Premier Low Voltage Systems by:

E²Systems
E-SQUARED SYSTEMS, LLC.
Fire • Security • Card Access • CCTV

PSD TRANSPORTATION BLDG
DAS Monitoring
1501 39ᵀᴴ AVE SW
PUYALLUP, WA 98373

Fire Alarm System

Equipment Datasheets
Battery Calculations
Certifications

E2 JOB #1250M

Prepared by:

E-Squared Systems, LLC
PO Box 731227
Puyallup, WA 98373
Ph: 253.284.3707

License: ESQUASL963BR

Premier Low Voltage Systems by:

E² Systems
E-SQUARED SYSTEMS, LLC.
Fire – Security – Card Access – CCTV

FIRE ALARM
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TAB 1

FA CONTROL PANEL

Gamewell FCI FIRE CONTROL INSTRUMENTS

by Honeywell

➥ S3 Series Control Panel

Description

The Gamewell-FCI, S3 Series Intelligent Fire Alarm Control Panel provides the latest innovative high-end processing power. It offers a simple, intuitive solution for the small to mid-sized fire alarm applications.

In standalone or network configurations, the S3 Series complies with most fire alarm application requirements. It supports either of the following types of networks.
• Up to 64 nodes using the 7100 Series panel.
• Up to 122 nodes using the S3 Series or E3 Series® panels.
Use either twisted-pair wire or fiber-optic to network panels at a high-speed 625K baud ARCNET network bus.

With flexible Boolean logic, intelligent detection, and Ethernet connectivity, this system provides power and versatility that surpasses comparable, small addressable fire alarm systems.

The basic S3 Series consists of an SLP (Smart Loop Panel) main board, LCD-SLP touchscreen display, SLC loop personality modules, and 7 amp power supply. The SLP provides either one or two SLC loops in Class A or B configuration that supports either of the following protocols:
• Up to 318 devices per loop using the System Sensor® protocol. If you add a second loop module, it increases the maximum device count to 636 devices.
• Up to 126 devices per loop using the Apollo protocol. If you add a second loop module, it increases the maximum device count to 252 devices.

Four Class B or two Class A NACs can be wired and synchronized using the System Sensor, Cooper-Wheelock, or Gentex strobes. To retrofit the SLP on the existing audible/visual appliances, the on-board Electronic EOL (EEOL) automatically adjusts to the EOL resistor in the field.

A 4.3" (10.92 cm) color touchscreen display screen shows the following:
• Events on the system
• Status of analog addressable devices
• Complete diagnostic fault codes/messages
• Five programmable function buttons with LED status for accessibility to the following functions:
  - Disable/Enable   - Trouble Acknowledge
  - Bypass Output   - Alarm Acknowledge
  - Lamp Test   - Custom-defined

E3 Series®, System Sensor® and FocalPoint® are registered trademarks of Honeywell International Inc.
UL® is a registered trademark of Underwriters Laboratories Inc.

Small Analog Addressable Fire Alarm Control Panel

➥ S3 Series

Features
• Listed per ANSI/UL® Standard 864 9th Edition.
• IBC Seismic Certified.
• Allows one SLC loop (expandable to two loops) that supports either System Sensor or Apollo devices in Class A or Class B (Style 4, 6 or 7).
• System Sensor supports up to 318 intelligent devices and each SLC loop supports the following.
  - up to 159 detectors.
  - up to 159 modules (expandable to 636 maximum per panel).
• Apollo supports up to 126 intelligent detectors and modules per SLC. (Expandable to 252 maximum per panel).
• Includes a high resolution (4.3") (10.92 cm) color touchscreen display.
• Supports a network system of up to 122 nodes (includes E3 Series® panels) or up to 64 nodes (includes 7100 Series).
• Provides 7.0 amp power supply (120VAC or 240VAC).
• Includes four Class B or two Class A built-in Notification Appliance Circuits (NAC). Provides selectable System Sensor, Cooper-Wheelock, or Gentex strobe synchronization.
• Supports up to 32 serial annunciators (LCD, LED-only, LED Switch).

SIGNALING

UL LISTED S1869   FM APPROVED   MEA FDNY: COA-#6162   7165-1703:0176   City of Chicago Approved Class 1   THE VMC GROUP Reference Certificate of Compliance VMA-45894-02C

ISO 9001 CERTIFIED ENGINEERING & MANUFACTURING QUALITY SYSTEMS

Application

The S3 Series Fire Alarm and Life Safety System is an easy-to-use intelligent fire alarm solution designed for the small to mid-sized buildings. Analog technology delivers the benefits of a simple system installation, while a user-friendly interface makes panel operation and system maintenance quick and intuitive.

Smart Panel Programming

Using Boolean logic programming, the installer may customize the system to precisely suit the needs of the building owner. Auto-programming allows the installer to instantly locate all the devices on the SLC loop.

Simple, Intuitive Display

The front panel display provides a user-friendly interface for the operator's control. A 4.3" (10.922 cm) color touch-screen displays system status, event details and service modes. On the front of the panel, six LEDs show the following conditions.

- Fire
- Hazard (Gas or CO)
- Supervisory
- Silenced
- AC Power
- Trouble

Five custom programmable switches allow the user quick access to common functions specific to the building like device disable, output bypass and device status.

Perfect for Retrofits

The S3 Series is well-suited for retrofit applications. The SLP provides a simple way to upgrade your fire protection system. It is designed to be an upgrade solution for the legacy FCI 7100 and Gamewell 602 Series panels. An added feature is the SLP's EEOL. Using EEOL, the installers can automatically identify the EOL for existing audible/visual appliances.

Flexibility for Future Growth

The S3 Series can be expanded to add a second SLC loop without replacing the entire system. Using the RPT-E3-UTP Network Repeater, you can network up to 64 nodes (122 nodes with the ANX node expander) using either twisted-pair or fiber-optic. The built-in Ethernet port allows the connection to the Gamewell-FCI's FocalPoint Graphical Workstation.

Figure 1 LCD-SLP Display

Features (Continued)

- Offers an Ethernet port for programming, a variety of system reports, and a FocalPoint® Graphic Workstation connectivity.
- Provides two fully-programmable Form-C contacts for Fire, Trouble, and Supervisory.
- TimeCap - Saves time and date up to 48 hours without any power or battery.
- Automatically adjusts to any NAC End-of-Line Resistor (EOL) value (1k-55k ohm) for legacy audible/visual appliances.
- Removable display can be used as a remote annunciator.
- Suitable for pre-action deluge applications.

Optional Accessories

DACT-E3 - Dialer

The Digital Alarm Communication Transmitter sends digital signals over telephone lines to the central station. It connects to the SLP through an RS-485 bus. Using the Contact ID format, the DACT-E3 provides a four-digit account code followed by the code/numbers listed below:

- Three-digit Event Code
- Two-digit Group Number
- Three-digit Contact Number

All codes are used to provide specific point identification. The DACT-E3 is compatible with digital alarm communicator receivers (DACRs) that receive the following signaling formats:

- Contact ID
- 3+1
- SIA
- 4+2

For more information, refer to the following data sheets:
DACT-E3 Data Sheet, P/N: 9020-0610
FML-E3/FSL-E3 Data Sheet, P/N: 9021-60783

RPT-E3-UTP - Network Repeater Card

The Network Repeater allows the SLP fire control panels to connect to the broadband network from remote locations. It connects to other networked units using unshielded, twisted-pair wiring. The RPT-E3-UTP is available with two add-on fiber modules:

- **FML-E3** connects to the network using either 62.5/125 micron multi-mode fiber.
- **FSL-E3** connects to the network using 9/125 micron single-mode fiber.

Refer to the RPT-E3-UTP Data Sheet, P/N: 9020-0609.

LCD-7100 - Remote Annunciator

The Remote serial display features an 80-character display. The LCD-7100 can be surface or flush-mounted on a standard 4-gang electrical box. You can use up to five LCD-7100 remote annunciators per SLP panel. For more information, refer to the LCD-7100 Data Sheet, P/N: 9020-0486.

ASM-16 - Addressable Switch/LED Module

There are 16 programmable switches available to perform any function the application requires. Each ASM-16 switch has 3 LEDs fully programmable in red, yellow, and green. These LEDs can be programmed to operate with a certain button press or operate independently as a status signal (e.g. ON, OFF, Activated, etc).

Up to 16 ASM-16 modules can be connected to the SLP panel. For more information, refer to the ASM-16 Data Sheet, P/N: 9020-0554.

ANU-48 - 48 LED Driver Unit

The ANU-48 provides output for eight remote panel switches and 48 remote LEDs for use in a remotely located UL® Listed annunciator enclosure. Up to 16 ANU-48 modules can be connected to the SLP panel. For more information, refer to the ANU-48 Data Sheet, P/N: 9020-0596.
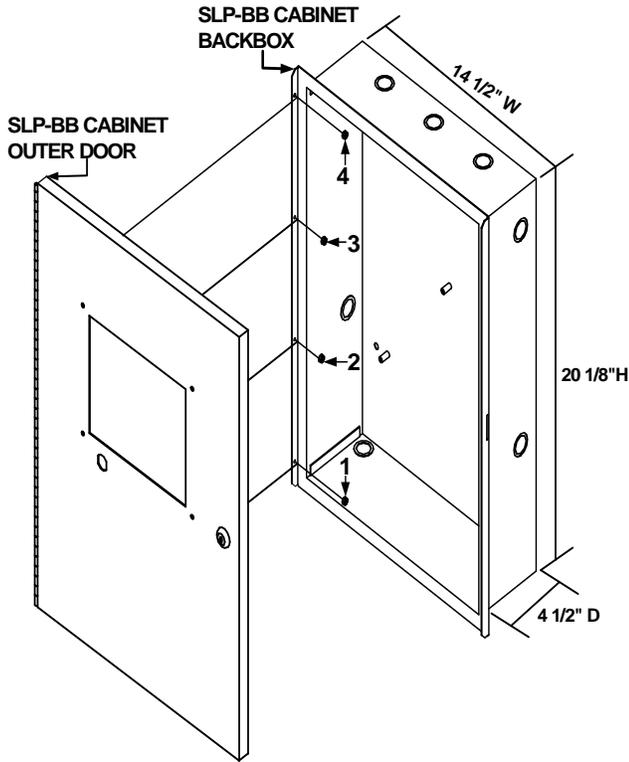
Figure 2 illustrates the SLP-BB Cabinet Enclosure.

SLP-BB CABINET BACKBOX

SLP-BB CABINET OUTER DOOR

14 1/2" W

4

3

2

1

20 1/8"H

4 1/2" D

Figure 2 SLP Enclosure

Specifications

Device Loops	Up to two Class A or B, System Sensor units, each loop supporting up to 318 device addresses. Or- Apollo units, each loop supporting up to 126 device addresses per loop.
NAC circuits	4 Class B or 2 Class A (2.0 A each circuit), 6.0 A total
NAC Operating Voltage	24 VDC
NAC Minimum Voltage	19.5 VDC @ 20.4 V battery voltage
SLC Loop Circuit Operating Voltage	24 V peak-to-peak
Input Voltage	120 VAC, 60 Hz 240 VAC 50-60 Hz
Input Current	120 VAC, 2.75 amps max. 240 VAC, 1.4 amps max.
Aux Power 1 (Continuous)	24 VDC nominal at 1.0A
Aux Power 2 (Resettable)	24 VDC nominal at 1.0A
Base Panel Current draw	Standby: 0.111 amps Alarm: 0.243 amps
Operating Temperature	32°-120° F (0°-49° C)
Relative Humidity	93% (non-condensing)
Battery Charger Voltage	+24 VDC
Battery Charger Capacity	55 A/H batteries (cabinet accommodates 12 A/H batteries)
Alarm, Trouble & Supervisory Relay Contacts	Form-C, 2 amps @ 24VDC (resistive)

Cabinet Dimensions:

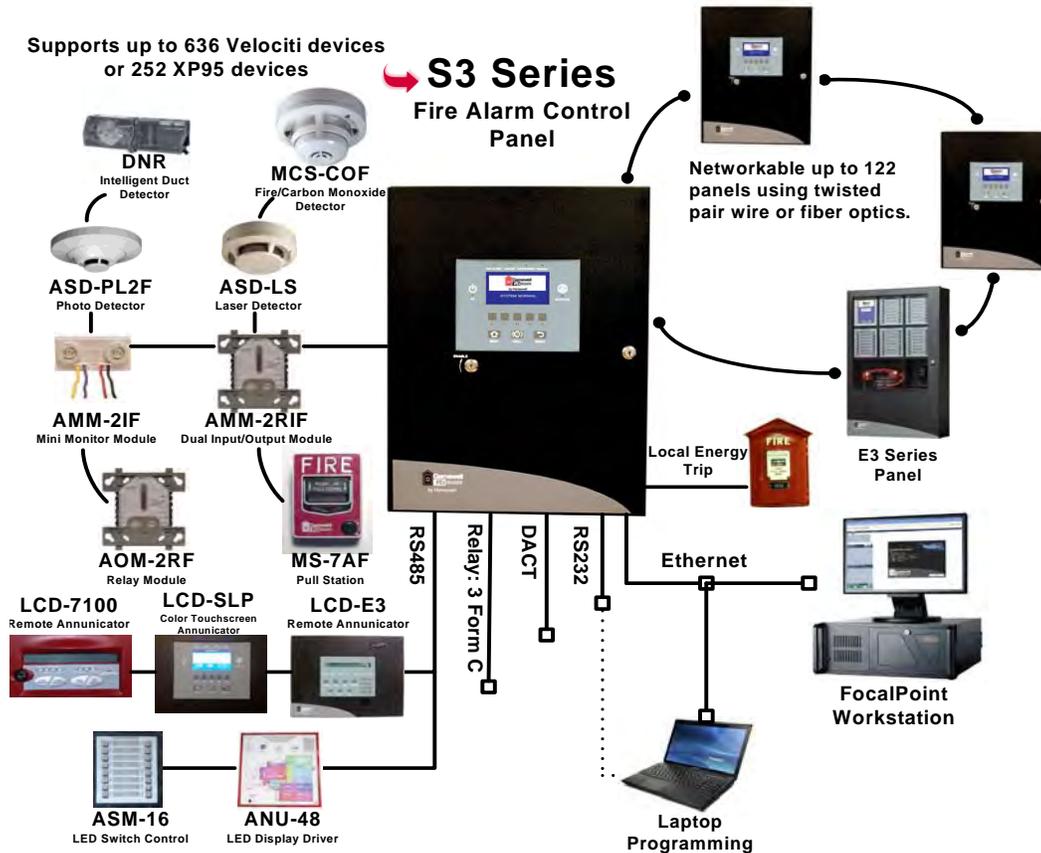|	
SLP-BB Dimensions	14 1/2" W x 20 1/8" H x 4 1/2" D (36.83 W x 51.18 H x 11.43 D cm)
S3BB-RB Dimensions	19 3/8" W x 19 3/8" H x 4.5" D (49.22 W x 49.22 H x 11.43 D)

Supports up to 636 Velociti devices or 252 XP95 devices

S3 Series
Fire Alarm Control Panel

Networkable up to 122 panels using twisted pair wire or fiber optics.

DNR
Intelligent Duct Detector

MCS-COF
Fire/Carbon Monoxide Detector

ASD-PL2F
Photo Detector

ASD-LS
Laser Detector

AMM-2IF
Mini Monitor Module

AMM-2RIF
Dual Input/Output Module

AOM-2RF
Relay Module

MS-7AF
Pull Station

LCD-7100
Remote Annunciator

LCD-SLP
Color Touchscreen Annunicator

LCD-E3
Remote Annunciator

ASM-16
LED Switch Control

ANU-48
LED Display Driver

RS485

Relay: 3 Form C

DACT

RS232

Local Energy Trip

E3 Series Panel

Ethernet

FocalPoint Workstation

Laptop Programming

Figure 3 SLP Panel Configuration

Ordering Information

Part Number	Description
SLP-BLK	SLP addressable FACP in black SLP-BB enclosure. Requires either an SLC-PM or an SLC95-PM for SLC loops.
SLP-RED	SLP addressable FACP with red door and black SLP-BB backbox. Requires either an SLC-PM or an SLC95-PM for SLC loops.
SLP-RED-G	SLP addressable FACP 240VAC power supply with red door and black SLP-BB backbox. Requires either an SLC-PM or an SLC95-PM for SLC loops.
SLC-PM	System Sensor Loop Card - 1 loop used for 159 sensors and 159 modules. For use with the SLP-E3 panels only.
SLC95-PM	Apollo Loop Card-1 loop used for 126 sensors and modules. For use with the SLP-E3 panels only.

