



FDNY

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CERTIFICATE OF APPROVAL # 6256 **THIS CERTIFICATE IS REVOCABLE, NOT TRANSFERABLE** **and EXPIRES on NOVEMBER 8, 2020**

By order of Fire Commissioner Daniel A. Nigro, and pursuant to Section FC 112 of the New York City New Fire Code, the following equipment or system is accepted for use provided the conditions as outlined below are in full compliance.

Manufacturer: Potter Electric Signal Company LLC

Trade Name: Potter Electric

Product: Fire Alarm Control Panels

Model Number(s): AFC-50, AFC-100, AFC-1000, ARC-100

Pertinent Code Section(s): Section FC 901 of the New York City Fire Code

Prescribed Tests: UL 864 9th Edition, NFPA 72

Laboratories: Underwriters Laboratories, Inc. (UL)

Report(s): UL S735, Volume 32; issued 2016-08-11; revised 2017-09-11

Description: The AFC-1000 is identical to the IPA-4000 except for a reduced number of expansion capabilities and no agent releasing service. The ARC-100 is identical to the IPA-100 except for a reduced number of on-board SLC points. The AFC-100 and is identical to the IPA-100 except for a reduced number of on-board SLC points and no agent releasing service. The AFC-50 and is identical to the IPA-60 except for a reduced number of on-board SLC points and no agent releasing service.

The **AFC-50** is an analog/addressable fire alarm system with a total system capacity of 50 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-50 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 includes the communication terminals and regulated 24 VDC connection for the field devices. The AFC-50 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,

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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. The AFC-50 has a 5 Amp power supply with two Notification Appliance Circuits (NACs) and two 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 Potter/AMSECO, Gentex, System Sensor and Cooper/Wheelock and with the exclusive Quadrasync each output may have a unique brand and all strobes will flash together. The I/Os are designed for inputs such as manual release stations and abort switches that will not require polling and react nearly instantaneously.

The **AFC-100** is an analog/addressable fire alarm system with a total system capacity of 100 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-100 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 includes the communication terminals and regulated 24 VDC connection for the field devices. The AFC-100 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. The AFC-100 has a 5 Amp power supply with two Notification Appliance Circuits (NACs) and two 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

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synchronization includes Potter/AMSECO, Gentex, System Sensor and Cooper/Wheelock and with the exclusive Quadrasync each output may have a unique brand and all strobes will flash together. The I/Os are designed for inputs such as manual release stations and abort switches that will not require polling and react nearly instantaneously.

The **AFC-1000** is an expandable analog/addressable 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. The system is expandable with a total of thirty-one additional addressable Signaling Line Circuits (SLC) each with a maximum of 127 devices. 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-1000 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 includes the communication terminals and regulated 24 VDC connection for the field devices. The AFC-1000 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. The AFC-1000 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 Potter/AMSECO, Gentex, System Sensor and Cooper/Wheelock and with the exclusive Quadrasync each output may have a unique brand and all strobes will flash together. The I/Os are designed for inputs such as manual release stations and abort switches that will not require polling and react nearly instantaneously.

The **ARC-100** is an analog/addressable releasing fire alarm system with a total system capacity of 100 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 ARC-100 has a proprietary

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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 includes the communication terminals and regulated 24 VDC connection for the field devices. The ARC-100 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, and 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. The ARC-100 has a 5 Amp power supply with two Notification Appliance Circuits (NACs) and two 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 Potter/AMSECO, Gentex, System Sensor and Cooper/Wheelock and with the exclusive Quadrasync each output may have a unique brand and all strobes will flash together. The I/Os are designed for inputs such as manual release stations and abort switches that will not require polling and react nearly instantaneously.

Each product model type and description is shown in Table 1.

Table 1.

Device	Description
AFC-50	50 point analog/addressable fire alarm system
AFC-100	100 point analog/addressable fire alarm system
AFC-1000	Analog/addressable releasing fire alarm system expandable up to 1,270 points
ARC-100	100 point analog/addressable releasing fire alarm system
PAD100-6B	6" round base that is mounted to an electrical box and wired for connection of one of the above sensors.
PAD100-4B	4" round base that may be mounted to an electrical box and wired for connection to the above sensors.
PAD100-IB	Isolator base that interrupts a short in a SLC and prevents the short from affecting protected devices on the loop.
PAD100-RB	Addressable relay base that contains one relay controlled by the SLC. Relay is rated at rated at 2 A at 30 VDC or 0.5A at 125VAC.

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Device	Description
PAD100-SB	Addressable sounder base that contains an addressable sounder module that may be configured for local, group and all call.
PAD100-MIM	Micro input 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 pulls station.
PAD100-SIM	Single input module is a standard contact module with an led that 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 A at 30VDC or 0.5 A 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	Isolated 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 A at 30VDC or 0.5 A at 125VAC.
PAD100-LED	Module provides a single addressable led that 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 A at 30VDC or 0.5 A at 125VAC
PAD100-SLCE	Analog/addressable loop expansion module
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 A, remote intelligent power supply with 6 NAC, 2 I/Os and a P-link repeater. This panel is listed in conjunction with the IPA-60 as releasing circuits
CA-6500	Class A convertor that converts the SLC, NAC and P-link connection
UD-1000	UL listed, dual line telephone alarm communicator

