Date: 4/6/21

Project Submittals:

Krigen Pharma

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1. Device/Equipment Cut Sheets
2. System Battery Calculations
3. Voltage Drop Calculations

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Crawford SPRINKLER CO. OF RALEIGH, INC

SALES • DESIGN • INSTALLATION • INSPECTIONS

S3 SERIES CONTROL PANEL

Small Addressable Control Panel

> ## The S3 Series addressable control panel is used for small to mid-size fire applications.

GENERAL

The Gamewell-FCI®, S3 Series Intelligent Fire Alarm Control Panel provides the latest, innovative high-end processing power. The S3 Series panel is a digital, microprocessor-based system that 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 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 configuration consists of an SLP (Smart Loop Panel) main board, LCD-SLP touchscreen display, SLC loop personality modules, and as seven amp power supply. The SLP main board provides either one or two SLC loops in the 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.

S3 Series Panel

FEATURES AND BENEFITS

- Listed per ANSI/UL® Standard 864 10th 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
- Supports a network system of up to 122 nodes (includes E3 Series® panels) or up to 64 nodes (includes 7100 Series)
- 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
- 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)

- 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

Honeywell

Gamewell FCI FIRE CONTROL INSTRUMENTS

GENERAL

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
  - Bypass Output
  - Lamp Test
  - Trouble Acknowledge
  - Alarm Acknowledge
  - Custom-defined

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 touchscreen 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.
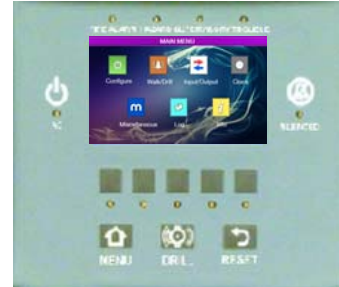

Figure 1 LCD-SLP Display

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

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 following data sheets:

- RPT-E3-UTP Data Sheet, P/N: 9020-0609
- FML-E3/FSL-E3 Data Sheet, P/N: 9021-60783

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.

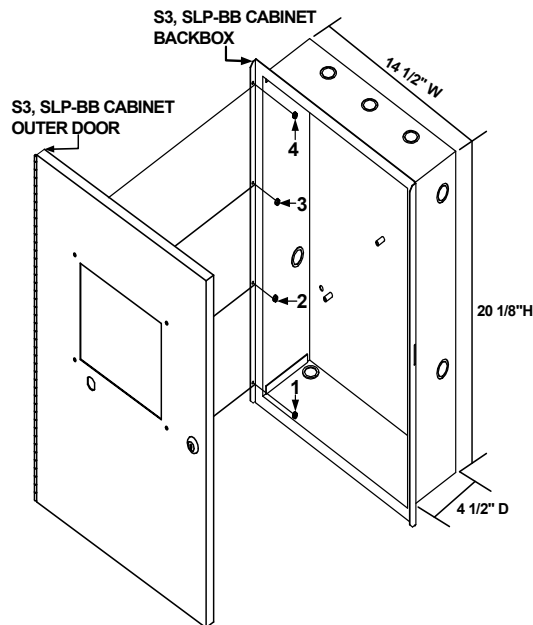Figure 2 illustrates the S3, SLP-BB Cabinet Enclosure.

Figure 2 S3, SLP Enclosure

ORDERING INFORMATION

SLP-BLK: SLP addressable FACP in black S3, 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 S3, 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 S3, 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 S3 panels only.

SLC95-PM: Apollo Loop Card-1 loop used for 126 sensors and modules. For use with the S3 panels only.

Accessories

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. Requires 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
- SLC95-PM
- SLC-PM
- FLPS-7-RB
- LCD-SLP

S3BB-RB: SLP red cabinet with an inner door for the mounting display behind the locked, plexi-glass door. Requires the following:

- SLP-RB
- SLC95-PM
- SLC-PM
- FLPS-7-RB
- LCD-SLP

LCD-7100: Remote Serial LCD Annunciator

ASM-16: Remote Programmable Addressable Switch/LED Module

ANU-48: Remote LED Driver Module

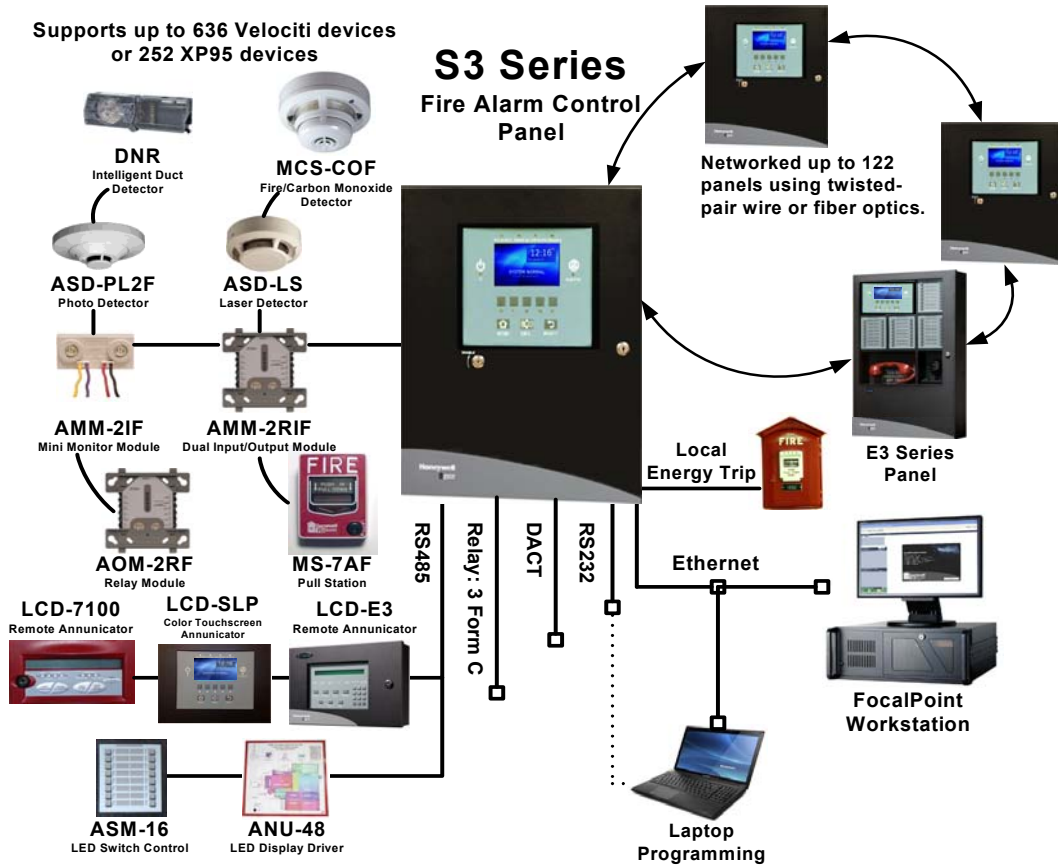Figure 3 illustrates the various S3 Series configuration options that are available.

Figure 3 S3 Series Panel Configuration Options

S3 SERIES CONTROL PANEL TECHNICAL SPECIFICATIONS

SYSTEMS

Device Loops: Up to two Class A or B, System Sensor units, each loop supports up to 318 device addresses.
OR-
Apollo units, each loop supports up to 126 device addresses per loop.
NAC Circuits: Four 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 (Resettable): Two Auxiliary circuits, 24 VDC, 1.75 A
  Aux Power
  Supervised
Class 2 Power-Limited: (Non-Resettable): (maximum current of 1.75 is shared between two circuits).
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:
  S3, SLP-BB Dimensions:
  14 1/2"Wx20 1/8"Hx4 1/2" D
  (36.83W x 51.18 H x 11.43 D cm)
  S3BB-RB Dimensions:
  19 3/8"Wx19 3/8"Hx4.5" D
  (49.22 W x 49.22 H x 11.43 D)
Base Panel Current Draw:
  Standby: 0.111 amps
  Alarm: 0.243 amps

STANDARDS

The S3 Series Control Panel 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
MEA FDNY: COA 6162
CSFM: 7165-1703:0176
City of Chicago Approved: Class 1
Reference Certificate of Compliance: VMA 45894-02C
ISO 9001 Certification

Honeywell

Gamewel
FCI

- **Universal full event sole & dual path cellular &/or IP commercial fire alarm reporting from any panel brand, virtually anywhere nationwide**

- **Code-compliant, replaces 2 POTs lines per FACP** saves thousands of dollars per year over the leased landlines

- **Supports 12V-24V control panels and FACPs** that communicate using Contact ID and 4/2 (such as on legacy panels), as primary or backup

- **Full data Reporting to any Central Station nationwide**, **via choice of LTE Networks, Verizon® or AT&T®. Communicate critical life and safety alarm reports on LTE (Long Term Evolution) 10+ year life, cyber-protected multi-billion dollar cellular network**, for maximum life safety & liability protection.