Ordering Information (Continued)

Part Number Accessories	Description
DACT-E3	Digital Dialer Communicator Transmitter for the S3 or E3 Series.
LCD-SLP	LCD Color Touchscreen display with five programmable switches. For use with the S3 Series panels. Remote annunciation requires the E3 Series A2 cabinet. (E3BB-BA2, E3BB-RA2)
RPT-E3-UTP	Network repeater card with twisted-pair fiber connections require either an FML-E3 or an FSL-E3 card.
FML-E3	Multi-mode fiber-optic card for one channel on the RPT-E3-UTP.
FSL-E3	Single-mode fiber-optic card for one channel on the RPT-E3-UTP.
SLP-RB	SLP motherboard For use with the replacement or the retrofit solutions.
FLPS-7-RB	SLP 120VAC 7A power supply. For use with the replacement or the retrofit solutions.
SLP-RETROFIT	SLP Retrofit Kit for the 7100 B-Slim and IF602 panels. Includes the new door and the mounting plate. Requires the following: • SLP-RB • LCD-SLP • SLC-PM/SLC95-PM • FLPS-7-RB
S3BB-RB	SLP red cabinet with an inner door for the mounting display behind the plexiglass. Requires the following: • SLP-RB • LCD-SLP • SLC-PM/SLC95-PM • FLPS-7-RB
LCD-7100	Remote Serial LCD Annunciator
ASM-16	Remote Programmable Addressable Switch/LED Module
ANU-48	Remote LED Driver Module

ILI-E3 SERIES

Intelligent Loop Interface-Main Board

The ILI-E3 Series is the main board interface used with the E3 Series® System.

GENERAL
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 the 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
- E3 Series Broadband Voice Command Center

This intuitive design provides the following features:

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

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 control 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-UTP 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 two 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. 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.

*Class X wiring requires the use of the System Sensor M500X Isolator Modules.

→ ILI-MB-E3

ILI-S-E3

FEATURES AND BENEFITS

ILI-MB-E3 & ILI-S-E3:

- Listed under UL® Standard 864, 10th Edition
- Listed under UL Standard UL2572, 2nd Edition for Mass Notification
- UL Listed and FM Approved for Pre-Action/ Deluge and Agent Releasing
- Provides signaling line circuits with the following:
  - 2 Class A, Class X* or Class B circuits
  - 40 Character user- defined text per device

- Offers a capacity of 159 sensors, 159 addressable modules and 159 addressable sounder bases per circuit
- Includes 8100 Event History Log
- Uses a network ready integral 625K baud ARCNET
- Supports 115.2K baud RS-232

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" or Class B, rated at 2.0 amps. per circuit
- Offers an RS-485 supporting 16 ASM-16 switch modules and/or ANU-48 LED driver modules

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ILI-S-E3

The Intelligent Loop Interface - Expansion Board (ILI-S-E3) provides the E3 Series control panel with two 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 two 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 Backbox
  - B-Slim-E3
- Cabinet C Backbox
  - E3-ILI-CPLATE
  - E3-INCC-CPLATE
  - E3-INX-CPLATE
- Cabinet D Backbox
  - E3-INCC-DPlate
  - E3-INX-DPLATE

ILI-MB-E3/ILI-S-E3

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.

ORDERING INFORMATION

ILI-MB-E3: Intelligent Loop Interface-Main Board

ILI-S-E3: Intelligent Loop Interface-Expansion Board

ILI-E3 SERIES TECHNICAL SPECIFICATIONS

SYSTEM

ILI-MB-E3 only:

ILI-MB-E3 Operating Current: 0.081 amp

ILI-MB-E3 Alarm Current: 0.150 amp max.

ILI-S-E3 Operating Current: 0.118 amp

ILI-S-E3 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 uF maximum line capacitance

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 (noncondensing) 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.

STANDARDS

The ILI-E3 Series are designed to comply with the following standards:

UL Standards: UL 864, 10th Edition
UL 2572, 2nd for Mass Notification

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

UL 864, 10th Edition

UL 2572, 2nd Edition for Mass Notification

FM Approved: 3025415

MEA FDNY: COA# 6077

CSFM: 7165-1703-0125

City of Chicago: Class 1, Class 2 and High Rise

City of Denver:

ISO 9001 Certification:

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PM-9

120 VAC Power Supply

> The PM-9 is a 9 ampere power supply used with the E3 Series® Fire, Mass Notification and Voice Evacuation Systems.

GENERAL

The Gamewell-FCI, PM-9 Power Supply is a 120 VAC, 60 Hz switching power supply that provides 9 amperes of filtered and regulated 24 VDC (nominal). It provides the power to all of the E3 Series components.

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 Voice Evacuation System

The PM-9 has an internal battery charging circuit capable of maintaining up to 55 A/H batteries.

Installation

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

- Cabinet B 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
- Retrofit Kits

For information on the installation of the PM-9, refer to the following documents:

- E3 Series Expandable Emergency Evacuation Manual,
  P/N: LS10080-000GF-E
- PM-9 Installation Instructions,
  P/N: 9000-0548
- Mass Notification System Manual,
  P/N:LS10013-000GF-E

ORDERING INFORMATION

PM-9: Power supply and battery charger, 120 VAC

29229: AC Line Filter Kit

PM-9

FEATURES AND BENEFITS

- Listed under UL® Standard 864, 10th Edition
- Listed under UL Standard UL2572, 2nd Edition for Mass Notification
- 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 55 AH batteries. (Batteries not furnished)

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Gamewell
FCI FIRE CONTROL INSTRUMENTS

PM–9 TECHNICAL SPECIFICATIONS

SYSTEM

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)

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 (noncondensing) 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.

STANDARDS

The PM-9 is designed to comply with the following standards:

UL Standards: UL 864, 10th Edition

UL 2572, 2nd Edition for Mass Notification

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, Vol. 14

UL 864, 10th Edition

S1949, Vol. 19

UL 2572, 2nd Edition

FM Approved: 3017416

MEA FDNY: COA 6077

CSFM: 7165-1703:0125

City of Chicago Approved:
Class 1, Class 2,High Rise

City of Denver Approved:

ISO 9001 Certification:

Honeywell

Gamewell FCI

RPT-E3

Network Repeater

The RPT-E3 is the network communication circuit used with the E3 Series® System.

GENERAL

The ARCNET Repeater Module (RPT-E3) is an optional component of the E3 Series® and S3 Series fire alarm control panels. It allows the following remote E3 Series and S3 Series sub-assemblies to connect to the Broadband network from remote locations:

- ILI-MB-E3/ILI95-E3 Series
- S3 Series, SLP (Smart Loop Panel-Main Board)
- ANX-SR/ANX-MR-UTP/ANX-MR-FO
- NGA

The RPT-E3 is a standard sub-assembly with network connections using unshielded, twisted-pair, copper wire. The following optional fiber-optic network connections using add-on modules are available.

- FML-E3 multi-mode fiber module (optional)
- FSL-E3 single-mode fiber module (optional)

In addition, you can use the RPT-E3 to connect remotely-mounted NGA modules to the network.

INSTALLATION

The RPT-E3 is adaptable for an installation in the standard E3 Series and S3 Series cabinets. Typically, the RPT-E3 module is mounted on standoffs on the top of the right side of the ILI-MB-E3/ILI95-MB-E3/ANX modules and SLP motherboard.

For instructions on the installation of the RPT-E3, refer to the following documents:

- E3 Series® UL Listing Document, P/N: LS10080-051GF-E
- S3 Series UL Listing Document, P/N:LS10005-051GF-E
- RPT-E3-UTP Installation Instructions, P/N: 9000-0580
- FML-E3/FSL-E3 Installation Instructions, P/N:LS10046-000GF-E

ORDERING INFORMATION

RPT-E3-UTP: Network Repeater, unshielded, twisted-pair

FML-E3: Multi-mode fiber-optic module for RPT-E3-UTP (one channel)

FSL-E3: Single-mode fiber-optic module for RPT-E3-UTP (one channel)

RPT-E3

FEATURES AND BENEFITS

- Listed under UL® Standard 864, 10th Edition
- Offers the 625K baud ARCNET Repeater
- Provides the capability for networked E3 Series and S3 Series sub-assemblies to connect in Class B or Class X configurations
- Connects to the network via the standard unshielded, twisted-pair copper wire
- Includes add-on fiber-optic modules that allow the network connection through single or multi-mode fiber-optic cables
- Use the RPT-E3 to connect remotely-mounted NGA modules to the network

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Gamewell FCI

RPT-E3 TECHNICAL SPECIFICATIONS

SYSTEM

Operating Voltage: 24 VDC FWR

Operating Current: 0.016 amp

Alarm Current: 0.017 amp

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

Relative Humidity: 0 to 93%, non-condensing at 90° F (32° C)

Wiring Specifications:

Copper Wire: 16 to 18 AWG twisted-pair, unshielded.
Up to 3,000 ft. (914.4 m) between each node.

Fiber-Optic Cable (FML-E3 only): Up to 200 microns optimized for 62.5/125 microns.
Up to 8 dB loss between nodes.

Fiber-Optic Cable (FSL-E3 only): Optimized for 9/125 micrometer cable @ 1310 nm.
Up to 30dB loss between nodes.

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 (noncondensing) 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.

STANDARDS

The RPT-E3 is designed to comply with the following standard:

UL Standard: UL 864, 10th 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
        UL 864, 10th Edition

FM Approved: 3025415

MEA FDNY: COA# 6077

CSFM: 7165-1703-0125

City of Chicago: Class 1, Class 2 and High Rise

City of Denver

ISO 9001 Certification

Honeywell

Gamewell
FCI

E3 SERIES® CABINETS

Cabinets used for the E3 Series System

The E3 Series® Cabinets offer a variety of cabinet options to house either the E3 Series or S3 Series fire alarm control panel systems.

GENERAL

The E3 Series® Expandable Emergency Evacuation System by Gamewell-FCI offers several cabinet size options. The E3 Series System is a modular design that allows a wide range of configurations to form an integrated, distributed fire alarm system. These cabinet options allow for sturdy and modern 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 options and mounting plates to accommodate a variety of E3 Series sub-assemblies.

Each cabinet backbox includes mounting patterns for plates to allow the installer to arrange and secure the sub-assemblies to the backbox. The backbox knockouts are also positioned at numerous points to allow a conduit access into the enclosure.

There are four Annunciator cabinet sizes which provide the maximum flexibility that can meet any application:

- Cabinet AA offers 2 slot or 3 slot options to accommodate any of the following configurations:
  - Inner door, 2 slots allows space for one LCD-E3 or LCD-SLP and one ASM-16
  - Inner door, 3 slots allows space for any combination of three modules: ASM-16, NGA or an ANU-48
- Cabinet A1 houses one NGA or one ASM-16/ANU-48.
- Cabinet A2 accommodates a single LCD-E3.
- E3BB-FLUSH-LCD or E3BB-NGA-FLUSH.

The E3BB-R-B-Slim or B-Slim contains the 600 Series cabinet. Cabinet B includes a mounting plate that contains a space for the following modules:

- ILI-MB-E3/ILI95-MB-E3
- PM-9/PM-9G sub-assemblies
- 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 LCD-E3 module and
- either one ASM-16/ANU-48 or one NGA module

E3 Series® Cabinets

FEATURES AND BENEFITS

- IBC Seismic Certified
- 16-gauge steel backbox
- Offers cabinets available in either black or red
- Provides removable cabinet outer and inner doors
- Includes an inner door bonding strap used to provide electrical continuity for grounding
- Designed with Lexan® windows that appear on the outer doors of most cabinets, except the following cabinets that contain louvered doors:
  - Cabinet "C" INX
  - Cabinet "D" INX
  - Cabinet INX CAB-B
- Furnished backbox and door ground studs provide positive grounding. 180° opening door with full clearance
- Designed with a 90° opening door with zero clearance
- Contains a keylock with a quarter turn latch
- Optional Trim Ring accessories available

Honeywell

Gamewell FCI

GENERAL

Both the C and D size Command Center cabinets house a variety of E3 Series Broadband sub-assemblies that can be used in multiple configurations that provide a solution to a wide range of applications. Two flexible inner door panel selections are available for C and D size Command Center cabinets that may contain any of the following:

- fire fighter's phone handset
- microphone
- optional modules to meet the facility operation requirements.

Refer to the Inner Door and Backbox Mounting Capacities in the Ordering Information Section.

ORDERING INFORMATION

Inner Door Mounting Capacity:

Cabinet "AA" Size:

   Dimensions: 19 1/4"W x 10"H x 4 1/2"D, (49W x 25H x 11.4D cm)

   E3BB-BAA: Enclosure, Black, "AA" (LOC) Size

   E3BB-RAA: Enclosure, Red, "AA" (LOC) Size

   E31D2-TA: Inner Door, 2 Slots, (INCC-TEL & ASM-16)

   E3ID2-A: Inner Door, 2 Slots, (LCD-E3 or LCD-SLP & ASM-16)

   E3ID3-A: Inner Door, 3 Slots,(NGA, ASM-16 and MIC)

Cabinet "AA1" Size:

   Dimensions: 8 3/4"W x 10"H x 4 1/2"D, (22W x 25H x 11.4D cm)

   E3BB-BAA1: Remote Enclosure, Black, w/Inner Door, 1 slot, (NGA)

   E3BB-RAA1: Remote Enclosure, Red, w/Inner Door, 1 Slot, (NGA)

Cabinet "A2" Size:

   Dimensions: 13 1/4"W x 10"H x 4 1/2"D, (40W x 25H x 11.4D cm)

   E3BB-BA2: Remote Enclosure, Black, w/Inner Door, 1 Slot, (LCD-E3 or LCD-SLP)

   E3BB-RA2: Remote Enclosure, Red, w/Inner Door, 1 Slot, (LCD-E3 or LCD-SLP)

Flush Cabinet A2 Annunciators:

   Dimensions: 13 1/4"W x 10"H x 4 1/2"D, (40W x 25H x 11.4D cm)

   E3BB-FLUSH-LCD: CAB A2 Remote Flush LCD ANN with Key switch operation

   E3BB-NGA-FLUSH: 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, (35.5W x 50.8H x 11D cm)

   E3BB-RBSLIM: Assembly, 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.

ORDERING INFORMATION (CONTINUED)

Cabinet "B" Size:

   Dimensions: 19 3/8"W x 19 3/8"H x 4 1/2"D, (49W x 49H x 11D cm)

   E3BB-BB: Assembly, Backbox Enclosure, Black,"B" Size

   E3BB-RB: Assembly, 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"Wx19 3/8"Hx4 1/2"D, (49Wx49Hx11.43 D cm)

Cabinet "C" Size:

   Dimensions: 19 3/8"W x 30"H x 4 1/2"D, (49W x 76H x 11D cm)

   E3BB-BC/INCC: Enclosure, Command Ctr, Black, "C" Size

   E3BB-RC/INCC: Enclosure, Command Ctr, Red, "C" Size

   E3ID2-C: Assembly, Inner Door, Command Center, 2- Bay "C" Size

   E3ID3-C: Assembly, Inner Door, Command Center, 3-Bay "C" Size

   E3BB-BC/INX: Assembly, Transponder, Black, "C" Size

   E3BB-RC/INX: Assembly, Transponder, Red, "C" Size

   E3-INCC-CPLATE: Command Center module mounting plate, "C" Size

   E3-INX-CPLATE: Transponder mounting plate, "C" Size

Inner Door Mounting Capacity:

   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, (49W x 104H x 11D cm)

   E3BB-BD/INCC: Enclosure, Command Center, Black, "D" Size

   E3BB-RD/INCC: Enclosure, Command Center, Red, "D" Size

   E3ID2-D: Assembly, Inner Door, 2-Bay, "D" Size

   E3ID3-D: Assembly, 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 "AA1" 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

ORDERING INFORMATION (CONTINUED)

Bulk Amplification:

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)

90516: 7100-Slim 7 A/H Seismic Battery Bracket Kit

Seismic Battery Bracket Kits:

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

Retrofit Kits:

For information on the Gamewell and 7200 Retrofit Kits, refer to the following Data Sheets.

