote microphone stations Model(s) 00VIP-RM, 00VIP-RM2000, SKE-SRM(f11)

Remote paging unit Model(s) ECS-550RPU

Remote zone annunciators Model(s) SK-RZA4

Repeater Model(s) IFP-RPT-FO, IFP-RPT-UTP

Serial/parallel interfaces, input 24VDC, 50mA Model(s) 5824(f01)#

Six zone interface modules Model(s) IDP-Zone-6, SK-ZONE-6

Status display modules Model(s) SK-5280(f09)

Supervising control modules Model(s) IDP-Control-6, SK-CONTROL-6

Telephone line monitor modules Model(s) 7150

Two-wire smoke monitor modules Model(s) SD500-SDM

Voice evacuation systems Model(s) SKE-450(f12), SKE-450-ZN4(f12), SKE-450-ZN6(f12)

Wireless gateway Model(s) WIDP-WGI, WSK-WGI

Wireless monitor module Model(s) WIDP-MONITOR, WSK-MONITOR

Wireless relay module Model(s) WIDP-RELAY, WSK-RELAY

Zone expanders Model(s) FFT-24, SK-5217(f09)

Investigated to UL 864 (10th edition)

Accessory Mounting cabinets Model(s) SK-NIC-KIT

Cellular Transmitter Model(s) Cell-Mod, Cell-Cab-SK

Enclosures Model(s) SK-NIC-Kit

Main board Model(s) 058600

Remote annunciator Model(s) 6855 (f15), 6860 (f15)

- Complementary Listed under FSYE, QVAX, UOXX, and PGWM.

(f01) - Intended for use with Model 5820, IFP-100ECS, IFP-1000ECS, and IFP-1000ECSHV control units

(f04) - For use with separately Listed central station protected premises or remote station units

(f05) - Intended for use with Model 5207 control units

(f06) - Intended for use with Model 5820 and IFP-1000 control units

(f07) - Intended for use with Model 5820 and 5820-XL control units

(f08) - Intended for use with Model IFP-1000, IFP-1000HV, IFP-1000ECS, and IFP-1000ECSHV control units

(f09) - Intended for use with Model SK5208 control units

(f10) - Intended for use with Model IFP-100 and IFP-100ECS control units

(f11) - For auxiliary use with this Listee's voice evacuation equipment

(f12) - For use with compatible Listed fire alarm control units

(f13) - Intended for use with Model(s) IFP-2000, IFP-2000HV, IFP-2000VIP, RPS-2000 and RPS-2000HV control units.

(f15) - Complimentary Listed to FSYE and PGWM

(F20) - Complementary Listed under PGWM

Note - Some of these products are covered by S2766

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ONLINE CERTIFICATIONS DIRECTORY



UQGS.S911
Heat-automatic Fire Detectors

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Heat-automatic Fire Detectors

See General Information for Heat-automatic Fire Detectors

SYSTEM SENSOR UNINCORPORATED, DIV OF HONEYWELL INTERNATIONAL INC S911
3825 Ohio Ave
Saint Charles, IL 60174-5467 USA

Trim Ring, Model(s) TR300, followed by a two-digit suffix, indicating color: no suffix for white, -IV for ivory, -BL for black, etc.

Color Kit, Model(s) CK300, followed by a two-digit suffix, indicating color: no suffix for white, -IV for ivory, -BL for black, etc.

					Spacing (Ft)	
Model No.	**Type**	**Compatibility Restrictions**	**Contact Arrangement**	**Temp Range (°F)**	**Smooth Ceiling**	**to Wall or Partition**
2251T, 2251TM, 2251TB, 2251TMB, 2251TMBC (a)						
	FT/ROR	D2	-	135	50	25
2351TB, 2351TBA	FT	D1	-	-	-	-
TC806B1043, TC806B1068, TC840M1005, TC840M1013, TC806B1084, TC840M1021 (a)						
	FT/ROR	D2	-	135	50	25

Base Model	Related Detector	Control Unit Compatibility Restrictions
B210W, B501W	FWD-200ACCLIMATE, FWH-200FIX135, FWH-200ROR135	B2

B2 - For connection to Listed control units with which compatibility was determined by test or a review of circuit parameters. Interconnection and compatible models indicated on installation wiring diagram for detector (base) and/or control unit.

D1 - Listing limited to specific system control unit. Information on compatible control unit indicated on installation drawing of control unit and/or detector.

D2 - For connection to Listed control units with which compatibility was determined by test or a review of circuit parameters. Interconnection and compatible models indicated on installation wiring diagram for detector (base) and/or control unit.

FT/ROR - Fixed temperature/rate of rise combination

FT - Fixed temperature

(a) - For connection to Fike model Cybercat control panel.

