PROJECT MANUAL

Product Submittal
for
John Adams Elementary School
Fire Alarm Upgrade
at
Madera Unified School District

Project No:
District Bid No:
DSA File No: 20-30
DSA Application No: 02-116790

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JOHN ADAMS ELEMENTARY SCHOOL
SECTION 283100 - FIRE ALARM SYSTEM
MATERIAL SUBMITTAL (DSA APPLICATION 02-116790)

PART #:	DESCRIPTION	MANUFACTURER	CSFM #
	CONTROL PANEL		
E3	FIRE ALARM CONTROL PANEL	GAMEWELL/FCI	7165-1703:0125
LCD-E3	LCD KEYPAD/DISPLAY	GAMEWELL/FCI	7165-1703:0125
ILI-MB-E3	INTELLIGENT LOOP INERFACE BOARD (MAIN)	GAMEWELL/FCI	7165-1703:0125
INI-VGX-UTP	COPPER VOICE GATEWAY	GAMEWELL/FCI	7165-1703:0125
PM-9	120VAC 9A POWER SUPPLY	GAMEWELL/FCI	7165-1703:0125
AM-50-70	70V 50W DIGITAL AUDIO AMPLIFIER	GAMEWELL/FCI	7165-1703:0125
DACT-E3	DIGITAL ALARM COMMUNICATOR	GAMEWELL/FCI	7165-1703:0125
E3BB-RC/INCC	"C" SIZE ENCLOSURE (RED)	GAMEWELL/FCI	7165-1703:0125
E3ID2-C	3-BAY INNER DOOR ASSEMBLY	GAMEWELL/FCI	7165-1703:0125
E3-INX-CPLATE	C-PLATE (1 ILI-MB, 1 PM-9, 1 VG, 4 AM-50)	GAMEWELL/FCI	7165-1703:0125
900375	PM-9 ADAPTER PLATE FOR VGX CARD	GAMEWELL/FCI	7165-1703:0125
ES26-12	12VDC 26AH LEAD ACID BATTERY	MK BATTERY	N/A
INX	FIRE ALARM CONTROL PANEL	GAMEWELL/FCI	7165-1703:0125
ILI-MB-E3	INTELLIGENT LOOP INERFACE BOARD (MAIN)	GAMEWELL/FCI	7165-1703:0125
INI-VGX-UTP	COPPER VOICE GATEWAY	GAMEWELL/FCI	7165-1703:0125
PM-9	120VAC 9A POWER SUPPLY	GAMEWELL/FCI	7165-1703:0125
AM-50-70	70V 50W DIGITAL AUDIO AMPLIFIER	GAMEWELL/FCI	7165-1703:0125
E3BB-RC/INX	"C" SIZE ENCLOSURE (RED)	GAMEWELL/FCI	7165-1703:0125
E3-INX-CPLATE	C-PLATE (1 ILI-MB, 1 PM-9, 1 VG, 4 AM-50)	GAMEWELL/FCI	7165-1703:0125
900375	PM-9 ADAPTER PLATE FOR VGX CARD	GAMEWELL/FCI	7165-1703:0125
ES17-12	12VDC 18AH LEAD ACID BATTERY	MK BATTERY	N/A
	REMOTE DEVICES		
LOC	LOCAL OPERATING CONSOLE	GAMEWELL/FCI	7165-1703:0125
INI-VGX-UTP	COPPER VOICE GATEWAY	GAMEWELL/FCI	7165-1703:0125
1100-0505	NETWORK GRAPHIC ANNUNCIATOR	GAMEWELL/FCI	7165-1703:0125
1100-0452	INCC-MIC REMOTE MICROPHONE	GAMEWELL/FCI	7165-1703:0125
E3ID3-A	AA SIZE INNER DOOR (NGA, ASM-16, INCC-MIC)	GAMEWELL/FCI	7165-1703:0125
E3BB-RAA	AA SEMI FLUSH ENCLOSURE (RED)	GAMEWELL/FCI	7165-1703:0125
HPFF8	REMOTE POWER SUPPLY	HONEYWELL	7315-1637:0102
AOM-2SF	ADDRESSABLE CONTROL MODULE	GAMEWELL/FCI	7300-1703:0102
ES7-12	12VDC 7AH LEAD ACID BATTERY	MK BATTERY	N/A
	INITIATION		
MS-7ASF	ADDRESSABLE MANUAL PULL STATION	GAMEWELL/FCI	7150-1703:0119
ASD-PL2F	ADDRESSABLE PHOTO SMOKE DETECTOR	GAMEWELL/FCI	7272-1703:0121
ATD-L2F	ADDRESSABLE 135F & ROR HEAT DETECTOR	GAMEWELL/FCI	7270-1703:0115
ATD-HL2F	ADDRESSABLE 190F HEAT DETECTOR	GAMEWELL/FCI	7270-1703:0115
MSC-COF	ADDRESSABLE MULTI-CRITERIA FIRE/CO DETECTOR	GAMEWELL/FCI	7275-1703:0175
B210LP	DETECTOR BASE	SYSTEM SENSOR	7300-1653:0109
	MODULES		
AOM-2RF	ADDRESSABLE RELAY MODULE	GAMEWELL/FCI	7300-1703:0102
	NOTIFICATION		
SPSRL	SPEAKER & MULTI-CANDELA STROBE (WALL)	SYSTEM SENSOR	7320-1653:0505
SPSCRL	SPEAKER & MULTI-CANDELA STROBE (CEILING)	SYSTEM SENSOR	7320-1653:0505
SCRL	MULTI-CANDELA STROBE (CEILING)	SYSTEM SENSOR	7125-1653:0503
SPRK	OUTDOOR SPEAKER (WALL)	SYSTEM SENSOR	7320-1653:0201
	CABLES		
D990	INITIATION (SLC) - INTERIOR	WEST PENN	7161-0859:0101
AQ225	INITIATION (SLC) - UNDERGROUND	WEST PENN	7161-0859:0101
994S	NOTIFICATION (SPEAKER) - INTERIOR	WEST PENN	7161-0859:0101
AQ226	NOTIFICATION (SPEAKER) - UNDERGROUND	WEST PENN	7161-0859:0101
998S	NOTIFICATION (STROBE) - INTERIOR	WEST PENN	7161-0859:0101
AQ227	NOTIFICATION (STROBE) - UNDERGROUND	WEST PENN	7161-0859:0101

E3 Series® Control Panel

Description

The E3 Series® Expandable Emergency Evacuation System by Gamewell-FCI is in the forefront of the latest generation of fire alarm control panels. Employing the new high-speed Velociti® sensors, the E3 Series provides previously unattainable polling speed and response together with the flexibility demanded by today's emergency evacuation systems. In addition to their high-speed polling rate, the Velociti Series of sensors feature bi-polar LEDs that flash green for normal polling, and light red steadily to indicate an alarm.

The E3 Series is equipped with an 80-character LCD-E3 alphanumeric LCD display that allows 40 characters to be user-defined for custom installations. Up to six (6), keyboard LCD displays may also be remotely located. In addition, you can install five of the familiar LCD-7100/RAN-7100 remote displays. The displays show instant system status information and can be connected in any desired area of an installation.

A high-speed 32-bit processor easily tackles a wide array of applications from small office buildings to multi-complex, high-rise installations.

The (64) node networking is made possible by 625K baud/ARCNET communications using twisted-pair copper cable, fiber-optic cable, or a combination of both. In addition, the Addressable Node Expander (ANX) board expands the network to one hundred and twenty-two (122) nodes.

The basic E3 Series is equipped with an ILI-MB-E3/ILI95-MB-E3 Intelligent Loop Interface-Main Board, ILI-S-E3/ILI95-S-E3 Intelligent Loop Interface Expansion Board, ANX, and ASM-16 Addressable Switch Module that features sixteen (16), software programmable switches, each accompanied by red, green and yellow LEDs that can be programmed to indicate operation of the switches. Additional ASM-16 modules may be added to expand the operation to a plateau previously unimagined.

The Intelligent Loop Interface - Expansion Board (ILI-S-E3/ILI95-S-E3 provides the E3 Series control panel with two (2), additional signaling line circuits. The layout is similar to the ILI-MB-E3/ILI95-MB-E3 with the exception that a number of components are omitted. It occupies one node on the Broadband network.

Expandable Emergency Evacuation System

E3 Series

Features

- IBC Seismic Certified
- Listed under UL® Standard 864, 9th Edition
- UL Listed for smoke control (dedicated and non-dedicated) when properly configured
- FM/UL Listed for Pre-action/Deluge use
- Styles 4, 6, or 7* signaling line circuits
- Two to (244) SLCs each supporting 159 sensors and 159 modules
- 625K baud ARCNET communications using wire, fiber, or mixed configurations for installation flexibility
- High-speed 32 bit processor and 4100 event history log
- Advanced Boolean logic-based programming such as AND, OR, NOT, time delay and calendar functions configurable via computer programming
- Supports up to (16), ASM-16 addressable switch or ANU-48 LED driver modules per ILI-MB-E3/ILI95-MB-E3
- Two (2), Class A, Style Z or Class B, Style Y, notification appliance circuits rated at 2.0 amps. per circuit
- Integral city connection
- Flexible 115,200 baud high speed RS-232 interface
- 40 character user-defined text per device
- Supports up to five (5), LCD-7100/RAN-7100 displays and six (6), LCD-E3 keyboard displays per ILI-MB-E3/ILI95-MB-E3

**Style 7 wiring requires the use of System Sensor M500X Isolator Modules.*

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Description (Continued)

Each ILI-MB-E3/ILI95-MB-E3 can support as many as sixteen (16), ANU-48 LED Driver modules supporting hundreds of LEDs on a 3rd party graphic annunciator for remote annunciation. The ANU-48 modules may be installed in any Listed remote annunciator. It can be remotely located via an RS-485 serial interface.

An array of cabinets allows for neat, compact, attractive installations.

Installation

The E3 Series expandable emergency evacuation system offers four (4), cabinet size options. A typical cabinet includes a backbox, an inner door, and an outer door. The E3 Series cabinet assembly is a compact 19 3/8" (49 cm) wide wall-mounted enclosure.

Cabinet A includes the following four options:

- Cabinet A1 inner door mounted to the backbox. The backbox houses one NGA module.
- Cabinet A2 inner door mounted to the backbox. The backbox houses one LCD-E3 module.
- Two or three-bay inner door mounted to the backbox. The backbox typically houses one (1) LCD-E3, or one (1) NGA, and one (1) or two (2), ASM-16 modules.

Cabinet B contains a space for the ILI-MB-E3/ILI95-MB-E3, PM-9/PM-9G modules and batteries set inside the backbox. Additional module options mounted on the backbox include the DACT-E3, and RPT-E3 or ILI-S-E3/ILI95-S-E3/ANX. The 2-bay inner door houses one (1), LCD-E3 module and one (1), ASM-16 module.

Both Cabinets C and D include the following:

- Pre-assembled outer door that gives visibility to the fire fighter's phone handset and a microphone voice messaging system.
- Two inner door panel selections that may contain optional modules to meet the facility operation requirements.

In the Cabinet B, C and D backboxes, the ANX appears in the same place as the ILI-MB-E3/ILI95-MB-E3 and PM-9/PM-9G. For information on the installation instructions for any of the E3 Series cabinets, refer to the E3 Series® Expandable Emergency Evacuation Installation/Operating Manual Part Number: 9000-0574.

Specifications

Operating Voltage:	24 VDC
Operating Temperature:	Not to exceed the range of 32° to 120° F (0 to 49° C)
Relative Humidity:	Not to exceed 93% non-condensing at 90° F (32° C)

Features (Continued)

Velociti® Intelligent Sensor Features:

- Poll 318 devices in less than two (2) seconds
- Activate up to 159 outputs in less than five (5) seconds
- LED's blink associated device address during Walk Test
- Fully digital, hi-precision protocol
- Up to 9 levels of sensitivity adjustment
- Pre-Alarm adjustable between 15 levels for both Alert and Action
- Day/night automatic sensing adjustment
- Sensitivity windows:
  - Ion .05 to 2% obscuration
  - Photo 1 to 3% obscuration
  - Laser .02 to 2% obscuration
  - MCS Acclimate2F .5 to 4%, also self-adjustable options 1 to 2%, 2 to 3%, and 3 to 4%
  - HARSH 1 to 3% obscuration
- Drift compensation
- Each Loop Card has its own integral processor providing maximum survivability on loss of any other component. SLC provides full response on loss of any other system processor
- Optional programmable switches can be configured to enable, disable or group any combination of output devices
- Integrated point or Grouped Cross Zoning allows for numerous devices installed at any location to cooperate and determine alarm condition
- Automatic detector sensitivity testing
- DIRTY and VERY DIRTY detector maintenance alerts

Ordering Information

Part Number	Description
ILI-MB-E3	Intelligent Loop Interface-Main Board
ILI95-MB-E3	Intelligent Loop Interface-Main Board
ILI-S-E3	Intelligent Loop Interface-Expansion Board
ILI95-S-E3	Intelligent Loop Interface-Expansion Board
ANX-SR	Addressable Node Expander-Single Ring
ANX-MR-FO	Addressable Node Expander-Multi-Ring Fiber Optic
ANX-MR-UTP	Addressable Node Expander-Multi-Ring Twisted-pair
LCD-E3	LCD-E3, LCD Keypad Display
RPT-E3-FO	Network Repeater (fiber and twisted-pair)
RPT-E3-UTP	Network Repeater (twisted-pair only)
DACT-E3	Digital Alarm Communicator Transmitter
ANU-48	ANU-48 LED Driver Module
ASM-16	Addressable Switch Module
NGA	LCD Network Graphic Annunciator
PM-9	Power Supply Module
PM-9G	Power Supply Module
LCD-7100	Remote LCD Display
RAN-7100	Remote LCD Display

For additional information on the cabinets, refer to the E3 Series Cabinets data sheet (Part Number: 9020-0649).

Seismic Battery Bracket Kits

For information on the types of Seismic Battery Bracket Kits that are available, the Seismic Battery Bracket Kit Part Numbers and the installation instructions, refer to the following documents:

- Seismic Battery Bracket Installation Guide, P/N: 53839
- E3 Series Cabinets Data Sheet, P/N: 9020-0649

LCD-E3

Description

The LCD-E3 provides the main panel display of the E3 Series® Expandable Emergency Evacuation System with indicating LEDs and operating switches. Up to six (6), LCD-E3 displays may be locally or remotely located from the panel via a local RS-485 bus of the ILI-MB-E3/ILI95-MB-E3 sub-assembly.

The LCD-E3 includes an LCD display for the system status and the following switches and LED indicators:

Switches

- Alarm acknowledge
- Trouble acknowledge
- Signal silence
- System reset/lamp test
- Function buttons:
  - menu/back
  - back space/edit
  - OK
- 12 button keypad

LED Indicators

• AC Power On	(green)	• Power Fault	(yellow)
• Alarm	(red)	• Ground Fault	(yellow)
• Supervisory	(yellow)	• System Silenced	(yellow)
• System Trouble	(yellow)		

Installation

The LCD-E3 is adaptable for installation in any of the following E3 Series® System cabinets:

- "A" size cabinet, inner door (E3ID2-A)
- "A2" size cabinet, inner door (E3ID-A2)
- "B" size cabinet, inner door (E3ID2-B)
- "C" size cabinet, inner door (E3ID2-C)
- "D" size cabinet, inner door (E3ID2-D)

Specifications

Operating Voltage:	24 VDC FWR (from PM-9 power supply)
Operating Current:	0.024 amp
Alarm Current:	0.028 amp
Operating Temperature:	32° to 120° F (0° to 49° C)
Relative Humidity:	0 to 93%, non-condensing at 90° F (32° C)

LCD Keypad Display

LCD-E3

Features

- Listed under UL Standard 864, 9th Edition
- Provides an 80-character display of system events together with indicating LEDs and control switches
- The ILI-MB-E3/ILI95-MB-E3 can support up to six (6), LCD-E3 displays, any or all of which may be remotely located via the RS-485 serial interface
- Easy to read backlit LED display, low power consumption

Ordering Information

Model	Description
LCD-E3	LCD keypad display

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ILI-E3 Series

Description

ILI-MB-E3
The Intelligent Loop Interface-Main Board (ILI-MB-E3) is the main interface for the E3 Series® product line. With its state-of-the-art 32 bit RISC processor, this compact "panel on a board" provides a powerful addition to Gamewell-FCI's single pair conductor solutions. The ILI-E3 Series is used in the following systems.

- E3 Series Expandable Emergency Evacuation System
- E3 Series Combined Fire and Mass Notification System

This intuitive design provides the following features:

- 2 signaling line circuits
- local energy city box output
- 2 notification application circuits
- auxiliary power output
- auxiliary relay functions

These features, combined with the built-in network and the serial protocols, allow this module to support a host of new and existing products, resulting in a building block approach to the fire alarm panel design.

The ILI-MB-E3 is network ready and occupies 1 of 64 nodes operating at 625K baud. In addition, the Addressable Node Expander (ANX) board expands the network to 122 nodes. When this sub-assembly is integrated with proven Broadband components, the result is a flexible yet powerful integrated audio solution. When the system transmits to remote locations, the optional RPT-E3 provides the ILI-MB-E3 with valuable signal boosting and transient protection, as well as connectivity using both wire and fiber-optic cables.

The ILI-MB-E3 provides 2 signaling line circuits and terminals for the connections to up to 159 detectors, 159 modules and 159 addressable sounder bases per SLC in Velociti®. In CLIP™ mode, each SLC supports 99 detectors and 99 modules. The RS-485 interface can support a variety of peripheral devices.

The ILI-MB-E3 relay outputs include system alarm, supervisory, and system trouble contacts. The ILI-MB-E3 provides output for a local energy city master box or remote location which is non power-limited. All other wiring is Class 2 power-limited.

Intelligent Loop Interface-Main Board

ILI-MB-E3

Features

ILI-MB-E3 and ILI-S-E3:

- Listed under UL® Standard 864, 9th Edition.
- Listed under UL Standard UL2572 for Mass Notification.
- UL Listed and FM Approved for Pre-Action/Deluge and Agent Releasing.
- Network ready integral 625K baud ARCNET.
- Supports 115.2K baud RS-232.
- Provides signaling line circuits with the following:
  - Two Class A, Style 6, 7* or Class B, Style 4 circuits.
  - 40 Character user-defined text per device.
  - Capacity of 159 sensors, 159 addressable modules and 159 addressable sounder bases per circuit.
- Includes 8100 Event History Log.

*Style 7 wiring requires the use of the System Sensor M500X Isolator Modules.

ILI-MB-E3 Only:

- Automatically adjusts to any NAC End-of-Line Resistor (EOL) value (1k-55k ohm) for legacy audible/visual appliances.
- Two notification appliance circuits, Class "A", Style Z or Class B, Style Y rated at 2.0 amps. per circuit.
- RS-485 supporting 16 ASM-16 switch modules and/or ANU-48 LED driver modules.
- Alarm, trouble, and supervisory dry contacts Form "C", rated at 2 amp. @ 30 VDC (resistive).
- Supports 1 LCD-SLP display via on-board ribbon cable connector.
- RS-485 terminal supports an additional 14 LCD-SLP displays/annunciators, 6 LCD-E3 displays/annunciators, 5 LCD-7100/RAN-7100 remote LED annunciators.

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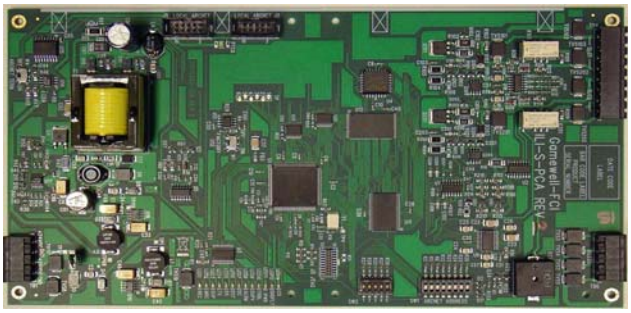

ILI-S-E3

ILI-S-E3
The Intelligent Loop Interface - Expansion Board (ILI-S-E3) provides the E3 Series control panel with 2 additional electrically isolated signaling line circuits. The layout is similar to the ILI-MB-E3 except a number of components are omitted. The ILI-S-E3 occupies one node on the Broadband network. The ILI-S-E3 provides 2 signaling line circuits and terminals for the connections to up to 159 detectors, 159 modules and 159 addressable sounder bases per SLC in Velociti mode. In CLIP mode, each SLC supports 99 detectors and 99 modules.

Installation
Typically, the ILI-MB-E3 or ILI-S-E3 can be mounted in the following E3 Series cabinets:

- Cabinet B and D, backbox
- Cabinet B, B-Slim-E3 sub-assembly plate
- Cabinet C, E3-ILI-C sub-assembly plate
- Cabinet C, E3-INCC-C sub-assembly plate
- Cabinet C, E3-INX-C sub-assembly plate
- Cabinet D, E3-INCC-D sub-assembly plate
- Cabinet D, E3-INX-D sub-assembly plate

For instructions on the installation of the ILI-MB-E3 or ILI-S-E3, refer to the following documents:

- E3 Series® Expandable Emergency Evacuation Manual, Part Number: LS10080-051GF-E
- ILI-MB-E3 Installation Instructions, Part Number: 9000-0579
- ILI-S-E3 Installation Instructions, Part Number: 9000-0569

For information on the ILI95-MB-E3 and ILI95-S-E3, refer to the ILI95-E3 Series Data Sheet, Part Number, 9021-60336.
For information on the ANX, refer to the ANX Data Sheet, Part Number, 9021-60497.

Specifications

ILI-MB-E3
Operating Current: 0.081 amp
Alarm Current: 0.150 amp max.
ILI-S-E3
Operating Current: 0.118 amp
Alarm Current: 0.119 amp
ILI-MB-E3 and ILI-S-E3
Operating Voltage: 24 VDC FWR (from the PM-9/ PM-9G Power Supply).
Operating Temperature: 32° to 120° F (0° to 49° C)
Relative Humidity: 0 to 93%, non-condensing at 90° F (32° C)
Supervised
Class 2 Power-Limited
SLC 40 Ohms maximum line impedance
0.5 µf maximum line capacitance

Ordering Information

Part Number	Description
ILI-MB-E3	Intelligent Loop Interface-Main Board
ILI-S-E3	Intelligent Loop Interface-Expansion Board

INI-VG Series

Description

The INI-VG Series includes the following sub-assemblies that are components of the E3 Broadband Audio Evacuation System and optional components of the E3 Series® Expandable Emergency Evacuation System:

- INI-VGC
- INI-VGE
- INI-VGX

INI-VGC

The INI-VGC Voice Gateway Module provides command and control functions for the INCC Command Center. The INCC serves as the point of interface between an operator and the system's audio evacuation, fire fighter intercom, and building control circuits.

A typical INCC assembly consists of an Intelligent Network Interface-Voice Gateway (INI-VGC) Module and one or more Addressable Switch Modules (ASM-16). Each INI-VGC can support up to sixteen (16), ANU-48 LED Driver Modules or ASM-16s for a total of 256 fully programmable switches and 768 LEDs (red, yellow, and green).

The INI-VGC occupies a single node on the E3 Broadband network and is connected by a single pair of twisted, unshielded wire, fiber-optic cable or any combination of the two. The INI-VGC-UTP is not equipped with fiber-optic connectors. The INCC Command Center's INI-VGC module also provides connections for an optional emergency voice page microphone as well as a Fire Fighter telephone handset.

The INI-VGC is a fully digital voice/tone generator using state-of-the-art Digital Signal Processing (DSP) technology to produce the clearest, most audible signal possible. The INI-VGC provides an output to a local speaker for message verification and testing.

The E3 Broadband Audio Evacuation System is a peer-to-peer, self regenerating, token ring network comprised of up to (64), individual nodes. Each E3 Broadband node can be spaced on the network at a maximum distance of 3,000 feet (914.4 m) or up to an 8dB loss using fiber-optic cable. Built-in isolation at each node permits Style 4, 6, and 7 network configurations.

INI-VG Series Command Center Voice Gateway

INI-VG Series

Features

The INI-VG Series include the following features:

- Listed under UL® Standard 864, 9th Edition
- All communication signals and control-by-event sequences over twisted, unshielded pair of wires or fiber-optic cable
- Distributed architecture, including Style 7 wiring configuration, allows system components to continue normal operation with NO loss of function during single line fault conditions
- Each INI-VGC or INI-VGE supports up to sixteen (16), ANU-48 LED drivers or ASM-16 switch modules for a total of 256 switches
- INI-VGC connects to a voice page microphone and fire fighter's handset
- Redundant command centers with microphone and fire fighter's handset easily configured by adding INCCs
- Advanced digital signal processor (DSP) technology for efficient audio compression and filtering
- Network data transfer rate at 625K baud

The INI-VGX includes the following features:

- Software-programmable multi-channel digital audio applications
- One Style 4 signaling line circuit (SLC) supporting up to thirty-two (32), addressable speaker circuits
- AOM-2SF used for single channel) and sixteen (16), addressable phone circuits (AOM-TELF)
- Supports up to 150 watts of audio power (using the AM-50 Series amplifiers operating at 50 watts of power @ either $25V_{RMS}$ or $70.7V_{RMS}$ output) installed in a single, wall-mounted cabinet
- 16 message capacity with up to 3 minute duration per INX and messages are easily field-configured via a laptop computer

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Description (Continued)

INI-VGE
The INI-VGE Voice Gateway Module provides command and control functions for the INCC Command Center. It provides bulk amplification. A typical INCC assembly consists of an Intelligent Network Interface-Voice Gateway (INI-VGE) Module and one or more Addressable Switch Modules (ASM-16). Each INI-VGE can support up to six (6), ASM-16s for a total of 96 fully programmable switches and 288 LEDs (red, yellow, and green).

The INI-VGE occupies a single node on the E3 Classic network and is connected by a single pair of twisted, unshielded wire, fiber-optic cable or any combination of the two. The INI-VGE-UTP is not equipped with the fiber-optic connectors. The INCC Command Center's INI-VGE Module also provides connections for an optional emergency voice paging microphone as well as a fire fighter telephone handset.

The INI-VGE is a fully digital voice/tone generator using state-of-the-art Digital Signal Processing (DSP) technology to produce the clearest, most audible signal possible. The INI-VGE provides an output capable of driving up to (20), Model AA-100 or AA-120 amplifiers.

INI-VGX
The INI-VGX Transponder Voice Gateway is a component of the E3 Broadband Audio Evacuation System and an optional component of the E3 Series Expandable Emergency Evacuation System. It is a multi-function module that incorporates:

- Network interface using twisted, unshielded wire or fiber-optic cable
- Fully digital message generator
- One (1) signaling line circuit for local peripheral devices
- Local fire fighter phone riser

It occupies a single DIP switch selectable address on the network and provides termination points for the network connection using either a pair of twisted, non-shielded wire (12 AWG max.) fiber-optic cable, or a combination of the two. The INI-VGX-UTP is not equipped with fiber-optic connectors.

The INI-VGX provides command and control for up to four (4), AM-50 Series amplifiers, operating at 50 watts of power @ either $25V_{RMS}$ or $70.7V_{RMS}$ audio output. The amplifiers are installed in a single cabinet. The INI-VGX uses advanced Digital Signal Processing (DSP) technology for audio compression and filtering. This feature allows the E3 Broadband to produce superior clarity for intelligible LIVE voice paging. The background noise is automatically filtered during voice paging and fire fighter communications which increases the audibility and eliminates the need for Push-to-Talk devices.

Specifications

INI-VGC, INI-VGE and INI-VGX

Operating Voltage:	24 VDC (nominal) from the PM-9/PM-9G Power Supply
Operating Current:	0.150 amp. supervisory and alarm
Operating Temperature:	32° to 120° F (0 to 49° C)
Relative Humidity:	0 to 93% (non-condensing)
Supervised Power-Limited	
Protocol:	Asynchronous with half-duplex data flow
Speed:	RS-232 up to 64 KBps RS-485 up to 128 KBps
St connectors*:	Up to 200 microns (multi mode), Optimized for 62.5/125 microns

*St Connectors are omitted on the INI-VG-UTP Series.
*Model INI-VGC only

Ordering Information

Part Number	Description
INI-VG Series:	
INI-VGC	Command center voice gateway
INI-VGC-UTP	Command center—(unshielded twisted-pair only)
INI-VGE	
INI-VGE	Command center classic voice gateway
INI-VGE-UTP	Command center (unshielded twisted-pair only)
INI-VGX	
INI-VGX	Transponder voice gateway
INI-VGX-UTP	Transponder voice gateway (unshielded twisted-pair)

PM-9

PM-9 Power Supply

Description

The PM-9 Power Supply is a component of NetSOLO® and E3 Series® fire alarm and voice evacuation systems. It provides power to the INX Transponder assembly and all E3 Series components.

The PM-9 is a switching power supply that provides 9 amperes of filtered and regulated 24 VDC (nominal). It has an internal battery charging circuit capable of maintaining up to fifty-five (55), A/H batteries. This module is designed for use with the Gamewell-FCI distributed audio networks.

Installation

Typically, the PM-9 Module can be mounted in the following E3 Series cabinets:

- Cabinet B and D, backbox
- Cabinet C, INX-E3 sub-assembly plate
- Cabinet C, INCC-E3 sub-assembly plate
- Cabinet D, E3-INX-D Plate
- Cabinet D, E3-ILI-D Plate

For instructions on installing the PM-9, refer to the E3 Series® Expandable Emergency Evacuation Installation/ Operating Manual, Part Number: 9020-0574 or the PM-9 Installation Instructions, Part Number: 9000-0548.

Specifications

Input Voltage:	120 VAC 60 Hz @ 3.5 A. max.
Output Voltage:	24 VDC (nominal) FWR
Output Current:	9 amperes
Output Current:	1 ampere battery charging current
Alarm Current:	0.050 amp
Operating Temperature:	32° to 120° F (0° to 49° C)
Relative Humidity:	0 to 93% (non-condensing) at 90° F (32° C)
Dimensions:	10 1/2” W x 5” H x 2” D (27 x 13 x 5 cm)

PM-9

Features

- Listed under UL® Standard 864, 9th Edition
- Includes 9 ampere, filtered, regulated power supply
- Provides 1 ampere battery charging current
- Offers energy and space saving switching technology
- Contains an integral battery charger capable of recharging up to fifty-five (55), AH batteries (Batteries not furnished)

Ordering Information

Part Number	Description
PM-9	Power supply
29229	AC Line Filter Kit

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GAMEWELL-FCI
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AM-50 Series

Description

The AM-50 Series amplifiers are components of the E3 Series®, Expandable Emergency Evacuation System. The AM-50 Series amplifiers include an AM-50-25 and an AM-50-70 amplifier. The amplifiers may be ordered as either a 25 V_{RMS} or a 70.7 V_{RMS}, 50 watt, digital, switching power amplifier. As many as four (4), AM-50 Series amplifiers can be installed in an INX CAB-B cabinet and they are supervised and controlled by an INI-VGX Voice Gateway.

There are two types of AM-50 Series amplifiers.

- The AM-50-25 amplifier produces 25 V_{RMS} audio output.
- The AM-50-70 amplifier produces 70.7V_{RMS} audio output.

WARNING: AM-50 Series Amplifiers Node Restriction: The INI-VGX can support up to four (4) AM-50 Series amplifiers with the same output voltage. You cannot wire an AM-50-25 amplifier and an AM-50-70 amplifier to the same INI-VGX Voice Gateway Node.

Each AM-50 Series amplifier provides two (2), speaker circuits that can be wired Style Y (Class "B") or Style Z (Class "A"). The terminal connections can accommodate up to 12 AWG, twisted-pair, shielded wire. Both speaker circuits produce a combined total of 50 watts of power. The 50 watts of power can be divided between the two (2), integral Class A/B speaker circuits. The two speaker circuits may be individually activated and supervised by an INI-VGX Transponder Voice Gateway.

The AM-50 Series amplifier can be programmed to broadcast 16 messages generated from its local INI-VGX Voice Gateway. In addition, the AM-50 Series amplifiers produce superior clarity for intelligible LIVE voice paging.

The AM-50 Series amplifiers may be installed in an INX CAB-B cabinet or an INCC command center using the expander plates whenever the E3 control panel is used in conjunction with the E3 Series, Expandable Emergency Evacuation System.

Specifications

AM-50-25 Amplifier:

Operating Voltage:	27.3 to 20.4 VDC
Operating Current:	0.086 amp normal standby
Alarm Current:	2.206 amp max. alarm @ 50 Watt
Audio Output:	50 watts max. @ 25 V_{RMS}

AM-50-70 Amplifier:

Operating Voltage:	27.3 to 20.4 VDC
Operating Current:	0.049 amp normal standby
Alarm Current:	2.30 amp max. alarm @ 50 watt
Audio Output:	50 watts max. @ 70.7 V_{RMS}

AM-50 Series Amplifiers

Relative Humidity:	0 to 93% max., (non-condensing) at 90° F (32° C)
Operating Temperature:	32° to 120° F (0° to 49° C)
Dimensions:	7 1/2" W x 3 1/2" H x 1 1/4" D (19 W x 9 H x 3 D cm)

AM-50 Series Amplifiers

AM-50-25

AM-50-70

Features

- Listed under UL® Standard 864, 9th Edition
- Provides digital, switching amplifier technology
- Produces 50 watts of digital power
- Includes two (2), speaker circuits, wired Style Y (Class B) or Style Z (Class A)
- Up to four (4), AM-50 Series amplifiers with the same output voltage can be controlled by the INI-VGX voice gateway

Ordering Information

Part Number	Description
1100-0456	AM-50-25, INX 25V_{RMS} audio output, 50 watt amplifier
AM-50-70	INX 70.7V_{RMS} audio output, 50 watt amplifier

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DACT-E3

Description

Digital Alarm Communicator Transmitter

The Digital Alarm Communicator Transmitter (DACT-E3) is an optional component of the E3 Series® Expandable Emergency Evacuation System. The DACT-E3 sends digital signals over the telephone network to a central station. This module can be located in the main cabinet or remotely located via a local RS-485 serial interface.

The DACT-E3 is compatible with digital alarm communicator receivers (DACRs) that receive the following signaling formats:

- SIA DC8
- SIA DCS20
- Ademco Contact ID
- 3+1 1400 Hz
- 3+1 2300 Hz
- 4+2 1400 Hz
- 4+2 2300 Hz

In addition to the DACT-E3 being compatible with digital signaling formats, the DACT-E3 features numerous formats for communication to a central station. As a digital communicator, the DACT-E3 complies with FCC Part 8, Telecommunication Standards for DC and AC Ringer Equivalence.

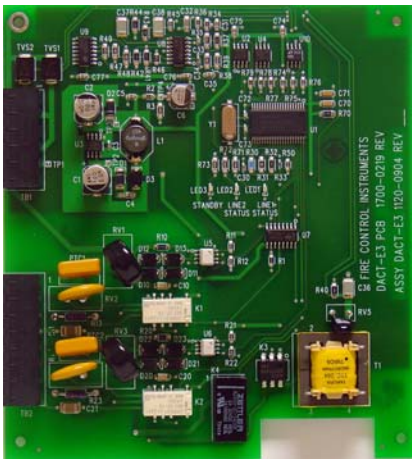
Installation Instructions

The DACT-E3 is adaptable for installation in standard E3 Series® System cabinets. Typically, the DACT-E3 module mounts on standoffs on top of the left side of the ILI-MB-E3/ILI95-MB-E3 module. Either unit can be easily connected to the backbox or sub-assembly plate depending on the cabinet module.

Note: For instructions on installing the DACT-E3, refer to the E3 Series® Expandable Emergency Evacuation Installation/Operation Manual, Part Number: 9020-0574 or the DACT-E3 Installation Instructions Part Number:9000-0581.

Specifications

Operating Voltage:	24 VDC (from the PM-9/PM-9G power supply)
Operating Current:	0.018 amp
Alarm Current:	0.018 amp
Operating Temperature:	32° to 120° F (0 to 49° C)
Relative Humidity:	0 to 93%, non-condensing at 90° F (32° C)



DACT-E3

Features

- Listed under UL® Standard 864, 9th Edition
- Communicates with the E3, ILI-MB-E3/ILI95-MB-E3 sub-assembly via RS-485
- Communicates in a variety of formats (including full Contact ID)
- Transmits and verifies data to the central station
- Offers pre-programmed dialing to the central station phone number
- Performs on and off-hook status to the phone lines
- Traces proper central station “ACK” and “Kiss-off” tone
- Activates hang-up and release phone lines
- Compatible with the IPDACT Internet Communicator

Ordering Information

Part Number	Description
DACT-E3	Digital alarm communicator transmitter

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E3 Series® Cabinets

Description

The E3 Series® Expandable Emergency Evacuation System by Gamewell-FCI offers several cabinet size options. These cabinet options allow for neat, sturdy, attractive installations. The E3 Series cabinet assembly is a compact, wall-mounted enclosure. A typical cabinet includes a backbox and an outer locking door. In addition, there are several inner door choices and mounting plates to accommodate a variety of E3 sub-assemblies.

Each cabinet backbox includes mounting patterns for plates to aid the installer in arranging and securing the sub-assemblies to the backbox. Backbox knockouts are also positioned at numerous points to allow a conduit access into the enclosure.

Four (4) Annunciator Cabinet sizes provide maximum flexibility that can meet any application.

