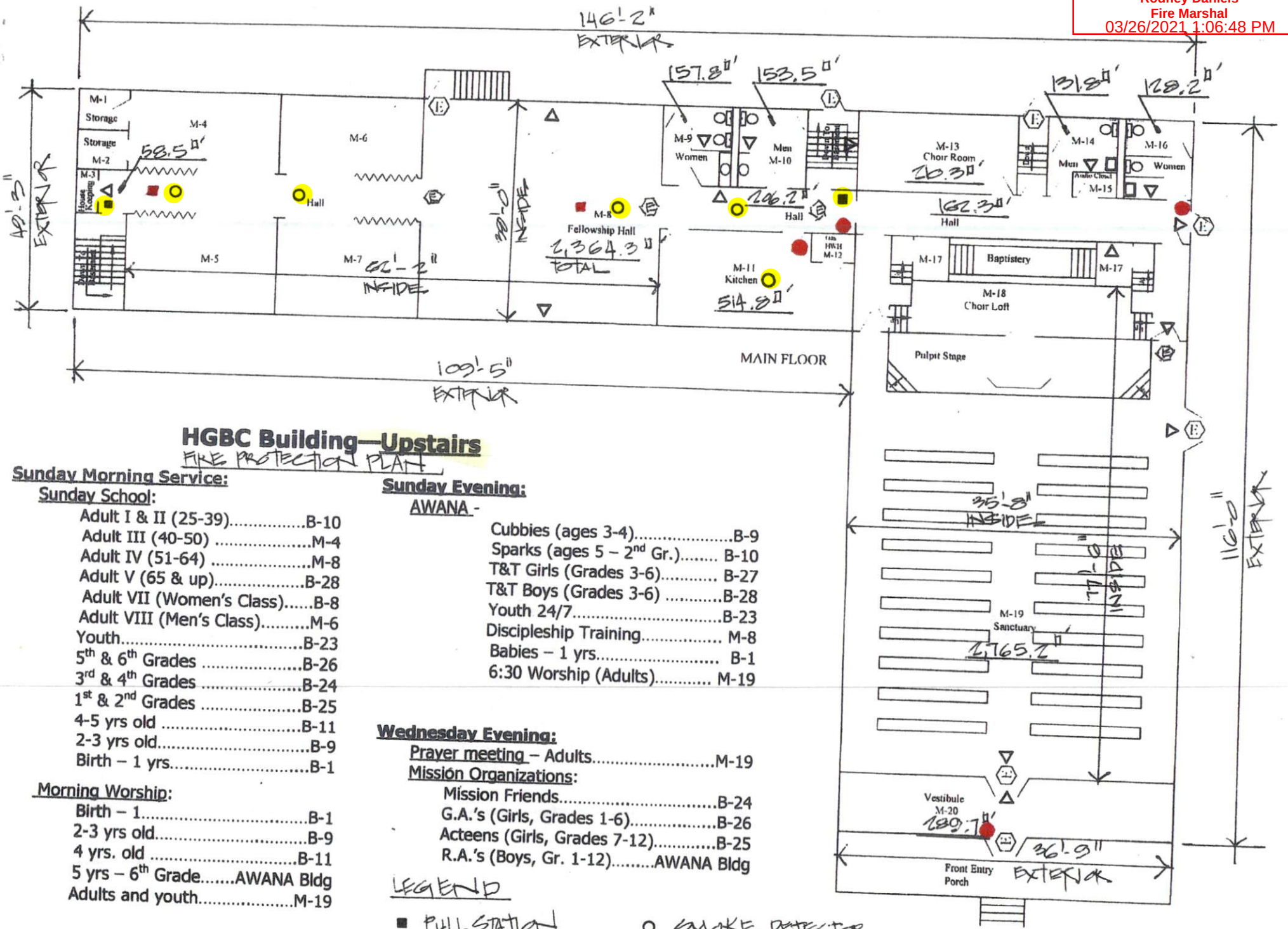
Reviewed For Code Compliance By:
Rodney Daniels
Fire Marshal
03/26/2021 1:06:48 PM



HGBC Building—Upstairs

FIRE PROTECTION PLAN

Sunday Morning Service:

Sunday School:

- Adult I & II (25-39).....B-10
- Adult III (40-50) M-4
- Adult IV (51-64) M-8
- Adult V (65 & up).....B-28
- Adult VII (Women's Class).....B-8
- Adult VIII (Men's Class).....M-6
- Youth.....B-23
- 5th & 6th Grades B-26
- 3rd & 4th Grades B-24
- 1st & 2nd Grades B-25
- 4-5 yrs old B-11
- 2-3 yrs old.....B-9
- Birth – 1 yrs.....B-1