- **Proven to work even where other's won't - using Signal Boost™ & twin dual diversity antennas** - Max. signal acquisition & null avoidance (receives signals simultaneously on both antennas)

- **Easiest installation, powered by panel, NO extra power supply, NO extra conduit.** (Excludes Direct AC-Powered "-PS" models, with transformer option.) †

- **Dual Path Cellular/IP Models Save Time & Money** - Uniquely including 4 programmable EOLR zone inputs; 2 Form C Relay outputs (no extra supervision modules to buy or install); plus, 2 Telephone-style jacks for easy FACP-connection. Self-supervised on 4 wires.

- **Preactivated to ensure communications** - saves time and labor onsite

- **LED Status /Trouble Indicators** 3 Radio Status LED Indicators (visible from outside standard model housing) - Green, Signal Strength; Amber- Busy/Activation; Red-Trouble (4 additional LEDs, not visible, for network status & troubleshooting). Power LED indicator viewable on outer metal enclosure models.

- **Over-the-Air Upgradable Communicator Firmware.** Remote ability for critical/mandatory updates, without a truck-roll

- **Cost-saving models and plans for any code requirement.** Dramatic savings over monthly dedicated landline charges.

UL and NFPA 72 Fire Code-Compliant, the StarLink Series Wireless Commercial Fire Alarm Sole Path & Dual Path Communicators provide universal support for any brand 12V to 24V fire alarm control panel, reporting in Contact ID and 4/2. With broadest LTE coverage footprint, Verizon or AT&T, using proven StarLink circuitry , they are also available in locking metal models. All provide the most economical solution for easy, versatile installation. Also regional compliances, i.e., CSFM, NYCFD, LAFD and more.

Easy, Universal Installation at Every Application; Panel-Powered Technology™. StarLink Fire Communications are easily connected to any panel or Fire Alarm Control Panel (FACP) standardly operating between 12V and 24V. Flexible in any application, StarLink Fire also comes in standard, or models in metal housings, with code-compliant supervision, and choice of power options, Panel-Powered Technology™ (powered by the panel), or direct-connect 120VAC models. **Signal Boost circuitry & dual diversity antennae** for maximum signal acquisition & null avoidance, receiving signals simultaneously on both antennae.

Flexible Performance & Reporting Options. StarLink Fire provides full data reporting, in sole and dual path, as a primary or backup, to any central station of your choice, without requiring any special equipment on premises. Ultra-affordable plans are available to meet various codes and requirements, with supervisory check-ins from 200 seconds, to 5 minutes; and/or from 1 to 6 hours. The units are very easily activated, plans and options are selected, and 24/7 account management is provided all through www.napcocomnet.com.

Napco StarLink Universal Fire Alarm Communicators

- **Sole Path Cellular and Dual Path Cellular &/or IP Models**

- **Choice of LTE Networks,** Verizon or AT&T models

- **Choice of plans** (varies by model) - check-ins from 200 seconds to 5-minutes, and from 1 hour; up to 6 hours for dual path

- **Patented Signal Boost™ and Dual Diversity Antennae** for maximum signal acquisition & null avoidance, receiving signals simultaneously on both antennae

- **Money-saving Tradeup incentive credit** for security professionals, on new or retrofit fire systems, i.e., tradeup missing/retired POTs lines, old radios & networks or new installations

- **Bonus: Full High-Speed Napco Panel remote uploading/ downloading**

- **COMPLIANCES:** NFPA 72 Editions: 2019, 2016, 2013, 2010, 2007; UL 864, 10th Ed., UL1610, UL985, UL1023, NYCFD; CSFM; LAFD

Code-compliant standard or metal models on choice of Verizon or AT&T LTE networks.

StarLink Fire

COMMERCIAL FIRE CELLULAR & IP

Commercial Fire Alarm Cellular &/or IP
Fire Alarm LTE Communicators

connected by **verizon** / **AT&T**

Model Ordering & Specifications

	LTE Network	Cell	IP	WiFi Option**	Unique Onboard Labor/Cost-Saver Features	Electrical Input Patings	Inputs	Input Ratings	Outputs	Output Ratings	Other Power Supply (option)†
STANDARD MODELS (ABS) 5.38 x 7.88 x 1.88" (HWD)											
SOLE PATH											
SLE-LTEA-FIRE	AT&T	Yes	No	No		Panel-Powered Tech'y:†† Input Voltage/Input Current: 10V = 90mA; 12-25V = 71mA, 200mA peak during transmissions	IN1, IN2, IN3	IN1: 9-25VDC Max input current 2mA IN2,IN3: 9-25VDC Max input current 1.2mA	PGM1, PGM2, PGM3	Open Collector Outputs Max 3V when active, Max 25V when not active. Max current 24mA@ 25V	
SLE-LTEV-FIRE	Verizon	Yes	No	No							
DUAL PATH											
SLE-LTEAI-FIRE	AT&T	Yes	Yes	Yes	2 TelCo jacks for EZ FACP Connect; 4 Programmable EOLR zone inputs; 2 Form C Relay outputs (avoids reqt for supervision module)	Panel-Powered Tech'y:†† Input Voltage:10-25VDC: Input Current: 162mA to 100mA standby; 300mA peak during transmissions	IN1, IN2, IN3, IN4, IN5	IN1: 9-25VDC Max input current 2mA IN2,IN3,IN4,IN5: 9-25VDC Max input current 1.2mA	OUT1, OUT2, PGM3	OUT1,OUT2:Dry Contact, Form C Relay, 30V AC/DC, 500mA Max PGM3: Open Collector Outputs Max 3V when active, Max 25V when active. Max current 24mA@ 25V	
SLE-LTEVI-FIRE	Verizon	Yes	Yes	Yes							
MODELS IN METAL ENCLOSURE 9.63 x 11.75 x 3.38" (HWD)											
SOLE PATH											
SLE-LTEA-CFB	AT&T	Yes	No	No		Panel-Powered Tech'y:†† Input Voltage/Input Current: 10V = 90mA; 12-25V = 71mA, 200mA peak during transmissions	IN1, IN2, IN3	IN1: 9-25VDC Max input current 2mA IN2,IN3: 9-25VDC Max input current 1.2mA	PGM1, PGM2, PGM3	Open Collector Outputs Max 3V when active, Max 25V when not active. Max current 24mA@ 25V	
SLE-LTEV-CFB	Verizon	Yes	No	No							
SLE-LTEA-CFB-PS	AT&T	Yes	No	No		Direct AC-Powered: Input Voltage: 120VAC nominal Input Current: 150mA max; maximum charging current: 200mA	IN1, IN2, IN3	IN1: 9-25VDC Max input current 2mA IN2,IN3: 9-25VDC Max input current 1.2mA	PGM1, PGM2, PGM3	Open Collector Outputs Max 3V when active, Max 25V when not active. Maximum current 24mA@ 25V	Transformer (TRF12 16VAC, 20VA transformer)
SLE-LTEV-CFB-PS	Verizon	Yes	No	No							
DUAL PATH											
SLE-LTEAI-CFB	AT&T	Yes	Yes	Yes	2 TelCo jacks for EZ FACP Connect; 4 Programmable EOLR zone inputs; 2 Form C Relay outputs (avoids reqt for supervision module)	Panel-Powered Tech'y:†† Input Voltage:10-25VDC: Input Current: 162mA to 100mA standby; 300mA peak during transmissions	IN1, IN2, IN3, IN4, IN5	IN1: 9-25VDC Max input current 2mA IN2,IN3,IN4,IN5: 9-25VDC Max input current 1.2mA	OUT1, OUT2, PGM3	OUT1,OUT2:Dry Contact, Form C Relay, 30V AC/DC, 500mA Max PGM3: Open Collector Outputs Max 3V when active, Max 25V when active. Max current 24mA@ 25V	
SLE-LTEVI-CFB	Verizon	Yes	Yes	Yes							
SLE-LTEAI-CFBPS	AT&T	Yes	Yes	Yes	2 TelCo jacks for EZ FACP Connect; 4 Programmable EOLR zone inputs; 2 Form C Relay outputs (avoids reqt for supervision module)	Direct AC-Powered: Input Voltage: 120VAC nominal Input Current: 200mA max; maximum charging current: 200mA	IN1, IN2, IN3, IN4, IN5	IN1: 9-25VDC Max input current 2mA IN2,IN3,IN4,IN5: 9-25VDC Max input current 1.2mA	OUT1, OUT2, PGM3	OUT1,OUT2:Dry Contact, Form C Relay, 30V AC/DC, 500mA Max PGM3: Open Collector Outputs Max 3V when active, Max 25V when active. Max current 24mA@ 25V	Transformer (TRF12 16VAC, 20VA transformer)
SLE-LTEVI-CFBPS	Verizon	Yes	Yes	Yes							

ACCESSORIES:

SLE-WIFI-MODULE Optionally connects supported dual path models to Internet via WiFi, eliminating Ethernet cable connection. Requires 7AH batt'y. (**See details WI2191)

SLE-ANTEXT75 Optional extended range omni. antenna w/ 75' cable, premium low-loss cable & full mounting hardware & ground fault isolation mounting plate

SLE-ANTEXT50 As above, with 50' cable

SLE-ANTEXT30 As above, with 30' cable

TRF12 Optional Plug in AC Transformer, 16.5V / 20VA (use is subject to local code compliance)†

Free Commercial Fire LTE Tradeup Trifold Brochures / Mailers/Stuffers (A747)

FireLink™ Integrated Fire Alarm Control Panel w/ StarLink Fire LTE Built In

ESX INNOVATION AWARDS 2018

FL-32FACP-LTEV Firewolf 8 Zone 24V Conventional Commercial Fire Alarm Control Panel with onboard StarLink Fire® Sole Path, Verizon LTE Cellular Alarm Communicator and integral menu-driven LCD annunciator, w/ 4amp, 24V power supply. Optionally expandable up to 32 points/zones via commercial addressable, wireless or conventional fire devices (2 onboard NACs providing up to 4A notification power). Locking, metal red enclosure,(surface or flush mount*) removable 16"x17" door w/14.25"x16" base. Houses 16Ah battery backup.