- Cabinet A or AA offers 2 slot and 3 slot options to accommodate either of the following configurations:
  - Cabinet A or AA, 2 slot allows space for one (1) LCD-E3 and one (1) NGA or one (1) ASM-16/ANU-48.
  - Cabinet A1 or AA, 3 slot provides space for either one NGA and two ASM-16s or three ASM-16s/ANU-48s.
- Cabinet A1 houses one NGA or one ASM-16/ANU-48.
- Cabinet A2 accommodates a single LCD-E3 display.

E3BB-RBSlim or B-Slim contains the 600 Series cabinet.

Cabinet B includes a mounting plate that contains a space for the ILI-MB-E3/ILI95-MB-E3, PM-9/PM-9G sub-assemblies and batteries set inside the backbox. Additional sub-assembly options mounted on the backbox include the DACT-E3 and RPT-E3. The 2 slot inner door houses the following options:

- one (1) LCD-E3 module and
- either one (1) ASM-16/ANU-48 or one (1) NGA module

Both C and D size Command Center cabinets house a variety of E3 Broadband sub-assemblies in multiple configurations that provide a solution to a wide range of applications.

Two (2), flexible inner door panel selections are available for C and D size Command Center cabinets that may contain a fire fighter's phone handset, a microphone, and optional modules to meet the facility operation requirements.
(*Note: See Inner Door and Backbox Mounting Capacities on page 3 and 4).

Cabinets for the E3 Series®

E3 Series® Cabinets

Features

- IBC Seismic Certified
- 16-gauge steel backbox
- Removable outer and inner doors
- Inner door bonding strap used to provide electrical continuity for grounding
- Backbox and door ground studs provide positive grounding. 180° opening door with full clearance
- Available in either black or red
- Lexan® windows appear on the doors of most cabinets, except the Cabinet "C" and "D" INX cabinets and the INX CAB-B cabinet which contain louvered doors
- 90° opening door with zero clearance
- Keylock with quarter turn latch
- Trim Ring accessories available

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Ordering Information

Part Number	Description
Cabinet "A" & "AA" Size	
Dimensions:	19 1/4" W x 10" H x 3" D (49 W x 25 H x 7.6 D cm)
E3BB-BA	Enclosure, Black, "A" Size
E3BB-RA	Enclosure, Red, "A" Size
E3BB-BAA	Enclosure, Black, "AA" (LOC) Size
E3BB-RAA	Inner Door, AA Plate, Enclosure, Red, "AA" (LOC) Size
E31D2-TA	Inner Door, 2 Slots, "AA" Size (INCC-TEL & ASM-16)
E3ID2-A	Inner Door, 2 Slots, "A" Size (LCD-E3 & ASM-16)
E3ID3-A	Inner Door, 3 Slots, "A" Size (NGA, ASM-16 and MIC)
Cabinet "A1" & "A2" Size:	
Dimensions:	8 3/4" W x 10" H x 4 1/2" D (22.2 W x 25 H x 7.6 D cm)
E3BB-BA1	Assy, Backbox, Remote Enclosure, A1 Size, Black (include inner door)
E3BB-RA1	Remote Enclosure, A1 Size, Red (include inner door)
E3BB-BA2	Remote Enclosure, A2 Size, Black (include inner door)
E3BB-RA2	Remote Enclosure, A2 Size, Red (include inner door)
Flush Cabinet A1 Annunciators:	
E3BB-FLUSH-LCD	CAB A2 Remote Flush LCD ANN with Keyswitch operation
E3BB-FLUSH-NGA	CAB A2 Remote Flush NGA ANN with Password protected
Cabinet "B-Slim" Size: (Retrofit Kits)	
Dimensions:	14" W x 20" H x 4 1/2: D (35.5 W x 50.8 H x 11 D cm)
E3BB-RBSLIM	Assy, Enclosure, B-SLIM, Red with Backplate and LCD-E3 Keyswitch plate
IF600-RETROFIT	Door and Cab mounting plates, disable key switch and door lock (PK-625) for E3 Series upgrade

For additional information, refer to the Gamewell Retrofit Kits Data Sheet, P/N: 9020-06093.

Cabinet "B" Size:	
Dimensions:	19 3/8" W x 19 3/8" H x 4 1/2" D (49 W x 49 H x 11 D cm)
E3BB-BB	Assy, Backbox Enclosure, Black,"B" Size
E3BB-RB	Assy, Backbox Enclosure, Red, "B" Size
E3ID2-B	Inner Door, 2 Slots, "B" Size
1100-0460	INX-Transponder 19" (cm) Backbox with Door, Black
Dimensions:	19 3/8" W x 19 3/8" H x 4 1/2" D (49 W x 49 H x 11.43 D cm)
Cabinet "C" Size:	
Dimensions:	19 3/8" W x 30" H x 4 1/2" D (49 W x 76 H x 11 D cm)
E3BB-BC/INCC	Enclosure, Command Center, Black, "C" Size
E3BB-RC/INCC	Enclosure, Command Center, Red, "C" Size
E3ID2-C	Assy, Inner Door, Command Center, 2- Bay "C" Size
E3ID3-C	Assy, Inner Door, Command Center, 3-Bay "C" Size
E3BB-BC/INX	Assy, Transponder, Black, "C" Size

Ordering Information (Continued)

Part Number	Description
Cabinet "C" Size (Continued)	
E3BB-RC/INX	Assy, Transponder, Red, "C" Size
E3-INCC-CPLATE	Command Center module mounting plate, "C" Size
E3-INX-CPLATE	Transponder module mounting plate, "C" Size
E3-ILI-CPLATE	Intelligent loop module mounting plate "C" Size
Cabinet "D" Size:	
Dimensions:	19 3/8" W x 41" H x 4 1/2" D (49 W x 104 H x 11 D cm)
E3BB-BD/INCC	Enclosure, Command Center, Black, "D" Size
E3BB-RD/INCC	Enclosure, Command Center, Red, "D" Size
E3ID2-D	Assy, Inner Door, 2-Bay, "D" Size
E3ID3-D	Assy, Inner Door, 3-Bay, "D" Size
E3BB-BD/INX	Enclosure, Transponder, Black "D" Size
E3BB-RD/INX	Enclosure, Transponder, Red, "D" Size
E3-INCC-D-PLATE	Command Center module mounting plate, "D" Size
E3-INX-D-PLATE	Transponder module mounting plate, "D" Size

Optional Extender Plates

AM-50 Plate	AM-50 Extender Plate
FPT-GATE-3-EXT	FPT-GATE-3 Extender Plate

Optional Accessories

1100-0450	Command Center,blank plate,single size
E3-BP	Inner door panel, blank, double size
90375	PM-9/PM-9G Adapter Plate Kit, Hardware
E3-TRIMKIT-A	Trim kit for "A"/"AA" size enclosure, black
E3-TRIMKIT-A1	Trim kit for "A1" size enclosure, black
E3-TRIMKIT-A2	Trim kit for "A2" size enclosure, black
E3-TRIMKIT-B	Trim kit for "B" size enclosure, black
E3-TRIMKIT-C	Trim kit for "C" size enclosure, black
E3-TRIMKIT-D	Trim kit for "D" size enclosure, black

Bulk Amplification

Part Number	Description
AA-100	100 W Audio Amplifier, @70.7 V_{RMS} with 120 VAC
AA-120	120 W Audio Amplifier, @25 V_{RMS} with 120 VAC
ACT-1	Audio coupling transformer, for audio systems w/multiple supplies
FCI-CHG-120	Battery Charger, 25-120 A/H Gel cell
FCI-LBB	Battery box, accommodates batteries up to 55 A/H, (Black)
Cabinet C:	
FCI-DR-C4B	Large Battery Backbox, Blank door, lock & keys, for backbox accepting 3 chassis, (Black)
FCI-DR-C4BR	Blank door, lock & keys, for backbox accepting 3 chassis, (Red)
SBB-C4	Backbox, 3 chassis, (Black)
Cabinet D:	
FCI-DR-D4B	Blank door, lock & keys, for backbox accepting 4 chassis, (Black)
FCI-DR-D4BR	Blank door, lock & keys, for backbox accepting 4 chassis, (Red)
SBB-D4	Backbox, 4 chassis, (Black)

Seismic Battery Bracket Kits

Part Number	Description
90516	7100-Slim 7 A/H Seismic Battery Bracket Kit
	E3 B-Slim 7 A/H Seismic Battery Bracket Kit
90517	7100-Slim 12 A/H Seismic Battery Bracket Kit
	E3 B-Slim 12 A/H Seismic Battery Bracket Kit
90518	E3 CAB-B 7 A/H Seismic Battery Bracket Kit
	E3 CAB-C 7 A/H Seismic Battery Bracket Kit
	E3 CAB-D 7 A/H Seismic Battery Bracket Kit
	NetSOLO NS-INX 7 A/H Seismic Battery Bracket Kit
	NetSOLO 7100 7 A/H Seismic Battery Bracket Kit
90519	E3 CAB-C (INX only) 12 A/H Seismic Battery Bracket Kit
	E3 CAB-D (INX only) 12 A/H Seismic Battery Bracket Kit
	NetSOLO NS-INX 12 A/H Seismic Battery Bracket Kit
90520	E3 CAB-B 18 A/H Seismic Battery Bracket Kit
	E3 CAB-C 18 A/H Seismic Battery Bracket Kit
	E3 CAB-D 18 A/H Seismic Battery Bracket Kit

Specifications

Inner Door Mounting Capacity

Number Components

Cabinet A

E3ID2-A, Cabinet A, Inner Door, 2 Slots
- 1 LCD-E3 Display and
- 1 ASM-16/ANU-48

E3ID2-TA Assembly, Door, Inner, TEL-E3

E3ID3-A, Cabinet A, Inner Door, 3 Slots
- 1 NGA or ASM-16
- 2 ASM-16s/ANU-48

Cabinet AA
- 1 Microphone

Cabinet A1

E3ID-A1 Cabinet A1, Inner Door, (Included with Box)
- 1 NGA or ASM-16

Cabinet A2

E3ID-A2 Cabinet A2, Inner Door, (Included with Box)
- 1 LCD-E3

Cabinet B

E3ID2-B, Cabinet B, Inner Door, (Included with Box)
- 1 LCD-E3 Display and one (1) ASM-16/ANU-48
- 1 NGA and one (1) ASM-16/ANU-48

B-Slim Cabinet
- 1 LCD-E3 Display and (1) RPT-E3 or (1) DACT-E3
- 1 ILI-MB-E3 or (1) ILI95-MB-E3
- 1 PM-9 or (1) PM-9G

Cabinet C

E3ID2-C, Cabinet C, Inner Door, 2 Slots
- 1 LCD-E3 Display and
- 5 Any combination of ASM-16/ANU-48, NGA or Microphone Assemblies
- 1 Telephone Assembly

Inner Door Mounting Capacity (Cont'd)

Number Components

Cabinet C (Continued)

E3ID3-C, Cabinet C, Inner Door, 3 Slots
- 7 Any Combination of ASM-16/ANU-48, NGA, or Microphone Assemblies
- 1 Telephone Assembly

Cabinet D

E3ID2-D, Cabinet D, Inner Door, 2 Slots
- 1 LCD-E3 Display
- 11 Any Combination of ASM-16/ANU-48, or NGA or Microphone and
- 1 Telephone Assembly

E3ID3-D, Cabinet D, Inner Door, 3 Slots
- 13 Any Combination of ASM-16/ANU-48, NGA or Microphone Assemblies
- 1 Telephone Assembly

Backbox Mounting Capacity

Number Components

E3BB-BAA, Enclosure, "AA' (LOC) Size, Black
- 1 INI-VG Series Voice Gateway

E3BB-BA, A1 Size Box/Door, Black
- 1 RPT-E3 Network Repeater

E3BB-BB, B Size Box/Door, Black
- 1 PM-9/PM-9G Power Supply
- 1 ILI-MB-E3/ILI95-MB-E3 and
- 1 Additional ILI-MB-E3/ILI95-MB-E3 Loop Interface or ANX or
- 1 DACT-E3 Digital Communicator and
- 1 RPT-E3 Network Repeater

INX CAB-B Mounting Plate
- 1 PM-9 or PM-9G
- 1 INI-VGX
- 4 AM-50 Series amplifiers

E3-INCC-C Plate
- 1 PM-9/PM-9G Power Supply
- 1 INI-VG Series Voice Gateway
- 1 ILI-MB-E3/ILI95-MB-E3 Loop Interface and
- 1 Additional ILI-MB-E3/ILI95-MB-E3/ANX Loop Interface or
- 1 DACT-E3 Digital Communicator and
- 1 RPT-E3 Network Repeater
- 1 Optional AM-50 or FPT-GATE-3 Extender Plate

E3-ILI-C Plate
- 1 PM-9/PM-9G Power Supply
- 1 ILI-MB-E3 or ILI95-MB-E3
- 2 Additional ILI-MB-E3/ILI95-MB-E3 or ILI-S-E3/ILI95-S-E3 or ANX
- 1 DACT-E3
- 1 RPT-E3
- 1 Optional FPT-GATE-3 Extender Plate

Backbox Mounting Capacity

Number	Components
E3-INX-C	Plate
1	PM-9/PM-9G Power Supply with one (1) PM-9/ PM-9G Adapter Plate
1	INI-VGX Voice Gateway
1	ILI-MB-E3 Loop Interface and
1	Additional ILI-MB-E3/LI95-MB-E3/ANX
1	DACT-E3 Digital Communicator and
1	RPT-E3 Network Repeater
4	AM-50 Series Amplifier
1	Optional FPT-GATE-3 Extender Plate
E3-INCC-D	Plate
1	PM-9/PM-9G Power Supply
1	ILI-MB-E3 or ILI95-MB-E3
4	Additional ILI-E3 Series or ILI95-E3 Series or ANX
1	DACT-E3 Digital Communicator
1	RPT-E3 Network Repeater
1	INI-VG Series
1	Optional AM-50 or FPT-GATE-3 Extender Plate
E3-INX-D	Plate
1	PM-9/PM-9G Power Supply
1	ILI-MB-E3 or ILI95-MB-E3
1	DACT-E3 Digital Communicator
1	RPT-E3 Network Repeater
1	INI-VG Series
4	AM-50 Series Amplifier
1	Optional FPT-GATE-3 Plate

Backbox Mounting Capacity

Number	Components
E3BB-BD, D Size Box/Command Center (Voice), Black	
1	PM-9/PM-9G Power Supply
1	INI-VG Series Voice Gateway
4	ILI-MB-E3/ILI95-MB-E3/ANX Loop Interface and
1	Additional ILI-MB-E3/ILI95-MB-E3/ANX Loop Interface or
1	DACT-E3 Digital Communicator and
1	RPT-E3 Network Repeater
1	Optional FPT-GATE-3 Plate
E3BB-BD, D Size Box/Command Center, Black	
1	PM-9/PM-9G Power Supply
7	ILI-MB-E3/ILI95-MB-E3/ANX Loop Interface and
1	Additional ILI-MB-E3/ILI95-MB-E3/ANX Loop Interface or
1	DACT-E3 Digital Communicator and
1	RPT-E3 Network Repeater
1	Optional FPT-GATE-3 Extender Plate

Optional Extender Plates

AM-50 Extender Plate	
1	AM-50-25 or AM-50-70
FPT-GATE-3 Extender Plate	
1	FocalPoint® Gateway
1	PNET-1

PM-9

PM-9 Power Supply

Description

The PM-9 Power Supply is a component of NetSOLO® and E3 Series® fire alarm and voice evacuation systems. It provides power to the INX Transponder assembly and all E3 Series components.

The PM-9 is a switching power supply that provides 9 amperes of filtered and regulated 24 VDC (nominal). It has an internal battery charging circuit capable of maintaining up to fifty-five (55), A/H batteries. This module is designed for use with the Gamewell-FCI distributed audio networks.

Installation

Typically, the PM-9 Module can be mounted in the following E3 Series cabinets:

- Cabinet B and D, backbox
- Cabinet C, INX-E3 sub-assembly plate
- Cabinet C, INCC-E3 sub-assembly plate
- Cabinet D, E3-INX-D Plate
- Cabinet D, E3-ILI-D Plate

For instructions on installing the PM-9, refer to the E3 Series® Expandable Emergency Evacuation Installation/ Operating Manual, Part Number: 9020-0574 or the PM-9 Installation Instructions, Part Number: 9000-0548.

Specifications

Input Voltage:	120 VAC 60 Hz @ 3.5 A. max.
Output Voltage:	24 VDC (nominal) FWR
Output Current:	9 amperes
Output Current:	1 ampere battery charging current
Alarm Current:	0.050 amp
Operating Temperature:	32° to 120° F (0° to 49° C)
Relative Humidity:	0 to 93% (non-condensing) at 90° F (32° C)
Dimensions:	10 1/2” W x 5” H x 2” D (27 x 13 x 5 cm)

PM-9

Features

- Listed under UL® Standard 864, 9th Edition
- Includes 9 ampere, filtered, regulated power supply
- Provides 1 ampere battery charging current
- Offers energy and space saving switching technology
- Contains an integral battery charger capable of recharging up to fifty-five (55), AH batteries (Batteries not furnished)

Ordering Information

Part Number	Description
PM-9	Power supply
29229	AC Line Filter Kit

An ISO 9001-2000 Company

SIGNALING UL LISTED S1869 Vol. 14 S1949 Vol. 19 · FM APPROVED 3017416 · MEA Approved FDNY: COA #6077 · 7165-1703:0125 · City of Chicago Approved Class 1 Class 2 High Rise · City of DENVER Approved

GAMEWELL-FCI
12 Clintonville Road, Northford, CT 06472-1610 USA • Tel: (203) 484-7161 • Fax: (203) 484-7118

Small Sealed VRLA AGM Batteries

MK Battery supplies the highest quality VRLA (Valve Regulated Lead Acid) battery line, designed for longer run times and superior cycle life.

FEATURES	BENEFITS
VRLA Technology	Reliable performance and long life
Sealed and 100% Maintenance Free	Will not leak or spill
Diverse Product Line	Batteries for deep cycle, standby and high rate applications
UL Certification	Safety tested
ISO 9001 and ISO 14001 Certified	Quality assurance

4V BATTERIES

NOTE: Reference **www.mkbattery.com** for the most current battery specifications.

Description	Nominal Ah Capacity	Weight	Dimensions – Inches (mm)				Terminal	
Model	20hr Rate F.V. (1.75V/cell)	lbs. (g.)	L	W	H	TH■	Type	Position
ES4.5-4	4.5	1.43 (650)	1.89 (48)	2.05 (52)	3.70 (94)	3.94 (100)	F2	6
ES9-4	9	2.62 (1190)	3.98 (101)	1.73 (44)	3.74 (95)	4.02 (102)	F2	3

6V BATTERIES

NOTE: Reference **www.mkbattery.com** for the most current battery specifications.

Description	Nominal Ah Capacity	Weight	Dimensions – Inches (mm)				Terminal	
Model	20hr Rate F.V. (1.75V/cell)	lbs. (g.)	L	W	H	TH■	Type	Position
ES1.2-6	1.2	0.68 (310)	3.82 (97)	0.98 (25)	2.05 (52)	2.24 (57)	F1	2
ES3-6	3	1.54 (700)	5.28 (134)	1.34 (34)	2.32 (59)	2.56 (65)	F1	2
ES3-6H	3.0	1.26 (570)	2.60 (66)	1.30 (33)	3.82 (97)	4.09 (104)	F1	1
ES3.8-6	3.8	1.56 (710)	2.60 (66)	1.30 (33)	4.65 (118)	4.96 (126)	F1	1
ES4-6	4.5	2.00 (910)	2.76 (70)	1.85 (47)	3.98 (101)	4.13 (105)	F1	1
ES7-6	7	2.64 (1200)	5.94 (151)	1.34 (34)	3.70 (94)	3.94 (100)	F1	2
ES8.2-6S	9	3.74 (1700)	3.88 (98.5)	2.20 (56)	4.65 (118)	4.65 (118)	F1	8
ES12-6	12	4.18 (1900)	5.94 (151)	1.97 (50)	3.70 (94)	3.90 (99)	F1, F2	2
ES13-6	13	4.84 (2200)	4.25 (108)	2.76 (70)	5.51 (140)	5.51 (140)	F1-, F2+	18
ES42-6	42	14.3 (6500)	6.38 (162)	3.46 (88)	6.42 (163)	6.69 (170)	F2	14

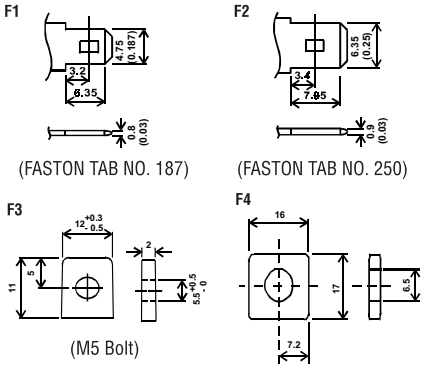
12V BATTERIES

NOTE: Reference **www.mkbattery.com** for the most current battery specifications.

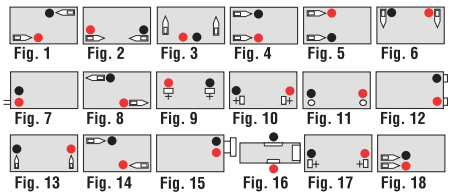
Description	Nominal Ah Capacity	Weight	Dimensions – Inches (mm)				Terminal	
Model	20hr Rate F.V. (1.75V/cell)	lbs. (g.)	L	W	H	TH■	Type	Position
ES0.8-12	0.8	0.88 (400)	3.78 (96)	0.98 (25)	2.44 (62)	2.44 (62)	WIRE	15
ES1.2-12	1.2	1.27 (575)	3.82 (97)	1.69 (43)	2.09 (53)	2.32 (59)	F1	4
ES1.9-12	2.3	2.31 (1050)	7.01 (178)	1.34 (34)	2.36 (60)	2.60 (66)	F1	2
ES2-12SLM	2	1.63 (741)	5.91 (150)	0.79 (20)	3.54 (90)	3.54 (90)	F1	12
ES2.3-12V	2.1	1.57 (714)	7.17 (182)	0.91 (23)	2.40 (61)	2.40 (61)	F13	16
ES2.9-12	2.9	2.66 (1210)	3.11 (79)	2.20 (56)	3.90 (99)	4.21 (107)	F1	13
ES3-12	3	2.86 (1300)	5.28 (134)	2.64 (67)	2.34 (60)	2.58 (66)	F1	4
ES3-12R	3	2.55 (1160)	5.24 (133)	1.30 (33)	3.82 (97)	4.09 (104)	F1	2
ES5-12*	5	4.18 (1900)	3.54 (90)	2.76 (70)	4.00 (101)	4.21 (107)	F1, F2	3
ES7-12*	7.2	5.28 (2400)	5.94 (151)	2.56 (65)	3.70 (94)	4.02 (102)	F1, F2	5
ES9-12	9	5.94 (2700)	5.94 (151)	2.56 (65)	3.70 (94)	4.02 (102)	F2	5
ES9-12TE	9	5.94 (2700)	5.94 (151)	2.56 (65)	3.70 (94)	4.17 (106)	F3	5
ES10-12S	10	7.26 (3300)	5.94 (151)	2.56 (65)	4.40 (112)	4.67 (118)	F2	5
ES12-12	12	9.02 (4100)	5.94 (151)	3.86 (98)	3.66 (93)	3.86 (98)	F2	5
ES12-12TE	12	8.58 (3900)	5.94 (151)	3.86 (98)	3.66 (93)	4.06 (103)	F3	5
ES14-12	14	9.42 (4280)	5.94 (151)	3.86 (98)	3.66 (93)	3.86 (98)	F2	5
ES17-12	18	13.20 (6000)	7.13 (181)	2.99 (76)	6.57 (167)	6.57 (167)	F2, F3	17
ES20-12C	20	13.42 (6100)	7.13 (181)	2.99 (76)	6.57 (167)	6.57 (167)	F3	10
ES20-12CFT	20	13.42 (6100)	7.13 (181)	2.99 (76)	6.57 (167)	6.57 (167)	F6	11
ES26-12	26	20.46 (9300)	6.54 (166)	6.89 (175)	4.92 (125)	4.92 (125)	F2, F3	17
ES33-12	35	23.10 (10500)	7.76 (197)	5.16 (131)	6.26 (159)	7.09 (180)	F4	9
ES40-12	45	31.90 (14500)	7.79 (198)	6.54 (166)	6.73 (171)	6.73 (171)	F4	10
ES50-12	50	31.50 (14300)	7.79 (198)	6.54 (166)	6.73 (171)	6.73 (171)	F8	11

★ Available In Flame Retardant Case. ■ Total Height Includes Terminals.

TERMINAL TYPE MM (INCH)

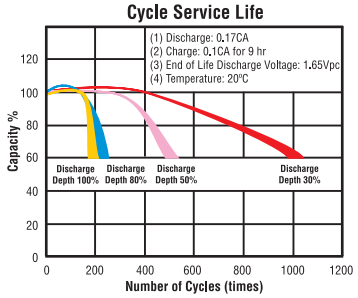


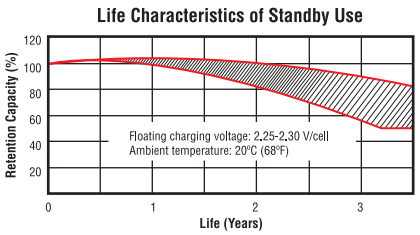
TERMINAL POSITIONS



■ Total Height Includes Terminals.

MK AGM PERFORMANCE





IMPORTANT CHARGING INSTRUCTIONS:
WARRANTY VOID IF OPENED OR IMPROPERLY CHARGED. Constant under or overcharging will damage any battery and shorten its life! Use a good constant potential, voltage-regulated charger. Do not charge in a sealed container.

Charging Voltage for 4V Batteries at 68°F
Cycle Use: 4.8-5.0V Standby Use: 4.5-4.6V

Charging Voltage for 6V Batteries at 68°F
Cycle Use: 7.2-7.5V Standby Use: 6.75-6.9V

Charging Voltage for 12V Batteries at 68°F
Cycle Use: 14.4-15.0V Standby Use: 13.5-13.8V

NON-SPILLABLE by DOT (Department of Transportation), ICAO (International Commercial Airline Organization), and IATA (International Airline Transport Association) definitions.

MK Battery • 1631 South Sinclair Street • Anaheim, CA 92806
Toll Free 800-372-9253 • Tel 714-937-1033 • Fax 714-937-0818
Website: www.mkbattery.com • Email: sales@mkbattery.com

CALIFORNIA DEPARTMENT OF FORESTRY & FIRE PROTECTION
OFFICE OF THE STATE FIRE MARSHAL
FIRE ENGINEERING - BUILDING MATERIALS LISTING PROGRAM

LISTING SERVICE

LISTING No. 7165-1703:0125

CATEGORY: 7165 -- FIRE ALARM CONTROL UNIT (COMMERCIAL)

LISTEE: GAMEWELL-FCI12 Clintonville Road, Northford, CT 06472
Contact: Vladimir Kireyev (203) 484-6277 Fax (203) 484-7309
Email: vladimir.kireyev@honeywell.com

DESIGN: Model E3 Series® BROADBAND and E3 Series® CLASSIC Voice Evacuation System. The E3 Systems may also work in conjunction with all the sub-assemblies of listee's 7100 Series Control Panel and NetSOLO systems (CSFM Listing No. 7165-1703:105 and 6911-1703:116, and 6911-1703:118).

Unit conveys all fire alarm, audio evacuation, voice paging, and fire fighter communications. Power-limited; non-coded, automatic, manual, smoke control, water flow, sprinkler supervisory, local auxiliary, central station, remote station, and proprietary service. Refer to listee's data sheet for additional detailed product description and operational considerations.

System components:

ILI-MB-E3; Intelligent Loop Interface Master Board
PM-9, PM-9G*; Power Supply
ILI-95-MB-E3, ILI-95-S-E3; Loop Interface Subassemblies
E3BB-FLUSH-LCD; Enclosure for ICD-E3
E3BB-BA/-RA/-BAA/-RAA/-BB/-RB/-BC/-RC/-BD; Cabinets*
RPT-E3-FO or; Repeater Sub-assembly, Fiber Optic or
RPT-E3-UTP; Repeater Sub-assembly, Unshielded twisted pair wire
LCD-E3; LCD Keypad Display
DACT-E3 sub-assembly; Digital alarm communicator transmitter
ILI-S-E3; Intelligent Loop Unit, Expansion Board
ANX-SR, ANX-MR-FO, ANX-MR-UTR; Addressable Node Expanders Sub Assembly*
INCC-E; Intelligent Network Enclosure*
INCC; Intelligent Network Central Command*
INI-VG, INI-VGC-UTP, INI-VGC-FO, INI-VGX-UTP; Intelligent Network Interface Sub Assembly*
INI-VGX-FO, INI-VGE-UTP, INI-VGE-FO; Intelligent Network Interface Sub Assembly*
ASM-16; Annunciator Switch Sub Assembly*
INX; Network Audio Transponder Enclosure*
ANU-48; Annunciator Sub Assembly*
NGA; Touch Screen LCD Display Sub Assembly*
LCD-7100; Remote LCD Display*
SBB-C4, SBB-D4; Backbox*

*Rev. 03-18-11bh

Date Issued: **July 01, 2018** *Listing Expires* **June 30, 2019**

Authorized By: ***DAVID CASTILLO**, Program Coordinator*

Fire Engineering Division

FCI-VDR-D4B, FCI-DR-C4B, FCI-CR-D4B; Doors with locks*
AA-100, AA-120; Amplifiers*
AM-50-25, AM-50-70; Amplifier Sub Assembly*
CHG120; Battery Charger with Cabinet*
BC-1/FCI-LBB; Backbox*
IPDACT-2; IP Digital Alarm Communicator*
FPJ; Firefighters's Telephone Jack Receptacle*
FHS; Portable Firefighters's Telephone Handset*
7100 Series#; Fire Alarm Control Panel or
INI-7100 UTP#; Intelligent Network Interface Sub-assembly, [Twisted, unshielded wire] or
INI-7100 FO#; Intelligent Network Interface

RATING: 120 V, 60 Hz, 3.5 A Primary; 24 V dc, 9A Secondary

INSTALLATION: In accordance with listee's printed installation instructions, NFPA 72, applicable codes & ordinances and in a manner acceptable to the authority having jurisdiction.

MARKING: Listee's name, model designation, electrical rating and UL label.

APPROVAL: Listed as fire alarm control unit for use with separately listed electrically and functionally compatible initiating and indicating devices. Suitable for high-rise applications when used with the above voice evacuation systems.

This control unit can generate a distinctive three-pulse Temporal Pattern Fire Alarm Evacuation Signal (for total evacuation) in accordance with NPFA 72, 2002 Edition.

This control unit meets the requirements of UL Standard 864, 9th Edition.

NOTE: For Fire Alarm Verification Feature (delay of alarm signaling), the Retard/Reset/Restart period shall be 30 seconds or less.

*Rev. 03-18-11bh

Date Issued: **July 01, 2018** *Listing Expires* **June 30, 2019**

Authorized By: ***DAVID CASTILLO**, Program Coordinator*

Fire Engineering Division

Honeywell | Voice Evacuation

INX

Intelligent Network Transponder

General

The Gamewell-FCI, INX Intelligent Network Transponder serves as the point of distribution for the system's audio and fire fighter telephone risers. It is a component of the following systems.

- E3 Series® Expandable Emergency Evacuation System
- E3 Series Combined Fire and Mass Notification System
- E3 Series Broadband Audio Evacuation System

The INX occupies a single node on the E3 Broadband network and it is connected by a single pair of unshielded, twisted wires, fiber-optic cable or any combination of the two. Each E3 Broadband node can be spaced on the network up to a maximum distance of 3,000 feet (914.4 m) or up to an 8 dB loss using a fiber-optic cable. Built-in isolation at each node permits Style 4, Style 6, and Style 7 network configurations.

The E3 Broadband Audio Evacuation System is a peer-to-peer, self-regenerating, token ring network comprised of up to 64 individual nodes. In addition, the Addressable Node Expander (ANX) board expands the network to 122 nodes.

The E3 Broadband employs proven technology and extends it to accomplish emergency voice evacuation, two-way fire fighter communications, and building control applications. It is unique in the industry since it requires only a single pair of wires or fiber-optic cable connections between nodes to convey all fire alarm, digital voice, fire fighter communications, paging, and building control signals. This system provides a 16 message capacity with up to a three minute duration per each INX. Messages are easily field-configurable with a laptop computer.

A typical INX assembly consists of the following:

- an Intelligent Network Interface-Voice Gateway (INI-VGX) module
- a PM-9/PM-9G power supply
- up to four AM-50 Series amplifiers including a minimum of one backup amplifier

INX

FEATURES & BENEFITS

- IBC Seismic Certified
- Listed under UL® Standard 864, 9th Edition
- Listed under UL Standard UL2572 for Mass Notification
- Each AM-50 Series amplifier provides two individually activated speaker circuits supplying 50 watts total
- Integrates with INCC command centers and additional INX transponders to create a complete audio evacuation system with up to 122 nodes
- Uses state-of-the-art digital signal processor (DSP) technology for efficient audio compression and filtering
- Distributed architecture, including Style 7 wiring configurations, allow system components to continue normal operation with NO loss of function during single line fault conditions
- Software-programmable multi-channel digital audio applications
- One Style 4 signaling line circuit (SLC) supporting up to 32 addressable speaker circuits (AOM-2SF used for single channel circuits and 16 addressable phones circuits AOM-TELF)
- Up to 150 watts of audio power provided by the AM-50 Series amplifiers with an 50 watts of standby amplifier enclosed in a single, compact wall-mounted cabinet
- Offers all communication signals and control-by-event sequences over two wires or fiber-optic cable including: audio evacuation, voice paging, fire fighter intercom, and building control signals

General

The INX is enclosed in a compact 19" enclosure capable of accommodating up to 12 A/H size batteries. The modular approach of the E3 Broadband greatly simplifies the design and the installation and allows the complete flexibility in retrofit or add-on situations. This system is ideal to use for a wide range of complex system applications including high-rise or campus installations.

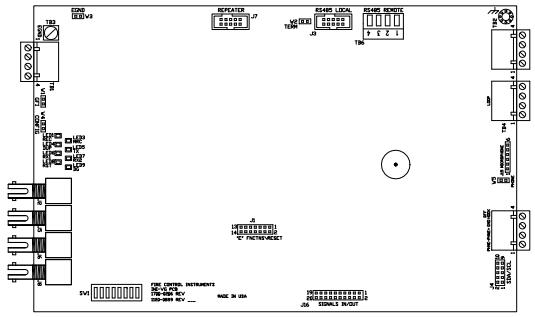


Figure 1 INI-VGX

INI-VGX

The INI-VGX is a multi-function module which incorporates the following:

- Network interface using twisted, unshielded wire or fiber-optic cable
- Fully digital message generator
- One signaling line circuit for local peripheral devices
- Local fire fighter phone riser

It occupies a single DIP switch selectable address on the network and provides termination points for the network connection using either a pair of twisted, non-shielded wire (12 AWG max.) or fiber-optic cable.

The INI-VGX uses advanced Digital Signal Processing (DSP) technology for audio compression and filtering allowing E3 Broadband to produce the clearest audio possible. Background noise is automatically filtered during voice paging and fire fighter communications which increase audibility and eliminates the need for the Push-to-Talk devices.

The INI-VGX can accommodate up to 16 different messages with a total combined duration of three minutes. Each message can be field installed via a laptop computer and the messages can be in the form of a voice message or an evacuation tone. The INI-VGX provides a fire fighter phone riser that would connect to phone jacks or warden stations through AOM-TELF modules.

The INI-VGX provides one Signaling Line Circuit (SLC) to control and supervise Addressable Output Modules (AOM) serving as speaker circuits and fire fighter telephone circuits. The INI-VGX SLC can support up to 32 speaker circuits using the AOM-2SF for single channel applications. In addition, each INI-VGX SLC can support up to 16 fire fighter intercom circuits using the AOM-TELF.

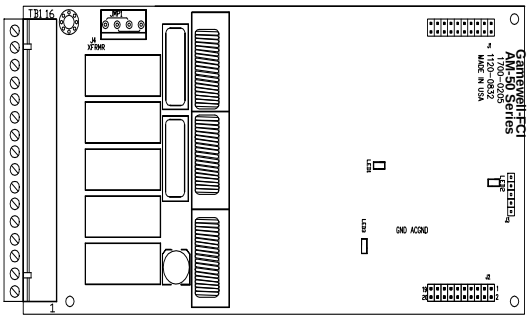


Figure 2 AM-50 Series Amplifiers

AM-50 Series Amplifiers

The AM-50 Series amplifiers offer 2 types of AM-50 Series amplifiers:

- AM-50-25 amplifier produces a $25V_{RMS}$ audio output
- AM-50-70 amplifier produces a $70V_{RMS}$ audio output

The AM-50 Series amplifiers are a component of the following systems.

- E3 Series, Expandable Emergency Evacuation System
- E3 Series Combined Fire and Mass Notification System

E3 Broadband Audio Evacuation System

Both AM-50 Series amplifiers produce 50 watt, digital, switching power. As many as four AM-50 Series amplifier modules can be installed in each INX CAB-B cabinet and are supervised and controlled by an INI-VGX Voice Gateway.