9021-60678: Gamewell Retrofit Kits Data Sheet

9021-60733: 7200 Retrofit Kits Data Sheet

Inner Door Mounting Capacity

Part Number	Number of Components
Cabinet AA	
E3ID2-A - (Cabinet AA, Inner Door, 2 Slots)	
LCD-E3 Display and	ONE
ASM-16/ANU-48	ONE
E3ID2-TA - (Assembly, Door, Inner, TEL-E3)	
E3ID3-A - (Cabinet A, Inner Door, 3 Slots)	
NGA or ASM-16	ONE
ASM-16s/ANU-48	TWO
Cabinet AA1	
E3ID-A1 - (Cabinet AA1, Inner Door (includes Box)	
NGA or ASM-16	ONE
Cabinet A2	
E3ID-A2 - (Cabinet A2, Inner Door, (includes Box)	
LCD-E3	ONE
Cabinet B	
E3ID2-B - (Cabinet B, Inner Door, (includes Box)	
LCD-E3 Display and one ASM-16/ANU-48	ONE
NGA and one ASM-16/ANU-48	ONE
B-Slim Cabinet	
LCD-E3 Display & one RPT-E3 or one DACT-E3	ONE
ILI-MB-E3 or one ILI95-MB-E3	ONE
PM-9 or one PM-9G	ONE
Cabinet C	
E3ID2-C - (Cabinet C, Inner Door, 2 Slots)	
LCD-E3 Display and	ONE
Any combination of ASM-16/ANU-48, NGA or Microphone Assemblies	FIVE
Telephone Assembly	ONE
E3ID3-C - (Cabinet C, Inner Door, 3 Slots)	
Any Combination of ASM-16/ANU-48, NGA, or Microphone Assemblies	SEVEN
Telephone Assembly	ONE
Cabinet D	
E3ID2-D - (Cabinet D, Inner Door, 2 Slots)	
LCD-E3 Display	ONE
Any Combination of ASM-16/ANU-48, or NGA or Microphone and	ELEVEN
Telephone Assembly	ONE
E3ID3-D - (Cabinet D, Inner Door, 3 Slots)	
Any Combination of ASM-16/ANU-48, NGA or Microphone Assemblies	THIRTEEN
Telephone Assembly	ONE
Backbox Mounting Capacity	
E3BB-BAA - (Enclosure, "AA' (LOC) Size, Black)	
INI-VG Series Voice Gateway	ONE
E3BB-BAA1 - (AA1 Size Box/Door, Black)	
RPT-E3 Network Repeater	ONE
E3BB-BB B-Size Box/Door, Black	
PM-9/PM-9G Power Supply	ONE
ILI-MB-E3/ILI95-MB-E3 and	ONE
Additional ILI-MB-E3/ILI95-MB-E3	ONE
Loop Interface or ANX or	ONE
DACT-E3 Digital Communicator and	ONE
RPT-E3 Network Repeater	ONE
INX CAB-B Mounting Plate	
PM-9 or PM-9G	ONE
INI-VGX	ONE
AM-50 Series amplifiers	FOUR

Backbox Mounting Capacity (Continued)

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

Part Number	Number of Components
E3-INCC-D Plate	
PM-9/PM-9G Power Supply	ONE
ILI-MB-E3 or ILI95-MB-E3	ONE
Additional ILI-E3 or ILI95-E3 Series or ANX	FOUR
DACT-E3 Digital Communicator	ONE
RPT-E3 Network Repeater	ONE
INI-VG Series	ONE
Optional AM-50 or FPT-GATE-3 Extender Plate	ONE
E3-INX-D Plate	
PM-9/PM-9G Power Supply	ONE
ILI-MB-E3 or ILI95-MB-E3	ONE
DACT-E3 Digital Communicator	ONE
RPT-E3 Network Repeater	ONE
INI-VG Series	ONE
AM-50 Series Amplifier	FOUR
Optional FPT-GATE-3 Plate	ONE
E3BB-BD - (D Size Box/Command Center (Voice), Black)	
PM-9/PM-9G Power Supply	ONE
INI-VG Series Voice Gateway	ONE
ILI-MB-E3/ILI95-MB-E3/ANX Loop Interface	FOUR
Additional ILI-MB-E3/ILI95-MB-E3/ANX Loop Interface or	ONE
DACT-E3 Digital Communicator and	ONE
RPT-E3 Network Repeater	ONE
Optional FPT-GATE-3 Plate	ONE
E3BB-BD - (D Size Box/Command Center, Black)	
PM-9/PM-9G Power Supply	ONE
ILI-MB-E3/ILI95-MB-E3/ANX Loop Interface & Additional ILI-MB-E3/ILI95-MB-E3/ANX Loop Interface or	SEVEN
DACT-E3 Digital Communicator and	ONE
RPT-E3 Network Repeater	ONE
Optional Extender Plates	
AM-50 Extender Plate	
AM-50-25 or AM-50-70	ONE
FPT-GATE-3 Extender Plate	
FocalPoint® Gateway	ONE
PNET-1	ONE
Optional FPT-GATE-3 Extender Plate	ONE

E3 SERIES® CABINETS TECHNICAL SPECIFICATIONS

STANDARDS

The E3 Series fire alarm control panel cabinets are designed to comply with the following standards:

UL Standards: UL 864, 10th Edition:
  Automatic Fire Detector Alarm
  Manual Fire Alarm
  Waterflow Alarm
  Supervisory
  Releasing Device Service
  Releasing/Pre-Action Deluge
  Releasing/Agent Releasing
  Automatic Smoke Alarm, Non-coded and Master Coded Operation
Underwriters Laboratories Standard UL 2572, 2nd Edition (for Mass Notification Systems)
UUKL for Smoke Control

NFPA Standards

NFPA 13 - Standard for Installation of Sprinkler Systems
NFPA 16 - Standard for Foam-Water Sprinkler and Foam Water Spray Systems
NFPA 72 - National Fire Alarm Code:
  Central Station Fire Alarm Systems
  Auxiliary Fire Alarm Systems
  Proprietary Fire Alarm Systems
  Local Fire Alarm Systems
  Remote Station Fire Alarm Systems
NFPA 13 Sprinkler
NFPA 12A Halon 1301
NFPA 15 Water Spray
NFPA 16 Foam Water
NFPA 750 Water Mist
NFPA 2001 Clean Agent
NFPA 12 CO2 Carbon Dioxide
NFPA 17 Dry Chemical/17A Wet Chemical

Seismic Codes

International Building Codes:
  IBC 2013
  IBC 2009
  IBC 2006
  IBC 2003
  IBC 2000 (Seismic)
California Building Code CBC 2007 (Seismic)

STANDARDS (CONTINUED)

The E3 Series Cabinets are designed to comply with the following standard:

UL Standard: UL 864, 10th Edition
                 UL 2572, 2nd Edition
                 for Mass Notification

AGENCY LISTINGS AND APPROVALS

These listings and approvals apply to the modules specified in this document. In some cases, certain modules or applications may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.

UL Listed: S1869
               ULS 864, 10th Edition
               UL 2572, 2nd Edition
MEA Approved: 6177
MEA FDNY: COA# 6077
CSFM: 7165-1703-0125
FM Approved: 3025415
City of Chicago
City of Denver
VMA Seismic Certified
ISO 9001 Certification

Honeywell

Gamewell FCI

Premier Low Voltage Systems by:

E²Systems

E-SQUARED SYSTEMS, LLC.

Fire ► Security ► Card Access ► CCTV

TAB 2

EXISTING ANNUNCIATOR

LCD-SLP

Description

The Gamewell-FCI, Liquid Crystal Display, Smart Loop Panel (LCD-SLP) is a touchscreen annunciator display used with the S3 Series System. The LCD-SLP provides an easy-to-use, intuitive interface for the operator's control. The 4.3" (10.92 cm) color touchscreen display shows the following:
- System Status
- Service modes
- Event details

The following identify the LED Indicators that display on the panel.
- AC (green)
- Supervisory (yellow)
- Fire Alarm (red)
- Trouble (yellow)
- Hazard (blue)
- Silenced (yellow)

The five fully-programmable front panel switch/LED combinations provide a direct access to perform the following tasks:
- Device Bypass
- Lamp Test
- Enable/Disable Groups or Devices

The display features the following physical switches.
- Menu
- System Reset
- Five Programmable Switches
- Drift Walk Test

Installation
The LCD-SLP is adaptable for installation in either the S3 or E3® Series cabinets.
- S3 Series Cabinets
  - SLP-BB basic system enclosure
  - S3BB-BB/S3BB-RB system enclosure
- E3 Series® Cabinets
  - A2 size cabinet (E3BB-BA2, E3BB-RA2)
  - A size flush cabinet (E3BB-FLUSH-LCD)

Specifications

Operating Voltage:	24 VDC FWR
Operating Current:	0.030 amp
Alarm Current:	0.065 amp
Operating Temperature:	32° to 120° F (0° to 49° C)
Relative Humidity:	0 to 93%,non-condensing at 90° F (32° C)

LCD Touchscreen Annunciator Display

LCD-SLP

Features

- Listed per ANSI/UL® Standard 864 9th Edition.
- Provides 4.3" (10.92 cm) color touchscreen display of System Events.
- Includes five custom function buttons with LEDs for direct access to system controls.
- Offers the following installation options:
  - Locally mounted in the S3 Series panels.
  - Remotely mounted in the E3 Series, A2 cabinet or LCD Flush enclosure.
- Displays the following six LED indicators:
  - Alarm   - Hazard
  - Trouble   - NAC Silence
  - Supervisory   - AC Power
- Shows the Hazard LED to indicate gas, carbon monoxide or other toxic gases.
- S3 Series (SLP) supports up to 15 LCD-SLP displays via the RS-485 serial interface.

Ordering Information

Part Number	Description
LCD-SLP	LCD Touchscreen display unit
E3BB-BA2	Remote enclosure with inner door, black, one LCD slot
E3BB-RA2	Remote enclosure with inner door, red, one LCD slot
E3BB-FLUSH-LCD	Remote flush mounting enclosure, black, LCD slot

SIGNALING

UL LISTED S1869 MEA FDNY: COA-#6162 7165-1703:0176 City of Chicago Approved Class 1 THE VMC GROUP Reference Certificate of Compliance VMA-45894-02C

Premier Low Voltage Systems by:

E² Systems

E-SQUARED SYSTEMS, LLC.

Fire ● Security ● Card Access ● CCTV

TAB 3

EXISTING POWER SUPPLY

Honeywell

• HPF24S6 • HPF24S6E • HPF24S6C
• HPF24S8 • HPF24S8E • HPF24S8C

Fire Alarm Power Supply

Description

The HPF24S6 and HPF24S8 are compact, cost-effective, 6-amp or 8-amp remote power supplies with a battery charger built in. They may be connected to any 12- or 24-volt Fire Alarm Control Panel (FACP) or may stand alone. Primary applications include Notification Appliance (bell) Circuit (NAC) expansion (to support ADA requirements and NAC synchronization) or auxiliary power to support 24-volt system accessories. The supply provides regulated and filtered 24 VDC power to four Notification Appliance Circuits configured as either four Class B (Style Y) or Class A (Style A, with ZNAC-4 option module). Alternately, the four outputs may be configured as all non-resettable or all resettable or two non-resettable and two resettable. They also contains a battery charger capable of charging up to 18 Amp Hour batteries.

Benefits

• Extends and supports power for additional fire alarm devices.
• Instantaneous switchover to standby battery (if equipped) when AC fails, maintaining power to all attached devices without intervention.
• Strobe signal "passes through" allowing syncing of large systems.
• LED lights for quick and easy diagnosis, troubleshooting, and status indication.
• Two outputs can be used for constant power devices such as door holders (power drops upon alarm).
• Works with almost any UL 864 fire alarm.

Specifications

• Primary (AC) Power
  – HPF24S6, HPF24S6C: 120 VAC 60 Hz, 3.2 A maximum
  – HPF24S8, HPF24S8C: 120 VAC 60 Hz, 3.2 A maximum
  – HPF24S6E: 220/240 VAC, 50 Hz, 1.6 A maximum
  – HPF24S8E: 220/240 VAC, 50 Hz, 1.6 A maximum
    Wire size: minimum 14 AWG (2.0 mm²) with 600V insulation.
• Control Input Circuit
  – Trigger Input Voltage: 9.0 to 32 VDC.
  – Trigger Current: 2.0 mA (16 - 32 V).
    (per input) 1.0 mA (9 - 16 V).
• Trouble Contact Rating
  – 5.0 A at 24 VDC.
• Auxiliary Power Output
  – Specific Application Power - 500 mA maximum.
• Output Circuits
  – +24 VDC filtered, regulated.
  – 3.0 A maximum for any one circuit.
  – 4.0 A maximum total continuous current for all outputs (Stand-alone mode) for the HPF24S6 and 6A for the HPF24S8.
  – 6A oer 8A (depending on model) maximum total short-term current for all outputs (NAC Expander mode).
• Secondary Power (Battery) Charging Circuit

– Supports lead-acid batteries only.
– Float Charge Voltage: 27.6VDC.
– Maximum Charge Current: 1.5 A.
– Maximum Battery Capacity: 18 AH.
• UL Listed NAC Synchronization using System Sensor, Wheelock or Gentex (Commander Series) appliances.
• Cascade up to 10 power supplies (four with Gentex) with strobe timing maintained.
• Operates as a sync follower or a sync generator (default).
• Contains two, fully-isolated input/control circuits (triggered from FACP Notification Appliance Circuit [NAC expander mode] or jumpered permanently on [standalone mode]).
• Configured to internally house addressable SLC control module for alarm activation.
• Four Class B (Style Y) or four Class A (Style Z) (with ZNAC-4 Module) Notification Appliance Circuits.
• 6.0A or 8A (depending on model) full load output (3.0 A maximum per circuit) in NAC expander mode (UL 864).
• 4.0A or 6.0Acontinuous output in stand-alone mode (UL 1481).
• In stand-alone mode, output power circuits may be configured as resettable (reset line from FACP required) or nonresettable or a mix of two and two.
• Fully regulated and filtered power output (optimal for powering four-wire smoke detectors, annunciators and other system peripherals requiring regulated/filtered power).
• Power-limiting technology meets UL power-limiting requirements.
• Form-C normally-closed trouble relay.
• Fully supervised power supply, battery and Notification Appliance Circuits.
• Selectable earth fault detection.
• AC trouble report selectable for immediate or 8 hour delay.
• Works with virtually any UL 864 fire alarm control which utilizes an industry-standard reverse-polarity notification circuit (including unfiltered and unregulated bell power).
• Requires input trigger voltage of 9.0 - 32 VDC.

- Self-contained in compact, lockable cabinet (15" [38.1 cm] H x 14.5" [36.8 cm] W x 2.75" [7.0 cm] D).
- Includes integral battery charger capable of charging up to 18 AH batteries. Cabinet capable of housing 7.0 AH batteries.
- Battery charger may be disabled via dip switch for applications requiring larger batteries.
- Fixed, clamp-type terminal blocks accommodate up to 12 AWG (3.1 mm²) wire.

Standards and Codes

- NFPA 72 National Fire Alarm Code.
- UL 864 Standard for Control Units for Fire Alarm Systems (NAC expander mode).
- UL 1481 Power Supplies for Fire Alarm Systems (standalone mode).
- FM Approved
- CSFM Approved
- HPF24S6Cand HPF24S8C approved
  – CAN/ULC-S527-99

Listings

Listings and approvals below apply to the HPF24S6 and HPF24S8. In some cases, certain modules may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.

- **UL Listed:** S6677
- **CAN/ULC Listed:** S6677
- **CSFM:** 7315-1637:102
- **FM Approved**

Ordering Information

HPF24S6: Remote charger 6A power supply (120 VAC). Includes main printed circuit board, transformers, red enclosure, and installation instructions.

HPF24S8: Remote charger 8A power supply (120 VAC). Includes main printed circuit board, transformers, red enclosure, and installation instructions.

HPF24S6E: Export version, 220/240 VAC, 50 Hz.

HPF24S8E: Export version, 220/240 VAC, 50 Hz.

HPF24S6C: Canadian version

HPF24S8C: Canadian version

FCPS-24S6RB: Replacement mother board.

ZNAC-4: Class A (Style Z) NAC option module

A77-716B: 12/24 VDC end-of-line relay for monitoring 4-wire smoke detector power.

