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Licenses: MD Security System Agency #107-402 \* Calvert County #ABL5287 \* Frederick County #F-0185 \* Howard County #112 \* Montg. County #00960 \* PG County #0000492 \* VA DCJS Private

***Fire Alarm System***  
for  
***King Farm Manor House***  
***16100 Frederick Road***  
***Rockville, MD 20855***

EAI Security, Inc  
1084 Taft Street  
Rockville, MD 20850

King Farm Manor House

We are submitting the following for your approval.

- A. List of Equipment
- B. Scope of Work
- C. Sequence of Operations
- D. Battery Calculations
- E. Voltage Drop Equations
- F. Data Cut Sheets
- G. Drawings

If you have any questions, please feel free to call.  
Scott Moore @ 240-876-0983

King Farm Manor House

List of Equipment

Fire Alarm System:

ES200X FACP		01 ea.
Battery		02 ea.
ANN-80 Textual Annunciator		01 ea.
BG-12LX Manual Station		01 ea.
SD-365 Photo Electric Smoke Detector		10 ea.
H-365 ROR Heat Detector		06 ea.
PC2WL Ceiling Horn Strobe:		
	15CD	04 ea.
	95CD	01 ea.

SCWL Ceiling Strobe:

	15CD	06 ea.
	30CD	02 ea.

Wireless Fire Alarm System:

W-DISD Wireless FACP Interface		01 ea.
W-GATE Wireless Gateway		01 ea.
W-BG12LX Wireless Manual Station		04 ea.
W-SD355 Wireless Smoke Detector		07 ea.
W-H355R Wireless Heat Detector		01 ea.
WAV-CWL Wireless Ceiling AV Base		08 ea.

## SCOPE OF WORK

The structure is built as follows:

Exterior walls: Block / Brick / Wood

Interior walls: Plaster / Drywall

Slab: Concrete / Wood

Ceiling: Plaster / Drywall / Open Wood Beam

Building is **not** sprinkled.

Work to be performed includes:

Furnish and install a complete 24VDC addressable / wireless fire alarm system. The system shall include but not be limited to control panel, annunciator panel, initiating devices, audible and visual notification appliances and all accessories as required to provide a complete operating fire alarm system.

Install electrical conduit and back boxes, etc., as required per specification, NFPA & NEC codes.

Install the wiring as follows:

**14/2 FPLP min (A/V circuit)**

**16/2 SH FPLP min (SLC)**

**#12 MC Min (120VAC Power)**

Install the entire system as depicted on plans per NFPA, NEC, IBC and the City of Rockville's requirements.

Provide a 100% pre-test of new system, to include all input and or output functions.  
Produce a test report for the AHJ.

Provide a 100% final test with the AHJ.

## SEQUENCE OF OPERATION

### ALARM:

Any activation of an alarm initiating device shall:

(Manual Station, Smoke or Heat Detector)

- Sound an audible signal at the fire alarm control panel. The signal shall be capable of being silenced during the alarm condition.
- Annunciate device and area on the FACP and FAAP.
- Activate all A/V devices.
- Dial the UL listed central station. (In this case City of Rockville Police)
- Log the event in the systems history log.
- The panel will remain in the alarm state until reset.

### SUPERVISORY:

(N/A for this project)

- Sound an audible signal at the fire alarm control panel. The signal shall be capable of being silenced during the supervisory condition.
- Annunciate device and area on the FACP and FAAP.
- Shut down its associated AHU.
- Dial the UL listed central station. (In this case City of Rockville Police)
- Log the event in the systems history log.
- The panel will remain in the supervisory state until reset.

### TROUBLE:

Any break or ground in the system wiring, loss of communication with a wireless device or low battery power for a wireless device shall cause a trouble condition which shall activate an audible and visual signal at the FACP. Dial the UL listed central station. (In this case City of Rockville Police)

Log the event in the systems history log.

Under any of the conditions above, once you acknowledge the condition and the piezo is silenced, if another condition occurs, the piezo will resound. Alarm conditions take precedence over all other conditions, then supervisory, then troubles.



EAI SECURITY  
1084 TAFT STREET  
ROCKVILLE, MD 20850

PROJECT: **KING FARM MANOR HOUSE**

**NO CIRCUITS OVER 250'**

**FACP CIRCUIT 1**

AMPS	0.532
DISTANCE	250
CMILS	4110
	2766.4
VOLTAGE DROP	0.67
SUPPLY VOLTAGE	20.4
VOLTAGE AT LOAD	19.73

**FACP CIRCUIT 2**

AMPS	0.553
DISTANCE	250
CMILS	4110
	2875.6
VOLTAGE DROP	0.70
SUPPLY VOLTAGE	20.4
VOLTAGE AT LOAD	19.70

**FACP CIRCUIT 3**

AMPS	0.861
DISTANCE	250
CMILS	4110
	4477.2
VOLTAGE DROP	1.09
SUPPLY VOLTAGE	20.4
VOLTAGE AT LOAD	19.31

**FACP CIRCUIT 4**

AMPS	0.79
DISTANCE	250
CMILS	4110
	4108
VOLTAGE DROP	1.00
SUPPLY VOLTAGE	20.4
VOLTAGE AT LOAD	19.40





# ES-200X

## Intelligent Addressable FACP with Communicator



### Addressable Fire Alarm Control Panels

#### General

The **ES-200X** is the latest intelligent addressable Fire Alarm Control Panel (FACP) from Fire•Lite Alarms and is a direct replacement for the MS-9200UDLS. The ES-200X comes with a pre-installed communicator and supports up to 198 addressable devices (99 detectors and 99 modules). With an extensive list of powerful features, the ES-200X programs just like Fire•Lite's other addressable products, yet fits into applications previously served only by conventional panels.

The pre-installed IPOTS-COM is a dual technology (POTS and IP) communicator. The POTS transmits system status (alarms, troubles, AC loss, etc.) to a Central Station via the public switched telephone network. The IP communicator's internet monitoring capability sends alarm signals over the Internet saving the monthly cost of two dedicated business telephone lines. Although not required, the secondary telephone line may be retained providing backup communication over the public switched telephone line. Optional cellular reporting is available using the CELL-MOD or CELL-CAB-FL.

Remote and local programming of the control panel is possible using the FS-Tools Upload/Download utility. Programming databases can be uploaded/downloaded via the panel's USB port (and USB cable) or via an ethernet connection using the IPOTS-COM communicator. The USB port also allows for the download or upload of the entire program, history file, walk-test data, current status and system voltages by means of a USB flash drive.

The power supply and all electronics are contained on a circuit board supported on a new quick install chassis and housed in a metal cabinet. Available accessories include local and remote upload/download software, remote annunciators, and reverse polarity/city box transmitter (4XTMF).

#### Features

- Listed to UL Standard 864, 10th edition
- Pre-installed IPOTS-COM Ethernet IP and POTS (Plain Old Telephone Service) Central Station Communicator over AlarmNet
- Optional CELL-MOD or CELL-CAB-FL GSM Central Station Communicator over AlarmNet®
- Automated activation of the ECC-50/100 Emergency Command Center
- ECC-FFT Firefighter Telephone option
- Compatible with SWIFT® wireless devices
- Auto-programming (learn mode) reduces installation time. Reports two devices set to the same address
- Four built-in, independently programmable Style Z (Class A) or Style Y (Class B) NAC circuits
- Selectable strobe synchronization for System Sensor, Wheelock, and Gentex devices
- Notification Appliance Circuit End of Line resistor matching
- Four programmable function keys for ease of maintenance
- Two programmable relays and one fixed trouble relay
- Built-in Programmer
- Integral 80-character LCD display with backlighting
- Real-time clock/calendar with automatic daylight savings control
- History file with 1,000 event capacity
- Addressable sounder base compatibility
- Multi-criteria detector (smoke, heat, CO) with programmable response
- Control module delay timer
- Automatic detector sensitivity testing (NFPA 72 compliant)
- Automatic device type-code verification
- Point trouble identification
- Waterflow selection per module point



- Alarm verification selection per detector point
- Maintenance alert warns when smoke detector dust accumulation is excessive
- One-person audible or silent walk test with walk-test log and printout
- System alarm verification selection per detector point
- PAS (Positive Alarm Sequence) and Pre-signal per point (NFPA 72 compliant)
- Up to 16 ANN-BUS annunciators- 8 per each ANN-Bus
- Remote Acknowledge, Alarm Silence, Reset and Drill via addressable modules or remote annunciator
- Upload/Download of program and data via USB with optional FS-Tools Programming Utility

#### SLC COMMUNICATION LOOP

- Supports LiteSpeed™ and CLIP protocols
- SLC operates up to 10,000 ft. (3,000 m) in LiteSpeed mode with twisted, unshielded wire
- Single addressable SLC loop which meets NFPA Class B and Class A requirements
- 198 addressable device capacity (99 addressable detectors and 99 modules)
- Compatible with Fire•Lite's addressable devices (refer to the *SLC Wiring Manual*)

#### NOTIFICATION APPLIANCE CIRCUITS (NACS)

- Four independently programmable output circuits. Circuits can be configured for the following outputs:
  - **Style Y** (Class B)
  - **Style Z** (Class A)
- Silence Inhibit and Autosilence timer options
- Continuous, March Time, Temporal, or California code for main circuit board NACs with two-stage capability
- Selectable strobe synchronization per NAC
- 2.5 A special application, 250mA regulated, total power for NACs

**NOTE:** Maximum or total 24VDC system power shared between all NAC circuits and the ANN-BUS is 2.7 A

## PROGRAMMING AND SOFTWARE

- Autoprogramming (learn mode) reduces installation time
- Custom English labels (per point) may be manually entered or selected from an internal library file
- Two programmable Form-C relay outputs
- 99 software zones
- Continuous fire protection during online programming
- Program Check automatically catches common errors not linked to any zone or input point
- **OFFLINE PROGRAMMING:** Create the entire program in your office using FS-Tools, a Windows®-based software package, and upload/download system programming locally. Offline programming requires an ethernet connection. FS-Tools is available on [www.firelite.com](http://www.firelite.com).

## User interface

### LED INDICATORS

- Fire Alarm (red)
- CO Alarm (red)
- AC Power (green)
- Supervisory (yellow)
- Trouble (yellow)
- Ground fault (yellow)
- Battery fault (yellow)
- Disabled (yellow)
- Maintenance (yellow)
- Communication (yellow)
- Alarm Silenced (yellow)
- F1-F4 Programmable Function Keys (yellow)

### KEYPAD

- 16 key alpha-numeric pad
- Acknowledge
- Alarm Silence
- Drill (Manual Evacuate)
- Four (4) programmable function keys
- Reset (lamp test)

## PRODUCT LINE INFORMATION

**ES-200X:** Addressable Fire Alarm Control Panel with one SLC loop. Includes main circuit board with display, pre-installed communicator, chassis with transformer, backbox with door, plastic bag containing screws, cables, key, etc. (For ES-200XC, refer to DF-60958.)

**FS-Tools:** Programming software for Windows®-based PC computer. Available for download at [www.firelite.com](http://www.firelite.com).

**CELL-CAB-FL/CELL-MOD:** Optional GSM communicators.

**IPOTS-COM:** Dual technology (POTS and IP) communicator. (replacement board)

**DP-ES-R:** Optional dress panel for the ES-200X.

**TR-CE:** Optional trim ring for semi-flush mounting.

**BB-2F:** Optional cabinet for one or two modules.

**BB-6F:** Optional cabinet for up to six modules mounted on CHS-6 chassis.

**BB-26:** Battery backbox, holds up to two 25 AH batteries and CHG-75.

**BB-55F:** Battery box, houses two 55 AH batteries

**CHS-6:** Chassis, mounts up to six multi-modules in a BB-6F cabinet.

**CHG-75:** Battery charger for lead-acid batteries with a rating of 25 to 75 AH.

**CHG-120F:** Remote battery charging system for lead-acid batteries with a rating of 55 to 120 AH. Requires additional BB-55F for mounting.

**BAT Series:** Batteries, see data sheet DF-52397.

**PRN Series:** UL listed compatible event printer. Uses tractor-fed paper.

## OPTIONAL MODULES

**4XTMF Reverse Polarity Transmitter Module:** Provides a supervised output for local energy municipal box transmitter, alarm and trouble. Includes a disable switch and disable trouble LED.

**PWRMOD24 Power Expander Module:** Optional power module. Increases alarm power output to 6 amps.

## COMPATIBLE ANNUNCIATORS

**ANN-80:** Remote LCD annunciator mimics the information displayed on the FACP LCD display. Recommended wire type is unshielded.

**ANN-100:** Remote LCD annunciator mimics the information displayed on the FACP LCD display. Recommended wire type is unshielded. For use in FM applications only.

**ANN-I/O:** LED Driver Module provides connections to a user supplied graphic annunciator. (See DF-52430.)

**ANN-LED:** Annunciator Module provides three LEDs for each zone: Alarm, Trouble, and Supervisory. Ships with red enclosure. (See DF-60241.)

**ANN-RLED:** Provides alarm (red) indicators for up to 30 input zones or addressable points. (See DF-60241.)

**ANN-RLY:** Relay Module provides 10 programmable Form-C relays. Can be mounted inside the cabinet. (See DF-52431.)

**ANN-S/PG:** Serial/Parallel Printer Gateway module provides a connection for a serial or parallel printer. (See DF-52429.)