StarLink Fire

333 Bayview Ave., Amityville, NY 11701 • 1-800-645-9445 • www.napcosecurity.com

Indoor Selectable-Output Strobes and Horn Strobes for Ceiling Applications

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

Features

- Plug-in design with minimal intrusion into the back box

- Tamper-resistant construction

- Automatic selection of 12- or 24-volt operation at 15 and 30 candela

- Field-selectable candela settings on ceiling units: 15, 30, 75, 95, 115, 150, and 177

- Horn rated at 88+ dBA at 16 volts

- Rotary switch for horn tone and two volume selections

- Universal mounting plate for ceiling units

- Mounting plate shorting spring feature checks wiring continuity before device installation

- Electrically Compatible with legacy SpectrAlert and SpectrAlert Advance devices

- Compatible with MDL3 sync module

- Listed for ceiling mounting only

The System Sensor L-Series offers the most versatile and easy-to-use line of horns, strobes, and horn strobes in the industry with lower current draws and modern aesthetics. With white and red plastic housings, wall and ceiling mounting options, System Sensor L-Series can meet virtually any application requirement.

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

To further simplify installation, the L-Series utilizes a universal mounting plate so installers can mount them to a wide array of back boxes. With an onboard shorting spring, installers can test wiring continuity before the device is installed.

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

Agency Listings

SIGNALING
UL LISTED
S5512
S4011

FM APPROVED
FM approved except for ALERT models 3057383

7125-1653:0504
7135-1653:0503

L-Series Specifications

General

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

Strobe

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

Horn Strobe Combination

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

Synchronization Module

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

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

Notes:

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

UL Current Draw Data

UL Max. Strobe Current Draw (mA RMS)

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

UL Max. Horn Current Draw (mA RMS)

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

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

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

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

Horn Strobe Tones and Sound Output Data

Horn Strobe Output (dBA)

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

L-Series Dimensions

2.47" (62.7 mm)

1.37" (34.8 mm)

6.83" diam. (173 mm)

A0545-00

Ceiling-Mount Horn Strobes

6.92" diam. (175.77 mm)

2.5" (64 mm)
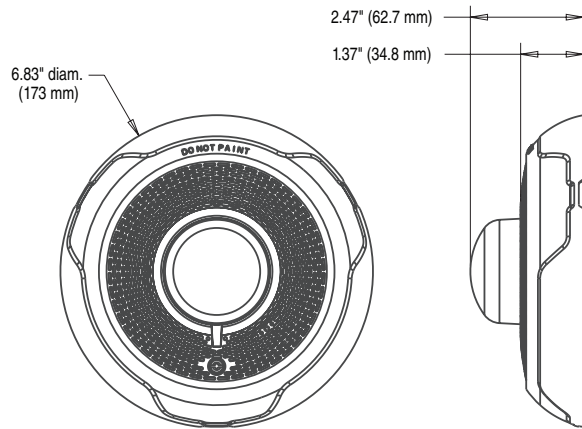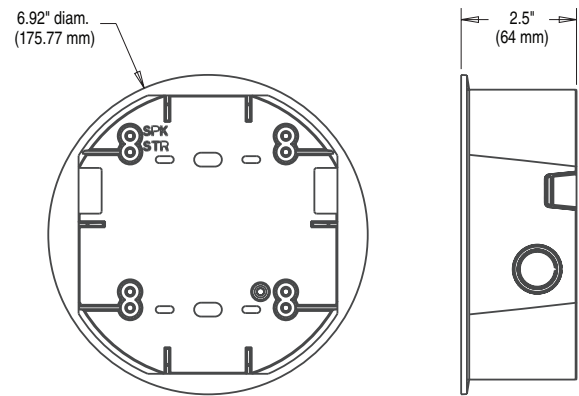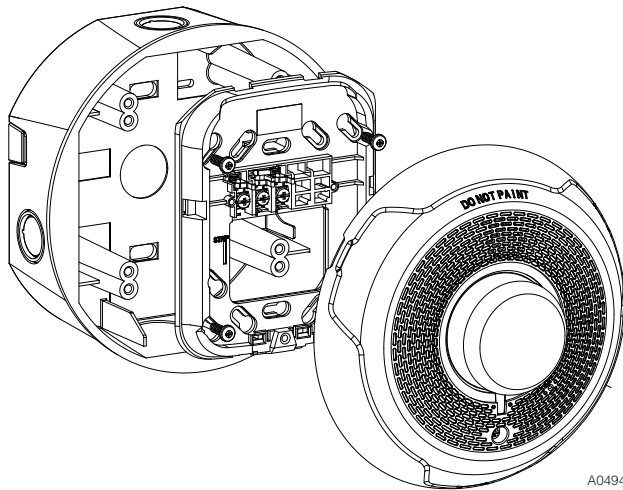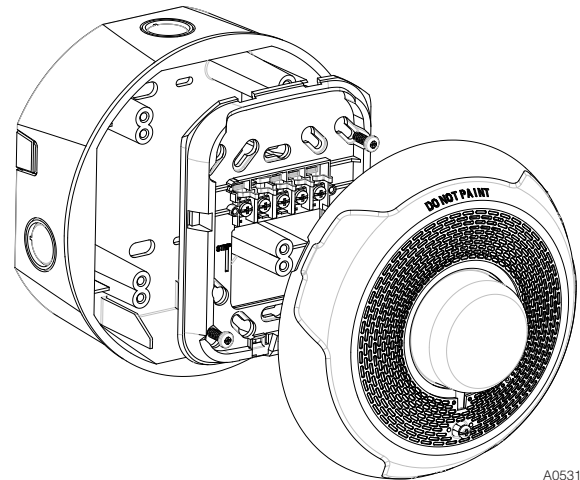
A0546-00

Ceiling Surface Mount Back Box

A0494-01

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

A0531-01

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

L-Series Ordering Information

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

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

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

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

SIGNALING
UL LISTED
S5512
S4011

FM APPROVED
FM approved except for ALERT models 3057383, 3057072

7125-1653:0504
7135-1653:0503

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

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
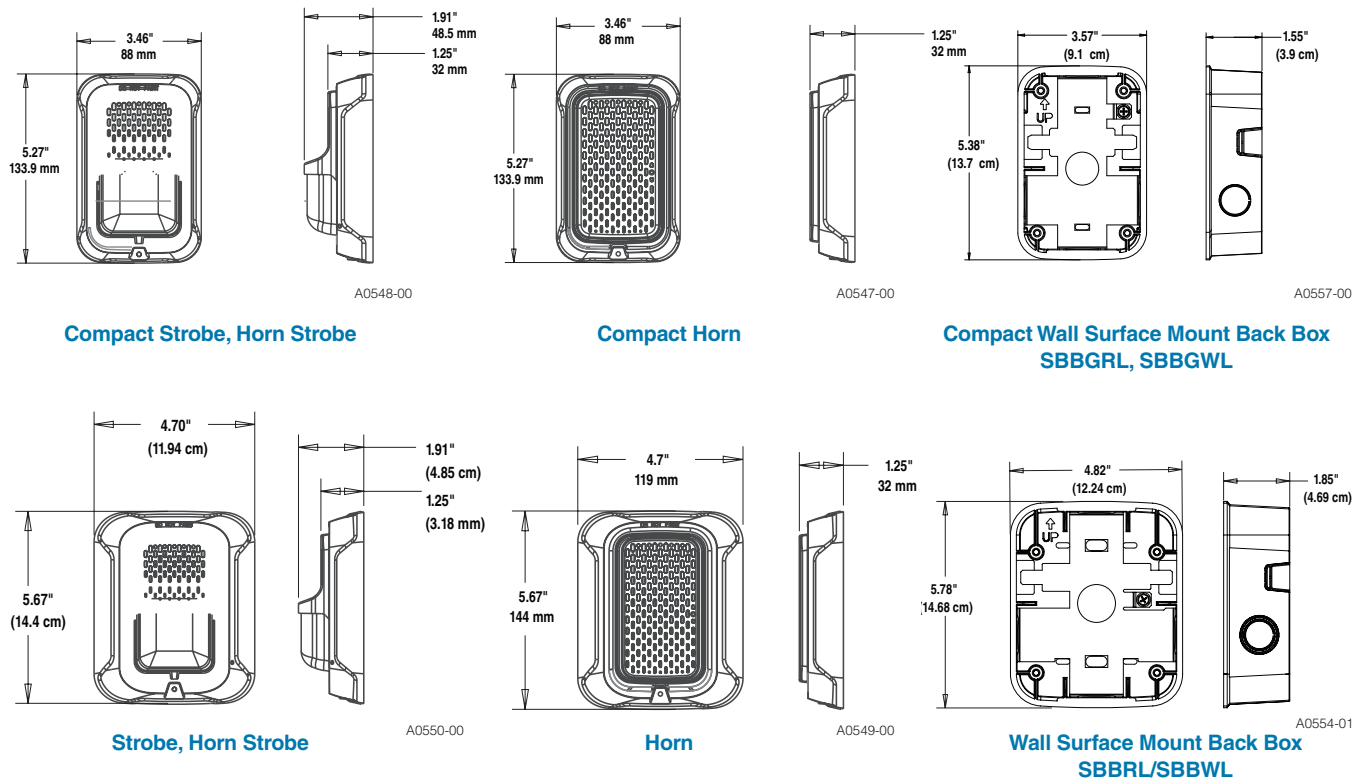
L-Series Ordering Information

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.