BAT-1270: Battery, 12 volt, 7.0 AH (two required).

Automation and Control Solutions

Honeywell

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Northford, CT 06472-1610   hpp_techserv@honeywell.com

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TAB 4

PULL STATIONS

MS-7 Series

Manual Fire Alarm Pull Stations

General

The Gamewell-FCI, MS-7 Series manual fire alarm pull stations are available in a wide variety of configurations. The pull 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 pull stations include a key lock/reset which is keyed alike with the Gamewell-FCI fire alarm control panels and other manual fire alarm pull stations.

MS-7AF Velociti Addressable Station

The MS-7AF Velociti® Series addressable station is a double action pull station designed for installation in the signaling line circuit of Gamewell-FCI analog addressable control panels. Activation of the pull station causes its assigned address to register at the fire alarm 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 pull 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 pull station is activated.* The station features screw terminals.

The Velociti® Series pull 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 offers a response speed up to five times greater than earlier designs.

MS-7 Double Action Station

The MS-7 double action pull 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.

MS-7 Series

FEATURES & BENEFITS

- Addressable stations compatible with all Gamewell-FCI analog addressable fire alarm controls

- Conventional stations suitable for use with any UL® Listed control panel

- The pull stations (MS-7LOB) are Listed for outdoor applications

- Complies with ADA pull force requirements

- Offers surface or semi-flush mounting

- Shock and vibration resistant

- Both single and double action pull stations available

- Includes a tumbler lock for test and reset keyed alike with analog addressable fire alarm controls

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

MS-7S Single Action Station

The MS-7S single action pull 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 pull station similar to the MS-7 station, with the additional feature of including 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 used to connect 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 the following:

- An MS-7LR mounted on a plate with an abort switch
- LED indicators that signal 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 pull 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 pull 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

Ordering Information

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.

MS-7 Series Technical Specifications

SYSTEMS

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.

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 (noncondensing) 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.

STANDARDS

The MS-7 Series 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 factory for latest listing status.

UL: S2465

FM: 3023594

MEA FDNY: 67-02-E Vol. VII

CSFM:
7160-1703:0119
7160-1703:0170
7160-1703:0109

ISO 9001 Certification

For more information

Learn more about Gamewell-FCI's MS-7 Series and other products available by visiting www.Gamewell-FCI.com

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E-SQUARED SYSTEMS, LLC.

Fire • Security • Card Access • CCTV

TAB 5

SMOKE/HEAT DETECTORS

Velociti® Series 3 Detectors

Photoelectric Detectors

Description

The Gamewell-FCI, Velociti® Series 3 intelligent photoelectric detectors with integral communication provide point location for alarm communication and selective maintenance. Designed in a modern bright white color, the Velociti Series 3 is aesthetically pleasing for today's contemporary buildings.

The Velociti Series 3 smoke detectors are intelligent addressable detectors with point ID capability that enable each detector address to be set with rotary address switches providing exact device locations. The photoelectric detector continually monitors the detected temperature and reports it to the fire alarm control panel. The modern design and expanded color options support a variety of contemporary aesthetic demands. In addition, each detector is constructed for exceptional installation and maintenance efficiency.

The Gamewell-FCI, ASD-PL3 photoelectric detector's re-designed optical sensing chamber is engineered to sense smoke produced by a wide range of combustion sources in accordance with more stringent code standards. The sensitivity of Velociti series detectors can be programmed using the control panel software to suit the environment. The ASD-PL3R photoelectric detector is also remote test capable that may be used with a DNR (DNRW) duct smoke detector housing. The ASD-PTL3 multi-sensor detector offers either photoelectric detection or thermal detection through dual electronic thermistors at 135°F fixed temperature thermal sensing.

For legacy installations, service detectors are available in the classic ivory color that will operate in both Velociti and CLIP protocol for backwards compatibility. Service models are designated by the -IV part number after the detector model.

Note: Although the E3 Series® and S3 Series panels support both the Velociti® and CLIP™ protocols, the GWF-7075 panel does not support the CLIP protocol. To obtain a complete list of panels that are listed to Velociti Series 3 detectors, refer to the Compatibility Addendum for Gamewell-FCI Manuals, P/N:9000-0427-L8.

Photoelectric Detector

FEATURES & BENEFITS

- Complies with UL® Standard 268 7th Edition
- Designed with a new profile to offer modern and improved aesthetics
- Contains a built-in functional test switch activated by external magnet
- Supports a low standby current
- Provides rotary address switches (01-159)
- Supplies optional relay, isolator, or sounder bases (standard or low frequency)
- Includes dual LEDs for 360° visibility
- Offers expanded color options

Ordering Information

NOTE: "-IV" suffix indicates Ivory color model.
NOTE: "-BL" suffix indicates Black color model.
NOTE: "WH" suffix indicates Bright White color model.

→ **ASD-PL3:** Photoelectric smoke detector, bright white, Velociti

ASD-PL3R: Photoelectric smoke detector, remote test capable, for use with DNR(W) duct smoke detectors, bright white, Velociti

ASD-PTL3: Photoelectric smoke detector with thermal sensing, bright white, Velociti

ASD-PL3-IV : Photoelectric smoke detector, ivory, Velociti/CLIP

ASD-PL3R-IV: Photoelectric smoke detector, remote test capable, for use with DNR(W) duct smoke detectors, ivory, Velociti/CLIP

ASD-PTL3-IV : Photoelectric smoke detector with thermal sensing, ivory, Velociti/CLIP

Intelligent Bases

For details on intelligent bases, refer to Data Sheet P/N: 9021-60540.

Note: "IV" suffix indicates Flashscan and CLIP devices.

"WH" suffix indicates bright white

B501-WHITE: 4" Flangeless mounting base, bright white

B501-WHITE-BP: 4" Flangeless mounting base bulk pack, bright white

B501-IV: 4" Flangeless mounting base, ivory

→ **B300-6:** 6" Flanged mounting base, bright white

B300-6-IV: 6" Flanged mounting base, ivory

B300-6-BP: 6" Flanged mounting base bulk (Pack of 10)

B200SR-WH: Standard sounder base, bright white

B200SR-IV: Standard sounder base, ivory

B200S-WH: Intelligent addressable sounder base, bright white

B200S-IV: Intelligent addressable sounder base, ivory

B200SR-LF-WH: Standard low frequency sounder base, bright white

B200SR-LF-IV: Standard low frequency sounder base, ivory

B200S-LF-WH: Intelligent addressable low frequency sounder base, bright white

B200S-LF-IV: Intelligent addressable low frequency sounder base, ivory

B224RB-WH: Relay base, bright white

B224RB-IV: Relay base, ivory

B224BI-WH: Isolator base, bright white

B224BI-IV: Isolator base, ivory

DNR: Intelligent duct detector housing, non-relay

DNRW: Intelligent duct detector housing, non-relay, watertight

Ordering Information

Accessories

SMB600: Surface Mounting Kit (flanged)

TR300: Accessory Flange Ring for B300 6" Base, bright white

TR300-IV: Accessory Flange Ring for B300 6" Base, ivory

RA100Z: Remote LED annunciator, 3-32 VDC

The annunciator mounts to a U.S. single-gang electrical box. For use with B501 and B300-6.

CK300: Bright White detector kit (Pack of 10)

CK300-IR: White, detector color kit for use with MCS-COF Series Detectors. (Pack of 10)

CK300-IV: Ivory, detector color kit. (Pack of 10)

CK300-IR-IV: Ivory, detector color kit for use with MCSCOF Series detectors. (Pack of 10)

CK300-BL: Black detector kit. (Pack of 10)

CK300-IR-Bl: Black, detector color kit for use with MCSCOF Series detectors. (Pack of 10)

M02-04-01: Detector test magnet.

M02-09-00: Test magnet with telescoping handle.

XR2B: Detector removal tool. Allows the installation and/or removal of the detector heads from the bases in high ceiling applications.

XP-4: Extension pole for XR2B. Shipped with three, 5-foot (1.524,m) sections.

Velociti® Series 3 Detectors Technical Specifications

SYSTEMS

Photoelectric Intelligent Detector:

Physical Specifications

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

Diameter:
6.1 inches (15.49 cm) installed in B300-6 base
4 inches (10.16 cm) installed in B501 base

Shipping Weight: 3.4 oz (96.4 g)

Operating Temperature Range:
Photo: 32° F to 122° F (0° C to 50° C)
Photo in Duct Applications: -4° F to 158° F (-20° C to 70° C)
Photo with Thermal: 32° F to 100° F (0° C to 38° C)

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

Rate-of-Rise Detection: Responds to greater than 15°F/minute or 135°F (8.3° C/minute or 57°C

Air Velocity Range: 0 to 4,000 ft/min (0 to 1219.2 m/min)

Electrical Specifications

Voltage Range: 15 to 32 VDC

Standby Current (@ 24 VDC): 200 UA (one communication every 5 seconds with green LED enabled)

Max Alarm Current (max.): 2 mA @ 24 VDC (one communication every 5 seconds with red LED enabled)

Max Current (max.): 4.5 mA @ 24 VDC (one communication every 5 seconds with amber LED enabled)

Isolator Load Rating: 0.0063

STANDARDS

The Velociti® Series 3 Photoelectric Detectors are designed to comply with the following standard:

UL Standard: UL 268

AGENCY LISTINGS AND APPROVALS

These listings and approvals apply to the modules specified in this document. In some cases, certain modules or applications may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.

UL: S2332
FM: 3023594
MEA FDNY: COA-219-02-E Vol. VI
CSFM: 7272-1703:0501
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

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For more information

Learn more about Gamewell-FCI's Velociti® Series 3 Detectors and other products available by visiting www.Gamewell-FCI.com

Honeywell

Velociti® Series 3 Detectors

Thermal Detectors

Description

The Gamewell-FCI, Velociti® Series 3 intelligent thermal detectors with integral communication provide point location for alarm communication and selective maintenance. Designed in a modern bright white color, the Velociti Series 3 is aesthetically pleasing for today's contemporary buildings.

The Velociti Series 3 heat detectors are intelligent addressable detectors with point ID capability that enable each detector address to be set with rotary address switches providing exact device locations. The thermal detector continually monitors the detected temperature and reports it to the fire alarm control panel. The modern design and expanded color options support a variety of contemporary aesthetic demands. In addition, each detector is constructed for exceptional installation and maintenance efficiency. Velociti Series 3 thermal detectors provide cost-effective, intelligent property protection using the following single thermistor:

- ATD-L3 offers 135ºF fixed thermal detection.
- ATD-L3R offers 135ºF fixed and rate-of-rise thermal detection.
- ATD-L3H provides fixed high-temperature detection at 190ºF .

For legacy installations, service detectors are available in the classic ivory color that will operate in both Velociti and CLIP protocol for backwards compatibility. Service models are designated by the -IV part number that appears after the detector model.

Note: The E3 Series® and S3 Series panels support both the Velociti® and CLIP™ protocols, and the GWF-7075 panel supports only the Velociti® protocol. To obtain a complete list of panels that are listed to Velociti Series 3 detectors, refer to the Compatibility Addendum for Gamewell-FCI Manuals, P/N:9000-0427-L8.

Thermal Detector

FEATURES & BENEFITS

- Complies with UL® 268 7th Edition
- Designed with a new profile to offer modern and improved aesthetics

- Contains a built-in functional test switch activated by an external magnet
- Supports a low standby current

- Provides rotary address switches (01–159)
- Supplies optional relay, isolator, or sounder bases (standard or low frequency)

- Includes dual LEDs used for 360º visibility

- Offers expanded color options

Ordering Information

NOTE: "-IV" suffix indicates Ivory color model.

NOTE: "-BL" suffix indicates Black color model.

NOTE: "WH" suffix indicates Bright White color model.

➤ **ATD-L3:** Thermal heat detector, 135°F fixed, bright white, Velociti

ATD-L3-IV: Thermal heat detector, 135°F fixed, ivory, Velociti/CLIP

ATD-L3R: Thermal heat detector, 135°F rate of rise, bright white, Velociti

ATD-L3R-IV: Thermal heat detector, 135°F rate of rise, ivory, Velociti/CLIP

ATD-L3H: Thermal heat detector, 190°F high temp, bright white, Velociti

ATD-L3H-IV: Thermal heat detector, 190°F high temp, ivory, Velociti/CLIP

Intelligent Bases

For details on intelligent bases, refer to Data Sheet P/N: 9021-60540.

B501-White: 4" Flangeless mounting base, bright white

B501-White-BP: 4" Flangeless mounting base bulk pack, bright white

B501-IV: 4" Flangeless mounting base, ivory

B501-BL
4" Flangeless mounting base,

➤ **B300-6:** 6" Flanged mounting base, bright white

B300-6-IV: 6" Flanged mounting base, ivory

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

B200SR-WH: Standard sounder base, bright white

B200SR-IV: Standard sounder base, ivory

B200S-WH: Intelligent addressable sounder base, bright white

B200S-IV: Intelligent addressable sounder base, ivory

B200SR-LF-WH: Standard low frequency sounder base, bright white

B200SR-LF-IV: Standard low frequency sounder base, ivory

B200S-LF-WH: Intelligent addressable low frequency sounder base, bright white

B200S-LF-IV: Intelligent addressable low frequency sounder base, ivory

B224RB-WH: Relay base, bright white

B224RB-IV: Relay base, ivory

B224BI-WH: Isolator base, bright white

B224BI-IV: Isolator base, ivory

Ordering Information

Accessories

SMB600: Surface Mounting Kit (flanged)

TR300: Accessory Flange Ring for B300 6" Base, bright white

TR300-IV: Accessory Flange Ring for B300 6" Base, ivory

RA100Z: Remote LED annunciator, 3-32 VDC

The annunciator mounts to a U.S. single-gang electrical box. For use with B501 and B300-6.

CK300: Bright White detector kit (Pack of 10)

CK300-IR: White, detector color kit for use with MCS-COF Series Detectors. (Pack of 10)

CK300-IV: Ivory, detector color kit. (Pack of 10)

CK300-IR-IV: Ivory, detector color kit for use with MCS-COF Series detectors. (Pack of 10)

CK300-BL: Black detector kit (Pack of 10)

CK300-IR-Bl: Black, detector color kit for use with MCS-COF Series detectors. (Pack of 10)

M02-04-01: Detector test magnet.

M02-09-00: Test magnet with telescoping handle.

XR2B: Detector removal tool. Allows the installation and/or removal of the detector heads from the bases in high ceiling applications.

XP-4: Extension pole for XR2B. Shipped with three, 5-foot (1.524,m) sections.

Velociti® Series 3 Detectors Technical Specifications

SYSTEMS

Thermal Intelligent Detector

Physical Specifications

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

Diameter:

6.1 inches (15.6 cm) installed in B300-6 base

4 inches (10.2 cm) installed in B501 base

Shipping Weight: 3.4 oz (95 g)

Operating Temperature Range:

Thermal 135° F fixed: -4° F to 100° F (-20° C to 38° C)

Thermal 135° F rate-of-rise: -4° F to 100° F (-20° C to 38° C)

Thermal 190° F rate-of-rise: -4° F to 135° F (-20° C to 57° C)

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

Rate-of-Rise Detection: : Responds to greater than 15°F/minute or 135°F (8.3° C/minute or 57°C

Electrical Specifications

Voltage Range: : 15 to 32 VDC

Standby Current (@ 24 VDC): 200 uA (one communication every 5 seconds with green LED enabled)

Max Alarm Current (max.): : 2 mA @ 24 VDC (one communication every 5 seconds with red LED enabled)

Max Current (max.): : 4.5 mA @ 24 VDC (one communication every 5 seconds with amber LED enabled)

Isolator Load Rating: : 0.0063

STANDARDS

The Velociti® Series 3 Thermal Detectors are designed to comply with the following standard:

UL Standard: UL 268

AGENCY LISTINGS AND APPROVALS

These listings and approvals apply to the modules specified in this document. In some cases, certain modules or applications may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.

UL: S2332

FM: 3023594

MEA-FDNY: 219-02-E Vol. VI

CSFM: 7270-1703-0502

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

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For more information

Learn more about Gamewell-FCI's Velociti® Series 3 Detectors and other products available by visiting www.Gamewell-FCI.com

Honeywell

System Sensor®

Select Series Mounting Base Options

System Sensor mounting bases and kits provide a variety of installation options for detectors in any application.