Each AM-50 Series amplifier provides two speaker circuits that can be wired Style Y (Class "B") or Style Z (Class "A"). The terminal connections can accommodate up to 12 AWG, twisted-pair, shielded wire. Both speaker circuits can produce a combined 50 watt power that can be divided between the two integral Class A/B speaker circuits. The two speaker circuits may be individually activated and supervised by an INI-VGX Voice Gateway.

The AM-50 Series amplifiers may be installed in an INX CAB-B cabinet or an INCC command center using the expander plates whenever the E3 control panel is used in conjunction with the E3 Series®, Expandable Emergency Evacuation System.

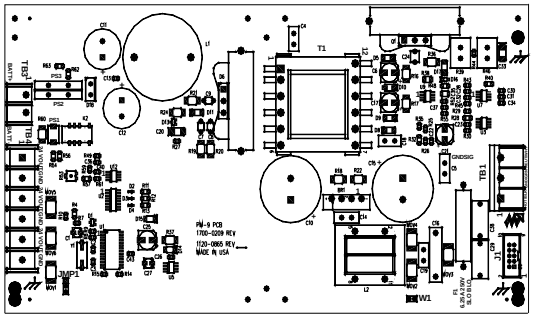


Figure 3 PM-9

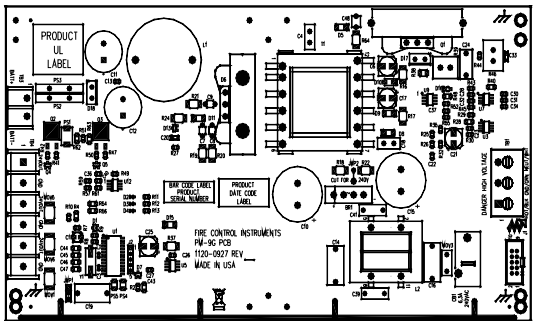


Figure 4 PM-9G

PM-9

The PM-9 is a switching power supply that provides 9 amps of filtered and regulated 24 VDC (nominal) to power the INX transponder. It has an internal battery charging circuit capable of accommodating up to 55 A/H batteries as well as an auxiliary continuous duty 24 VDC output @ 5 amps max.

PM-9G

The PM-9G is a switching power supply that provides 9 amps of filtered and regulated 24 VDC (nominal) to power the INX transponder. It has an internal battery charging circuit capable of accommodating up to 55 A/H batteries as well as an auxiliary continuous duty 24 VDC output @ 5 amps max.

Figure 5 illustrates the dimensions for the INX cabinet configuration.

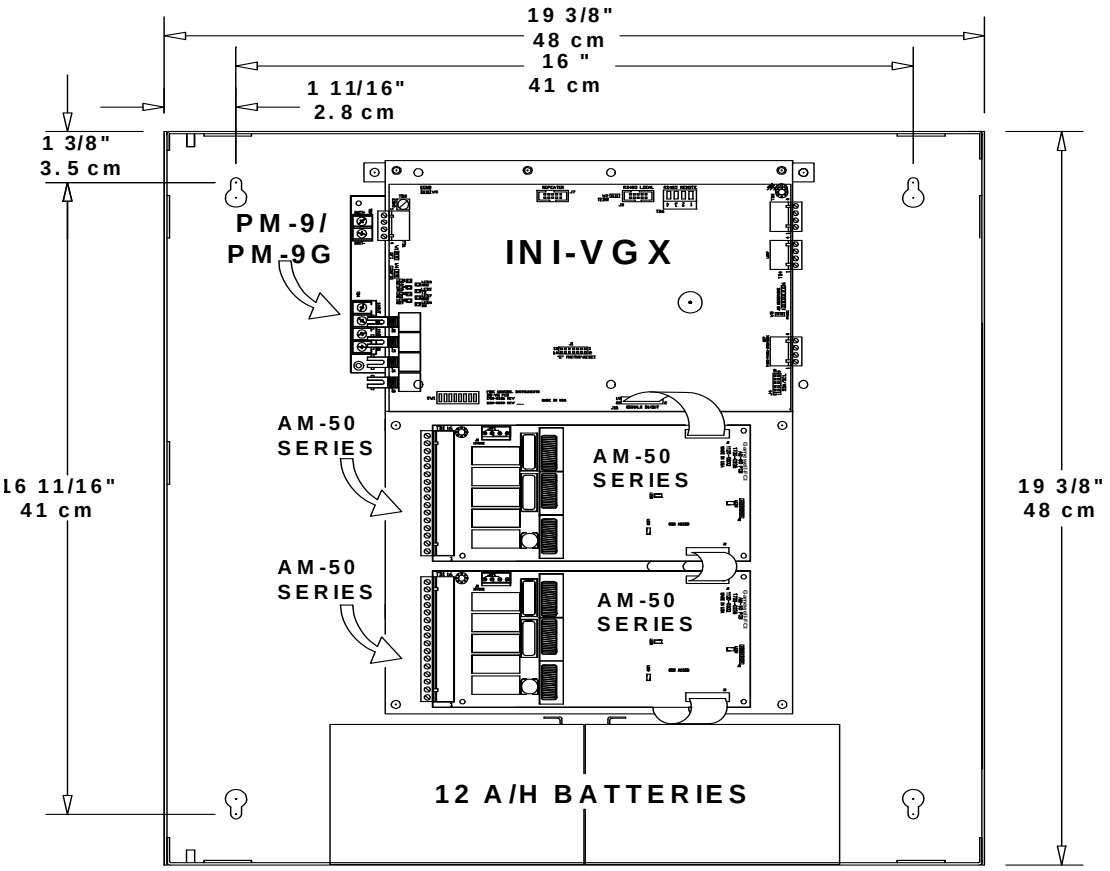


Figure 5 INX Cabinet Dimensions

INX Technical Specifications

SPECIFICATIONS

PM-9G	
Input Voltage:	240 VAC @ 50/60 Hz
Input Current:	2.4 amps max. @ 240 VAC, 50/60 Hz
Output Voltage:	24 VDC FWR
Output Current:	9 amperes Alarm max. continuous
Output Current:	5 amperes max. continuous Standby (when the PM-9G is used with the ILI-E3 or the ILI95-E3 Series, see Note 1).
Output Current:	4 amperes max. continuous Standby (when the PM-9G is used with any AM-50 Series amplifier, see Note 2).
Operating Temperature:	32° to 120° F (0° to 49° C)
Relative Humidity:	0 to 93%, non-condensing at 90° F (32° C)
Supervised	
Non Power-Limited	

Continuous standby loads in excess of .560 Amps up to 5 Amps may require a Generator Backup or load shedding during an AC power failure. Continuous standby loads in excess of .560 Amps up to 4 Amps may require a Generator Backup or load shedding during an AC power failure.

PM-9	
Input Voltage:	120 VAC, 60 Hz
Input Current:	4.6 amps max. @ 120 VAC 60 Hz
Output Voltage:	24 VDC FWR
Output Current:	9 amperes Alarm max. continuous
Output Current:	5 amperes max. continuous Standby (when the PM-9 is used with the ILI-E3 or the ILI95-E3 Series, see Note 1).

TEMPERATURE AND HUMIDITY RANGES

This system meets NFPA requirements for operation at 0 – 49°C/32 – 120°F and at a relative humidity 93% ± 2% RH (non-condensing) at 32°C ± 2°C (90°F ± 3°F). 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 – 27°C/60 – 80°F.

Ordering Information

Part Number	Description
INX	Intelligent Network Transponder, (Distributed Voice Network Sub-Assembly Enclosure)
INI-VGX	Transponder Voice Gateway PM-9
PM-9	INX 9 ampere Power Supply
PM-9G	INX 9 ampere Power Supply
AM-50 Series:	
1100-0456	AM-50-25, INX 50 watt 25 V_{RMS} audio amplifier
AM-50-70	INX 50 watt 70.7 V_{RMS} audio amplifier
Cabinets:	
INX-CAB	Backbox with Black Door
Dimensions:	INX 19" W x 19" H x 4" D, (48 x 48 x 10 cm)
INX-CABR	Backbox with Red Door
Dimensions:	INX 19" W x 19" H x 4" DM (48 x 48 x 10 cm)
INX-CAB-B	Backbox/ louvered door & INX-CAB-B Mounting Plate
Dimensions:	19 3/8" W x 19 3/8" H x 4.5" D, (49 x 49 x 11 cm)

Seismic Battery Bracket Kits

Part Number	Description
90518	NetSOLO NS-INX 7 A/H Seismic Battery Bracket Kit NetSOLO 7100 7 A/H Seismic Battery Bracket Kit
90519	NetSOLO NS-INX 12 A/H Seismic Battery Bracket Kit

Note: For information on the types of Seismic Battery Bracket Kits available and the Seismic Battery Bracket Kit Part Numbers, refer to the following documents:

Seismic Battery Bracket Installation Guide, P/N: 53839

E3 Series Cabinets Data Sheet, P/N: 9020-0649

STANDARDS

The INX is designed to comply with the following standard:

UL Standard: UL 864 9th Edition

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 the factory for the latest listing status.

UL Listed: S1869
2572 for Mass Notification
FM Approved: 3017416
MEA Approved FDNY: COA #:-217-03-E
CSFM: 6911-1703:0118
City of Chicago: Class 1, Class 2, High Rise
City of Denver Approved
VMC Reference of Certification: VMA-45894-02C
ISO 9001 Certification

For a complete listing of all compliance approvals and certifications, please visit: http://www.gamewell-fci.com/en-US/documentation/Pages/Listings.aspx

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 more information

Learn more about Gamewell-FCI's INX and other products available by visiting www.Gamewell-FCI.com

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9020-0541 | N | 09/17

Honeywell

ILI-E3 Series

Description

ILI-MB-E3
The Intelligent Loop Interface-Main Board (ILI-MB-E3) is the main interface for the E3 Series® product line. With its state-of-the-art 32 bit RISC processor, this compact "panel on a board" provides a powerful addition to Gamewell-FCI's single pair conductor solutions. The ILI-E3 Series is used in the following systems.

- E3 Series Expandable Emergency Evacuation System
- E3 Series Combined Fire and Mass Notification System

This intuitive design provides the following features:

- 2 signaling line circuits
- local energy city box output
- 2 notification application circuits
- auxiliary power output
- auxiliary relay functions

These features, combined with the built-in network and the serial protocols, allow this module to support a host of new and existing products, resulting in a building block approach to the fire alarm panel design.

The ILI-MB-E3 is network ready and occupies 1 of 64 nodes operating at 625K baud. In addition, the Addressable Node Expander (ANX) board expands the network to 122 nodes. When this sub-assembly is integrated with proven Broadband components, the result is a flexible yet powerful integrated audio solution. When the system transmits to remote locations, the optional RPT-E3 provides the ILI-MB-E3 with valuable signal boosting and transient protection, as well as connectivity using both wire and fiber-optic cables.

The ILI-MB-E3 provides 2 signaling line circuits and terminals for the connections to up to 159 detectors, 159 modules and 159 addressable sounder bases per SLC in Velociti®. In CLIP™ mode, each SLC supports 99 detectors and 99 modules. The RS-485 interface can support a variety of peripheral devices.

The ILI-MB-E3 relay outputs include system alarm, supervisory, and system trouble contacts. The ILI-MB-E3 provides output for a local energy city master box or remote location which is non power-limited. All other wiring is Class 2 power-limited.

Intelligent Loop Interface-Main Board

ILI-MB-E3

Features

ILI-MB-E3 and ILI-S-E3:

- Listed under UL® Standard 864, 9th Edition.
- Listed under UL Standard UL2572 for Mass Notification.
- UL Listed and FM Approved for Pre-Action/Deluge and Agent Releasing.
- Network ready integral 625K baud ARCNET.
- Supports 115.2K baud RS-232.
- Provides signaling line circuits with the following:
  - Two Class A, Style 6, 7* or Class B, Style 4 circuits.
  - 40 Character user-defined text per device.
  - Capacity of 159 sensors, 159 addressable modules and 159 addressable sounder bases per circuit.
- Includes 8100 Event History Log.

*Style 7 wiring requires the use of the System Sensor M500X Isolator Modules.

ILI-MB-E3 Only:

- Automatically adjusts to any NAC End-of-Line Resistor (EOL) value (1k-55k ohm) for legacy audible/visual appliances.
- Two notification appliance circuits, Class "A", Style Z or Class B, Style Y rated at 2.0 amps. per circuit.
- RS-485 supporting 16 ASM-16 switch modules and/or ANU-48 LED driver modules.
- Alarm, trouble, and supervisory dry contacts Form "C", rated at 2 amp. @ 30 VDC (resistive).
- Supports 1 LCD-SLP display via on-board ribbon cable connector.
- RS-485 terminal supports an additional 14 LCD-SLP displays/annunciators, 6 LCD-E3 displays/annunciators, 5 LCD-7100/RAN-7100 remote LED annunciators.

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FM APPROVED 3025415
MEA Approved 231-06-E
7165-1703:0125
City of Chicago Approved
City of Denver Approved
Class 1
Class 2
High Rise

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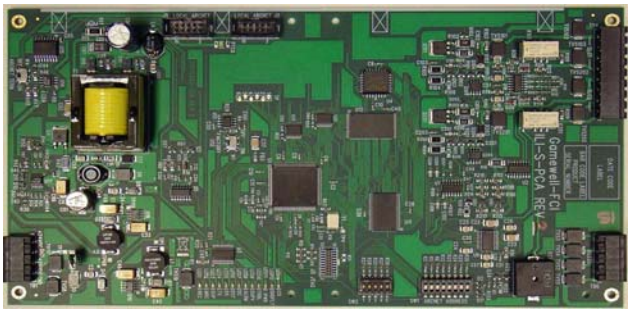

ILI-S-E3

ILI-S-E3
The Intelligent Loop Interface - Expansion Board (ILI-S-E3) provides the E3 Series control panel with 2 additional electrically isolated signaling line circuits. The layout is similar to the ILI-MB-E3 except a number of components are omitted. The ILI-S-E3 occupies one node on the Broadband network. The ILI-S-E3 provides 2 signaling line circuits and terminals for the connections to up to 159 detectors, 159 modules and 159 addressable sounder bases per SLC in Velociti mode. In CLIP mode, each SLC supports 99 detectors and 99 modules.

Installation
Typically, the ILI-MB-E3 or ILI-S-E3 can be mounted in the following E3 Series cabinets:

- Cabinet B and D, backbox
- Cabinet B, B-Slim-E3 sub-assembly plate
- Cabinet C, E3-ILI-C sub-assembly plate
- Cabinet C, E3-INCC-C sub-assembly plate
- Cabinet C, E3-INX-C sub-assembly plate
- Cabinet D, E3-INCC-D sub-assembly plate
- Cabinet D, E3-INX-D sub-assembly plate

For instructions on the installation of the ILI-MB-E3 or ILI-S-E3, refer to the following documents:

- E3 Series® Expandable Emergency Evacuation Manual, Part Number: LS10080-051GF-E
- ILI-MB-E3 Installation Instructions, Part Number: 9000-0579
- ILI-S-E3 Installation Instructions, Part Number: 9000-0569

For information on the ILI95-MB-E3 and ILI95-S-E3, refer to the ILI95-E3 Series Data Sheet, Part Number, 9021-60336.
For information on the ANX, refer to the ANX Data Sheet, Part Number, 9021-60497.

Specifications

ILI-MB-E3
Operating Current: 0.081 amp
Alarm Current: 0.150 amp max.
ILI-S-E3
Operating Current: 0.118 amp
Alarm Current: 0.119 amp
ILI-MB-E3 and ILI-S-E3
Operating Voltage: 24 VDC FWR (from the PM-9/ PM-9G Power Supply).
Operating Temperature: 32° to 120° F (0° to 49° C)
Relative Humidity: 0 to 93%, non-condensing at 90° F (32° C)
Supervised
Class 2 Power-Limited
SLC 40 Ohms maximum line impedance
0.5 µf maximum line capacitance

Ordering Information

Part Number	Description
ILI-MB-E3	Intelligent Loop Interface-Main Board
ILI-S-E3	Intelligent Loop Interface-Expansion Board

INI-VG Series

Description

The INI-VG Series includes the following sub-assemblies that are components of the E3 Broadband Audio Evacuation System and optional components of the E3 Series® Expandable Emergency Evacuation System:

- INI-VGC
- INI-VGE
- INI-VGX

INI-VGC

The INI-VGC Voice Gateway Module provides command and control functions for the INCC Command Center. The INCC serves as the point of interface between an operator and the system's audio evacuation, fire fighter intercom, and building control circuits.

A typical INCC assembly consists of an Intelligent Network Interface-Voice Gateway (INI-VGC) Module and one or more Addressable Switch Modules (ASM-16). Each INI-VGC can support up to sixteen (16), ANU-48 LED Driver Modules or ASM-16s for a total of 256 fully programmable switches and 768 LEDs (red, yellow, and green).

The INI-VGC occupies a single node on the E3 Broadband network and is connected by a single pair of twisted, unshielded wire, fiber-optic cable or any combination of the two. The INI-VGC-UTP is not equipped with fiber-optic connectors. The INCC Command Center's INI-VGC module also provides connections for an optional emergency voice page microphone as well as a Fire Fighter telephone handset.

The INI-VGC is a fully digital voice/tone generator using state-of-the-art Digital Signal Processing (DSP) technology to produce the clearest, most audible signal possible. The INI-VGC provides an output to a local speaker for message verification and testing.

The E3 Broadband Audio Evacuation System is a peer-to-peer, self regenerating, token ring network comprised of up to (64), individual nodes. Each E3 Broadband node can be spaced on the network at a maximum distance of 3,000 feet (914.4 m) or up to an 8dB loss using fiber-optic cable. Built-in isolation at each node permits Style 4, 6, and 7 network configurations.

INI-VG Series Command Center Voice Gateway

INI-VG Series

Features

The INI-VG Series include the following features:

- Listed under UL® Standard 864, 9th Edition
- All communication signals and control-by-event sequences over twisted, unshielded pair of wires or fiber-optic cable
- Distributed architecture, including Style 7 wiring configuration, allows system components to continue normal operation with NO loss of function during single line fault conditions
- Each INI-VGC or INI-VGE supports up to sixteen (16), ANU-48 LED drivers or ASM-16 switch modules for a total of 256 switches
- INI-VGC connects to a voice page microphone and fire fighter's handset
- Redundant command centers with microphone and fire fighter's handset easily configured by adding INCCs
- Advanced digital signal processor (DSP) technology for efficient audio compression and filtering
- Network data transfer rate at 625K baud

The INI-VGX includes the following features:

- Software-programmable multi-channel digital audio applications
- One Style 4 signaling line circuit (SLC) supporting up to thirty-two (32), addressable speaker circuits
- AOM-2SF used for single channel) and sixteen (16), addressable phone circuits (AOM-TELF)
- Supports up to 150 watts of audio power (using the AM-50 Series amplifiers operating at 50 watts of power @ either $25V_{RMS}$ or $70.7V_{RMS}$ output) installed in a single, wall-mounted cabinet
- 16 message capacity with up to 3 minute duration per INX and messages are easily field-configured via a laptop computer

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Description (Continued)

INI-VGE
The INI-VGE Voice Gateway Module provides command and control functions for the INCC Command Center. It provides bulk amplification. A typical INCC assembly consists of an Intelligent Network Interface-Voice Gateway (INI-VGE) Module and one or more Addressable Switch Modules (ASM-16). Each INI-VGE can support up to six (6), ASM-16s for a total of 96 fully programmable switches and 288 LEDs (red, yellow, and green).

The INI-VGE occupies a single node on the E3 Classic network and is connected by a single pair of twisted, unshielded wire, fiber-optic cable or any combination of the two. The INI-VGE-UTP is not equipped with the fiber-optic connectors. The INCC Command Center's INI-VGE Module also provides connections for an optional emergency voice paging microphone as well as a fire fighter telephone handset.

The INI-VGE is a fully digital voice/tone generator using state-of-the-art Digital Signal Processing (DSP) technology to produce the clearest, most audible signal possible. The INI-VGE provides an output capable of driving up to (20), Model AA-100 or AA-120 amplifiers.

INI-VGX
The INI-VGX Transponder Voice Gateway is a component of the E3 Broadband Audio Evacuation System and an optional component of the E3 Series Expandable Emergency Evacuation System. It is a multi-function module that incorporates:

- Network interface using twisted, unshielded wire or fiber-optic cable
- Fully digital message generator
- One (1) signaling line circuit for local peripheral devices
- Local fire fighter phone riser

It occupies a single DIP switch selectable address on the network and provides termination points for the network connection using either a pair of twisted, non-shielded wire (12 AWG max.) fiber-optic cable, or a combination of the two. The INI-VGX-UTP is not equipped with fiber-optic connectors.

The INI-VGX provides command and control for up to four (4), AM-50 Series amplifiers, operating at 50 watts of power @ either $25V_{RMS}$ or $70.7V_{RMS}$ audio output. The amplifiers are installed in a single cabinet. The INI-VGX uses advanced Digital Signal Processing (DSP) technology for audio compression and filtering. This feature allows the E3 Broadband to produce superior clarity for intelligible LIVE voice paging. The background noise is automatically filtered during voice paging and fire fighter communications which increases the audibility and eliminates the need for Push-to-Talk devices.

Specifications

INI-VGC, INI-VGE and INI-VGX

Operating Voltage:	24 VDC (nominal) from the PM-9/PM-9G Power Supply
Operating Current:	0.150 amp. supervisory and alarm
Operating Temperature:	32° to 120° F (0 to 49° C)
Relative Humidity:	0 to 93% (non-condensing)
Supervised Power-Limited	
Protocol:	Asynchronous with half-duplex data flow
Speed:	RS-232 up to 64 KBps RS-485 up to 128 KBps
St connectors*:	Up to 200 microns (multi mode), Optimized for 62.5/125 microns

*St Connectors are omitted on the INI-VG-UTP Series.
*Model INI-VGC only

Ordering Information

Part Number	Description
INI-VG Series:	
INI-VGC	Command center voice gateway
INI-VGC-UTP	Command center—(unshielded twisted-pair only)
INI-VGE	
INI-VGE	Command center classic voice gateway
INI-VGE-UTP	Command center (unshielded twisted-pair only)
INI-VGX	
INI-VGX	Transponder voice gateway
INI-VGX-UTP	Transponder voice gateway (unshielded twisted-pair)

AM-50 Series

Description

The AM-50 Series amplifiers are components of the E3 Series®, Expandable Emergency Evacuation System. The AM-50 Series amplifiers include an AM-50-25 and an AM-50-70 amplifier. The amplifiers may be ordered as either a 25 V_{RMS} or a 70.7 V_{RMS}, 50 watt, digital, switching power amplifier. As many as four (4), AM-50 Series amplifiers can be installed in an INX CAB-B cabinet and they are supervised and controlled by an INI-VGX Voice Gateway.

There are two types of AM-50 Series amplifiers.

- The AM-50-25 amplifier produces 25 V_{RMS} audio output.
- The AM-50-70 amplifier produces 70.7V_{RMS} audio output.

WARNING: AM-50 Series Amplifiers Node Restriction: The INI-VGX can support up to four (4) AM-50 Series amplifiers with the same output voltage. You cannot wire an AM-50-25 amplifier and an AM-50-70 amplifier to the same INI-VGX Voice Gateway Node.

Each AM-50 Series amplifier provides two (2), speaker circuits that can be wired Style Y (Class "B") or Style Z (Class "A"). The terminal connections can accommodate up to 12 AWG, twisted-pair, shielded wire. Both speaker circuits produce a combined total of 50 watts of power. The 50 watts of power can be divided between the two (2), integral Class A/B speaker circuits. The two speaker circuits may be individually activated and supervised by an INI-VGX Transponder Voice Gateway.

The AM-50 Series amplifier can be programmed to broadcast 16 messages generated from its local INI-VGX Voice Gateway. In addition, the AM-50 Series amplifiers produce superior clarity for intelligible LIVE voice paging.

The AM-50 Series amplifiers may be installed in an INX CAB-B cabinet or an INCC command center using the expander plates whenever the E3 control panel is used in conjunction with the E3 Series, Expandable Emergency Evacuation System.

Specifications

AM-50-25 Amplifier:

Operating Voltage:	27.3 to 20.4 VDC
Operating Current:	0.086 amp normal standby
Alarm Current:	2.206 amp max. alarm @ 50 Watt
Audio Output:	50 watts max. @ 25 V_{RMS}

AM-50-70 Amplifier:

Operating Voltage:	27.3 to 20.4 VDC
Operating Current:	0.049 amp normal standby
Alarm Current:	2.30 amp max. alarm @ 50 watt
Audio Output:	50 watts max. @ 70.7 V_{RMS}

AM-50 Series Amplifiers

Relative Humidity:	0 to 93% max., (non-condensing) at 90° F (32° C)
Operating Temperature:	32° to 120° F (0° to 49° C)
Dimensions:	7 1/2" W x 3 1/2" H x 1 1/4" D (19 W x 9 H x 3 D cm)

AM-50 Series Amplifiers

AM-50-25

AM-50-70

Features

- Listed under UL® Standard 864, 9th Edition
- Provides digital, switching amplifier technology
- Produces 50 watts of digital power
- Includes two (2), speaker circuits, wired Style Y (Class B) or Style Z (Class A)
- Up to four (4), AM-50 Series amplifiers with the same output voltage can be controlled by the INI-VGX voice gateway

Ordering Information

Part Number	Description
1100-0456	AM-50-25, INX 25V_{RMS} audio output, 50 watt amplifier
AM-50-70	INX 70.7V_{RMS} audio output, 50 watt amplifier

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E3 Series® Cabinets

Description

The E3 Series® Expandable Emergency Evacuation System by Gamewell-FCI offers several cabinet size options. These cabinet options allow for neat, sturdy, attractive installations. The E3 Series cabinet assembly is a compact, wall-mounted enclosure. A typical cabinet includes a backbox and an outer locking door. In addition, there are several inner door choices and mounting plates to accommodate a variety of E3 sub-assemblies.

Each cabinet backbox includes mounting patterns for plates to aid the installer in arranging and securing the sub-assemblies to the backbox. Backbox knockouts are also positioned at numerous points to allow a conduit access into the enclosure.

Four (4) Annunciator Cabinet sizes provide maximum flexibility that can meet any application.

- Cabinet A or AA offers 2 slot and 3 slot options to accommodate either of the following configurations:
  - Cabinet A or AA, 2 slot allows space for one (1) LCD-E3 and one (1) NGA or one (1) ASM-16/ANU-48.
  - Cabinet A1 or AA, 3 slot provides space for either one NGA and two ASM-16s or three ASM-16s/ANU-48s.
- Cabinet A1 houses one NGA or one ASM-16/ANU-48.
- Cabinet A2 accommodates a single LCD-E3 display.

E3BB-RBSlim or B-Slim contains the 600 Series cabinet.

Cabinet B includes a mounting plate that contains a space for the ILI-MB-E3/ILI95-MB-E3, PM-9/PM-9G sub-assemblies and batteries set inside the backbox. Additional sub-assembly options mounted on the backbox include the DACT-E3 and RPT-E3. The 2 slot inner door houses the following options:

- one (1) LCD-E3 module and
- either one (1) ASM-16/ANU-48 or one (1) NGA module

Both C and D size Command Center cabinets house a variety of E3 Broadband sub-assemblies in multiple configurations that provide a solution to a wide range of applications.

Two (2), flexible inner door panel selections are available for C and D size Command Center cabinets that may contain a fire fighter's phone handset, a microphone, and optional modules to meet the facility operation requirements.
(*Note: See Inner Door and Backbox Mounting Capacities on page 3 and 4).

Cabinets for the E3 Series®

E3 Series® Cabinets

Features

- IBC Seismic Certified
- 16-gauge steel backbox
- Removable outer and inner doors
- Inner door bonding strap used to provide electrical continuity for grounding
- Backbox and door ground studs provide positive grounding. 180° opening door with full clearance
- Available in either black or red
- Lexan® windows appear on the doors of most cabinets, except the Cabinet "C" and "D" INX cabinets and the INX CAB-B cabinet which contain louvered doors
- 90° opening door with zero clearance
- Keylock with quarter turn latch
- Trim Ring accessories available

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Ordering Information

Part Number	Description
Cabinet "A" & "AA" Size	
Dimensions:	19 1/4" W x 10" H x 3" D (49 W x 25 H x 7.6 D cm)
E3BB-BA	Enclosure, Black, "A" Size
E3BB-RA	Enclosure, Red, "A" Size
E3BB-BAA	Enclosure, Black, "AA" (LOC) Size
E3BB-RAA	Inner Door, AA Plate, Enclosure, Red, "AA" (LOC) Size
E31D2-TA	Inner Door, 2 Slots, "AA" Size (INCC-TEL & ASM-16)
E3ID2-A	Inner Door, 2 Slots, "A" Size (LCD-E3 & ASM-16)
E3ID3-A	Inner Door, 3 Slots, "A" Size (NGA, ASM-16 and MIC)
Cabinet "A1" & "A2" Size:	
Dimensions:	8 3/4" W x 10" H x 4 1/2" D (22.2 W x 25 H x 7.6 D cm)
E3BB-BA1	Assy, Backbox, Remote Enclosure, A1 Size, Black (include inner door)
E3BB-RA1	Remote Enclosure, A1 Size, Red (include inner door)
E3BB-BA2	Remote Enclosure, A2 Size, Black (include inner door)
E3BB-RA2	Remote Enclosure, A2 Size, Red (include inner door)
Flush Cabinet A1 Annunciators:	
E3BB-FLUSH-LCD	CAB A2 Remote Flush LCD ANN with Keyswitch operation
E3BB-FLUSH-NGA	CAB A2 Remote Flush NGA ANN with Password protected
Cabinet "B-Slim" Size: (Retrofit Kits)	
Dimensions:	14" W x 20" H x 4 1/2: D (35.5 W x 50.8 H x 11 D cm)
E3BB-RBSLIM	Assy, Enclosure, B-SLIM, Red with Backplate and LCD-E3 Keyswitch plate
IF600-RETROFIT	Door and Cab mounting plates, disable key switch and door lock (PK-625) for E3 Series upgrade

For additional information, refer to the Gamewell Retrofit Kits Data Sheet, P/N: 9020-06093.

Cabinet "B" Size:	
Dimensions:	19 3/8" W x 19 3/8" H x 4 1/2" D (49 W x 49 H x 11 D cm)
E3BB-BB	Assy, Backbox Enclosure, Black,"B" Size
E3BB-RB	Assy, Backbox Enclosure, Red, "B" Size
E3ID2-B	Inner Door, 2 Slots, "B" Size
1100-0460	INX-Transponder 19" (cm) Backbox with Door, Black
Dimensions:	19 3/8" W x 19 3/8" H x 4 1/2" D (49 W x 49 H x 11.43 D cm)
Cabinet "C" Size:	
Dimensions:	19 3/8" W x 30" H x 4 1/2" D (49 W x 76 H x 11 D cm)
E3BB-BC/INCC	Enclosure, Command Center, Black, "C" Size
E3BB-RC/INCC	Enclosure, Command Center, Red, "C" Size
E3ID2-C	Assy, Inner Door, Command Center, 2- Bay "C" Size
E3ID3-C	Assy, Inner Door, Command Center, 3-Bay "C" Size
E3BB-BC/INX	Assy, Transponder, Black, "C" Size

Ordering Information (Continued)

Part Number	Description
Cabinet "C" Size (Continued)	
E3BB-RC/INX	Assy, Transponder, Red, "C" Size
E3-INCC-CPLATE	Command Center module mounting plate, "C" Size
E3-INX-CPLATE	Transponder module mounting plate, "C" Size
E3-ILI-CPLATE	Intelligent loop module mounting plate "C" Size
Cabinet "D" Size:	
Dimensions:	19 3/8" W x 41" H x 4 1/2" D (49 W x 104 H x 11 D cm)
E3BB-BD/INCC	Enclosure, Command Center, Black, "D" Size
E3BB-RD/INCC	Enclosure, Command Center, Red, "D" Size
E3ID2-D	Assy, Inner Door, 2-Bay, "D" Size
E3ID3-D	Assy, Inner Door, 3-Bay, "D" Size
E3BB-BD/INX	Enclosure, Transponder, Black "D" Size
E3BB-RD/INX	Enclosure, Transponder, Red, "D" Size
E3-INCC-D-PLATE	Command Center module mounting plate, "D" Size
E3-INX-D-PLATE	Transponder module mounting plate, "D" Size

Optional Extender Plates

AM-50 Plate	AM-50 Extender Plate
FPT-GATE-3-EXT	FPT-GATE-3 Extender Plate

Optional Accessories

1100-0450	Command Center,blank plate,single size
E3-BP	Inner door panel, blank, double size
90375	PM-9/PM-9G Adapter Plate Kit, Hardware
E3-TRIMKIT-A	Trim kit for "A"/"AA" size enclosure, black
E3-TRIMKIT-A1	Trim kit for "A1" size enclosure, black
E3-TRIMKIT-A2	Trim kit for "A2" size enclosure, black
E3-TRIMKIT-B	Trim kit for "B" size enclosure, black
E3-TRIMKIT-C	Trim kit for "C" size enclosure, black
E3-TRIMKIT-D	Trim kit for "D" size enclosure, black

Bulk Amplification

Part Number	Description
AA-100	100 W Audio Amplifier, @70.7 V_{RMS} with 120 VAC
AA-120	120 W Audio Amplifier, @25 V_{RMS} with 120 VAC
ACT-1	Audio coupling transformer, for audio systems w/multiple supplies
FCI-CHG-120	Battery Charger, 25-120 A/H Gel cell
FCI-LBB	Battery box, accommodates batteries up to 55 A/H, (Black)
Cabinet C:	
FCI-DR-C4B	Large Battery Backbox, Blank door, lock & keys, for backbox accepting 3 chassis, (Black)
FCI-DR-C4BR	Blank door, lock & keys, for backbox accepting 3 chassis, (Red)
SBB-C4	Backbox, 3 chassis, (Black)
Cabinet D:	
FCI-DR-D4B	Blank door, lock & keys, for backbox accepting 4 chassis, (Black)
FCI-DR-D4BR	Blank door, lock & keys, for backbox accepting 4 chassis, (Red)
SBB-D4	Backbox, 4 chassis, (Black)

Seismic Battery Bracket Kits

Part Number	Description
90516	7100-Slim 7 A/H Seismic Battery Bracket Kit
	E3 B-Slim 7 A/H Seismic Battery Bracket Kit
90517	7100-Slim 12 A/H Seismic Battery Bracket Kit
	E3 B-Slim 12 A/H Seismic Battery Bracket Kit
90518	E3 CAB-B 7 A/H Seismic Battery Bracket Kit
	E3 CAB-C 7 A/H Seismic Battery Bracket Kit
	E3 CAB-D 7 A/H Seismic Battery Bracket Kit
	NetSOLO NS-INX 7 A/H Seismic Battery Bracket Kit
	NetSOLO 7100 7 A/H Seismic Battery Bracket Kit
90519	E3 CAB-C (INX only) 12 A/H Seismic Battery Bracket Kit
	E3 CAB-D (INX only) 12 A/H Seismic Battery Bracket Kit
	NetSOLO NS-INX 12 A/H Seismic Battery Bracket Kit
90520	E3 CAB-B 18 A/H Seismic Battery Bracket Kit
	E3 CAB-C 18 A/H Seismic Battery Bracket Kit
	E3 CAB-D 18 A/H Seismic Battery Bracket Kit

Specifications

Inner Door Mounting Capacity

Number Components

Cabinet A

E3ID2-A, Cabinet A, Inner Door, 2 Slots
- 1 LCD-E3 Display and
- 1 ASM-16/ANU-48

E3ID2-TA Assembly, Door, Inner, TEL-E3

E3ID3-A, Cabinet A, Inner Door, 3 Slots
- 1 NGA or ASM-16
- 2 ASM-16s/ANU-48

Cabinet AA
- 1 Microphone

Cabinet A1

E3ID-A1 Cabinet A1, Inner Door, (Included with Box)
- 1 NGA or ASM-16

Cabinet A2

E3ID-A2 Cabinet A2, Inner Door, (Included with Box)
- 1 LCD-E3

Cabinet B

E3ID2-B, Cabinet B, Inner Door, (Included with Box)
- 1 LCD-E3 Display and one (1) ASM-16/ANU-48
- 1 NGA and one (1) ASM-16/ANU-48

B-Slim Cabinet
- 1 LCD-E3 Display and (1) RPT-E3 or (1) DACT-E3
- 1 ILI-MB-E3 or (1) ILI95-MB-E3
- 1 PM-9 or (1) PM-9G

Cabinet C

E3ID2-C, Cabinet C, Inner Door, 2 Slots
- 1 LCD-E3 Display and
- 5 Any combination of ASM-16/ANU-48, NGA or Microphone Assemblies
- 1 Telephone Assembly

Inner Door Mounting Capacity (Cont'd)

Number Components

Cabinet C (Continued)

E3ID3-C, Cabinet C, Inner Door, 3 Slots
- 7 Any Combination of ASM-16/ANU-48, NGA, or Microphone Assemblies
- 1 Telephone Assembly

Cabinet D

E3ID2-D, Cabinet D, Inner Door, 2 Slots
- 1 LCD-E3 Display
- 11 Any Combination of ASM-16/ANU-48, or NGA or Microphone and
- 1 Telephone Assembly

E3ID3-D, Cabinet D, Inner Door, 3 Slots
- 13 Any Combination of ASM-16/ANU-48, NGA or Microphone Assemblies
- 1 Telephone Assembly

Backbox Mounting Capacity

Number Components

E3BB-BAA, Enclosure, "AA' (LOC) Size, Black
- 1 INI-VG Series Voice Gateway

E3BB-BA, A1 Size Box/Door, Black
- 1 RPT-E3 Network Repeater

E3BB-BB, B Size Box/Door, Black
- 1 PM-9/PM-9G Power Supply
- 1 ILI-MB-E3/ILI95-MB-E3 and
- 1 Additional ILI-MB-E3/ILI95-MB-E3 Loop Interface or ANX or
- 1 DACT-E3 Digital Communicator and
- 1 RPT-E3 Network Repeater

INX CAB-B Mounting Plate
- 1 PM-9 or PM-9G
- 1 INI-VGX
- 4 AM-50 Series amplifiers

E3-INCC-C Plate
- 1 PM-9/PM-9G Power Supply
- 1 INI-VG Series Voice Gateway
- 1 ILI-MB-E3/ILI95-MB-E3 Loop Interface and
- 1 Additional ILI-MB-E3/ILI95-MB-E3/ANX Loop Interface or
- 1 DACT-E3 Digital Communicator and
- 1 RPT-E3 Network Repeater
- 1 Optional AM-50 or FPT-GATE-3 Extender Plate

E3-ILI-C Plate
- 1 PM-9/PM-9G Power Supply
- 1 ILI-MB-E3 or ILI95-MB-E3
- 2 Additional ILI-MB-E3/ILI95-MB-E3 or ILI-S-E3/ILI95-S-E3 or ANX
- 1 DACT-E3
- 1 RPT-E3
- 1 Optional FPT-GATE-3 Extender Plate

Backbox Mounting Capacity

Number	Components
E3-INX-C	Plate
1	PM-9/PM-9G Power Supply with one (1) PM-9/ PM-9G Adapter Plate
1	INI-VGX Voice Gateway
1	ILI-MB-E3 Loop Interface and
1	Additional ILI-MB-E3/LI95-MB-E3/ANX
1	DACT-E3 Digital Communicator and
1	RPT-E3 Network Repeater
4	AM-50 Series Amplifier
1	Optional FPT-GATE-3 Extender Plate
E3-INCC-D	Plate
1	PM-9/PM-9G Power Supply
1	ILI-MB-E3 or ILI95-MB-E3
4	Additional ILI-E3 Series or ILI95-E3 Series or ANX
1	DACT-E3 Digital Communicator
1	RPT-E3 Network Repeater
1	INI-VG Series
1	Optional AM-50 or FPT-GATE-3 Extender Plate
E3-INX-D	Plate
1	PM-9/PM-9G Power Supply
1	ILI-MB-E3 or ILI95-MB-E3
1	DACT-E3 Digital Communicator
1	RPT-E3 Network Repeater
1	INI-VG Series
4	AM-50 Series Amplifier
1	Optional FPT-GATE-3 Plate

Backbox Mounting Capacity

Number	Components
E3BB-BD, D Size Box/Command Center (Voice), Black	
1	PM-9/PM-9G Power Supply
1	INI-VG Series Voice Gateway
4	ILI-MB-E3/ILI95-MB-E3/ANX Loop Interface and
1	Additional ILI-MB-E3/ILI95-MB-E3/ANX Loop Interface or
1	DACT-E3 Digital Communicator and
1	RPT-E3 Network Repeater
1	Optional FPT-GATE-3 Plate
E3BB-BD, D Size Box/Command Center, Black	
1	PM-9/PM-9G Power Supply
7	ILI-MB-E3/ILI95-MB-E3/ANX Loop Interface and
1	Additional ILI-MB-E3/ILI95-MB-E3/ANX Loop Interface or
1	DACT-E3 Digital Communicator and
1	RPT-E3 Network Repeater
1	Optional FPT-GATE-3 Extender Plate

Optional Extender Plates

AM-50 Extender Plate	
1	AM-50-25 or AM-50-70
FPT-GATE-3 Extender Plate	
1	FocalPoint® Gateway
1	PNET-1

PM-9

PM-9 Power Supply

Description

The PM-9 Power Supply is a component of NetSOLO® and E3 Series® fire alarm and voice evacuation systems. It provides power to the INX Transponder assembly and all E3 Series components.