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		16–33 Volts	
		DC	FWR	DC	FWR
Standard Candela Range	15	123	128	66	71
	15/75	142	148	77	81
	30	NA	NA	94	96
	75	NA	NA	158	153
	95	NA	NA	181	176
	110	NA	NA	202	195
	115	NA	NA	210	205
High Candela Range	135	NA	NA	228	207
	150	NA	NA	246	220
	177	NA	NA	281	251
	185	NA	NA	286	258

UL Max. Horn Current Draw (mA RMS)

Sound Pattern	dB	8–17.5 Volts		16–33 Volts	
		DC	FWR	DC	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		16–33 Volts						
DC Input	15	15/75	15	15/75	30	75	95	110	115
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)

	16–33 Volts					16–33 Volts			
DC Input	135	150	177	185	FWR Input	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	Do not use below 32°F
15/75	
30	
75	44
95	70
110	110
115	115
135	135
150	150
177	177
185	185

Horn Tones and Sound Output Data

Horn and Horn Strobe Output (dBA)

Switch Position	Sound Pattern	dB	8–17.5 Volts		16–33 Volts		24-Volt Nominal			
							Reverberant		Anechoic	
			DC	FWR	DC	FWR	DC	FWR	DC	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˝
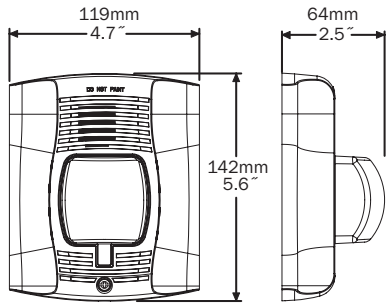
Wall-Mount Horn Strobes
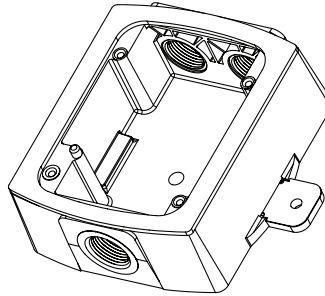
Wall Plastic Weatherproof Back Box
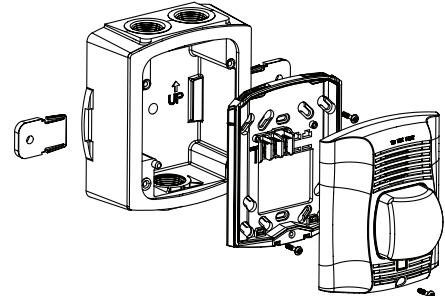
Wall-Mount Horn Strobe with Plastic Weatherproof Back Box

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.**

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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UL® is a registered trademark of Underwriter's Laboratories Inc.

This document is not intended to be used for installation purposes. We try to keep our product information up-to-date and accurate. We cannot cover all specific applications or anticipate all requirements. All specifications are subject to change without notice.

For more information

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

Honeywell

Intelligent Bases

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

General

The Intelligent Velociti® and CLIP™ mounting bases and kits provide a variety of ways to install Gamewell-FCI detectors in any application. These mounting bases are non-addressable and are available in both the Velociti and CLIP protocols. The intelligent detectors can be mounted in any of the following devices, depending on the junction box selection (see Table 1 - Junction Box Selection Guide).

* flanged bases
* flangeless bases
* plastic rings

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.

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

The Intelligent Bases provide a variety of mounting options to meet your installation challenges. The bases are available in flanged or flangeless versions, so that you can mount the bases to a variety of junction boxes. See Table 1 for the Junction Box Selection Guide. You can use the SMB600 surface mounting box to mount the following bases:

* B210LP relay base
* B224BI isolator base
* B224RB relay base

Figure 1 B501 Mounting Base

Figure 2 B210LP Mounting Base

Figure 3 B224BI Mounting Base

Figure 4 B224RB Mounting Base

FEATURES & BENEFITS

All sounder bases offer the following features.
* Complies with UL® Standards 268 and 464

* Includes the following three types of bases that comply with local code requirements:
  - Relay
  - Isolator
  - Sounder

Relay Base Feature
* Relay bases provide one Form-C contact relay

Isolator Base Feature
* Isolator bases include data communications lines to operate under fault condition

Installation Features
The bases offer the following flexible installation characteristics:
* Offers multiple accessory options

* Includes an installation mounting kit and accessories for several types of model options

* Uses 12-24 AWG gauge wire ranges to provide the bases with flexible installation

* Contains bases that enable quick and secure detector plug-in

* Provides SEMS screws for easy wiring connections

* Available in temporal and non-temporal pattern versions

Ordering Information

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

Intelligent Bases

B501-WHITE: Flangeless mounting base, bright white
   Dimensions: 4" (10.2 cm) diameter x 0.74" (18.8 mm) height

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

B501-IV: Standard European flangeless mounting base, ivory

B501-BL: Standard European flangeless mounting base, black

B224BI-WH: Plug-in Isolator detector base, bright white
   Dimensions: 6.85 (17.4 cm) diameter x 1.61" (4.1 cm) height

B224BI-IV: Plug-in Isolator detector base, ivory

B224RB-WH: Plug-in Relay detector base, bright white
   Dimensions: 6.85" (17.4 cm) diameter x 1.61" (4.1 cm) height

B224RB-IV: Plug-in Relay detector base, ivory

B300-6 : Standard flanged low-profile mounting base, white
   Dimensions: 6.1" (15.49 cm) diameter

B300-6-BP: Bulk pack of B200-6 package contains 10

B300-6-IV: Standard flanged low-profile mounting base, ivory

Ordering Information

Mounting Kits and Accessories:

BCK-200B: Detector kit, black

CK300: Detector color kit, white Pack of 10

CK300-IR: Detector color kit for use with MCS-COF Series Detectors, white. Pack of 10

CK300-IV: Detector color kit, ivory. Pack of 10.

CK300-IR-IV: Detector color kit for use with MCS-COF Series detectors, ivory. Pack of 10.

CK300-BL: Detector color kit, black. Pack of 10.

CK300-IR-Bl: Detector color kit for use with MCS-COF Series detectors, black. Pack of 10.

TR300: Accessory flange ring for B300-6, bright white

TR300-IV: Accessory flange ring for B300-6m ivory

M02-04-01: Detector test magnet.

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

RA100Z: Remote LED annunciator. 3-32 VDC. Mounts to a U.S. single-gang electrical box. For use with B401 and B300-6.

SMB600: Surface mounting kit, flanged.

TR300: Replacement flange for B210LP base, white

TR300-IV: Replacement flange for B210LP base, ivory

WCK-200B: Detector kit, white

Mounting Kits and Accessories

Table 1 lists the mounting kits and accessories assigned to each model.

	SINGLE-GANG	3.5" OCTAGONAL	4.0" OCTAGONAL	4.0" SQUARE	4.0" SQUARE WITH 3.0" MUD RING	50 MM	60 MM	70 MM	75 MM
B501	No	Yes	No	No	Yes	Yes	Yes	Yes	No
B210LP	Yes	Yes	Yes	Yes	Yes	No	No	No	No
B224BI	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
B224RB	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
NOTE: The box depth is contingent on the base and the wire size. For information on applicable local codes for appropriate recommendation, refer to the National Electrical Code.									

Table 1: Intelligent Bases Mounting Kits

Intelligent Bases Technical Specifications

SYSTEM

Temperature Range:

For B224RB, B224BI, and B210LP: 32°F to 120°F (0°C to 49° C)

For B210LP, B300-6, B501: -4° F to 150°F (-20°C to 66°C)

Humidity Range: 10% to 93% RH, non-condensing

Wire Gauge:

For B224BI, B224RB: 14 to 24 AWG

For B210LP, B300-6, B501: 12 to 24 AWG

Electrical Ratings:
For B501, B224RB, B224BI:

Operating Voltage: 15 to 32 VDC (powered by SLC)

Standby Ratings:

B501: 150 uA

B224BI: 450 uA maximum

B224RB: 170 uA

Set Time (B224RB only):

Short delay: 55-90 m seconds

Long delay: 6 to 9 seconds

Reset Time (B224RB only): 20 m seconds maximum

Relay Characteristics (B224RB only): Two-coil Latching Relay One Form-C Contact

Ratings (UL/CSA):

0.9 A @ 125 VAC (resistive)

0.9 A @ 110 VDC (inductive)

3.0 A @ 30 VDC (resistive)

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 Intelligent Bases are designed to comply with the following standards:

UL Standards: UL 268

UL 464

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: S911

FM: 3035027

CSFM: 7135-1653:0213

7300-1653:0109

7300-1653:0126

7300-1653:0238

ISO 9001 Certification

For more information

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

Honeywell

DNR AND DNRW

Intelligent Photoelectric Duct Smoke Detectors

> ## The DNR and DNRW use photoelectric technology to detect smoke and combustion particles present in air moving through an HVAC air handling system.