Features

- Bases enable quick and secure detector plug-in
- SEMS screws provide easy wiring connection
- Support for 12-24 AWG provides installation flexibility
- Multiple base formats meet application requirements
- Standard white color with ivory and black options
- UL 268 compliant
- Mechanical locking feature restricts removal of attached sensor head

Specialty Base Features

- Pre-wired mounting plate simplifies installation
- Application driven feature sets
- Sounder bases both UL 268 and UL 464 compliant

Agency Listings

SIGNALING
UL LISTED
S911

FM APPROVED
3062622

4" & 6" bases: 7300-1653:0109
Relay & Isolator bases: 7300-1653:0126
Sounder bases: 7135-1653:0213
Low-frequency bases: 7300-1653:0238

To meet local code and application requirements, System Sensor offers **standard 4" and 6" bases**, as well as, specialty base designs including relay, isolator, sounder and low frequency sounder options for Select Series detectors.

The standard 4" and 6" bases offer a plug-in detector base intended for use in intelligent systems, with screw terminals provided for power (+ and −), and remote annunciator connections. Communication takes place over the power (+ and −) lines. The 4" base offers a compact design while the 6" base provides compatibility with a wider range of junction boxes.

The Select Series specialty bases support application driven requirements. The bases employ a separate mounting plate that installs on various junction box sizes to eliminate unsightly surface-mount boxes. The mounting plate enables pre-wiring of all connections to speed and simplify installation.

Relay bases (B224RB-WH/B224RB-IV) provide one form C contact relay for control of auxiliary functions, such as door closure and elevator recall. The relay can operate in two different modes (short and long delay). The activation time for the short delay is 60 ms to 100 ms, while the activation time for the long delay is 6 sec to 10 sec. A shunt with pin headers, located on the base PC board, is used to set the delay timing.

Isolator bases (B224BI-WH/B224BI-IV) allow the Signaling Line Circuit (SLC) loop to operate under fault conditions created from a short circuit preventing an entire communication loop from being disabled. The base isolates the section of the loop containing the short circuit from the remainder of the circuit and automatically restores when the fault is corrected.

The Select Series **sounder and low frequency sounder bases** are designed for new and existing dwelling unit applications. They offer maximum flexibility in installation, configuration, and operation to meet or exceed UL 268 and UL 464 requirements. The
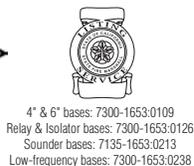
† Consult your fire alarm control panel manufacturer for compatibility with the addressable model of the sounder base.

Select Series low frequency sounder bases are designed to meet the NFPA 72 sleeping space requirement to produce a fundamental frequency of 520 Hz +/- 10% with a square wave or its equivalent. Studies show that a lower frequency, centered around 520 Hz, is the most ideal to wake sleeping occupants, even those with mild to severe hearing loss. The B200SR sounder and LF sounder bases (B200SR-WH/B200SR-IV/B200SR-LF-WH/ B200SR-LF-IV) are fully compatible with existing B501BH-Series sounder base installations. The device enables users to select one of two B501-supported tones (ANSI Temporal 3 or Continuous) through a jumper.

The B200S sounder and LF sounder bases (B200S-WH/B200S-IV/B200S-LF-WH/ B200S-LF-IV) adopt the same address as the detector, but use a unique device type on the loop. The Fire Alarm Control Panel (FACP) can use that address to command an individual sounder — or a group of sounders — to activate. The command set from the FACP can be tailored to multiple event-driven tone outputs allowing selection of volume (75 or 85 dBA), tone (ANSI Temporal 3, ANSI Temporal 4 or March Time) and group. In addition, some FACPs will enable custom tone patterns. The B200S series sounder bases recognize the System Sensor synchronization protocol. This enables it to be used as a component of the general evacuation signal — along with other System Sensor AV appliances — when connected to a power supply or FACP output capable of generating the System Sensor synchronization pulses.

Specifications – Select Series Bases

Physical Specifications	
Diameter	B501-WHITE, B501-IV, B501-BL: 4.0" (10.2 cm) B200S-WH, B200S-IV, B200S-LF-WH, B200S-LF-IV, B200SR-WH, B200SR-IV, B200SR-LF-WH, B200SR-LF-IV: 6.85" (17.4 cm) B300-6, B300-6-IV: 6.1" (155 mm) B224BI-WH, B224BI-IV, B224RB-WH, B224RB-IV: 6.85" (17.4 cm)
Base Height (without sensor)	B501-WHITE, B501-IV, B501-BL: 0.74" (18.8 mm) B200S-WH, B200S-IV, B200S-LF-WH, B200S-LF-IV, B200SR-WH, B200SR-IV, B200SR-LF-WH, B200SR-LF-IV: 1.6" (4.1 cm) B300-6, B300-6-IV: 0.76" (19 mm) B224BI-WH, B224BI-IV, B224RB-WH, B224RB-IV: 1.61" (4.1 cm)
Weight:	B501-WHITE 0.32 lb (145 gm) B200S-WH, B200S-IV, B200SR-WH, B200SR-IV: 0.50 lb (227 gm) B200S-LF-WH, B200S-LF-IV, B200SR-LF-WH, B200SR-LF-IV: Weight: 0.6 lb (272 gm) B300-6, B300-6-IV: 0.32 lb (145 gm) B224RB-WH, B224RB-IV, B224BI-WH, B224BI-IV 0.50 lb (227 gm)
Wire Gauge	B501-WHITE, B501-IV, B501-BL, B224BI-WH, B224BI-IV, B224RB-WH, B224RB-IV, B300-6, B300-6-IV: 18 AWG (0.823 mm^2) to 12 AWG (3.31 mm^2) B200S-WH, B200S-IV, B200S-LF-WH, B200S-LF-IV, B200SR-WH, B200SR-IV, B200SR-LF-WH, B200SR-LF-IV: 14 AWG to 12 AWG
Temperature Range	Refer to applicable sensor Operating Temperature Range using the Base/Sensor Cross Reference Chart at systemsensor.com
Humidity Range	10% to 93% RH non-condensing

Electrical Specifications: B501-WHITE, B501-IV, B501-BL (Includes base and detector)	
Operating Voltage	15 to 32 VDC
Standby Current	150 µA

Electrical Specifications: B300-6, B300-6-IV	
Operating Voltage	15 to 32 VDC
Standby Current	170 µA max.

Electrical Specifications: B224BI-WH, B22BI-IV	
Operating Voltage	15 to 32 VDC
Standby Current	450 µA max.
Isolation Current	15 mA max

Electrical Specifications: B224RB-WH, B22RB-IV	
Operating Voltage	15 to 32 VDC
Standby Current	170 µA max.
Set Time	Position 1, Short Delay: 60 to 100 ms Position 2, Long Delay: 6 to 10 sec
Reset Time	20 ms max.
Relay Characteristics	2 coil latching relay 1 Form C contact UL/ULC Rating:

CURRENT RATING	MAXIMUM VOLTAGE	LOAD DESCRIPTION	APPLICATION
2 A	25 VAC	PF = 0.35	Non-coded
3 A	30 VDC	Resistive	Non-coded
2 A	30 VDC	Resistive	Coded
0.46 A	30 VDC	(L/R = 20ms)	Non-coded
0.7 A	70.7 VAC	PF = 0.35	Non-coded
0.9 A	125 VDC	Resistive	Non-coded
0.5 A	125 VAC	PF = 0.75	Non-coded
0.3 A	125 VAC	PF = 0.35	Non-coded

Electrical Specifications: B200S-WH, B200S-IV	
External Supply Electrical Ratings	
External Supply Voltage	16 to 33 VDC (VFWR)
Standby Current:	500 µA maximum
Alarm Current:	35 mA maximum (at high volume setting); 15 mA maximum (at low volume setting)
SLC Electrical Ratings	
SLC Operating Voltage:	15 to 32 VDC
SLC Standby Current:	300 µA maximum
Sound Output	
High Volume:	Greater than 85 dBA minimum measured in a UL reverberant room at 10 feet, 24 Volts (in continuous tone)
Low Volume:	Greater than 75 dBA minimum measured in a UL reverberant room at 10 feet, 24 Volts (in continuous tone)

Electrical Specifications: B200S-LF-WH, B200S-LF-IV	
External Supply Electrical Ratings	
External Supply Voltage	16 to 33 VDC (VFWR)
Standby Current:	550 µA maximum VDC
Alarm Current, High-volume setting	
	70 mA maximum @ 33.0 VDC 90 mA maximum @ 24.0 VDC 140 mA maximum @16.0 VDC
Alarm Current, Low-volume setting	
	15 mA maximum @ 33.0 VDC 20 mA maximum @ 24.0 VDC 25 mA maximum @ 16.0 VDC
SLC Electrical Ratings	
SLC Operating Voltage:	15 to 32 VDC
SLC Standby Current:	300 µA maximum (base only, refer to applicable sensor specification)
Sound Output	
High Volume:	Greater than 85 dBA minimum measured in a UL reverberant room at 10 feet, 24 Volts (in continuous tone)
Low Volume:	Greater than 75 dBA minimum measured in a UL reverberant room at 10 feet, 24 Volts (in continuous tone)

Electrical Specifications: B200SR-WH, B200SR-IV	
External Supply Electrical Ratings	
External Supply Voltage	16 to 33 VDC (VFWR)
Standby Current:	500 µA maximum
Alarm Current:	35 mA maximum
SLC Electrical Ratings	
SLC Operating Voltage:	15 to 32 VDC
SLC Standby Current:	300 µA maximum
Sound Output	Greater than 85 dBA minimum measured in a UL reverberant room at 10 feet, 24 Volts (in continuous tone)

Electrical Specifications: B200SR-LF-WH, B200SR-LF-IV	
External Supply Electrical Ratings	
External Supply Voltage	16 to 33 VDC (VFWR)
Standby Current:	1 mA maximum VDC
Alarm Current	65 mA maximum @ 33.0 VDC 90 mA maximum @ 24.0 VDC 125 mA maximum @16.0 VDC
SLC Electrical Ratings	
SLC Operating Voltage:	15 to 32 VDC
SLC Standby Current:	Refer to applicable sensor specification.
Sound Output	Greater than 85 dBA minimum measured in a UL reverberant room at 10 feet, 24 Volts (in continuous tone)

Select Series Junction Box Selection Guide

Model	Single Gang	Double Gang	3.5" Octagonal	4" Octagonal	4" Square	4" Square with mud ring*	50 mm	60 mm	70 mm	75 mm
B501-WHITE, B501-IV, B501-BL	No	No	Yes	No	No	Yes	Yes	Yes	Yes	No
B200S-WH, B200S-IV, B200S-LF-WH, B200S-LF-IV, B200SR-WH, B200SR-IV, B200SR-LF-WH, B200SR-LF-IV	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No
B300-6, B300-6-IV	Yes	No	Yes	Yes	Yes	Yes	No	No	No	No
B224BI-WH, B224BI-IV	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No
B224RB-WH, B224RB-IV	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No

* with 3.0" mud ring

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

Ordering Information

Model			Description
White	Ivory	Black	
B501-WHITE	B501-IV	B501-BL	4" Flangeless mounting base
B501-WHITE-BP	—	—	4" Flangeless mounting base bulk pack, white
B300-6	B300-6-IV	—	6" Flanged mounting base
B300-6-BP	—	—	6" Flanged mounting base bulk pack, white
B200S-WH	B200S-IV	—	Intelligent addressable sounder base
B200S-LF-WH	B200S-LF-IV	—	Intelligent addressable sounder base, low-frequency
B200SR-WH	B200SR-IV	—	Standard sounder base (compatible with B501BH series)
B200SR-LF-WH	B200SR-LF-IV	—	Low-frequency sounder base (compatible with B501BH series)
B224BI-WH	B224BI-IV	—	Isolator base
B224RB-WH	B224RB-IV	—	Relay base

Related Accessories

White	Ivory	Black	
CK300	CK300-IV	CK300-BL	Color kit (includes cover and trim ring)
CK300-IR	CK300-IR-IV	CK300-IR-BL	PTIR Color kit (includes cover and trim ring)
TR300	TR300-IV	—	Trim ring
—	SMB600		Surface mounting kit (flanged), ivory
RA100Z	—	—	Remote LED annunciator
M02-04-00			Detector test magnet
M02-09-00			Test magnet with telescoping handle

Accessories

RA100Z
Remote LED Annunciator

CK300-BL
Color Kit

TR300
Trim Ring

Premier Low Voltage Systems by:

E² Systems

E-SQUARED SYSTEMS, LLC.

Fire • Security • Card Access • CCTV

TAB 6

NOTIFICATION DEVICES

Indoor Selectable-Output Horns, Strobes, and Horn Strobes for Wall 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

- Updated Modern Aesthetics
- Small profile devices for Horns and Horn Strobes
- 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 wall units: 15, 30, 75, 95, 110, 135, and 185
- Horn rated at 88+ dBA at 16 volts
- Rotary switch for horn tone and two volume selections
- Mounting plate for all standard and all compact wall units
- Mounting plate shorting spring checks wiring continuity before device installation
- Electrically compatible with legacy SpectrAlert and SpectrAlert Advance devices
- Compatible with MDL3 sync module
- Strobes and Horn Strobes listed for wall mounting only
- Horns listed for wall or ceiling use

Agency Listings

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, standard and compact devices, and plain, FIRE, and FUEGO-printed devices, System Sensor L-Series can meet virtually any application requirement.

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

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

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.

L-Series Specifications

General

L-Series standard horns, strobes, and horn strobes shall mount to a standard 2 x 4 x 1⅞-inch back box, 4 × 4 × 1½-inch back box, 4-inch octagon back box, or double-gang back box. L-Series compact products shall mount to a single-gang 2 × 4 × 1⅞-inch back box. A universal mounting plate shall be used for mounting ceiling and wall products for all standard models and a separate universal mounting plate shall be used for mounting wall compact models. 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. Strobes and horn strobes shall have field-selectable candela settings including 15, 30, 75, 95, 110, 135, and 185.

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 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 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/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 DC 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 Sync Module	8.5 to 17.5 V (12 V nominal) or 16.5 to 33 V (24 V nominal)
Input Terminal Wire Gauge	12 to 18 AWG
Wall-Mount Dimensions (including lens)	5.6″L × 4.7″W × 1.91″D (143 mm L × 119 mm W × 49 mm D)
Compact Wall-Mount Dimensions (including lens)	5.26" L x 3.46" W x 1.91" D (133 mm L x 88 mm W x 49 mm D)
Horn Dimensions	5.6″L × 4.7″W × 1.25″D (143 mm L × 119 mm W × 32 mm D)
Compact Horn Dimensions	5.25" L x 3.45" W x 1.25" D (133 mm L x 88 mm W x 32 mm D)

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 cd 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	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

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), Wall Horn Strobe, Candela Range (15–185 cd)								
	8–17.5 Volts		16–33 Volts					
DC Input	15cd	30cd	15cd	30cd	75cd	95cd	110cd	135cd	185cd
Temporal High	98	158	54	74	121	142	162	196	245
Temporal Low	93	154	44	65	111	133	157	184	235
Non-Temporal High	106	166	73	94	139	160	182	211	262
Non-Temportal Low	93	156	51	71	119	139	162	190	239
3.1K Temporal High	93	156	53	73	119	140	164	190	242
3.1K Temporal Low	91	154	45	66	112	133	160	185	235
3.1K Non-Temporal High	99	162	69	90	135	157	175	208	261
3.1K Non-Temporal Low	93	156	52	72	119	138	162	192	242

	16–33 Volts						
FWR Input	15cd	30cd	75cd	95cd	110cd	135cd	185cd
Temporal High	83	107	156	177	198	234	287
Temporal Low	68	91	145	165	185	223	271
Non-Temporal High	111	135	185	207	230	264	316
Non-Temportal Low	79	104	157	175	197	235	283
3.1K Temporal High	81	105	155	177	196	234	284
3.1K Temporal Low	68	90	145	166	186	222	276
3.1K Non-Temporal High	104	131	177	204	230	264	326
3.1K Non-Temporal Low	77	102	156	177	199	234	291

Horn Tones and Sound Output Data

Horn and 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
9*	Coded	High	85	90	90
10*	3.1 KHz Coded	High	84	89	89

* Settings 9 and 10 are not available on 2-wire horn strobes. Temporal coding must be provided by the NAC. If the NAC voltage is held constant, the horn output remains constantly on.