The PM-9 is a switching power supply that provides 9 amperes of filtered and regulated 24 VDC (nominal). It has an internal battery charging circuit capable of maintaining up to fifty-five (55), A/H batteries. This module is designed for use with the Gamewell-FCI distributed audio networks.

Installation

Typically, the PM-9 Module can be mounted in the following E3 Series cabinets:

- Cabinet B and D, backbox
- Cabinet C, INX-E3 sub-assembly plate
- Cabinet C, INCC-E3 sub-assembly plate
- Cabinet D, E3-INX-D Plate
- Cabinet D, E3-ILI-D Plate

For instructions on installing the PM-9, refer to the E3 Series® Expandable Emergency Evacuation Installation/ Operating Manual, Part Number: 9020-0574 or the PM-9 Installation Instructions, Part Number: 9000-0548.

Specifications

Input Voltage:	120 VAC 60 Hz @ 3.5 A. max.
Output Voltage:	24 VDC (nominal) FWR
Output Current:	9 amperes
Output Current:	1 ampere battery charging current
Alarm Current:	0.050 amp
Operating Temperature:	32° to 120° F (0° to 49° C)
Relative Humidity:	0 to 93% (non-condensing) at 90° F (32° C)
Dimensions:	10 1/2” W x 5” H x 2” D (27 x 13 x 5 cm)

PM-9

Features

- Listed under UL® Standard 864, 9th Edition
- Includes 9 ampere, filtered, regulated power supply
- Provides 1 ampere battery charging current
- Offers energy and space saving switching technology
- Contains an integral battery charger capable of recharging up to fifty-five (55), AH batteries (Batteries not furnished)

Ordering Information

Part Number	Description
PM-9	Power supply
29229	AC Line Filter Kit

An ISO 9001-2000 Company

SIGNALING UL LISTED S1869 Vol. 14 S1949 Vol. 19 · FM APPROVED 3017416 · MEA Approved FDNY: COA #6077 · 7165-1703:0125 · City of Chicago Approved Class 1 Class 2 High Rise · City of DENVER Approved

GAMEWELL-FCI
12 Clintonville Road, Northford, CT 06472-1610 USA • Tel: (203) 484-7161 • Fax: (203) 484-7118

Small Sealed VRLA AGM Batteries

MK Battery supplies the highest quality VRLA (Valve Regulated Lead Acid) battery line, designed for longer run times and superior cycle life.

FEATURES	BENEFITS
VRLA Technology	Reliable performance and long life
Sealed and 100% Maintenance Free	Will not leak or spill
Diverse Product Line	Batteries for deep cycle, standby and high rate applications
UL Certification	Safety tested
ISO 9001 and ISO 14001 Certified	Quality assurance

4V BATTERIES

NOTE: Reference **www.mkbattery.com** for the most current battery specifications.

Description	Nominal Ah Capacity	Weight	Dimensions – Inches (mm)				Terminal	
Model	20hr Rate F.V. (1.75V/cell)	lbs. (g.)	L	W	H	TH■	Type	Position
ES4.5-4	4.5	1.43 (650)	1.89 (48)	2.05 (52)	3.70 (94)	3.94 (100)	F2	6
ES9-4	9	2.62 (1190)	3.98 (101)	1.73 (44)	3.74 (95)	4.02 (102)	F2	3

6V BATTERIES

NOTE: Reference **www.mkbattery.com** for the most current battery specifications.

Description	Nominal Ah Capacity	Weight	Dimensions – Inches (mm)				Terminal	
Model	20hr Rate F.V. (1.75V/cell)	lbs. (g.)	L	W	H	TH■	Type	Position
ES1.2-6	1.2	0.68 (310)	3.82 (97)	0.98 (25)	2.05 (52)	2.24 (57)	F1	2
ES3-6	3	1.54 (700)	5.28 (134)	1.34 (34)	2.32 (59)	2.56 (65)	F1	2
ES3-6H	3.0	1.26 (570)	2.60 (66)	1.30 (33)	3.82 (97)	4.09 (104)	F1	1
ES3.8-6	3.8	1.56 (710)	2.60 (66)	1.30 (33)	4.65 (118)	4.96 (126)	F1	1
ES4-6	4.5	2.00 (910)	2.76 (70)	1.85 (47)	3.98 (101)	4.13 (105)	F1	1
ES7-6	7	2.64 (1200)	5.94 (151)	1.34 (34)	3.70 (94)	3.94 (100)	F1	2
ES8.2-6S	9	3.74 (1700)	3.88 (98.5)	2.20 (56)	4.65 (118)	4.65 (118)	F1	8
ES12-6	12	4.18 (1900)	5.94 (151)	1.97 (50)	3.70 (94)	3.90 (99)	F1, F2	2
ES13-6	13	4.84 (2200)	4.25 (108)	2.76 (70)	5.51 (140)	5.51 (140)	F1-, F2+	18
ES42-6	42	14.3 (6500)	6.38 (162)	3.46 (88)	6.42 (163)	6.69 (170)	F2	14

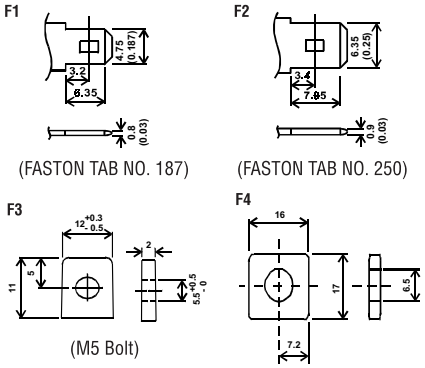
12V BATTERIES

NOTE: Reference **www.mkbattery.com** for the most current battery specifications.

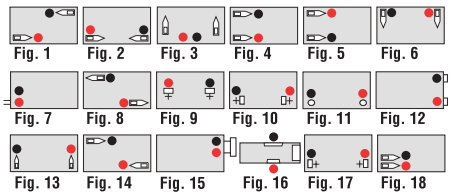
Description	Nominal Ah Capacity	Weight	Dimensions – Inches (mm)				Terminal	
Model	20hr Rate F.V. (1.75V/cell)	lbs. (g.)	L	W	H	TH■	Type	Position
ES0.8-12	0.8	0.88 (400)	3.78 (96)	0.98 (25)	2.44 (62)	2.44 (62)	WIRE	15
ES1.2-12	1.2	1.27 (575)	3.82 (97)	1.69 (43)	2.09 (53)	2.32 (59)	F1	4
ES1.9-12	2.3	2.31 (1050)	7.01 (178)	1.34 (34)	2.36 (60)	2.60 (66)	F1	2
ES2-12SLM	2	1.63 (741)	5.91 (150)	0.79 (20)	3.54 (90)	3.54 (90)	F1	12
ES2.3-12V	2.1	1.57 (714)	7.17 (182)	0.91 (23)	2.40 (61)	2.40 (61)	F13	16
ES2.9-12	2.9	2.66 (1210)	3.11 (79)	2.20 (56)	3.90 (99)	4.21 (107)	F1	13
ES3-12	3	2.86 (1300)	5.28 (134)	2.64 (67)	2.34 (60)	2.58 (66)	F1	4
ES3-12R	3	2.55 (1160)	5.24 (133)	1.30 (33)	3.82 (97)	4.09 (104)	F1	2
ES5-12*	5	4.18 (1900)	3.54 (90)	2.76 (70)	4.00 (101)	4.21 (107)	F1, F2	3
ES7-12*	7.2	5.28 (2400)	5.94 (151)	2.56 (65)	3.70 (94)	4.02 (102)	F1, F2	5
ES9-12	9	5.94 (2700)	5.94 (151)	2.56 (65)	3.70 (94)	4.02 (102)	F2	5
ES9-12TE	9	5.94 (2700)	5.94 (151)	2.56 (65)	3.70 (94)	4.17 (106)	F3	5
ES10-12S	10	7.26 (3300)	5.94 (151)	2.56 (65)	4.40 (112)	4.67 (118)	F2	5
ES12-12	12	9.02 (4100)	5.94 (151)	3.86 (98)	3.66 (93)	3.86 (98)	F2	5
ES12-12TE	12	8.58 (3900)	5.94 (151)	3.86 (98)	3.66 (93)	4.06 (103)	F3	5
ES14-12	14	9.42 (4280)	5.94 (151)	3.86 (98)	3.66 (93)	3.86 (98)	F2	5
ES17-12	18	13.20 (6000)	7.13 (181)	2.99 (76)	6.57 (167)	6.57 (167)	F2, F3	17
ES20-12C	20	13.42 (6100)	7.13 (181)	2.99 (76)	6.57 (167)	6.57 (167)	F3	10
ES20-12CFT	20	13.42 (6100)	7.13 (181)	2.99 (76)	6.57 (167)	6.57 (167)	F6	11
ES26-12	26	20.46 (9300)	6.54 (166)	6.89 (175)	4.92 (125)	4.92 (125)	F2, F3	17
ES33-12	35	23.10 (10500)	7.76 (197)	5.16 (131)	6.26 (159)	7.09 (180)	F4	9
ES40-12	45	31.90 (14500)	7.79 (198)	6.54 (166)	6.73 (171)	6.73 (171)	F4	10
ES50-12	50	31.50 (14300)	7.79 (198)	6.54 (166)	6.73 (171)	6.73 (171)	F8	11

★ Available In Flame Retardant Case. ■ Total Height Includes Terminals.

TERMINAL TYPE MM (INCH)

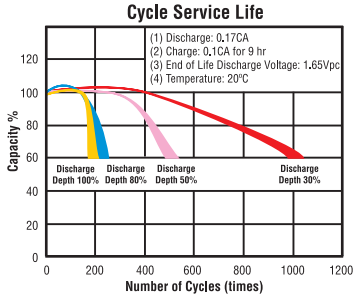


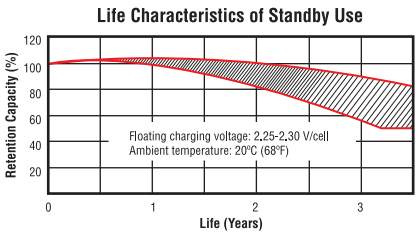
TERMINAL POSITIONS



■ Total Height Includes Terminals.

MK AGM PERFORMANCE





IMPORTANT CHARGING INSTRUCTIONS:
WARRANTY VOID IF OPENED OR IMPROPERLY CHARGED. Constant under or overcharging will damage any battery and shorten its life! Use a good constant potential, voltage-regulated charger. Do not charge in a sealed container.

Charging Voltage for 4V Batteries at 68°F
Cycle Use: 4.8-5.0V Standby Use: 4.5-4.6V

Charging Voltage for 6V Batteries at 68°F
Cycle Use: 7.2-7.5V Standby Use: 6.75-6.9V

Charging Voltage for 12V Batteries at 68°F
Cycle Use: 14.4-15.0V Standby Use: 13.5-13.8V

NON-SPILLABLE by DOT (Department of Transportation), ICAO (International Commercial Airline Organization), and IATA (International Airline Transport Association) definitions.

MK Battery • 1631 South Sinclair Street • Anaheim, CA 92806
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CALIFORNIA DEPARTMENT OF FORESTRY & FIRE PROTECTION
OFFICE OF THE STATE FIRE MARSHAL
FIRE ENGINEERING - BUILDING MATERIALS LISTING PROGRAM

LISTING SERVICE

LISTING No. 7165-1703:0125

CATEGORY: 7165 -- FIRE ALARM CONTROL UNIT (COMMERCIAL)

LISTEE: GAMEWELL-FCI12 Clintonville Road, Northford, CT 06472
Contact: Vladimir Kireyev (203) 484-6277 Fax (203) 484-7309
Email: vladimir.kireyev@honeywell.com

DESIGN: Model E3 Series® BROADBAND and E3 Series® CLASSIC Voice Evacuation System. The E3 Systems may also work in conjunction with all the sub-assemblies of listee's 7100 Series Control Panel and NetSOLO systems (CSFM Listing No. 7165-1703:105 and 6911-1703:116, and 6911-1703:118).

Unit conveys all fire alarm, audio evacuation, voice paging, and fire fighter communications. Power-limited; non-coded, automatic, manual, smoke control, water flow, sprinkler supervisory, local auxiliary, central station, remote station, and proprietary service. Refer to listee's data sheet for additional detailed product description and operational considerations.

System components:

ILI-MB-E3; Intelligent Loop Interface Master Board
PM-9, PM-9G*; Power Supply
ILI-95-MB-E3, ILI-95-S-E3; Loop Interface Subassemblies
E3BB-FLUSH-LCD; Enclosure for ICD-E3
E3BB-BA/-RA/-BAA/-RAA/-BB/-RB/-BC/-RC/-BD; Cabinets*
RPT-E3-FO or; Repeater Sub-assembly, Fiber Optic or
RPT-E3-UTP; Repeater Sub-assembly, Unshielded twisted pair wire
LCD-E3; LCD Keypad Display
DACT-E3 sub-assembly; Digital alarm communicator transmitter
ILI-S-E3; Intelligent Loop Unit, Expansion Board
ANX-SR, ANX-MR-FO, ANX-MR-UTR; Addressable Node Expanders Sub Assembly*
INCC-E; Intelligent Network Enclosure*
INCC; Intelligent Network Central Command*
INI-VG, INI-VGC-UTP, INI-VGC-FO, INI-VGX-UTP; Intelligent Network Interface Sub Assembly*
INI-VGX-FO, INI-VGE-UTP, INI-VGE-FO; Intelligent Network Interface Sub Assembly*
ASM-16; Annunciator Switch Sub Assembly*
INX; Network Audio Transponder Enclosure*
ANU-48; Annunciator Sub Assembly*
NGA; Touch Screen LCD Display Sub Assembly*
LCD-7100; Remote LCD Display*
SBB-C4, SBB-D4; Backbox*

*Rev. 03-18-11bh

Date Issued: **July 01, 2018** *Listing Expires* **June 30, 2019**

Authorized By: ***DAVID CASTILLO**, Program Coordinator*

Fire Engineering Division

FCI-VDR-D4B, FCI-DR-C4B, FCI-CR-D4B; Doors with locks*
AA-100, AA-120; Amplifiers*
AM-50-25, AM-50-70; Amplifier Sub Assembly*
CHG120; Battery Charger with Cabinet*
BC-1/FCI-LBB; Backbox*
IPDACT-2; IP Digital Alarm Communicator*
FPJ; Firefighters's Telephone Jack Receptacle*
FHS; Portable Firefighters's Telephone Handset*
7100 Series#; Fire Alarm Control Panel or
INI-7100 UTP#; Intelligent Network Interface Sub-assembly, [Twisted, unshielded wire] or
INI-7100 FO#; Intelligent Network Interface

RATING: 120 V, 60 Hz, 3.5 A Primary; 24 V dc, 9A Secondary

INSTALLATION: In accordance with listee's printed installation instructions, NFPA 72, applicable codes & ordinances and in a manner acceptable to the authority having jurisdiction.

MARKING: Listee's name, model designation, electrical rating and UL label.

APPROVAL: Listed as fire alarm control unit for use with separately listed electrically and functionally compatible initiating and indicating devices. Suitable for high-rise applications when used with the above voice evacuation systems.

This control unit can generate a distinctive three-pulse Temporal Pattern Fire Alarm Evacuation Signal (for total evacuation) in accordance with NPFA 72, 2002 Edition.

This control unit meets the requirements of UL Standard 864, 9th Edition.

NOTE: For Fire Alarm Verification Feature (delay of alarm signaling), the Retard/Reset/Restart period shall be 30 seconds or less.

*Rev. 03-18-11bh

Date Issued: **July 01, 2018** *Listing Expires* **June 30, 2019**

Authorized By: ***DAVID CASTILLO**, Program Coordinator*

Fire Engineering Division

E3 Series® LOC

Local Operating Console

Description

The E3 Series,® Local Operating Console (LOC) is a paging component that is used with the E3 Series Expandable Emergency Evacuation System to provide Mass Notification to comply with the DOD, United Facilities Criteria (UFC) guidelines. It provides emergency notification that can be remotely distributed in real-time via pre-recorded messages, live voice paging, or text messages.

The LOC's robust distributed messaging capabilities allow users to program the system to broadcast messages that automatically change as the situation changes. This versatile feature makes it possible for the system to simultaneously distribute different emergency communications to zones, floors, multiple buildings, large outdoor campus or facility areas.

The Local Operating Console uses a state-of-the-art Digital Signal Processor (DSP) that produces reliable, high fidelity audio messaging and it allows live voice instructions. The Network Touchscreen Graphic Annunciator (NGA) provides the LOC with the capability to display text messaging over the network to all Local Operating Consoles within a protected area. The Addressable Switch Module (ASM-16) includes 16 programmable switches for message, control, and zone paging.

The E3 Series LOC communicates over the network, allowing full communication and control over a single pair of wires or fiber-optic cable. This E3 distributed architecture, including Style 7 wiring configuration, provides complete supervision and survivability if a fault condition occurs or the system is compromised. All LOCs on the network are supervised.

The Local Operating Console comprises the following:

- AA Cabinet with mounting patterns for the INI-VG Series
- 3-slot inner door for mounting the following:
  - One (1) INCC-MIC paging microphone
  - One (1) or two (2) ASM-16s
  - One (1) ASM-16 and one (1) NGA

Note: Gamewell-FCI recommends you install the speakers at 4 ft. (1.2 m) or more from the microphone.

Ordering Information

Part Number	Description
E3BB-BAA	AA Cabinet
E3ID3-A	Inner Door, 3 Slots
1100-1321	INI-VGC, Voice Gateway
1100-0452	INCC-MIC, Paging Microphone
1100-0455	ASM-16, Addressable Switch Module
Optional Components	
1100-0505	NGA, Network Graphic Annunciator
Thumb lock	Thumb quarter turn latch
E3-TRIMKIT-A	Trim Ring

E3 Series LOC

Features

- Offers instantaneous audio or text messaging
- Includes 16 message capacity with up to a 3 minute duration per each LOC
- Supports up to two (2), ASM-16 modules for a total of 32 switches for each LOC
- Allows messages to be easily field-configured via a laptop computer
- Built of 16-gauge steel backbox with a full Lexan® window and keylock on the door
- Includes an optional thumb quarter turn latch and Trim Ring available
- Provides all communication signals and control-by-event sequences connected over twisted, unshielded pair of wires or fiber-optic cable
- Uses E3 Series distributed architecture, including Style 7 wiring configuration
- Transmits at a network data transfer rate of 625K baud

An ISO 9000-2000 Company

SIGNALING LISTED S1869 · FM APPROVED 3025415 · MEA Approved 231-06-E · 7165-1703:0125 7170-1703:0126 · City of Chicago Approved Class1 Class2 High Rise · City of Denver Approved

GAMEWELL-FCI
12 Clintonville Road, Northford, CT 06472-1610 USA • Tel: (203) 484-7161 • Fax: (203) 484-7118

INI-VG Series

Description

The INI-VG Series includes the following sub-assemblies that are components of the E3 Broadband Audio Evacuation System and optional components of the E3 Series® Expandable Emergency Evacuation System:

- INI-VGC
- INI-VGE
- INI-VGX

INI-VGC

The INI-VGC Voice Gateway Module provides command and control functions for the INCC Command Center. The INCC serves as the point of interface between an operator and the system's audio evacuation, fire fighter intercom, and building control circuits.

A typical INCC assembly consists of an Intelligent Network Interface-Voice Gateway (INI-VGC) Module and one or more Addressable Switch Modules (ASM-16). Each INI-VGC can support up to sixteen (16), ANU-48 LED Driver Modules or ASM-16s for a total of 256 fully programmable switches and 768 LEDs (red, yellow, and green).

The INI-VGC occupies a single node on the E3 Broadband network and is connected by a single pair of twisted, unshielded wire, fiber-optic cable or any combination of the two. The INI-VGC-UTP is not equipped with fiber-optic connectors. The INCC Command Center's INI-VGC module also provides connections for an optional emergency voice page microphone as well as a Fire Fighter telephone handset.

The INI-VGC is a fully digital voice/tone generator using state-of-the-art Digital Signal Processing (DSP) technology to produce the clearest, most audible signal possible. The INI-VGC provides an output to a local speaker for message verification and testing.

The E3 Broadband Audio Evacuation System is a peer-to-peer, self regenerating, token ring network comprised of up to (64), individual nodes. Each E3 Broadband node can be spaced on the network at a maximum distance of 3,000 feet (914.4 m) or up to an 8dB loss using fiber-optic cable. Built-in isolation at each node permits Style 4, 6, and 7 network configurations.

INI-VG Series Command Center Voice Gateway

INI-VG Series

Features

The INI-VG Series include the following features:

- Listed under UL® Standard 864, 9th Edition
- All communication signals and control-by-event sequences over twisted, unshielded pair of wires or fiber-optic cable
- Distributed architecture, including Style 7 wiring configuration, allows system components to continue normal operation with NO loss of function during single line fault conditions
- Each INI-VGC or INI-VGE supports up to sixteen (16), ANU-48 LED drivers or ASM-16 switch modules for a total of 256 switches
- INI-VGC connects to a voice page microphone and fire fighter's handset
- Redundant command centers with microphone and fire fighter's handset easily configured by adding INCCs
- Advanced digital signal processor (DSP) technology for efficient audio compression and filtering
- Network data transfer rate at 625K baud

The INI-VGX includes the following features:

- Software-programmable multi-channel digital audio applications
- One Style 4 signaling line circuit (SLC) supporting up to thirty-two (32), addressable speaker circuits
- AOM-2SF used for single channel) and sixteen (16), addressable phone circuits (AOM-TELF)
- Supports up to 150 watts of audio power (using the AM-50 Series amplifiers operating at 50 watts of power @ either $25V_{RMS}$ or $70.7V_{RMS}$ output) installed in a single, wall-mounted cabinet
- 16 message capacity with up to 3 minute duration per INX and messages are easily field-configured via a laptop computer

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Description (Continued)

INI-VGE
The INI-VGE Voice Gateway Module provides command and control functions for the INCC Command Center. It provides bulk amplification. A typical INCC assembly consists of an Intelligent Network Interface-Voice Gateway (INI-VGE) Module and one or more Addressable Switch Modules (ASM-16). Each INI-VGE can support up to six (6), ASM-16s for a total of 96 fully programmable switches and 288 LEDs (red, yellow, and green).

The INI-VGE occupies a single node on the E3 Classic network and is connected by a single pair of twisted, unshielded wire, fiber-optic cable or any combination of the two. The INI-VGE-UTP is not equipped with the fiber-optic connectors. The INCC Command Center's INI-VGE Module also provides connections for an optional emergency voice paging microphone as well as a fire fighter telephone handset.

The INI-VGE is a fully digital voice/tone generator using state-of-the-art Digital Signal Processing (DSP) technology to produce the clearest, most audible signal possible. The INI-VGE provides an output capable of driving up to (20), Model AA-100 or AA-120 amplifiers.

INI-VGX
The INI-VGX Transponder Voice Gateway is a component of the E3 Broadband Audio Evacuation System and an optional component of the E3 Series Expandable Emergency Evacuation System. It is a multi-function module that incorporates:

- Network interface using twisted, unshielded wire or fiber-optic cable
- Fully digital message generator
- One (1) signaling line circuit for local peripheral devices
- Local fire fighter phone riser

It occupies a single DIP switch selectable address on the network and provides termination points for the network connection using either a pair of twisted, non-shielded wire (12 AWG max.) fiber-optic cable, or a combination of the two. The INI-VGX-UTP is not equipped with fiber-optic connectors.

The INI-VGX provides command and control for up to four (4), AM-50 Series amplifiers, operating at 50 watts of power @ either $25V_{RMS}$ or $70.7V_{RMS}$ audio output. The amplifiers are installed in a single cabinet. The INI-VGX uses advanced Digital Signal Processing (DSP) technology for audio compression and filtering. This feature allows the E3 Broadband to produce superior clarity for intelligible LIVE voice paging. The background noise is automatically filtered during voice paging and fire fighter communications which increases the audibility and eliminates the need for Push-to-Talk devices.

Specifications

INI-VGC, INI-VGE and INI-VGX

Operating Voltage:	24 VDC (nominal) from the PM-9/PM-9G Power Supply
Operating Current:	0.150 amp. supervisory and alarm
Operating Temperature:	32° to 120° F (0 to 49° C)
Relative Humidity:	0 to 93% (non-condensing)
Supervised Power-Limited	
Protocol:	Asynchronous with half-duplex data flow
Speed:	RS-232 up to 64 KBps RS-485 up to 128 KBps
St connectors*:	Up to 200 microns (multi mode), Optimized for 62.5/125 microns

*St Connectors are omitted on the INI-VG-UTP Series.
*Model INI-VGC only

Ordering Information

Part Number	Description
INI-VG Series:	
INI-VGC	Command center voice gateway
INI-VGC-UTP	Command center—(unshielded twisted-pair only)
INI-VGE	
INI-VGE	Command center classic voice gateway
INI-VGE-UTP	Command center (unshielded twisted-pair only)
INI-VGX	
INI-VGX	Transponder voice gateway
INI-VGX-UTP	Transponder voice gateway (unshielded twisted-pair)

NGA

Description

The Gamewell-FCI, NGA LCD Graphic Annunciator is a powerful, software programmable, touch-screen, remote annunciator. It is used with the following Gamewell-FCI systems.

- E3 Series® Expandable Emergency Evacuation System
- E3 Series Combined Fire and Mass Notification System
- E3 Series Broadband Voice Evacuation System

The bright, back-lit ¼" VGA display is supplemented with an intuitive, easy-to-use touch-screen interface that provides the following features.

- Up to 512 user-defined messages may be configured.
- Messages may be up to 77 characters in length.
- Display font and color may be selected for each message.

The NGA mounts in the following enclosures or it can be remotely located.

- E3 Series Fire Command Center
- E3 Series Broadband Voice Command Center
- ACU Main Command Center
- E3 LOC Remote Command Center

It occupies one standard slot in the cabinet and directly connects to the INI-VGC or RPT-E3 which eliminates the need for a separate ARCNET interface. The NGA occupies one node on the Broadband network.

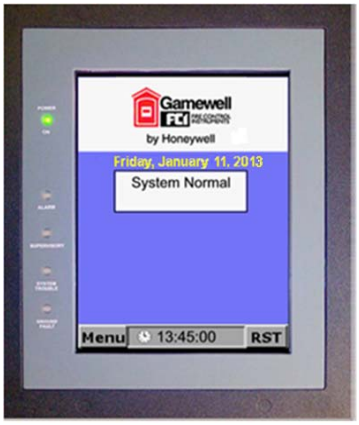
The back-lit LCD display indicates events stored in the System Event Log, the status of analog addressable monitor and control points and provides diagnostic fault codes/ messages.

NGA Touchscreen Tabs and Buttons

The attractive, state-of-the-art display is user-friendly, easy-to-read and affords the end-user with the means to perform numerous functions via the touch-screen feature which is software programmable. The following list the switch and system maintenance functions.

- MNS Alarm
- MNS Trouble
- MNS Supervisory
- Fire Reset
- MNS Reset
- Fire Alarm
- Fire Trouble
- Fire Supervisory
- Alarm Acknowlege
- Text Message
- Signal Silence
- Menu
- Scroll Up
- Scroll Down

NGA Network Graphic Annunciator



NGA

Features

- Listed under UL® Standard 864, 9th Edition.
- Listed under UL Standard UL2572 for Mass Notification.
- 1/4" VGA display multipurpose touchscreen provides the following options:
  - Up to 512 user-defined messages may be configured.
  - Messages can be up to 77 characters in length.
  - Display font and color may be selected for each message.
- Software programmable touch-screen interface.
- Mounts in the following command center mounting spaces or enclosures.
  - E3 Series Expandable Emergency Evacuation System
  - E3 Series Broadband Voice Evacuation Systems
  - E3 Series Combined Fire & Mass Notification System
- 625K baud ARCNET communications.
- User-friendly design.
- Includes an RS-232 interface.

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NGA LEDs

Additional LEDs located on the display panel perimeter indicate the following conditions.

- Power On
- System Trouble
- Ground Fault
- Alarm
- Supervisory

Figure 1 illustrates the NGA Screen with an MNS Alarm Event.

Figure 1 NGA Screen with MNS Alarm Event

Figure 2 illustrates the NGA System Reset screen for an Inactive Fire/MNS Event.

Figure 2 NGA Reset Screen for Inactive Fire/MNS Buttons

Specifications

Operating Voltage:	24 VDC from the PM-9/PM-9G power supply
Operating Current:	0.200 amp*
Alarm Current:	0.200 amp
Operating Temperature:	32° to 120° F (0° to 49° C)
Relative Humidity:	0-93% non-condensing at 90° F (32° C)

*Normal operating current. During power failure, current drops to 0.045 amp, since the back light is extinguished.

Ordering Information

Part Number	Description
1100-0505	Network graphic annunciator

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INCC-MIC

Description

Paging Microphone Module

The Gamewell-FCI, INCC-MIC Paging Microphone Module is a microphone interface used for paging. It is a component of the following Systems:

- NetSOLO® Broadband System
- E3 Series® Combined Fire and Mass Notification System
- E3 Series Broadband Voice Evacuation System

The INCC-MIC microphone provides a cost-effective microphone interface module for paging. Installed with the ASM-16 Addressable Switch Module, it provides easy paging to selected speaker zones with visual indications of paging and zone status.

Installation

The INCC-MIC Paging Microphone Module can be installed in any of the following types of E3 Series cabinets:

- Cabinet AA
- Cabinet B
- Cabinet C
- Cabinet D

Note: Gamewell-FCI recommends that you install the speakers at 4 ft. (1.2 m) or more from the microphone.

Specifications

INCC-MIC	Paging Microphone Module
Microphone Box	Durable gauge steel construction with microphone holder
Dimensions:	5.5” W x 6.5” H x 2.75” D (14 W x 16.5 H x 7 D cm)

INCC-MIC

Features

- Listed under UL® Standard UL2572 for Mass Notification.
- Delivers audio feedback cancellation.
- Contains a supervised microphone.
- Provides status bit activation when the microphone is in use.
- Offers an easy installation.
- Built with a pre-assembled microphone box and a microphone holder.
- Includes a terminal block with an easy-to-use plug-in cable.

Ordering Information

Part Number	Description
1100-0452	Paging Microphone Module

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E3 Series® Cabinets

Description

The E3 Series® Expandable Emergency Evacuation System by Gamewell-FCI offers several cabinet size options. These cabinet options allow for neat, sturdy, attractive installations. The E3 Series cabinet assembly is a compact, wall-mounted enclosure. A typical cabinet includes a backbox and an outer locking door. In addition, there are several inner door choices and mounting plates to accommodate a variety of E3 sub-assemblies.

Each cabinet backbox includes mounting patterns for plates to aid the installer in arranging and securing the sub-assemblies to the backbox. Backbox knockouts are also positioned at numerous points to allow a conduit access into the enclosure.

Four (4) Annunciator Cabinet sizes provide maximum flexibility that can meet any application.

- Cabinet A or AA offers 2 slot and 3 slot options to accommodate either of the following configurations:
  - Cabinet A or AA, 2 slot allows space for one (1) LCD-E3 and one (1) NGA or one (1) ASM-16/ANU-48.
  - Cabinet A1 or AA, 3 slot provides space for either one NGA and two ASM-16s or three ASM-16s/ANU-48s.
- Cabinet A1 houses one NGA or one ASM-16/ANU-48.
- Cabinet A2 accommodates a single LCD-E3 display.

E3BB-RBSlim or B-Slim contains the 600 Series cabinet.

Cabinet B includes a mounting plate that contains a space for the ILI-MB-E3/ILI95-MB-E3, PM-9/PM-9G sub-assemblies and batteries set inside the backbox. Additional sub-assembly options mounted on the backbox include the DACT-E3 and RPT-E3. The 2 slot inner door houses the following options:

- one (1) LCD-E3 module and
- either one (1) ASM-16/ANU-48 or one (1) NGA module

Both C and D size Command Center cabinets house a variety of E3 Broadband sub-assemblies in multiple configurations that provide a solution to a wide range of applications.

Two (2), flexible inner door panel selections are available for C and D size Command Center cabinets that may contain a fire fighter's phone handset, a microphone, and optional modules to meet the facility operation requirements.
(*Note: See Inner Door and Backbox Mounting Capacities on page 3 and 4).

