

Features

- 1,270 addresses available on this analog addressable system
- Optional PSK-1000B for integrated programmable soft keys
- Additional system capacity achieved via multi-point SLC modules
- 1500 software zones
- NFPA 72 Compliant Smoke Sensitivity Test Built-In
- System Operates as Class A or Class B for SLC, P-Link and NACs
- 10 Amp Power Supply, Expandable to 315 amps
- 6 NACS, Regulated, Rated at 3 Amps each, expandable to 192
- 4 Input/Output (I/O) Circuits for system flexibility rated at 1 Amp each, ideal for manual release and abort
- Strobe Synchronization and System Wide Sync for Potter/AMSECO®, Gentex®, Cooper Wheelock® and System Sensor® strobes
- Dedicated Alarm, Supervisory and Trouble Relays
- 4,000 Event History Buffer
- Optional two line DACT with UD-2000 that can report General, Zone or Point Information
- Built in IP communicator
- Ethernet Port for Programming and Network Connectivity
- E-Mail System Status, Reports and Event Information
- Product includes 5 year warranty



Description

The AFC-1000E is an expandable analog/addressable releasing fire alarm system with a total system capacity of 1,270 addresses. Additional capacity on the system is achieved using multi-point SLC modules. The control panel utilizes the exclusive Potter protocol that includes a complete line of sensors and modules. Each SLC may be comprised of any combination of smoke sensor, heat detectors or modules and allows for a total of 50 ohms of impedance and may use any wire compliant with the National Electrical Code (NEC).

The AFC-1000E has a 10 Amp power supply with six Notification Appliance Circuits (NACs) and four Input/Output (I/O) circuits. The NACs are rated at 3 Amps each and the I/Os are rated at 1 Amp each. Each output is regulated and power limited. In addition, each output is uniquely programmable and may be configured for steady signal, strobe synchronization, constant power, door holder power, or releasing. The strobe synchronization includes Gentex, AMSECO, System Sensor and Cooper/Wheelock and with the exclusive Quadrasync each output may have a unique brand and all strobes will flash together.

The NACs may be expanded using the PSN-1000 series intelligent power supplies. Each PSN-1000 adds another 10 Amps of power, 2 additional input circuits and the AFC-1000E will support up to 31 power supplies. The system will synchronize the strobes system wide. In addition, the PSN-1000E has space to allow the installation of up to six PAD100-SLCE SLC loop expansion cards. The cards mount on a stacker bracket that allows access to all SLC circuit connections.

The AFC-1000E enclosure allows integration of the PSK-1000B which offers 16 programmable soft keys to manually control zones. Soft keys can be expanded by adding remote PSK-1000's. All zones can be configured using the Potter programming tool.

Technical Specifications

| | |
|--------------------------------|--|
| Dimensions | 18 15/16" W x 27 5/16" H x 4 7/16" D |
| AC Mains | 5.0 Amps @ 120 VAC 50/60 HZ 3.0 Amps @ 240 VAC 50/60 HZ |
| Enclosure | 16 guage cold rolled steel with removable locked door with Lexan viewing window |
| Battery | Standby Current-130 mA Alarm Current-220 mA <ul style="list-style-type: none"> • 10 Amps power for NACs, I/O, and P-Link • 3 Amps per NAC, regulated • 1 Amp per I/O circuit, regulated • Battery Charger range 8-55 Ah • Battery Charger voltage 27.3 VDC • P-Link maximum current of 1 Amp |
| Temperature and Humidity Range | 32°F to 120°F (0°C to 49°C) with a maximum humidity of 93% non-condensing |
| Standards | <ul style="list-style-type: none"> • NFPA 12, 12A, 13, 15, 16, 17, 17A, 70, 72, 92, 750, and 2001 • ANSI/UL 864 - Local (L), Remote Station (RS), Central Station (CS), Proprietary (PPU), Auxiliary (AUX) Type of Service: Automatic (A), Manual (M), Water Flow (WF), Sprinkler Supervisory (SS) Type of Signaling: Digital Alarm Communicator (DAC), March Time (March), Non Coded (NC), Reverse Polarity (Rev Pol), Other Technologies (OT) • IBC (International Building Code) |

SLC Loop Accessories

The control panel may be connected with up to 1,270 addressable devices or modules in any combination. The SLC is not restricted by any special wire requirements and may be wired with any wire that complies with the NEC.