The Gamewell-FCI DNR intelligent non-relay photoelectric duct smoke detector and DNRW watertight non-relay photoelectric duct smoke detector feature a pivoting housing that fits both square and rectangular footprints capable of mounting to a round or rectangular duct.

The DNRW duct smoke detector, with its NEMA-4 rating, is listed as a watertight, UV resistant enclosure providing protection against falling dirt, rain, and windblown dust, splashing and hose directed water, allowing operators to use the detector in the most extreme environments.

These units sense smoke in the most challenging conditions, operating in airflow speeds of 100 to 4,000 feet per minute (0.5 – 20.32 m/s), temperatures of -4°F – 158°F (-20°C – 70°C), and a humidity range of 0 – 95 percent (non-condensing.)

An improved cover design isolates the sensor head, which allows for ease of maintenance. A cover tamper feature indicates a trouble signal for a removed or improperly installed sensor cover. The housing provides a 3/4-inch conduit knockout and ample space to facilitate easy wiring and mounting of a relay module.

The Gamewell-FCI DNR duct smoke detectors can be customized to meet local codes and specifications without additional wiring and are compatible with all previous models, including remote test accessories.

ACCESSORIES

Gamewell-FCI provides system flexibility with a variety of accessories, including two remote test stations and different means of visible and audible system annunciation. As with our duct smoke detectors, all duct smoke detectors accessories are UL listed.

FEATURES AND BENEFITS

- Photoelectric, integrated low-flow technology
- Air velocity rating from 100 ft/min – 4,000 ft/min (0.5 m/s – 20.32 m/s)
- Versatile mounting options: square or rectangular configuration
- Broad ranges for operating temperature (-4°F – 158°F, -20°C – 70°C) and humidity (0% – 95% non-condensing)

- Patented sampling tube installs from front or back of the detector with no tools required
- Cover tamper signal
- Increased wiring space with a newly added 3/4" conduit knockout
- Available space within housing to accommodate mounting of a relay module
- Easily accessible code wheels on sensor head (sold separately)

- Clear cover for convenient visual inspection
- Remote testing capability
- Requires com line power only
- Accommodates an addressable relay module, sold separately, for applications requiring a Form-C relay

Honeywell

Gamewell FCI FIRE CONTROL INSTRUMENTS

DNR AND DNRW TECHNICAL SPECIFICATIONS

Size: (Rectangle) 14.38 in (37 cm) Length; 5 in (12.7 cm) Width, 2.5 in (6.6 cm) Depth

Size: (Square) 7.75 in (19.7 cm) Length; 9 in (22.9 cm) Width; 2.5 in (6.35 cm) Depth

Weight: 1.6 lb (0.73 kg)

Operating Temperature Range: -4°F – 158°F (-20°C – 70°C)

Storage Temperature Range: -22°F – 158°F (-30°C – 70°C)

Operating Humidity Range: 0% – 95% relative humidity (non-condensing)

Air Duct Velocity: 100 – 4,000 ft/min (0.5 – 20.32 m/s)

Accessory Current Loads at 24 VDC: RA100Z and RTS151(KEY)

- Standby: 0mA
- Alarm: 12mA max

AGENCY LISTINGS AND APPROVALS

Consult product manual for lists of compatible UL-Listed devices. 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:** S911
- **CSFM:** 3240-1653:0209
- **FM approved**

PRODUCT LINE INFO

DNR: Intelligent non-relay photoelectric low flow smoke detector housing. Requires photoelectric smoke detector (sold separately).

DNRW: Watertight intelligent non-relay photoelectric low flow duct smoke detector housing. Requires photoelectric smoke detector (sold separately). NEMA-4 rated.

ASD-PL3R-IV: Remote test capable addressable low-profile photoelectric smoke detector; ivory; supports CLIP and Velociti® protocols

ASD-PL3R: Remote test capable addressable low-profile photoelectric smoke detector; white; supports Velociti protocol only

ASD-PL3-IV: Addressable low-profile photoelectric smoke detector; ivory; supports CLIP and Velociti protocols

ASD-PL3: Addressable low-profile photoelectric smoke detector; white; supports Velociti protocol only

DCOIL: Remote test coil. Required for older DNR(W) duct detector housing

DUCTCOV: Retrofit DNR cover for manufactured prior to April 2014

DUCTCOVW: Retrofit DNRW cover for manufactured prior to April 2014

DST1: Metal sampling tube duct width up to 1 ft (0.3m)

DST1.5: Metal sampling tube duct widths up to 1 ft – 2 ft (0.3 – 0.6 m)

DST3: Metal sampling tube duct widths up to 2 ft – 4 ft (0.6 – 1.2 m)

DST5: Metal sampling tube duct widths up to 4 ft – 8 ft (1.2 – 2.4 m)

DST10: Metal sampling tube duct widths up to 8 ft – 12 ft (2.4 – 3.7 m)

DH400OE-1: Weatherproof enclosure

ETX: Metal exhaust tube duct, width 1 ft (0.3 m)

M02-04-00: Test magnet

P48-21-00: End cap for metal sampling tubes

RA100Z: Remote annunciator alarm LED

RTS151: Remote test station

RTS151KEY: Remote test station with key lock

IMPORTANT NOTES

- DNR(W) duct detector housings with a date code of 0013 or higher do not require a DCOIL or auxiliary 24 VDC for remote test applications when used with a remote test capable detector.
- DNR(W) duct detector housings with a date code of 0012 or earlier require a DCOIL and auxiliary 24 VDC power for remote test applications.

Honeywell

Gamewell
FCI
FIRE CONTROL INSTRUMENTS

SYSTEM SENSOR®

Duct Smoke Detector Accessories

Expand the versatility of the InnovairFlex™ line of duct smoke detectors with System Sensor notification and test accessories.

Available Accessories

APA151	Piezo Annunciator
MHR	Mini-Horn, Red
MHW	Mini-Horn, White
RA100Z/RA100ZA	Remote Annunciator
RTS151	Remote Test Station
RTS151KEY	Remote Test Station with Key
RTS2	Multi-Signaling Accessory
AOS	Add-On Strobe
RTS2-AOS	Multi-Signaling Accessory

Duct smoke detector accessories add functionality to the duct smoke detection system by allowing quick, convenient inspections at eye level and effective audible and visible notification options. All System Sensor duct smoke detectors and accessories are UL listed.

The **APA151** piezo annunciator, which replaces the APA451 with a new, improved look, provides an audible alarm signal, a red LED to indicate alarm status, and a green LED to indicate power status. It is intended for use with System Sensor 4-wire conventional duct smoke detector applications without a system control panel, to comply with NFPA 90A.

The **MHR and MHW** SpectrAlert® Advance mini-horns feature temporal or continuous tones at high and low volume settings. Their small footprint allows mounting to single-gang back boxes for applications where a small device is desired.

The **RA100Z and RA100ZA** remote annunciators are designed for both conventional and intelligent applications. Their red LED provides visual indication of an alarm condition.

The **RTS151 and RTS151KEY** remote test stations are automatic fire detector accessories designed to test duct smoke detectors from a convenient location. For 4-wire detectors, the RTS151KEY test station features a multi-colored LED that alternates between steady green and red. For 2-wire detectors, the LED illuminates red for alarm.

The **RTS2 and RTS2-AOS** multi-signaling accessories are designed to work with InnovairFlex 4-wire conventional duct smoke detectors. These accessories include a key switch that can be used to select one of two connected sensors to be tested, reset, or both by a push button switch. They also enable sensitivity measurements using the SENS-RDR sensitivity reader (sold separately). The AOS (Add-On Strobe) is an optional accessory included with the RTS2-AOS model.