Cabinets for the E3 Series®

E3 Series® Cabinets

Features

- IBC Seismic Certified
- 16-gauge steel backbox
- Removable outer and inner doors
- Inner door bonding strap used to provide electrical continuity for grounding
- Backbox and door ground studs provide positive grounding. 180° opening door with full clearance
- Available in either black or red
- Lexan® windows appear on the doors of most cabinets, except the Cabinet "C" and "D" INX cabinets and the INX CAB-B cabinet which contain louvered doors
- 90° opening door with zero clearance
- Keylock with quarter turn latch
- Trim Ring accessories available

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Ordering Information

Part Number	Description
Cabinet "A" & "AA" Size	
Dimensions:	19 1/4" W x 10" H x 3" D (49 W x 25 H x 7.6 D cm)
E3BB-BA	Enclosure, Black, "A" Size
E3BB-RA	Enclosure, Red, "A" Size
E3BB-BAA	Enclosure, Black, "AA" (LOC) Size
E3BB-RAA	Inner Door, AA Plate, Enclosure, Red, "AA" (LOC) Size
E31D2-TA	Inner Door, 2 Slots, "AA" Size (INCC-TEL & ASM-16)
E3ID2-A	Inner Door, 2 Slots, "A" Size (LCD-E3 & ASM-16)
E3ID3-A	Inner Door, 3 Slots, "A" Size (NGA, ASM-16 and MIC)
Cabinet "A1" & "A2" Size:	
Dimensions:	8 3/4" W x 10" H x 4 1/2" D (22.2 W x 25 H x 7.6 D cm)
E3BB-BA1	Assy, Backbox, Remote Enclosure, A1 Size, Black (include inner door)
E3BB-RA1	Remote Enclosure, A1 Size, Red (include inner door)
E3BB-BA2	Remote Enclosure, A2 Size, Black (include inner door)
E3BB-RA2	Remote Enclosure, A2 Size, Red (include inner door)
Flush Cabinet A1 Annunciators:	
E3BB-FLUSH-LCD	CAB A2 Remote Flush LCD ANN with Keyswitch operation
E3BB-FLUSH-NGA	CAB A2 Remote Flush NGA ANN with Password protected
Cabinet "B-Slim" Size: (Retrofit Kits)	
Dimensions:	14" W x 20" H x 4 1/2: D (35.5 W x 50.8 H x 11 D cm)
E3BB-RBSLIM	Assy, Enclosure, B-SLIM, Red with Backplate and LCD-E3 Keyswitch plate
IF600-RETROFIT	Door and Cab mounting plates, disable key switch and door lock (PK-625) for E3 Series upgrade

For additional information, refer to the Gamewell Retrofit Kits Data Sheet, P/N: 9020-06093.

Cabinet "B" Size:	
Dimensions:	19 3/8" W x 19 3/8" H x 4 1/2" D (49 W x 49 H x 11 D cm)
E3BB-BB	Assy, Backbox Enclosure, Black,"B" Size
E3BB-RB	Assy, Backbox Enclosure, Red, "B" Size
E3ID2-B	Inner Door, 2 Slots, "B" Size
1100-0460	INX-Transponder 19" (cm) Backbox with Door, Black
Dimensions:	19 3/8" W x 19 3/8" H x 4 1/2" D (49 W x 49 H x 11.43 D cm)
Cabinet "C" Size:	
Dimensions:	19 3/8" W x 30" H x 4 1/2" D (49 W x 76 H x 11 D cm)
E3BB-BC/INCC	Enclosure, Command Center, Black, "C" Size
E3BB-RC/INCC	Enclosure, Command Center, Red, "C" Size
E3ID2-C	Assy, Inner Door, Command Center, 2- Bay "C" Size
E3ID3-C	Assy, Inner Door, Command Center, 3-Bay "C" Size
E3BB-BC/INX	Assy, Transponder, Black, "C" Size

Ordering Information (Continued)

Part Number	Description
Cabinet "C" Size (Continued)	
E3BB-RC/INX	Assy, Transponder, Red, "C" Size
E3-INCC-CPLATE	Command Center module mounting plate, "C" Size
E3-INX-CPLATE	Transponder module mounting plate, "C" Size
E3-ILI-CPLATE	Intelligent loop module mounting plate "C" Size
Cabinet "D" Size:	
Dimensions:	19 3/8" W x 41" H x 4 1/2" D (49 W x 104 H x 11 D cm)
E3BB-BD/INCC	Enclosure, Command Center, Black, "D" Size
E3BB-RD/INCC	Enclosure, Command Center, Red, "D" Size
E3ID2-D	Assy, Inner Door, 2-Bay, "D" Size
E3ID3-D	Assy, Inner Door, 3-Bay, "D" Size
E3BB-BD/INX	Enclosure, Transponder, Black "D" Size
E3BB-RD/INX	Enclosure, Transponder, Red, "D" Size
E3-INCC-D-PLATE	Command Center module mounting plate, "D" Size
E3-INX-D-PLATE	Transponder module mounting plate, "D" Size

Optional Extender Plates

AM-50 Plate	AM-50 Extender Plate
FPT-GATE-3-EXT	FPT-GATE-3 Extender Plate

Optional Accessories

1100-0450	Command Center,blank plate,single size
E3-BP	Inner door panel, blank, double size
90375	PM-9/PM-9G Adapter Plate Kit, Hardware
E3-TRIMKIT-A	Trim kit for "A"/"AA" size enclosure, black
E3-TRIMKIT-A1	Trim kit for "A1" size enclosure, black
E3-TRIMKIT-A2	Trim kit for "A2" size enclosure, black
E3-TRIMKIT-B	Trim kit for "B" size enclosure, black
E3-TRIMKIT-C	Trim kit for "C" size enclosure, black
E3-TRIMKIT-D	Trim kit for "D" size enclosure, black

Bulk Amplification

Part Number	Description
AA-100	100 W Audio Amplifier, @70.7 V_{RMS} with 120 VAC
AA-120	120 W Audio Amplifier, @25 V_{RMS} with 120 VAC
ACT-1	Audio coupling transformer, for audio systems w/multiple supplies
FCI-CHG-120	Battery Charger, 25-120 A/H Gel cell
FCI-LBB	Battery box, accommodates batteries up to 55 A/H, (Black)
Cabinet C:	
FCI-DR-C4B	Large Battery Backbox, Blank door, lock & keys, for backbox accepting 3 chassis, (Black)
FCI-DR-C4BR	Blank door, lock & keys, for backbox accepting 3 chassis, (Red)
SBB-C4	Backbox, 3 chassis, (Black)
Cabinet D:	
FCI-DR-D4B	Blank door, lock & keys, for backbox accepting 4 chassis, (Black)
FCI-DR-D4BR	Blank door, lock & keys, for backbox accepting 4 chassis, (Red)
SBB-D4	Backbox, 4 chassis, (Black)

Seismic Battery Bracket Kits

Part Number	Description
90516	7100-Slim 7 A/H Seismic Battery Bracket Kit
	E3 B-Slim 7 A/H Seismic Battery Bracket Kit
90517	7100-Slim 12 A/H Seismic Battery Bracket Kit
	E3 B-Slim 12 A/H Seismic Battery Bracket Kit
90518	E3 CAB-B 7 A/H Seismic Battery Bracket Kit
	E3 CAB-C 7 A/H Seismic Battery Bracket Kit
	E3 CAB-D 7 A/H Seismic Battery Bracket Kit
	NetSOLO NS-INX 7 A/H Seismic Battery Bracket Kit
	NetSOLO 7100 7 A/H Seismic Battery Bracket Kit
90519	E3 CAB-C (INX only) 12 A/H Seismic Battery Bracket Kit
	E3 CAB-D (INX only) 12 A/H Seismic Battery Bracket Kit
	NetSOLO NS-INX 12 A/H Seismic Battery Bracket Kit
90520	E3 CAB-B 18 A/H Seismic Battery Bracket Kit
	E3 CAB-C 18 A/H Seismic Battery Bracket Kit
	E3 CAB-D 18 A/H Seismic Battery Bracket Kit

Specifications

Inner Door Mounting Capacity

Number Components

Cabinet A

E3ID2-A, Cabinet A, Inner Door, 2 Slots
- 1 LCD-E3 Display and
- 1 ASM-16/ANU-48

E3ID2-TA Assembly, Door, Inner, TEL-E3

E3ID3-A, Cabinet A, Inner Door, 3 Slots
- 1 NGA or ASM-16
- 2 ASM-16s/ANU-48

Cabinet AA
- 1 Microphone

Cabinet A1

E3ID-A1 Cabinet A1, Inner Door, (Included with Box)
- 1 NGA or ASM-16

Cabinet A2

E3ID-A2 Cabinet A2, Inner Door, (Included with Box)
- 1 LCD-E3

Cabinet B

E3ID2-B, Cabinet B, Inner Door, (Included with Box)
- 1 LCD-E3 Display and one (1) ASM-16/ANU-48
- 1 NGA and one (1) ASM-16/ANU-48

B-Slim Cabinet
- 1 LCD-E3 Display and (1) RPT-E3 or (1) DACT-E3
- 1 ILI-MB-E3 or (1) ILI95-MB-E3
- 1 PM-9 or (1) PM-9G

Cabinet C

E3ID2-C, Cabinet C, Inner Door, 2 Slots
- 1 LCD-E3 Display and
- 5 Any combination of ASM-16/ANU-48, NGA or Microphone Assemblies
- 1 Telephone Assembly

Inner Door Mounting Capacity (Cont'd)

Number Components

Cabinet C (Continued)

E3ID3-C, Cabinet C, Inner Door, 3 Slots
- 7 Any Combination of ASM-16/ANU-48, NGA, or Microphone Assemblies
- 1 Telephone Assembly

Cabinet D

E3ID2-D, Cabinet D, Inner Door, 2 Slots
- 1 LCD-E3 Display
- 11 Any Combination of ASM-16/ANU-48, or NGA or Microphone and
- 1 Telephone Assembly

E3ID3-D, Cabinet D, Inner Door, 3 Slots
- 13 Any Combination of ASM-16/ANU-48, NGA or Microphone Assemblies
- 1 Telephone Assembly

Backbox Mounting Capacity

Number Components

E3BB-BAA, Enclosure, "AA' (LOC) Size, Black
- 1 INI-VG Series Voice Gateway

E3BB-BA, A1 Size Box/Door, Black
- 1 RPT-E3 Network Repeater

E3BB-BB, B Size Box/Door, Black
- 1 PM-9/PM-9G Power Supply
- 1 ILI-MB-E3/ILI95-MB-E3 and
- 1 Additional ILI-MB-E3/ILI95-MB-E3 Loop Interface or ANX or
- 1 DACT-E3 Digital Communicator and
- 1 RPT-E3 Network Repeater

INX CAB-B Mounting Plate
- 1 PM-9 or PM-9G
- 1 INI-VGX
- 4 AM-50 Series amplifiers

E3-INCC-C Plate
- 1 PM-9/PM-9G Power Supply
- 1 INI-VG Series Voice Gateway
- 1 ILI-MB-E3/ILI95-MB-E3 Loop Interface and
- 1 Additional ILI-MB-E3/ILI95-MB-E3/ANX Loop Interface or
- 1 DACT-E3 Digital Communicator and
- 1 RPT-E3 Network Repeater
- 1 Optional AM-50 or FPT-GATE-3 Extender Plate

E3-ILI-C Plate
- 1 PM-9/PM-9G Power Supply
- 1 ILI-MB-E3 or ILI95-MB-E3
- 2 Additional ILI-MB-E3/ILI95-MB-E3 or ILI-S-E3/ILI95-S-E3 or ANX
- 1 DACT-E3
- 1 RPT-E3
- 1 Optional FPT-GATE-3 Extender Plate

Backbox Mounting Capacity

Number	Components
E3-INX-C	Plate
1	PM-9/PM-9G Power Supply with one (1) PM-9/ PM-9G Adapter Plate
1	INI-VGX Voice Gateway
1	ILI-MB-E3 Loop Interface and
1	Additional ILI-MB-E3/LI95-MB-E3/ANX
1	DACT-E3 Digital Communicator and
1	RPT-E3 Network Repeater
4	AM-50 Series Amplifier
1	Optional FPT-GATE-3 Extender Plate
E3-INCC-D	Plate
1	PM-9/PM-9G Power Supply
1	ILI-MB-E3 or ILI95-MB-E3
4	Additional ILI-E3 Series or ILI95-E3 Series or ANX
1	DACT-E3 Digital Communicator
1	RPT-E3 Network Repeater
1	INI-VG Series
1	Optional AM-50 or FPT-GATE-3 Extender Plate
E3-INX-D	Plate
1	PM-9/PM-9G Power Supply
1	ILI-MB-E3 or ILI95-MB-E3
1	DACT-E3 Digital Communicator
1	RPT-E3 Network Repeater
1	INI-VG Series
4	AM-50 Series Amplifier
1	Optional FPT-GATE-3 Plate

Backbox Mounting Capacity

Number	Components
E3BB-BD, D Size Box/Command Center (Voice), Black	
1	PM-9/PM-9G Power Supply
1	INI-VG Series Voice Gateway
4	ILI-MB-E3/ILI95-MB-E3/ANX Loop Interface and
1	Additional ILI-MB-E3/ILI95-MB-E3/ANX Loop Interface or
1	DACT-E3 Digital Communicator and
1	RPT-E3 Network Repeater
1	Optional FPT-GATE-3 Plate
E3BB-BD, D Size Box/Command Center, Black	
1	PM-9/PM-9G Power Supply
7	ILI-MB-E3/ILI95-MB-E3/ANX Loop Interface and
1	Additional ILI-MB-E3/ILI95-MB-E3/ANX Loop Interface or
1	DACT-E3 Digital Communicator and
1	RPT-E3 Network Repeater
1	Optional FPT-GATE-3 Extender Plate

Optional Extender Plates

AM-50 Extender Plate	
1	AM-50-25 or AM-50-70
FPT-GATE-3 Extender Plate	
1	FocalPoint® Gateway
1	PNET-1

CALIFORNIA DEPARTMENT OF FORESTRY & FIRE PROTECTION
OFFICE OF THE STATE FIRE MARSHAL
FIRE ENGINEERING - BUILDING MATERIALS LISTING PROGRAM

LISTING SERVICE

LISTING No. 7165-1703:0125

CATEGORY: 7165 -- FIRE ALARM CONTROL UNIT (COMMERCIAL)

LISTEE: GAMEWELL-FCI12 Clintonville Road, Northford, CT 06472
Contact: Vladimir Kireyev (203) 484-6277 Fax (203) 484-7309
Email: vladimir.kireyev@honeywell.com

DESIGN: Model E3 Series® BROADBAND and E3 Series® CLASSIC Voice Evacuation System. The E3 Systems may also work in conjunction with all the sub-assemblies of listee's 7100 Series Control Panel and NetSOLO systems (CSFM Listing No. 7165-1703:105 and 6911-1703:116, and 6911-1703:118).

Unit conveys all fire alarm, audio evacuation, voice paging, and fire fighter communications. Power-limited; non-coded, automatic, manual, smoke control, water flow, sprinkler supervisory, local auxiliary, central station, remote station, and proprietary service. Refer to listee's data sheet for additional detailed product description and operational considerations.

System components:

ILI-MB-E3; Intelligent Loop Interface Master Board
PM-9, PM-9G*; Power Supply
ILI-95-MB-E3, ILI-95-S-E3; Loop Interface Subassemblies
E3BB-FLUSH-LCD; Enclosure for ICD-E3
E3BB-BA/-RA/-BAA/-RAA/-BB/-RB/-BC/-RC/-BD; Cabinets*
RPT-E3-FO or; Repeater Sub-assembly, Fiber Optic or
RPT-E3-UTP; Repeater Sub-assembly, Unshielded twisted pair wire
LCD-E3; LCD Keypad Display
DACT-E3 sub-assembly; Digital alarm communicator transmitter
ILI-S-E3; Intelligent Loop Unit, Expansion Board
ANX-SR, ANX-MR-FO, ANX-MR-UTR; Addressable Node Expanders Sub Assembly*
INCC-E; Intelligent Network Enclosure*
INCC; Intelligent Network Central Command*
INI-VG, INI-VGC-UTP, INI-VGC-FO, INI-VGX-UTP; Intelligent Network Interface Sub Assembly*
INI-VGX-FO, INI-VGE-UTP, INI-VGE-FO; Intelligent Network Interface Sub Assembly*
ASM-16; Annunciator Switch Sub Assembly*
INX; Network Audio Transponder Enclosure*
ANU-48; Annunciator Sub Assembly*
NGA; Touch Screen LCD Display Sub Assembly*
LCD-7100; Remote LCD Display*
SBB-C4, SBB-D4; Backbox*

*Rev. 03-18-11bh

Date Issued: **July 01, 2018** *Listing Expires* **June 30, 2019**

Authorized By: ***DAVID CASTILLO**, Program Coordinator*

Fire Engineering Division

FCI-VDR-D4B, FCI-DR-C4B, FCI-CR-D4B; Doors with locks*
AA-100, AA-120; Amplifiers*
AM-50-25, AM-50-70; Amplifier Sub Assembly*
CHG120; Battery Charger with Cabinet*
BC-1/FCI-LBB; Backbox*
IPDACT-2; IP Digital Alarm Communicator*
FPJ; Firefighters's Telephone Jack Receptacle*
FHS; Portable Firefighters's Telephone Handset*
7100 Series#; Fire Alarm Control Panel or
INI-7100 UTP#; Intelligent Network Interface Sub-assembly, [Twisted, unshielded wire] or
INI-7100 FO#; Intelligent Network Interface

RATING: 120 V, 60 Hz, 3.5 A Primary; 24 V dc, 9A Secondary

INSTALLATION: In accordance with listee's printed installation instructions, NFPA 72, applicable codes & ordinances and in a manner acceptable to the authority having jurisdiction.

MARKING: Listee's name, model designation, electrical rating and UL label.

APPROVAL: Listed as fire alarm control unit for use with separately listed electrically and functionally compatible initiating and indicating devices. Suitable for high-rise applications when used with the above voice evacuation systems.

This control unit can generate a distinctive three-pulse Temporal Pattern Fire Alarm Evacuation Signal (for total evacuation) in accordance with NPFA 72, 2002 Edition.

This control unit meets the requirements of UL Standard 864, 9th Edition.

NOTE: For Fire Alarm Verification Feature (delay of alarm signaling), the Retard/Reset/Restart period shall be 30 seconds or less.

*Rev. 03-18-11bh

Date Issued: **July 01, 2018** *Listing Expires* **June 30, 2019**

Authorized By: ***DAVID CASTILLO**, Program Coordinator*

Fire Engineering Division

Gamewell FCI FIRE CONTROL INSTRUMENTS

by Honeywell

HPFF8

Description

NAC Expander/Power Supply

The Gamewell-FCI, HPFF8 is a Notification Appliance Circuit (NAC) expansion panel designed to extend the power capabilities of existing NACs and provide power for the auxiliary devices. The HPFF8 connects to any 12 or 24V Fire Alarm Control Panel (FACP) or stand alone.

The HPFF8 is available in 8.0 amps. It provides regulated and filtered 24VDC power to each of the four NACs and an auxiliary output. The NAC outputs are rated at 3.0 amps each (the total output cannot exceed 8.0 amps). The auxiliary output is rated at 2.0 amps. This output is continuously supplied, even in alarm, and therefore must be taken into account for power supply loading and battery size calculations.

The NAC outputs may be configured as any of the following:

- Four Class B (Style Y)
- Two Class A (Style Z)
- Two Class B and one Class A
- Four Class A with the optional HPP31076 Class A adapter installed

These power supplies contain an internal Battery charger capable of charging up to 26.0 amp-hour (AH) batteries.

The HPFF8 is mounted in lockable wall cabinet units that can accommodate up to two (2), 18AH batteries. A multi-pack option allows for up to four chassis mount units installed in a single lockable SBB-D4 enclosure. These chassis mount units have a "CM" suffix, HPFF8CM and can accommodate two 12AH batteries. Power supplies are available in either 120VAC/60 Hz or 240VAC/50 Hz.

One of the most challenging aspects of a retrofit application is locating the existing End-of-Line (EOL) resistor. In these applications that have EOL values, other than the 3.9k normally used with the HPFF8, a single resistor matching the existing EOL can be used as a reference for all the outputs. This feature speeds the installation and the system checkout, because the actual EOL does not need to be located and changed in the circuit. The reference resistor must be within the range of 1.9k to 25k.

HPFF8

Features

- Four (4) supervised notification application circuits (NACs) capable of supplying +24VDC at 3.0 amp maximum each
- NAC output circuits may be configured as any of the following:
  - Four Class B (Style Y)
  - Two Class A (Style Z)
  - Two Class B & one Class A
  - Four Class A with the optional HPP31076 Class A adapter installed
- Four field-programmable operational modes
- 2.0 amp auxiliary continuously supplied output
- Two (2) fully supervised input/output control circuits
- Temporal coding and sync protocols compatible with the following notification appliance brands:
  - System Sensor
  - Gamewell
  - Cooper-Wheelock
  - Faraday
  - Amseco
  - Gentex
- Supervised AC input, battery voltage, auxiliary output, charger, and earth ground faults
- Trouble indication for supervision of the following:
  - NAC circuits
  - AC input
  - Battery voltage
  - Earth ground faults by individual status LED's
  - Auxiliary output
  - Charger
  - Open contacts in the initiating device signal inputs (for FACP trouble notification)
- Separate Trouble and AC Fail Form-C relay Contacts

An ISO 9001-2000 Company

SIGNALING UL LISTED S24562 FM APPROVED 7315-1637:0102

GAMEWELL-FCI
12 Clintonville Road, Northford, CT 06472-1610 USA • Tel: (203) 484-7161 • Fax: (203) 484-7118

Features (Continued)

- The Trouble Form-C relay contacts selectable for immediate or a 2 hour delay with AC failure
- 26 AH battery charger capability; the wall cabinet supports two 12V 18AH batteries, while the multi-pack equipment cabinets supports two 12V 12AH batteries.
- NAC Overload protection and indication
- Up to four chassis mount units (HPFF8CM) can be installed in the SBB-D4 backbox
- Wall mount units can be configured to internally house the following:
  - one AOM-2SF single control module
  - one AOM-2R single relay module

Specifications

Primary Input Power:	120VAC/60Hz, 3.6A or 220VAC/50Hz, 1.5A
Secondary Power:	24 volt operation: two (2), 7-24 AH batteries
Battery Charging Capacity:	Up to 26 AH batteries mounted
Battery Space:	
HPFF8 Cabinet:	Up to two 18AH batteries
SBB-D4 Cabinet:	Up to two 12AH batteries per supply
Total Output Power:	8.0A max
Standby Current:	0.030 A
Auxiliary Power Output:	0.15A under all conditions 2.0A if load is removed during operation (external relay or AC Fail Relay is required)

Specifications (Continued)

NAC Output Ratings:	24VDC fully regulated, 3.0A max per circuit (8.0A total)
End-of-Line Resistor Range:	2K to 25k ohm, ½ watt
Common Trouble Relay/AC Fail Relay:	2.0A at 28VDC or 120VAC
Input Control Circuit:	16-30VDC @ 5mA min.
Temperature Rating:	32°F to 120°F (0°C to 49°C
Relative Humidity:	10% to 93% non-condensing
Cabinet Dimensions:	
HPFF8 Cabinet:	16.65” W x 19.0” H x 5.2” D (42.29 W x 48.26 H 13.23 D cm)
SBB-D4 Cabinet:	24” W x 45.9” H x 5.15” D (60.96 W x 116.52 H x 13.1D cm)

Ordering Information

Part Number	Description
HPFF8	8A fire rated power supply operating at 120VAC/60 Hz. Unit includes red enclosure with HPP lock and key
HPFF8CM	8A fire rated power supply - chassis mounted operating at 120VAC/60 Hz. Unit includes mounting hardware for installation in the SBB-D4 enclosure
HPFF8E	8A fire rated power supply operating at 240VAC/50 Hz
HPFF8CME	8A fire rated power supply chassis mounted operating at 240VAC/50 Hz
HPP31076	Class A (Style Z) NAC module
FCI-VDR-D4	Vented door, PK-625 lock and key for SBB-D4 backbox, black
SBB-D4	Backbox, accepts up to 4 chassis, black

CALIFORNIA DEPARTMENT OF FORESTRY & FIRE PROTECTION
OFFICE OF THE STATE FIRE MARSHAL
FIRE ENGINEERING - BUILDING MATERIALS LISTING PROGRAM

LISTING SERVICE

LISTING No. 7315-1637:0102

CATEGORY: 7315 -- POWER UNITS

LISTEE: Honeywell International Inc.One Fire-Lite Place, Northford, CT 06472
Contact: Vladimir Kireyev (203) 484-6277 Fax (203) 484-7309
Email: Vladimir.kireyev@honeywell.com

DESIGN: Models HPF24S6, HPF24S8, HPFF8, HPFF8E, HPFF8CM, HPFF8CME, HPFF12, HPFF12E, *HPFF12CM and *HPFF12CME power limited power supply/battery chargers used for supervision and expanded power driving capability of up to four Notification Appliance Circuits (FACP Fire Circuits, Signaling Devices) or resettable/non resettable outputs. Model ZNAC-4 Class A converter. Refer to listee's data sheet for additional detailed product description and operational considerations.

RATING: 120 VAC, 24 VDC

INSTALLATION: In accordance with listee's printed installation instructions, applicable codes and ordinances and in a manner acceptable to the authority having jurisdiction.

MARKING: Listee's name, product designation, electrical rating and UL label.

APPROVAL: Listed as power supply/battery chargers for use with separately listed compatible fire alarm control units.

XLF: 7315-0075:0206

*Rev. 10-20-10 bh

Date Issued: **July 01, 2018** *Listing Expires* **June 30, 2019**

Authorized By: ***DAVID CASTILLO**, Program Coordinator*

Fire Engineering Division

Velociti® Series
AOM-2SF

Description

The Gamewell-FCI Velociti® Series addressable output supervised control module (AOM-2SF) allows an Gamewell-FCI analog addressable fire alarm control to switch an external power supply, such as a DC supply or audio amplifier (up to 80 V_{RMS}) to notification appliances. The AOM-2SF notification appliance circuit can be wired either Class A (Style Z) or Class B (Style Y). It also supervises the wiring to the connected loads and reports their status to the panel as NORMAL, OPEN or SHORT CIRCUIT. The module contains a panel controlled LED.

The Velociti® Series use a communication protocol that substantially increases the speed of communication between the sensors and certain Gamewell-FCI analog addressable fire alarm controls. These devices operate in a grouped fashion. If one of the devices in the group has a status change, the panel's microprocessor stops the group poll and concentrates on the single device. The net effect is response speed up to five times greater than earlier designs.

The AOM-2SF module is designed for installation in the signaling line circuit of any Gamewell-FCI analog addressable control panel. The signaling line circuits of Gamewell-FCI analog addressable control panels are designed to accommodate up to 159 modules per circuit. The AOM-2SF is designed to mount in a 4" (10.16 cm) square junction box 2 1/8" (5.5 cm) deep.

Relay Contact Ratings

Current Rating	Maximum Voltage	Load Description	Application
3A	30 VDC	Resistive	Non-Coded
2A	30 VDC	Resistive	Coded
0.9A	110 VDC	Resistive	Non-Coded
0.5A	125 VAC	Resistive	Non-Coded
0.5A	30 VDC	Inductive (L/R=5ms)	Coded
1A	30 VDC	Inductive (L/R=2ms)	Coded
0.5A	125 VAC	Inductive (PF=.35)	Non-Coded
0.7A	75 VAC	Inductive	Non-Coded

Addressable Output Relay
Supervised Control Module

AOM-2SF

Features

- Compact Size allows easy installation
- Class A, Style Z, or Class B, Style Y notification appliance circuit
- Will accommodate audio amplifiers up to 80 V_{RMS}
- Listed as suitable for releasing device service
- Bicolor LEDS flash green whenever the module is addressed, and lights steady red on alarm*

*Note: Only the red LED is operative in panels that do not operate in Velociti® mode.

Specifications

Supervisory Current:	.000375 amps
Alarm Current:	.0065 amps
Operating Temperature:	32° to 120° F (0° to 49° C)
Relative Humidity:	10 to 93% relative humidity (non-condensing)
Dimensions:	4 1/2" H x 4" W x 1 1/4" D (11.4 H x 10.2 W x 3.2 D cm)

Ordering Information

Part Number	Description
AOM-2SF	Addressable output supervised control module

An ISO 9001-2000 Company

SIGNALING UL LISTED S1949 FM APPROVED 3023594 MEA Approved 227-03-E Vol.IV 7300-1703:102

GAMEWELL-FCI
12 Clintonville Road, Northford, CT 06472-1610 USA • Tel: (203) 484-7161 • Fax: (203) 484-7118

CALIFORNIA DEPARTMENT OF FORESTRY & FIRE PROTECTION
OFFICE OF THE STATE FIRE MARSHAL
FIRE ENGINEERING - BUILDING MATERIALS LISTING PROGRAM

LISTING SERVICE

LISTING No. 7300-1703:0102

CATEGORY: 7300 -- FIRE ALARM CONTROL UNIT ACCESSORIES/MISC. DEVICES

LISTEE: GAMEWELL-FCI12 Clintonville Road, Northford, CT 06472
Contact: Vladimir Kireyev (203) 484-6277 Fax (203) 484-7309
Email: vladimir.kireyev@honeywell.com

DESIGN: Models AMM-4, *AMM-4F, AMM-2 and *AMM-2F monitor modules and Models AOM, AOM-2, AOM-2R, *AOM-2RF, AOM-2S and *AOM-2SF control modules. Refer to listee's data sheet for detailed product description and operational considerations.

INSTALLATION: In accordance with listee's printed installation instructions, applicable codes and ordinances and in a manner acceptable to the authority having jurisdiction.

MARKING: Listee's name, model designation, electrical rating and UL label.

APPROVAL: Listed as accessories for use with separately listed compatible control units. System Sensor Model SMB500 surface mount box (CSFM Listing No. 7300-1653:103) may be used as an enclosure for these modules

NOTE: FORMERLY: 7300-0694:178

XLF: 7300-1653:0103

12-4-07

Date Issued: **July 01, 2018** *Listing Expires* **June 30, 2019**

Authorized By: ***DAVID CASTILLO**, Program Coordinator*

Fire Engineering Division

Small Sealed VRLA AGM Batteries

MK Battery supplies the highest quality VRLA (Valve Regulated Lead Acid) battery line, designed for longer run times and superior cycle life.

FEATURES	BENEFITS
VRLA Technology	Reliable performance and long life
Sealed and 100% Maintenance Free	Will not leak or spill
Diverse Product Line	Batteries for deep cycle, standby and high rate applications
UL Certification	Safety tested
ISO 9001 and ISO 14001 Certified	Quality assurance

4V BATTERIES

NOTE: Reference **www.mkbattery.com** for the most current battery specifications.

Description	Nominal Ah Capacity	Weight	Dimensions – Inches (mm)				Terminal	
Model	20hr Rate F.V. (1.75V/cell)	lbs. (g.)	L	W	H	TH■	Type	Position
ES4.5-4	4.5	1.43 (650)	1.89 (48)	2.05 (52)	3.70 (94)	3.94 (100)	F2	6
ES9-4	9	2.62 (1190)	3.98 (101)	1.73 (44)	3.74 (95)	4.02 (102)	F2	3

6V BATTERIES

NOTE: Reference **www.mkbattery.com** for the most current battery specifications.

Description	Nominal Ah Capacity	Weight	Dimensions – Inches (mm)				Terminal	
Model	20hr Rate F.V. (1.75V/cell)	lbs. (g.)	L	W	H	TH■	Type	Position
ES1.2-6	1.2	0.68 (310)	3.82 (97)	0.98 (25)	2.05 (52)	2.24 (57)	F1	2
ES3-6	3	1.54 (700)	5.28 (134)	1.34 (34)	2.32 (59)	2.56 (65)	F1	2
ES3-6H	3.0	1.26 (570)	2.60 (66)	1.30 (33)	3.82 (97)	4.09 (104)	F1	1
ES3.8-6	3.8	1.56 (710)	2.60 (66)	1.30 (33)	4.65 (118)	4.96 (126)	F1	1
ES4-6	4.5	2.00 (910)	2.76 (70)	1.85 (47)	3.98 (101)	4.13 (105)	F1	1
ES7-6	7	2.64 (1200)	5.94 (151)	1.34 (34)	3.70 (94)	3.94 (100)	F1	2
ES8.2-6S	9	3.74 (1700)	3.88 (98.5)	2.20 (56)	4.65 (118)	4.65 (118)	F1	8
ES12-6	12	4.18 (1900)	5.94 (151)	1.97 (50)	3.70 (94)	3.90 (99)	F1, F2	2
ES13-6	13	4.84 (2200)	4.25 (108)	2.76 (70)	5.51 (140)	5.51 (140)	F1-, F2+	18
ES42-6	42	14.3 (6500)	6.38 (162)	3.46 (88)	6.42 (163)	6.69 (170)	F2	14

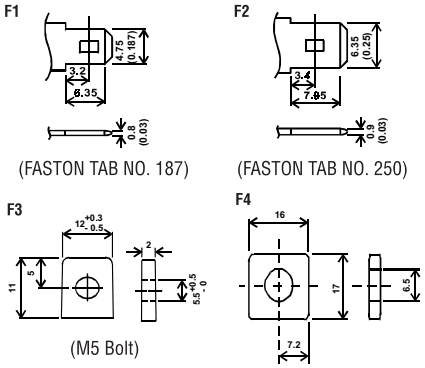
12V BATTERIES

NOTE: Reference **www.mkbattery.com** for the most current battery specifications.

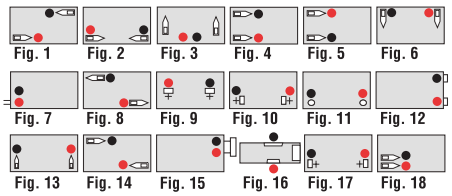
Description	Nominal Ah Capacity	Weight	Dimensions – Inches (mm)				Terminal	
Model	20hr Rate F.V. (1.75V/cell)	lbs. (g.)	L	W	H	TH■	Type	Position
ES0.8-12	0.8	0.88 (400)	3.78 (96)	0.98 (25)	2.44 (62)	2.44 (62)	WIRE	15
ES1.2-12	1.2	1.27 (575)	3.82 (97)	1.69 (43)	2.09 (53)	2.32 (59)	F1	4
ES1.9-12	2.3	2.31 (1050)	7.01 (178)	1.34 (34)	2.36 (60)	2.60 (66)	F1	2
ES2-12SLM	2	1.63 (741)	5.91 (150)	0.79 (20)	3.54 (90)	3.54 (90)	F1	12
ES2.3-12V	2.1	1.57 (714)	7.17 (182)	0.91 (23)	2.40 (61)	2.40 (61)	F13	16
ES2.9-12	2.9	2.66 (1210)	3.11 (79)	2.20 (56)	3.90 (99)	4.21 (107)	F1	13
ES3-12	3	2.86 (1300)	5.28 (134)	2.64 (67)	2.34 (60)	2.58 (66)	F1	4
ES3-12R	3	2.55 (1160)	5.24 (133)	1.30 (33)	3.82 (97)	4.09 (104)	F1	2
ES5-12*	5	4.18 (1900)	3.54 (90)	2.76 (70)	4.00 (101)	4.21 (107)	F1, F2	3
ES7-12*	7.2	5.28 (2400)	5.94 (151)	2.56 (65)	3.70 (94)	4.02 (102)	F1, F2	5
ES9-12	9	5.94 (2700)	5.94 (151)	2.56 (65)	3.70 (94)	4.02 (102)	F2	5
ES9-12TE	9	5.94 (2700)	5.94 (151)	2.56 (65)	3.70 (94)	4.17 (106)	F3	5
ES10-12S	10	7.26 (3300)	5.94 (151)	2.56 (65)	4.40 (112)	4.67 (118)	F2	5
ES12-12	12	9.02 (4100)	5.94 (151)	3.86 (98)	3.66 (93)	3.86 (98)	F2	5
ES12-12TE	12	8.58 (3900)	5.94 (151)	3.86 (98)	3.66 (93)	4.06 (103)	F3	5
ES14-12	14	9.42 (4280)	5.94 (151)	3.86 (98)	3.66 (93)	3.86 (98)	F2	5
ES17-12	18	13.20 (6000)	7.13 (181)	2.99 (76)	6.57 (167)	6.57 (167)	F2, F3	17
ES20-12C	20	13.42 (6100)	7.13 (181)	2.99 (76)	6.57 (167)	6.57 (167)	F3	10
ES20-12CFT	20	13.42 (6100)	7.13 (181)	2.99 (76)	6.57 (167)	6.57 (167)	F6	11
ES26-12	26	20.46 (9300)	6.54 (166)	6.89 (175)	4.92 (125)	4.92 (125)	F2, F3	17
ES33-12	35	23.10 (10500)	7.76 (197)	5.16 (131)	6.26 (159)	7.09 (180)	F4	9
ES40-12	45	31.90 (14500)	7.79 (198)	6.54 (166)	6.73 (171)	6.73 (171)	F4	10
ES50-12	50	31.50 (14300)	7.79 (198)	6.54 (166)	6.73 (171)	6.73 (171)	F8	11

★ Available In Flame Retardant Case. ■ Total Height Includes Terminals.

TERMINAL TYPE MM (INCH)

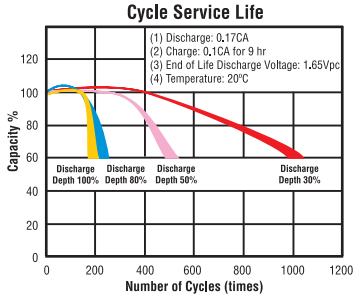


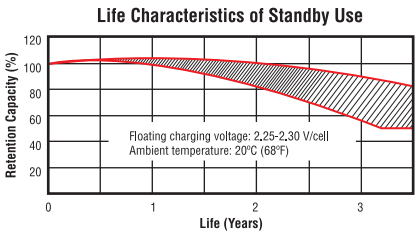
TERMINAL POSITIONS



■ Total Height Includes Terminals.