SLC Loop Devices

| Device | Description |
|------------------|--|
| PAD Series-PD | Analog Photoelectric Smoke Detector is a smoke detector with a listed obscuration of 1.1 to 3.5%/foot. UL 268 7th Edition. |
| PAD Series-PHD | Combination Analog Photoelectric Smoke/Heat Detector - a smoke detector with a listed obscuration of 1.1 to 3.5%/foot obscuration and a fixed temperature range of 135° to 185° F heat detector. Smoke detection compliant with UL 268 7th Edition. |
| PAD Series-PCD | Combination Photoelectric Smoke/Carbon Monoxide Detector. Smoke detection compliant with UL 268 7th Edition. Carbon Monoxide detection compliant with UL 2075. |
| PAD200-PCHD | Combination Photoelectric Smoke/Heat/Carbon Monoxide Detector. Smoke detection compliant with UL 268 7th Edition. Heat detection with a fixed temperature range of 135° to 185°F and UL 521 7th Edition compliant. Carbon Monoxide detection compliant with UL 2075. |
| PAD Series-HD | Analog Fixed Temperature (135° - 185°F) or Rate-of-Rise Heat Detector (software selectable). |
| PAD Series-DUCTR | Addressable Duct Smoke Detector with Form C Relay rate at 10Amps @ 250/120VAC or 8Amps at 30VDC. |
| PAD Series-DUCT | Addressable Duct Smoke Detector. |
| PAD100-6DB | 6" round base that is mountable to an electrical box and wired for connection to the PAD100/200 devices. |
| PAD100-4DB | 4" round base that may be mountable to an electrical box and wired for connection to the PAD100/200 devices |
| PAD100-IB | Isolator base that interrupts a short in a SLC and prevents the short from affecting protected devices on the loop and used for connection to the PAD100/200 devices only. |
| PAD100-RB | Addressable Relay Base that contains one relay controlled by the SLC. Relay rated at 2 amps at 30 VDC or 0.5A at 125VAC. For PAD100/200 devices only. |
| PAD100-SB | Addressable Sounder Base that contains an addressable sounder module which allows for configuration of local, group, and/or all call. For PAD100/200 devices only. |
| PAD Series-CD | Addressable CO gas detector. |
| PAD200-DD | Addressable photoelectric smoke detector for use in DUCT/DUCTR enclosure. |
| PAD300-DD | Addressable photoelectric smoke detector for use in DUCT/DUCTR enclosure or pendant mount applications. |
| PAD100-LFSB | Addressable Low Frequency Sounder Base that contains an addressable sounder module which allows for configuration of local, group, and/or all call. The LFSB complies with the Low Frequency Signal Requirements (520 Hz) and used for connection to the PAD100/200 devices. |
| PAD100-SPKB | Speaker base is a wall of ceiling mount speaker capable of 25 or 70.7 VRMS and is field selectable from 1/8W to 4W and used for connection with the PAD100/200 devices. |
| PAD300-6DB | 6" round base which is mountable to an electrical box and wired for connection to the PAD300 devices. |
| PAD300-4DB | 4" round base which is mountable to an electrical box and wired for connection to the PAD300 devices. |
| PAD300-IB | Isolator Base that interrupts a short in a SLC and prevents the short from affecting protected devices on the loop. Used for connection to the PAD300 devices. |
| PAD300-RB | Addressable Relay Base that contains one relay controlled by the SLC. The Relay is rated 2 amps at 30 VDC or 0.5A at 125VAC and used for connection to the PAD300 devices. |
| PAD300-SB | Addressable Sounder Base that contains an addressable sounder module which allows for configuration of local, group, and/or all call; and used for connection to the PAD300 devices. |
| PAD300-LFSB | Addressable Low Frequency Sounder Base that contains an addressable sounder module which allows for configuration of local, group, and/or all call. The LFSB complies with the Low Frequency Signal Requirements (520 Hz) and used for a connection to the PAD300 devices. |

Modules

| Device | Description |
|-------------|---|
| PAD100-MIM | Micro Input Device Module provides a small foot print contact module for mounting inside an enclosure. |
| PAD100-PSSA | Single Action Addressable Pull Station. |
| PAD100-PSDA | Dual Action Addressable Pull Station. |
| PAD100-SIM | Single Input Module is a standard contact module with an LED taht mounts into a 4" square electrical box. |
| PAD100-DIM | Dual Input Module is a device that can monitor two distinct inputs with a single device or in a Class A mode. |
| PAD100-TRTI | Two Relay Two Input module provides two form C relays that are individually controlled by the control panel. Each relay is rated for 2 amps at 30VDC or 0.5 amps at 125VAC. Also provides two contact inputs. |
| PAD100-NAC | Notification Appliance Circuit module is an addressable remote appliance circuit controlled by the panel. |
| PAD100-ZM | Zone Module is used to connect conventional 2-wire smoke detectors to the system. |
| PAD100-IM | Module interrupts a short on the SLC and prevents the short from affecting protected devices on the loop. |
| PAD100-RM | Relay Module that provides one form C relay controlled by the control panel. Relay is rated for 2 amps at 30VDC or 0.5 amps at 125VAC. |
| PAD100-LED | Module provides a single addressable LED taht is controlled by the control panel. |
| PAD100-SM | Speaker Module provides switching for two audio channels. |
| PAD100-LEDK | Addressable LED and key switch that mounts in a single gang box. |
| PAD100-DRTS | DUCTR Remote Test Switch that mounts in a single gang box and optionally supervised. |
| PAD100-OROI | One Relay One Input Module provides one form C relay and one input. The relay is rated at 2 amps at 30VDC of 0.5 amps at 125VAC. |