## ADDRESSABLE DEVICES

All feature a polling LED and rotary switches for addressing.

**SD365:** Addressable low-profile photoelectric smoke detector. LiteSpeed only.

**SD365-IV:** Addressable low-profile photoelectric smoke detector. Ivory. LiteSpeed and CLIP mode.

**SD365T:** Addressable low-profile photoelectric smoke detector with thermal sensor. LiteSpeed only.

**SD365T-IV:** Addressable low-profile photoelectric smoke detector with thermal sensor. Ivory. LiteSpeed and CLIP mode.

**SD365R:** Remote test capable addressable photoelectric smoke detector for use with DNR(W) duct detector housing. LiteSpeed only.

**SD365R-IV:** Remote test capable addressable photoelectric smoke detector for use with DNR(W) duct detector housing. Ivory. LiteSpeed and CLIP mode.

**H365:** Low-profile 135°F fixed thermal sensor. LiteSpeed only.

**H365-IV:** Low-profile 135°F fixed thermal sensor. Ivory. LiteSpeed and CLIP mode.

**H365R:** Low-profile, intelligent, rate-of-rise thermal sensor. LiteSpeed only.

**H365R-IV:** Low-profile, intelligent, rate-of-rise thermal sensor. Ivory. LiteSpeed and CLIP mode.

**H365HT:** Low-profile intelligent 190°F/88°C fixed thermal sensor. LiteSpeed only.

**H365HT-IV:** Low-profile intelligent 190°F/88°C fixed thermal sensor. Ivory. LiteSpeed and CLIP mode.

## Legacy Devices

**CP355:** Addressable low-profile ionization smoke detector.

**SD355:** Addressable low-profile photoelectric smoke detector.

**SD355T:** Addressable low-profile photoelectric smoke detector with thermal sensor.

**SD355R:** Remote test capable addressable photoelectric smoke detector for use with DNR(W) duct detector housing.

**SD355CO:** Addressable, low-profile device that provides fire, heat, and carbon monoxide (CO) detection.

**H355:** Fast-response, low-profile heat detector.

**H355R:** Fast-response, low-profile heat detector with rate-of-rise option.

**H355HT:** Fast-response, low-profile heat detector that activates at 190°F/88°C.

**AD355:** Low-profile, intelligent, “Adapt” multi-sensor detector (B350LP base included).

**B200S:** Programmable, addressable sounder base.

**B200SR:** Addressable sounder base.

**BEAM355:** Intelligent beam smoke detector.

**BEAM355S:** Intelligent beam smoke detector with integral sensitivity test.

**D355PL:** InnovairFlex low-flow non-relay duct-detector housing; includes SD355R.

**DNR:** InnovairFlex low-flow non-relay duct-detector housing. (Order SD355R/SD365R separately.)

**DNRW:** InnovairFlex low-flow non-relay duct-detector housing, with NEMA-4 rating. Watertight. (Order SD355R/SD365R separately.)

#### **Addressable Modules**

**MMF-300:** Addressable Monitor Module for one zone of normally-open dry-contact initiating devices. Mounts in standard 4.0" (10.16 cm.) box. Includes plastic cover plate and end-of-line resistor. Module may be configured for either a Style B (Class B) or Style D (Class A) IDC.

**MDF-300:** Dual Monitor Module. Same as MMF-300 except it provides two Style B (Class B) only IDCs.

**MMF-301:** Miniature version of MMF-300. Excludes LED and Style D option. Connects with wire pigtailed. May mount in device backbox.

**MMF-302:** Similar to MMF-300. Addressable Monitor Module for one zone of conventional two-wire detectors. Requires resettable 24 VDC power. Refer to the *Device Compatibility Document* for listed compatible devices and quantity limitation.

**CMF-300:** Addressable Control Module for one Style Y/Z (Class B/A) zone of supervised polarized Notification Appliances. Mounts directly to a 4.0" (10.16 cm.) electrical box. NAC option requires external 24 VDC to power notification appliances.

**CRF-300:** Addressable relay module containing two isolated sets of Form-C contacts, which operate as a DPDT switch. Mounts directly to a 4.0" (10.16 cm.) box, surface mount using the SMB500.

**BG-12LX:** Addressable manual pull station with interface module mounted inside.

**I300:** This module isolates the SLC loop from short circuit conditions (required for Style 6 or 7 operation).

**ISO-6:** Six-fault isolator module. Mount one or two modules in a BB-2F cabinet (optional). Mount up to six modules on a CHS-6 chassis in a BB-6F cabinet.

**SMB500:** Used to mount all modules except the MMF-301 and M301.

**MMF-300-10:** Ten-input monitor module. Mount one or two modules in a BB-2F cabinet (optional). Mount up to six modules on a CHS-6 chassis in a BB-6F cabinet.

**MMF-302-6:** Six-zone interface module. Mount one or two modules in a BB-2F cabinet (optional). Mount up to six modules on a CHS-6 chassis in a BB-6F cabinet.

**CMF-300-6:** Six-circuit supervised control module. Mount one or two modules in a BB-2F cabinet (optional). Mount up to six modules on a CHS-6 chassis in a BB-6F cabinet.

**CRF-300-6:** Six-relay control module (Form-C relays). Mount one or two modules in a BB-2F cabinet (optional). Mount up to six modules on a CHS-6 chassis in a BB-6F cabinet.

#### **SWIFT Wireless Devices**

**W-GATE:** LiteSpeed Wireless Gateway

**W-SD355:** LiteSpeed intelligent, wireless photo detector.

**W-H355R:** LiteSpeed intelligent wireless rate of rise (135°) heat detector.

**W-SD355T:** Intelligent wireless photo/heat detector.

**W-H355:** LiteSpeed intelligent wireless fixed-temperature (135°) heat detector.

**W-MMF:** LiteSpeed Intelligent wireless monitor module.

**W-CRF:** LiteSpeed Intelligent wireless relay module.

**W-BG12LX:** LiteSpeed Intelligent wireless pull station.

**WAV-RL, WAV-WL, WAV-CRL, WAV-CWL:** LiteSpeed Intelligent AV bases.

**W-USB:** Wireless USB radio/antenna dongle that plugs into the USB port of a PC running SWIFT Tools.

**SWIFT Tools:** Programming and diagnostic utility for the Wireless Gateway and devices. Available for download from firelite.com.

**NOTE:** For more information on Compatible Addressable Devices for use with the ES-200X, see the following data sheets (document numbers): SD365 Series (DF-61010), H365 Series (DF-61011), AD355 (DF-52386), BG-12LX (DF-52013), CMF-300-6 (DF-52365), CRF-300-6 (DF-52374), CMF/CRF Series (DF-52130), CP355 (DF-52383), H355 Series (DF-52385), I300 (DF-52389), ISO-6 (DF-60485), MMF-300 Series/MDF-300 (DF-52121), MMF-300-10 (DF-52347), MMF-302-6 (DF-52356), SD355/SD355T (DF-52384), and SLC Wiring Manual (51309).

**NOTE:** Legacy 300 Series detection devices such as the CP300/CP350, SD300(T)/SD350(T) and older modules such as the M300, M301, M302, C304, and BG-10LX are not compatible with LiteSpeed polling. If the SLC contains one of these devices, polling must be set for standard CLIP protocol. Please consult factory for further information on previous 300 Series devices.

#### **ADDRESSABLE DEVICE ACCESSORIES**

**End-of-Line Resistor Assembly (R-47K and R-3.9K):** The 47k ohm assembly supervises the MMF-300, MDF-300, MMF-301, and CMF-300 module circuits. The 3.9k ohm assembly supervises the MMF-302 module circuit. These resistors are included with each module.

**Power Supervision Relay:** Supervises the power to 4-wire smoke detectors and notification appliances.

#### **Wiring Requirements**

While shielded wire is not required, it is recommended that all SLC wiring be twisted-pair to minimize the effects of electrical interference. Refer to the panel manual for wiring details.

# SYSTEM SPECIFICATIONS

## System Capacity

- Intelligent Signaling Line Circuits..... 1
- Addressable device capacity ..... 198
- Programmable software zones ..... 99
- Annunciators..... 16

## Electrical Specifications

**AC Power:** Operates in either 120 or 240 VAC, 50/60 Hz, 3.25 A, auto-sensing- no switch required. Wire size: minimum 14 AWG (2.00 mm<sup>2</sup>) with 600 V insulation. Nonpower-limited, supervised.

**Battery:** Two 12 V 18 AH lead-acid batteries. Battery Charger Capacity: 7-18 AH (ES-200X cabinet holds maximum of two 18 AH batteries.)

**Communication Loop:** Supervised and power-limited.

**Notification Appliance Circuits:** Terminal Block provides connections for four NACs, Style Y (Class B) or Style Z (Class A). Special Application power. Power-limited, supervised circuitry. Maximum signaling current per circuit: 2.5 amps special application, 250mA regulated. End-of-Line Resistor: 4.7k ohm, ½ watt (P/N 71252 UL listed) for Style Y (Class B) NAC; system capable of 1.9 kΩ - 22 kΩ ELR range. Refer to the *Fire•Lite Device Compatibility Document* for listed compatible devices.

**Two Programmable Relays and One Fixed Trouble Relay:** Contact rating: 2.0 A @ 30 VDC (resistive), 0.5 A @ 30 VAC (resistive). Form-C relays, non-power-limited, non-supervised.

## Cabinet Specifications

**Door:** 19.26" (48.92 cm.) high x 16.82" (42.73 cm.) wide x 0.72" (1.82 cm.) deep. **Backbox:** 19.00" (48.26 cm.) high x 16.65" (42.29 cm.) wide x 5.25" (13.34 cm.) deep. **Trim Ring (TR-CE):** 22.00" (55.88 cm.) high x 19.65" (49.91 cm.) wide.

## Shipping Specifications

**Weight:** 26.9 lbs. (12.20 kg.) **Dimensions:** 20.00" (50.80 cm.) high x 22.5" (57.15 cm.) wide x 8.5" (21.59 cm.) deep.

## 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.

## NFPA Standards

The ES-200X complies with the following NFPA 72 Fire Alarm Systems requirements:

- **LOCAL** (Automatic, Manual, Waterflow and Sprinkler Supervisory).
- **AUXILIARY** (Automatic, Manual and Waterflow) (requires 4XTMF).
- **REMOTE STATION** (Automatic, Manual and Waterflow) (Where a DACT is not accepted, the alarm, trouble and supervisory relays may be connected to UL 864 listed transmitters. For reverse polarity signaling of alarm and trouble, 4XTMF is required.)
- **PROPRIETARY** (Automatic, Manual and Waterflow).
- **CENTRAL STATION** (Automatic, Manual and Waterflow, and Sprinkler Supervised).
- **OT, PSDN** (Other Technologies, Packet-switched Data Network)
- **IBC 2012, IBC 2009, IBC 2006, IBC 2003, IBC 2000** (Seismic).
- **CBC 2007** (Seismic)

## Agency Listings and Approvals

The listings and approvals below apply to the basic ES-200X control panel. 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:** S624
- **FM approved**
- **CSFM:** 7165-0075:500
- **FDNY:** COA #6261

**NOTE:** See DF-60958 for ULC-listed model.

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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, contact Fire•Lite Alarms. Phone: (800) 627-3473, FAX: (877) 699-4105.  
www.firelite.com



Country of Origin: USA

# ANN-80

## 80-Character Serial LCD Annunciator

### Annunciators

#### General

The ANN-80 annunciator is a compact, backlit, 80-character LCD fire annunciator that mimics the Fire Alarm Control Panel (FACP) display. It provides system status indicators for AC Power, Alarm, Trouble, Supervisory, and Alarm Silenced conditions. The ANN-80 and the FACP communicate over a two-wire serial interface employing the ANN-Bus communication format. Connected devices are powered, via two additional wires, by either the host FACP or a remote UL-listed, filtered power supply. The ANN-80 is red; for white, order ANN-80-W.

The ANN-80 displays English-language text of system point information including device type, zone, independent point alarm, trouble or supervisory status, as well as any custom alpha labels programmed into the control panel. It includes control switches for remote control of critical system functions. (A keyswitch prevents unauthorized operation of the control switches.)

Up to eight ANN-80s may be connected to the ANN-Bus of each FACP. No programming is required, which saves time during system commissioning.