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ONLINE CERTIFICATIONS DIRECTORY



UQGS.S6228
Heat-automatic Fire Detectors

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Heat-automatic Fire Detectors

See General Information for Heat-automatic Fire Detectors

SILENT KNIGHT BY HONEYWELL S6228
1985 Douglas Dr
MN10-212A
Golden Valley, MN 55422 USA

					Spacing (Ft)	
Model No.	**Type**	**Compatibility Restrictions**	**Contact Arrangement**	**Temp Range (°F)**	**Smooth Ceiling**	**to Wall or Partition**
IDP-Heat	FT	D1	-	135	50	25
IDP-Heat-HT	FT	D1	-	190	50	25
IDP-HEAT-HT-IV	FT	D1	-	190	50	25
IDP-HEAT-HT-W	FT	D1	-	190	50	25
IDP-HEAT-IV	FT	D1	-	135	50	25
IDP-Heat-ROR	FT/ROR	None	-	135	50	25
IDP-HEAT-ROR-IV	FT/ROR	D1	-	135	50	25
IDP-HEAT-ROR-W	FT/ROR	D1	-	135	50	25
IDP-HEAT-W	FT	D1	-	135	50	25
SD505-AHS	FT	None	-	135-150	70	25
SD505-HEAT	FT/ROR	D2	-	135-194	70	35
SK-HEAT	FT	D1	-	135	50	25
SK-HEAT-HT	FT	D1	-	190	50	25
SK-HEAT-HT-W	FT	D1	-	190	50	25
SK-HEAT-ROR	FT/ROR	None	-	135	50	25
SK-HEAT-ROR-W	FT/ROR	D1	-	135	50	25
SK-HEAT-W	FT	D1	-	135	50	25
WIDP-HEAT	FT	D1	-	135	50	25
WIDP-HEAT-ROR	FT/ROR	D1	-	135	50	25
WSK-HEAT	FT	D1	-	135	50	25
WSK-HEAT-ROR	FT/ROR	D1	-	135	50	25

Base Model	Related Detector	Control Unit Compatibility Restrictions

SD505-6AB	SD505-APS	None

D1 - Listing limited to specific system control unit. Information on compatible control unit indicated on installation drawing of control unit and/or detector.

D2 - For connection to Listed control units with which compatibility was determined by test or a review of circuit parameters. Interconnection and compatible models indicated on installation wiring diagram for detector (base) and/or control unit.

FT - Fixed temperature

FT/ROR - Fixed temperature/rate of rise combination

D2 - For connection to Listed control units with which compatibility was determined by test or a review of circuit parameters. Interconnection and compatible models indicated on installation wiring diagram for detector (base) and/or control unit.

Trademark and/or Tradename: Honeywell SILENT KNIGHT

Last Updated on 2017-12-19

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ONLINE CERTIFICATIONS DIRECTORY



UROX.S6173
Smoke-automatic Fire Detectors

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Smoke-automatic Fire Detectors

See General Information for Smoke-automatic Fire Detectors

SILENT KNIGHT BY HONEYWELL S6173
1985 Douglas Dr
MN10-212A
Golden Valley, MN 55422 USA

Detector			Compatibility	Velocity Range (fpm)		Date of	Time of Manufacture	Firmware Version
Model	Application	Type	Restrictions	Min	Max	Manufacture	Firmware Version	Update
IDP-BEAM, IDP-BEAM-T, SK-BEAM, SK-BEAM-T								
	OAP	PB	D2			-	-	-
IDP-FIRE-C0	OAP	P(IHD)	D4	0	4000	-	-	-
IDP-ION, SK-ION	OAP	I	D2	0	500	-	-	-
IDP-PHOTO, IDP-PHOTOR, SK-PHOTO, SK-PHOTOR								
	OAP, D(I)	P	D2	0	4000	-	-	-
IDP-PHOTO-IV	OAP, D(I)	P	D2	0	4000	-	-	-
IDP-PHOTO-R-IV	OAP, D(I)	P	D2	0	4000	-	-	-
IDP-PHOTO-R-W	OAP, D(I)	P	D2	0	4000	-	-	-
IDP-PHOTO-T, IDP-ACCLIMATE, SK-PHOTO-T, SK-ACCLIMATE								
	OAP	P(IHD)	D2	0	4000	-	-	-
IDP-PHOTO-T-IV	OAP, D(I)	P	D2	0	4000	-	-	-
IDP-PHOTO-T-W	OAP, D(I)	P	D2	0	4000	-	-	-
IDP-PHOTO-W	OAP, D(I)	P	D2	0	4000	-	-	-
SD400-CPS	OAP	P	D6	0	300	-	-	-
SD505-AIS	OAP	I	D2, D6	0	300	-	-	-
SD505-APS	OAP	P	D2, D6	0	300	-	-	-
SD505-DUCT	D(ST)	P	D2, D6	300	4000	-	-	-
SD505-PHOTO	OAP, D	P	D2	0	4000	-	-	-
SK-FIRE-CO	OAP	P(IHD)	D4	0	4000	-	-	-

SK-PHOTO-R-W	OAP, D(I)	P	D2	0	4000	-	-	-
SK-PHOTO-T-W	OAP, D(I)	P	D2	0	4000	-	-	-
SK-PHOTO-W	OAP, D(I)	P	D2	0	4000	-	-	-
WIDP-ACCLIMATE	OAP	P(RF)	D2	0	4000	-	-	-
WIDP-PHOTO	OAP	P(RF)	D2	0	4000	-	-	-
WSK-PHOTO	OAP	P(RF)	D2	0	4000	-	-	-
WSK-PHOTO-T	OAP	P(RF) (IHD)	D2	0	4000	-	-	-

