

Fire Department & Project Submittal

for

**Facility Fire Alarm System
Submitted per:
NFPA 72 & NFPA 13
Class B System**

At

**Napa Auto
2321 NE Independence Ave
Lees Summit, MO 64063**

Monitoring:

**Remote Monitoring
Sole Path**

**Alarm Central
13700 E. 42nd Terrace S. - PO Box 3272
Independence, MO 64055
UUFX-S7249-1
816-861-1500**

**T&C Fire and Security Systems LLC
2321 NE Independence Ave
Lee's Summit, MO 64064
816-690-4722**



**Joel Damminga
Archway Systems
17020 East 40 Hwy, Suite #1
Independence, MO. 64055
(816) 709-3358**



Party Site No.: 607913

Expires: 31-Dec-2026

CERTIFICATE OF COMPLIANCE

THIS IS TO CERTIFY that the Alarm / Service Company identified below is included by - UL Solutions (UL) in its UL Product iQ directories as eligible to use the UL Listing Mark in connection with Certificated Systems. The only evidence of compliance with UL's requirements is the issuance of a UL Certificate for the System and the Certificate is active under UL's Certificate Verification Service. This Certificate does not apply in any way to the communication channel between the protected property and any facility that monitors signals from the protected property.

Listed Service From: INDEPENDENCE , MISSOURI

Alarm / Service Company: (607913)

ALARMCENTRAL L L C
13700 E 42ND TER S
PO BOX 3272
INDEPENDENCE , Missouri 64055 UNITED STATES

The Alarm / Service Company is Listed in the following Certificate Service Categories:

| <u>File</u> | <u>Vol No.</u> | <u>CCN</u> | <u>Listing Category</u> |
|-------------|----------------|------------|---|
| BP9514 | 1 | CVSU | Monitoring Stations, Residential |
| S7249 | 1 | UUFX | Central-station Protective Signaling Services |



*****THIS CERTIFICATE EXPIRES ON 31-DEC-26*****

"LOOK FOR THE UL ALARM / SYSTEM CERTIFICATE"

Voltage drop Calculations & Current Draws for NACP #1

FIRELITE
HPF-PS6

Signal Circuits Amperage Calculation

| Device | Current Draw | Circuit #1 | | Circuit #2 | | Circuit #3 | | Circuit #4 | | Circuit #5 | |
|---------------------|--------------|------------|---------------|------------|---------------|------------|---------------|------------|---------------|------------|---------------|
| | | Quantity | Total Current |
| ELHSRC (15CD) | 0.037 | 2 | 0.074 | | 0 | | 0 | | 0 | | 0 |
| ELHSRC (110CD) | 0.109 | 6 | 0.654 | 6 | 0.654 | 6 | 0.654 | | 0 | | 0 |
| ELSTRC (15CD) | 0.022 | 2 | 0.044 | | 0 | | 0 | | 0 | | 0 |
| | | | 0 | | 0 | | 0 | | 0 | | 0 |
| | | | 0 | | 0 | | 0 | | 0 | | 0 |
| | | | 0 | | 0 | | 0 | | 0 | | 0 |
| | | | 0 | | 0 | | 0 | | 0 | | 0 |
| | | | 0 | | 0 | | 0 | | 0 | | 0 |
| | | | 0 | | 0 | | 0 | | 0 | | 0 |
| | | | 0 | | 0 | | 0 | | 0 | | 0 |
| | | | 0 | | 0 | | 0 | | 0 | | 0 |
| | | | 0 | | 0 | | 0 | | 0 | | 0 |
| | | | 0 | | 0 | | 0 | | 0 | | 0 |
| | | | 0 | | 0 | | 0 | | 0 | | 0 |
| | | | 0 | | 0 | | 0 | | 0 | | 0 |
| | | | 0 | | 0 | | 0 | | 0 | | 0 |
| | | | 0 | | 0 | | 0 | | 0 | | 0 |
| | | | 0 | | 0 | | 0 | | 0 | | 0 |
| | | | 0 | | 0 | | 0 | | 0 | | 0 |
| | | | 0 | | 0 | | 0 | | 0 | | 0 |
| | | | 0 | | 0 | | 0 | | 0 | | 0 |
| Current for Circuit | | | 0.772 | | 0.654 | | 0.654 | | 0 | | 0 |

Signal Voltage Drop Calculation

| | | | | | | | | |
|---------------------------------|--------|--|--------|--|--------|--|--|--|
| Max Wire Run Distance For AWG | 812 | | 959 | | 959 | | | |
| Wire Length Ft for Circuit | 280 | | 160 | | 200 | | | |
| Actual Voltage Drop For Circuit | 1.379 | | 0.668 | | 0.835 | | | |
| End of line Voltage: | 22.621 | | 23.332 | | 23.165 | | | |

Voltage Drop = 2 * Wire Run Distance * 3.07 Ohms Per 1000 ft 14 AWG * Total Current for Circuit / 1000

Control/Device/Module/Other Powered Device Amperage Calculation

| Device | Device Standby Current | Device Alarm Current | Quantity | Total Standby Draw | Total Alarm Draw | Max Circuit Amps | Wire Size | Alarm Min | Max Panel Amps | Starting Voltage |
|---------|------------------------|----------------------|----------|--------------------|------------------|------------------|-----------|-----------|----------------|------------------|
| HPF-PS6 | 0.154 | 0.192 | 1 | 0.154 | 0.192 | 3 | 14 | 5 | 6 | 24.000 |
| | | | | 0 | 0 | | | | | |
| | | | | 0 | 0 | | | | | |
| | | | | 0 | 0 | | | | | |
| | | | | 0 | 0 | | | | | |
| | | | | 0 | 0 | | | | | |
| | | | | 0 | 0 | | | | | |

| | |
|------------------------------------|-------|
| Total Battery Calculation Standby: | 4.608 |
| Alarm Current Min: | 0.189 |

| | |
|--------------------------|-------|
| Standby Hours | 24 |
| Alarm Current: | 2.272 |
| Battery size Required: | 5.996 |
| Batteries Supplied (AH): | 7 |

Battery Size Required with Alarm Time Minutes with Alarm Time Minutes and 25% Reserve.

ES-50X

Intelligent Addressable FACP with Communicator



Addressable Fire Alarm Control Panels

General

The **ES-50X** is the latest intelligent addressable fire alarm control panel (FACP) from Fire•Lite Alarms. The ES-50X comes with a pre-installed communicator and supports up to 50 addressable devices in any combination of detectors or modules. With an extensive list of powerful features, the ES-50X programs just like Fire•Lite's other addressable panels, 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
- Optional CELL-MOD or CELL-CAB-FL GSM Central Station Communicator over AlarmNet®
- Compatible with SWIFT® wireless devices
- Auto-programming (learn mode) reduces installation time. Reports two devices set to the same address
- Two independently programmable, built-in 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
- 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 walktest with walktest log & 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
- 50 addressable device capacity (any combination of addressable detectors and modules)
- Compatible with Fire•Lite's addressable devices (refer to the *SLC Wiring Manual*)

NOTIFICATION APPLIANCE CIRCUITS (NACS)

- Two 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
- 50 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.