MK AGM PERFORMANCE





IMPORTANT CHARGING INSTRUCTIONS:
WARRANTY VOID IF OPENED OR IMPROPERLY CHARGED. Constant under or overcharging will damage any battery and shorten its life! Use a good constant potential, voltage-regulated charger. Do not charge in a sealed container.

Charging Voltage for 4V Batteries at 68°F
Cycle Use: 4.8-5.0V Standby Use: 4.5-4.6V

Charging Voltage for 6V Batteries at 68°F
Cycle Use: 7.2-7.5V Standby Use: 6.75-6.9V

Charging Voltage for 12V Batteries at 68°F
Cycle Use: 14.4-15.0V Standby Use: 13.5-13.8V

NON-SPILLABLE by DOT (Department of Transportation), ICAO (International Commercial Airline Organization), and IATA (International Airline Transport Association) definitions.

MK Battery • 1631 South Sinclair Street • Anaheim, CA 92806
Toll Free 800-372-9253 • Tel 714-937-1033 • Fax 714-937-0818
Website: www.mkbattery.com • Email: sales@mkbattery.com

MS-7 Series

Description

The Gamewell-FCI, MS-7 Series manual fire alarm stations are available in a wide variety of configurations. The Stations comply with the Americans with Disabilities Act (ADA) 5-lb. maximum pull force requirement. Operating instructions and Braille text are engraved in the handle. All stations have a key lock/reset which is keyed alike with Gamewell-FCI fire alarm control panels and other manual fire alarm stations.

MS-7AF Velociti Addressable Station

The MS-7AF Velociti® Series addressable station is a double action station designed for installation in the signaling line circuit of Gamewell-FCI analog addressable control panels. Activation of the station causes its assigned address to register at the control panel. The door contains an LED which flashes green in normal condition and lights steady red when the station has been activated.* The station features screw terminals.

MS-7ASF Velociti Addressable Station

The MS-7ASF Velociti® Series addressable station is a single action station designed for installation in the signaling line circuit of Gamewell-FCI analog addressable control panels. Activation of the station causes its assigned address to register at the control panel. The door contains an LED which flashes green in normal condition and lights steady red when the station has been activated.* The station features screw terminals.

The Velociti® Series stations use a communication protocol that substantially increases the speed of communication between the sensors and certain Gamewell-FCI analog addressable fire alarm controls. These devices operate in a grouped fashion. If one of the devices in the group has a status change, the panel's microprocessor stops the group poll and focuses on the single device. The net effect is response speed up to five times greater than earlier designs.

MS-7 Double Action Station

The MS-7 double action station is used with conventional fire alarm control panels. It features a set of single pole contacts and screw terminals for connection to an initiating circuit.

Non-Coded, Manual Fire Alarm Stations

MS-7

Features

- Addressable stations compatible with all Gamewell-FCI analog addressable fire alarm controls
- Conventional stations suitable for use with any UL® Listed control panel
- Both single and double action stations available
- Tumbler lock for test and reset keyed alike with Gamewell-FCI controls
- Surface or semi-flush mounting
- Shock and vibration resistant
- Stations (MS-7LOB) Listed for outdoor applications
- Complies with ADA pull force requirements

*Only the red LED is operative in panels that do not operate in Velociti mode.

An ISO 9001-2000 Company

SIGNALING UL LISTED S2465 FM APPROVED 3023594 MEA Approved 67-02-E Vol.VIII 07150-0694:261

GAMEWELL-FCI
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MS-7S Single Action Station

The MS-7S single action station is used with conventional fire alarm control panels. It features a set of single pole contacts and wire leads for connection to an initiating circuit.

MS-7SP Double Action Station

The MS-7SP is a double action station similar to the MS-7 station, with the additional feature of both English and Spanish instructions molded into the unit.

MS-7LR Dual-action Agent Release Station

The MS-7LR is designed for use with the Gamewell-FCI fire alarm control panels with releasing capabilities and Flex Series releasing systems. It features a set of single pole contacts and screw terminals for connection to an initiating circuit.

MS-7LRA Agent Release Station with Abort

The MS-7LRA is designed for use with the Gamewell-FCI fire alarm control panels with releasing capabilities and Flex Series releasing systems where system abort capabilities are required. It consists of an MS-7LR mounted on a plate with an abort switch and LED indicators for system normal, and system activated status.

MS-7LOB Double Action Station (Listed for Outdoor Applications)

The MS-7LOB station must be mounted on a Model SB-I/O backbox. In retrofit applications, the station is UL Listed for use with the WP-10 backbox. It is intended for use with conventional control panels and has a set of single pole contacts and screw terminals.

Mounting

The MS-7 interior stations may be surface mounted or semi-flush mounted on a standard double-gang, or 4-inch (10.2 cm) square electrical box. An optional trim ring (BG12TR) may also be used for semi-flush mounting.

NYC-Plate

The NYC-Plate provides the backplate for the manual pull station. (See Figure 1).

Figure 1 NYC-Plate

Specifications

Material:	Lexan®
Contact Ratings:	0.25 amps. @ 30 VAC/VDC (resistive)
Dimensions:	5 5/8" H x 4 1/4" W x 1 1/4" D (14 x 10.1 x 3.2 cm)
Operating Temperature	
(MS-7AF, MS-7ASF):	32° to 120° F (0° to 49° C)
(MS-7LOB):	-30° to 150° F (-35° to 66° C)
Relative Humidity	
(MS-7AF, MS-7ASF):	10 to 93% (non-condensing)
(MS-7LOB):	85% ± 5% @ 86° ± 3.6° (30° ± 2° C)
Alarm Current:	.0030 amp. 0.007 for LED
Supervisory Current	
(MS-7AF, MS-7ASF):	.00030 amps.

Ordering Information

Part Number	Description
MS-7	Double action station
MS-7AF**	Velociti addressable double action station
MS-7ASF**	Velociti addressable single action station
MS-7S	Single action station, wire leads
MS-7SP	Double action station, English and Spanish instructions
MS-7LR	Agent release station, dual-action
MS-7LRA	Agent release station with abort switch, LED indicators, dual- action
MS-7LOB	Double action station, outdoor use (Includes SB-I/O - Indoor/outdoor use backbox)
SB-I/O	Indoor/outdoor use backbackbox
SB-10	Surface backbox
BG12TR	Trim ring for semi-flush mount, plastic
NY-PLATE	NYC backplate for manual pull station

**For use with the Gamewell-FCI analog addressable control panels only.

GAMEWELL-FCI
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www.gamewell-fci.com

CALIFORNIA DEPARTMENT OF FORESTRY & FIRE PROTECTION
OFFICE OF THE STATE FIRE MARSHAL
FIRE ENGINEERING - BUILDING MATERIALS LISTING PROGRAM

LISTING SERVICE

LISTING No. 7150-1703:0119

CATEGORY: 7150 -- FIRE ALARM PULL BOXES

LISTEE: GAMEWELL-FCI12 Clintonville Road, Northford, CT 06472
Contact: Vladimir Kireyev (203) 484-6277 Fax (203) 484-7309
Email: vladimir.kireyev@honeywell.com

DESIGN: Model MS-7AF dual action fire alarm pull box. Refer to listee's data sheet for detailed product description and operational considerations.

INSTALLATION: In accordance with listee's printed installation instructions, applicable codes and ordinances and in a manner acceptable to the authority having jurisdiction.

MARKING: Listee's name, model number, rating, and UL label.

APPROVAL: Listed as fire alarm pull boxes for use with separately listed compatible fire alarm control units. Refer to listee's Installation Instruction Manual for details.

* These manual pull boxes meet the requirements of UL Standard 38, 1999 Edition and California amendments.

NOTE: Formerly: 7150-0694:261

XLF: 7150-0028:0199

*Updated 09-08-2009 fm

Date Issued: **July 01, 2018** *Listing Expires* **June 30, 2019**

Authorized By: ***DAVID CASTILLO**, Program Coordinator*

Fire Engineering Division

Velociti® Series ASD-PL2F, ASD-PTL2F and ASD-PL2FR

Description

The Gamewell-FCI Velociti® Series, analog addressable plug-in smoke sensors with integral communication provide features that surpass conventional sensors. Sensitivity can be programmed in the control panel software, and is continuously monitored and reported to the panel. Point ID capability allows each sensor's address to be set, providing exact locations for selective maintenance when the chamber contamination reaches an unacceptable level. The ASD-PL2F photoelectric sensor's unique optical sensing chamber is engineered to sense smoke produced by a wide range of combustion sources. Dual electronic thermistors add 135°F (57°C) fixed-temperature thermal sensing on the ASD-PTL2F model.

The Velociti® Series use a communication protocol that substantially increases the speed of communication between the sensors and certain Gamewell-FCI analog addressable fire alarm controls. These devices operate in a grouped fashion. If one of the devices in the group has a status change, the panel's microprocessor stops the group poll and concentrates on the single device. The net effect is a response speed up to five times greater than earlier designs.

Ordering Information

Model	Description
ASD-PL2F	Analog, addressable photoelectronic smoke sensor
ASD-PTL2F	Analog, addressable photoelectronic smoke sensor with thermal sensing
ASD-PL2FR	Analog, addressable photoelectronic smoke sensor used with the DNR duct base when the remote test is required.

Analog, Addressable Photoelectronic Smoke Sensor

ASD-PL2F/ASD-PTL2F

ASD-PL2FR

Features

- Sleek, low-profile design
- Visual rotary, decimal switch addressing (01-159)
- Built-in functional test switch activated by an external magnet
- Bicolor LEDs flash green whenever the sensor is addressed, and light steady red on alarm*
- Optional relay, isolator, or sounder bases
- Low standby current
- Analog addressable communication
- Stable communication technique with noise immunity
- Optional remote, single-gang LED Indicator (RA100Z)
- Compatible with Gamewell-FCI analog addressable panels

Note: *Only the red LED is operative in panels that do not operate in Velociti® mode.

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SIGNALING UL LISTED S1913 FM APPROVED 3023594 MEA Approved 219-02-E Vol.VI 7272-1703:0121

GAMEWELL-FCI
12 Clintonville Road, Northford, CT 06472-1653 USA • Tel: (203) 484-7161 • Fax: (203) 484-7118

Installation

ASD-PL2F plug-in sensors use a separate base to simplify installation, service, and maintenance. A special tool allows maintenance personnel to plug-in and remove sensors without using a ladder.

Mount the base on a box which is at least 1.5" (3.8 cm) deep. Suitable mounting base boxes include:

- 4.0" (10.2 cm) square box
- 3.5" (8.9 cm) or 4.0" (10.2 cm) octagonal box
- Single-gang box (except relay or isolator bases)
- With B200S or B200SR base, mounted on a 4.0" (10.2 cm) octagonal or square box
- With B224RB or B224BI base, mounted on a 3.5" (8.9 cm) octagonal box, or a 4.0" (10.2 cm) octagonal or square box

NOTE: Because of the inherent supervision provided by the SLC, end-of-line resistors are not required. Wiring “T-taps” or branches are permitted for Style 4 (Class “B”) wiring.

Sensor Spacing

Gamewell-FCI recommends that the spacing sensors be used in compliance with NFPA 72.

Specifications

ASD-PL2F, ASD-PTL2F, ASD-PL2FR:

Dimensions:	2.1” (5.1 cm) height
Diameter:	4.1” (10.4 cm) installed in the B501 base 6.1” (15.5 cm) installed in the B210LP base
Shipping Weight:	5.2 oz. (147 g)
Operating Temperature:	ASD-PL2F: 32° F to 120° F (0° C to 49° C) ASD-PTL2F: 32° F to 100° F (0° C to 38° C)
UL®-Listed Velocity Range:	0-4000 ft./min. (1,219.2 m/min.), suitable for installation in ducts.
Relative Humidity:	10-93% (non-condensing)
Thermal Ratings:	Fixed-temperature setpoint 135° F (57° C)

Electrical Specifications

Voltage Range:	15 – 32 volts DC peak
Standby Current:	(max. avg.): .0003 A @ 24 VDC (one communication every 5 seconds with LED blink enabled)
Maximum Alarm-Current:	.0065 A @ 24 VDC (LED) lit).

Bases and Options

B501	Plug-in sensor base without flange
Dimensions:	4.1” (10.4 cm) diameter
B210LP	Flanged mounting base
Dimensions:	6.1” (15.5 cm) diameter
B210LPBP	Flanged mounting base bulk pack
Dimensions:	6.1” (15.5 cm) diameter
B224RB Relay Base	Plug-in sensor base with auxiliary relay, SPDT, rated 2 amps @ 30 VDC (resistive) Screw terminals: Up to 14 AWG (2.0 mm^2) 2 coil latching relay 1 Form C contact UL/CSA Rating: 0.9 A @ 125 VAC, inductive 0.9 A @ 110 VDC, inductive 3 A @ 30 VDC, resistive
Dimensions:	6.1” (15.5 cm) diameter **Maximum:** 25 devices between isolator bases.
B200S	Intelligent sensor sounder base
Dimensions:	6.875” (17.5 cm) diameter
B200SR	Standard sounder base, UL 8649th Edition compliant, ULC Listed
Dimensions:	6.875” (17.5 cm) diameter
RA100Z	Remote LED Annunciator
BCK-200	Black detector covers (box of 10)
DNR	Duct smoke housing

CALIFORNIA DEPARTMENT OF FORESTRY & FIRE PROTECTION
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FIRE ENGINEERING - BUILDING MATERIALS LISTING PROGRAM

LISTING SERVICE

LISTING No. 7272-1703:0121

CATEGORY: 7272 -- SMOKE DETECTOR-SYSTEM TYPE-PHOTOELECTRIC

LISTEE: GAMEWELL-FCI12 Clintonville Road, Northford, CT 06472
Contact: Brian Reynolds (203) 484-6277 Fax (203) 484-7309
Email: brian.reynolds@honeywell.com

DESIGN: Models ASD-PL2F, ASD-PL2FR*, ASD-FILTREXF, ASD-PTL2F, and MCS-ACCLIMATE2F photoelectric smoke detector. Models ASD-PL2F and MCS-ACCLIMATE2F employ a 135°F supplement integral heat sensor which only assists in a fire situation. This thermal circuitry is NOT approved for use in lieu of a required heat detector. Refer to listee's data sheet for detailed product description and operational considerations.

INSTALLATION: In accordance with listee's printed installation instructions, applicable codes and ordinances and in a manner acceptable to the authority having jurisdiction.

MARKING: Listee's name, model number, electrical rating, and UL label.

APPROVAL: Listed as photoelectric smoke detectors when used in conjunction with listee's separately listed compatible fire alarm control units and bases. All models are suitable for open areas and inside duct installations with air velocities between 0-4000 FPM. Models ASD-PL2F and ASD-PL2FR are also approved for installations inside System Sensor duct detector housing DNR (OSFM Listing No. 3242-1653:209) and DNRW (OSFM Listing No. 3242-1653:210)*.

NOTE: The photoelectric type detectors are generally more effective at detecting slow, smoldering fires which smolder for hours before bursting into flame. Sources of these fires may include cigarettes burning in couches or bedding. The ionization type detectors are generally more effective at detecting fast, flaming fires that consume combustible materials rapidly and spread quickly. Sources of these fires may include paper burning in a waste container or a grease fire in the kitchen.

FORMERLY: 7272-1209:160 and 7272-0694:263

XLF: 7272-1653:0123

*Rev. 01-28-2010 fm

Date Issued: **July 01, 2018** *Listing Expires* **June 30, 2019**

Authorized By: ***DAVID CASTILLO**, Program Coordinator*

Fire Engineering Division

Velociti® Series
ATD-L2F, ATD-RL2F

Description

The Gamewell-FCI Velociti® Series, addressable plug-in thermal sensors with integral communication provide features that surpass conventional sensors. Point ID capability allows each sensor's address to be set, providing exact locations for pinpointing alarm locations and for selective maintenance. ATD thermal sensors use an innovative thermistor sensing circuit to produce 135°F/57°C fixed-temperature (ATD-L2F). The ATD-RL2F provides a combination 15°/minute rate-of-rise with 135° fixed thermal detection that is included in a low-profile package. The ATD-HL2F provides fixed high-temperature detection at 190°F/88°C. These thermal sensors provide cost-effective, addressable property protection in a variety of applications.

The Velociti® Series uses a communication protocol that substantially increases the speed of communication between the sensors and Gamewell-FCI analog addressable fire alarm controls. These devices operate in a grouped fashion. If one of the devices in the group has a status change, the panel's microprocessor stops the group poll and identifies the single device with the status change. The net effect is response speed up to five times greater than earlier designs.

Installation

ATD plug-in sensors use a separate base to simplify installation, service, and maintenance. A special tool allows maintenance personnel to plug-in and remove sensors without using a ladder.

Mount the base on a box which is at least 1.5" (3.8 cm) deep. Suitable mounting base boxes include:

- 4.0" (10.2 cm) square box.
- 3.5" (8.9 cm) or 4.0" (10.2 cm) octagonal box.
- Single-gang box (except relay or isolator base).
- With B200S or B200SR base, mounted on a 4.0" (10.2 cm) octagonal or square box.
- With B224RB or B224BI base, mounted on a 3.5" (8.9 cm) octagonal box, or a 4.0" (10.2 cm) octagonal or square box.

NOTE: Because of the inherent supervision provided by the SLC, end-of-line resistors are not required. Wiring "T-taps" or branches are permitted for Style 4 (Class "B") wiring.

Addressable Thermal Sensor

ATD-L2F

Features

- Sleek, low-profile design
- Visual rotary switch addressing
- Built-in functional test switch activated by an external magnet
- Bicolor LEDs flash green whenever the sensor is addressed, and light steadily red on alarm*
- Optional relay, isolator, or sounder bases
- Low standby current
- Addressable communication
- Stable communication technique with noise immunity
- Optional remote, single-gang LED accessory (RA-100Z)
- Suitable for installation in ducts

Note: *Only the red LED is operative in panels that do not operate in Velociti® mode.

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SIGNALING UL LISTED S2332 FM APPROVED 3023594 MEA Approved 219-02-E Vol.VI 7270-1703:0115

GAMEWELL-FCI
12 Clintonville Road, Northford, CT 06472-1610 USA • Tel: (203) 484-7161 • Fax: (203) 484-7118

Specifications

ATD-L2F/ATD-RL2F

Dimensions:	2.1" (5.3 cm) Height 4.1" (10.4 cm) diameter installed in the B501 base 6.1" (15.5 cm) diameter installed in the B210LP base
Shipping Weight:	4.8 oz. (137 g)
Operating Temperature:	
ATD-L2F or ATD-RL2F	–4° F to 100° F (–20° C to 38°C)
ATD-HL2	–4° F to 150°F (–20 C to 66°C)
Sensor Spacing:	UL® approved for 50 ft. (15.2 m) center to center FM approved for 25 x 25 ft. (7.6 x 7.6 m) spacing
Relative Humidity:	10 – 93% (non-condensing)
ATD-L2F	Fixed-temperature setpoint 135°F (57°C)
ATD-RL2F	Combination 135° F fixed temperature and 15° F(8.3°c)/per minute rate-of-rise°
ATD-HL2F	Fixed-temperature setpoint 190°F (88°C)

Electrical Specifications

Voltage Range:	15 - 32 Volts DC peak
Standby Current:	200 mA @ 24 VDC (without communication)
(max. avg.)	.0003 A @ 24 VDC (one communication every 5 seconds with LED blink enabled)
LED Current (max.)	.0065 A @ 24 VDC (LED lit)

Specifications

Bases and Options

B501	Plug-in sensor base without flange
Dimensions:	4.1" (10.4 cm) diameter
B210LP	Flanged mounting base
Dimensions:	6.1" (15.5 cm) diameter
B210LPBP	Flanged mounting base bulk pack
Dimensions:	6.1" (15.5 cm) diameter
B224RB	Plug-in sensor base with auxiliary relay, SPDT 2 coil latching relay 1 Form C contact UL/CSA Rating: 0.9 A @ 125 VAC (inductive) 0.9 @ 110 VDC (inductive) 3.A @ 30 VDC (resistive)
Dimensions:	6.1" (15.5 cm) diameter
B224BI	Plug-in sensor isolator base for Style 7 operation
Dimensions:	6.1" (15.5 cm) diameter Maximum 25 devices between isolator bases
B200S	Intelligent sensor sounder base
Dimensions:	6.875" (17.5 cm) diameter
B200SR	Standard sounder base, UL 864 9th Edition compliant, ULC Listed
Dimensions:	6.875" (17.5 cm) diameter
RA-100Z	Remote LED Annunciator
BCK-200	Black detector covers (box of 10)

Ordering Information

Part Number	Description
ATD-L2F	Addressable thermal sensor, fixed, 135° F
ATD-RL2F	Addressable thermal sensor, combination fixed,135° F and 15°/minute rate-of-rise.
ATD-HL2F	Addressable thermal sensor, fixed, 190° F

CALIFORNIA DEPARTMENT OF FORESTRY & FIRE PROTECTION
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LISTING SERVICE

LISTING No. 7270-1703:0115

CATEGORY: 7270 -- HEAT DETECTOR

LISTEE: GAMEWELL-FCI12 Clintonville Road, Northford, CT 06472
Contact: Vladimir Kireyev (203) 484-6277 Fax (203) 484-7309
Email: vladimir.kireyev@honeywell.com

DESIGN: Models ATD-L2, *ATD-L2F, ATD-HL2 AND *ATD-HL2F (fixed temperature) and ATD-RL2, *ATD-RL2F (fixed temperature with Rate-of-Rise) electronic heat detectors. Refer to listee's data sheet for additional detailed product description and operational considerations.

RATING: ATD-L2, *-L2F, ATD-RL2, -*RL2F = 135°F fixed temperature
ATD-HL2, *-HL2F = 190°F fixed temperature

INSTALLATION: In accordance with listee's printed installation instructions, applicable codes and ordinances and in a manner acceptable to the authority having jurisdiction.

MARKING: Listee's name, model number, electrical ratings, and UL Label.

APPROVAL: Listed as heat detectors for use with separately listed compatible fire alarm control units. Refer to listee's Installation Instruction Manual for details.

NOTE: FORMERLY: 7270-0694:256

Date Issued: **July 01, 2018** *Listing Expires* **June 30, 2019**

Authorized By: ***DAVID CASTILLO**, Program Coordinator*

Fire Engineering Division

Velociti® Series MCS-COF

Description

The Advanced Multi-Criteria Fire/CO Detector (MCS-COF) is an addressable device that provides both fire and carbon monoxide (CO) detection. For fire detection, the detector combines the following four separate sensing elements in one unit.

- Smoke
- Carbon Monoxide (CO)
- Light/flame
- Heat

These elements sense multiple components of a fire. This approach enables an enhanced sensitivity to real fire with a 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 mandates the use of CO detection in commercial spaces in the U.S. The MCS-COF is Listed to the UL® 2075 Standard for system-connected life safety carbon monoxide monitoring.

It is designed to be used with the Gamewell-FCI, E3 Series or S3 Series fire alarm control panel only. The MCS-COF should be used in conjunction with the B200S intelligent sounder base, which can generate either of the following patterns:

- Temp 3 pattern for fire.
- Temp 4 pattern for CO alarm indication.

The B200S recognizes the System Sensor synchronization protocol. This feature enables it to be used as a component of the general evacuation signal, along with other System Sensor horns, horn strobes, and chimes, when the MCS-COF is connected to a power supply or Fire Alarm Control Panel (FACP) output that is capable of generating the System Sensor synchronization pulses. 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 volume, tone, and group. For more information on the B200S, refer to Data Sheet P/N: 9021-60671.

Advanced Multi-Criteria
Fire/CO Detector

MCS-COF in a B200S Sounder Base

Features

- Offers the unique function to detect the following four major elements of a fire:
  - Smoke
  - Carbon Monoxide (CO)
  - Light/flame
  - Heat
- Supplies a separate CO detection signal.
- Presents the highest nuisance alarm immunity.
- Produces an automatic drift compensation of smoke sensor and CO cell.
- Uses only one address on the SLC.
- Includes the EasyTest CO testing capability.
- Complies with UL® Listed Standard 268 and UL® Listed Standard 2075.
- Separates the audible signal for fire or CO alarm when used with the B200S Base.
- Provides the CO cell end-of-life warning and fault.

SIGNALING
UL LISTED
S1195 7275-1703:0175

ISO 9001 CERTIFIED ENGINEERING & MANUFACTURING QUALITY SYSTEMS

GAMEWELL-FCI
12 Clintonville Road, Northford, CT 06472-1610 USA • Tel: (203) 484-7161 • Fax: (203) 484-7118

Specifications

Physical Specifications

Base Diameter: 6.875" (17.46 cm) installed in a B200S base
Base Height: 3.46" (8.79 cm) installed in B200S base
Shipping Weight: 4.6 oz
Color: Ivory
Material: Bayblend FR110
Operating Temperature Range: 32° F to 100° F (0° C to 38° C)
Operating Humidity Range: 15 to 90% relative humidity (non-condensing)
Air Velocity: 0 to 4,000 ft/min (0 to 20 m/sec)

Electrical Specifications

Operating Voltage Range: 15 to 32 VDC
Maximum Standby Current: 300 µA at 24 VDC (no communication every 5 seconds with LED blink enabled).
Maximum Alarm Current (LED on): 7.2 mA at 24 VDC

Sensitivity Settings & Suggested Applications

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 3: 3% per foot (30.48 cm) of smoke. Moderately clean environments: Used in hotel rooms, dorm rooms.
Level 4: 3% per foot (30.48 cm) of smoke with different algorithm processing and weighting of sensor elements. Used in hotel rooms near a shower, boiler rooms.
Level 5: 4% per foot (30.48 cm) of smoke. Used in equipment rooms, kitchens, paint shop.
Level 6: Thermal alarm at 135° F (57° C).

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).

Specifications (Continued)

CO Monitoring UL Standard Reference - Alarm Thresholds are as follows:

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

Note: Per UL Standard 2075, the MCS-COF has been tested to the sensitivity limits defined in UL Standard 2034.

Ordering Information

Part Number	Description
MCS-COF	Advanced Multi-Criteria Fire/CO Detector **Note:** Due to the unique nature of this detector, please consult your Fire Alarm Control Panel Manufacturer for the specific model and compatibility.
Accessories:	
B200S	Addressable Sounder Base
M02-04-01	Detector Test Magnet
M02-09-01	Telescoping Test Magnet

CALIFORNIA DEPARTMENT OF FORESTRY & FIRE PROTECTION
OFFICE OF THE STATE FIRE MARSHAL
FIRE ENGINEERING - BUILDING MATERIALS LISTING PROGRAM

LISTING SERVICE

LISTING No. 7275-1703:0175

CATEGORY: 7275 -- COMBINATION SMOKE/CO DETECTOR-PHOTOELECTRIC TYPE

LISTEE: GAMEWELL-FCI12 Clintonville Road, Northford, CT 06472
Contact: Vladimir Kireyev (203) 484-6277 Fax (203) 484-7309
Email: vladimir.kireyev@honeywell.com

DESIGN: Model MCS-COF combination multi-criteria photoelectric smoke and Carbon Monoxide detector with supplemental heat sensor. Refer to listee's data sheet for additional detailed product description and operational considerations.

RATING: 15-32 VDC

INSTALLATION: In accordance with listee's printed installation instructions, NFPA 72, NFPA 720, applicable codes & ordinances and in manner acceptable to the authority having jurisdiction.

MARKING: Listee's name, product number, electrical rating and UL label.

APPROVAL: Listed as smoke detectors for use with Model B200S base and listee's separately listed compatible fire alarm control units. Also suited for gas and vapor detection. The supplemental heat sensor is intended for use to reduce the nuisance alarm and is not intended for use as a stand alone heat detector.

XLF: 7275-0028:0264

12-13-11 gt

Date Issued: **July 01, 2018** *Listing Expires* **June 30, 2019**

Authorized By: ***DAVID CASTILLO**, Program Coordinator*

Fire Engineering Division

Gamewell FCI FIRE CONTROL INSTRUMENTS

by Honeywell

Intelligent Bases

Description

The Intelligent FlashScan® and CLIP™ mounting bases and kits provide a variety of ways to install Gamewell-FCI detectors in any application. Intelligent detectors can be mounted in either flanged or flangeless bases depending on the junction box selection (see Junction Box Selection Guide) or plastic rings. Across this product line, you can easily plug-in the detectors to the base using SEMS screws; and the models employ various 12 to 24 AWG wire ranges.

Relay, isolator, and sounder bases can be used to meet local code requirements. Relay bases provide one Form-C contact relay for the control of auxiliary functions such as door closure and elevator recall. Isolator bases allow loops to continue to operate under fault conditions and automatically restore when the fault is removed. Sounder bases are available in a combination temporal 3 and continuous tone model.

The Intelligent Bases provide a variety of mounting options to meet your installation challenges. The bases come in flanged or flangeless versions for mounting to a variety of junction boxes. See Table 1 for the junction box options. The B210LP, B224RB relay base, and B224BI isolator base can be mounted on the SMB600 surface mounting box.

Specifications

System Temperature and Humidity Ranges:

This system meets the NFPA requirements for operation at 0°C to 49°C (32°F to 120°F); and at a relative humidity (non-condensing) of 85% at 30°C (86°F) per NFPA, and 93% ± 2% at 32°C ± 2°C (89.6°F ± 1.1°F) per ULC®. 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 all peripherals be installed in an environment with a nominal room temperature of 15°C to 27°C (60°F to 80°F).

Temperature Range:

For B501, B224RB, B224BI, B210LP, B200S, B200SR	32°F to 120°F (0°C to 49° C)
Humidity Range:	10% to 93% RH, non-condensing

Wire Gauge:

For B224BI, B224RB:	14 to 24 AWG
For B200S:	12 to 24 AWG
For B200SR:	12 to 24 AWG

B501, B224RB, B224BI, B210LP, B200S and B200SR Mounting Kits, and Accessories

Figure 1 B501 Mounting Base

Figure 2 B224RB Relay Base and B224BI Isolator Bases

Figure 3 B210LP Mounting Base

Figure 4 B200S/SR Sounder Base

Features

- Bases employ 12 to 24 gauge wire ranges
- Offers the following three (3) types of bases:
  - Relay
  - Isolator
  - Sounder
- Relay, isolator and sounder bases meet local code requirements
- Relay bases provide one Form-C contact relay
- Isolator bases include data communications lines to operate under fault condition
- Sounder bases offer temporal and non-temporal pattern versions
- Includes an installation mounting kit and accessories for several types of model options

An ISO 9001-2000 Company

SIGNALING UL LISTED S1911 FM APPROVED 3035027 7135-1653:0213

GAMEWELL-FCI
12 Clintonville Road, Northford, CT 06472-1653 USA • Tel: (203) 484-7161 • Fax: (203) 484-7118

Electrical Ratings

For B224RB, B224BI:

Operating Voltage:	15 to 32 VDC (powered by SLC)
Standby Ratings:	<500 µA maximum @ 24 VDC
Set Time	Short delay: 55-90 mseconds
(B224RB only):	Long delay: 6 to 9 seconds
Reset Time	
(B224RB only):	20 mseconds maximum
Relay Characteristics	
(B224RB only):	Two-coil Latching Relay One Form-C Contact
Ratings (UL/CSA):	0.9 A @ 125 VAC (inductive) 0.9 A @ 110 VDC (inductive) 3.0 A @ 30 VDC (resistive)

For B200S Specifications:

External Supply Voltage:	16 to 33 VDC (VFWR)
Standby Current:	500 µA maximum
Alarm Current:	35 mA maximum (high volume) 15 mA maximum (low volume)
SLC Operating Voltage:	15 to 32 VDC
SLC Standby Current:	300 µA maximum
For B200S Sound Output:	Greater than 90 dBA measured in anechoic room at 10 ft. (3.048 m), 24 volts. Greater than 85 dBA minimum-measured in a UL® reverberant room at 10ft. (3.048 m) 24 volts (in continuous tone).

B200S Description

The B200S sounder base is capable of producing a variety of tone patterns, including the distinctive three-pulse temporal pattern (ANSI Temporal 3) fire alarm signal now required by NFPA 72 for commercial and residential applications. The available tones are Continuous, ANSI Temporal 3, ANSI Temporal 4, and March Time. In addition, some fire alarm panels will offer the option to command a custom tone pattern.

For B200SR Specifications:

External Supply Voltage:	16 to 33 VDC (VFWR)
Standby Current:	<500 µA maximum @ 24 VDC
Alarm Current:	35 mA maximum
Maximum Ripple Voltage:	10% of supply voltage
Startup Capacitance:	200 µF
For B200SR:	6 to 15 seconds
For B200SR:	0.75 to 5.7 seconds
Sound Output:	Greater than 90 dBA measured in anechoic room at 10 feet (3.048 m), 24 volts. 85 dBA minimum in UL reverberant room.

B200SR Description

The B200SR sounder base is capable of producing either the distinctive three-pulse temporal pattern (ANSI Temporal 3) fire alarm signal now required by NFPA 72 for commercial and residential applications or it can produce a continuous tone. To produce a continuous tone, remove the included jumper from the device. Additionally, the B200SR is designed to be compatible with existing installations that use the B501BH-Series sounder bases.

Ordering Information

Intelligent Bases

Part Number	Description
B501	Flangeless mounting base
Dimensions:	4.1" (10.41 cm) diameter
B501BP	Flangeless mounting base bulk pack
Dimensions:	4.1" (10.41 cm) diameter
B224BI	Isolator base
Dimensions:	6.1" (15.5 cm) diameter
B224RB	Relay base
Dimensions:	6.1" (15.5 cm) diameter
B210LP	Flanged mounting base
Dimensions:	6.1" (15.5 cm) diameter
B210LPBP	Flanged mounting base bulk pack
Dimensions:	6.1" (15.5 cm) diameter
B200S	Intelligent sensor sounder base
Dimensions:	6.875" diameter x 2.0" height (less sensor) (17.5 diameter x 5.08 H cm) (less sensor)
B200SR	Standard sounder base, UL 864 9th Edition compliant, ULC Listed
Dimensions:	6.875" diameter x 2.0" height (less sensor) (17.5 diameter x 5.08 H cm) (less sensor)

Mounting Kits and Accessories

SMB600	Surface mounting kit, flanged
F110	Accessory retrofit flange ring for B210LP
F110BP	Accessory retrofit flange ring for the B210LPBP bulk pack of 15
F210	Accessory with a new smaller flange ring for the B210LP
M02-04-01	Detector test magnet
M02-09-00	Test magnet with telescoping handle
XR2B	Detector removal tool (T55-127-000 included)
XP-4	Extension pole for XR2B (5 to 15 ft/1.524 to 4.572 m)
T55-127-000	Detector removal head
BCK-200B	Black detector kit
WCK-200B	White detector kit

Table 1: Junction Box Selection Guide

	Single-Gang	**3.5"** Octagonal	**4.0"** Octagonal	**4.0" Square**	**4.0"** Square with **3.0" mud ring**	**50 mm**	**60 mm**	**70 mm**	**75 mm**
B501	No	Yes	No	No	Yes	Yes	Yes	Yes	No
B210LP	Yes	Yes	Yes	Yes	Yes	No	No	No	No
B224BI	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
B224RB	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
B200S	Yes	Yes	Yes	Yes	Yes	No	No	Yes	No
B200SR	Yes	Yes	Yes	Yes	Yes	No	No	Yes	No

NOTE: The box depth is contingent on the base and the wire size.
For information on applicable local codes for appropriate recommendation, refer to the National Electrical Code.

CALIFORNIA DEPARTMENT OF FORESTRY & FIRE PROTECTION
OFFICE OF THE STATE FIRE MARSHAL
FIRE ENGINEERING - BUILDING MATERIALS LISTING PROGRAM

LISTING SERVICE

LISTING No. 7300-1653:0109

CATEGORY: 7300 -- FIRE ALARM CONTROL UNIT ACCESSORIES/MISC. DEVICES

LISTEE: System Sensor, Unincorporated Div of Honeywell Int'l Inc.3825 Ohio Ave, St. Charles, IL 60174
Contact: Vladimir Kireyev (203) 484-6277 Fax (203) 484-7309
Email: Vladimir.Kireyev@honeywell.com

DESIGN: Models B401, B401B, B401R, B401BR, B401BR-750, B401R-750, B402B, B404B, B404BT, B406B, B501, B501B, 14506587-002, B501BH, B501BHT, B401BH, B110LP, B110RLP, B110RLP750, B112LP, B114LP, B114LPBT, B116LP, B210LP, B501-BL, B501-IV, *B501-WHITE, B300-6, B300-6-IV, B300-6-IS detector bases. Refer to listee's data sheet for detailed product description and operational considerations.

INSTALLATION: In accordance with listee's printed installation instructions, applicable codes and ordinances and in a manner acceptable to the authority having jurisdiction.

MARKING: Listee's name, *model number, *electrical rating and UL label.

APPROVAL: Listed as detector bases for use with separately listed compatible detectors. *Refer to Manufacturers Installation Instruction Manual for details.