Detector			**Compatibility**	**Velocity Range (fpm)**		**Pressure Differential Between Sampling Tube**		**Date of**	**Time of Manufacture**	**Firmware Version**
Model	**Application**	**Type**	**Restrictions**	**Min**	**Max**	**Min**	**Max**	**Manufacture**	**Firmware Version**	**Update**
IDP-PDUCT, IDP-PDUCT-R (a)	D(ST)	P	D2	100	4000	0.03	1.4	-	-	-
SK-DUCT (b)(c)	D(ST)	P	D2	100	4000	0.01	1.11	-	-	-

Base Model	**Related Detector**	**Control Unit Compatibility Restrictions**
B210LP	IDP-FIRE-C0 (CO), SK-FIRE-CO (CO)	B2
B501, B200S, B210LP, B224RB, B224BI	IDP-FIRE-C0 (CO), SK-FIRE-CO (CO)	B4
IDP-6AB	1151, 1151RIS, 2151, 1251, 2251, 3251, 7251, IDP-PHOTO, IDP-PHOTO-T, IDP-ION, IDP-HEAT, IDP-HEAT-HT, IDP-HEAT-ROR, IDP-ACCLIMATE	B2
SD505-4AB	SD505-AIS, SD505-APS	B2
SD505-6AB	SD505-AIS, SD505-APS	B2
SD505-6RB	SD505-AIS, SD505-APS, SD505-AHS	B2
SD505-6SB	SD505-AIS, SD505-APS, SD505-AHS	B2

B2 - For connection to Listed control units with which compatibility was determined by test or a review of circuit parameters. Interconnection and compatible models indicated on installation wiring diagram for detector (base) and/or control unit.

B4 - For connection to any manufacturer's Listed compatible control unit.

D2 - For connection to Listed control units with which compatibility was determined by test or a review of circuit parameters. Interconnection and compatible models indicated on installation wiring diagram for detector (base) and/or control unit.

D4 - For connection to any manufacturer's Listed compatible control unit.

D6 - When using 2-wire bases Listing limited to specific system control unit. Information on compatible control unit indicated on installation drawing of control unit and/or detector. When using 4 wire bases, no restriction on compatibility.

OAP - Open Area Protection

PB - Projected Beam

P - Photoelectric

IHD - Includes Integral Heat Detector

I - Ionization

D(I) - Duct Detector - Installation Inside Duct

D(ST) - Duct Detector - Sampling Tubes

D - Duct Detector

RF - Includes Integral Radio Frequency Transmitter

Date of Manufacture identifies the manufacturing start date of all product models that will use the specific Time of Manufacture Firmware Version. The date of manufacture is noncoded and in the format YEAR (in 4 digits), MONTH (in letters), DAY (in 2 digits).

Time of Manufacture Firmware Version identifies a numerical and/or alphabetic series designation that is product and date-code specific and will only identify the Firmware Version at the time the product was manufactured. The numeric and/or alphabetic sequence is defined by the manufacturer.

Firmware Version Update is a numerical and/or alphabetic sequential identification that is product and date-code specific and sequentially identifies the Firmware Version Update from the previous version of firmware. The numerical and/or alphabetic sequence is defined by the manufacturer.

(a) - Suitable for use in ambient temperatures of 0-55 C (23-131 F).

(b) - SK-DUCT duct housing can be used with the following compatible detector heads: IDP-PHOTO, IDP-PHOTOR, SK-PHOTO, SK-PHOTOR.

(c) - Suitable for elevated temperatures up to 70 C.

CO - Suitable for use as a carbon monoxide alarm

Trademark and/or Tradename: Honeywell SILENT KNIGHT

Last Updated on 2017-12-19

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Automatic Releases for Preaction and Deluge Sprinkler Systems

The function of these releases is to open water valves automatically via FM Approved fire detection devices.

Release control panels FM Approved for deluge and preaction sprinkler systems are compatible with the specified solenoid-operated valves, have standby power supplies capable of providing the required 90-hour system operation should primary power fail, and fire detection circuitry capable of operation during open circuit fault condition.

IFP 2100/RFP-2100, IFP-2100HV Releases

The IFP 2100/RFP/2100, IFP-2100HV release circuits Class A Style D, supervised, rated 24Vdc. The IFP 2100 is provided with the releasing circuits for agent release which will actuate a 24Vdc control head or initiator-based releasing devices. The IFP 2100 is provided with the releasing circuit for sprinkler release which will actuate a 24Vdc control head. For Approved combination of solenoid and water control valves, refer to Automatic Water Control Valve listings that follow. The IFP 2100 is provided with standby battery capacity from 40AH and up to 55 AH to supply the required 90 hours of standby. (See complete IFP 2100 System description under LOCAL PROTECTIVE SIGNALING)

Control Panel Group 1: The IFP 2100/RFP-2100 System is compatible with Solenoid Groups Rated 11W and below.

Company Name:	Silent Knight Div of Honeywell
Company Address:	7550 Meridian Circle N, Maple Grove, Minnesota 55369, USA
Company Website:	http://www.silentknight.com
New/Updated Product Listing:	No
Listing Country:	United States of America
Certification Type:	FM Approved
Primary Class of Work:	1011-Deluge Sprinkler Systems

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Electrical Signaling

Electrical protective signaling systems are configurations of components used to produce alarm signals indicative of fire, smoke, sprinkler waterflow or other emergency and to produce supervisory signals indicative of conditions needing attention with respect to protection equipment or watch service. System configurations are classified according to where and how the signals are received. The categories are commonly designated as local, municipal, remote station, proprietary, emergency voice/alarm communication, emergency communication, and central station. Auxiliary systems are either local or proprietary systems interconnected with a municipal system.