#### Features

- Listed to UL Standard 864, 9th Edition
- Backlit 80-character LCD display (20 characters x 4 lines)
- Mimics all display information from the host panel
- Control switches for System Acknowledge, Signal Silence, Drill, and Reset
- Control switches can be independently enabled or disabled at the FACP
- Keyswitch enables/disables control switches and mechanically locks annunciator enclosure
- Keyswitch can be enabled or disabled at the FACP
- Enclosure supervised for tamper
- System status LEDs for AC Power, Alarm, Trouble, Supervisory, and Alarm Silence
- Local sounder can be enabled or disabled at the FACP
- ANN-80 connects to the ANN-Bus terminal on the FACP and requires minimal panel programming
- Displays device type identifiers, individual point alarm, trouble, supervisory, zone, and custom alpha labels
- Time-and date display field
- Surface mount directly to wall or to single, double, or 4" square electrical box
- Semi-flush mount to single, double, or 4" square electrical box. Use ANN-SB80KIT for angled view mounting
- Can be remotely located up to 6,000 feet (1,800 m) from the panel
- Backlight turns off during AC loss to conserve battery power but will turn back on if an alarm condition occurs
- May be powered by 24 VDC from the host FACP or by remote power supply (requires 24 VDC)
- Up to eight ANN-80s can be connected on the ANN-Bus

#### Controls and Indicators

- AC Power
- Alarm
- Trouble



- Supervisory
- Alarm Silenced

#### Specifications

- **Operating voltage range:** 18 VDC to 28 VDC
- **Current consumption @ 24 VDC nominal** (filtered and non-resettable): 40 mA maximum
- **Ambient temperature:** 32°F to 120°F (0°C to 49°C)
- **Relative humidity:** 93% ± 2% RH (non-condensing) at 32°C ± 2°C (90°F ± 3°F)
- 5.375" (13.65 cm.) high x 6.875" (17.46 cm.) wide x 1.375" (3.49 cm.) deep
- For use indoors in a dry location
- All connections are power-limited and supervised

#### The ANN-Bus

##### POWERING THE DEVICES ON THE ANN-BUS FROM AUXILIARY POWER SUPPLY

The ANN-Bus can be powered by an auxiliary power supply when the maximum number of ANN-Bus devices exceeds the ANN-Bus power requirements. See the FACP manual for more information.

##### ANN-BUS DEVICE ADDRESSING

Each ANN-Bus device requires a unique address (ID Number) in order to communicate with the FACP. A maximum of 8 devices can be connected to the FACP ANN-Bus communication circuit. See the FACP manual for more information.

##### WIRE REQUIREMENTS: COMMUNICATIONS CIRCUIT

The ANN-80 connects to the FACP ANN-Bus communications circuit. To determine the type of wire and the maximum wiring distance that can be used with FACP ANN-Bus accessory modules, it is necessary to calculate the total worst case current draw for all modules on a single 4-conductor bus. The total worst case current draw is calculated by adding the individual worst case currents for each module.

**NOTE:** For total worst case current draw on a single ANN-Bus refer to appropriate FACP manual.

### WIRE REQUIREMENTS: POWER CIRCUIT

- 14 to 18 AWG (0.75 - 2.08 mm<sup>2</sup>) wire for 24 VDC power circuit is acceptable. Power wire distance limitation is set by 1.2 volt maximum line drop from source to end of circuit.
- All connections are power-limited and supervised.
- A maximum of eight ANN-80 modules may be connected to this circuit.

### Ordering Options

**ANN-80:** Red 80 character LCD Annunciator.

**ANN-80-W:** White, 80 character LCD Annunciator.

**ANN-SB80KIT-R:** Red surface mount backbox with angled wedge.

**ANN-SB80KIT-W:** White surface mount backbox with angled wedge.

### Agency Listings and Approvals

The listings and approvals below apply to the ANN-80. 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.

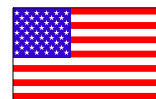
- **UL:** S2424
- **FM approved**
- **CSFM:** 7120-0075:0211
- **MEA:** 442-06-E

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[www.firelite.com](http://www.firelite.com)



Country of Origin: USA

# BAT Series Batteries

## Sealed Lead-Acid



Power Supplies/Accessories

### General

**BAT Series Batteries** are Power Sonic brand batteries. BAT Series (or Power Sonic brand) batteries are recommended for secondary power or backup power for all Fire•Lite fire alarm control equipment.

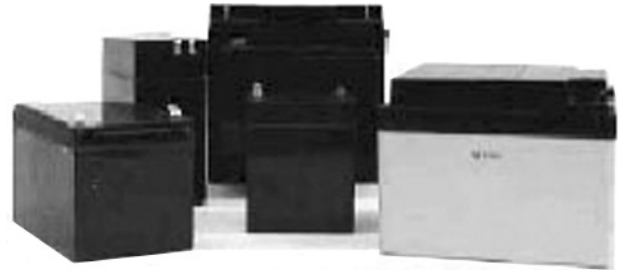
### Features

- Provide secondary power for control panels.
- Sealed and maintenance-free.
- Overcharge protected.
- Easy handling with leakproof construction.
- Ruggedly constructed, high-impact case (ABS, polystyrene, or polypropylene, depending on models).
- Long service life.
- Compact design.

### Agency Listings and Approvals

The listings and approvals below apply to BAT Series Batteries. 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 Recognized Components:** MH20845 (*Power-Sonic*)



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### Ordering Information

**BAT-1250-BP:** 10-unit bulk pack of BAT-1250 (12 V 5 AH)

**BAT-1270-BP:** 5-unit bulk pack of BAT-1270 (12 V 7 AH)

**BAT-12120-BP:** 4-unit bulk pack of BAT-12120 (12V 12 AH)

**BAT-12180-BP:** 2-unit bulk pack of BAT-12180 (12 V 18 AH)

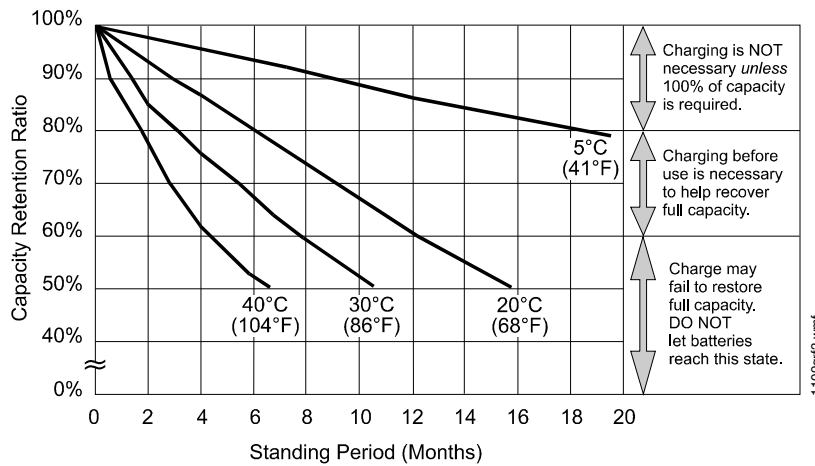
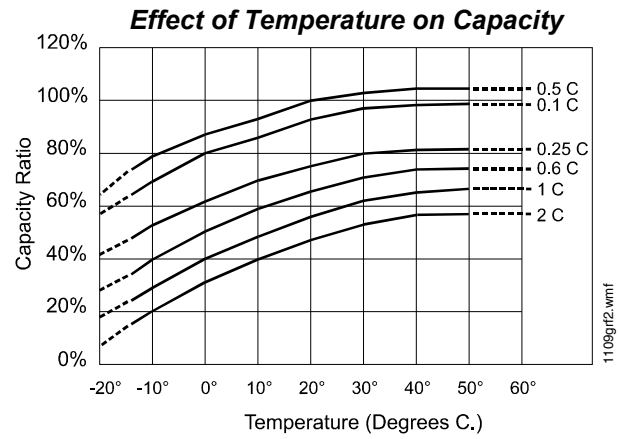
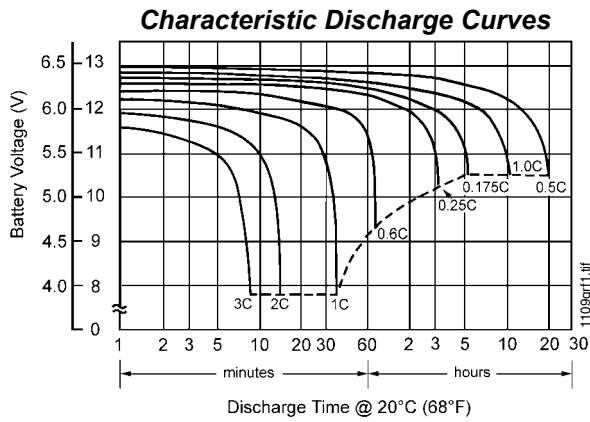
**BAT-12260-BP:** 2-unit bulk pack of BAT-12260 (12 V 26 AH)

**BAT-12550:** single battery (12 V 55 AH)

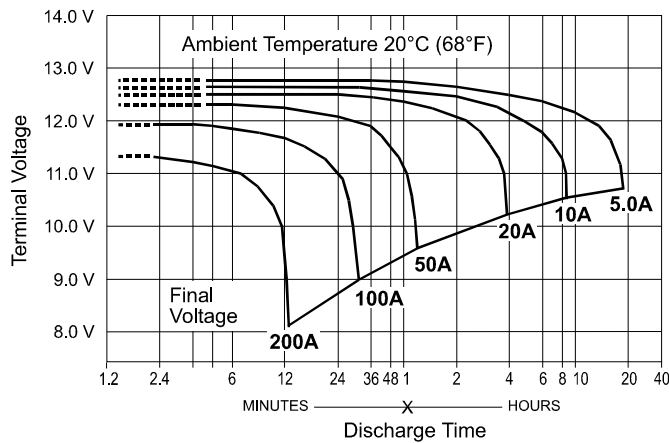
**BAT-121000:** single battery (12 V 100 AH)

### Part Number Reference & Specifications

Part Number	Power Sonic Part Number	Battery Description			DIMENSIONS									
		Nominal Voltage V	Nominal Capacity @ 20 hr. rate A.H.		Width		Depth		Height		Height over terminal		Weight	
					in.	mm	in.	mm	in.	mm	in.	mm	lb.	kg.
BAT-1250	PS-1250	12	5	sealed	3.54	90	2.76	70	4.02	102	4.21	107	4.1	1.9
BAT-1270	PS-1270	12	7	sealed	5.95	151	2.56	65	3.7	94	3.86	98	4.8	2.18
BAT-12120	PS-12120	12	12	sealed	5.95	151	3.86	98	3.7	94	3.94	100	7.92	3.59
BAT-12180	PS-12180	12	18	sealed	7.13	181	2.99	76	6.57	167	6.57	167	12.6	5.8
BAT-12260	PS-12260	12	26	sealed	6.56	167	6.97	177	4.92	125	4.92	125	17	7.71
BAT-12550	PS-12250	12	55	sealed	9.04	230	6.54	138	8.2	208	8.98	228	36	16.33
BAT-121000	PS-121000	12	100	sealed	12	305	6.6	168	8.2	208	8.98	228	68	30.84



at left:  
**PS-121000**  
**Shelf-Life**  
**and Storage**



at left:  
**PS-121000**  
**Discharge**  
**Characteristics**

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# BG-12LX

## Addressable Manual Pull Station



Addressable Devices

### General

The Fire-Lite BG-12LX is a state-of-the-art, dual-action (i.e., requires two motions to activate the station) pull station that includes an addressable interface (mounted inside) for Fire-Lite's addressable fire alarm control panels (FACPs). Because the BG-12LX is addressable, the control panel can display the exact location of the activated manual station. This leads fire personnel quickly to the location of the alarm.

### Features

- Maintenance personnel can open station for inspection and address setting without causing an alarm condition.
- Built-in bicolor LED, which is visible through the handle of the station, flashes in normal operation and latches steady red when in alarm.
- Handle latches in down position and the word "ACTIVATED" appears to clearly indicate the station has been operated.
- Captive screw terminals wire-ready for easy connection to SLC loop (accepts up to 12 AWG/3.25 mm<sup>2</sup> wire).
- Can be surface mounted (with SB-10 or SB-I/O) or semi-flush mounted. Semi-flush mount to a standard single-gang, double-gang, or 4" (10.16 cm) square electrical box.
- Smooth dual-action design.
- Meets ADAAG controls and operating mechanisms guidelines (Section 4.1.3[13]); meets ADA requirement for 5 lb. maximum activation force.
- Highly visible.
- Attractive shape and textured finish.
- Key reset.
- Includes Braille text on station handle.
- Optional trim ring (BG12TR).
- Meets UL 38, Standard for Manually Actuated Signaling Boxes.

### Construction

Shell, door, and handle are molded of durable polycarbonate material with a textured finish.

### Specifications

- **Shipping Weight:** 9.6 oz. (272.15 g)
- **Normal operating voltage:** 24 VDC.
- **Maximum SLC loop voltage:** 28.0 VDC.
- **Maximum SLC standby current:** 375  $\mu$ A.
- **Maximum SLC alarm current:** 5 mA.
- **Temperature Range:** 32°F to 120°F (0°C to 49°C)
- **Relative Humidity:** 10% to 93% (noncondensing)
- **For use indoors in a dry location**

### Installation

The BG-12LX will mount semi-flush into a single-gang, double-gang, or standard 4" (10.16 cm) square electrical outlet box, or will surface mount to the model SB-10 or SB-I/O surface backbox. If the BG-12LX is being semi-flush mounted, then the optional trim ring (BG12TR) may be used. The BG12TR is



FL PullStation.jpg

usually needed for semi-flush mounting with 4" (10.16 cm) or double-gang boxes (not with single-gang boxes).

### Operation

Pushing in, then pulling down on the handle causes it to latch in the down/activated position. Once latched, the word "ACTIVATED" (in bright yellow) appears at the top of the handle, while a portion of the handle protrudes from the bottom of the station. To reset the station, simply unlock the station with the key and pull the door open. This action resets the handle; closing the door automatically resets the switch.