L-Series Dimensions

Compact Strobe, Horn Strobe

3.46" 88 mm
5.27" 133.9 mm
1.91" 48.5 mm
1.25" 32 mm
A0548-00

Compact Horn

3.46" 88 mm
5.27" 133.9 mm
1.25" 32 mm
A0547-00

Compact Wall Surface Mount Back Box SBBGRL, SBBGWL

1.25" 32 mm
3.57" (9.1 cm)
5.38" (13.7 cm)
1.55" (3.9 cm)
A0557-00

Strobe, Horn Strobe

4.70" (11.94 cm)
5.67" (14.4 cm)
1.91" (4.85 cm)
1.25" (3.18 mm)
A0550-00

Horn

4.7" 119 mm
5.67" 144 mm
1.25" 32 mm
A0549-00

Wall Surface Mount Back Box SBBRL/SBBWL

4.82" (12.24 cm)
5.78" (14.68 cm)
1.85" (4.69 cm)
A0554-01

L-Series Ordering Information

Model	Description
Wall Horn Strobes	
P2RL	2-Wire, Horn Strobe, Red
P2WL	2-Wire, Horn Strobe, White
P2GRL	2-Wire, Compact Horn Strobe, Red
P2GWL	2-Wire, Comp 2 fils act Horn Strobe, White
P2RL-P	2-Wire, Horn Strobe, Red, Plain
P2WL-P	2-Wire, Horn Strobe, White, Plain
P2RL-SP	2-Wire, Horn Strobe, Red, FUEGO
P2WL-SP	2-Wire, Horn Strobe, White, FUEGO
P4RL	4-Wire, Horn Strobe, Red
P4WL	4-Wire, Horn Strobe, White
Wall Strobes	
SRL	Strobe, Red
SWL	Strobe, White
SGRL	Compact Strobe, Red
SGWL	Compact Strobe, White
SRL-P	Strobe, Red, Plain
SWL-P	Strobe, White, Plain
SRL-SP	Strobe, Red, FUEGO
SWL-CLR-ALERT	Strobe, White, ALERT

Model	Description
Horns*	
HRL*	Horn, Red
HWL*	Horn, White
HGRL*	Compact Horn, Red
HGWL*	Compact Horn, White
Accessories	
TR-2	Universal Wall Trim Ring Red
TR-2W	Universal Wall Trim Ring White
SBBRL	Wall Surface Mount Back Box, Red
SBBWL	Wall Surface Mount Back Box, White
SBBGRL	Compact Wall Surface Mount Back Box, Red
SBBGWL	Compact Wall Surface Mount Back Box, White

Notes:

All -P models have a plain housing (no "FIRE" marking on cover).
All -SP models have "FUEGO" marking on cover.
All -ALERT models have "ALERT" marking on cover.
*Horn-only models are listed for wall or ceiling use.

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

Outdoor Selectable-Output Horns, Strobes, and Horn Strobes for Wall Applications

SpectrAlert® Advance outdoor audible visible products are rich with features that cut installation times and maximize profits.

Features

- Weatherproof per NEMA 4X, IP56
- Listed to UL 1638 (strobe) and UL 464 (horn)
- Compatible with System Sensor synchronization protocol and legacy SpectrAlert products
- 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 horn tone and three volume selections
- Horn rated at 88+ dBA at 16 volts
- Rated from −40°F to 151°F
- Universal mounting plate with an onboard shorting spring that tests wiring continuity before devices are installed
- Plug-in design with minimal intrusion into the back box
- Tamper-resistant construction
- Listed for ceiling or wall mounting

Agency Listings

SpectrAlert Advance offers the broadest line of outdoor horns, strobes, and horn strobes in the industry. With white or red plastic housings, wall or ceiling mounting options, and plain or FIRE-printed devices, SpectrAlert Advance can meet virtually any application requirement, including indoor, outdoor, wet, and dry applications in temperatures from −40°F to 151°F.

Like the entire SpectrAlert Advance line, outdoor horns, strobes, and horn strobes for wall applications include a variety of features that increase application flexibility and simplify installation. First, field-selectable settings, including candela, automatic selection of 12- or 24-volt operation, horn tones, and three volume options enable installers to easily adapt devices to meet requirements.

Next, SpectrAlert Advance devices use a universal mounting plate for both wall and ceiling applications. This mounting plate includes 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 Horn, Strobe, and Horn StrobeSpecifications

Architect/Engineer Specifications

General

SpectrAlert Advance outdoor horns, strobes, and horn 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 wiring shall terminate at the universal mounting plate. Also, SpectrAlert Advance 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. Outdoor SpectrAlert Advance products shall operate between −40 and 151 degrees Fahrenheit from a regulated DC or full-wave rectified unfiltered power supply. Strobes and horn strobes shall have field-selectable candela settings including 15, 15/75, 30, 75, 95, 110, 115, 135, 150, 177, and 185.

Strobe

The strobe shall be a System Sensor SpectrAlert Advance 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. The strobe must be installed with its weatherproof back box in order to remain outdoor approved per UL. The strobe shall be suitable for use in wet environments.

Horn Strobe Combination

The horn strobe shall be a System Sensor SpectrAlert Advance 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 three audibility options and an option to switch between a temporal three pattern and a non-temporal (continuous) pattern. These options shall be set by a multiple position switch. On four-wire products, the strobe shall be powered independently of the sounder. The horn or horn strobe models shall operate on a coded or non-coded power supply. The horn strobe must be installed with its weatherproof back box in order to remain outdoor approved per UL. The horn strobe shall be suitable for use in wet environments.

Physical/Electrical Specifications

Operating Temperature	−40°F to 151°F (−40°C to 66°C)
Strobe Flash Rate	1 flash per second
Nominal Voltage	Regulated 12 DC/FWR 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 with MLD3 Sync Module	8.5 to 17.5 V (12 V nominal) or 16.5 to 33 V (24 V nominal)
Input Terminal Wire Gauge	12 to 18 AWG
Wall-Mount Dimensions (including lens)	5.6″L × 4.7″W × 2.5″D (142 mm L × 119 mm W × 64 mm D)
Horn Dimensions	5.6″L × 4.7″W × 1.3″D (142 mm L × 119 mm W × 33 mm D)
Wall-Mount Weatherproof Back Box Dimensions (SA-WBB)	5.7″L × 5.1″W × 2.0″D (145 mm L × 130 mm W × 51 mm D)

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. 2. P, S, PC, and SC products will operate at 12 V nominal only for 15 and 15/75 cd.

UL Current Draw Data

UL Max. Strobe Current Draw (mA RMS)

	Candela	8–17.5 Volts DC	8–17.5 Volts FWR	16–33 Volts DC	16–33 Volts 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

UL Max. Horn Current Draw (mA RMS)

Sound Pattern	dB	8–17.5 Volts DC	8–17.5 Volts FWR	16–33 Volts DC	16–33 Volts FWR
Temporal	High	57	55	69	75
Temporal	Medium	44	49	58	69
Temporal	Low	38	44	44	48
Non-Temporal	High	57	56	69	75
Non-Temporal	Medium	42	50	60	69
Non-Temporal	Low	41	44	50	50
Coded	High	57	55	69	75
Coded	Medium	44	51	56	69
Coded	Low	40	46	52	50

UL Max. Current Draw (mA RMS), 2-Wire Horn Strobe, Standard Candela Range (15–115 cd)

	8–17.5 Volts 15	8–17.5 Volts 15/75	16–33 Volts 15	15/75	30	75	95	110	115
DC Input									
Temporal High	137	147	79	90	107	176	194	212	218
Temporal Medium	132	144	69	80	97	157	182	201	210
Temporal Low	132	143	66	77	93	154	179	198	207
Non-Temporal High	141	152	91	100	116	176	201	221	229
Non-Temporal Medium	133	145	75	85	102	163	187	207	216
Non-Temporal Low	131	144	68	79	96	156	182	201	210
FWR Input									
Temporal High	136	155	88	97	112	168	190	210	218
Temporal Medium	129	152	78	88	103	160	184	202	206
Temporal Low	129	151	76	86	101	160	184	194	201
Non-Temporal High	142	161	103	112	126	181	203	221	229
Non-Temporal Medium	134	155	85	95	110	166	189	208	216
Non-Temporal Low	132	154	80	90	105	161	184	202	211

UL Max. Current Draw (mA RMS), 2-Wire Horn Strobe, High Candela Range (135–185 cd)

DC Input	16–33 Volts 135	150	177	185	FWR Input	16–33 Volts 135	150	177	185
Temporal High	245	259	290	297	Temporal High	215	231	258	265
Temporal Medium	235	253	288	297	Temporal Medium	209	224	250	258
Temporal Low	232	251	282	292	Temporal Low	207	221	248	256
Non-Temporal High	255	270	303	309	Non-Temporal High	233	248	275	281
Non-Temporal Medium	242	259	293	299	Non-Temporal Medium	219	232	262	267
Non-Temporal Low	238	254	291	295	Non-Temporal Low	214	229	256	262

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	
15/75	Do not use below 32°F
30	
75	44
95	70
110	110
115	115
135	135
150	150
177	177
185	185

Horn Tones and Sound Output Data

Horn and Horn Strobe Output (dBA)

Switch Position	Sound Pattern	dB	8–17.5 Volts DC	8–17.5 Volts FWR	16–33 Volts DC	16–33 Volts FWR	24-Volt Nominal Reverberant DC	Reverberant FWR	Anechoic DC	Anechoic FWR
1	Temporal	High	78	78	84	84	88	88	99	98
2	Temporal	Medium	74	74	80	80	86	86	96	96
3	Temporal	Low	71	73	76	76	83	80	94	89
4	Non-Temporal	High	82	82	88	88	93	92	100	100
5	Non-Temporal	Medium	78	78	85	85	90	90	98	98
6	Non-Temporal	Low	75	75	81	81	88	84	96	92
7[†]	Coded	High	82	82	88	88	93	92	101	101
8[†]	Coded	Medium	78	78	85	85	90	90	97	98
9[†]	Coded	Low	75	75	81	81	88	85	96	92

[†]Settings 7, 8, and 9 are not available on 2-wire horn strobe.

SpectrAlert Advance Diagrams

119mm
4.7″

64mm
2.5″

142mm
5.6″
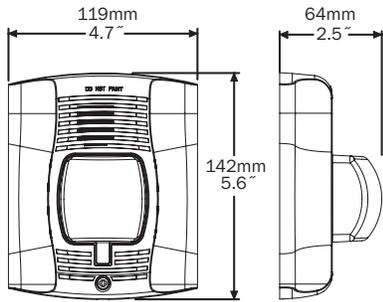
Wall-Mount Horn Strobes
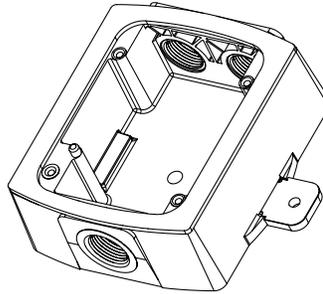
Wall Plastic Weatherproof Back Box
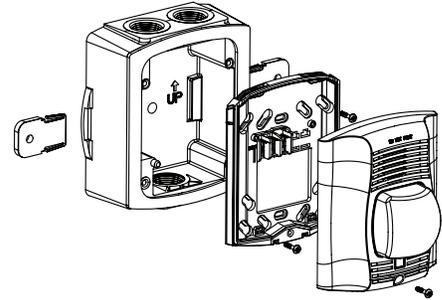
Wall-Mount Horn Strobe with Plastic Weatherproof Back Box

SpectrAlert Advance Ordering Information

Model		Description
Red	**White**	
Wall Horn Strobes		
P2RK	P2WK	2-Wire Horn Strobe, Standard cd, Outdoor (includes plastic weatherproof back box)
P2RK-P	P2WK-P	2-Wire Horn Strobe, Standard cd, Outdoor, Plain (includes plastic weatherproof back box)
P2RK-R	P2WK-R	2-Wire Horn Strobe, Standard cd, Outdoor (does not include plastic weatherproof back box)
P2RHK	P2WHK	2-Wire Horn Strobe, High cd, Outdoor (includes plastic weatherproof back box)
P2RHK-P	P2WHK-P	2-Wire Horn Strobe, High cd, Outdoor, Plain (includes plastic weatherproof back box)
P2RHK-R	P2WHK-R	2-Wire Horn Strobe, High cd, Outdoor (does not include plastic weatherproof back box)
P4RK	P4WK	4-Wire Horn Strobe, Standard cd, Outdoor (includes plastic weatherproof back box)
P4RK-R	—	4-Wire Horn Strobe, Standard cd, Outdoor (does not include plastic weatherproof back box)
P2RHK-120	—	2-Wire Horn Strobe, High cd, Outdoor, 120 V (includes plastic weatherproof back box)
Wall Strobes		
SRK	SWK	Strobe, Standard cd, Outdoor (includes plastic weatherproof back box)
SRK-P	SWK-P	Strobe, Standard cd, Outdoor, Plain (includes plastic weatherproof back box)
SRK-R	SWK-R	Strobe, Standard cd, Outdoor (does not include plastic weatherproof back box)
SRHK	SWHK	Strobe, High cd, Outdoor (includes plastic weatherproof back box)
SRHK-P	SWHK-P	Strobe, High cd, Outdoor, Plain (includes plastic weatherproof back box)
SRHK-R	SWHK-R	Strobe, High cd, Outdoor (does not include plastic weatherproof back box)
Horns		
HRK	—	Horn, Red, Outdoor (includes plastic weatherproof back box)
HRK-R	—	Horn, Red, Outdoor (does not include plastic weatherproof back box)
Accessories		
SA-WBB	SA-WBBW	Metal Weatherproof Back Box
WTP	WTPW	Metal Weatherproof Outdoor Flush-mounting Plate

Notes:

All -P models have a plain housing (no "FIRE" marking on cover). All -R models require metal weatherproof outdoor flush mounting plate or a metal weatherproof outdoor back box (order separately). "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.**

Premier Low Voltage Systems by:

E² Systems

E-SQUARED SYSTEMS, LLC.

Fire ◆ Security ◆ Card Access ◆ CCTV

TAB 7

SYSTEM BATTERIES

DURACELL®
ULTRA

General Purpose
DURA12-8F

Specification

Cells Per Unit	6
Voltage Per Unit	12
Capacity	8.0Ah@20hr-rate to 1.75V per cell @25°C
Weight	Approx. 2.26 Kg (Tolerance±4%)
Max. Discharge Current	80 A (5 sec)
Internal Resistance	Approx. 25 mΩ
Operating Temperature Range	Discharge: -20°C~60°C Charge: 0°C~50°C Storage: -20°C~60°C
Normal Operating Temperature Range	25°C±5°C
Float charging Voltage	13.7 to 13.9 VDC/unit Average at 25°C
Recommended Maximum Charging Current Limit	2.4 A
Equalization and Cycle Service	14.6 to 14.8 VDC/unit Average at 25°C
Self Discharge	Duracell® Ultra Valve Regulated Lead Acid (VRLA) batteries can be stored for more than 6 months at 25°C. Self-discharge ratio less than 3% per month at 25°C. Please charge batteries before using.
Terminal	Faston Tab 187(F1)/Faston tab 250(F2)
Constainer Material	A.B.S. UL94-HB, UL94-V0 Optional.