NOTE: Formerly 7300-1209:128

*Rev 04-03-18 gt

Date Issued: **July 01, 2018** *Listing Expires* **June 30, 2019**

Authorized By: ***DAVID CASTILLO**, Program Coordinator*

Fire Engineering Division

Gamewell FCI FIRE CONTROL INSTRUMENTS

by Honeywell

Velociti® Series AOM-2RF

Description

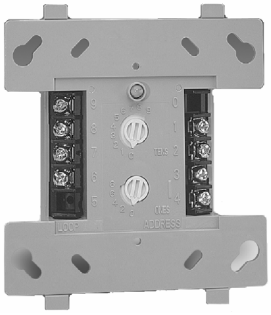
The Gamewell-FCI Velociti® Series, addressable output relay control module (AOM-2RF) allows an Gamewell-FCI analog addressable fire alarm control to switch discrete relay contacts by code command. The relay provides two (2), isolated sets of Form-C contacts which transfer simultaneously. Circuit connections to the relay contacts are not supervised by the module.

The Velociti® Series use a communication protocol that substantially increases the speed of communication between the sensors and certain Gamewell-FCI analog addressable fire alarm controls. These devices operate in a grouped fashion. If one of the devices in the group has a status change, the panel's microprocessor stops the group poll and concentrates on the single device. The net effect is response speed up to five times greater than earlier designs.

The AOM-2RF Module is designed for installation in the signaling line circuit of any Gamewell-FCI analog addressable fire control panel. The module contains a panel controlled LED. The AOM-2RF is designed to mount in a 4" square junction box 2 1/8" deep.

Relay Contact Ratings			
Current Rating	**Maximum Voltage**	**Load Description**	**Application**
3A	30 VDC	Resistive	Non-Coded
2A	30 VDC	Resistive	Coded
0.9A	110 VDC	Resistive	Non-Coded
0.5A	125 VAC	Resistive	Non-Coded
0.5A	30 VDC	Inductive (L/R=5ms)	Coded
1A	30 VDC	Inductive (L/R=2ms)	Coded
0.5A	125 VAC	Inductive (PF=.35)	Non-Coded
0.7A	75 VAC	Inductive	Non-Coded

Addressable Output Relay Control Module



AOM-2RF

Features

- Two (2) sets of Form "C" contacts
- Visual rotary, decimal switch addressing (01-159)
- Bicolor LEDs flash green whenever the sensor is addressed, and light steady red on alarm*
- Compact size allows easy installation

Note: Only the red LED is operative in panels that do not operate in Velociti® mode.

Specifications

Supervisory current: .000375 amps.
Alarm current: .0065 amps.
Operating temperature: 32° to 120° F (0° to 49° C)
Relative humidity: 10 to 93% relative humidity (non-condensing)
Dimensions: 4 1/2" H x 4" W x 1 1/4" (11.4 x 10.2 x 3.2 cm)

Ordering Information

Model	Description
AOM-2RF	Addressable output relay control module

An ISO 9001-2000 Company

SIGNALING

UL LISTED S1949 FM APPROVED 3023594 MEA Approved 227-03-E Vol.IV 07300-0694:178

GAMEWELL-FCI
12 Clintonville Road, Northford, CT 06472-1653 USA • Tel: (203) 484-7161 • Fax: (203) 484-7118

CALIFORNIA DEPARTMENT OF FORESTRY & FIRE PROTECTION
OFFICE OF THE STATE FIRE MARSHAL
FIRE ENGINEERING - BUILDING MATERIALS LISTING PROGRAM

LISTING SERVICE

LISTING No. 7300-1703:0102

CATEGORY: 7300 -- FIRE ALARM CONTROL UNIT ACCESSORIES/MISC. DEVICES

LISTEE: GAMEWELL-FCI12 Clintonville Road, Northford, CT 06472
Contact: Vladimir Kireyev (203) 484-6277 Fax (203) 484-7309
Email: vladimir.kireyev@honeywell.com

DESIGN: Models AMM-4, *AMM-4F, AMM-2 and *AMM-2F monitor modules and Models AOM, AOM-2, AOM-2R, *AOM-2RF, AOM-2S and *AOM-2SF control modules. Refer to listee's data sheet for detailed product description and operational considerations.

INSTALLATION: In accordance with listee's printed installation instructions, applicable codes and ordinances and in a manner acceptable to the authority having jurisdiction.

MARKING: Listee's name, model designation, electrical rating and UL label.

APPROVAL: Listed as accessories for use with separately listed compatible control units. System Sensor Model SMB500 surface mount box (CSFM Listing No. 7300-1653:103) may be used as an enclosure for these modules

NOTE: FORMERLY: 7300-0694:178

XLF: 7300-1653:0103

12-4-07

Date Issued: **July 01, 2018** *Listing Expires* **June 30, 2019**

Authorized By: ***DAVID CASTILLO**, Program Coordinator*

Fire Engineering Division

Indoor Selectable-Output Speaker Strobes and Dual Voltage Evacuation Speakers for Wall Applications

System Sensor L-Series selectable output speaker strobes and dual-voltage evacuation speakers can reduce ground faults and enable faster installation with lower current draw and modern aesthetics.

Features

- Plug-in design and protective cover reduce ground faults
- Universal mounting plate with an onboard shorting spring tests wiring continuity before installation
- No extension ring required
- Field selectable candela settings on wall units: 15, 30, 75, 95, 110, 135, 185
- Automatic selection of 12- or 24-volt operation at 15 and 30 candela
- Rotary switch simplifies field selection of speaker voltage (25 and 70.7 Vrms) and power settings (¼, ½, 1 and 2 watts)
- Seakers offer high fidelity and high volume sound output
- Compatible with System Sensor synchronization protocol
- Electrical compatibility with existing SpectrAlert and SpectrAlert Advance products
- Tamper-resistant construction
- Updated modern aesthetics

Agency Listings

SIGNALING UL LISTED
S4048

FM APPROVED
FM approved except for ALERT models
3057493

7320-1653:0505

The System Sensor L-Series of speakers and speaker strobes reduce costly ground faults using a plug-in design and universal mounting plate that allow the installer to pre-wire mounting plates, dress the wires, and confirm wiring continuity before plugging in the speakers. In addition, a protective plastic cover prevents nicked wires by covering exposed speaker components.

These devices also enable faster installations by providing instant feedback to ensure that wiring is properly connected, rotary switches to select voltage and power settings, and 7 field-selectable candela settings for wall speaker strobes.

The low total harmonic distortion of the speaker offers high fidelity sound output while still offering high volume sound output for use in high ambient noise applications.

System Sensor L-Series makes installation easy

- Attach a universal mounting plate to a 4 × 4 × 21⁄8 inch back box. Flush-mount applications do not require an extension ring.
- Connect the notification appliance circuit or speaker wiring to the terminals on the mounting plate.
- Attach the speaker or speaker strobe to the mounting plate by inserting the product tabs into the mounting plate grooves. Hinge the device into position to lock the product pins into the mounting plate terminals. The device will temporarily hold in place with a catch until it is secured with a captured mounting screw.

L-Series Speaker and Speaker Strobe Specifications

Architectural/Engineering Specifications

General

L-Series speaker and speaker strobes shall mount to a 4 × 4 × 21⁄8-inch back box. A universal mounting plate shall be used for mounting ceiling and wall products. The notification appliance circuit and amplifier wiring shall terminate at the universal mounting plate. Also, L-Series speaker strobes, when used with the Sync•Circuit™ Module accessory, shall be powered from a non-coded notification appliance circuit output and shall operate on a nominal 12 or 24 volts. When used with the Sync•Circuit Module, 12-volt rated notification appliance circuit outputs shall operate between 8.5 and 17.5 volts; 24-volt rated notification appliance circuit outputs shall operate between 16.5 and 33 volts. Indoor L-Series products shall operate between 32°F and 120°F from a regulated DC, or full-wave rectified, unfiltered power supply. Wall-mount speaker strobes shall have field-selectable candela settings including 15, 30, 75, 95, 110, 135, 185.

Speaker

The speaker shall be a System Sensor L-Series model _____ dual-voltage transformer speaker capable of operating at 25.0 or 70.7 nominal Vrms. It should be listed to UL 1480 and shall be approved for fire protective service. The speaker shall have a frequency range of 400 to 4,000 Hz and shall have an operating temperature between 32°F and 120°F. The speaker shall have power taps and voltage that are selected by rotary switches.

Speaker Strobe combination

The speaker strobe shall be a System Sensor L-Series model _____ listed to UL1480 and UL 1971 and be approved for fire protective signaling systems. The speaker shall be capable of operating at 25.0 or 70.7 nominal Vrms selected via rotary switch, and shall have a frequency range of 400 to 4,000 Hz. The speaker shall have power taps that are selected by rotary switch. The strobe shall comply with the NFPA 72 requirements for visible signaling appliances, flashing at 1 Hz over the strobe's entire operating voltage range. The strobe light shall consist of a xenon flash tube and associated lens/reflector system.

Synchronization Module

The module shall be a System Sensor Sync•Circuit model MDL3 listed to UL 464 and shall be approved for fire protective service. The module shall synchronize SpectrAlert strobes at 1 Hz. The module shall mount to a 411⁄16 × 411⁄16 × 21⁄8-inch back box. The module shall also control two Style Y (class B) circuits or one Style Z (class A) circuit. The module shall synchronize multiple zones. Daisy chaining two or more synchronization modules together will synchronize all the zones they control. The module shall not operate on a coded power supply.

Physical Specifications			
Operating Temperature	32°F to 120°F (0°C to 49°C)		
Humidity Range	10 to 93% non-condensing		
Dimensions, Wall-Mount	**Length**	**Width**	**Depth**
SPL Speaker	6.5 in, 165 mm	5 in, 127 mm	.97 in,23 mm
With Surface Mount Back Box	6.6 in, 168 mm	5.1 in, 130 mm	3.2 in, 82 mm
SPSL Speaker/Strobe (including lens and speaker)	6.5 in, 165 mm	5.0 in, 127 mm	2.3 in, 58 mm
With Surface Mount Back Box	6.6 in, 168 mm	5.1 in, 130 mm	4.5 in, 116 mm
Electrical/Operating Specifications			
Nominal Voltage (speakers)	25 Volts or 70.7 Volts(nominal)		
Maximum Supervisory Voltage (speakers)	50 VDC		
Strobe Flash Rate	1 flash per second		
Nominal Voltage (strobes)	Regulated 12 VDC or regulated 24 DC/FWR[1,2]		
Operating Voltage Range (includes fire alarm panels with built in sync)	8 to 17.5 V (12 V nominal) or 16 to 33V (24 V nominal)		
Operating Voltage with MDL3 Sync Module	8.5 to 17.5 V (12 V nominal) or 16.5 to 33V (24 V nominal)		
Frequency Range	400 to 4000 Hz		
Power	¼, ½, 1, 2 watts		

1. Full Wave Rectified (FWR) voltage is a non-regulated, time-varying power source that is used on some power supply and panel outputs.
2. Strobe products will operate at 12 V nominal only for 15 and 30 cd

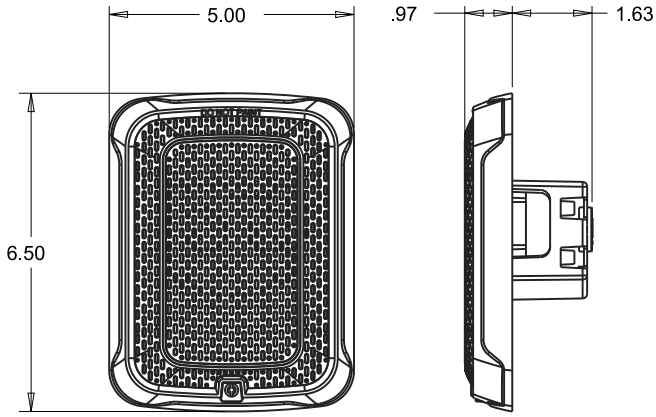
UL Current Draw Data

UL Max Strobe Current Draw (mA RMS)			
	8 to 17.5 Volts	16 to 33 Volts	
Candela	DC	DC	FWR
15	88	43	60
30	143	63	83
75	N/A	107	136
95	N/A	121	155
110	N/A	148	179
135	N/A	172	209
185	N/A	222	257

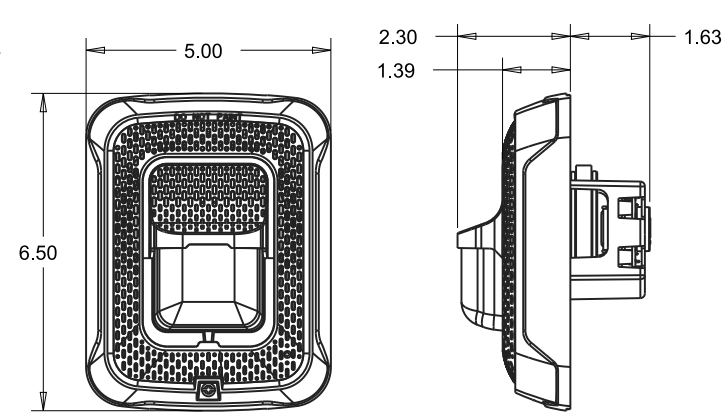
Sound Output Speaker Strobe				
	¼ W	½ W	1 W	2 W
UL Reverberant (dBA @10 ft)	77	80	83	86
UL Anechoic (dBA @10 ft)	77	80	83	86

Sound Output Speaker				
	¼ W	½ W	1 W	2 W
UL Reverberant (dBA @10 ft)	79	82	85	88
UL Anechoic (dBA @10 ft)	79	82	85	88

L-Series Dimensions

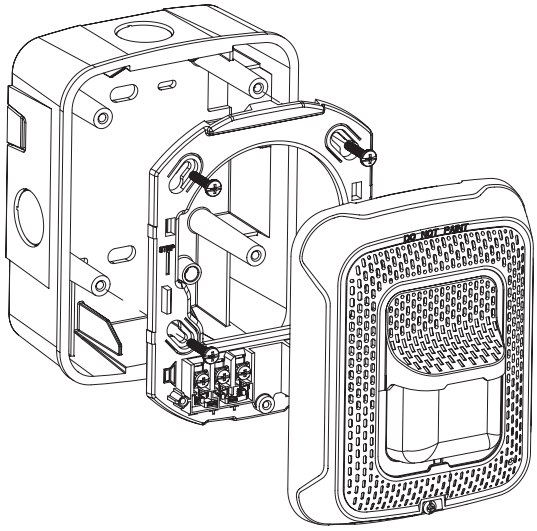


Wall-Mount Speaker



Wall-Mount Speaker Strobe

Surface Mounting



Wall-Mount Speaker Strobe with SBBSPL Surface Mount Back Box

L-Series Ordering Information

Wall Mount		
White	**Red**	**Description**
SPWL	SPRL	Speaker only
SPSWL	SPSRL	Speaker Strobe
SPSWL-P	SPSRL-P	Plain Speaker Strobe
SPSWL-ALERT	—	Speaker Strobe, Amber Lens
SPSWL-CLR-ALERT	—	Speaker Strobe Clear Lens
—	SPSRL-SP	Speaker Strobe, Fuego
Accessories		
White	**Red**	**Description**
RFPW	RFP	7 in × 9.5 in Retrofit Plate
SBBSPWL	SBBSPRL	Surface Mount Back Box for Speakers and Speaker Strobes
TR-2W	TR-2	Wall Mount Trim Ring

Notes:
All -P models have a plain housing (no “FIRE” marking on the cover)

3825 Ohio Avenue • St. Charles, IL 60174
Phone: 800-SENSOR2 • Fax: 630-377-6495
www.systemsensor.com

AVDS86701 • 03/17

Indoor Selectable-Output Speaker Strobes and Dual Voltage Evacuation Speakers for Ceiling Applications

System Sensor L-Series selectable-output speaker strobes and dual-voltage evacuation speakers can reduce ground faults and enable faster installation with lower current draw and modern aesthetics.

Features

- Plug-in design and protective cover reduce ground faults
- Universal mounting plate with an onboard shorting spring tests wiring continuity before installation
- No extension ring required
- Field selectable candela settings on ceiling units: 15, 30, 75, 95, 115, 150, and 177
- Automatic selection of 12- or 24-volt operation at 15 and 30 candela
- 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
- Compatible with System Sensor synchronization protocol
- Electrical compatibility with existing SpectrAlert and SpectrAlert Advance products
- Tamper-resistant construction
- Updated modern aesthetics

Agency Listings

SIGNALING UL LISTED
S4048

FM APPROVED
FM approved except for ALERT models 3057493

7320-1653:0505

System Sensor L-Series of speakers and speaker strobes reduce costly ground faults using a plug-in design and universal mounting plate that allow the installer to pre-wire mounting plates, dress the wires, and confirm wiring continuity before plugging in the speakers. In addition, a protective plastic cover prevents nicked wires by covering exposed speaker components.

These devices also enable faster installations by providing instant feedback to ensure that wiring is properly connected, rotary switches to select voltage and power settings, and 7 field-selectable candela settings for both wall and ceiling speaker strobes.

The low total harmonic distortion of the SP speaker offers high fidelity sound output while still offering high volume sound output for use in high ambient noise applications.

L-Series makes installation easy

- Attach a universal mounting plate to a 4 × 4 × 2⅛ inch back box . Flush-mount applications do not require an extension ring.
- Connect the notification appliance circuit or speaker wiring to the terminals on the mounting plate.
- Attach the speaker or speaker strobe to the mounting plate by inserting the product tabs into the mounting plate grooves. Hinge the device into position to lock the product pins into the mounting plate terminals. The device will temporarily hold in place with a catch until it is secured with a captured mounting screw.

L-Series Speaker and Speaker Strobe Specifications

Architectural/Engineering Specifications

General

L-Series speaker and speaker strobes shall mount to a 4 × 4 × 2 1/8-inch back box. A universal mounting plate shall be used for mounting ceiling and wall products. The notification appliance circuit and amplifier wiring shall terminate at the universal mounting plate. Also, L-Series speaker strobes, when used with the Sync•Circuit™ Module accessory, shall be powered from a non-coded notification appliance circuit output and shall operate on a nominal 12 or 24 volts. When used with the Sync•Circuit Module, 12-volt rated notification appliance circuit outputs shall operate between 8.5 and 17.5 volts; 24-volt rated notification appliance circuit outputs shall operate between 16.5 and 33 volts. Indoor L-Series products shall operate between 32°F and 120°F from a regulated DC, or full-wave rectified, unfiltered power supply. Speaker strobes shall have field-selectable candela settings including 15, 30, 75, 95, 115, 150, 177.

Speaker

The speaker shall be a System Sensor L-Series model _____ dual-voltage transformer speaker capable of operating at 25.0 or 70.7 nominal Vrms. It should be listed to UL 1480 and shall be approved for fire protective service. The speaker shall have a frequency range of 400 to 4,000 Hz and shall have an operating temperature between 32°F and 120°F. The speaker shall have power taps and voltage that are selected by rotary switches.

Speaker Strobe combination

The speaker strobe shall be a System Sensor L-Series model _____ listed to UL1480 and UL 1971 and be approved for fire protective signaling systems. The speaker shall be capable of operating at 25.0 or 70.7 nominal Vrms selected via rotary switch, and shall have a frequency range of 400 to 4,000 Hz. The speaker shall have power taps that are selected by rotary switch. The strobe shall comply with the NFPA 72 requirements for visible signaling appliances, flashing at 1 Hz over the strobe's entire operating voltage range. The strobe light shall consist of a xenon flash tube and associated lens/reflector system.

Synchronization Module

The module shall be a System Sensor Sync•Circuit model MDL3 listed to UL 464 and shall be approved for fire protective service. The module shall synchronize SpectrAlert strobes at 1 Hz. The module shall mount to a 4 11/16 × 4 11/16 × 2 1/8-inch back box. The module shall also control two Style Y (class B) circuits or one Style Z (class A) circuit. The module shall synchronize multiple zones. Daisy chaining two or more synchronization modules together will synchronize all the zones they control. The module shall not operate on a coded power supply.

Physical Specifications

Operating Temperature	32°F to 120°F (0°C to 49°C)	
Humidity Range	10 to 93% non-condensing	
Dimensions, Ceiling-Mount	**Diameter**	**Depth**
SPC Speaker	6.8 in, 173 mm	1.0 in, 25 mm
With Surface Mount Back Box	6.9 in, 176 mm	3.5 in, 89 mm
SPSC Speaker Strobe	6.8 in, 173 mm	2.8 in, 73 mm
With Surface Mount Back Box	6.9 in, 176 mm	5.37 in, 136 mm

*When using 12AWG, 14 AWG, or adding extra wires in the box, a deeper box or extension ring is recommended.

Electrical/Operating Specifications

Nominal Voltage (speakers)	25 Volts or 70.7 Volts (nominal)
Maximum Supervisory Voltage (speakers)	50 VDC
Strobe Flash Rate	1 flash per second
Nominal Voltage (strobes)	Regulated 12 VDC or regulated 24 VDC/FWR [1,2]
Operating Voltage Range (includes fire alarm panels with built in sync)	8 to 17.5 V (12 V nominal) or 16 to 33 V (24 V nominal)
Operating Voltage with MDL3 Sync Module	8.5 to 17.5 V (12 V nominal) or 16.5 to 33 V (24 V nominal)
Frequency Range	400 to 4,000 Hz[3]
Power	¼, ½, 1, 2 watts

1. Full Wave Rectified (FWR) voltage is a non-regulated, time-varying power source that is used on some power supply and panel outputs.
2. Strobe products will operate at 12 V nominal only for 15 and 30 cd.
3. 520 Hz +/- 10% square wave tone capable with compatible FACP.

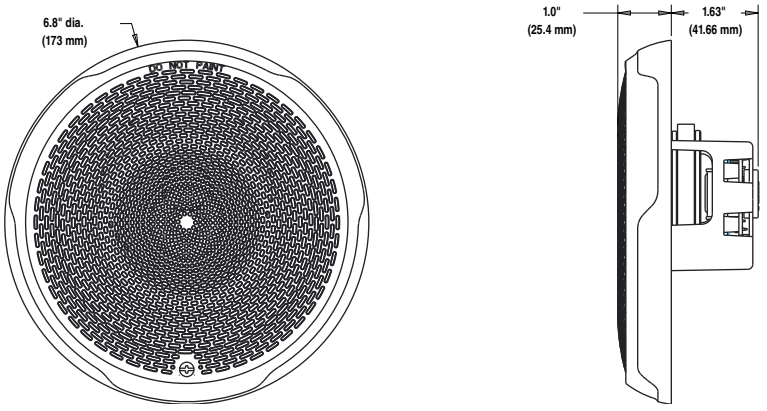
UL Current Draw Data

UL Max. Strobe Current Draw (mA RMS)			
	8 to 17.5 Volts	16 to 33 Volts	
Candela	DC	DC	FWR
15	87	41	60
30	153	63	86
75	NA	111	142
95	NA	134	164
115	NA	158	191
150	NA	189	228
177	NA	226	264

Ceiling-Mount Speaker Sound Output		
Setting	UL Reverberant (dBA @10 ft)	UL Anechoic (dBA @10 ft)
1/4 W	79	79
1/2 W	82	82
1 W	85	85
2 W	88	88

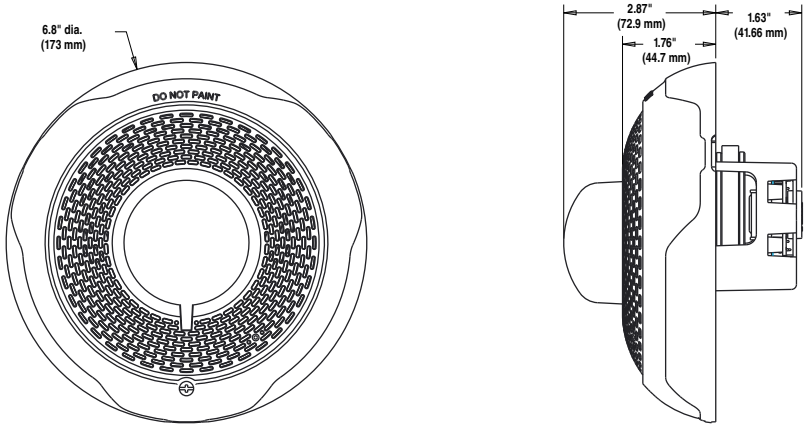
Ceiling-Mount Speaker Strobe Sound Output		
Setting	UL Reverberant (dBA @10 ft)	UL Anechoic (dBA @10 ft)
1/4 W	77	77
1/2 W	80	80
1 W	83	83
2 W	86	86

L-Series Dimensions



A0543-00

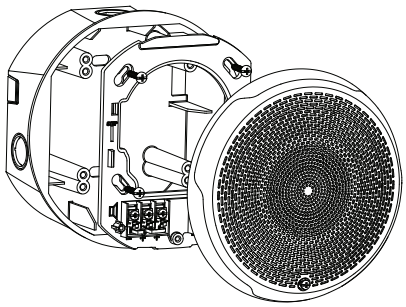
Ceiling Speaker



A0544-00

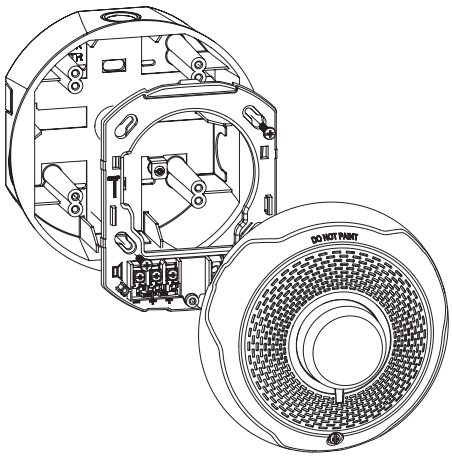
Ceiling Speaker Strobe

Surface Mounting



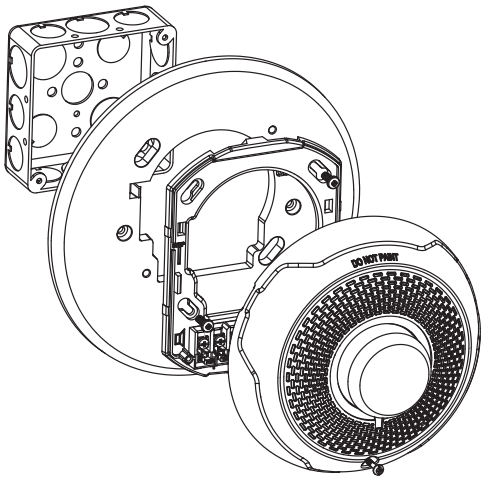
A0504-01

Ceiling Speaker with Surface Mount Back Box



A0520-01

Ceiling Speaker Strobe with Surface Mount Back Box



A0542-00

Ceiling Speaker Strobe with Trim Ring and 4" Square Electrical Box

L-Series Ordering Information

Ceiling Mount		
White	**Red**	**Description**
SPCWL	SPCRL	Speaker only
SPSCWL	SPSCRL	Speaker Strobe
SPSCWL-P	—	Plain, Speaker Strobe
SPSCWL-SP	—	Fuego, Speaker Strobe
SPSCWL-CLR-ALERT	—	Alert, Speaker Strobe, Clear Lens

Accessories		
White	**Red**	**Description**
SBBCWL	SBBCRL	Universal Ceiling Surface Mount Back Box
TRC-2W	TRC-2	Universal Ceiling Trim Ring

SYSTEM SENSOR®

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Phone: 800-SENSOR2 • Fax: 630-377-6495
www.systemsensor.com

AVDS866-03 • 03/23/2018

CALIFORNIA DEPARTMENT OF FORESTRY & FIRE PROTECTION
OFFICE OF THE STATE FIRE MARSHAL
FIRE ENGINEERING - BUILDING MATERIALS LISTING PROGRAM

LISTING SERVICE

LISTING No. 7320-1653:0505

CATEGORY: 7320 -- SPEAKERS

LISTEE: System Sensor, Unincorporated Div of Honeywell Int'l Inc.3825 Ohio Ave, St. Charles, IL 60174
Contact: Vladimir Kireyev (203) 484-6277 Fax (203) 484-7309
Email: Vladimir.Kireyev@honeywell.com

DESIGN: System Sensor Indoor Models:
SPRL and SPWL Wall Speakers;
SPCRL and SPCWL Ceiling Speakers;
SPSRL, SPSWL, SPSRL-P, SPSRL-SP, SPSWL-P, SPSWL-ALERT and SPSWL-CLR-ALERT Wall Speaker Stobes;
SPSCRL, SPSCWL, SPSCWL-P, SPSCWL-SP and SPSCWL-CLR-ALERT Ceiling Speaker Strobes.

Wall Bezel Parts:
BZSPR-P, BZSPR-AL, BZSPR-EV, BZSPR-AG, BZSPR-PG, BZSPR-F and BZSPR-SP, BZSPW-P, BZSPW-AL, BZSPW-EV, BZSPW-AG, BZSPW-PG, BZSPW-F and BZSPW-SP,

Ceiling Bezel Parts:
BZSPRC-P, BZSPRC-AL, BZSPRC-EV, BZSPRC-AG, BZSPRC-PG, BZSPRC-F and BZSPRC-SP,
BZSPWC-P, BZSPWC-AL, BZSPWC-EV, BZSPWC-AG, BZSPWC-PG, BZSPWC-F and BZSPWC-SP,

WallTrim Rings for Speaker Strobes:
TR2 and TR2W

CeilingTrim Rings for Speaker Strobes:
TRC2 and TRC2W.

Wall Surface Mounted Back Boxes:
SBBSPRL and SBBSPWL,

Ceiling Surface Mounted Back Boxes:
SBBCRL and SBBCWL

Refer to listee's data sheet for detailed product description and operational considerations.

02-27-17 gt

Date Issued: **July 01, 2018** *Listing Expires* **June 30, 2019**

Authorized By: ***DAVID CASTILLO**, Program Coordinator*

Fire Engineering Division

RATING: 25 or 70.7 VAC, 1/4, 1/2, 1, 2 Watt outputs.
Regulated 12 VDC and 24 VDC/FWR is for 2-wire strobe portion.

INSTALLATION: In accordance with listee's printed installation instructions, NFPA 72, applicable codes & ordinances and in a manner acceptable to the authority having jurisdiction.

MARKING: Listee's name, model number, electrical rating, and UL label.

APPROVAL: Listed as speakers and speaker-strobes when used with separately listed compatible fire alarm control units. Suitable for indoor use, dry and damp environments. Authority having jurisdiction should be consulted prior to installation. Refer to listee's Installation Instruction Manual for details.

02-27-17 gt

Date Issued: **July 01, 2018** *Listing Expires* **June 30, 2019**

Authorized By: ***DAVID CASTILLO**, Program Coordinator*

Fire Engineering Division

Indoor Selectable-Output Strobes and Horn Strobes for Ceiling Applications

System Sensor L-Series audible visible notification products are rich with features guaranteed to cut installation times and maximize profits with lower current draw and modern aesthetics.

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
- Horn rated at 88+ dBA at 16 volts
- Rotary switch for horn tone and two volume selections
- Universal mounting plate for ceiling units
- Mounting plate shorting spring feature checks wiring continuity before device installation
- Electrically Compatible with legacy SpectrAlert and SpectrAlert Advance devices
- Compatible with MDL3 sync module
- Listed for ceiling mounting only

The System Sensor L-Series offers 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, wall and ceiling mounting options, System Sensor L-Series can meet virtually any application requirement.

The entire L-Series product line of ceiling-mount strobes and horn strobes include a variety of features that increase their application versatility while simplifying installation. All devices feature a plug-in design 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, the L-Series utilizes a universal mounting plate so installers can mount them to a wide array of back boxes. With an onboard shorting spring, installers can test wiring continuity before the device is installed.

Installers can also easily adapt devices to a suit a wide range of application requirements using field-selectable candela settings, automatic selection of 12- or 24-volt operation, and a rotary switch for horn tones with two volume selections.

Agency Listings

SIGNALING UL LISTED
S5512
S4011

FM APPROVED
FM approved except for ALERT models
3057383

7125-1653:0504
7135-1653:0503

L-Series Specifications

Architect/Engineer Specifications

General

L-Series ceiling-mount strobes and horn strobes shall mount to a standard 4 × 4 × 1½-inch back box, 4-inch octagon back box, or double-gang back box. Two-wire products shall also mount to a single-gang 2 × 4 × 17⁄8-inch back box. A universal mounting plate shall be used for mounting ceiling and wall products. The notification appliance circuit wiring shall terminate at the universal mounting plate. Also, L-Series products, when used with the Sync•Circuit™ Module accessory, shall be powered from a non-coded notification appliance circuit output and shall operate on a nominal 12 or 24 volts. When used with the Sync•Circuit Module, 12-volt-rated notification appliance circuit outputs shall operate between 8.5 and 17.5 volts; 24-volt-rated notification appliance circuit outputs shall operate between 16.5 and 33 volts. Indoor L-Series products shall operate between 32 and 120 degrees Fahrenheit from a regulated DC or full-wave rectified unfiltered power supply. Ceiling strobes and horn strobes shall have field-selectable candela settings including 15, 30, 75, 95, 115, 150, and 177.

Strobe

The strobe shall be a System Sensor L-Series Model _____ listed to UL 1971 and shall be approved for fire protective service. The strobe shall be wired as a primary-signaling notification appliance and comply with the Americans with Disabilities Act requirements for visible signaling appliances, flashing at 1 Hz over the strobe's entire operating voltage range. The strobe light shall consist of a xenon flash tube and associated lens/reflector system.

Horn Strobe Combination

The horn strobe shall be a System Sensor L-Series Model _____ listed to UL 1971 and UL 464 and shall be approved for fire protective service. The horn strobe shall be wired as a primary-signaling notification appliance and comply with the Americans with Disabilities Act requirements for visible signaling appliances, flashing at 1 Hz over the strobe's entire operating voltage range. The strobe light shall consist of a xenon flash tube and associated lens/reflector system. The horn shall have two audibility options and an option to switch between a temporal three pattern and a non-temporal (continuous) pattern. These options are set by a multiple position switch. The horn on horn strobe models shall operate on a coded or non-coded power supply.

Synchronization Module

The module shall be a System Sensor Sync•Circuit model MDL3 listed to UL 464 and shall be approved for fire protective service. The module shall synchronize L-Series strobes at 1 Hz and horns at temporal three. Also, while operating the strobes, the module shall silence the horns on horn strobe models over a single pair of wires. The module shall mount to a 4 11⁄16 × 4 11⁄16 × 2 1⁄8-inch back box. The module shall also control two Style Y (class B) circuits or one Style Z (class A) circuit. The module shall synchronize multiple zones. Daisy chaining two or more synchronization modules together will synchronize all the zones they control. The module shall not operate on a coded power supply.

Physical/Electrical Specifications	
Standard Operating Temperature	32°F to 120°F (0°C to 49°C)
Humidity Range	10 to 93% non-condensing
Strobe Flash Rate	1 flash per second
Nominal Voltage	Regulated 12 VDC or regulated 24 DC/FWR[1]
Operating Voltage Range[2]	8 to 17.5 V (12 V nominal) or 16 to 33 V (24 V nominal)
Operating Voltage Range (MDL3)	8.5 to 17.5V (12 V nominal) or 16.5 to 33 V (24V nominal)
Input Terminal Wire Gauge	12 to 18 AWG
Ceiling-Mount Dimensions (including lens)	6.8" diameter × 2.5" high (173 mm diameter × 64 mm high)
Ceiling-Mount Surface Mount Back Box Skirt Dimensions (SBBCRL, SBBCWL)	6.9" diameter x 3.4" high (175 mm diameter x 86 mm high)

Notes:

1. Full Wave Rectified (FWR) voltage is a non-regulated, time-varying power source that is used on some power supply and panel outputs.
2. P, S, PC, and SC products will operate at 12 V nominal only for 15 and 30 cd.