This category presents the major system component categories and the integrated system configurations. The selection of components to form a hybrid system should be made only by those skilled in system design. Also, the suitability of any system application should be judged on the basis of the hazard(s) being protected.

Local Protective Signaling

Local systems produce alarm and/or supervisory signals within the protected property, which may not be constantly attended. The systems are electrically supervised, include a secondary power supply having sufficient capacity to operate the system for 24 hours under maximum normal load and often are primarily for the purpose of providing occupant evacuation signals. Some local systems also provide for signaling to a constantly attended remote location.

The heart of a signaling system consists of a control unit to which are connected the initiating and signal indicating circuits. The control unit is usually in a separate enclosure, provides power to its external circuits, and often is of modular design to enable flexibility in obtaining multiple functions. In a coded signaling system, transmitters may be either separate from or integral to a control; they transmit to the control or from a control to remote receiving equipment. The equipment listed below, in conjunction with peripheral devices, may be used to form a complete system or a portion of a multizone system.

IFP-2000, Fire Alarm Control/Communicator

The IFP-2000 Fire Alarm Control/Communicator is an analog addressable fire control system with software revision 2.00. The IFP-2000HV is the same as the IFP-2000 except it has 240VAC input power. The RPS-2000 and the RPS-2000HV, respectively, are the same as the IFP-2000 without the display. The IFP-2000 can be configured for 999 software zones, 999 output groups. The basic IFP-2000 panel contains one built in signaling line circuit (SLC), which can support up to 159 IDP sensors and 159 IDP modules. Signaling line circuits uses following addressable devices: SK-PULL-DA, IDP-PULL-DA, SK-PULL-SA, IDP-PULL-SA, PS-DAH and PS-DALOB Manual Pull Stations. The following analog addressable Wenlock Heat detectors are compatible with the control: Models IDP-HEAT-W, SK-HEAT-W, IDP-HEAT-IV, IDP-HEAT-ROR-W, SK-HEAT-ROR-W, IDP-HEAT-ROR-IV and IDP-HEAT-HT-W, SK-HEAT-HT-W, IDP-HEAT-HT-IV; The following analog addressable Wenlock Smoke detectors are compatible with the control: Models Models IDP-PHOTO-W, SK-PHOTO-W, IDP-PHOTO-IV, IDP-PHOTO-R-W, SK-PHOTO-R-W, IDP-PHOTO-R-IV(A) and IDP-PHOTO-T-W, SK-PHOTO-T-W, IDP-PHOTO-T-IV. Additional SLC loops can be added using the model 5815XL SLC expander to increase overall point capacity to a maximum of 636 points. The SLC(s) Style 4, 6, 7 supports Intelligent Device Protocol (IDP) analog addressable sensors and modules. • Each SLC supports 159 IDP sensors and 159 IDP modules to a maximum of 636 points per IFP-2000 system. 9.0A of output power is available from eight Class A Style Z or Class B Style Y notification and auxiliary circuits. Each 3.0A circuit is power limited (total output power must not exceed 9.0A). Built-in dual phone line, digital alarm communicator/transmitter (DACT) reports events to central station by point or by zone. • IFP-2000 supports: conventional 2-wire & 4-wire detectors with compatibility ID 24N, compatible detectors are Apollo 55000-350 (45681-200) 55000-350 45681-200 24, Hochiki SIH-24F (HS-224D OR HSD-224) HD-3 HB-5 25, System Sensor 1400, 1451 (B401B), 2100, 2100T, 2151 (B401), 2151T (B401), 2300T, 2300, 2300TB, 2400, 2400 (DH400), 2400AIT, 2400AT, System Sensor 2400TH, 2451 (B401B), 2451DH (DH 400), 2451TH (B401B), using 8 Flexput™ Class A style D or Class B Style B 24VDC, 100mA circuits or SLC zone modules, pre-action and deluge releasing systems, [optional] models 25895XL/RPS-1000 Remote Power Supplies, 5496 Intelligent Power Module 5865-3, 5865-4 LED annunciators, [optional] model 5880 LED driver board, IDP-6AB base used with detectors, 5883 Relay board [optional] Model 5824 Serial/Parallel Printer Interface Module, [optional] Model RA-2000 Remote Annunciator, Hochiki devices [list is defined in the IFP installation and operations manual]. • with compatible SD505-6IB 6" short circuit isolator base, SD505-6RB 6" relay base, SD505-6SB 6" sounder base, SD500-PS/-PSDA Single or dual action addressable pull station, SD500-SDM Addressable smoke detector module, and SD500-LIM Line isolator module. • IFP-2000 has dedicated Form C trouble relay and two general purpose Form C programmable relays. Six Flexput™ circuits can be added to the IFP-2000 with each RPS-1000 Intelligent Power Module (up to 8 5895s per system). IDP-MONITOR Intelligent Monitor Module, IDP-MINIMON Intelligent Mini-Monitor Module, IDP-CONTROL Intelligent Control Module, IDP RELAY Intelligent Relay Module, IDP-ZONE Intelligent Zone Module, IDP-MONITOR-2 Intelligent Dual Monitor Module, SK-ISO-6, IDP-ISO and IDP-ISO-6 Isolator Module, IDP-RELAY-6 Intelligent Relay Module, IDP-RELAY-6 Intelligent Multi-Relay Module, IDP-CONTROLS-6 Intelligent Multi-Control Module, IDP-RELAYMON-2 2in / 2out Module, IDP-ZONE-6 Intelligent Multi-Zone Interface Monitor, IDP-MONITOR-10 Intelligent Multi-Monitor. Models IDP-PHOTO and IDP-PHOTOR Intelligent Photo Detectors, IDP-PHOTO-T Intelligent Photo Detector w / Supplemental Heat, IDP-ACCLIMATE Intelligent Acclimate Photo Detector, IDP-ION Intelligent Ion Detector, IDP-BEAM Intelligent Beam Detector, IDP-BEAM-T Intelligent Beam Detector w / Test, IDP-HEAT Intelligent Heat Detector (135°F), IDP-HEAT-ROR Intelligent Heat Detector ROR, IDP-HEAT-HT Intelligent Heat Detector (190°F). Four notification/auxiliary power circuits Class A Style Z and Class B Style Y can be added to the IFP-2000 with each 5496 Intelligent Power Module. The system can support a maximum of eight Intelligent Power modules, either the RPS-1000 or 5496, in any combination.