Agency Listings

Specifications, Duct Smoke Detector Accessories

APA151 Piezo Annunciator

Voltage	Regulated 24 VDC
Operating Voltage	16 to 33 VDC
Maximum Alarm Current	30 mA
Temperature Range	0°C to 49°C (32°F to 120°F)
Relative Humidity	10 to 93% non-condensing
Wire Gauge	12 to 18 AWG
Dimensions	4.6″H × 2.9″W × .45″D

MHR/MHW SpectrAlert® Advance Mini-Horns

Voltage	Regulated 12 DC or FWR (Full Wave Rectified) or Regulated 24 VDC or FWR
Sounder Current Draw	22 mA RMS max. at 8 to 17.5 Volts DC 29 mA RMS max. at 16 to 33 Volts DC
Temperature Range	0°C to 49°C (32°F to 120°F)
Humidity Range	10 to 93% non-condensing
Nominal Sounder Frequency	3 kHz
Wire Gauge	12 to 18 AWG
Dimensions	4.6″H × 2.9″W × 0.45″D

RA100Z/RA100ZA Remote Annunciator

Voltage Range	Conventional System: 3.1 to 32 VDC Intelligent System: 18 to 32 VDC
Maximum Alarm Current	10 mA
Dimensions	4.6 ″H × 2.8″W × 1.3″D

RTS151 Remote Test Station

|	
Power Requirements	Alarm LED: 2.8 to 32 VDC, 12 mA max. Total Current: 105 mA max.
Test Switch	10 VA @ 32 VDC
Reset Switch	10 VA @ 32 VDC
Alarm Response Time	40 seconds max.
Temperature Range	−10°C to 60°C (14°F to 140°F)
Relative Humidity	95% non-condensing
Wire Gauge	14 to 18 AWG
Dimensions	4.8″H x 2.90″W x 1.4″D

RTS151KEY Remote Test Station with Key

Power Requirements	Power LED (Green): 14 to 35 VDC, 12 mA max. Alarm LED (Red): 2.8 to 32 VDC, 12 mA max. Total Current: 105 mA max.
Alarm Response Time	40 seconds max.
Temperature Range	−10°C to 60°C (14°F to 140°F)
Relative Humidity	95% non-condensing
Wire Gauge	14 to 18 AWG
Dimensions	4.6″H × 2.75″W × 1.8″D

RTS2 and RTS2-AOS Multi-signaling Accessory

Voltage	20 to 29 VDC
Power Requirements	Standby: 3.0 mA max. Trouble: 16.0 mA max. Alarm without strobe: 30 mA max. Alarm with strobe: 55 mA max.
Sounder	85 dBA at ten feet
Temperature Range	−10°C to 60°C (14°F to 140°F)
Relative Humidity	95% non-condensing
Wire Gauge	14 to 22 AWG
Dimensions	4.8″W x 5.3″H x 1.6″D

For the very latest product specifications and listing information, please visit the System Sensor Web site at www.systemsensor.com.

RTS151 UL S4011
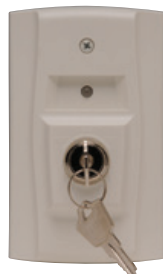
RTS151KEY UL S2522

APA151 UL S4011

RTS2-AOS UL S2522

RA100Z UL S2522

MHW UL S4011

MHR UL S4011

AOS

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

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 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.
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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UL® is a registered trademark of Underwriter's Laboratories Inc.

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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® AOM-2RF

Addressable Output Relay Control Module

General

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

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

The AOM-2RF Module is designed for installation in the signaling line circuit of any Gamewell-FCI analog addressable fire alarm control panel. The module contains a panel controlled LED. The AOM-2RF is designed to mount in a 4" (10.16 cm) square junction box 2 1/8" (5.53 cm) deep.

AOM-2RF

Ordering Information

AOM-2RF: Addressable output relay control module

Table 1 lists the relay contact ratings.

CURRENT RATING	MAXIMUM VOLTAGE	LOAD DESCRIPTION	APPLICATION
3A	30 VDC	Resistive	Non-Coded
2A	30 VDC	Resistive	Coded
0.9A	110 VDC	Resistive	Non-Coded
0.5A	125 VAC	Resistive	Non-Coded
0.5A	30 VDC	Inductive (L/R=5ms)	Coded
1A	30 VDC	Inductive (L/R=2ms)	Coded
0.5A	125 VAC	Inductive (PF=.35)	Non-Coded
0.7A	75 VAC	Inductive	Non-Coded

Table 1: Relay Contact Ratings

FEATURES & BENEFITS

- Listed under UL® Standard 864
- Offers two sets of Form "C" contacts

- Provides visual rotary, decimal switch addressing (01-159)

- Includes a bi-color LED that flashes green whenever the module is addressed, and lights steady red upon activation*

- Designed as a compact size to allow easy installation

Note 1: Only the red LED is operative in panels that do not operate in Velociti® mode
*Note 2: The bi-color LED functionality is not available on the GWF-7075 panel.

Velociti Series® AOM-2RF Technical Specifications

SYSTEMS

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

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 Velociti Series® AOM-2RF 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: S1913
FM: 3023594
FDNY: COA-219-02-E Vol. VI
CSFM: 7300-1703:0102
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® AOM-2RF and other products available by visiting www.Gamewell-FCI.com

Honeywell

Velociti Series® AMM-4F

Addressable Monitor Module

General

The Gamewell-FCI Velociti® Series, addressable monitor module (AMM-4F) features a single Style D, Class A initiating device circuit. It may also be configured as a Style B, Class B initiating circuit with end-of-line resistor. This module provides an address for any device or group of devices connected to this circuit. Any alarm initiating devices with normally open (N.O.) dry contacts, such as heat detectors, linear heat detection devices, 4-wire projected beam smoke detectors, 4-wire smoke detectors, water flow switches, tamper switches, manual stations, etc. may be installed in this circuit.

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

The AMM-4F module is designed for installation in the signaling line circuit of any Gamewell-FCI analog addressable control panel. The initiating circuit of the AMM-4F has a maximum line resistance of 40 ohms, allowing the module to accommodate a number of initiating devices at a distance from the module. The AMM-4F is designed to mount in a 4" square junction box 2 1/8" deep.

The initiating device circuit of the AMM-4F can support a maximum line resistance of up to 40 ohms allowing the use of linear heat detection devices.

Ordering Information

AMM-4F: Addressable monitor module, single circuit Style D, Class A or Style BC/A and B
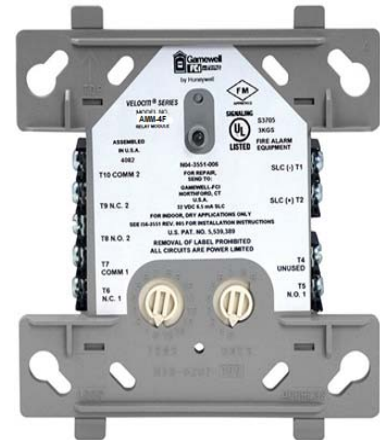
AMM-4F

FEATURES & BENEFITS

- Compact size allows easy installation

- Includes Class A, Style D, or Class B, Style B initiating circuit

- Offers a visual rotary, decimal switch addressing (01–159)

- Provides a 40 ohm line resistance for each initiating device circuit

- Accommodates any N/O dry contact device

- Bi-color LEDs flash green whenever the module is addressed, and light steady red on alarm*

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

Velociti Series® AMM-4F Technical Specifications

SYSTEM

Supervisory Current: .000375 amps. (LED flashing)
Alarm Current: .005 amps. (LED lit)
Operating Temperature: 32° to 120° F (0° to 49° C)
Relative Humidity: 10 to 93% (non-condensing)
End-of-Line resistor: 47K ohms
Dimensions: 4 1/2" H x 4" W x 1 1/4" D
(11.4 x 10.2 x 3.2 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 Velociti Series® AMM-4F 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: S1949
FM: 3023594
MEA FDNY: 277-03-E Vol. VI
CSFM: 7300-1703:0102
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® AMM-4F and other products available by visiting www.Gamewell-FCI.com

Honeywell

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 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 MS-7 Series and other products available by visiting www.Gamewell-FCI.com

Honeywell

AceBOX

BY SPACE AGE ELECTRONICS

FIRE ALARM
FIRE ALARM
FIRE ALARM
Patent Pending

FA	FIRE ALARM	EC	FIRE ALARM / ECS

FA: FIRE ALARM

EC: EMERGENCY COMMUNICATIONS

EC: FIRE ALARM / ECS

FIRE ALARM / EMERGENCY
CIRCUIT INSIDE
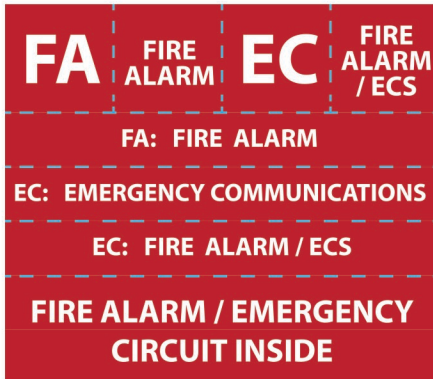
ELOCK-FA
CIRCUIT LOCKOUT KIT

• Circuit lockout tab
• Hex key
• Breaker, legend, and door labels

NFPA 2016 CODE COMPLIANCE

• 10.6.5.2 Circuit Identification and Accessibility.

• 10.6.5.2.1 The location of the branch circuit disconnecting means shall be permanently identified at the control unit.

• 10.6.5.2.2 System circuit disconnecting means shall be permanently identified as to its purpose in accordance with the following:

  (1) "FIRE ALARM" for fire alarm systems

  (2) "EMERGENCY COMMUNICATIONS" for emergency communications systems

  (3) "FIRE ALARM/ECS" for combination fire alarm and emergency communications systems

• 10.6.5.2.3 For fire alarm and/or signaling systems, the circuit disconnecting means shall have a red marking.

• 10.6.5.2.4 The red marking shall not damage the overcurrent protective devices or obscure the manufacturer's markings.

• 10.6.5.2.5 The circuit disconnecting means shall be accessible only to authorized personnel.

• 10.6.5.3 Mechanical Protection. The branch circuit(s) and connections shall be protected against physical damage.