UL Current Draw Data

UL Max. Strobe Current Draw (mA RMS)

		8–17.5 Volts	16–33 Volts	
	Candela	DC	DC	FWR
Candela Range	15	87	41	60
	30	153	63	86
	75	N/A	111	142
	95	N/A	134	164
	115	N/A	158	191
	150	N/A	189	228
	177	N/A	226	264

UL Max. Horn Current Draw (mA RMS)

		8–17.5 Volts	16–33 Volts	
Sound Pattern	dB	DC	DC	FWR
Temporal	High	39	44	54
Temporal	Low	28	32	54
Non-Temporal	High	43	47	54
Non-Temporal	Low	29	32	54
3.1 KHz Temporal	High	39	41	54
3.1 KHz Temporal	Low	29	32	54
3.1 KHz Non-Temporal	High	42	43	54
3.1 KHz Non-Temporal	Low	28	29	54
Coded	High	43	47	54
3.1 KHz Coded	High	42	43	54

UL Max. Current Draw (mA RMS), Ceiling Horn Strobe, Candela Range (15–177 cd)

	8–17.5 Volts		16–33 Volts						
DC Input	15cd	30cd	15cd	30cd	75cd	95cd	115cd	150cd	177cd
Temporal High	103	167	71	90	143	165	187	217	254
Temporal Low	96	165	54	71	137	161	185	211	249
Non-Temporal High	106	173	71	90	141	165	187	230	273
Non-Temportal Low	95	166	54	71	124	161	170	216	258
3.1K Temporal High	111	164	69	94	147	163	184	229	257
3.1K Temporal Low	103	163	54	88	143	155	185	212	252
3.1K Non-Temporal High	111	172	69	94	144	164	202	229	271
3.1K Non-Temporal Low	103	169	54	88	131	155	187	217	259

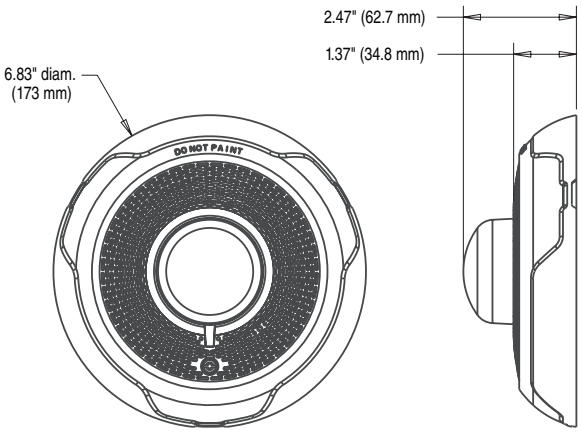
	16–33 Volts						
FWR Input	15cd	30cd	75cd	95cd	115cd	150cd	177cd
Temporal High	107	135	179	198	223	254	286
Temporal Low	78	101	151	172	199	229	262
Non-Temporal High	107	135	179	198	223	254	286
Non-Temportal Low	78	101	151	172	199	229	262
3.1K Temporal High	108	135	179	200	225	255	289
3.1K Temporal Low	79	101	150	171	196	229	260
3.1K Non-Temporal High	108	135	179	200	225	255	289
3.1K Non-Temporal Low	79	101	150	171	196	229	260

Horn Strobe Tones and Sound Output Data

Horn Strobe Output (dBA)

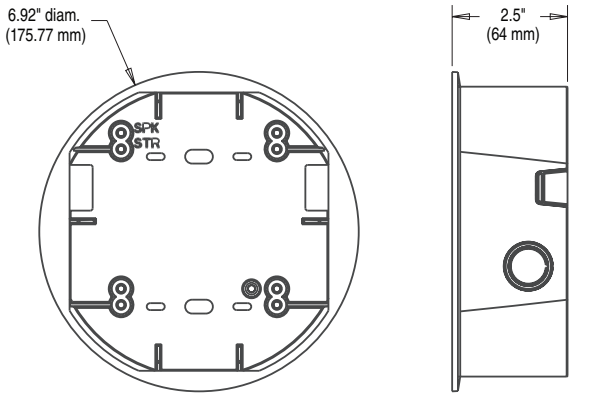
			8–17.5 Volts	16–33 Volts	
Switch Position	Sound Pattern	dB	DC	DC	FWR
1	Temporal	High	84	89	89
2	Temporal	Low	75	83	83
3	Non-Temporal	High	85	90	90
4	Non-Temporal	Low	76	84	84
5	3.1 KHz Temporal	High	83	88	88
6	3.1 KHz Temporal	Low	76	82	82
7	3.1 KHz Non-Temporal	High	84	89	89
8	3.1 KHz Non-Temporal	Low	77	83	83

L-Series Dimensions



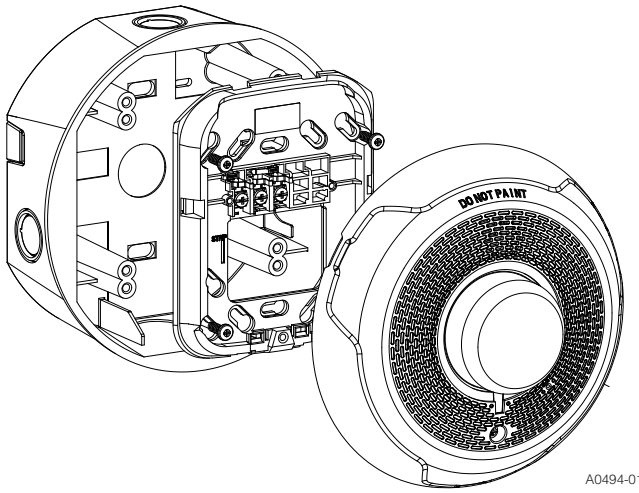
A0545-00

Ceiling-Mount Horn Strobes



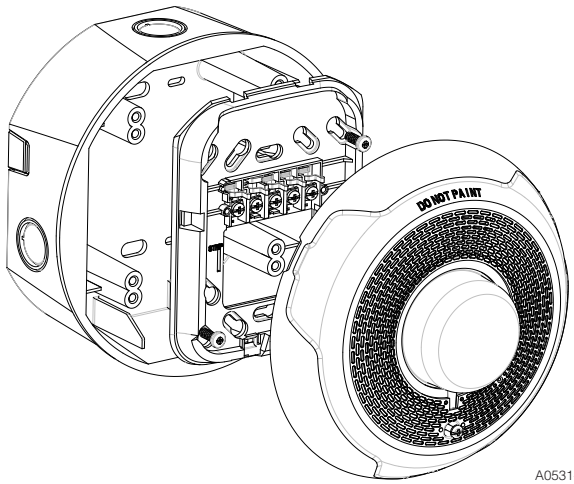
A0546-00

Ceiling Surface Mount Back Box



A0494-01

2-Wire Ceiling Mount Horn Strobes with Ceiling Surface Mount Back Box



A0531-01

4-Wire Ceiling Mount Horn Strobes with Ceiling Surface Mount Back Box

L-Series Ordering Information

Model	Description
Ceiling Horn Strobes	
PC2RL	2-Wire, Horn Strobe, Red
PC2WL	2-Wire, Horn Strobe, White
PC4RL	4-Wire, Horn Strobe, Red
PC4WL	4-Wire, Horn Strobe, White

Model	Description
Ceiling Strobes	
SCRL	Strobe, Red
SCWL	Strobe, White
SCWL-CLR-ALERT	Strobe, White, ALERT
Accessories	
TRC-2	Universal Ceiling Trim Ring Red
TRC-2W	Universal Ceiling Trim Ring White
SBBCRL	Ceiling Surface Mount Back Box, Red
SBBCWL	Ceiling Surface Mount Back Box, White

For a ceiling-listed horn-only device, see AVDS865 “Indoor Selectable-Output Horns, Strobes, and Horn Strobes for Wall Applications”.

SYSTEM SENSOR®

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AVDS868-02 • 12/01/2017

CALIFORNIA DEPARTMENT OF FORESTRY & FIRE PROTECTION
OFFICE OF THE STATE FIRE MARSHAL
FIRE ENGINEERING - BUILDING MATERIALS LISTING PROGRAM

LISTING SERVICE

LISTING No. 7135-1653:0503

CATEGORY: 7135 -- AUDIBLE DEVICES

LISTEE: System Sensor, Unincorporated Div of Honeywell Int'l Inc.3825 Ohio Ave, St. Charles, IL 60174
Contact: Vladimir Kireyev (203) 484-6277 Fax (203) 484-7309
Email: Vladimir.Kireyev@honeywell.com

DESIGN: System Sensor Indoor 2-wire and *4-wire Models:
HWL, HRL, HGWL and HGRL Horns;
CHWL and CHRL Chimes;
P2RL, P2WL, P2GRL, P2GWL, P2RL-P, P2WL-P, P2RL-SP, P2WL-SP, *P4RL and *P4WL Wall Horn Strobes;
PC2RL, PC2WL, *PC4RL and *PC4WL Ceiling Horn Strobes;
CHSRL and CHSWL Wall Chime Strobes;
CHSCRL and CHSCWL Ceiling Chime Strobes;

Wall Bezel Parts:
BZR-F, BZR-AL, BZR-AG, BZR-EV, BZR-P, BZR-SP, BZR-PG,
BZW-F, BZW-AL, BZW-AG, BZW-EV, BZW-P, BZW-SP, BZW-PG,
BZGR-F, BZGR-AL, BZGR-AG, BZGR-EV, BZGR-P, BZGR-SP, BZGR-PG,
BZGW-F, BZGW-AL, BZGW-AG, BZGW-EV, BZGW-P, BZGW-SP and BZGW-PG,

Ceiling Bezel Parts:
BZRC-F, BZRC-AL, BZRC-AG, BZRC-EV, BZRC-P, BZRC-SP, BZRC-PG,
BZWC-F, BZWC-AL, BZWC-AG, BZWC-EV, BZWC-P, BZWC-SP and BZWC-PG.

Color Lens:
LENS-A2, LENS-B2, LENS-G2, LENS-R2, LENS-AC2, LENS-BC2, LENS-GC2 and LENS-RC2.

WallTrim Rings:
*TR-2 and *TR-2W

CeilingTrim Rings:
*TRC-2 and *TRC-2W.

Wall Surface Mounted Back Boxes:
SBBRL, SBBGRL, SBBWL and SBBGWL,

Ceiling Surface Mounted Back Boxes:

Revision 08-21-2017 dcc

Date Issued: **July 01, 2018** *Listing Expires* **June 30, 2019**

Authorized By: ***DAVID CASTILLO**, Program Coordinator*

Fire Engineering Division

SBBCRL and SBBCWL

MP120KL 120 VAC Adapter Mounting Plate

Refer to listee's data sheet for detailed product description and operational considerations.

RATING: 12 VDC regulated and 24 VDC/FWR

INSTALLATION: In accordance with listee's printed installation instructions, NFPA 72, applicable codes & ordinances and in a manner acceptable to the authority having jurisdiction.

MARKING: Listee's name, model number, electrical rating, and UL label.

APPROVAL: Listed as audible devices when used with separately listed compatible fire alarm control units. Suitable for indoor use, wall or ceiling mounted. Authority having jurisdiction should be consulted prior to installation. Refer to listee's Installation Instruction Manual for details.

Revision 08-21-2017 dcc

Date Issued: **July 01, 2018** *Listing Expires* **June 30, 2019**

Authorized By: ***DAVID CASTILLO**, Program Coordinator*

Fire Engineering Division

Outdoor, Selectable-Output Speaker Strobes and Dual-Voltage Evacuation Speakers for Wall Applications

SpectrAlert® Advance outdoor, selectable-output speaker strobes and dual-voltage evacuation speakers meet virtually any outdoor application requirement.

SPECTRAlert ADVANCE from System Sensor

Features

- Weatherproof per NEMA 4X, IP56
- Rated from -40°F to 151°F
- Plug-in design reduces ground faults
- Universal mounting plate with onboard shorting spring that tests wiring continuity before devices are installed
- Field-selectable candela settings: 15, 15/75, 30, 75, 95, 110, 115, 135, 150, 177, and 185
- Automatic selection of 12- or 24-volt operation at 15 and 15/75 candela
- Rotary switch for speaker voltage (25 and 70.7 Vrms) and power settings (1/4, 1/2, 1 and 2 watts)
- Compatible with System Sensor synchronization protocol and legacy SpectrAlert products
- Tamper-resistant construction
- Listed for ceiling or wall mounting

Agency Listings

SIGNALING UL LISTED 75S0

7320-1653:201

MEA approved 10-08-E

SpectrAlert Advance offers the broadest line of outdoor speakers and speaker strobes in the industry. From metal and plastic outdoor back boxes, to white and red plastic housings, to wall and ceiling mounting options, SpectrAlert Advance can meet virtually any application requirement.

Wall-mount outdoor speakers and speaker strobes can be used indoors or outdoors in wet or dry applications, and can provide reliable operation from –40°F to 151°F. These speakers provide a broad frequency response range, low harmonic distortion and maintain a high sound pressure level at all tap settings to provide accurate and intelligible broadcast of evacuation messages.

Like the entire SpectrAlert Advance line, wall-mount outdoor speakers and speaker strobes include a variety of features that increase application flexibility and simplify installation. First, field-selectable settings, including candela, speaker voltage and power settings, and automatic selection of 12- or 24-volt operation enable installers to easily adapt devices to meet requirements.

Next, these devices use a universal mounting plate with an onboard shorting spring that ensures wiring continuity before devices are installed, so installers can verify proper wiring without mounting the devices and exposing them to potential construction damage. Once the plates are mounted, all SpectrAlert Advance devices utilize a plug-in design with a single captured screw to speed installation and virtually eliminate costly ground faults.

Outdoor devices ship with weatherproof plastic back boxes (metal back boxes are available separately) that accommodate in-and-out wiring for daisy chaining devices. Plastic back boxes feature removable side flanges and improved resistance to saltwater corrosion. Knock-outs located on the back eliminate the need to drill holes for screw-in mounting. Plastic and metal weatherproof back boxes come with ¾-inch top and bottom conduit entries and ¾-inch knock-outs at the back. A screw-in NPT plug with an O-ring gasket for a watertight seal is included with each back box.

SpectrAlert® Advance Outdoor Speaker and Speaker Strobe Specifications

Architectural/Engineering Specifications

General

SpectrAlert Advance outdoor speakers and speaker strobes shall mount to a weatherproof back box. A universal mounting plate shall be used for mounting ceiling and wall products. The notification appliance circuit and amplifier wiring shall terminate at the universal mounting plate. Also, SpectrAlert Advance speaker strobes, when used with the Sync•Circuit™ Module accessory, shall be powered from a non-coded notification appliance circuit output and shall operate on a nominal 12 or 24 volts. When used with the Sync•Circuit Module, 12-volt-rated notification appliance circuit outputs shall operate between 8.5 and 17.5 volts; 24-volt-rated notification appliance circuit outputs shall operate between 16.5 and 33 volts. Outdoor SpectrAlert Advance products shall operate between –40°F and 151°F from a regulated DC, or full-wave rectified, unfiltered power supply.

Speaker

Speaker shall be a System Sensor SpectrAlert Advance Model _____ dual-voltage transformer speaker capable of operating at 25.0 or 70.7 nominal Vrms. Speaker shall be listed to Underwriters Laboratories Standard S4048 for outdoor fire protective signaling systems. Speaker shall have a frequency range of 400 to 4,000 Hz and shall have an operating temperature from –40°F to 150.8°F. Speaker shall have power taps and wattage settings that are selected by rotary switches. The speaker must be installed with its weatherproof back box in order to remain outdoor approved per UL listing S4048. The speaker shall be suitable for use in air handling spaces and wet environments.

Speaker Strobe Combination

The speaker strobe shall be a System Sensor Model _____ listed to UL 1638 and UL 1480 and be approved for fire protective signaling systems. Speaker shall be capable of operating at 25.0 or 70.7 nominal Vrms and shall have a frequency range of 400 to 4,000 Hz. Speaker shall have power taps that are selected by rotary switch. The strobe shall consist of a xenon flash tube with associated lens/reflector system and operate on either 12 or 24 volts. The strobe shall also feature selectable candela output, providing options for 15 or 15/75 candela when operating on 12 volts and 15, 15/75, 30, 75, 110, 115, 135, 150, 177 or 185 candela when operating on 24 volts. The strobe shall comply with the Americans with Disabilities Act requirement for visible signaling appliances, flashing at 1 Hz over the strobe's entire operating voltage range. The speaker strobe must be installed with its weatherproof back box in order to remain outdoor approved per UL. The speaker strobe shall be suitable for use in wet environments.

Physical Specifications	
Operating Temperature	–40°F to 151°F (–40°C to 66°C)
Dimensions, Wall-Mount	
SPS Speaker Strobe	6.0″L × 5.0″W × 4.7″D (including lens and speaker)
SP Speaker	6.0″L × 5.0″W × 2.9″D
Dimensions, Wall-Mount Weatherproof Back Box	6.5″L × 5.5″H × 2.9″D
Electrical/Operating Specifications	
Nominal Voltage (speakers)	25 V or 70.7 V (nominal)
Maximum Supervisory Voltage (speakers)	50 VDC
Strobe Flash Rate	1 flash per second
Nominal Voltage (strobes)	Regulated 12 VDC/FWR or regulated 24 DC/FWR
Operating Voltage Range (includes fire alarm panels with built in sync)	8 to 17.5 V (12 V nominal) or 16 to 33 V (24 V nominal)
Operating Voltage with MDL3 Sync Module	8.5 to 17.5 V (12 V nominal) or 16.5 to 33 V (24 V nominal)
Frequency Range	400 to 4,000 Hz
Power	¼, ½, 1, 2 watts

UL Current Draw Data

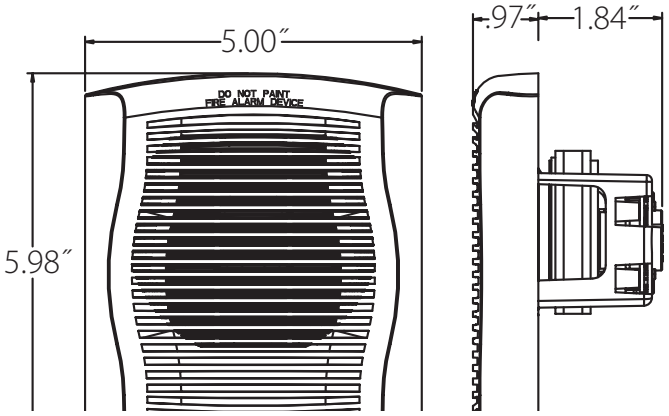
UL Max. Strobe Current Draw (mA RMS)					
		8 to 17.5 Volts		16 to 33 Volts	
	Candela	DC	FWR	DC	FWR
Standard Candela Range	15	123	128	66	71
	15/75	142	148	77	81
	30	NA	NA	94	96
	75	NA	NA	158	153
	95	NA	NA	181	176
	110	NA	NA	202	195
	115	NA	NA	210	205
High Candela Range	135	NA	NA	228	207
	150	NA	NA	246	220
	177	NA	NA	281	251
	185	NA	NA	286	258
Sound Output					
UL Reverberant (dBA @ 10 ft.)		2W	1W	½ W	¼ W
Outdoor Speaker		90	87	84	81
Outdoor Speaker/Strobe		89	86	83	80

Candela Derating

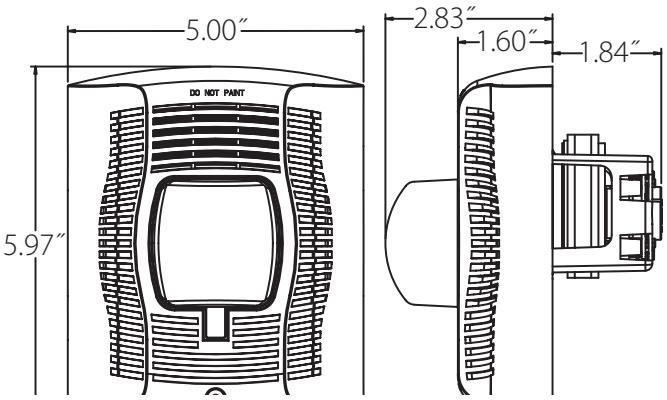
For K series products used at low temperatures, listed candela ratings must be reduced in accordance with this table.

Strobe Output (cd)	
Listed Candela	Candela rating at –40°F
15	Do not use below 32°F
15/75	
30	
75	44
95	70
110	110
115	115
135	135
150	150
177	177
185	185

Dimensions

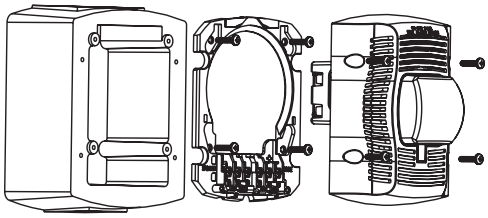


Wall-Mount Outdoor Speaker

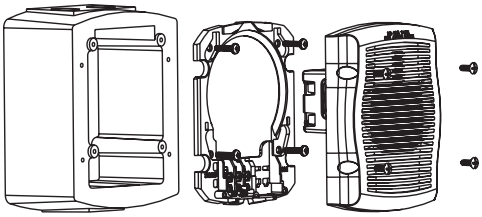


Wall-Mount Outdoor Speaker Strobe

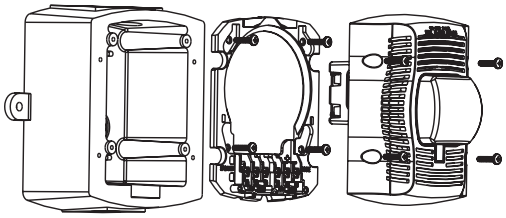
Surface Mounting



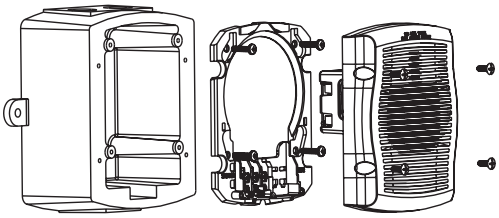
Wall-Mount Speaker Strobe with Plastic Weatherproof Back Box



Wall-Mount Speaker with Plastic Weatherproof Back Box



Wall-Mount Speaker Strobe with Metal Weatherproof Back Box



Wall-Mount Speaker with Metal Weatherproof Back Box

Ordering Information for SpectrAlert® Advance Outdoor Speakers and Speaker Strobes

Wall Mount		
White	**Red**	**Description**
SPWK	SPRK	Outdoor Speaker (includes plastic weatherproof back box)
SPWK-R	SPRK-R	Outdoor Speaker (does not include plastic weatherproof back box)
SPSWK	SPSRK	Outdoor Speaker Strobe, Standard cd (includes plastic weatherproof back box)
SPSWK-P	SPSRK-P	Plain Outdoor Speaker Strobe, Standard cd(includes plastic weatherproof back box)
SPSWK-R	SPSRK-R	Outdoor Speaker Strobe, Standard cd(does not include weatherproof back box)
SPSWK-CLR-ALERT	—	Outdoor Speaker Strobe, Standard cd, Clear Lens, ALERT Printed (includes plastic weatherproof back box)
—	SPSRHK	Outdoor Speaker Strobe, High cd (135,150,177,185) (includes plastic weatherproof back box)
Accessories		
White	**Red**	**Description**
MWBBW	MWBB	Wall, Metal Weatherproof Back Box

Notes:

All -P models have a plain housing (no “FIRE” marking on cover)

“Standard cd” refers to strobes that include 15, 15/75, 30, 75, 95, 110, and 115 candela settings. “High cd” refers to strobes that include 135, 150, 177, and 185 candela settings. **When replacing standard outdoor units, both the device and back box must be replaced.**

SYSTEM SENSOR®

3825 Ohio Avenue • St. Charles, IL 60174
Phone: 800-SENSOR2 • Fax: 630-377-6495

AVDS11301 • 09/12

CALIFORNIA DEPARTMENT OF FORESTRY & FIRE PROTECTION
OFFICE OF THE STATE FIRE MARSHAL
FIRE ENGINEERING - BUILDING MATERIALS LISTING PROGRAM

LISTING SERVICE

LISTING No. 7320-1653:0201

CATEGORY: 7320 -- SPEAKERS

LISTEE: System Sensor, Unincorporated Div of Honeywell Int'l Inc.3825 Ohio Ave, St. Charles, IL 60174
Contact: Vladimir Kireyev (203) 484-6277 Fax (203) 484-7309
Email: Vladimir.Kireyev@honeywell.com

DESIGN: Models SPR,SPW,SPRV, and SPWV SpectrAlert Speakers - Rectangular enclosure. Models SPCW, SPCR, SPCWV, and SPCRV SpectrAlert Speakers with round enclosure. Models SPSR, SPSRH, SPSW, SPSW-ALERT, SPSW-CLR-ALERT, *SPSWK-CLR-ALERT, SPSWH, SPSRV, and SPSWV SpectrAlert Speaker/Strobe with rectangular enclosure. Models SPSCR, SPSCRH, SPSCW, *SPSCWK-CLR-ALERT, SPSCWH, SPSCRV, SPSCRVH, SPSCWV, and SPSCWVH SpectrAlert Speaker/Strobe with round enclosure. Model SPSCW-CLR-ALERT Speaker/Strobe. Model SPSW-ALERT has amber lens and is intended for non-fire use.
All models identified are intended for indoor use mounted on the wall or ceiling. Models with a “K” in the suffix are suitable for indoor or outdoor use with an operating temperature rating of -40°C to +66°C (-40°F to +151°F) and have a NEMA 4X enclosure rating when used with models PWBB, PWBBW (wall) or the model PWBBCW (ceiling) plastic weatherproof back boxes or with Model MWBBW (Wall), MWBB (Wall) or MWBBCW (Ceiling) metal weatherproof back boxes. Models with a “- P” in the suffix have plain housings with no lettering on the enclosure. Models not containing “- P”, in the suffix have English lettering reading “FIRE” on the housing. Refer to listee's data sheet for additional detailed product description and operational considerations.

RATING: Nominal Voltage: 25 Vrms or 70 Vrms
Power Settings: ¼, ½, 1, 2 Watts
Frequency Range: 400 - 4000 Hz

INSTALLATION: In accordance with listee's printed installation instructions, NFPA 72, applicable codes & ordinances and in a manner acceptable to the authority having jurisdiction.

MARKING: Listee's name, model number, electrical rating and UL label.

APPROVAL: Listed as speaker/strobes when used with separately listed compatible fire alarm control units. Suitable for wall or ceiling mount.
These speaker/strobes do not generate a distinctive three-pulse temporal code pattern (for total evacuation) as required per NFPA 72, 2010 edition. If required, the appliances must be used with a fire alarm control unit that can generate the temporal pattern signal.

*Corrected 02-06-12 bh

Date Issued: **July 01, 2018** *Listing Expires* **June 30, 2019**

Authorized By: ***DAVID CASTILLO**, Program Coordinator*

Fire Engineering Division

Technical Data Sheet
Fire Alarm Cables- Addressable

2833 West Chestnut Street
Washington, PA 15301
Toll Free: (800) 245-4964
Fax: (724) 222-6420
www.westpenn-wpw.com

PART NUMBER: **D990**

DESCRIPTION: 16/2 Solid bare copper conductors, unshielded with an overall jacket.

NEC RATING: FPL, NEC Article 760

APPROVALS: (UL) or (ETL)us Listed

APPLICATION: Indoor data fire alarm cable for (Data Circuits, Initiating Circuits, Notification Circuits, Addressable Systems)

Construction Parameters:

Conductor	16 AWG Bare Copper
Stranding	Solid
Insulation Material	Copolene
Insulation Thickness	0.015" Nom.
Number of Conductors	2
Shield	None
Drain	None
Jacket Material	PVC
Jacket Thickness	0.030" Nom.
Overall Cable Diameter	0.223" Nom.
Approximate Cable Weight	29 Lbs/1M' Nom.
Flame Rating	UL 1581 Vertical Tray Flame Test

Electrical & Environmental Properties:

Temperature Rating	-20deg C to 60deg C
Operating Voltage	300 V RMS
Max.Capacitance Between Conductors @ 1 KHz	18 pf/ft Nom.
DC Resistance per Conductor @ 20deg C	4.2 Ohms/1M' Nom.
Velocity of Propagation	71% Nom.
Insulation Colors	Black, Red
Jacket Color	Red
RoHS Compliant	--

Mechanical Properties:

Max. Recommended Pull Tension	62.4 lbs.
Min. Bend Radius (Install)	2.25”

Specification Issue Date: 7/06

Standard Lengths are 1000ft.
The Jacket is sequentially footmarked.
The information presented here is, to the best of our knowledge, is true and accurate. However, since conditions of use are beyond our control, all recommendations or suggestions are presented without guarantee or responsibility on our part. We disclaim all liability in connection with the use of information contained herein or otherwise.

Technical Data Sheet
Aquaseal ® Fire-Alarm Cables

WEST PENN WIRE

2833 West Chestnut Street
Washington, PA 15301
Toll Free: (800) 245-4964
Fax: (724) 222-6420
www.westpenn-wpw.com

PART NUMBER: **AQ225**

DESCRIPTION: 16/2 Stranded bare copper conductors, overall unshielded with Aquaseal tape and overall jacket.

NEC RATING: FPL – PLTC, NEC Article 760 And 725

APPROVALS: (UL) or (ETL)us Listed –Direct Burial

APPLICATION: Materials suitable for outdoor use (direct burial), and indoor trays, allows a variety of uses for (Low voltage industrial process control circuits, Power-Limited circuits, Power-Limited fire alarm circuits, Power-Limited tray cable PLTC)

Construction Parameters:

Conductor	16 AWG Bare Copper
Stranding	7x24
Insulation Material	PVC with Nylon
Insulation Thickness	PVC 0.015" Nom. Nylon .005” Nom.
Number of Conductors	2 (1 Pair)
Shield	None
Drain	None
Water-Blocking Tape	2 Ply water swellable tape
Jacket Material	Sunlight/ Moisture Resistant PVC
Jacket Thickness	0.040" Nom.
Overall Cable Diameter	0.295" Nom.
Approximate Cable Weight	48 Lbs/1M' Nom.
Flame Rating	UL 1685 Vertical Tray

Electrical & Environmental Properties:

Temperature Rating	-20deg C to 60deg C
Operating Voltage	300 V RMS
Max.Capacitance Between Conductors @ 1 KHz	28 pf/ft Nom.
DC Resistance per Conductor @ 20deg C	4.2 Ohms/1M' Nom.
Insulation Colors	Black, Red
Jacket Color	Black
RoHS Compliant	--
TIA455-82B Water Infiltration Test Compliant	Yes
UL 444 & 13 Compliant	Yes

Mechanical Properties:

Max. Recommended Pull Tension	54 lbs.
Min. Bend Radius (Install)	2.9”

Specification Issue Date: 7/06

Standard Lengths are 1000ft.
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Fire Alarm Cables

2833 West Chestnut Street
Washington, PA 15301
Toll Free: (800) 245-4964
Fax: (724) 222-6420
www.westpenn-wpw.com

PART NUMBER: **994S**

DESCRIPTION: 14/2 Stranded bare copper conductors, unshielded with an overall jacket.

NEC RATING: FPLR, NEC Article 760

APPROVALS: (UL) or (ETL)us Listed

APPLICATION: Indoor for (Audio Circuits, Control Circuits, Initiating Circuits, Notification Circuits)

Construction Parameters:

Conductor	14 AWG Bare Copper
Stranding	Stranded
Insulation Material	PVC
Insulation Thickness	0.012" Nom.
Number of Conductors	2
Shield	None
Drain	None
Jacket Material	PVC
Jacket Thickness	0.015" Nom.
Overall Cable Diameter	0.197" Nom.
Approximate Cable Weight	42 Lbs/1M' Nom.
Flame Rating	UL 1666 Riser Flame Test

Electrical & Environmental Properties:

Temperature Rating	-20deg C to 60deg C
Operating Voltage	300 V RMS
Max.Capacitance Between Conductors @ 1 KHz	30 pf/ft Nom.
DC Resistance per Conductor @ 20deg C	2.43 Ohms/1M' Nom.
Insulation Colors	Black, Red
Jacket Color	Red, Black, Blue, White, Yellow
RoHS Compliant	Yes

Mechanical Properties:

Max. Recommended Pull Tension	99.4 lbs.
Min. Bend Radius (Install)	2”

Specification Issue Date: 7/06

Standard Lengths are 1000ft.
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Technical Data Sheet
Aquaseal ® Fire-Alarm Cables

WEST PENN WIRE

2833 West Chestnut Street
Washington, PA 15301
Toll Free: (800) 245-4964
Fax: (724) 222-6420
www.westpenn-wpw.com

PART NUMBER: **AQ226**

DESCRIPTION: 14/2 Stranded bare copper conductors, overall unshielded with Aquaseal tape and overall jacket.

NEC RATING: FPL – PLTC, CL3 NEC Article 760 And 725

APPROVALS: (UL) Listed – Direct Burial

APPLICATION: Materials suitable for outdoor use, and indoor trays, allows a variety of uses for (Low voltage industrial process control circuits, Power-Limited circuits, Power-Limited fire alarm circuits, Power-Limited tray cable PLTC)

Construction Parameters:

Conductor	14 AWG Bare Copper
Stranding	19x27
Insulation Material	PVC with Nylon
Insulation Thickness	PVC 0.015" Nom. Nylon .005” Nom.
Number of Conductors	2 (1 Pair)
Shield	None
Drain	None
Water-Blocking Tape	2 Ply water swellable tape
Jacket Material	Sunlight/ Moisture Resistant PVC
Jacket Thickness	0.040" Nom.
Overall Cable Diameter	0.310" Nom.
Approximate Cable Weight	59 Lbs/1M' Nom.
Flame Rating	UL 1685 Vertical Tray

Electrical & Environmental Properties:

Temperature Rating	-20deg C to 90deg C
Operating Voltage	300 V RMS
Max.Capacitance Between Conductors @ 1 KHz	32 pf/ft Nom.
DC Resistance per Conductor @ 20deg C	2.7 Ohms/1M' Nom.
Insulation Colors	Black, Red
Jacket Color	Black
RoHS Compliant	Yes
TIA455-82B Water Infiltration Test Compliant	Yes
UL 444 & 13 Compliant	Yes

Mechanical Properties:

Max. Recommended Pull Tension	84 lbs.
Min. Bend Radius (Install)	2.7”

Specification Issue Date: 7/06

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Technical Data Sheet
Fire Alarm Cables

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Washington, PA 15301
Toll Free: (800) 245-4964
Fax: (724) 222-6420
www.westpenn-wpw.com

PART NUMBER: **998S**

DESCRIPTION: 12/2 Stranded bare copper conductors, unshielded with an overall jacket.

NEC RATING: FPLR, NEC Article 760

APPROVALS: (UL) or (ETL)us Listed

APPLICATION: Indoor for (Audio Circuits, Control Circuits, Initiating Circuits, Notification Circuits)

Construction Parameters:

Conductor	12 AWG Bare Copper
Stranding	Stranded
Insulation Material	PVC
Insulation Thickness	0.012" Nom.
Number of Conductors	2
Shield	None
Drain	None
Jacket Material	PVC
Jacket Thickness	0.015" Nom.
Overall Cable Diameter	0.227" Nom.
Approximate Cable Weight	57 Lbs/1M' Nom.
Flame Rating	UL 1666 Riser Flame Test

Electrical & Environmental Properties:

Temperature Rating	-20deg C to 60deg C
Operating Voltage	300 V RMS
Max.Capacitance Between Conductors @ 1 KHz	33 pf/ft Nom.
DC Resistance per Conductor @ 20deg C	1.53 Ohms/1M' Nom.
Insulation Colors	Black, Red
Jacket Color	Red
RoHS Compliant	Yes

Mechanical Properties:

Max. Recommended Pull Tension	158 lbs.
Min. Bend Radius (Install)	2.5”

Specification Issue Date: 7/06

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Technical Data Sheet
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2833 West Chestnut Street
Washington, PA 15301
Toll Free: (800) 245-4964
Fax: (724) 222-6420
www.westpenn-wpw.com

PART NUMBER: **AQ227**

DESCRIPTION: 12/2 Stranded bare copper conductors, overall unshielded with Aquaseal tape and overall jacket.

NEC RATING: FPL – PLTC, NEC Article 760 And 725

APPROVALS: (UL) or (ETL)us Listed – Direct Burial

APPLICATION: Materials suitable for outdoor use (direct burial), and indoor trays, allows a variety of uses for (Low voltage industrial process control circuits, Power-Limited circuits, Power-Limited fire alarm circuits, Power-Limited tray cable PLTC)

Construction Parameters:

Conductor	12 AWG Bare Copper
Stranding	19x25
Insulation Material	PVC with Nylon
Insulation Thickness	PVC 0.015" Nom. Nylon .005” Nom.
Number of Conductors	2 (1 Pair)
Shield	None
Drain	None
Water-Blocking Tape	2 Ply water swellable tape
Jacket Material	Sunlight/ Moisture Resistant PVC
Jacket Thickness	0.040" Nom.
Overall Cable Diameter	0.340" Nom.
Approximate Cable Weight	78 Lbs/1M' Nom.
Flame Rating	UL 1685 Vertical Tray

Electrical & Environmental Properties:

Temperature Rating	-20deg C to 60deg C
Operating Voltage	300 V RMS
Max.Capacitance Between Conductors @ 1 KHz	36 pf/ft Nom.
DC Resistance per Conductor @ 20deg C	1.7 Ohms/1M' Nom.
Insulation Colors	Black, Red
Jacket Color	Black
RoHS Compliant	--
TIA455-82B Water Infiltration Test Compliant	Yes
UL 444 & 13 Compliant	Yes

Mechanical Properties:

Max. Recommended Pull Tension	146 lbs.
Min. Bend Radius (Install)	3.4”

Specification Issue Date: 7/06

Standard Lengths are 1000ft.
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CALIFORNIA DEPARTMENT OF FORESTRY & FIRE PROTECTION
OFFICE OF THE STATE FIRE MARSHAL
FIRE ENGINEERING - BUILDING MATERIALS LISTING PROGRAM

LISTING SERVICE

LISTING No. 7161-0859:0101

CATEGORY: 7161 -- CABLES-FIRE PROTECTIVE SIGNALING

LISTEE: West Penn Wire2833 W Chestnut St, Washington, PA 15301
Contact: Mark Sams (724) 222-7060 Fax (724) 229-1151
Email: mark.sams@westpenn-cdt.com

DESIGN: Types FPL and FPLP power limited fire protective signaling cable. Refer to listee's data sheet for detailed product description and operational considerations.

INSTALLATION: In accordance with listee's printed installation instructions, NEC Article 760, applicable codes and ordinances and in a manner acceptable to the authority having jurisdiction.

MARKING: Listee's name, type, NEC rating and UL label.

APPROVAL: Listed as power-limited fire protective signaling cable.

*Rev. 05-23-2005

Date Issued: **July 01, 2018** *Listing Expires* **June 30, 2019**

Authorized By: ***DAVID CASTILLO**, Program Coordinator*

Fire Engineering Division