Gamewell-FCI network repeaters: RPT-E3-UTP - Network repeater, unshielded twisted pair: 13ma Standby and Alarm
RPT-E3-FO - Network repeater, fiber optic: 13ma Standby and Alarm

Maximum Battery Standby Loads for 24 Hour Standby

Rechargeable Battery Size	*24 hr Standby, 5 mins Alarm*	*24 hr Standby, 15 min Alarm*	*24 hr Standby, 20 min Alarm*

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17AH	535mA	473mA	442mA
24AH	769mA	706mA	675mA
33AH	1.07A	1.01A	975mA
40AH	1.30A	1.24A	1.21A
55AH	1.80A	1.74A	1.71A

Maximum Battery Standby Loads for 90 Hour Standby

Rechargeable Battery Size	*24 hr Standby, 5 mins Alarm*	*90 hr Standby, 15 min Alarm*	*90 hr Standby, 20 min Alarm*
17AH	N/A	N/A	N/A
24AH	N/A	N/A	N/A
33AH	N/A	N/A	N/A
40AH	347mA	331mA	322mA
55AH	480mA	464mA	456mA

(See also AUTOMATIC RELEASES FOR PREACTION AND DELUGE SPRINKLER SYSTEMS)

Company Name:	Silent Knight Div of Honeywell
Company Address:	7550 Meridian Circle N, Maple Grove, Minnesota 55369, USA
Company Website:	http://www.silentknight.com
New/Updated Product Listing:	No
Listing Country:	United States of America
Certification Type:	FM Approved
Primary Class of Work:	3010-Fire Alarm Systems

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Electrical Signaling

Electrical protective signaling systems are configurations of components used to produce alarm signals indicative of fire, smoke, sprinkler waterflow or other emergency and to produce supervisory signals indicative of conditions needing attention with respect to protection equipment or watch service. System configurations are classified according to where and how the signals are received. The categories are commonly designated as local, municipal, remote station, proprietary, emergency voice/alarm communication, emergency communication, and central station. Auxiliary systems are either local or proprietary systems interconnected with a municipal system.

This category presents the major system component categories and the integrated system configurations. The selection of components to form a hybrid system should be made only by those skilled in system design. Also, the suitability of any system application should be judged on the basis of the hazard(s) being protected.

Alarm Signal Initiating Devices

Alarm signals are initiated either automatically or manually. Automatic detectors respond to changes in characteristic phenomena associated with fire or other emergency conditions.

Fire Detection, Heat-Actuated

Heat sensitive devices may be either "spot" or "line" type and operate at a fixed temperature or on a rapid increase in temperature (rate-of-rise). Some detectors combine the fixed and rate sensitive principles.

The spacing guides listed are indicative of each detector's relative sensitivity and, in each case, the spacing guide is the maximum recommended separation between detectors for smooth-ceiling installations. For a given temperature rating, a fixed-temperature detector which has a 30 ft (9 m) listing and one which has a 15 ft (5 m) listing will both respond at approximately the same time to a geometrically growing fire if each is installed at its listed spacing. FM Approved rate-of-rise detectors all have 30 ft (9 m) listed spacings, the maximum separation recommended by FM Approvals.

Installation of heat detectors at less than maximum spacing is necessary: to achieve earlier response; to compensate for ceiling obstructions such as beams and joists; and to compensate for ceiling heights greater than 15 ft (5 m). Proper location and use of heat detectors involves consideration of ceiling construction, the location of partitions, the maximum normal room temperature, heat produced by the occupancy, and whether detector function is to warn occupants or to automatically actuate protection equipment. Refer to Standard 72-1993 of the National Fire Protection Association and design specifications published by jurisdictional authorities, as appropriate.