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-50X: Addressable Fire Alarm Control Panel with one SLC loop. Includes main circuit board with display, pre-installed IPOTS-COM communicator, chassis with transformer, backbox with door, plastic bag containing screws, cables, key, etc. (For ES-50XC, refer to DF-60954.)

FS-Tools: Programming software for Windows®-based PC computer. Available for download at 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-50X.

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 & 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.

COMPATIBLE ANNUNCIATORS

ANN-80: Remote, red 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

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).

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 pigtails. 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 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-50X, 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 capacity50
- Programmable software zones.....50
- Annunciators.....16

Electrical Specifications

AC Power: 120/240 VAC, 50/60 Hz, 3.25 A. Wire size: minimum 14 AWG (2.00 mm²) with 600 V insulation. Nonpower-limited, supervised.

Battery: Two 12 V 18 AH lead-acid batteries. Battery Charger Capacity: 7-18 AH (ES-50X cabinet holds maximum of two 18 AH batteries.)

Communication Loop: Supervised and power-limited.

Notification Appliance Circuits: Terminal Block provides connections for two 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 k Ω - 22 k Ω 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-50X 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-50X 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

NOTE: See DF-60954 for ULC-listed model.

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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



Assembled in the USA

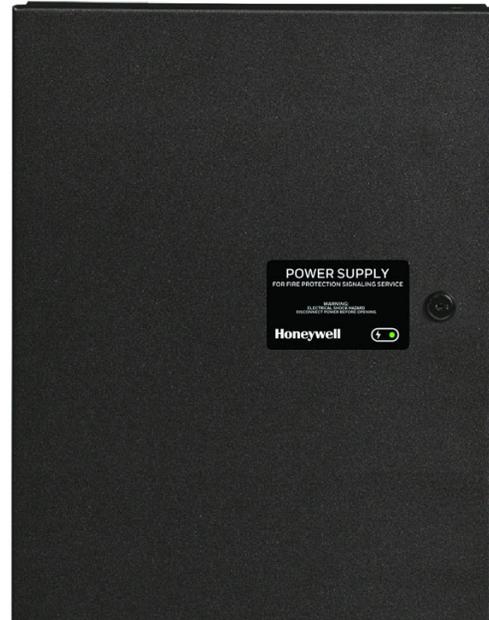
HPF-PS6/HPF-PS10 Series 6/10 Amp, 24 Volt Power Supplies

General

The HPF-PS Series is a remote power supply line from Honeywell and is a direct replacement for the PSE and FCPS Series. The HPF-PS6(B)(E) is a 6 amp and the HPF-PS10(B)(E) is a 10 amp, remote power supply with battery charger that may be connected to any 12 or 24 volt fire alarm control panel (FACP) or used as a stand-alone power supply. The HPF-PS Series provides 24 VDC power for NACs (notification appliance circuits) configured as either Class B or Class A (requires the ZNAC-PS option card) with multiple sync protocol options. The HPF-PS Series also provides auxiliary power, constant or resettable, suited for detectors, annunciators, door holders, and other fire alarm system peripherals. The HPF-PS Series cabinet can hold two 7 AH or 18 AH batteries and can charge up to 33 AH batteries in a separate cabinet. The HPF-PS6E and HPF-PS10E are models rated for 240V operation.

Features

- Up to five (6 amp model) or seven (10 amp model) independently-configurable, power-limited output circuits for:
 - Class B and/or Class A NACs
 - Class B and/or Class A resettable or non-resettable 24V auxiliary power
 - door holder power
- Converts from Class B to Class A wiring without losing any outputs using the ZNAC-PS converter card (sold separately)
- Optimal for powering four-wire smoke detectors, annunciators, and other system peripherals requiring regulated power
- Configurable for ANSI® Temporal 3 or Temporal 4 coded output
- UL-Listed NAC synchronization using System Sensor®, Wheelock®, Gentex®, or AMSECO® appliances
- Synchronization can be triggered from FACP NAC/remote sync outputs, cascaded power supply, or a control module, single or multi, which may be housed within the power supply cabinet
- Ability to cascade up to four power supplies
- Two (6 amp model) or three (10 amp model) fully-isolated input/control circuits which can be programmed to any output
- Two Form C normally-closed trouble relays for AC Trouble and General Trouble, Ground Fault relay available on Canadian models only
- 6 or 10 amp full load output, respectively, with 3 A maximum/circuit
- Individual NAC power and trouble LEDs for diagnostic efficiency
- Trouble history modes for diagnostic support
- Wide range end-of-line supervision value (normal: 2K-27K ohms)
- Selectable earth fault detection (enable or disable)
- AC trouble report delay timer
- Completely configurable via onboard DIP switches, no extra software required
- Self-contained in compact, locking cabinet constructed of heavy gauge steel with a corrosion-resistant powder coat chip and scratch-resistant finish
- Cabinet designed with ten double knockouts and a removable door for ease of installation and wiring
- Includes integral battery charger capable of charging up to 33 AH batteries
- Cabinet can house two 7 AH or 18 AH batteries



- Battery charger may be disabled via DIP switch for applications requiring larger batteries and external battery charger
- Removable terminal blocks accommodate up to 12 AWG (3.1mm²) wire
- Works with any UL 864 FACP which utilizes an industry-standard reverse-polarity notification circuit
- Optional devices include addressable control, monitor, and relay modules and power-supervision relay (EOLR-1)

Standards and Codes

The HPF-PS Series comply with the following standards:

- **NFPA 72** National Fire Alarm Code
- **UL 864** Standard for Control Units for Fire Alarm Systems (NAC expander mode), 10th Edition
- **UL 1481** Power Supplies for Fire Alarm Systems
- **IBC 2009** (when using SEISKIT-MULTI-1)
- **CBC 2007** (when using SEISKIT-MULTI-1)

Agency Listings and Approvals

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

- **UL Listed:** S24562 (HPF-PS/E Series), S635, S674 (PSE Series, discontinued)
- **ULC Listed:** S24562 (HPF-PS Series), S635 (PSE-6C/PSE-10C discontinued)
- **CSFM Approved:** 7315-1637:0505 (HPF-PS Series), 7315-0028:0513 (PSE Series, discontinued)
- **FDNY COA:** 2022-TMCOAP-002231-AMND (HPF-PS Series), 2021-TMCOAP-001761-CERT (PSE Series, discontinued)
- **FM Approved**

Primary (AC) Power:

- **HPF-PS6(B):** 120 VAC, 50/60 Hz, 5.0A maximum
- **HPF-PS10(B):** 120VAC, 50/60 Hz, 6.2 A maximum
- **HPF-PS6E:** 240 VAC, 50/60 Hz, 2.7A maximum
- **HPF-PS10E:** 240 VAC, 50/60 Hz, 3.5A maximum
- **Wire Size:** #12-14 AWG with 600 V insulation

Command Input Circuit:

- **Trigger Input Voltage:** 9 to 32 VDC
- **Trigger Current:** 2.0 mA (16 - 32 V); Per Input: 1.0 mA (9 - 16 V)

Trouble Contact Rating: 4 A at 24 VDC

Output Circuits:

- 24 VDC filtered, regulated
- HPF-PS6(B): TB8-TB9 – 1A Regulated, 3A special applications; TB10-TB12 – 0.3A Regulated, 3A special applications
- HPF-PS10(B): TB8-TB11 – 1.5A Regulated, 3A special applications; TB12-TB14 – 0.3A Regulated, 3A special applications
- 6.0 A (HPF-PS6) or 10.0 A (HPF-PS10) maximum total continuous current for all outputs

Secondary Power (Battery) Charging Circuit:

- Supports lead-acid batteries only
- Float-charge voltage: 27.6 VDC
- Maximum current charge: 1.5 A
- Maximum battery capacity: 18 AH (inside cabinet)
- Maximum battery charging capacity: 33 AH (external cabinet)

Physical:

- **Dimensions:** 20.0”H x 14.5”W x 3.5”D (cm: 50.8H x 36.83W x 8.9D)
- **Weight:** with two 7Ah batteries is 24 pounds (10.9 kg), with two 18 AH batteries is 39 pounds (17.7 kg)

Ordering Information

HPF-PS6: 6.0 A, 120 VAC remote charger power supply in a lockable, metal enclosure, red

HPF-PS6B: 6.0 A, 120 VAC remote charger power supply in a lockable, metal enclosure, black

HPF-PS6E: 6.0 A, 240 VAC remote charger power supply in a lockable, metal enclosure, red

HPF-PS10: 10.0 A, 120 VAC remote charger power supply in a lockable, metal enclosure, red

HPF-PS10B: 10.0 A, 120 VAC remote charger power supply in a lockable, metal enclosure, black

HPF-PS10E: 10.0 A, 240 VAC remote charger power supply in a lockable, metal enclosure, red

ZNAC-PS: Optional Class A output converter module

50152254-001: Hardware kit for Canadian applications

17045: Alternate NOTIFIER lock set

FCM-1: Addressable Control Module for one Class B or Class A zone of supervised, polarized Notification Appliances. Notification Appliance Circuit option requires external 24 VDC to power notification appliances.

FRM-1: Addressable relay module containing two isolated sets of Form-C contacts, which operate as a DPDT switch

FMM-1: Addressable Monitor Module for one zone of normally open dry-contact initiating devices. Includes plastic cover plate and end-of-line resistor. Module may be configured for either a Class B or Class A IDC.

FDM-1: Dual Monitor Module. Same as FMM-1 except it provides two inputs for Class B wiring only

FDRM-1: Provides two monitored inputs and two Form-C relays. Functions in Class B wiring only.

XP6-C: Six-circuit supervised control module

XP6-R: Six Form-C relay control module

EOLR-1: 12/24 VDC end-of-line relay for monitoring four-wire smoke detector power

BAT-1270-BP: Battery, 12 volt, 7.0 AH, 5-pack (two required, see BAT Series data sheet DN-6933).

BAT-12180-BP: Battery, 12 volt, 18AH, 2-pack

BAT-12330: Battery, 12 volt, 33AH

SEISKIT-MULTI-1: Seismic kit for the HPF-PS Series. Includes bracket and hardware for two 7AH or two 18AH batteries.



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.

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Country of Origin: USA

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MMF-300(A) Series, MDF-300(A)

Addressable Monitor Modules



Addressable Devices

General

Four different monitor modules are available for Fire•Lite's intelligent control panels to suit a variety of applications. Monitor modules are used to supervise a circuit of dry-contact input devices, such as conventional heat detectors and pull stations, or monitor and power a circuit of two-wire smoke detectors (MMF-302(A)).

MMF-300(A) is a standard-sized module (typically mounts to a 4" [10.16 cm] square box) that supervises either a Style D (Class A) or Style B (Class B) circuit of dry-contact input devices.

MMF-301(A) is a miniature monitor module a mere 1.3" (3.302 cm) H x 2.75" (6.985 cm) W x 0.5" (1.270 cm) D used to supervise a Style B (Class B) circuit of dry-contact input devices. Its compact design allows the MMF-301(A) to be mounted in a single-gang box behind the device it monitors.

MMF-302(A) is a standard-sized module used to monitor and supervise compatible two-wire, 24 volt, smoke detectors on a Style D (Class A) or Style B (Class B) circuit.

MDF-300(A) is a standard-sized dual monitor module used to monitor and supervise two independent two-wire Style B (Class B) dry-contact initiating device circuits (IDCs) at two separate, consecutive addresses in intelligent, two-wire systems.

LiteSpeed™ is a communication protocol developed by Fire•Lite Engineering that greatly enhances the speed of communication between analog intelligent devices. Intelligent devices communicate in a grouped fashion. If one of the devices within the group has new information, the panel CPU stops the group poll and concentrates on single points. The net effect is response speed greater than five times that of other designs.

MMF-300(A) Monitor Module

- Built-in type identification automatically identifies this device as a monitor module to the control panel.
- Powered directly by two-wire SLC loop. No additional power required.
- High noise (EMF/RFI) immunity.
- SEMS screws with clamping plates for ease of wiring.
- Direct-dial entry of address: 01 – 159 on MS-9600 series panels, 01 – 99 on other compatible systems.
- LED flashes during normal operation and latches on steady to indicate alarm.

The MMF-300(A) Monitor Module is intended for use in intelligent, two-wire systems, where the individual address of each module is selected using the built-in rotary switches. It provides either a two-wire or four-wire fault-tolerant Initiating Device Circuit (IDC) for normally-open-contact fire alarm and supervisory devices. The module has a panel-controlled LED indicator. The MMF-300(A) can be used to replace M300(A) modules in existing systems.

MMF-300(A) APPLICATIONS

Use to monitor a zone of four-wire smoke detectors, manual fire alarm pull stations, waterflow devices, or other normally-open dry-contact alarm activation devices. May also be used to monitor normally-open supervisory devices with special supervisory indication at the control panel. Monitored circuit



MMF-300(A) (Type H)

may be wired as an NFPA Style B (Class B) or Style D (Class A) Initiating Device Circuit. A 47K ohm End-of-Line Resistor (provided) terminates the Style B circuit. No resistor is required for supervision of the Style D circuit.

MMF-300(A) OPERATION

Each MMF-300(A) uses one of the available module addresses on an SLC loop. It responds to regular polls from the control panel and reports its type and the status (open/normal/short) of its Initiating Device Circuit (IDC). A flashing LED indicates that the module is in communication with the control panel. The LED latches steady on alarm (subject to current limitations on the loop).

MMF-300(A) SPECIFICATIONS

Nominal operating voltage: 15 to 32 VDC.

Maximum current draw: 5.0 mA (LED on).

Average operating current: 350 µA (LED flashing), 1 communication every 5 seconds, 47k EOL.

Maximum IDC wiring resistance: 40 ohms.

EOL resistance: 47K ohms.