• 10.6.5.4 Circuit Breaker Lock. Where a circuit breaker is the disconnecting means, a listed breaker locking device shall be installed.

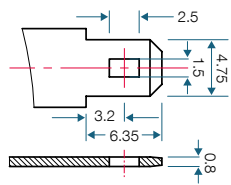MEMBER OF NFPA   NEMA   ISO 9001:2015 REGISTERED   ADA

POWER PS SONIC
TRUSTED BATTERY SOLUTIONS

General Purpose • Emergency Lighting • Medical • Fire & Security

PS-1270

12V 7.0 AH @ 20-hr.
12V 6.5 AH @ 10-hr.
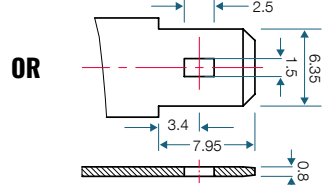
Rechargeable Sealed Lead Acid Battery
PS – General Purpose Series

TERMINALS: (mm)

F1: Quick disconnect tabs, 0.187" x 0.032" – Mate with AMP. INC. FASTON "187" series
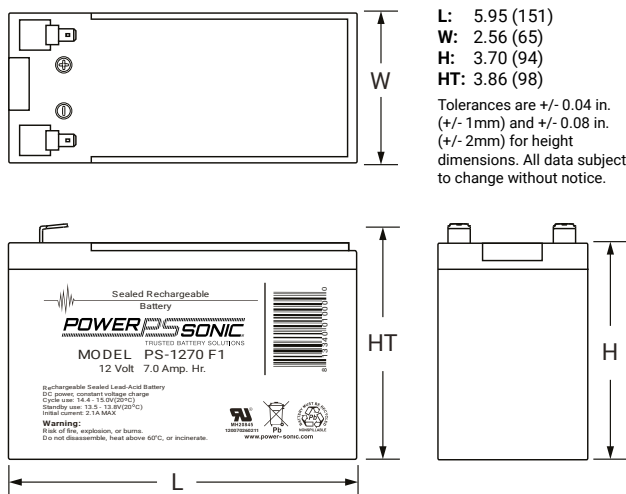
F2: Quick disconnect tabs, 0.250" x 0.032" – Mate with AMP. INC FASTON "250" series

2.5 1.5 4.75 3.2 6.35 0.8

OR

2.5 1.5 6.35 3.4 7.95 0.8

Torque – Not Applicable   Torque – Not Applicable

DIMENSIONS: inch (mm)

W

L: 5.95 (151)
W: 2.56 (65)
H: 3.70 (94)
HT: 3.86 (98)

Tolerances are +/- 0.04 in. (+/- 1mm) and +/- 0.08 in. (+/- 2mm) for height dimensions. All data subject to change without notice.

HT

H

L

Sealed Rechargeable Battery
POWER PS SONIC
TRUSTED BATTERY SOLUTIONS
MODEL PS-1270 F1
12 Volt 7.0 Amp. Hr.

Rechargeable Sealed Lead-Acid Battery
DC power; constant voltage charge
Cycle use: 14.4 - 15.0V(20°C)
Standby use: 13.5 - 13.8V(20°C)
Initial current: 2.1A MAX
Warning:
Risk of fire, explosion, or burns.
Do not disassemble, heat above 60°C, or incinerate.

FEATURES

- Absorbent Glass Mat (AGM) technology for superior performance
- Valve regulated, maintenance free spill proof construction
- Power/volume ratio yielding excellent energy density
- Rugged vibration and impact resistant ABS case and cover
- Gas recombination technology
- 5 year design life

APPROVALS

- Approved for transport by air. D.O.T., I.A.T.A., F.A.A. and C.A.B. certified
- U.L. recognized
- ISO9001:2015 – Quality management systems

PERFORMANCE SPECIFICATIONS

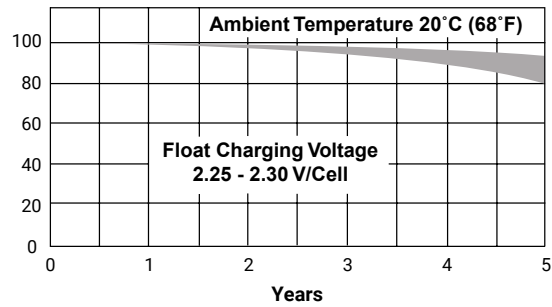|	
Nominal Voltage	12 volts (6 cells)
Nominal Capacity	
20-hr. (350mA to 10.50 volts)	7.00 AH
10-hr. (650mA to 10.50 volts)	6.50 AH
5-hr. (1.2A to 10.20 volts)	6.00 AH
1-hr. (4.5A to 9.00 volts)	4.50 AH
Approximate Weight	4.80 lbs. (2.18 kg)
Internal Resistance (approx.)	23.0 milliohms
Max Short-Duration Discharge Current (10 Sec.)	70.0 amperes
Shelf Life (% of nominal capacity at 68°F (20°C)	
1 Month	97%
3 Month	91%
6 Month	83%
Operating Temperature Range	
Charge	5°F (-15°C) to 122°F (50°C)
Discharge	-4°F (-20°C) to 140°F (60°C)
Case	ABS Plastic
Power Sonic Chargers	PSC-12800A-C PSC-121000-PC

PS-1270 12V 7.0 AH @ 20-hr.
12V 6.5 AH @ 10-hr.

Rechargeable Sealed Lead Acid Battery
PS – General Purpose Series

SHELF LIFE & STORAGE

Charging is not necessary unless 100% of capacity is required.

Charging before use is necessary to help recover full capacity.
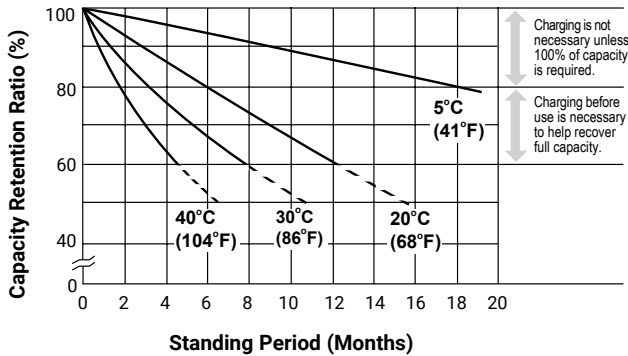
LIFE CHARACTERISTICS IN STAND-BY USE

CHARGING

Cycle Applications: Apply constant voltage charge at 2.35v/c – 2.45v/c (14.1 – 14.7v for 12v Monobloc) at 20°C. Initial charging current should be set at less than 0.25C Amps. Switch to float charge to avoid overcharging.

"Float" or "Stand-By" Service: Apply constant voltage charge of 2.25v/c – 2.30v/c (13.5 to 13.8 volts for 12v Monobloc at 20°C. When held at this voltage, the battery will seek its own current level and maintain itself in a fully charged condition.

Temperature Compensation: Charging Voltage for both Cyclic and Standby applications should be regulated in relation to ambient temperature. As temperature rises charging voltage should be reduced to prevent overcharge and increased as temperature falls to avoid undercharge.

For further charging information including temperature compensation factors, see Power Sonic Technical Manual/ Power Sonic Charger specifications.

APPLICATIONS

- General purpose
- Emergency lighting
- Medical
- Fire and security

CHARGERS

Power Sonic offers a wide range of chargers suitable for batteries with a variety of capacities.

Please refer to our website for more information on our switch mode and transformer type chargers.

Please contact our technical department for advice if you have difficulty in locating a suitable charger.

FURTHER INFORMATION

Please refer to our website **www.power-sonic.com** for a complete range of useful downloads, such as product catalogs, material safety data sheets (MSDS), ISO certification, etc.

DTK-HW Series

Parallel Connected Surge Protective Device

DITEK Surge Protection

DITEK's **DTK-HW Series** of surge protective devices are designed and manufactured to meet the standards of the life safety industry. These compact, parallel-mount SPD's are available for 120V, 240V and 120/240V systems; and are widely used to protect fire alarm panels and other dedicated branch circuit loads. Their small footprint enables installation in a variety of locations.

Product Features

- Approved for 20A circuit breakers
- NEMA 4X Weatherproof enclosure allows for use in harsh environments
- Diagnostic LED indicates ground presence, system power and SPD function
- Complies with ANSI/IEEE C62.41 and C62.45 Category B standards

Applications

- Fire Alarm Control Panels
- Equipment Panels
- Dedicated Branch Circuits
- Pumps, Motors and Lift Pump Stations

Accessories

- DIN Rail Mounting Kit – DTK-DRK

Dimensions

Technical Specifications

Part Number:	DTK-120HW	DTK-240HW	DTK-120/240HW
Service Voltage:	Single Φ (2W + G), 120VAC	Single Φ (2W + G), 240VAC	Split Φ (3W + G), 120/240VAC
MCOV:	150V	320V	150/320V
Protection Modes:	L-G, L-N, N-G	L-G, L-N, N-G	L-G, L-L, L-N, N-G
Voltage Protection Rating:	700V L-G 700V L-N 1,500V N-G	1,200V L-G, 1,200V L-N 2,000V N-G	700V L-G, L-N 1,500V L-L, 1,500V N-G
Surge Current Rating:	50,000A	50,000A	100,000A
SCCR:	10kA		
Nominal Discharge Current Rating (I_n):	10kA		

Mechanical Characteristics

Connection Method:	¾" NPT Parallel Wired
Housing:	NEMA 4X
Temperature Range:	-31°F - 176°F (-35°C - 80°C)
Maximum Humidity:	95% non-condensing
Dimensions:	3.5"L x 1.89"W x 3.4"H (88.9mm x 48.3mm x 86.4mm)
Weight:	0.55 lb. (0.25 kg)

Quality, Standards & Approval

Agency Approvals:	UL 1449 4th Edition, cUL
SPD Type:	Type 1 SPD
Warranty:	Ten Year Limited

Every precaution has been taken to ensure that this literature is accurate and complete. DITEK Corporation assumes no responsibility and disclaims all liability for damages resulting from the use of this information or for any errors or omissions.