Models IDP-HEAT-W, SK-HEAT-W, IDP-HEAT-IV, IDP-HEAT-ROR-W, SK-HEAT-ROR-W, IDP-HEAT-ROR-IV...

Models IDP-HEAT-W, SK-HEAT-W, IDP-HEAT-IV, IDP-HEAT-ROR-W, SK-HEAT-ROR-W, IDP-HEAT-ROR-IV and IDP-HEAT-HT-W, SK-HEAT-HT-W, IDP-HEAT-HT-IV are field programmable analog addressable heat detectors. The temperature sensor can be programmed as either a 135°F (57°C) or 190°F (88°C) fixed temperature or rate-of-rise device through the FACP.

Compatible Fire Alarm Panels	IFP-75 IFP-75B IFP-300 IFP-300B IFP-1000 IFP-2000 IFP-2100 IFP-2100B 6700 6808 5820XL 6820
Compatible detector bases	B224RB, B224RBA, B300-6, B501, B300-6, B300-6-IS, B300A-6, B200S, B200SA, B200S-LF, B200SR, B200SRA, B200SR-LF, B210LP, B210LPA, B224BI, B224BIA, B710LP, and B710LPA.(these models may also have a suffix of -IV (Ivory), -WH, -WHITE (White) or -BL (Black) designating their color)
Fixed temperature operating range	57°C, fixed – IDP-HEAT-W, SK-HEAT-W, IDP-HEAT-IV, IDP-HEAT-ROR-W, SK-HEAT-ROR-W, IDP-HEAT-ROR-IV; 88°C, fixed – IDP-HEAT-HT-W, SK-HEAT-HT-W, IDP-HEAT-HT-IV;
Rate of Rise feature	Yes – IDP-HEAT-ROR-W, SK-HEAT-ROR-W, IDP-HEAT-ROR-IV;
RTI classification	Special
Maximum spacing	4.6m by 4.6m (15ft by 15ft)

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Operating voltage range	15 to 32Vdc
Operating temperature range	-20° to 38°C - IDP-HEAT-W, SK-HEAT-W, IDP-HEAT-IV, IDP-HEAT-ROR-W, SK-HEAT-ROR-W, IDP-HEAT-ROR-IV; -20° to 66°C - IDP-HEAT-HT-W, SK-HEAT-HT-W, IDP-HEAT-HT-IV;
Maximum humidity	10 to 93% RH, non-condensing
Power consumption	Standby current: 200µA; Alarm current: 2mA; Maximum current: 4.5mA
Outputs	Multi-color LED
Transmission method	All models have flashscan protocol, - IV models also have Classic Loop Interface Protocol (CLIP);
Enclosure	Indoor use only;
Explanation of Suffixes	**"A" –** for use in Canada; **"ROR" –** rate of rise heat sensor; **"HT" -** high temperature heat sensor. **"IV" –** ivory color enclosure. **"BL" –** black color enclosure. **"WH" or "WHITE" –** white color enclosure

Company Name:	Silent Knight Div of Honeywell
Company Address:	7550 Meridian Circle N, Maple Grove, Minnesota 55369, USA
Company Website:	http://www.silentknight.com
New/Updated Product Listing:	No
Listing Country:	United States of America
Certificate Number:	
Certification Type:	FM Approved

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Electrical Signaling

Electrical protective signaling systems are configurations of components used to produce alarm signals indicative of fire, smoke, sprinkler waterflow or other emergency and to produce supervisory signals indicative of conditions needing attention with respect to protection equipment or watch service. System configurations are classified according to where and how the signals are received. The categories are commonly designated as local, municipal, remote station, proprietary, emergency voice/alarm communication, emergency communication, and central station. Auxiliary systems are either local or proprietary systems interconnected with a municipal system.

This category presents the major system component categories and the integrated system configurations. The selection of components to form a hybrid system should be made only by those skilled in system design. Also, the suitability of any system application should be judged on the basis of the hazard(s) being protected.

Alarm Signal Initiating Devices

Alarm signals are initiated either automatically or manually. Automatic detectors respond to changes in characteristic phenomena associated with fire or other emergency conditions.

Fire Detection, Smoke-Actuated

FM Approved smoke actuated devices respond to airborne particulate products of combustion.
The photoelectric principle is based on the change in current which accompanies a change in light intensity on a photoelectric cell as a result of smoke entering the detector.
The beam type version has the light source and photoelectric cell separated in the protected area.
The ionization type detector ionizes the air in special chambers within the detector.
Particles entering the exposed chamber decrease the normal ionization current.
Air-sampling detectors have ambient air drawn from the protected area into a chamber containing the sensing element.
Air duct smoke detectors are for the primary purpose of controlling blowers and dampers of air conditioning and ventilating systems to prevent distribution of smoke and gaseous products;
they should not be used as a substitute for open area detection.
Unless otherwise indicated in the listing, the permissible air velocity range for duct type detectors is 250 to 1500 ft/min (75 to 455 m/min) and up to 300 ft/min (90 m/min) for open area detectors.
A "smoke switch" is fail-safe in that loss of power to the device causes the same switching operation as when smoke is detected.
Average coverage should not exceed 900 ft2 (84 m2) per detector. Reduced coverage is recommended beneath high ceilings and for high air flow areas such as computer rooms.
These devices are suitable for use in ambients of 32°-100°F (0°-38°C) unless otherwise indicated in the listing. Installation, testing, and maintenance by trained personnel are recommended.