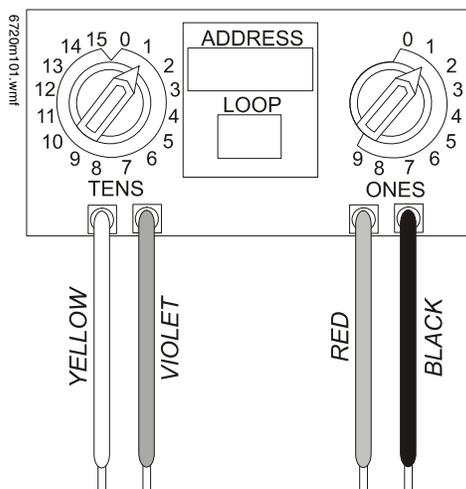
Temperature range: 32°F to 120°F (0°C to 49°C).

Humidity range: 10% to 93% noncondensing.

Dimensions: 4.5" (11.43 cm) high x 4" (10.16 cm) wide x 1.25" (3.175 cm) deep. Mounts to a 4" (10.16 cm) square x 2.125" (5.398 cm) deep box.

MMF-301(A) Mini Monitor Module

- Built-in type identification automatically identifies this device as a monitor module to the panel.
- Powered directly by two-wire SLC loop. No additional power required.
- High noise (EMF/RFI) immunity.
- Tinned, stripped leads for ease of wiring.
- Direct-dial entry of address: 01 – 159 on MS-9600 series panels, 01 – 99 on other compatible systems



The MMF-301(A) Mini Monitor Module can be installed in a single-gang junction directly behind the monitored unit. Its small size and light weight allow it to be installed without rigid mounting. The MMF-301(A) is intended for use in intelligent, two-wire systems where the individual address of each module is selected using rotary switches. It provides a two-wire initiating device circuit for normally-open-contact fire alarm devices. The MMF-301(A) can be used to replace M301(A) modules in existing systems.

MMF-301(A) APPLICATIONS

Use to monitor a single device or a zone of four-wire smoke detectors, manual fire alarm pull stations, waterflow devices, or other normally-open dry-contact devices. May also be used to monitor normally-open supervisory devices with special supervisory indication at the control panel. Monitored circuit/device is wired as an NFPA Style B (Class B) Initiating Device Circuit. A 47K ohm End-of-Line Resistor (provided) terminates the circuit.

MMF-301(A) OPERATION

Each MMF-301(A) uses one of the available module addresses on an SLC loop. It responds to regular polls from the control panel and reports its type and the status (open/normal/short) of its Initiating Device Circuit (IDC).

MMF-301(A) SPECIFICATIONS

Nominal operating voltage: 15 to 32 VDC.

Average operating current: 350 μ A, 1 communication every 5 seconds, 47k EOL; 600 μ A Max. (Communicating, IDC Shorted).

Maximum IDC wiring resistance: 40 ohms.

Maximum IDC Voltage: 11 Volts.

Maximum IDC Current: 400 μ A.

EOL resistance: 47K ohms.

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

Humidity range: 10% to 93% noncondensing.

Dimensions: 1.3" (3.302 cm) high x 2.75" (6.985 cm) wide x 0.65" (1.651 cm) deep.

Wire length: 6" (15.24 cm) minimum.

MMF-302(A) Interface Module

- Supports compatible two-wire smoke detectors.
- Supervises IDC wiring and connection of external power source.
- High noise (EMF/RFI) immunity.
- SEMS screws with clamping plates for ease of wiring.
- Direct-dial entry of address: 01 – 159 on MS-9600 series panels, 01 – 99 on other compatible systems.
- LED flashes during normal operation.
- LED latches steady to indicate alarm on command from control panel.

The MMF-302(A) Interface Module is intended for use in intelligent, addressable systems, where the individual address of each module is selected using built-in rotary switches. This module allows intelligent panels to interface and monitor two-wire conventional smoke detectors. It transmits the status (normal, open, or alarm) of one full zone of conventional detectors back to the control panel. All two-wire detectors being monitored must be UL compatible with the module. The MMF-302(A) can be used to replace M302(A) modules in existing systems.

MMF-302 (A) APPLICATIONS

Use the MMF-302(A) to monitor a zone of two-wire smoke detectors. The monitored circuit may be wired as an NFPA Style B (Class B) or Style D (Class A) Initiating Device Circuit. A 3.9 K ohm End-of-Line Resistor (provided) terminates the end of the Style B or D (class B or A) circuit (maximum IDC loop resistance is 25 ohms). Install ELR across terminals 8 and 9 for Style D application.

MMF-302(A) OPERATION

Each MMF-302(A) uses one of the available module addresses on an SLC loop. It responds to regular polls from the control panel and reports its type and the status (open/normal/short) of its Initiating Device Circuit (IDC). A flashing LED indicates that the module is in communication with the control panel. The LED latches steady on alarm (subject to current limitations on the loop).

MMF-302(A) SPECIFICATIONS

Nominal operating voltage: 15 to 32 VDC.

Maximum current draw: 5.1 mA (LED on).

Maximum IDC wiring resistance: 25 ohms.

Average operating current: 300 μ A, 1 communication and 1 LED flash every 5 seconds, 3.9k eol.

EOL resistance: 3.9K ohms.

External supply voltage (between Terminals T3 and T4): DC voltage: 24 volts power limited. Ripple voltage: 0.1 Vrms maximum. Current: 90 mA per module maximum.

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

Humidity range: 10% to 93% noncondensing.

Dimensions: 4.5" (11.43 cm) high x 4" (10.16 cm) wide x 1.25" (3.175 cm) deep. Mounts to a 4" (10.16 cm) square x 2.125" (5.398 cm) deep box.

MDF-300(A) Dual Monitor Module

The MDF-300(A) Dual Monitor Module is intended for use in intelligent, two-wire systems. It provides two independent two-wire initiating device circuits (IDCs) at two separate, consecutive addresses. It is capable of monitoring normally open contact fire alarm and supervisory devices. The module has a single panel-controlled LED.

NOTE: The MDF-300(A) provides two Style B (Class B) IDC circuits ONLY. Style D (Class A) IDC circuits are NOT supported in any application.

MDF-300(A) SPECIFICATIONS

Normal operating voltage range: 15 to 32 VDC.

Maximum current draw: 6.4 mA (LED on).

Average operating current: 750 μ A (LED flashing).

Maximum IDC wiring resistance: 1,500 ohms.

Maximum IDC Voltage: 11 Volts.

Maximum IDC Current: 240 μ A

EOL resistance: 47K ohms.

Maximum SLC Wiring resistance: 40 Ohms.

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

Humidity range: 10% to 93% (non-condensing).

Dimensions: 4.5" (11.43 cm) high x 4" (10.16 cm) wide x 2.125" (5.398 cm) deep.

MDF-300(A) AUTOMATIC ADDRESSING

The MDF-300(A) automatically assigns itself to two addressable points, starting with the original address. For example, if the MDF-300(A) is set to address "26", then it will automatically assign itself to addresses "26" and "27".