MH20720

G4M20206-0910-E-16

IQNet
THE INTERNATIONAL CERTIFICATION NETWORK
CERTIFICATE
Postcode.:421001
is in conformity with
ISO 14001:2004 Standard

IQNet
THE INTERNATIONAL CERTIFICATION NETWORK
CERTIFICATE
Postcode.:421001
is in conformity with
OHSAS 18001:1999 Standard

Dimensions

Unit: mm   Dimension: 151(L)×65(W)×100(H)

F 1 4.75
3.15
6.35
0.8

151

65

94 100
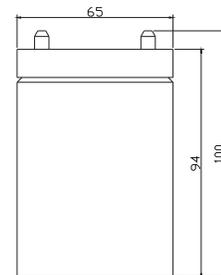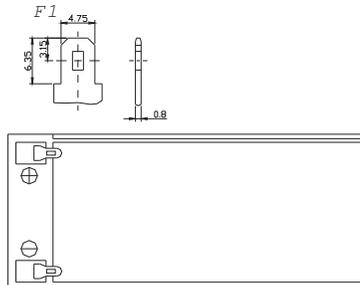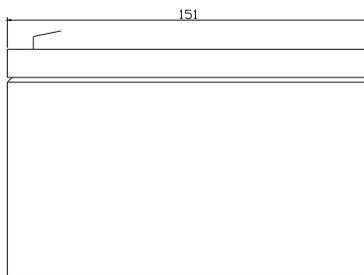
Constant Current Discharge Characteristics : A(25°C)

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
9.60V	31.55	20.69	15.41	8.202	5.199	3.179	2.095	1.706	1.402	0.924	0.800	0.428
10.0V	30.41	20.17	14.91	8.097	5.130	3.115	2.056	1.682	1.390	0.920	0.792	0.424
10.2V	28.63	19.17	14.50	7.973	5.081	3.082	2.038	1.665	1.381	0.912	0.779	0.413
10.5V	25.73	17.93	13.68	7.753	5.019	3.042	2.020	1.641	1.369	0.904	0.776	0.404
10.8V	23.06	16.72	12.90	7.497	4.949	3.017	1.996	1.585	1.362	0.900	0.763	0.388
11.1V	20.17	15.33	11.90	7.212	4.832	2.896	1.957	1.562	1.357	0.893	0.751	0.381

Constant Power Discharge Characteristics : W(25°C)

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
9.60V	342.2	226.8	170.0	93.9	62.16	37.47	25.05	20.43	16.80	11.06	9.580	5.136
10.0V	333.3	222.1	167.6	92.9	61.24	36.97	24.64	20.14	16.65	11.02	9.490	5.095
10.2V	317.0	213.3	165.4	92.1	60.79	36.65	24.43	19.95	16.55	10.94	9.368	4.964
10.5V	289.4	204.5	156.8	90.2	59.97	36.25	24.25	19.68	16.42	10.84	9.302	4.880
10.8V	261.1	191.3	148.1	88.1	59.19	36.00	23.97	19.02	16.34	10.80	9.161	4.684
11.1V	230.2	178.1	139.5	85.67	57.89	34.74	23.50	18.74	16.28	10.72	9.025	4.610

All mentioned values are average values(Tolerance±2%).

DURACELL®
ULTRA

General Purpose
DURA12-8F

Effect of temperature on long term float life

Life Expectancy (years) vs Battery Temperature (℃)

Storage characteristic

Capacity (%) vs Storage Time (months)

Supplementary charge required (Carry out supplementary charge before use if 100% capacity is requires)

Supplementary charge required before use.
This supplementary charge will help to recover the capacity and should be made as early as possible.

Supplementary charge may often fail to recover the capacity.
The battery should never be left standing till this state is reached

Supplementary charge and storage guidelines

Charge characteristic Curve for standby use

Chcrge Volume
Chcrge Voltage
Charge Current

① Discharge
100%（0.05CA×20h）
50%（0.05CA×10h）
② Charge
Chcrge Voltage2.275V/C
Charge Current0.1CA
③ Temperature 25℃

Charge Voltage (V) / Charge Volume (%) / Charge Current (CA) vs Charge Time (h)

Discharge characteristic Curve

Terminal Voltage (V) vs Discharge Time (min / Hr)

0.05C, 0.093C, 0.16C, 0.35C, 0.62C, 1C, 3C
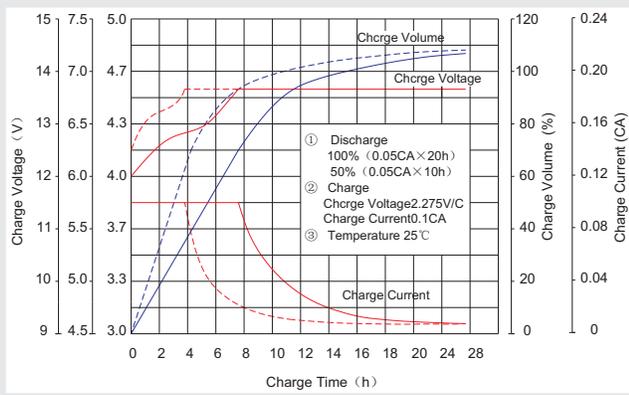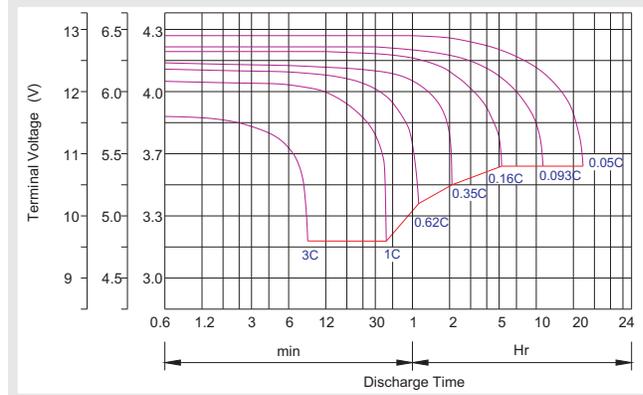
Capacity Factors With Different Temperature

BATTERY TYPE		-20°C	-10°C	0°C	5°C	10°C	20°C	25°C	30°C	40°C	45°C
AGM Battery	12V	46%	66%	76%	83%	90%	98%	100%	103%	107%	109%

Discharge Current VS. Discharge Voltage

Final Discharge Voltage V/cell	1.75V	1.70V	1.60V
Discharge Current (A)	（A）≤0.2C	0.2C＜（A）＜1.0C	（A）≥1.0C

Charge the batteries at least once every six months, if they are stored at 25°C.

Charging Method:

Constant Voltage	-0.2Cx2h+2.4-2.45V/cellx24h,Max. Current 0.3C
Constant Current	-0.2Cx2h+0.1Cx12h
Fast	-0.2Cx2h+0.3Cx4h

www.batteriesplus.com

Batteries+Bulbs

DURACELL® ULTRA

SLA General Purpose

DURA12-12F2

12V 12Ah AGM

DURA12-12F2

SEALED NON-SPILLABLE BATTERY · BATERÍA DE PLOMO-ÁCIDO SELLADOS

DURACELL® ULTRA

99mm

93mm

99mm

151mm

6.35

0.8

8.1

4.5

F2
(FASTON TAB 250)
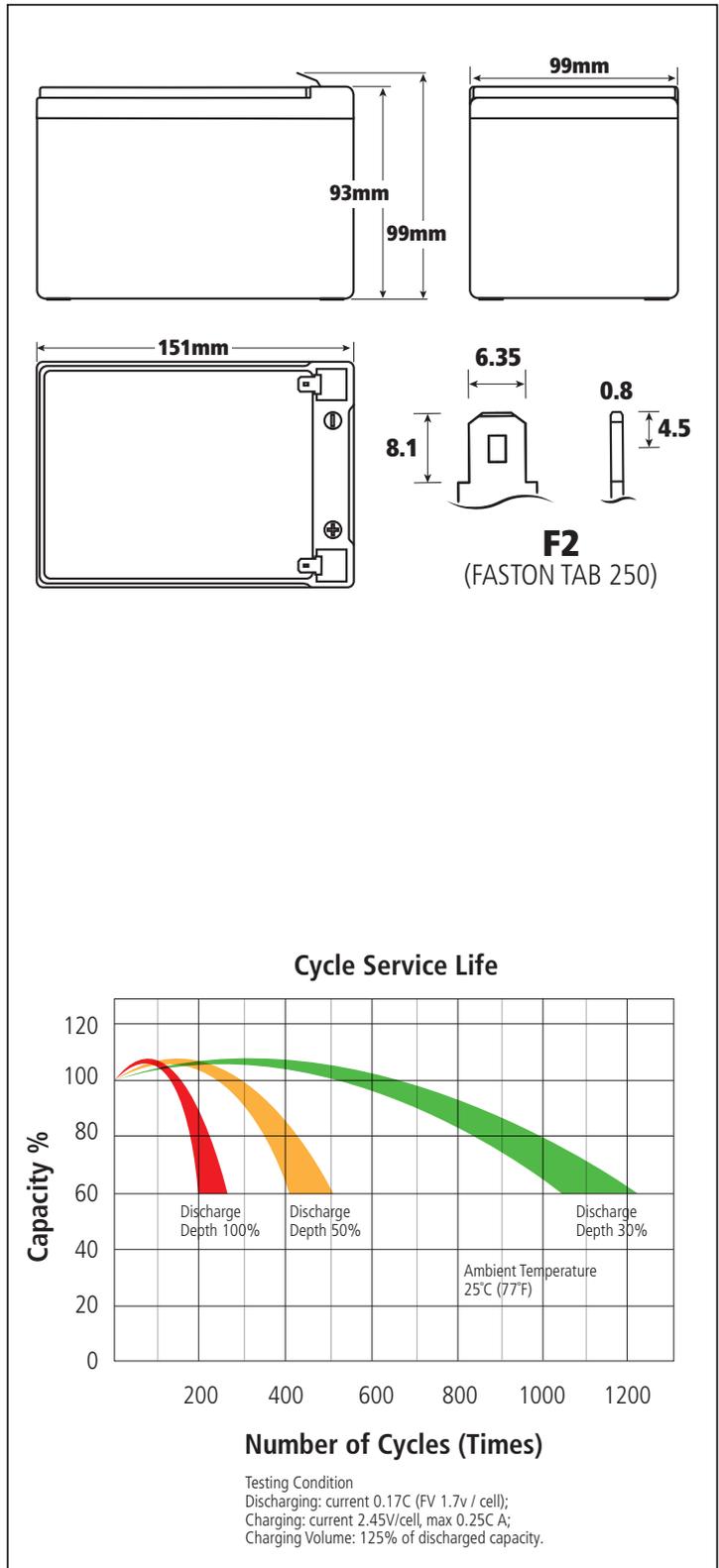
Specifications

Nominal Voltage —————————— 12 volts (6 cells)

Nominal Capacity

20hr.	(600 mA to 10.5 volts)	12.00 Ah
10hr.	(1,110 mA to 10.5 volts)	11.10 Ah
5hr.	(2,020 mA to 10.2 volts)	10.10 Ah
1hr.	(7,250 mA to 9.6 volts)	7.25 Ah
15min.	(21,200 mA to 9.6 volts)	5.30 Ah

Approximate Weight —————————— 7.14 **lbs.** (9.15 **kg**)

Energy Density (20hr. rate) —————— 1.76 **W-h/in3** (0.028**W-h/l**)

Specific Energy (20hr rate) ————— 20.17 **W-h/lb** (8.90 **W-h/kg**)

Internal Resistance (approx) —————————— 18 mΩ

Max Discharge Current (7 Min.) —————— 36A

Max Short-Duration Discharge Current (10 sec.) ———— 120A

Float Design Life at (68°F (20°C)) —————— 5 years

Shelf Life (% of nominal capacity at 68°F (20°C))

1 Month	97%
3 Months	91%
6 Months	83%

Operating Temperature Range

Charge	32°F (-0°C) to 122°F (50.0°C)
Discharge	5°F (-15°C) to 140°F (60.0°C)

Case —————————— ABS Plastic

Cycle Service Life

Capacity %

Number of Cycles (Times)

Discharge Depth 100%
Discharge Depth 50%
Discharge Depth 30%

Ambient Temperature 25°C (77°F)

Testing Condition
Discharging: current 0.17C (FV 1.7v / cell);
Charging: current 2.45V/cell, max 0.25C A;
Charging Volume: 125% of discharged capacity.

Batteries + Bulbs

Premier Low Voltage Systems by:

E² Systems

E-SQUARED SYSTEMS, LLC.

Fire • Security • Card Access • CCTV

TAB 8

BATTERY CALCULATIONS

System Current Draw
E3 Series Control Panel with Broadband

		Total Standby	0.147 A		Total Alarm		0.542 A	

Device	Qty		Standby Current Draw	Standby	Qty		Alarm Current Draw	Alarm
1. System Device								
Intel. Loop Interface, Main Board (ILI-MB-E3)	1	x	0.08100	0.08100	1	x	0.15000	0.15000
Intel. Loop Interface Supplement Board (ILI-S-E3)	0	x	0.08100		0	x	0.15000	
Intel. Loop Interface Main Board - Apollo (ILI95-MB-E3)	0	x	0.05000		0	x	0.09100	
Intel. Loop Interface Supplement Board - Apollo (ILI95-S-E3)	0	x	0.05000		0	x	0.09100	
7100 Panel, 1 SLC	0	x	0.05600		0	x	0.07600	
7100 Panel, 1 SLC with DACT	0	x	0.07500		0	x	0.09500	
7100 Panel, 2 SLC	0	x	0.06500		0	x	0.08500	
7100 Panel, 2 SLC with DACT	0	x	0.08500		0	x	0.10500	
2. E3 Optional Modules								
120V Power Supply Sub-Assembly (PM-9)	1	x	0.05000	0.05000	1	x	0.05000	0.05000
240V Power Supply Sub-Assembly (PM-9G)	0	x	0.02700		0	x	0.05000	
LCD Display & Switch Control (LCD-E3)	0	x	0.02400		0	x	0.02800	
ARCNET Repeater (RPT-E3)	1	x	0.01300	0.01300	1	x	0.01300	0.01300
Digital Communicator (DACT-E3)	0	x	0.01800		0	x	0.01800	
Optional Remote Serial Annunicator (LCD-7100)	0	x	0.05000		0	x	0.07500	
Network LCD Annunicator (NGA)	0	x	0.20000		0	x	0.20000	
Auxiliary Switch Sub-Assembly (ASM-16)	0	x	0.01100		0	x	0.01100	
Remote LED Driver Module (ANU-48)	0	x	0.01100		0	x	0.01100	
Addressable Node Expander (ANX)	0	x	0.06500		0	x	0.06500	
3. 7100 Optional Modules								
Intelligent Network Inferface Module (INI-7100)	0	x	0.04000		0	x	0.04000	
Printer Transient Module (PTRM)	0	x	0.02000		0	x	0.02000	
Remote LED Driver Module (LDM-7100)	0	x	0.03500		0	x	0.20000	
Class A Option Module (CAOM)	0	x	0.00100		0	x	0.00100	
Municipal Circuit Option Module (MCOM)	0	x	0.00100		0	x	0.00100	
4. INI-VGC Command Center								
Intel. Network Command Center (INI-VGC)	0	x	0.15000		0	x	0.15000	
Addressable Switch Sub-assembly (ASM-16)	0	x	0.01100		0	x	0.01100	
Voice Paging Microphone (Microphone)	0	x	0.00100		0	x	0.00100	
Firefighter's Telephone (Handset)	0	x	0.02000		0	x	0.02000	
Addressable Output Module-Telephone (AOM-TEL)	0	x	0.00200		0	x	0.00650	
5. INI-VGX Voice Gateway								
Intel. Network Voice Gateway (INI-VGX)	0	x	0.15000		0	x	0.15000	
120V Power Supply Sub-Assembly (PM-9)	0	x	0.05000		0	x	0.05000	
240V Power Supply Sub-Assembly (PM-9G)	0	x	0.02700		0	x	0.05000	
Amplifier Sub-assembly, 50 watt 25V (AM-50)	0	x	0.08600		0	x	2.20600	
Amplifier Sub-assembly, 50 watt 70V (AM-50-70)	0	x	0.04900		0	x	2.30000	
Addressable Output Module-Signal (AOM-2SF)	0	x	0.00200		0	x	0.00650	
Addressable Output Module-Telephone (AOM-TEL)	0	x	0.00200		0	x	0.00650	
Addressable Output Module-Audio (AOM-MUX)	0	x	0.00200		0	x	0.00650	
6. INI-VGE Command Center Voice Gateway								
Intel. Network Command Voice Gateway (INI-VGE)	0	x	0.15000		0	x	0.15000	
Addressable Switch Sub-assembly (ASM-16)	0	x	0.01100		0	x	0.01100	
Voice Paging Microphone (Microphone)	0	x	0.00100		0	x	0.00100	
Firefighter's Telephone (Handset)	0	x	0.02000		0	x	0.02000	
Addressable Output Module-Signal (AOM-2SF)	0	x	0.00200		0	x	0.00650	
Addressable Output Module-Telephone (AOM-TEL)	0	x	0.00200		0	x	0.00650	
Addressable Output Module-Audio (AOM-MUX)	0	x	0.00200		0	x	0.00650	
7. Smoke Detectors/Modules								
Smoke/Heat	10	x	0.00020	0.00200	10	x	0.00200	0.02000
AMM-4	0	x	0.00038		0	x	0.00500	
	0	x	0.00050		0	x	0.03500	
MCS-COF	0	x	0.00020		0	x	0.00200	
AOM	0	x	0.00038		0	x	0.00650	
R-20	0	x	0.00000		0	x	0.04000	
B200S-LF	0	x	0.00500		0	x	0.03500	
MS-7AF Pull stration	3	x	0.00030	0.00090	3	x	0.00300	0.00900
Smoke Detector/Module 9	0	x	0.00000		0	x	0.00000	
Smoke Detector/Module 10	0	x	0.00000		0	x	0.00000	
8. Notification Appliances								
P2RK 110CD	1	x	0.00000	0.00000	1	x	0.21200	0.21200
P2RL 15CD	2	x	0.00000	0.00000	2	x	0.04400	0.08800
	0	x	0.00000		0	x	0.00000	
	0	x	0.00000		0	x	0.00000	
	0	x	0.00000		0	x	0.00000	
	0	x	0.00000		0	x	0.00000	

Gamewell FCI FIRE CONTROL INSTRUMENTS
Technology and Tradition
by Honeywell

	0	x	0.00000		0	x	0.00000	
	0	x	0.00000		0	x	0.00000	
	0	x	0.00000		0	x	0.00000	
	0	x	0.00000		0	x	0.00000	
Total Standby Load:				0.147 A	Total Alarm Load:		0.542 A

System Power Requirements

E3 Fire Alarm Control Panel with Broadband

Protected Premises:	PSD ITC	Date: 2/23/2021
Address:	1501 39th Ave SW	
City:	Puyallup	State: WA Zip:

Prepared By:	Sandifer Deer	Phone: 253-284-3707
Address:	3006 96th Ave S	Email: sandiferd@e2systemsllc.c
City:	Lakewood	State: WA Zip: 98499

Secondary Load Requirements   **4.29**   Amp Hours

Total Secondary Load from the calculation table below.