Fire Detectors-Smoke

Models IDP-PHOTO-W, SK-PHOTO-W, IDP-PHOTO-IV, IDP-PHOTO-R-W, SK-PHOTO-R-W, IDP-PHOTO-R-IV...

Models IDP-PHOTO-W, SK-PHOTO-W, IDP-PHOTO-IV, IDP-PHOTO-R-W, SK-PHOTO-R-W, IDP-PHOTO-R-IV and IDP-PHOTO-T-W, SK-PHOTO-T-W, IDP-PHOTO-T-IV; are field programmable analog addressable photoelectric smoke detectors.

Compatible Fire Alarm Panels	IFP-75 IFP-75B IFP-300 IFP-300B IFP-1000 IFP-2000 IFP-2100 IFP-2100B 6700 6808 5820XL 6820
Compatible detector bases	B224RB, B224RBA, B300-6, B501, B300-6, B300-6-IS, B300A-6, B200S, B200SA, B200S-LF, B200SR, B200SRA, B200SR-LF, B210LP, B210LPA, B224BI, B224BIA, B710LP, and B710LPA.(these models may also have a suffix of -IV (Ivory), -WH, -WHITE (White) or -BL (Black) designating their color) All models are also for use with the following Listed duct detector housing: System Sensor Models DNR, DNRA, and DNRW; Silent Knight Model FHS-D; and Fire-Lite Model D355PL.
Sensitivity range	0.5%/ft. to 4.0%/ft.

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Maximum spacing*	9m by 9m (30ft by 30ft) – if installed as a smoke detector*
Operating voltage range	15 to 32Vdc
Operating temperature range	0° to 50°C, -20° to 70°C in duct applications;
Air velocity range	0-4000 fpm
Maximum humidity	0 to 93% RH, non-condensing
Power consumption	Standby : 200µA; Alarm: 2mA (with a red LED on); Alarm: 4.5mA (with an amber LED on);
Outputs	Multi-color LED;
Transmission method	All models have flashscan protocol, - IV models also have Classic Loop Interface Protocol (CLIP);
Enclosure	Indoor use only;
Explanation of Suffixes	**"A" – for use in Canada;** **"R" – remote test "RAT" feature enabled;** **"IV" – ivory color enclosure.** **"BL" – black color enclosure.** **"WH" or "WHITE" – white color enclosure** **"T" – smoke sensor combines a photoelectric sensing chamber and 57°C fixed temperature heat detector.**

Company Name:	Silent Knight Div of Honeywell
Company Address:	7550 Meridian Circle N, Maple Grove, Minnesota 55369, USA
Company Website:	http://www.silentknight.com
New/Updated Product Listing:	No
Listing Country:	United States of America
Certification Type:	FM Approved
Primary Class of Work:	3010-Fire Alarm Systems

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intertek
Total Quality. Assured.

CERTIFICATE
OF REGISTRATION

This is to certify that the management system of:

Honeywell Fire Safety

Main Site: One Fire-Lite Place, Northford, Connecticut, 06472, United States

See appendix for additional sites and additional site scopes

has been registered by Intertek as conforming to the requirements of:

ISO 9001:2015

The management system is applicable to:

The design, manufacture, test and distribution of fire alarm controls, networks and related equipment.

Certificate Number:
93-040p

Initial Certification Date:
06 April 1993

Date of Certification Decision:
28 September 2018

Issuing Date:
28 September 2018

Valid Until:
03 June 2020

ANAB ACCREDITED
ISO/IEC 17021
MANAGEMENT SYSTEMS CERTIFICATION BODY

Calin Moldovean
President, Business Assurance

Intertek Testing Services NA, Inc.,
900 Chelmsford Street,
Lowell, MA 01851.
USA.

In the issuance of this certificate, Intertek assumes no liability to any party other than to the Client, and then only in accordance with the agreed upon Certification Agreement. This certificate's validity is subject to the organization maintaining their system in accordance with Intertek's requirements for systems certification. Validity may be confirmed via email at certificate.validation@intertek.com or by scanning the code to the right with a smartphone. The certificate remains the property of Intertek, to whom it must be returned upon request.

Country of Origin

Please refer to next page

Honeywell

هـــانيـــويـــل

Honeywell Middle East FZE
Trade License No. 7360
P.O. Box: 18530, Office No. LB190401
Jebel Ali, Dubai, U.A.E.

هـانـيـــويـــل مـــيـدل إيـــست م.م.ح.
رقم الرخصة تجارية ٧٣٦٠
ص.ب. : ١٨٥٣٠، مكتب رقم ال او بي ١٩٠٤٠١
جبل علي، دبي، ا.ع.م.

Dated: 15 Oct 2018

Reference No. S/2018/146

To Whom It May Concern:

Country of Origin Certificate

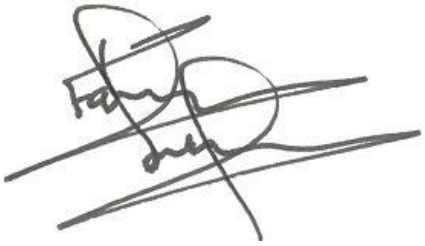
This letter is to state that Honeywell owns and operates factories in over 30 countries. Products are manufactured under the brand name and logo of Honeywell Corporation in USA, Italy, United Kingdom, Mexico, Canada, Japan, Korea, Taiwan, China, Australia, South Africa, Switzerland and the Netherlands. Honeywell hereby confirms that all Honeywell brand products have been tested and in accordance by our Global Quality Assurance Department under the direct control and leadership of our USA Head quarters to ensure the products Quality and Performance.