NOTE: "Ones" addresses on the MDF-300(A) are 0, 2, 4, 6, or 8 only. Terminals 6 and 7 use the first address, and terminals 8 and 9 use the second address.



CAUTION:

Avoid duplicating addresses on the system.

Installation

MMF-300(A), MMF-302(A), and MDF-300(A) modules mount directly to a standard 4" (10.16 cm) square, 2.125" (5.398 cm) deep, electrical box. They may also be mounted to the SMB500 surface-mount box. Mounting hardware and installation instructions are provided with each module. All wiring must conform to applicable local codes, ordinances, and regulations. These modules are intended for power-limited wiring only.

The MMF-301(A) module is intended to be wired and mounted without rigid connections inside a standard electrical box. All wiring must conform to applicable local codes, ordinances, and regulations.

Agency Listings and Approvals

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
- **ULC:** S2424
- **FM Approved**
- **CSFM:** 7300-0075:0185
- **MEA:** 72-01-E

Product Line Information

NOTE: "A" suffix indicates ULC-listed model.

MMF-300(A): Monitor module.

MMF-301(A): Monitor module, miniature.

MMF-302(A): Monitor module, two-wire detectors.

MDF-300(A): Monitor module, dual, two independent Class B circuits.

SMB500: Optional surface-mount backbox.

NOTE: See installation instructions and refer to the SLC Wiring Manual, PN 51309.

Architects'/Engineers' Specifications

Specifications of these devices and all FireLite products are available from FireLite.

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www.firelite.com

CMF-300(A)

Control Module



Addressable Devices

General

The **CMF-300(A)** Addressable Control Module provides Fire•Lite intelligent control panels a circuit for Notification Appliances (horns, strobes, etc.). Addressability allows the CMF-300(A) to be activated through panel programming, on a select (zone or area of coverage) basis.

LiteSpeed™ is a communication protocol developed by Fire•Lite Engineering that greatly enhances the speed of communication between analog intelligent devices. Intelligent devices communicate in a grouped fashion. If one of the devices within the group has new information, the panel CPU stops the group poll and concentrates on single points. The net effect is response speed greater than five times that of other designs.

Features

- Built-in type identification automatically identifies these devices to the control panel.
- Internal circuitry powered directly by two-wire SLC loop. The CMF-300(A) module requires power (for horns, strobes, etc.).
- Integral LED “blinks” green each time a communication is received from the control panel and turns on steady red when activated.
- High noise immunity (EMF/RFI).
- The CMF-300(A) may be used to switch 24-volt NAC power.
- Wide viewing angle of LED.
- SEMS screws with clamping plates for wiring ease.
- Direct-dial entry of address: 01– 159 for MS-9600 series panels, 01 – 99 on MS-9200UDLS and MS-9050UD.

Applications

The CMF-300(A) is used to switch 24 VDC audible/visual power.

Construction

- The face plate is made of off-white heat-resistant plastic.
- Controls include two rotary switches for direct-dial entry of address setting.
- The CMF-300(A) is configured for a single Class B (Style Y) or Class A (Style Z) Notification Appliance Circuit.

Operation

Each CMF-300(A) uses one of the module addresses on a SLC loop. It responds to regular polls from the control panel and reports its type and status, including the open/normal/short status of its Notification Appliance Circuit (NAC). The LED blinks with each poll received. On command, it activates its internal relay. The CMF-300(A) supervises Class B (Style Y) or Class A (Style Z) notification or control circuits.

Upon code command from the panel, the CMF-300(A) will disconnect the supervision and connect the external power supply in the proper polarity across the load device. The disconnection of the supervision provides a positive indication to the panel that the control relay actually turned ON. The



CMF-300(A)

external power supply is always relay-isolated from the communication loop so that a trouble condition on the external power supply will never interfere with the rest of the system.

Rotary switches set a unique address for each module. The address may be set before or after mounting. The built-in TYPE CODE (not settable) will identify the module to the control panel, so as to differentiate between a module and a sensor address.

Specifications

Normal operating voltage: 15 to 32 VDC.

Maximum SLC current draw: 6.5 mA (LED on).

Average operating current: 350 μ A direct poll (CLIP mode), 375 μ A group poll (LiteSpeed mode) with LED flashing.

External supply voltage: maximum 80 volts (RMS or DC).

Drain on external supply: 2 mA maximum (using internal EOL relay).

EOL resistance: 47K ohms.

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

Humidity range: 10% to 93% non-condensing.

Dimensions: 4.5" (11.43 cm) high x 4" (10.16 cm) wide x 1.25" (3.175 cm) deep. Mounts to a 4" (10.16 cm) square x 2.125" (5.398 cm) deep box.

Agency Listings and Approvals

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.

- ULC: S2424

Product Line Information

CMF-300: Intelligent addressable control module.

CMF-300A: Canadian intelligent addressable control module.

SMB500: Optional surface-mount backbox.

CB500: Optional control module barrier, required by UL for separating power-limited and non-power-limited wiring in the same junction box as CMF-300(A).

NOTE: For installation instructions, see document I56-1189-009 and refer to the SLC Wiring Manual, document 51309. The CRF-300(A) relay module, previously on this data sheet, is now on DF-60379.

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www.firelite.com

SD365(A) Series

Addressable Photoelectric Detectors



Addressable Devices

General

The Fire-Lite SD365(A), SD365T(A), and SD365R(A) Series addressable plug-in photoelectric smoke detectors are designed for both performance and aesthetics. 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 loop connection.
- Unit uses base for wiring.

ADDRESSING

- Addressable by device.
- Rotary, decimal addressing: *Please refer to the Fire-Lite panel manuals for device capacity.*

ARCHITECTURE

- New modern profile for improved aesthetics.
- Unique single-source design to respond quickly and dependably to a broad range of fires.
- Integral communications and built-in type identification.
- Built-in tamper-resistant feature.
- Removable cover and insect-resistant screen for simple field cleaning.

OPERATION

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

MECHANICALS

- Sealed against back pressure.
- Mounts to: single-gang box, 3.5" (8.89 cm) or 4.0" (10.16 cm) octagonal box, or 4.0" (10.16 cm) square electrical box (*with or without a mud ring - not included*).

OPTIONS

- Remote LED output connection, RA100Z.



SD365

Installation

SD365(A) series plug-in detectors use a detachable mounting base to simplify installation, service and maintenance.

Mount 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. SD365R(A) mounts in a D355PL(A) or DNR(A) /DNRW duct detector housing.*

Operation

Each SD365(A) Series detector uses one possible addresses on the Fire-lite Signaling Line Circuit (SLC). It responds to regular polls from the system and reports its type and status.

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 ES-50X or ES-200X addressable fire alarm control panel. The results of the sensitivity test can be printed off the for record keeping.

Specification

Voltage range: 15 – 32 VDC (peak).

Standby current: 200 µA @ 24 VDC.

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

Air velocity: 4,000 ft./min. (20 m/sec.) maximum.

Sensitivity: UL Applications: 0.5% to 4.0% 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 *DN-60981*.