Morning Worship:

- Birth – 1.....B-1
- 2-3 yrs old.....B-9
- 4 yrs. old B-11
- 5 yrs – 6th Grade.....AWANA Bldg
- Adults and youth.....M-19

Sunday Evening:

AWANA -

- Cubbies (ages 3-4).....B-9
- Sparks (ages 5 – 2nd Gr.)..... B-10
- T&T Girls (Grades 3-6)..... B-27
- T&T Boys (Grades 3-6) B-28
- Youth 24/7.....B-23
- Discipleship Training..... M-8
- Babies – 1 yrs..... B-1
- 6:30 Worship (Adults)..... M-19

Wednesday Evening:

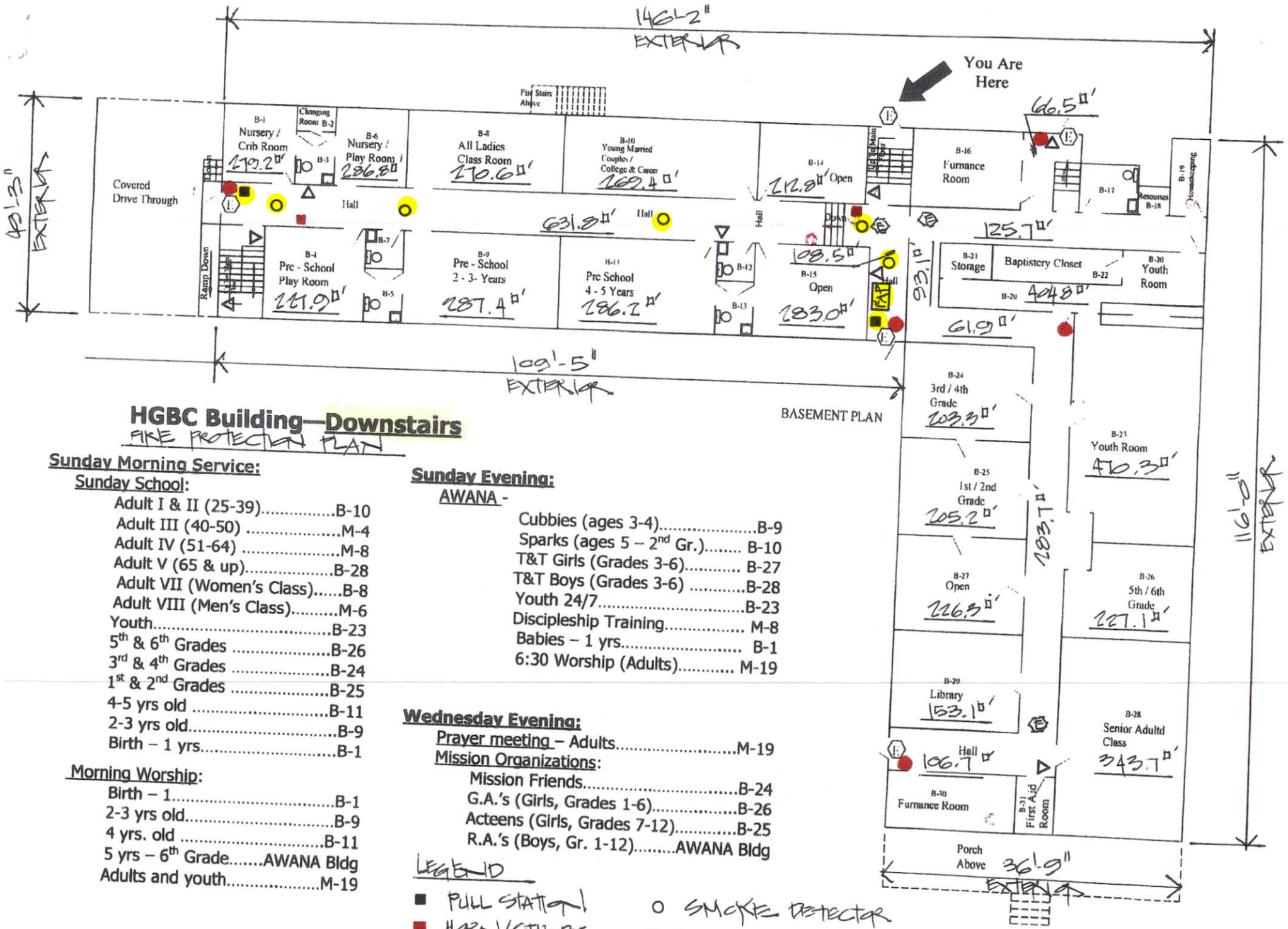
Prayer meeting – Adults.....M-19

Mission Organizations:

- Mission Friends.....B-24
- G.A.'s (Girls, Grades 1-6).....B-26
- Acteens (Girls, Grades 7-12).....B-25
- R.A.'s (Boys, Gr. 1-12).....AWANA Bldg

LEGEND

- ■ PULL STATION
- ■ HORN/STROBE
- ◁ EMERGENCY LIGHT
- ○ SMOKE DETECTOR
- E EXIT
- ● FIRE EXTINGUISHER



HGBC Building—Downstairs

FIRE PROTECTION PLAN

Sunday Morning Service:

Sunday School:

- Adult I & II (25-39).....B-10
- Adult III (40-50) M-4
- Adult IV (51-64) M-8
- Adult V (65 & up).....B-28
- Adult VII (Women's Class).....B-8
- Adult VIII (Men's Class).....M-6
- Youth.....B-23
- 5th & 6th Grades B-26
- 3rd & 4th Grades B-24
- 1st & 2nd Grades B-25
- 4-5 yrs old B-11
- 2-3 yrs old.....B-9
- Birth – 1 yrs.....B-1

Morning Worship:

- Birth – 1.....B-1
- 2-3 yrs old.....B-9
- 4 yrs. old B-11
- 5 yrs – 6th Grade.....AWANA Bldg
- Adults and youth.....M-19

Sunday Evening:

AWANA -

- Cubbies (ages 3-4).....B-9
- Sparks (ages 5 – 2nd Gr.)..... B-10
- T&T Girls (Grades 3-6)..... B-27
- T&T Boys (Grades 3-6) B-28
- Youth 24/7.....B-23
- Discipleship Training..... M-8
- Babies – 1 yrs..... B-1
- 6:30 Worship (Adults)..... M-19

Wednesday Evening:

- Prayer meeting – Adults.....M-19
- Mission Organizations:
  - Mission Friends.....B-24
  - G.A.'s (Girls, Grades 1-6).....B-26
  - Acteens (Girls, Grades 7-12).....B-25
  - R.A.'s (Boys, Gr. 1-12).....AWANA Bldg

LEGEND

- ■ PULL STATION
- ■ HORN/STROBE
- ◁ EMERGENCY LIGHT
- o SMOKE DETECTOR
- E EXIT
- FAP FIRE ALARM PANEL
- ● FIRE EXTINGUISHER

ES-50X

Intelligent Addressable FACP with Communicator

FIRE·LITE ALARMS by Honeywell

Addressable Fire Alarm Control Panels

General

The **ES-50X** is the latest intelligent addressable fire alarm control panel (FACP) from Fire•Lite Alarms and is a direct replacement for the MS-9050UD/LS. The ES-50X comes with a pre-installed communi-cator 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.

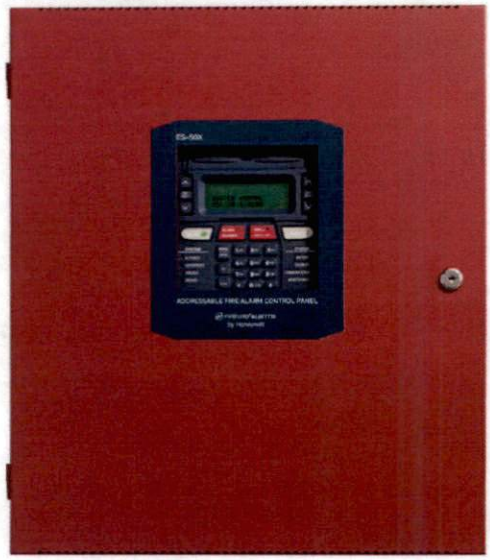
The pre-installed IPOTS-COM is a dual technology (POTS and IP) communicator. The POTS transmits system status (alarms, troubles, AC loss, etc.) to a Central Station via the public switched telephone network. The IP communicator's internet monitoring capability sends alarm signals over the Internet saving 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).