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Device	Description
DRV-50	LED driver expander, used to connect up to 50 LED 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 multimode fiber (2 required)
RLY-5	Relay module, provides 5 Form C relay contacts rated at 3.0 A 24VDC/125AC
SPG-1000	Serial parallel gateway, allows for the connection to a serial or parallel printer
MC-1000	Multi-connect allows up to sixty-three IPA series panels to share a single reporting technology
AE-2	Two card expansion cabinet
AE-8	Eight card expansion cabinet
AE-14	Fourteen card expansion cabinet
EOLR	End of line resistor
SCI	Short circuit isolator
CIZM-4	Conventional input zone module
MOM-4	Monitored output module
TRM-4	Twin relay module
DCM-4	Dual contact module
SCM-4	Single contact module
MCM	Miniature contact module
ARB	Addressable relay base
ASB	Addressable sounder base
AIB	Addressable isolator base
APS-SA/DA	Addressable pull station (single action / dual action)

NOTE: The fire detectors (smoke, smoke/duct, heat) is not required our approval and were excluded from this COA; you may use them in NYC if they are listed by National Recognized Test Laboratories and compatible with the fire alarm control panel.

Conditions of Approval:

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1. All uses, configurations, arrangements and functions, application and installations shall comply with the provisions of New York City Construction Codes, specifically Building Code Chapter 9 & IRCNY §3616-04. Further, the installation shall be in accordance with applicable provisions of New York City Fire Code, New York City Electrical Code, manufacturer's installation requirements, and UL Standard 864.
2. When used with a central office control communicator or a transmitter, the installation and operation of the equipment and devices shall comply with 3RCNY §901-01. It shall have the capability of transmitting separate and distinct signals to indicate manual pull station alarm, automatic detection alarm, sprinkler waterflow alarm, supervisory signal indications, and trouble indications.
3. The installation of Fire Alarm Control Unit must provide for fail-safe operation. This feature must assure that control of doors, locks, ventilation fans, and elevator recall will not be rendered inoperable in the event of a fire or power failure.
4. Annunciator is acceptable under the condition that this unit shall be used to acknowledge the alarm and all its control function, including alarm silence and panel reset shall be disabled.
5. Connection to Central Station shall have two means of communication. Primary channel shall be telephone line. Internet communication shall be limited for the **secondary means of communication** and comply with 26.6.3 NFPA 72, 2010 edition.
6. When used for carbon dioxide (CO₂) releasing application (**ARC-100 fire alarm control panel only**), the following shall be complied with:
 - 6.1. All safety precautions stated in NFPA 12 shall be strictly followed.
 - 6.2. Provide signs at every entrance of the protected space as follows:
WARNING: DO NOT ENTER THE PROTECTED PREMISES SPACE UNLESS PHYSICAL LOCKOUT OR OTHER SAFETY PROCEDURES ARE FULLY COMPLETED. DO NOT USE SOFTWARE DISABLE FUNCTIONS IN THE PANEL THROUGHOUT THE LOCKOUT.
7. Only fiber optic cables listed by Nationally Recognized Testing Laboratory (NRTL) and meeting the New York City Electrical Code requirements shall be used.
8. A listed barrier gateway, integral with or attached to each control unit or group of control units, as appropriate, shall be provided to prevent the other systems from interfering with or controlling the fire alarm system.
9. The above referenced equipment shall be used only with listed fire alarm equipment and devices, with which the compatibility has been determined by UL Listing Report
10. Only enclosures painted red in color shall be used.
11. Underwriters Laboratories Inc.'s Listing requirements and limitations shall be complied with.
12. Certificate of Approval number shall be plainly and permanently stamped or otherwise fixed upon each product by the applicant.

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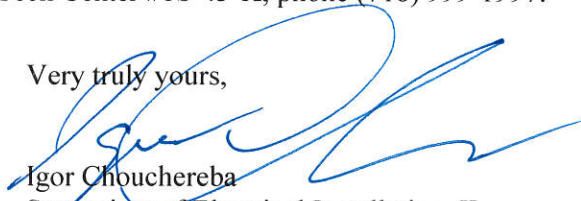
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13. The Fire Department's conditions of approval shall be enumerated in the installation manuals and brochures that will be provided to all New York City buyers and users.
14. Fire Department Certificate of Approval does not constitute an endorsement or recommendation of your product by the Fire Department, but is a certification that your product is acceptable as of the date of issuance.
15. The Fire Department reserves the right to withdraw this approval at any time in the event there is a reasonable doubt that the product does not operate or perform as required by code, the conditions of this resolution or as represented in your application.
16. As the manufacturer of this product, you should be aware that any end user who fails to comply with the condition as outlined in the approval would be subject to enforcement action, which may include fines and imprisonment.
17. This Certificate of Approval does not grant the right to use any trademark associated with the New York City Fire Department (the letters FDNY, the FDNY Shield design, the FDNY Maltese Cross design, and the seal of the City of New York). The unauthorized use of trademarks in connection with the sale of commercial goods or services violates federal and state laws.
18. Products marked to indicate the Certificate of Approval number might refer to the "NYC Fire Department" or "NYC Fire Dept." (e.g., "NYC Fire Dept. Certificate of Approval #XXXX).

Any change in company name or ownership, product name, design or model number of any product included on this certificate must be immediately reported to this Department in writing.

When responding to this Department regarding this subject matter, kindly refer to F.P. Index # 1710035A and to Igor Chouchereba attention, 9 MetroTech Center #1S-43-K, phone (718) 999-1997.

Very truly yours,



Igor Chouchereba
Supervisor of Electrical Installation, II
Technology Management

c: Tamara Saakian, P.E., Director of Technology Management.
cc: Trushant Shah, Deputy Director of Engineering, Technology Management.