Shipping weight: 3.4 oz. (95 g).

Operating temperature range:

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

Relative humidity: 10%-93%, non-condensing.

Listings

Listings and approvals below apply to the SD365 Series detectors. In some cases, certain detectors may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.

- UL/ULC Listed: S1059
- CSFM: 7272-0075-0502
- FM Approved

Product Line Information

NOTE: Detectors must be mounted to one of the Intelligent Bases listed below.

NOTE: "IV" suffix indicates LiteSpeed® and CLIP device.

NOTE: "A" suffix indicates Canadian version.

SD365(A): White, Addressable photoelectric detector; B300-6 base included. LiteSpeed only.

SD365(A)-IV: Ivory, Addressable photoelectric detector; B300-6 base included.

SD365T(A): White, Same as SD365 but with thermal element; B300-6 base included. LiteSpeed only.

SD365T(A)-IV: Ivory, Same as SD365 but with thermal element; B300-6 base included.

SD365R(A): White, Remote test capable addressable photoelectric detector for use with DNR(A)/DNRW. LiteSpeed only.

SD365R(A)-IV: Ivory, Remote test capable addressable photoelectric detector; for use with DNR(A)/DNRW.

INTELLIGENT BASES

NOTE: For details on intelligent bases, see DN-60981.

B300-6: White, 6" base, standard flanged low-profile mounting base. (CSFM: 7300-1653:0109 Pending)

B300-6-IV: Ivory, 6" base, standard flanged low-profile mounting base. (CSFM: 7300-1653:0109 Pending)

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 Pending)

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

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

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

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

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

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

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

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

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

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 Pending)

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 Pending)

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 Pending)

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 Pending)

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 Pending)

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 Pending)

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 Pending)

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 Pending)

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.

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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

Eluxa horns, horn strobes, & strobes



Description

The Wheelock Eluxa horns, horn strobes, and strobes by Eaton feature an advanced power saving LED technology with a full range of low and high candela settings for indoor wall and ceiling-mount applications. Designed in sleek, modern enclosures, Eluxa's aesthetically pleasing low profile will blend with the building's interior décor.

High efficiency, LED technology

Eaton's high energy efficient technology leads the industry in lowest current draw for a combined high and low candela device, which reduces overall power consumption. As the first notification appliances in the industry to utilize LED as the light source, this breakthrough optical design, resulting in best-in-class efficiency, enables material and system cost savings, allowing for a greater number of appliances on the notification appliance circuit and fewer power supplies. This reduces installation and operating costs. All strobe models feature six candela settings: 15, 30, 75, 110, 135, 185 cd on wall models and 15, 30, 75, 110, 150, 177 cd on ceiling models.

Low profile design and rich feature set

With the industry's smallest footprint, the Eluxa horns, horn strobes, and strobes are aesthetically pleasing to building owners as the low profile design does not detract from the interior decor. Eluxa is feature rich with 6 candela settings and 3 horn patterns (Continuous, T3, T3/T4) in 1 device, pre-wire/pre-test via mounting plate with hinged feature for ease-of-installation, single-gang design (wall models), and no tools needed for setting changes. The ELST strobe, ELHS horn strobe, and the ELHN horn are for 24V operation. ELHN is suitable for 12V applications.

Approvals and synchronization

Eaton's Eluxa strobes meet the 20 millisecond light pulse duration requirements of the 2016 edition of NFPA 72. By meeting this latest requirement, xenon and LED devices can now be in the same field of view.

The Eluxa notification appliances are listed under UL Standards 1971, 1638, and 464 and under CAN/ULC-S525 and CAN/ULC-S526. The appliances are Restriction of Hazardous Substances (RoHS) compliant and contain no mercury or other hazardous substances.

In addition, the Eluxa product line has been UL/ULC listed as compatible with all Fire Alarm Control Panels (FACP) and accessories that have been determined to be compatible with Exceder LED3 and Wheelock RSS strobe-based products including the RSS, CH, E, EH, ET, ST, HS, MT, S8, SA, STH and Z Series. The listing also includes the ability to install the Eluxa strobes in the same notification zone and field of view with any Wheelock RSS and Exceder LED3 strobe models.

EATON

Powering Business Worldwide

Features

- Energy efficient
 - LED technology provides industry’s lowest current draw
 - Fewer power supplies required, smaller wire gage, reduced wire runs
- Low-profile design
 - One of the smallest, most compact single-gang designs
 - Sleek, modern aesthetics with no visible mounting screws
- Special lettering available
- 6 Field selectable settings in 1 device
 - Wall: 15, 30, 75, 110, 135, 185 cd
 - Ceiling: 15, 30, 75, 110, 150, 177 cd
- 3 horn patterns
 - Continuous, T3, and T3/T4; Fire and CO signaling in 1 device
- Sound pressure (Anechoic) dBA
 - Low 86, High 91 (for Continuous, T3, and T4)
- Easy-to-install
 - Mounting plate included with all models: Convenient capture hinge allows installers to easily hold the device while fastening the single-mount screw in place.
 - Pre-wire/pre-test capability to check for wiring and ground faults prior to appliance installation
 - Finger slide switches–No tools needed for setting changes
 - IN/OUT screw terminals using #12 to #18 AWG wires
 - Mounting options include ELSBB, any single-gang backbox and to 4” square with adapter kit for wall models and LSPKBB-C backboxes and 4” square, 1 1/2” or 2 1/8” deep for ceiling
- Strobe synchronization
 - Meet synchronizing standards with Wheelock’s DSM Sync Modules, PS Power Supplies or SAFEPATH products
 - Ability to mix xenon and LED strobes in the same field of view
- Compliance
 - NFPA 72 2016 - 20 ms flash duration requirements
 - UL 1971, UL 1638, UL 464, ULC-S525, ULC-S526
 - California State Fire Marshal (CSFM)
 - Factory Mutual (FM)
 - RoHS
 - FCC Part 15, ICES

Note: Please read these specifications and associated installation instructions, before using, specifying, or installing this product. Visit Eaton.com/Lifesafetynotification for current installation instructions.

General Notes

- Strobes are designed to flash at 1 flash per second minimum over their “Regulated Voltage Range.” Note that NFPA-72 specifies a flash rate of 1 to 2 flashes per second and ADA Guidelines specify a flash rate of 1 to 3 flashes per second.
- All candela ratings represent minimum effective strobe intensity based on UL 1971.