Each manual station, on command from the control panel, sends data to the panel representing the state of the manual switch. Two rotary decimal switches allow address settings (1 – 159 with Breakaway Tab removed for MS-9600 Series, 1 – 99 and MS-9200UDLS, 1 – 50 for MS-9050UD).

### Architectural/Engineering Specifications

Manual Fire Alarm Stations shall be non-coded, with a key-operated reset lock in order that they may be tested, and so designed that after actual Emergency Operation, they cannot be restored to normal except by use of a key. An operated station shall automatically condition itself so as to be visually detected as activated. Manual stations shall be constructed of red-colored polycarbonate material with clearly visible operating instructions provided on the cover. The word FIRE shall appear on the front of the stations in white letters, 1.00 inches (2.54 cm) or larger. Stations shall be suitable for surface mounting on matching backbox SB-10 or SB-I/O; or semi-flush mounting on a standard single-gang, double-gang, or 4" (10.16 cm) square electrical box, and shall be installed

within the limits defined by the Americans with Disabilities Act (ADA) or per national/local requirements. Manual Stations shall be Underwriters Laboratories listed.

Manual stations shall connect with two wires to one of the control panel SLC loops. The manual station shall, on command from the control panel, send data to the panel representing the state of the manual switch. Manual stations shall provide address setting by use of rotary decimal switches.

## Product Line Information

**BG-12LX:** Dual-action addressable pull station. Includes key locking feature. (Listed for Canadian and non-Canadian applications.)

**SB-10:** Surface backbox; metal.

**SB-I/O:** Surface backbox; plastic.

**BG12TR:** Optional trim ring.

**17003:** Keys, set of two.

## Agency Listings and Approvals

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/ULC Listed:** S711 (listed for Canadian and non-Canadian applications).
- **MEA:** 67-02-E.
- **CSFM:** 7150-0075:0184.
- **FM Approved.**

**Patented:** U.S. Patent No. D428,351; 6,380,846; 6,314,772; 6,632,108.

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[www.firelite.com](http://www.firelite.com)

# SD365 Series

## Addressable Photoelectric Smoke Detectors



### Addressable Devices

The Fire•Lite® Alarms SD365(A), SD365R(A), and SD365HT(A) intelligent plug-in smoke detectors are designed for both performance and aesthetics, and are direct replacements for the SD355 Series. A new modern, sleek, contemporary design and enhanced optical sensing chamber is engineered to sense smoke produced by a wide range of combustion sources in accordance with more stringent code standards.

Exclusively for use with Fire•Lite's addressable fire alarm control panels, the SD365(A) Series point ID capability allows each detector's address to be set with rotary, decimal address switches, providing exact detector location for emergency personnel to quickly locate a fire during its early stages, potentially saving precious rescue time while also reducing property damage. Two LEDs on each sensor light to provide a local, visible sensor indication.

The SD365(A) Series also offers 135°F (57°C) fixed temperature thermal sensing on the SD365T(A) and a remote test capable detector on the SD365R(A) for use with DNR(A)/DNRW duct smoke detector housings.

## Features

### SLC LOOP:

- Two-wire SLC loop connection
- Unit uses base for wiring
- Compatible with LiteSpeed™ and CLIP protocol systems
- Stable communication technique with noise immunity

### ADDRESSING:

- Addressable by device
- Rotary, decimal addressing  
(Refer to the *Fire•Lite panel manuals* for device capacity.)

### ARCHITECTURE:

- Sleek, low-profile, stylish design
- Unique single-source design to respond quickly and dependably to a broad range of fires
- Integral communications and built-in device-type identification
- Built-in tamper resistant feature
- Remote test feature from the panel
- Walk test with address display (an address on 121 will blink the detector LED: 12-[pause]-1 (*LiteSpeed systems only*))
- Built-in functional test switch activated by external magnet
- Removable cover and insect-resistant screen for simple field cleaning
- Expanded color options

### OPERATION:

- Designed to meet UL 268 7th Edition
- Factory preset at 1.5% nominal sensitivity for panel alarm threshold level
- LED "blinks" when the unit is polled (communicating with the fire panel) and latches in alarm.
- Low standby current

### MECHANICALS:

- Sealed against back pressure
- SEMS screws for wiring of the separate base
- Designed for direct-surface or electrical-box mounting



- Plugs into separate base for ease of installation and maintenance
- Separate base allows interchange of photoelectric, ionization and thermal sensors

### OPTIONS:

- Optional relay, isolator, and sounder bases

## Installation

SD365 Series plug-in intelligent smoke detectors use a detachable base to simplify installation, service and maintenance. Installation instructions are shipped with each detector.

Mount detector base (all base types) on an electrical backbox which is at least 1.5" (3.81 cm) deep. For a chart of compatible junction boxes, see *DF-60059*.

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

When using relay or sounder bases, consult the *I300(A) installation sheet I56-3626* for device limitations between isolator modules and isolator bases.

## Construction

These detectors are constructed of fire-resistant plastic. The SD365 Series plug-in intelligent smoke detectors are designed to commercial standards and offer an attractive appearance.

## Operation

Each SD365 Series detector uses one of the panel's addresses (total limit is panel dependent) on the Fire•Lite Signaling Line Circuit (SLC). It responds to regular polls from the control panel and reports its type and the status. If it receives a test command from the panel (or a local magnet test), it stimulates its electronics and reports an alarm. It blinks its LEDs when polled and turns the LEDs on when commanded by the panel. The SD365 Series offers features and performance that represent the latest in smoke detector technology.

## Detector Sensitivity Test

Each detector can have its sensitivity tested (required per NFPA 72, Chapter 14 on *Inspection, Testing and Maintenance*) when installed/connected to an Fire•Lite addressable fire alarm control panel. The results of the sensitivity test can be printed for record keeping.

## Product Line Information

**NOTE:** “-IV” suffix indicates CLIP and LiteSpeed device.

**NOTE:** “A” suffix indicates Canadian version.

**SD365:** White, low-profile intelligent photoelectric sensor, LiteSpeed only

**SD365A:** Same as SD365 but with ULC listing

**SD365-IV:** Ivory, low-profile intelligent photoelectric sensor

**SD365A-IV:** Same as SD365-IV but with ULC listing

**SD365T:** White, same as **SD365** but includes a built-in 135°F (57°C) fixed-temperature thermal device, LiteSpeed only

**SD365TA:** Same as SD365T but with ULC listing

**SD365T-IV:** Ivory, same as SD365T but includes a built-in 135°F (57°C) fixed-temperature thermal device

**SD365TA-IV:** Same as SD365T-IV but with ULC listing

**SD365R:** White, low-profile intelligent photoelectric sensor, remote test capable, for use with DNR/DNRW, LiteSpeed only

**SD365RA:** Same as SD365R but with ULC listing, for use with DNRA

**SD365R-IV:** Ivory, low-profile intelligent photoelectric sensor, remote test capable, for use with DNR/DNRW

**SD365RA-IV:** Same as SD365R-IV but with ULC listing, for use with DNRA

### INTELLIGENT BASES

**NOTE:** For details on intelligent bases, see DF-60059.

**B300-6:** White, 6” base, standard flanged low-profile mounting base (CSFM: 7300-1653:0109)

**B300-6-IV:** Ivory, 6” base, standard flanged low-profile mounting base (CSFM: 7300-1653:0109)

**B300A-6:** Same as B300-6, ULC listed

**B300A-6-IV:** Ivory, 6” standard flanged low-profile mounting base, ULC listed

**B300-6-BP:** Bulk pack of B300-6, package contains 10

**B501-WHITE:** White, 4” standard European flangeless mounting base. UL/ULC listed (CSFM: 7300-1653:0109)

**B501-BL:** Black, 4” standard European flangeless mounting base. UL/ULC listed (CSFM: 7300-1653:0109)

**B501-IV:** Ivory color, 4” standard European flangeless mounting base. UL/ULC listed (CSFM: 7300-1653:0109)

**B501-WHITE-BP:** Bulk pack of B501-WHITE contains 10

**B224RB-WH:** White, relay base (CSFM: 7300-1653:0216)

**B224RB-IV:** Ivory, relay base (CSFM: 7300-1653:0216)

**B224RBA-WH:** White, relay base, ULC listing

**B224RBA-IV:** Ivory, relay base, ULC listing

**B224BI-WH:** White, isolator detector base (CSFM: 7300-1653:0216)

**B224BI-IV:** Ivory isolator detector base (CSFM: 7300-1653:0216)

**B224BIA-WH:** White, isolator detector base, ULC listing

**B224BIA-IV:** Ivory isolator detector base, ULC listing

**B200S-WH:** White, Intelligent addressable sounder base capable of producing sound output in high or low volume with ANSI Temporal 3, ANSI Temporal 4, continuous tone, marching tone, and custom tone. Uses FlashScan protocol. (CSFM: 7300-1653:0213)

**B200S-IV:** Ivory, Intelligent addressable sounder base capable of producing sound output in high or low volume with ANSI Temporal 3, ANSI Temporal 4, continuous tone, marching tone, and custom tone. Uses FlashScan protocol. (CSFM: 7300-1653:0213)

**B200SA-WH:** Same as B200S-WH, ULC listing

**B200SA-IV:** Same as B200S-IV, ULC listing

**B200SCOA-WH:** White, Intelligent, programmable sounder base in English/French (required in Canada for ULC applications with CO Series detector applications)

**B200SCOA-IV:** Ivory Intelligent, programmable sounder base in English/French (required in Canada for ULC applications with CO Series detector applications, ULC listing)

**B200S-LF-WH:** White, Low Frequency Intelligent, programmable sounder base. Produces a fundamental frequency of 520 Hz +/- 10% with a square wave or its equivalent; designed to meet the NFPA 72 sleeping space requirement. (CSFM: 7300-1653:0238)

**B200S-LF-IV:** Ivory, Low Frequency Intelligent, programmable sounder base. Produces a fundamental frequency of 520 Hz +/- 10% with a square wave or its equivalent; designed to meet the NFPA 72 sleeping space requirement. (CSFM: 7300-1653:0238)

**B200SR-WH:** White, Intelligent sounder base capable of producing sound output with ANSI Temporal 3 or continuous tone. Intended for retrofit applications. (CSFM: 7300-1653:0213)

**B200SR-IV:** Ivory, Intelligent sounder base capable of producing sound output with ANSI Temporal 3 or continuous tone. Intended for retrofit applications. (CSFM: 7300-1653:0213)

**B200SRA-WH:** Same as B200SR-WH with, ULC listing

**B200SRA-IV:** Same as B200SR-IV in Ivory color, ULC listing

**B200SR-LF-WH:** White, Low Frequency Intelligent, programmable sounder base. Produces a fundamental frequency of 520 Hz +/- 10% with a square wave or its equivalent; designed to meet the NFPA 72 sleeping space requirement. Intended for retrofit applications. (CSFM: 7300-1653:0238)

**B200SR-LF-IV:** Ivory, Low Frequency Intelligent, programmable sounder base. Produces a fundamental frequency of 520 Hz +/- 10% with a square wave or its equivalent; designed to meet the NFPA 72 sleeping space requirement. Intended for retrofit applications. (CSFM: 7300-1653:0238)

### MOUNTING KITS AND ACCESSORIES

**TR300:** White, replacement flange for B210LP(A) base

**TR300-IV:** Ivory, replacement flange for B210LP(A) base

**RA100Z(A):** Remote LED annunciator. 3-32 VDC. Mounts to a U.S. single-gang electrical box. For use with B501(A) and B300-6(A).

**M02-04-00:** Test magnet

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

**CK300:** Color Kit (includes cover and trim ring), white, 10-pack

**CK300-IV:** Color Kit (includes cover and trim ring), ivory, 10-pack

**CK300-BL:** Color Kit (includes cover and trim ring), black, 10-pack

# SYSTEM SPECIFICATIONS

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## Sensitivity:

- UL Applications: 0.5% to 4.0% per foot obscuration.
- ULC Applications: 0.5% to 3.5% per foot obscuration

**Size:** 2.0" (5.3 cm) high; base determines diameter

- **B300-6:** 6.1" (15.6 cm) diameter
- **B501:** 4" (10.2 cm) diameter

*For a complete list of detector bases see DF-60983*

**Shipping weight:** 3.4 oz. (95 g)

## Operating temperature range:

- SD365: 32°F to 122°F (0°C to 50°C)
- SD365T Series: 32°F to 100°F (0°C to 38°C)
- SD365R Series installed in a DNR/DNRW, -4°F to 158°F (-20°C to 70°C)

**UL/ULC Listed Velocity Range:** 0-4000 ft/min. (1219.2 m/min.), suitable for installation in ducts

**Relative humidity:** 10% – 93% non-condensing

**Thermal ratings:** fixed-temperature set point 135°F (57°C), rate-of-rise detection 15°F (8.3°C) per minute, high temperature heat 190°F (88°C)

## ELECTRICAL SPECIFICATIONS

**Voltage range:** 15 - 32 volts DC peak

**Standby current (max. avg.):** 200µA @ 24 VDC (one communication every 5 seconds with LED enabled)

**Max current:** 4.5 mA @ 24 VDC ("ON")

## DETECTOR SPACING AND APPLICATIONS

Fire•Lite recommends spacing detectors in compliance with NFPA 72. In low airflow applications with smooth ceiling, space detectors 30 feet (9.1m). For specific information regarding detector spacing, placement, and special applications refer to NFPA 72. A *System Smoke Detector Application Guide*, document A05-1003, is available at [www.systemsensor.com](http://www.systemsensor.com).