Further, Honeywell manufactures the following list of products in the countries as listed across it only:

Product code	Description	COO
IFP-2100HV	Farenhyt 2100 point Addressable Fire Panel, 4 line LCD display with 40 characters per line, One SLC loop card inbuild, 159 Detectors and 159 Modules per loop, Additional Loop cards can be expanded through 5815RMK (Remote mounting Kit which accomodates 2 SLC Cards (6815)), Network upto 32 panels, inbuild eight on-board Flexput™ circuits,Built in USB interface,for programming,Four programmable function keys, 240VAC @ 50/60Hz, 2.8A , UL Listing and FM Approved, Black Cabinet	USA
6815	SLC Loop Expander which supports 159 Detectors and 159 Modules	USA
5815RMK	Remote Mounting Kit	USA
SK-NIC	Network Interface Card	USA
SK-FSL	Network Interface Card	USA
BAT-12550	BATTERY, 12 VOLT, 55 AH.	VIETNAM
BB-55F	BATTERY BOX, HOLDS UP TO TWO BAT-12260 (26 AH) OR BAT-12550 (55 AH)	USA
ECS-DUAL50WHV	Amplifier 50/100 Watt Dual Channel / Back-up Amp -high Voltage 220vac 50 Hz	USA
BAT-12180-BP	TWO (2) BAT-12180 (12V, 18AH) SHIPPED IN EACH BULK PACK	VIETNAM
IFP-NET-3	Software and key (a key is required on each PC in system)	USA
IFPN-GW-KIT	Installation packages includes Gateway interface, Cabinet, and 5824 Serial/Parallel printer interface	USA
RA-2000	4 X 40 Display Remote Annunciator. Red	USA
IDP-PHOTO	Intelligent Addressable Photoelectric Detector	MEXICO
B501	4" Mounting Base	MEXICO
B200S	Intelligent Sounder Base High/low Volume Output W/ansi Temporal 3 Or Temporal 4, Continuous, March Or Custom Tone	MEXICO
IDP-FIRE-CO	Advanced Multi-Criteria Fire/CO Detector	ITALY
RA100Z	Remote LED. Mounts to single gang box.	MEXICO
IDP-PULL-DA	Addressable Manual Dual Action Pull Station	MEXICO
IDP-PHOTOR	Intelligent Photoelectric Replacement Smoke Detector remote test capable, for use with DNR (W) duct smoke detector	MEXICO

DNR	InnovairFlex intelligent duct detector, non-relay, does not include head	MEXICO
ST-5	Detector sampling tube, 4-8’ ducts	MEXICO
P48-21-00	Replacement End Cap for Metal	USA
RTS151KE	Key-Activated Remote Test station	MEXICO
IDP-BEAM	Intelligent Addressable Beam Smoke Detector	MEXICO
BEAMMMK	Projected Beam Smoke Detector Multi-Mount Kit, Wall or Ceiling.	MEXICO
BEAMLRK	Projected Beam Smoke Detector Long Range Kit, Increases Distance.	DE
RTS151	Remote Test Station.	MEXICO
IDP-ACCLIMATE	Intelligent Addressable Multicriteria Photoelectric Smoke Detectorc (Smoke with Thermal (Base Not Included)	MEXICO
9400X	FAAST XT 4 CHANNEL	MEXICO
761520.10	Pipe (ABS), length 3 m, 25 mm PU 10 pcs. Total 30 mts	GREAT BRITAIN
761525.10	Sleeve (ABS) for 25 mm pipe PU 10 pcs.	GREAT BRITAIN
761523.10	45° angle (ABS) for 25 mm PU 10 pcs.	GREAT BRITAIN
761522.10	90° angle (ABS) for 25 mm PU 10 pcs.	GREAT BRITAIN
761526.10	End cap (ABS) for 25 mm pipe PU 10 pcs.	GREAT BRITAIN
761542.10	Suctions hose set for 25 mm	GREAT BRITAIN
761524.10	T-piece (ABS) for 25 mm pipe PU 10 pcs.	GREAT BRITAIN
IDP-CONTROL	Addressable Control Module	MEXICO
IDP-HEAT	Intelligent Addressable Thermal Detector Fixed Temp 135 (Base Not Included)	MEXICO
IDP-HEAT-ROR	Intelligent Addressable Fixed temperature and rate-of rise thermal detector (Rate-of-rise detection 15ºF/min (9ºC/min) (Base Not Included)	MEXICO
B200S	Intelligent Sounder Base High/low Volume Output W/ansi Temporal 3 Or Temporal 4, Continuous, March Or Custom Tone	MEXICO
FSL100-UV	UVIR flame detector RED, ATEX FM EN54	NETHERLANDS
S2000A	Sensor cable	MEXICO

Yours sincerely,



Jabri, Fahmi
Strategy and Marketing Director, Honeywell Security and Fire