Drawings

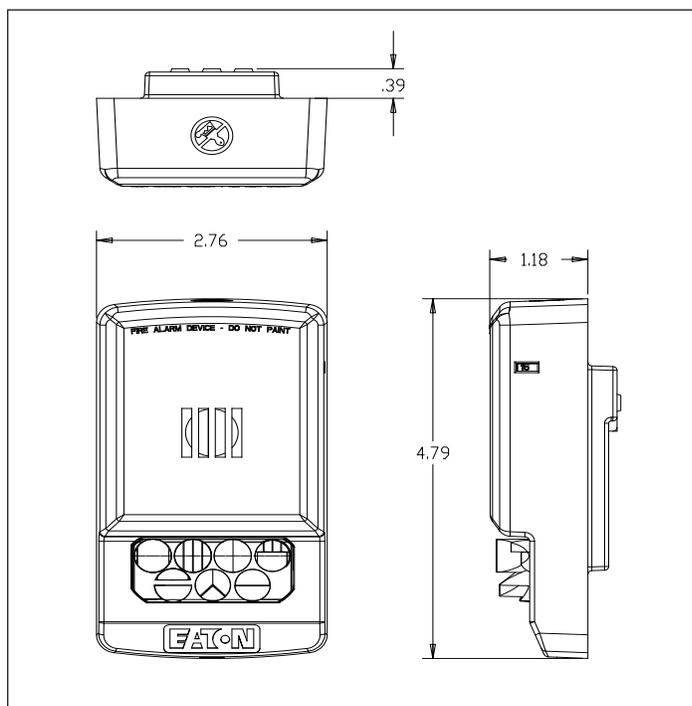


Figure 1. Wall, horn strobe

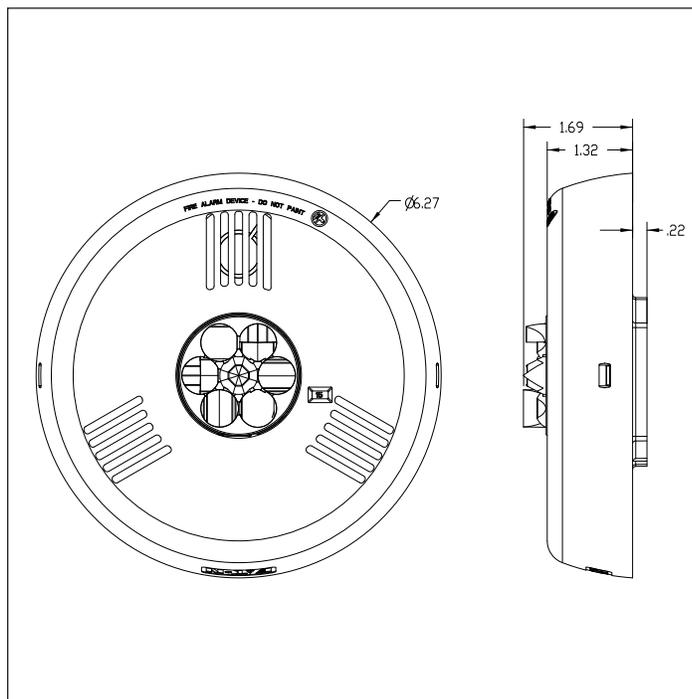


Figure 2. Ceiling, horn strobe

Table 1. Horn ratings per UL/ULC Anechoic

| Eluxa Horns | | | |
|-------------|-----------------------------|---------|--------|
| Model | Regulated Voltage Range VDC | High dB | Low dB |
| ELHN/ELHNC | 8.0 - 17.5 | 0.025 | 0.020 |
| ELHN/ELHNC | 16.0 - 33.0 | 0.028 | 0.021 |

Table 2. Strobe ratings

| Model | Regulated Voltage Range VDC | UL/ULC Max Current ① | | | | | | | |
|-------|-----------------------------|----------------------|-------|-------|-------|-------|-------|-------|-------|
| | | 24VDC | | | | | | | |
| | | 15 | 30 | 75 | 110 | 135 | 150 | 177 | 185 |
| ELST | 16.0-33.0 | 0.022 | 0.030 | 0.060 | 0.086 | 0.125 | | | 0.185 |
| ELSTC | 16.0-33.0 | 0.022 | 0.030 | 0.060 | 0.086 | | 0.125 | 0.185 | |

Table 3. Code 3 horn strobe ratings

| Eluxa Horn Strobes | Model | Regulated Voltage Range VDC | UL/ULC Max Current ① at Anechoic High continuous | | | | | | | |
|--------------------|-------|-----------------------------|--|-------|-------|-------|-------|-------|-------|-------|
| | | | 24VDC | | | | | | | |
| | | | 15 | 30 | 75 | 110 | 135 | 150 | 177 | 185 |
| | ELHS | 16.0-33.0 | 0.037 | 0.046 | 0.077 | 0.109 | 0.146 | | | 0.208 |
| | ELHSC | 16.0-33.0 | 0.037 | 0.046 | 0.077 | 0.109 | | 0.146 | 0.208 | |

| Eluxa Horn Strobes | Model | Regulated Voltage Range VDC | UL/ULC Max Current ① at Anechoic Low continuous | | | | | | | |
|--------------------|-------|-----------------------------|---|-------|-------|-------|-------|-------|-------|-------|
| | | | 24VDC | | | | | | | |
| | | | 15 | 30 | 75 | 110 | 135 | 150 | 177 | 185 |
| | ELHS | 16.0-33.0 | 0.030 | 0.039 | 0.070 | 0.102 | 0.139 | | | 0.201 |
| | ELHSC | 16.0-33.0 | 0.030 | 0.039 | 0.070 | 0.102 | | 0.139 | 0.201 | |

Table 4. Specification & Ordering Information

| Model | Mounting | Strobe Candela | Red | White | Lettering | Sync w/ DSM or Wheelock Power Supplies |
|---------------------|-------------------|----------------------|-----|-------|--------------|--|
| Horn strobes | | | | | | |
| ELHSR | Wall | 15/30/75/110/135/185 | X | | FIRE | X |
| ELHSW | Wall | 15/30/75/110/135/185 | | X | FIRE | X |
| ELHSR-A | Wall | 15/30/75/110/135/185 | X | | AGENT | X |
| ELHSR-N | Wall | 15/30/75/110/135/185 | X | | No Lettering | X |
| ELHSW-A | Wall | 15/30/75/110/135/185 | | X | AGENT | X |
| ELHSW-AL | Wall | 15/30/75/110/135/185 | | X | ALERT | X |
| ELHSW-N | Wall | 15/30/75/110/135/185 | | X | No Lettering | X |
| ELHSW-EV | Wall | 15/30/75/110/135/185 | | X | EVACUATE | X |
| ELHSRC | Ceiling | 15/30/75/110/150/177 | X | | FIRE | X |
| ELHSWC | Ceiling | 15/30/75/110/150/177 | | X | FIRE | X |
| ELHSWC-N | Ceiling | 15/30/75/110/150/177 | | X | No lettering | X |
| Strobes | | | | | | |
| ELSTR | Wall | 15/30/75/110/135/185 | X | | FIRE | X |
| ELSTW | Wall | 15/30/75/110/135/185 | | X | FIRE | X |
| ELSTR-A | Wall | 15/30/75/110/135/185 | X | | AGENT | X |
| ELSTR-AL | Wall | 15/30/75/110/135/185 | X | | ALERT | X |
| ELSTW-A | Wall | 15/30/75/110/135/185 | | X | AGENT | X |
| ELSTW-AL | Wall | 15/30/75/110/135/185 | | X | ALERT | X |
| ELSTW-N | Wall | 15/30/75/110/135/185 | | X | No Lettering | X |
| ELSTR-N | Wall | 15/30/75/110/135/185 | X | | No Lettering | X |
| ELSTW-EV | Wall | 15/30/75/110/135/185 | | X | EVACUATE | X |
| ELSTRC | Ceiling | 15/30/75/110/150/177 | X | | FIRE | X |
| ELSTWC | Ceiling | 15/30/75/110/150/177 | | X | FIRE | X |
| ELSTRC-AL | Ceiling | 15/30/75/110/150/177 | X | | ALERT | X |
| ELSTWC-AL | Ceiling | 15/30/75/110/150/177 | | X | ALERT | X |
| ELSTWC-EV | Ceiling | 15/30/75/110/150/177 | | X | EVACUATE | X |
| Horns | | | | | | |
| ELHNR | Wall | | X | | No Lettering | X |
| ELHNW | Wall | | | X | No Lettering | X |
| ELHNR-C | Ceiling | | X | | No Lettering | X |
| ELHNW-C | Ceiling | | | X | No Lettering | X |
| Accessories | | | | | | |
| ELSBB-R | LED Backbox, wall | | X | | | |
| ELSBB-W | LED Backbox, wall | | | X | | |
| ESB-KIT-R | Trim Plate, wall | | X | | | |
| ESB-KIT-W | Trim Plate, wall | | | X | | |
| LSPKBB-CR | Backbox, ceiling | | X | | | |
| LSPKBB-CW | Backbox, ceiling | | | X | | |