## Listings and Approvals

Listings and approvals below apply to the SD365 Series detectors. 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/ULC Listing: S1059
- FM Approved
- CSFM: 7272-0075:0502

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[www.firelite.com](http://www.firelite.com)

Country of Origin: Mexico

# H365 Series

## Addressable Heat Detectors



### Addressable Devices

The Fire-Lite® Alarms H365(A), H365R(A), and H365HT(A) addressable plug-in thermal detectors are designed for both performance and aesthetics and are a direct replacement for the H355 Series. A new modern, sleek, contemporary design and advanced thermal technologies make the H365(A) Series ideal for both system operation and building design.

Exclusively for use with Fire-Lite's addressable fire alarm control panels, the H365(A) Series point ID capability allows each detector's address to be set with rotary, decimal address switches, providing exact detector location for emergency personnel to quickly locate a fire during its early stages, potentially saving precious rescue time while also reducing property damage. Two LEDs on each sensor light to provide a local, visible sensor indication.

The H365(A) Series includes fixed temperature, rate-of-rise and high heat fixed temperature detectors that provide effective, intelligent property protection for a variety of applications. Detectors are available for both LiteSpeed™ and CLIP applications as designated.

### Features

#### SLC LOOP:

- Two-wire SLC loop connection
- Unit uses base for wiring

#### ADDRESSING:

- Addressable by device
- Rotary, decimal addressing  
(Refer to the *Fire-Lite panel manuals* for device capacity.)

#### ARCHITECTURE:

- Designed to meet UL 268 7th Edition
- Sleek, low-profile, stylish design
- State-of-the-art thermistor technology for fast response
- Integral communications and built-in device-type identification
- Built-in tamper resistant feature
- Built-in functional test switch activated by external magnet

#### OPERATION:

- Fixed temperature model (H365(A)) factory preset to 135°F (57°C)
- Rate-of-rise model (H365R(A)), 15°F (8.3°C) per minute
- High-temperature model (H365HT(A)) factory preset to 190°F (88°C)
- 360°-field viewing angle of the two visual alarm indicators, LEDs blink red in Normal condition and turn on steady red in Alarm
- LEDs blink every time the unit is polled

#### MECHANICALS:

- Sealed against back pressure
- SEMS screws for wiring of the separate base
- Designed for direct-surface or electrical-box mounting
- Plugs into separate base for ease of installation and maintenance
- Separate base allows interchange of photoelectric, ionization and thermal sensors

#### OTHER SYSTEM FEATURES:

- Remote test feature from the panel
- Walk test with address display
- Low standby current



#### OPTIONS:

- Remote LED output connection to optional RA100Z remote LED annunciator

### Installation

H365 Series plug-in intelligent thermal detectors use a detachable base to simplify installation, service and maintenance. Installation instructions are shipped with each detector.

Mount detector base (all base types) on an electrical backbox which is at least 1.5" (3.81 cm) deep. For a chart of compatible junction boxes, see *DF-60059*.

**NOTE:** Because of the inherent supervision provided by the SLC loop, end-of-line resistors are not required. Wiring "T-taps" or branches are permitted for Style 4 (Class "B") wiring only. When using relay or sounder bases, consult the *I300(A)* installation sheet I56-3626 for device limitations between isolator modules and isolator bases.

### Applications

Use thermal detectors for protection of property. For further information, refer to I56-6525, Applications Manual for System Smoke Detectors, which provides detailed information on detector spacing, placement, zoning, wiring, and special applications.

### Construction

These detectors are constructed of fire-resistant plastic. The H365 Series plug-in intelligent thermal detectors are designed to commercial standards and offer an attractive appearance.

### Operation

Each H365 Series detector uses one of the panel's addresses (total limit is panel dependent) on the Fire-LiteJCI Signaling Line Circuit (SLC). It responds to regular polls from the control panel and reports its type and the status. If it receives a test command from the panel (or a local magnet test), it stimulates its electronics and reports an alarm. It blinks its LEDs when polled and turns the LEDs on when commanded by the panel. The H365 Series offers features and performance that represent the latest in thermal detector technology.

## Product Line Information

**NOTE:** “-IV” suffix indicates CLIP and LiteSpeed device.

**NOTE:** “A” suffix indicates Canadian version.

**H365:** White, low-profile intelligent 135°F fixed thermal sensor, LiteSpeed only

**H365A:** Same as H365 but with ULC listing

**H365-IV:** Ivory, low-profile intelligent 135°F fixed thermal sensor, LiteSpeed and CLIP

**H365A-IV:** Same as H365-IV but with ULC listing

**H365R:** White, low-profile intelligent rate-of-rise thermal sensor, LiteSpeed only

**H365RA:** Same as H365R but with ULC listing

**H365R-IV:** Ivory, low-profile intelligent rate-of-rise fixed thermal sensor, LiteSpeed and CLIP

**H365RA-IV:** Same as H365R-IV but with ULC listing

**H365H:** White, low-profile intelligent 190°F fixed thermal sensor, LiteSpeed only

**H365HA:** Same as H365H but with ULC listing

**H365H-IV:** Ivory, low-profile intelligent 190°F thermal sensor, LiteSpeed and CLIP

**H365HA-IV:** Same as H365H-IV but with ULC listing

### INTELLIGENT BASES

**NOTE:** For details on intelligent bases, see DF-60059.

**B300-6:** White, 6” base, standard flanged low-profile mounting base (CSFM: 7300-1653:0109)

**B300-6-IV:** Ivory, 6” base, standard flanged low-profile mounting base (CSFM: 7300-1653:0109)

**B300A-6:** Same as B300-6, ULC listed

**B300A-6-IV:** Ivory, 6” standard flanged low-profile mounting base, ULC listed

**B300-6-BP:** Bulk pack of B300-6, package contains 10

**B501-WHITE:** White, 4” standard European flangeless mounting base. UL/ULC listed (CSFM: 7300-1653:0109)

**B501-BL:** Black, 4” standard European flangeless mounting base. UL/ULC listed (CSFM: 7300-1653:0109)

**B501-IV:** Ivory color, 4” standard European flangeless mounting base. UL/ULC listed (CSFM: 7300-1653:0109)

**B501-WHITE-BP:** Bulk pack of B501-WHITE contains 10

**B224RB-WH:** White, relay base (CSFM: 7300-1653:0216)

**B224RB-IV:** Ivory, relay base (CSFM: 7300-1653:0216)

**B224RBA-WH:** White, relay base, ULC listing

**B224RBA-IV:** Ivory, relay base, ULC listing

**B224BI-WH:** White, isolator detector base (CSFM: 7300-1653:0216)

**B224BI-IV:** Ivory isolator detector base (CSFM: 7300-1653:0216)

**B224BIA-WH:** White, isolator detector base, ULC listing

**B224BIA-IV:** Ivory isolator detector base, ULC listing

**B200S-WH:** White, Intelligent addressable sounder base capable of producing sound output in high or low volume with ANSI Temporal 3, ANSI Temporal 4, continuous tone, marching tone, and custom tone. Uses FlashScan protocol. (CSFM: 7300-1653:0213)

**B200S-IV:** Ivory, Intelligent addressable sounder base capable of producing sound output in high or low volume with ANSI Temporal 3, ANSI Temporal 4, continuous tone, marching tone, and custom tone. Uses FlashScan protocol. (CSFM: 7300-1653:0213)

**B200SA-WH:** Same as B200S-WH, ULC listing

**B200SA-IV:** Same as B200S-IV, ULC listing

**B200SCOA-WH:** White, Intelligent, programmable sounder base in English/French (required in Canada for ULC applications with CO Series detector applications)

**B200SCOA-IV:** Ivory Intelligent, programmable sounder base in English/French (required in Canada for ULC applications with CO Series detector applications, ULC listing)

**B200S-LF-WH:** White, Low Frequency Intelligent, programmable sounder base. Produces a fundamental frequency of 520 Hz +/- 10% with a square wave or its equivalent; designed to meet the NFPA 72 sleeping space requirement. (CSFM: 7300-1653:0238)

**B200S-LF-IV:** Ivory, Low Frequency Intelligent, programmable sounder base. Produces a fundamental frequency of 520 Hz +/- 10% with a square wave or its equivalent; designed to meet the NFPA 72 sleeping space requirement. (CSFM: 7300-1653:0238)

**B200SR-WH:** White, Intelligent sounder base capable of producing sound output with ANSI Temporal 3 or continuous tone. Intended for retrofit applications. (CSFM: 7300-1653:0213)

**B200SR-IV:** Ivory, Intelligent sounder base capable of producing sound output with ANSI Temporal 3 or continuous tone. Intended for retrofit applications. (CSFM: 7300-1653:0213)

**B200SRA-WH:** Same as B200SR-WH with, ULC listing

**B200SRA-IV:** Same as B200SR-IV in Ivory color, ULC listing

**B200SR-LF-WH:** White, Low Frequency Intelligent, programmable sounder base. Produces a fundamental frequency of 520 Hz +/- 10% with a square wave or its equivalent; designed to meet the NFPA 72 sleeping space requirement. Intended for retrofit applications. (CSFM: 7300-1653:0238)

**B200SR-LF-IV:** Ivory, Low Frequency Intelligent, programmable sounder base. Produces a fundamental frequency of 520 Hz +/- 10% with a square wave or its equivalent; designed to meet the NFPA 72 sleeping space requirement. Intended for retrofit applications. (CSFM: 7300-1653:0238)

### MOUNTING KITS AND ACCESSORIES

**TR300:** White, replacement flange for B210LP(A) base

**TR300-IV:** Ivory, replacement flange for B210LP(A) base

**RA100Z(A):** Remote LED annunciator. 3-32 VDC. Mounts to a U.S. single-gang electrical box. For use with B501(A) and B300-6(A).

**M02-04-00:** Test magnet

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

**CK300:** Color Kit (includes cover and trim ring), white, 10-pack

**CK300-IV:** Color Kit (includes cover and trim ring), ivory, 10-pack

**CK300-BL:** Color Kit (includes cover and trim ring), black, 10-pack

# SYSTEM SPECIFICATIONS

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**Size:** 2.0" (5.3 cm) high; base determines diameter

- **B300-6:** 6.1" (15.6 cm) diameter
- **B501:** 4" (10.2 cm) diameter

For a complete list of detector bases see DF-60983

**Shipping weight:** 3.4 oz. (95 g)

**Operating temperature range:**

- H365, H365R Series: –4°F to 100°F (–20°C to 38°C)
- H365H Series: –4°F to 150°F (–20°C to 66°C)

**Detector spacing:** UL approved for 50 ft. (15.24 m) center-to-center, FM approved for 25 x 25 ft. (7.62 x 7.62 m) spacing

**Relative humidity:** 10% – 93% non-condensing

**Thermal ratings:** fixed-temperature set point 135°F (57°C), rate-of-rise detection 15°F (8.3°C) per minute, high temperature heat 190°F (88°C)

**Mounting:** B300-6(A) flanged base, included

See “**Product Line Information: Intelligent Bases,**” if using a different base.

## ELECTRICAL SPECIFICATIONS

**Voltage range:** 15 - 32 volts DC peak

**Standby current (max. avg.):** 200uA @ 24 VDC (one communication every 5 seconds with LED enabled)

**Max current:** 4.5 mA @ 24 VDC (“ON”)

## Listings and Approvals

Listings and approvals below apply to the H365(A) Series detectors. 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/ULC Listing: S2517
- FM Approved
- CSFM: 7272-0075:0501

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We cannot cover all specific applications or anticipate all requirements.  
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For more information, contact Fire•Lite Alarms. Phone: (800) 627-3473, FAX:(877) 699-4105.  
www.firelite.com

Country of Origin: Mexico



# W-GATE

## SWIFT Wireless Gateway



Intelligent Wireless Devices

Fire-Lite® Alarms' SWIFT® (Smart Wireless Integrated Fire Technology) Wireless System can be applied in many situations that are problematic for traditional wired devices. In cases where areas of a building are difficult or impossible to wire, visually sensitive, or have restricted access, SWIFT wireless sensors provide an efficient, reliable solution.

SWIFT wireless devices communicate via a proprietary wireless mesh protocol to communicate with Fire-Lite fire alarm systems by means of a SWIFT wireless gateway. The SWIFT gateway connects to the SLC loop of an ES-200X, ES-50X, MS-9200UDLS or MS-9600(UD)LS panel using LiteSpeed™ protocol. New type IDs for wireless devices are supported (for the ES-200X and ES-50X only) that allow the FACP to display all events such as alarms and trouble indications, as well as unique trouble conditions required for wireless devices. This capability eliminates the need for a supplementary annunciator for wireless event messages.

Wireless devices in a SWIFT network develop "parent-child" communication links with other devices in the mesh, so that a message originating from a remote device "hops" to the closest parent device, and then to successive parent devices until the message reaches gateway. Alternate paths are also identified and supervised by the SWIFT protocol providing approved Class A wireless communication. If a device does not have an established communication path with adequate signal strength, an additional device such as a wireless module may be installed in between so that it will act as a repeater.