Current Draw		Time (hours)	Total (AH)
Secondary Standby Load	x	Required Standby Time	
0.147 A		24 hours	3.53
Secondary Alarm Load	x	Required Alarm Time (hours)	
0.542 A		0.084 hours	0.05
		Total Secondary Load	3.57
		Derating factor	x 1.20
		Secondary Load Requirements	**4.29 AH**

Battery Selection   **12.00**   Amp Hours

Select batteries from the list

Battery Distribution Chart

Shows amp-hour distribution of your selections.

Spare Battery Capacity	7.71 Amp Hours
Secondary Standby Load	4.23 Amp Hours
Secondary Alarm Load	0.05 Amp Hours

Honeywell

System Current Draw - HPFF8 - BPS 1

Total Current	
Standby	0.075 A
Alarm	1.235 A

Device	Qty		Draw	Non-Alarm	Qty		Draw	Alarm
			Secondary Non-Alarm Current				Secondary Alarm Current	
1. System Modules								
HPFF8 Main Circuit Board	1	x	0.07500	0.07500	1	x	0.20600	0.20600
2. NAC #1								
SCR1575	1	x	0.00000	0.00000	1	x	0.07700	0.07700
P2RL 15CD	1	x	0.00000	0.00000	1	x	0.04400	0.04400
P2R75	1	x	0.00000	0.00000	1	x	0.17600	0.17600
P2RK75	1	x	0.00000	0.00000	1	x	0.17600	0.17600
		x	0.00000		0	x	0.00000	
		x	0.00000		0	x	0.00000	
		x	0.00000		0	x	0.00000	
		x	0.00000		0	x	0.00000	
NAC #1 Totals (Max 3 Amps):				0.00000				0.47300
3. NAC								
P2RL 15CD	2	x	0.00000	0.00000	2	x	0.04400	0.08800
P2RK110	1	x	0.00000	0.00000	1	x	0.21200	0.21200
		x	0.00000		0	x	0.00000	
		x	0.00000		0	x	0.00000	
		x	0.00000		0	x	0.00000	
		x	0.00000		0	x	0.00000	
		x	0.00000		0	x	0.00000	
		x	0.00000		0	x	0.00000	
NAC #2 Totals (Max 3 Amps):				0.00000				0.30000
4. NAC								
P2RL 15CD	1	x	0.00000	0.00000	1	x	0.04400	0.04400
P2RK110	1	x	0.00000	0.00000	1	x	0.21200	0.21200
		x	0.00000		0	x	0.00000	
		x	0.00000		0	x	0.00000	
		x	0.00000		0	x	0.00000	
		x	0.00000		0	x	0.00000	
		x	0.00000		0	x	0.00000	
		x	0.00000		0	x	0.00000	
NAC #3 Totals (Max 3 Amps):				0.00000				0.25600
5. NAC								
HW-LF		x	0.00000		0	x	0.07600	
P2WH150		x	0.00000		0	x	0.27000	
P2W15		x	0.00000		0	x	0.09100	
SW1575		x	0.00000		0	x	0.07700	
SW15		x	0.00000		0	x	0.06600	
PC2W15		x	0.00000		0	x	0.09100	
PC2W30		x	0.00000		0	x	0.11600	
PC2W75	0	x	0.00000		0	x	0.17600	
NAC #4 Totals (Max 3 Amps):				0.00000				0.00000
6. Auxiliary Power								
Auxiliary Device	0	x	0.00000		0	x	0.00000	
Auxiliary Device	0	x	0.00000		0	x	0.00000	
Auxiliary Device	0	x	0.00000		0	x	0.00000	
Auxiliary Device	0	x	0.00000		0	x	0.00000	
Auxiliary Device	0	x	0.00000		0	x	0.00000	
TB4 Totals (Max 2 Amps):				0.00000				0.00000
7. Compatible Devices not listed								
Other compatible devices	0	x	0.00000		0	x	0.00000	
Other compatible devices	0	x	0.00000		0	x	0.00000	
Other compatible devices	0	x	0.00000		0	x	0.00000	
Total Non-Alarm Load:				0.075	Total Alarm Load:			1.235

Honeywell

Secondary Power Requirements

HPFF8 Power Supply

Protected Premises: PSD DRIVERS TRAINING PORTABLE   Date: 2/23/2021

Address: 1501 39TH AVE SW

City: PUYALLUP   State: WA   Zip: 98373

Prepared By: E-SQUARED SYSTEMS   Phone: 253-284-3707

Address: 3006 96th Ave S   Email:

City: TACOMA   State: WA   Zip: 98499

Secondary Load Requirements | 2.28 | Amp Hours

Total Secondary Load from the calculation table below.

Current Draw		Time (hours)	Total (AH)
Secondary Standby Load	x	Required Standby Time	
0.075 A		24 hours	1.80
Secondary Alarm Load	x	Required Alarm Time (hours)	
1.235 A		0.084 hours	0.10
		Total Secondary Load	1.90
		Derating factor	x 1.2
		Secondary Load Requirements	**2.28** AH

Battery Selection | 7 | Amp Hours

Select batteries from the list below.

7.0 AH BAT-1270 Battery (12 volt)

◉ Two   ○ Four (two 12VDC sets in parallel)

Battery Distribution Chart
Shows amp-hour distribution of your selections.
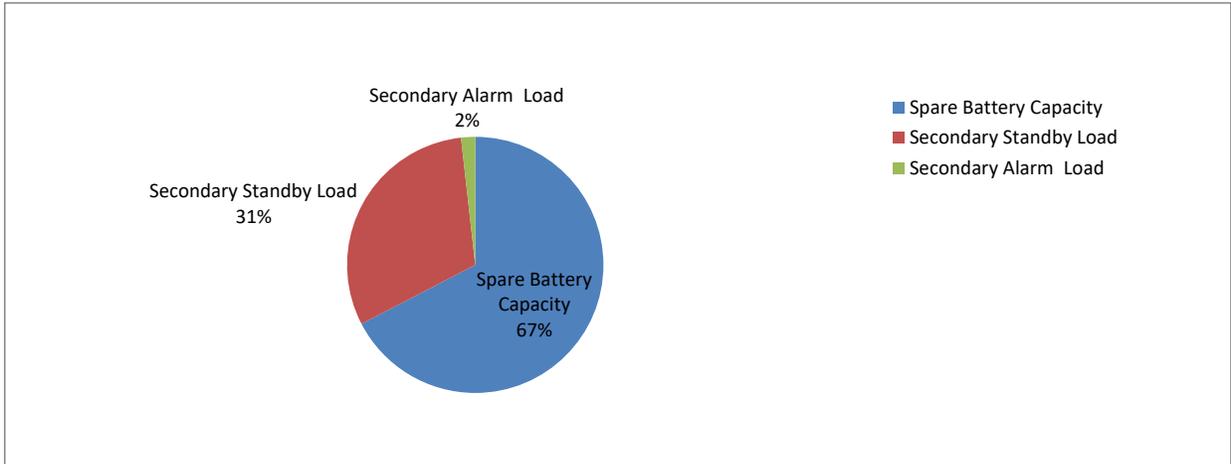
Comments
1. Batteries will fit in the FACP cabinet.
2. Selected battery size meets secondary load requirements.
3. The selected batteries (7AH) are within the charger range of this power supply (7-26AH).

Spare Battery Capacity	4.72	Battery Selection (AH) - Secondary Load Requirements (AH)
Secondary Standby Load	2.16	Secondary Standby Load (AH) * Derating Factor
Secondary Alarm Load	0.12	Secondary Alarm Load (AH) * Derating Factor

PSD ITC DRIVERS TRAINING PORTABLE NAC PANEL

Panel	SNAC							
Circuit	Device	Current	X	0		Current		
N1	SDR1575	0.077	X	1	=	0.077		
	P2RL 15CD	0.044	X	1	=	0.044		
	P2R75	0.176	X	1	=	0.176		
	P2RK75 WEATHERPROOF HORN/STROBE 75CD	0.176	X	1	=	0.176		
			X		=	0		
			X		=	0		
			X		=	0		
			X		=	0		
			X		=	0		
			X		=	0		
			X		=	0		
					Total Current	0.473		

	Ohms Per Foot	X Total Wire Length		Current		VDC	EOL Voltage
	3.19	58	X	0.473	=	0.088	20.312
		1000					

12ga. 2 cond = 1.59 Ω
14 ga, 2 cond = 3.19 Ω
16 ga, 2 cond = 4.02Ω

Panel	SNAC						
Circuit	Device	Current	X	# of Devices		Current	
N2	P2RK110 WEATHERPROOF HORN/STROBE 110CD	0.212	X	1	=	0.212	
	P2RL HORN/STROBE 15CD	0.044	X	2	=	0.088	
			X		=	0	
			X		=	0	
			X		=	0	
			X		=	0	
			X		=	0	
			X		=	0	
			X		=	0	
			X		=	0	
			X		=	0	
					Total Current	0.3	

	Ohms Per Foot	X Total Wire Length		Current		VDC	EOL Voltage
	3.19	160	X	0.3	=	0.153	20.247
		1000					

12ga. 2 cond = 1.59 Ω
14 ga, 2 cond = 3.19 Ω
16 ga, 2 cond = 4.02Ω

Panel	SNAC						
Circuit	Device	Current	X	# of Devices		Current	
N3	P2RK110 WEATHERPROOF HORN/STROBE 110CD	0.212	X	1	=	0.212	
	P2RL HORN/STROBE 15CD	0.044	X	1	=	0.044	
			X		=	0	
			X		=	0	
			X		=	0	
			X		=	0	
			X		=	0	
			X		=	0	
			X		=	0	
			X		=	0	
			X		=	0	
					Total Current	0.256	

	Ohms Per Foot	X Total Wire Length		Current		VDC	EOL Voltage
	3.19	220	X	0.256	=	0.180	20.220
		1000					

12ga. 2 cond = 1.59 Ω
14 ga, 2 cond = 3.19 Ω
16 ga, 2 cond = 4.02Ω

Panel	SNAC						
Circuit	Device	Current	X	# of Devices		Current	
N4	SPARE		X		=	0	
			X		=	0	
			X		=	0	
			X		=	0	
			X		=	0	
			X		=	0	
			X		=	0	
			X		=	0	
			X		=	0	
			X		=	0	
			X		=	0	
					Total Current	0	

	Ohms Per Foot	X Total Wire Length		Current		VDC	EOL Voltage
	1.59	0	X	0	=	0.000	20.400
		1000					

12ga. 2 cond = 1.59 Ω
14 ga, 2 cond = 3.19 Ω
16 ga, 2 cond = 4.02Ω

Premier Low Voltage Systems by:

E² Systems

E-SQUARED SYSTEMS, LLC.

Fire ← Security ← Card Access ← CCTV

TAB 8

CERTIFICATIONS

Search L&I | SEARCH |

Washington State Department of Labor & Industries

DEER, SANDIFER M

Owner or tradesperson DEER, SANDIFER M   **TENINO**, **WA 98589**
                                                        THURSTON County

WA UBI No.

Certifications & Endorsements

License

Verify the contractor's active registration / license / certification (depending on trade) and any past violations.

Electrician   **Active.**
                                                        Meets current requirements.

License specialties
LIMITED ENERGY
HVAC/RFRG

License no.
DEER*SM021PC

Effective — expiration
10/03/1998— 03/27/2022

License Violations
No license violations during the previous 6 year period.

Continuing education

Course title
RCW / WAC Update

Completed   Course code
03/30/2019   **WA2019-54**

Course Hours
4.00 WAC

Workplace safety and health

Help us improve

NATIONAL INSTITUTE FOR CERTIFICATION IN ENGINEERING TECHNOLOGIES®

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BE IT KNOWN THAT

Sandifer Deer

IS HEREBY AWARDED THE FOLLOWING CERTIFICATION

Fire Alarm Systems Level IV

Certification Number **129796**

Valid Through **2022-08-01**

VERIFY ONLINE
nicet.org/verify

BASED UPON SUCCESSFUL DEMONSTRATION OF REQUISITE KNOWLEDGE, EXPERIENCE AND WORK PERFORMANCE AS SET FORTH BY THIS INSTITUTE.

Curtis A Beck

CHAIR OF THE NICET BOARD OF GOVERNORS

A DIVISION OF THE NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

Search L&I   SEARCH

Safety & Health   Claims & Insurance   Workplace Rights   Trades & Licensing

Washington State Department of
Labor & Industries

Firkins, Charles Larrick

Firkins, Charles Larrick

PUYALLUP, **WA 98371**
PIERCE County

WA UBI No.

License

Verify the contractor's active registration / license / certification (depending on trade) and any past violations.

Electrician   **Active.**
                                                     Meets current requirements.

License specialties
LIMITED ENERGY
License no.
FIRKICL850BB
Effective — expiration
02/18/2015— **02/01/2021**

License Violations
No license violations during the previous 6 year period.

Continuing education
Course title
Basic Networking for Installing and Sharing Recorders

Completed   Course code
11/20/2018   **WA2017-773**

Course Hours
2.00

Workplace safety and health

No inspections during the previous 6 year period.

Help us improve

NATIONAL INSTITUTE FOR CERTIFICATION IN ENGINEERING TECHNOLOGIES®

Providing Certification Programs Since 1961

BE IT KNOWN THAT

Charles Larrick Firkins

IS HEREBY AWARDED CERTIFICATION AT

LEVEL II

IN FIRE PROTECTION ENGINEERING TECHNOLOGY
FIRE ALARM SYSTEMS

BASED UPON SUCCESSFUL DEMONSTRATION OF REQUISITE KNOWLEDGE, EXPERIENCE AND WORK PERFORMANCE AS SET FORTH BY THIS INSTITUTE.

Certification Valid through March 1, 2021

CERTIFICATION NUMBER 146805

CHAIRMAN OF THE NICET BOARD OF GOVERNORS

A DIVISION OF THE NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

Certificate of Training

LARRICK FIRKINS

E SQUARED SYSTEMS LLC

has successfully completed training and is hereby certified on

E3/S3 SYSTEMS UNIVERSITY

Issued: February 28, 2019
Expires: February 27, 2022
Certificate #: 201811-69444

NICET Continuing Professional Development: 32 CPD credits
Honeywell Continuing Education Credits: 3.2

Honeywell

Gamewell
FCI FIRE CONTROL INSTRUMENTS

This certificate is valid in the name of the Recipient AND Company together and is rendered invalid
should the two separate OR the distributorship of the Company be revoked for any reason.

Andres Zapata
_____
Training Leader
Honeywell | Security and Fire