MADE IN U.S.A.

System Power Requirements

S3 Addressable Control Panel

Protected Premises:	KRIGEN Pharma	Date: 3/30/2021
Address:	800 Edwards Brothers Drive	
City:	Lillington	State: NC Zip: 27546

Prepared By:	Crawford Sprinkler Co.	Phone: 919-828-9346
Address:	2725 S. Saunders St	Email: gary@crawfordsprinkler.co
City:	Raleigh	State: NC Zip: 27603

Secondary Load Requirements   **3.96** Amp Hours

Total Secondary Load from the calculation table below.

Current Draw		Time (hours)	Total (AH)
Secondary Standby Load	x	Required Standby Time	
0.131 A		24 hours	3.14
Secondary Alarm Load	x	Required Alarm Time (hours)	
1.877 A		0.084 hours	0.16
		Total Secondary Load	3.30
		Derating factor	x 1.20
		Secondary Load Requirements	**3.96 AH**

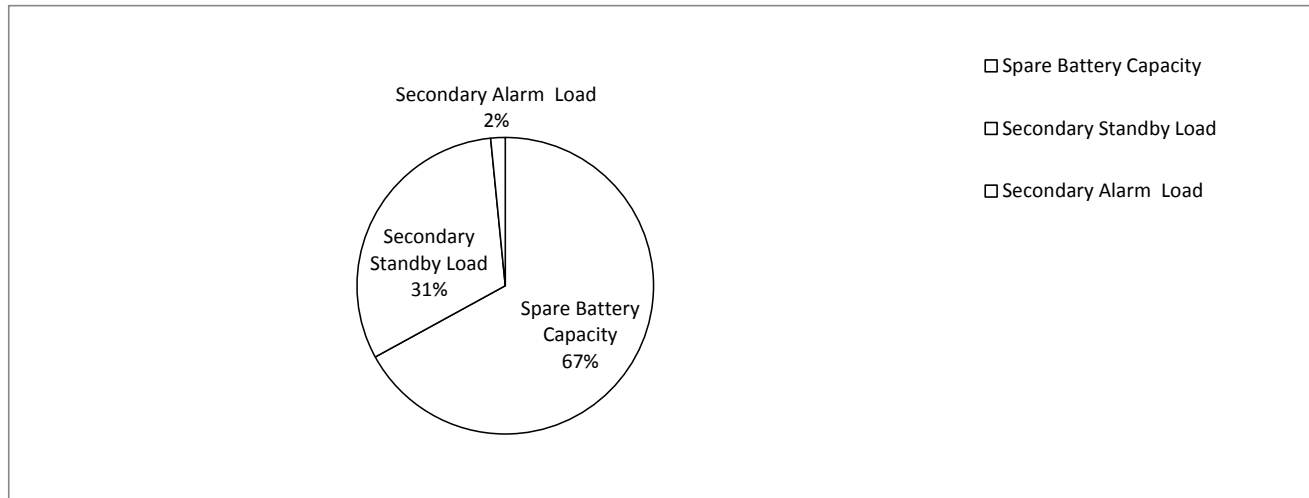## Battery Selection   **12.00** Amp Hours

Select batteries from the list

12 AH Battery (12 volt)

Battery Distribution Chart

Shows amp-hour distribution of your selections.

☐ Spare Battery Capacity

☐ Secondary Standby Load

☐ Secondary Alarm Load

Spare Battery Capacity	8.04 Amp Hours
Secondary Standby Load	3.77 Amp Hours
Secondary Alarm Load	0.19 Amp Hours

System Current Draw
S3 Series Addressable Control Panel

Gamewell FCI — Technology and Tradition — FIRE CONTROL INSTRUMENTS — by Honeywell

	Total Standby	0.131 A	Total Alarm	1.877 A

Device	Qty		Draw	Standby	Qty		Draw	Alarm
1. System Device								
SLP-E3 Smart Loop Panel Main Board	1	x	0.10000	0.10000	1	x	0.18000	0.18000
FLPS-7 - Power Supply	1	x	0.00000	0.00000	1	x	0.00000	0.00000
SLC-PM - SLC Expander (System Sensor)	1	x	0.01400	0.01400	1	x	0.01400	0.01400
SLC95-PM -SLC Expander (Apollo)	0	x	0.01600		0	x	0.01600	
2. SLP-E3 Outputs								
Resetable 24V Power	0	x	0.00000		0	x	0.00000	
Non-resetable 24V Power	0	x	0.00000		0	x	0.00000	
Munipical / Polarity Reversal	0	x	0.00000		0	x	0.00000	
3. S3 Optional Modules								
DACT-E3 - Digital Communicator	1	x	0.01800		1	x	0.01800	0.01800
RPT-E3-UTP - ARCNET Repeater	0	x	0.01600		0	x	0.01700	
FML-E3 - Fiber-Optic Multi-Mode Board	0	x	0.05300		0	x	0.05300	
FSL-E3 - Fiber-Optic Single Mode Board	0	x	0.07900		0	x	0.07900	
LCD-SLP - Remote LCD Annunciator	0	x	0.03000		0	x	0.06500	
LCD-E3 - LCD Display & Switch Control	0	x	0.02400		0	x	0.02800	
LCD-7100/RAN-7100 - Remote Serial Annunciator	0	x	0.12000		0	x	0.23000	
ASM-16 - Auxiliary Switch Sub-Assembly	0	x	0.01100		0	x	0.01100	
LED's On for ASM-16 (max 48)	0	x	0.00300		0	x	0.00300	
ANU-48 - Remote LED Driver Module	0	x	0.01100		0	x	0.01100	
LED's On for ANU-48 (max 48)	0	x	0.00300		0	x	0.00300	
4. Smoke Detectors/Modules								
ASD-PL3	1	x	0.00030	0.00030	1	x	0.00650	0.00650
ASD-PL3R	16	x	0.00030	0.00480	16	x	0.00650	0.10400
Smoke Detector/Module 3	0	x	0.00000		0	x	0.00000	
AMM-4F	7	x	0.00038	0.00266	7	x	0.00500	0.03500
AOM-2RF	16	x	0.00038	0.00608	16	x	0.00650	0.10400
MS-7AF	7	x	0.00030	0.00210	7	x	0.00300	0.02100
ATD-L3R	3	x	0.00030	0.00090	3	x	0.00650	0.01950
Smoke Detector/Module 8	0	x	0.00000		0	x	0.00000	
Smoke Detector/Module 9	0	x	0.00000		0	x	0.00000	
Smoke Detector/Module 10	0	x	0.00000		0	x	0.00000	
5. Notification Appliances								
P2WH185	2	x	0.00000	0.00000	2	x	0.30900	0.61800
P2RK15	1	x	0.00000	0.00000	1	x	0.09100	0.09100
P2W75	1	x	0.00000	0.00000	1	x	0.17600	0.17600
P2W15	2	x	0.00000	0.00000	2	x	0.09100	0.18200
PC2W75	1	x	0.00000	0.00000	1	x	0.17600	0.17600
SCW15	2	x	0.00000	0.00000	2	x	0.06600	0.13200
	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:	0.131 A			**Total Alarm Load:**	1.877 A

Device Brand:
Sys. Sensor L-Series

VOLTAGE DROP CALCULATIONS - POWER SUPPLY -FACP VD

Voltage Drop - NAC 1

Brand: Sys. Sensor L-Series				
Voltage: 20.4		Wire AWG: 16		
Device	Current Draw (mA)	Distance (feet)	Voltage Drop	Voltage (At each)
185 H - W	245	220	1.10	19.30
185 H - C	245	330	0.82	18.48
Total Voltage Drop:			1.92	
Total NAC Circuit Amps:			0.490	

Voltage Drop - NAC 2

Brand: Sys. Sensor L-Series				
Voltage: 20.4		Wire AWG: 16		
Device	Current Draw (mA)	Distance (feet)	Voltage Drop	Voltage (At each)
75 H - W	121	30	0.16	20.24
15 H - W	79	65	0.27	19.96
15 H - W	54	210	0.72	19.24
15 S - C	43	60	0.17	19.07
15 S - C	43	25	0.06	19.01
15 H - W	54	20	0.04	18.97
75 H - C	143	50	0.07	18.90
Total Voltage Drop:			1.50	
Total NAC Circuit Amps:			0.537	