A SWIFT gateway system supports up to 50 devices: 1 SWIFT gateway and up to 49 wireless detectors, modules, pullstations, and A/V bases when used with the ES-200X or ES-50X. The MS-9200UDLS and MS-9600(UD)LS can support a SWIFT gateway and up to 48 detectors, modules, pullstations, A/V bases, and 1 display driver. The maximum number of gateways on a system is limited by the number of available SLC addresses on the FACP, or a maximum of 4 gateways within common wireless range. One W-DIS-D Wireless Display Driver and ANN-80-W Annunciator are required with each W-GATE installed in a system using the MS-9200UDLS or MS-9600(UD)LS control panels. The W-DIS-D and ANN-80-W display wireless-specific events that cannot be displayed on the FACP.

The SWIFT system has been designed so that it can be installed using only typical hand tools and magnets. However, the SWIFT Tools PC utility provides many benefits that can enhance the process of performing a site evaluation (Site Survey), installing a system (Mesh Configuration), or extracting detailed information from the system (Diagnostics). The utility runs on a Windows® laptop, and uses a USB radio antenna (W-USB) inserted into a USB slot to communicate with wireless devices within range of the PC. Once devices have formed a mesh, SWIFT Tools can provide current information on all devices in the mesh as long as the PC is within range of the SWIFT Gateway.

The result is a fire system that combines both wired and wireless detection and presents all event information at the panel and/or network displays, when used, and a display driver/annunciator, when required.

### Features

- Wireless mesh technology (902-928 MHz frequency)
- Cascading-wave mesh operation provides a verification of redundant communication paths
- Any wireless device can be added to act as a repeater
- Each gateway supports up to 50 addresses: 1 wireless gateway, 1 display driver, if required, and up to 49 devices



- Up to 4 wireless networks can be installed with overlapping radio network coverage
- Site Survey feature allows for an evaluation of a site before the installation
- Standard "code wheel" for setting the SLC address
- Wireless devices use (4) CR-123A lithium batteries
- Battery Life – UL listed for 2 years

### Compatible Control Panels

- ES-50X
- ES-200X
- MS-9200UDLS
- MS-9600(UD)LS

### SWIFT Tools

SWIFT Tools is a Windows PC-based utility that is used for site evaluation, system configuration, and diagnostics. The SWIFT Tools program is used with the W-USB adapter to communicate with wireless devices that are not joined in a network, or with one or more wireless gateways and all devices that have formed a network with each gateway. A graphic representation of the wireless network provides important system data in an effective format, including communication links, signal strength, battery voltage, and more.

Tool-less operation is supported, allowing you to perform site evaluation and system configuration and installation can be accomplished without using SWIFT Tools when necessary. Multi-colored LEDs on SWIFT devices provide feedback for interactions. At any point, only one instance of SWIFT Tools can run on a laptop or PC.

SWIFT Tools has the following utilities:

- Site Survey
- Create Mesh Network
- Diagnostics

SWIFT Tools works in a wireless environment with the W-GATE and devices within a range of approximately 20 feet.

SWIFT Tools is designed for systems running Microsoft® Windows®.

### MINIMUM SYSTEM REQUIREMENTS

**Operating System:** Windows 7 and Windows 8 (32 bit and 64 bit).

**Hard Drive:** 20 GB hard drive space with minimum 1GB free space on hard disk.

**RAM:** Minimum 512MB RAM.

**Processor speed:** 1GHz minimum (2.4 GHz recommended) Processor, 512K Cache.

### Components and Ordering Information

- **W-GATE:** Fire•Lite Wireless SWIFT Gateway - 1 SWIFT Gateway is required for each wireless mesh, and supports up to 48 SWIFT detectors or modules, and one display driver, if required. Connects to the SLC loop of a compatible panel using LiteSpeed protocol. Power may be supplied by the SLC circuit or via an optional 24VDC input.

**NOTE:** Use of the 24VDC input may be more convenient for service as it allows for powering down a gateway without shutting down an SLC loop.

- **W-DIS-D:** LCD user interface for use with the W-GATE wireless gateway and an ANN-80-W Remote Annunciator. Connects to the FACP via the ANN-BUS. Both W-DIS-D and ANN-80-W are required to display trouble and supervisory conditions that are specific to the W-GATE and its devices. One W-DIS-D is required for each W-GATE in a system using the MS-9200UDLS or MS-9600(UD)LS.
- **ANN-80-W:** White 80 character LCD annunciator used with the W-DIS-D to display wireless-specific events not displayed on the FACP.
- **W-SD355:** intelligent, wireless photo detector. Ships with B501W base included. Requires (4) CR-123A batteries (included).
- **W-H355R:** intelligent wireless rate of rise (135°) heat detector. Ships with B501W base included. Requires (4) CR-123A batteries (included).
- **W-SD355T:** intelligent wireless photo/heat detector. Ships with B501W base included. Requires (4) CR-123A batteries (included).
- **W-H355:** intelligent wireless fixed-temperature (135°) heat detector. Ships with B501W base included. Requires (4) CR-123A batteries (included).
- **W-MMF:** Wireless monitor module. Used to monitor devices with mechanical contact actuation. Includes a special cover with a built-in tamper magnet. Recommended for installation in a SMB500-WH box (ordered separately) rather than a metal backbox for best performance. Ships with 4 Panasonic® CR123A or 4 Duracell® DL123A batteries. (See data sheet for more information).
- **W-CRF:** Wireless relay module for use with the W-GATE wireless gateway. Includes a special cover with a built-in tamper magnet. Recommended for installation in an SMB500-WH box (ordered separately) rather than a metal backbox for best performance. Ships with 4 Panasonic CR123A or 4 Duracell DL123A batteries.
- **W-BG12LX:** Wireless addressable pullstation. Requires (4) CR-123A batteries (included).
- **W-BG12LXSP:** Wireless addressable pullstation. Spanish text. Requires (4) CR-123A batteries (included).
- **WAV-CRL, WAV-CWL:** SWIFT Wireless Addressable A/V bases. Requires (8) CR-123A batteries (included). Requires a non-com-

pact ceiling System Sensor® L-series notification device (ordered separately).

- **W-SYNC:** Wireless sync module. Requires (4) CR-123A batteries (included).
- **SMB500-WH:** Optional surface-mount backbox.
- **SWIFT Tools:** Programming and diagnostic utility. Free download from firelite.com. For installation on a (typically laptop) PC running an approved version of Windows (See Minimum System Requirements for SWIFT Tools). Requires the W-USB radio/antenna dongle for communication with SWIFT Wireless devices.
- **W-USB:** Wireless USB radio/antenna dongle that plugs into the USB port of a PC running SWIFT Tools. The W-USB provides a communication link with SWIFT Wireless devices that are within approximately 20 feet and have not formed a mesh. Alternately, when the devices have formed a mesh, bringing the PC/W-USB within range (20 ft.) of the gateway for that mesh will allow SWIFT Tools to acquire information on all devices in that mesh, including point-to-point signal strength for all links.
- **W-BATCART:** Wireless battery cartridge, 10-pack. For use with wireless pullstations and A/V bases.

### Agency Listings and Approvals

The listings and approvals below apply to the W-GATE. In some cases, certain modules may not be listed by certain approval agencies or listing may be in process. Consult factory for latest listing status.

**UL Listed:** S2424

**CSFM:** 7300-0075:0232

**NYC Fire Dept:** COA #6185

**FM Approved**

**FCC ID:** PV3WFSGW

### Standards and Codes

The SWIFT Wireless System complies with the following UL Standards and with NFPA 72 Fire Alarm system requirements.

UL 864

UL 268

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www.firelite.com

Country of Origin: Mexico

# W-MMF & W-CRF

## SWIFT Wireless Modules



Intelligent Wireless Devices

The SWIFT® wireless monitor module is intended for use with a wireless gateway to interface with a device having contacts used to signal status conditions. It is designed to provide an interface to contact devices such as security contacts, waterflow switches, or pull stations. The input to the monitor module is non-latching and does not require a reset. The device has a panel controlled LED indicator. The monitor module must be within 3-feet of the monitored device when using field wiring or 20 feet in non-metallic conduit.

The SWIFT wireless relay module allows the control panel to switch contacts by code command. The relay contains an isolated set of Form-C contacts, which operate as a SPDT switch. Circuit connections to the relay are not supervised by the module. The SWIFT relay module can be used to activate functions such as a remote power supply (in conjunction with a monitor module), elevator recall, door holders and fan shutdown of wired devices or SWIFT devices within the same mesh network. The module also includes a panel-controlled LED indicator.

SWIFT wireless modules are intelligent (addressable) modules which provide secure, reliable communication to the Fire Alarm Control Panel (FACP) across a Class A mesh network. Wireless modules create an opportunity for applications where it is costly (concrete walls/ceilings, buried wires), obtrusive (surface mount conduit), or possibly dangerous (asbestos) to use traditional wired devices. In addition, both wired and wireless devices can be present on the same FACP providing an integrated wired-wireless solution for increased installation potential.

The mesh network within the SWIFT system creates a child-parent relationship between the devices so that each device has two parents providing a second path for communications on every device. If one device can no longer operate for any reason, the rest of the devices can still communicate with each other, directly or through one or more intermediate devices.

The SWIFT system also engages frequency hopping to prevent system interference whether intentional or accidental.

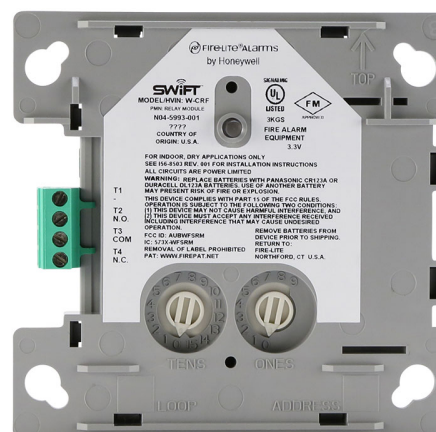
The devices communicate across the mesh network through a gateway to the FACP. The FACP views the SWIFT wireless device and another addressable device on the system providing similar detection functions and outputs as a wired counterpart. In addition, both wired and wireless devices can be present on the same FACP to meet the needs of a given application. A SWIFT wireless system can use any combination of modules, smoke and heat detectors, pullstations, and A/V bases.

### Features

- Wireless installation
- Class A mesh network
- Addressable code wheels
- Commercial applications
- UL 268 listed
- Frequency hopping
- Bi-directional communications

### Compatible Control Panels

- ES-50X
- ES-200X
- MS-9200UDLS
- MS-9600(UD)LS



W-CRF Wireless Relay Module

### Monitor Module Specifications

#### PHYSICAL / OPERATING SPECIFICATIONS

**Dimensions:** Height 4-1/2 inches; Width 4-1/2 inches; Depth 1-1/2 inches

**Device Weight (includes 4 batteries):** 7.9 oz (224 g)

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

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

#### ELECTRICAL SPECIFICATIONS

**EOL Resistance:** 3.9K Ohms

**Maximum IDC Wiring Resistance:** 10 Ohms

**Maximum IDC Voltage:** 3.2 Volts

**Maximum Average IDC Current:** 5.5µA

**Maximum Transmit RF Power:** 17 dBm

**Radio Frequency Range:** 902-928 MHz

#### BATTERY SPECIFICATIONS

**Battery Type:** 4 Panasonic CR123A or 4 Duracell DL 123A

**Battery Life:** 2 years

**Battery Replacement:** Upon TROUBLE BATTERY LOW display and/or during annual maintenance

### Relay Module Specifications

#### PHYSICAL / OPERATING SPECIFICATIONS

**Dimensions:** Height 4-1/4 inches; Width 4-1/4 inches; Depth 1-1/2 inches

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

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

#### ELECTRICAL SPECIFICATIONS

**Maximum Transmit RF Power:** 17 dBm

**Radio Frequency Range:** 902-928 MHz

#### BATTERY SPECIFICATIONS

**Battery Type:** 4 Panasonic® CR123A or 4 Duracell® DL 123A

**Battery Life:** 2 years

**Battery Replacement:** Upon TROUBLE BATTERY LOW display and/or during annual maintenance

## Relay Contact Ratings

Current Rating	Maximum Voltage	Load Description	Application
2 A	25 VAC	PF = 0.35	Non-coded
3 A	30 VDC	Resistive	Non-coded
2 A	30 VDC	Resistive	Coded
0.46 A	30 VDC	(L/R = 20ms)	Non-coded
0.7 A	70.7 VAC	PF = 0.35	Non-coded
0.9 A	125 VDC	Resistive	Non-coded
0.5 A	125 VAC	PF = 0.75	Non-coded
0.3 A	125 VAC	PF = 0.35	Non-coded

## Agency Listings and Approvals

Each device complies with part 15 of the FCC rules meaning operation is subject to two conditions.

1) The device may not cause harmful interference and 2) The device must accept any interference received including interference that may cause undesired operation.

The listings and approvals below apply to the basic intelligent wireless modules. In some cases, certain modules may not be listed by certain approval agencies or listing may be in process. Consult factory for latest listing status.

**UL Listed:** S2424

**CSFM** (Monitor Module): 7300-0075:0233; (Relay module): 7300-0075:0234

**FM Approved**

**FCC ID:** (Monitor Module) AUBWFSMM and (Relay Module) AUB-WFSRM

## Standards and Codes

The SWIFT Wireless Intelligent Detectors comply with the following UL Standards and with NFPA 72 Fire Alarm System requirements.