① RMS current ratings are per UL maximum RMS method. UL max current rating is the maximum RMS current within the listed voltage range (16-33v for 24v units). For strobes the UL max current is usually at the minimum listed voltage (16v for 24v units). For audibles the max current is usually at the maximum listed voltage (33v for 24v units). For unfiltered FWR ratings, see installation instructions.

② Regulated Voltage Range- VDC

Note: Due to continuous development of our products, specifications and offerings are subject to change without notice in accordance with Cooper Wheelock Inc., dba Eaton standard terms and conditions.

Table 5. Specifications

| | |
|--|--|
| Physical | |
| Material | Red or white textured UV stabilized, colored impregnated engineered plastic. Exceeds 94V-0 UL flammability rating |
| Weight | Wall: 0.35 lbs; Ceiling: 0.55 lbs |
| Lens | Light Emitting Diode (LED) in a rugged Lexan lens |
| Dimensions | Wall: 4.79" H x 2.76" W x 1.18" D, Trimplate: 5.25" H x 4.58" W x 0.32" D; Ceiling: 6.27" Diameter x 1.69" D |
| Operating Temperature | Indoor: 32°F to 122°F (0°C to 50°C) and maximum humidity of 93% |
| Mounting & Wire Connections | |
| Mounting (indoor only) | Mounting plate included with all models. ELHS and ELST are for wall-mount applications only. ELHN can be used for wall and ceiling-mount applications. Wall mounting: Single-gang, ELSBB backboxes or to 4" square with adapter kit. ELHN can be used for wall and ceiling-mount applications. ELHSC and ELSTC are for ceiling mount applications only. The ELHNC can also be used for wall-mount applications. Ceiling mounting: LSPKBB-C backboxes or to 4" square, 1 1/2" or 2 1/8" |
| Wire Connections | #12 through #18 AWG |
| Power & General | |
| Operating voltage | 12 VDC/VFWR: 8 - 17.5 VDC/VFWR; 24 VDC/VFWR: 16 - 33 VDC/VFWR (12 VDC ELHN/ELHNC models only) |
| Strobe Output Rating | UL 1971, UL 1638, ULC S526: Selectable 15, 30, 75, 110, 135, 185 candela output for wall models; Selectable 15, 30, 75, 110, 150, 177 candela output for ceiling models |
| Synchronization Models | Strobes can be synchronized with Wheelock's DSM Sync Modules, PS Power Supplies or SAFEPATH products, using Wheelock patented sync protocol |

Architects and Engineers Specifications

The LED notification appliances shall be Wheelock® ELHS audible visual strobe appliances, ELST visual strobe appliances and ELHN audible appliances for wall and ceiling-mount applications with a low-profile design or approved equals. Special lettering, including AGENT, ALERT, EVACUATE, and no lettering, shall be available. The ELHS and ELST strobes shall be listed for UL Standard 1971 (Emergency Devices for the Hearing-Impaired) for Indoor Fire Protection Service and UL 1638 (Visible Signaling Devices). The ELHS and ELHN Audibles shall be UL Listed under Standard 464 (Fire Protective Signaling). All models shall meet the requirements of FCC Part 15 and ICES-003. All inputs shall be compatible with standard reverse polarity supervision of circuit wiring by a Fire Alarm Control Panel (FACP) with the ability to operate from 16 to 33 VDC/VFWR.

The ELHS audible strobe and ELST strobe appliances shall produce a flash rate of one (1) flash per second over the Regulated Voltage Range and shall incorporate a Light Emitting Diode (LED) as the light source with a rugged Lexan® lens. The appliances shall be of low current design. The LED strobe flash duration shall be 20 ms. Where Multi-Candela appliances are specified, the strobe intensity shall have 6 field selectable settings at 15, 30, 75, 110, 135 and 185 candela for wall mount applications and 15, 30, 75, 110, 150 and 177 for ceiling applications. The selector switch for selecting the candela shall be tamper resistant. Appliances with candela settings shall show the candela selection in a visible location at all times when installed.

The audible shall have a choice of three (3) horn patterns (high & low

output): Continuous, T3, and T3/T4 for fire (T3) and CO (T4) signaling.

The ELHS audible strobe, ELST strobe, and ELHN audible shall include a hinged mounting plate. Mounting options shall include LED backboxes, single-gang backbox and to 4" square with adapter kit for wall-mount models and LED Ceiling backboxes and 4" square, 1 1/2" or 2 1/8" deep for ceiling models. Two wire appliance wiring shall be capable of directly connecting to the mounting base. Removal of an appliance shall result in a supervision fault condition by the Fire Alarm Control Panel (FACP). All notification appliances shall be backwards compatible.

The ELHS, ELHN and ELST wall models shall have a low profile measuring 4.79" H x 2.76" W x 1.18" D. The ELHSC, ELHNC and ELSTC ceiling models shall have a low profile measuring 6.27" Diameter with 1.69" D.

When synchronization is required, the appliance shall be compatible with Wheelock®'s DSM Sync Modules, PS Power Supplies, SAFEPATH products or other manufacturer's panels with built-in Wheelock® Patented Sync Protocol. The strobes shall not drift out of synchronization at any time during operation. If the sync protocol fails to operate, the strobe shall revert to a non-synchronized flash-rate and still maintain (1) flash per second over its Regulated Voltage Range. The appliance shall also be designed so that the audible signal may be silenced while maintaining strobe activation when used with Wheelock® patented sync protocol.

NFPA 72 2016, UL 1971, UL, 1638, UL 464 ULC-S525-16, ULC-S526-16, CSFM, FM, FCC, RoHS, ICES



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