Ordering Information

| Model | Description | Stock No. |
|-----------|-------------------------------------|-----------|
| AFC-1000E | Expandable Fire Alarm Control Panel | 3992799 |
| | Replacement Board AFC-1000 | 3992758 |
| PSK-1000B | Programmable Soft Keys Board Only | 3993140 |

SCL Features

The Potter protocol is a digital protocol with a proven design for reliability and noise immunity. The system does not require special cable or conductors for connection of the Signaling Line Circuit as long as the cable is compliant with NFPA 70 and NFPA 72. The system allows for Class A or Class B installations as well as "T-Taps." Each loop is capable of 127 points, with a max wiring distance of 10,000 ft.

Sensor Features

The sensors through the fire alarm control panel provide a real time status as to the condition of the system. The smoke detector sensitivity, heat detector temperature level and drift compensation are all programmable options. The system also allows for day/night mode where the panel automatically adjusts the sensitivity depending on the time of day. To assist in the reduction of false alarms, the smoke detectors also have a maintenance warning that sends a trouble signal when a detector is dirty to the point that it can no longer maintain the programmed sensitivity.

User Interface

The fire alarm control panel has a 4 x 40 LCD display to provide information to the system status. The keypad had navigation keys to allow manipulation of the Menu on board the panel. The panel is shipped standard with the following LEDs:

- AC Power - Green
- Alarm - Red
- Earth Fault - Amber
- Supervisory - Amber
- Silenced - Amber
- Trouble - Amber
- Pre-Release - Amber
- Release - Red

The common buttons include a Silence, Reset, Acknowledge, and Drill. All of the buttons are accessible once the locked door is opened.

P-Link

The AFC-1000E has a proprietary communication protocol that communicates through a RS-485 connection to field devices. Up to 64 devices may be connected to a single P-Link connection. The P-Link included the communication terminals and regulated 24 VDC connection for the field devices. The field devices may be any of the following:

PAD100-SLCE - Analog/Addressable loop expansion module

SLCE-127 - Nohmi addressable loop expansion module for retrofit applications

RA-6075R - 2 x 16 LCD annunciator with a key pad in a locked metal enclosure.

RA-6500R(F) - 4 x 40 LCD annunciator with a key pad in a locked metal enclosure. Flush mount version available.

LED-16(F) - 16 LED annunciator with common indicators in a locked metal enclosure. Flush mount version available.

PSN-1000(E) - 10 amp, remote intelligent power supply with 6 NAC's, 2 Inputs and a P-Link repeater. This panel is listed in conjunction with the AFC-1000E as releasing circuits.

CA-6500 - Class A convertor that converts the SLC, NACs and P-Link connection

UD-2000 - UL listed, Dual line telephone alarm communicator

DRV-50 - LED driver expander, used to connect up to 50 LEDs in a graphic display

FCB-1000 - Fire communication bridge, provides remote mounting of the Ethernet connection

FIB-1000 - Fiber interface module, used to extend P-Link to multi-mode fiber (2 required)

RLY-5 - Relay module, provides form C relay contacts rated at 3.0 amps 24VDC/125AC

SPG-1000 - Serial parallel gateway, allows for the connection to a serial or parallel printer

The **FIB-1000**, **FCB-1000** and the **SPG-1000** may be installed in the stacker bracket or ordered with the optional rack mount enclosure.

MC-1000 Multi-Connect allows up to sixty-three IPA series panels to share a single reporting technology.

IDC-6 - Initiating device circuit provides 6 programmable inputs

AE-2 - Two card expansion cabinet

AE-8 - Eight card expansion cabinet

AE-14 - Fourteen card expansion cabinet

PSK-1000 - 16 programmable soft keys

Ethernet/I.P. Connection

The AFC-1000E is shipped standard with an Ethernet connection. This connection is the programming port and may be connected to a building Wide Area Network (WAN) or Local Area Network (LAN). Once connected to the Internet, the panel may be selectively programmed to e-mail alarm conditions, trouble conditions, supervisory conditions, test, Event History and detector status. An e-mail may be sent to the panel and the panel will e-mail the event history, detector status, configuration file or server status to an authorized E-mail account. In addition, reminders may be set to send an e-mail for service, testing or other conditions.

In addition, the Ethernet connection is UL listed as an IP communicator. The IP communicator is listed to report to the UL listed Sur-Gard III IP receiver. The IP communicator replaces the traditional less reliable alarm communicator transmitter that utilized telephone lines. The IP communicator is an active method of connection and communication to the monitoring station.