UL 864

UL 268

## SWIFT Devices and Ordering Information

- **W-MMF:** Wireless monitor module. Used to monitor devices with mechanical contact actuation. Includes a special cover with a built-in tamper magnet. Recommended for installation in a SMB500-WH box (ordered separately) rather than a metal backbox for best performance. Requires (4) CR-123A batteries (included).
- **W-CRF:** Wireless relay module. Includes a special cover with a built-in tamper magnet. Recommended for installation in a SMB500-WH box (ordered separately) rather than a metal backbox for best performance. Requires (4) CR-123A batteries (included).
- **W-GATE:** Fire•Lite Wireless SWIFT Gateway - 1 SWIFT Gateway is required for each wireless mesh, and supports up to 48 SWIFT detectors or modules, and one display driver, if required. Connects to the SLC loop of a compatible panel using LiteSpeed protocol. Power may be supplied by the SLC circuit or via an optional 24VDC input.

- **W-DIS-D:** LCD user interface for use with the W-GATE wireless gateway and an ANN-80-W Remote Annunciator. Connects to the FACP via the ANN-BUS. Both W-DIS-D and ANN-80-W are required to display trouble and supervisory conditions that are specific to the W-GATE and its devices. One W-DIS-D is required for each W-GATE in a system using the MS-9200UDLS or MS-9600(UD)LS.
- **ANN-80-W:** White 80 character LCD annunciator used with the W-DIS-D to display wireless-specific events not displayed on the FACP.
- **W-SD355:** Intelligent, wireless photo detector. Ships with B501W base included. Requires (4) CR-123A batteries (included).
- **W-H355R:** Intelligent wireless rate of rise (135°) heat detector. Ships with B501W base included. Requires (4) CR-123A batteries (included).
- **W-SD355T:** intelligent wireless photo/heat detector. Ships with B501W base included. Requires (4) CR-123A batteries (included).
- **W-H355:** Intelligent wireless fixed-temperature (135°) heat detector. Ships with B501W base included. Requires (4) CR-123A batteries (included).
- **W-BG12LX:** Wireless addressable pullstation. Requires (4) CR-123A batteries (included).
- **W-BG12LXSP:** Wireless addressable pullstation. Spanish text. Requires (4) CR-123A batteries (included).
- **WAV-CRL, WAV-CWL:** SWIFT Wireless Addressable A/V bases. Requires (8) CR-123A batteries (included). Requires a non-compact ceiling System Sensor® L-series notification device (ordered separately).
- **W-SYNC:** Wireless sync module. Requires (4) CR-123A batteries (included).
- **SMB500-WH:** Optional surface-mount backbox.
- **SWIFT Tools:** Programming and diagnostic utility. Free download from [www.firelite.com](http://www.firelite.com). For installation on a (typically laptop) PC running an approved version of Windows (See Minimum System Requirements for SWIFT Tools). Requires the W-USB radio/antenna dongle for communication with SWIFT Wireless devices.
- **W-USB:** Wireless USB radio/antenna dongle that plugs into the USB port of a PC running SWIFT Tools. The W-USB provides a communication link with SWIFT Wireless devices.
- **W-BATCART:** Wireless battery cartridge, 10-pack. For use with wireless pullstations and A/V bases.

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[www.firelite.com](http://www.firelite.com)

Country of Origin: Mexico



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

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

## Features

- Updated Modern Aesthetics
- Small profile devices for Horns and Horn Strobes
- Plug-in design with minimal intrusion into the back box
- Tamper-resistant construction
- Automatic selection of 12- or 24-volt operation at 15 and 30 candela
- Field-selectable candela settings on wall units: 15, 30, 75, 95, 110, 135, and 185
- Horn rated at 88+ dBA at 16 volts
- Rotary switch for horn tone and two volume selections
- Mounting plate for all standard and all compact wall units
- Mounting plate shorting spring checks wiring continuity before device installation
- Electrically compatible with legacy SpectrAlert and SpectrAlert Advance devices
- Compatible with MDL3 sync module
- Strobes and Horn Strobes listed for wall mounting only
- Horns listed for wall or ceiling use

## Agency Listings



**The System Sensor L-Series** offers the most versatile and easy-to-use line of horns, strobes, and horn strobes in the industry with lower current draws and modern aesthetics. With white and red plastic housings, standard and compact devices, and plain, FIRE, and FUEGO-printed devices, System Sensor L-Series can meet virtually any application requirement.

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

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

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

# L-Series Specifications

## Architect/Engineer Specifications

### General

L-Series standard horns, strobes, and horn strobes shall mount to a standard 2 x 4 x 1<sup>7</sup>/<sub>8</sub>-inch back box, 4 x 4 x 1<sup>1</sup>/<sub>2</sub>-inch back box, 4-inch octagon back box, or double-gang back box. L-Series compact products shall mount to a single-gang 2 x 4 x 1<sup>7</sup>/<sub>8</sub>-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 4<sup>11</sup>/<sub>16</sub> x 4<sup>11</sup>/<sub>16</sub> x 2<sup>1</sup>/<sub>8</sub>-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

<b>Standard Operating Temperature</b>	32°F to 120°F (0°C to 49°C)
<b>Humidity Range</b>	10 to 93% non-condensing
<b>Strobe Flash Rate</b>	1 flash per second
<b>Nominal Voltage</b>	Regulated 12 DC or regulated 24 DC/FWR <sup>1</sup>
<b>Operating Voltage Range<sup>2</sup></b>	8 to 17.5 V (12 V nominal) or 16 to 33 V (24 V nominal)
<b>Operating Voltage Range MDL3 Sync Module</b>	8.5 to 17.5 V (12 V nominal) or 16.5 to 33 V (24 V nominal)
<b>Input Terminal Wire Gauge</b>	12 to 18 AWG
<b>Wall-Mount Dimensions (including lens)</b>	5.6" L x 4.7" W x 1.91" D (143 mm L x 119 mm W x 49 mm D)
<b>Compact Wall-Mount Dimensions (including lens)</b>	5.26" L x 3.46" W x 1.91" D (133 mm L x 88 mm W x 49 mm D)
<b>Horn Dimensions</b>	5.6" L x 4.7" W x 1.25" D (143 mm L x 119 mm W x 32 mm D)
<b>Compact Horn Dimensions</b>	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)				
Candela Range	Candela	8–17.5 Volts		
		DC	16–33 Volts 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)				
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

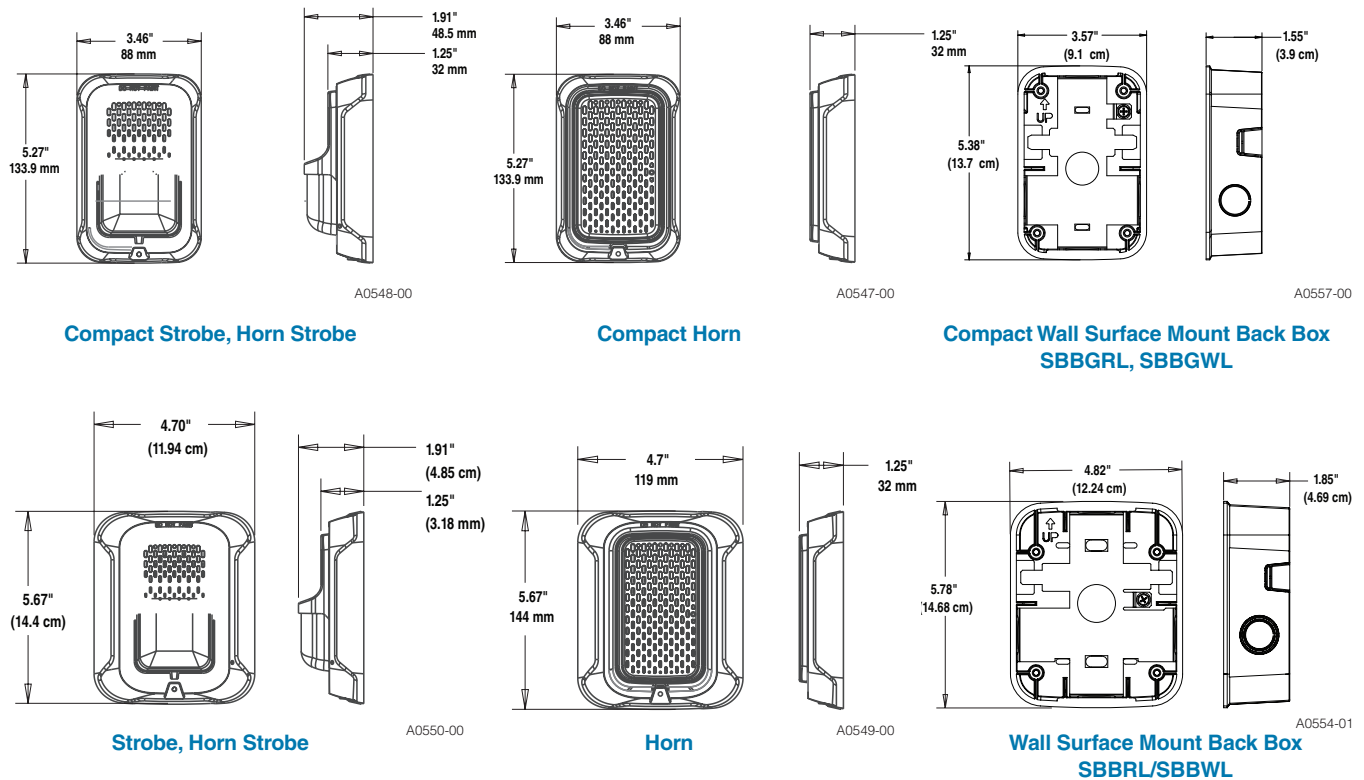
UL Max. Current Draw (mA RMS), Wall Horn Strobe, Candela Range (15–185 cd)										
DC Input	8–17.5 Volts		16–33 Volts							
	15cd	30cd	15cd	30cd	75cd	95cd	110cd	135cd	185cd	
Temporal High	98	158	54	74	121	142	162	196	245	
Temporal Low	93	154	44	65	111	133	157	184	235	
Non-Temporal High	106	166	73	94	139	160	182	211	262	
Non-Temporal 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	
FWR Input	16–33 Volts									
	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-Temporal 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)					
Switch Position	Sound Pattern	dB	8–17.5 Volts	16–33 Volts	FWR
			DC	DC	
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.

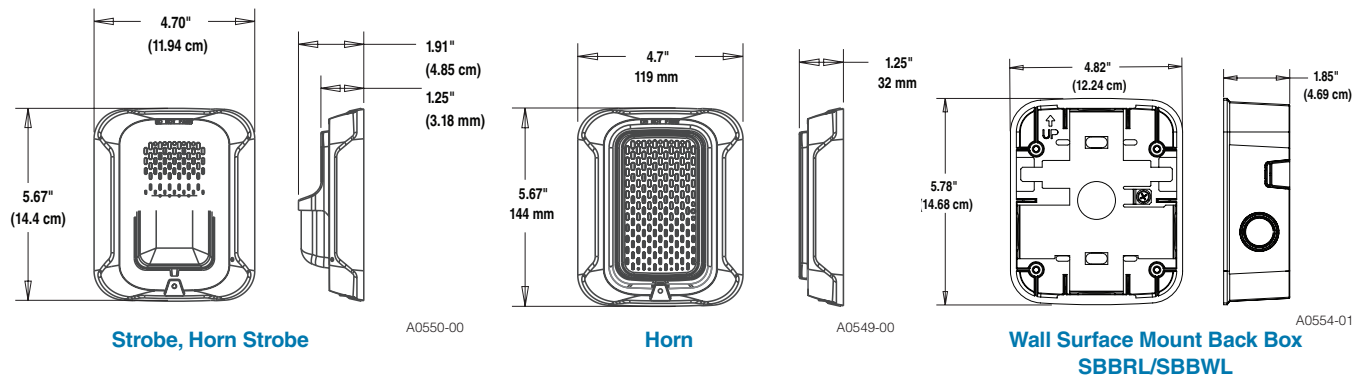
## L-Series Dimensions



Compact Strobe, Horn Strobe

Compact Horn

Compact Wall Surface Mount Back Box  
SBBGRL, SBBGWL



Strobe, Horn Strobe

Horn

Wall Surface Mount Back Box  
SBBRL/SBBWL

## L-Series Ordering Information

Model	Description
<b>Wall Horn Strobes</b>	
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
<b>Wall Strobes</b>	
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
<b>Horns*</b>	
HRL*	Horn, Red
HWL*	Horn, White
HGRL*	Compact Horn, Red
HGWL*	Compact Horn, White
<b>Accessories</b>	
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.



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 for current product information, including the latest version of this data sheet.  
 AVDS865-05 • 2/22/2018





# 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



# L-Series Specifications

## Architect/Engineer Specifications

### General

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

### Strobe

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

### Horn Strobe Combination

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

### Synchronization Module

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

## Physical/Electrical Specifications

<b>Standard Operating Temperature</b>	32°F to 120°F (0°C to 49°C)
<b>Humidity Range</b>	10 to 93% non-condensing
<b>Strobe Flash Rate</b>	1 flash per second
<b>Nominal Voltage</b>	Regulated 12 VDC or regulated 24 DC/FWR <sup>1</sup>
<b>Operating Voltage Range<sup>2</sup></b>	8 to 17.5 V (12 V nominal) or 16 to 33 V (24 V nominal)
<b>Operating Voltage Range (MDL3)</b>	8.5 to 17.5V (12 V nominal) or 16.5 to 33 V (24V nominal)
<b>Input Terminal Wire Gauge</b>	12 to 18 AWG
<b>Ceiling-Mount Dimensions (including lens)</b>	6.8" diameter × 2.5" high (173 mm diameter × 64 mm high)
<b>Ceiling-Mount Surface Mount Back Box Skirt Dimensions (SBBCRL, SBBCWL)</b>	6.9" diameter × 3.4" high (175 mm diameter × 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 Range	Candela	8–17.5 Volts		16–33 Volts
		DC	DC	FWR
Candela Range	15	87	41	60
	30	153	63	86
	75	N/A	111	142
	95	N/A	134	164
	115	N/A	158	191
	150	N/A	189	228
	177	N/A	226	264

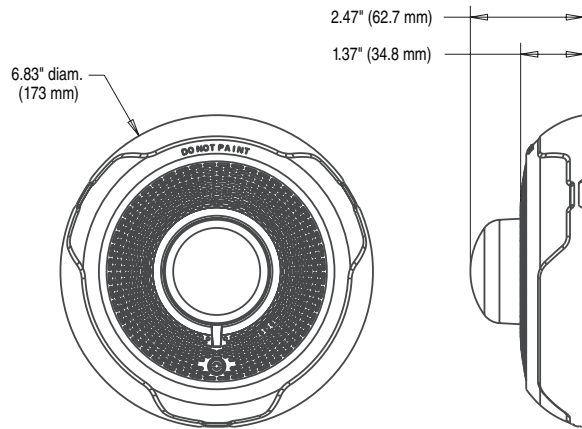
UL Max. Horn Current Draw (mA RMS)				
Sound Pattern	dB	8–17.5 Volts		16–33 Volts
		DC	DC	FWR
Temporal	High	39	44	54
Temporal	Low	28	32	54
Non-Temporal	High	43	47	54
Non-Temporal	Low	29	32	54
3.1 KHz Temporal	High	39	41	54
3.1 KHz Temporal	Low	29	32	54
3.1 KHz Non-Temporal	High	42	43	54
3.1 KHz Non-Temporal	Low	28	29	54
Coded	High	43	47	54
3.1 KHz Coded	High	42	43	54

UL Max. Current Draw (mA RMS), Ceiling Horn Strobe, Candela Range (15–177 cd)										
DC Input	8–17.5 Volts		16–33 Volts							
	15cd	30cd	15cd	30cd	75cd	95cd	115cd	150cd	177cd	
Temporal High	103	167	71	90	143	165	187	217	254	
Temporal Low	96	165	54	71	137	161	185	211	249	
Non-Temporal High	106	173	71	90	141	165	187	230	273	
Non-Temporal 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-Temporal 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

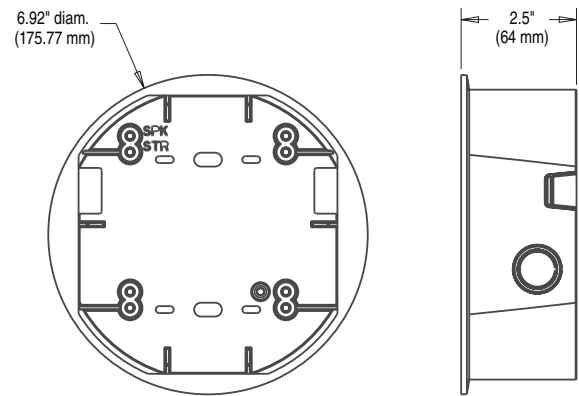
Horn Strobe Output (dBA)					
Switch Position	Sound Pattern	dB	8–17.5 Volts	16–33 Volts	FWR
			DC	DC	
1	Temporal	High	84	89	89
2	Temporal	Low	75	83	83
3	Non-Temporal	High	85	90	90
4	Non-Temporal	Low	76	84	84
5	3.1 KHz Temporal	High	83	88	88
6	3.1 KHz Temporal	Low	76	82	82
7	3.1 KHz Non-Temporal	High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

## L-Series Dimensions



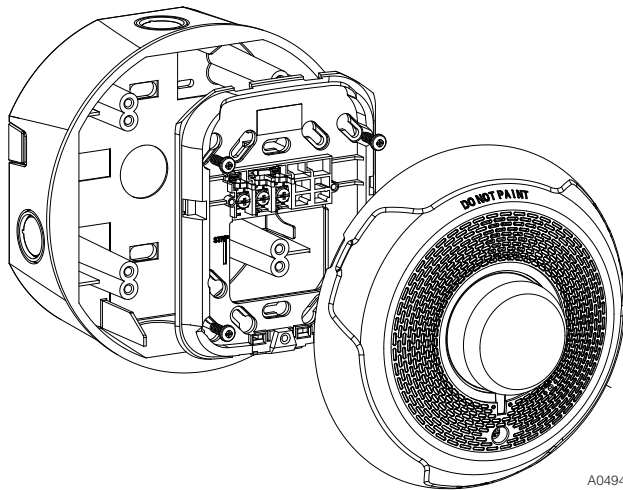
**Ceiling-Mount Horn Strobes**

A0545-00



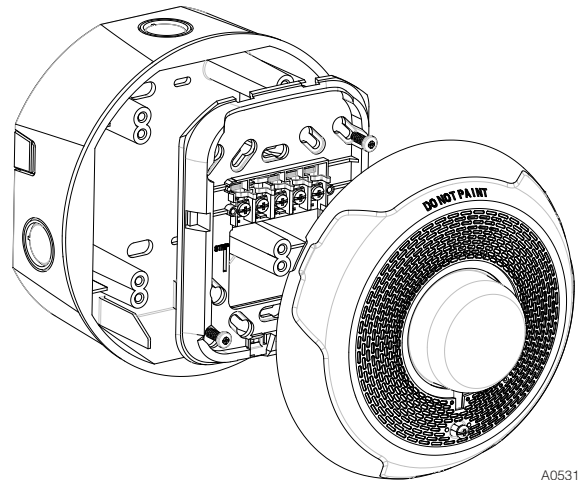
**Ceiling Surface Mount Back Box**

A0546-00



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

A0494-01



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

A0531-01

## L-Series Ordering Information

Model	Description
<b>Ceiling Horn Strobes</b>	
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
<b>Ceiling Strobes</b>	
SCRL	Strobe, Red
SCWL	Strobe, White
SCWL-CLR-ALERT	Strobe, White, ALERT
<b>Accessories</b>	
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".



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AVDS868-02 • 12/01/2017



# SWIFT AV Base

The System Sensor SWIFT® Wireless system offers an AV base to support L-Series devices in wireless installations.



## Features

- Wireless installation
- Class A mesh network
- Addressable code wheels
- Commercial applications
- Listed to UL 464, UL 1638, UL 1971, ULC S525, and ULC S526
- Frequency hopping
- Bi-Directional Communications

The **SWIFT AV bases (WAV-CRL and WAV-CWL)** are intended for use with compatible System Sensor L-Series AV notification appliances to meet a comprehensive range of notification requirements. The AV Base provides power for the audio and visual signals and supports wireless communication with the Fire Alarm Control Panel (FACP). The L-Series AV notification appliance is mounted directly to the wireless AV base allowing flexibility in color, placement and signal output.

Power is supplied through two sets of 4 batteries – one set provides power for wireless communication, and the other set provides power for the notification appliance’s audio and/or visual signal. Battery life of the wireless portion is UL listed for at least 2 years. Battery life for the AV set of batteries depends upon the activation time and output level of the audio or visual signal.

The SWIFT synchronization module (W-SYNC) can be used to provide audio and visual synchronization between SWIFT notification appliances and System Sensor wired notification appliances. The wireless synchronization module operates from 24V power with supplemental battery support and communicates through the mesh network to the gateway and FACP. Synchronization is only available with notification appliances that use the System Sensor synchronization protocol. Synchronization of the SWIFT notification appliances within a single mesh network is inherent in the wireless system and a wireless synchronization module is not needed. The W-SYNC also provides wireless control and monitoring of a Notification Appliance Circuit (NAC) expander or power supply.

## SWIFT SYSTEM OVERVIEW

The SWIFT Smart Wireless Integrated Fire Technology wireless system offers intelligent (addressable) devices which provide secure, reliable communication to the Fire Alarm Control Panel (FACP) across a Class A mesh network. Wireless devices create an opportunity for applications where it is costly (concrete walls/ceilings, buried wires), obtrusive (surface mount conduit), or possibly dangerous (asbestos) to use traditional wired devices. It allows fast installation

## Agency Listings



for time-critical situations and provides the flexibility to add wireless onto wired systems for retrofit installations. Both wired and wireless devices can be present on the same FACP for an integrated solution.

The mesh network within the SWIFT system creates a child-parent relationship between the devices so that each device has two parents providing a second path for communications on every device. If one device can no longer operate for any reason, the rest of the devices can still communicate with each other, directly

or through one or more intermediate devices. Once an initial mesh network is formed, mesh restructuring automatically occurs to find the strongest paths possible within the network.

The SWIFT system also engages frequency hopping to prevent system interference whether intentional or accidental. Each device complies with part 15 of the FCC rules: 1) The device may not cause harmful interference and 2) The device must accept any interference received including interference that may cause undesired operation.

## Specifications

Physical/Operating Specifications	
<b>Dimensions (Ceiling)</b>	Diameter 7.4" (19 cm); Depth 1.6" (4 cm)
<b>Weight (Ceiling):</b>	20.0 oz (567 g) installed with 8 batteries
Electrical Specifications	
<b>RF Operating Voltage Range</b>	3.3 VDC
<b>RF Maximum Current Draw</b>	5 mA (LED On)
<b>AV Operating Voltage Range</b>	12 VDC
<b>AV Maximum Standby Current</b>	6.5 mA
<b>AV Maximum Alarm Current</b>	550 mA
<b>Standby Current</b>	210 $\mu$ A @ 3.3 VDC (LED blink enabled)
<b>Maximum Transmit RF Power</b>	17 dBm
<b>Radio Frequency Range</b>	902-928 MHz
<b>Operating Humidity Range</b>	10% to 93% Relative Humidity, Non-condensing
<b>Operating Temperature Range</b>	32°F to 120°F (0°C to 49°C)
<b>Battery Type</b>	8 Panasonic CR123A or 8 Duracell DL123A
<b>Battery Life</b>	<i>RF batteries:</i> 2 year minimum. <i>AV batteries:</i> See Table 2 for AV battery life.
<b>Battery Replacement</b>	Replace during annual maintenance or when TROUBLE BATTERY LOW displays.

Battery Life at Temporal 3, Ambient Conditions											
Model	Model Type	Battery Life (Minutes), per Candela Setting									
		15 cd	30 cd	75 cd	95 cd	110 cd	115 cd	135 cd	150 cd	177 cd	185 cd
<b>Strobe-only</b>	<b>Ceiling</b>	1305	849	482	399	—	339	—	283	237	—
<b>Chime-Strobe</b>	<b>Ceiling</b>	1115	764	461	388	—	324	—	269	225	—
<b>Horn-Strobe</b>	<b>Ceiling</b>	754	594	374	324	—	286	—	247	211	—

NOTE: Battery life will decrease using continuous tone or other coded patterns and under non-ambient environmental conditions.

## Compatible Equipment

Note: ULC-listed models have all required languages.

System Sensor L-Series AV Devices		
Model (UL listed)	Model (ULC listed)	Description
CHSCRL	CHSCRLA*	Chime/Strobe Red Ceiling
	CHSCRLA-E	Chime/Strobe Red Ceiling, English
	CHSCRLA-F	Chime/Strobe Red Ceiling, French
CHSCWL	CHSCWLA*	Chime Strobe White Ceiling
	CHSCWLA-E	Chime/Strobe White Ceiling, English
	CHSCWLA-F	Chime/Strobe White Ceiling, French
PC2RL	PC2RLA*	Horn Strobe 2-wire Red Ceiling
	PC2RLA-E	Horn/Strobe 2-wire Red Ceiling, English
	PC2RLA-F	Horn/Strobe 2-wire Red Ceiling, French
PC2WL	PC2WLA*	Horn Strobe 2-wire White Ceiling
	PC2WLA-E	Horn/Strobe 2-wire White Ceiling, English
	PC2WLA-F	Horn/Strobe 2-wire White Ceiling, French
SCRL	SCRLA*	Strobe Red Ceiling
	SCRLA-E*	Strobe Red Ceiling, English
	SCRLA-F	Strobe Red Ceiling, French
SCWL	SCWLA*	Strobe White Ceiling
	SCWLA-E	Strobe White Ceiling, English
	SCWLA-F	Strobe White Ceiling, French
SCWL-CLR-ALERT	—	Strobe White Ceiling Clear Lens Alert

\*Bilingual Canadian model

## Ordering Information

Part No.	Description
WAV-CRL	Wireless AV base, ceiling, red
WAV-CWL	Wireless AV base, ceiling, white
W-SYNC	Wireless Sync Module
W-BATCART	Wireless battery cartridge, 10-pack

## Accessories

**W-BATCART**  
Wireless battery  
cartridge



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