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 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 capacity.....50
- Programmable software zones.....50
- 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 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 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-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
- **FM approved**
- **CSFM:** 7165-0075:0500
- **FDNY:** COA #6261

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

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ISO 9001 CERTIFIED ENGINEERING & MANUFACTURING QUALITY SYSTEMS

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

FIRE-LITE ALARMS by Honeywell

ES-50X Battery Calculation

Secondary Power Source Requirements

	Standby Current (amps)					Secondary Alarm Current (amps)				
Device	**Qty**		**Current Draw**		**Total**	**Qty**		**Current Draw**		**Total**
Main Circuit Board	1	x	0.141000	=	0.141000	1	x	0.257000	=	0.257000
IPOTS-COM Communicator	0	x	0.040000	=		0	x	0.041000	=	
4XTMF	0	x	0.005000	=		0	x	0.011000	=	
EOLR-1	0	x	0.020000	=		0	x	0.020000	=	
CELL-MOD-FL / CELL-CAB	1	x	0.055000	=	0.055000	1	x	0.100000	=	0.100000
ANN-BUS Devices										
ANN-SEC Card	0	x	0.003000	=		0	x	0.003000	=	
ANN-80(-W)	1	x	0.015000	=	0.015000	1	x	0.040000	=	0.040000
ANN-100	0	x	0.020000	=		0	x	0.025000	=	
ANN-(R)LED	0	x	0.028000	=		0	x	0.068000	=	
ANN-RLY	0	x	0.015000	=		0	x	0.075000	=	
ANN-I/O	0	x	0.035000	=		0	x	0.200000	=	
ANN-I/O LED	0	x	0.000000	=		0	x	0.010000	=	
ANN-S/PG	0	x	0.045000	=		0	x	0.045000	=	
Addressable Devices										
BEAM355	0	x	0.002000	=						
BEAM355S	0	x	0.002000	=						
CP355	0	x	0.000300	=						
SD365CO	0	x	0.002000							
SD355CO	0	x	0.000300	=						
SD355	0	x	0.000300	=						
SD365	10	x	0.000200	=	0.002000					
SD355T	0	x	0.000300	=						
SD365T	0	x	0.000200	=						
H355	0	x	0.000300	=						
H365	4	x	0.000200	=	0.000800					
H355HT	0	x	0.000300	=						
H365HT	0	x	0.000200	=						
H350R	0	x	0.000300	=						
H355R	0	x	0.000300	=						
H365R	0	x	0.000200	=						
D350RPL	0	x	0.000300	=						
D355PL	5	x	0.000300	=	0.001500					
MMF-300	0	x	0.000375	=						
MMF-300-10	0	x	0.003500	=						
MDF-300	0	x	0.000750	=						
MMF-301	3	x	0.000350	=	0.001050					
MMF-302	0	x	0.000270	=						
MMF-302-6	0	x	0.002000	=						
BG-12LX	5	x	0.000375	=	0.001875					
CMF-300	0	x	0.000390	=						
CMF-300-6	0	x	0.002250	=						
CRF-300	5	x	0.000255	=	0.001275					
CRF-300-6	0	x	0.001450	=						
CDRM-300	0	x	0.001300	=						
I300	0	x	0.000400	=						

ISO-6	0	x	0.002700	=							
B501BH-2	0	x	0.001000	=							
B501BHT-2	0	x	0.001000	=							
B224RB	0	x	0.000500	=							
B224BI	0	x	0.000450	=							
W-GATE	0	x	0.024000	=							
Maximum alarm draw for all Addressable devices ---------->					0.20000						
Resettable Power											
4-Wire Smoke Detectors	0	x	0.000000	=		0	x	0.000000	=		
SWIFT Wireless											
W-GATE	0	x	0.040000	=		0	x	0.040000	=		
Auxiliary Power											
CMF-300 (Aux. Power)	0	x	0.001700	=		0	x	0.007000	=		
CMF-300-6 (Aux. Power)	0	x	0.008000	=		0	x	0.020000	=		
MMF-302 (Aux. Power)	0	x	0.012000	=		0	x	0.090000	=		
MMF-302-6 (Aux. Power)	0	x	0.050000	=		0	x	0.270000	=		
B200SR (Aux. Power)	0	x	0.000500	=		0	x	0.035000	=		
B200SR-LF (Aux. Power)	0	x	0.001000	=		0	x	0.125000	=		
Miscellaneous Devices											
	0	x	0.000000	=		0	x	0.000000	=		
	0	x	0.000000	=		0	x	0.000000	=		
	0	x	0.000000	=		0	x	0.000000	=		
	0	x	0.000000	=		0	x	0.000000	=		
	0	x	0.000000	=		0	x	0.000000	=		
Output Circuits											
NAC/Output #1			0.000000	=				0.216000	=	0.216000	
NAC/Output #2			0.000000	=				0.000000	=		
FCPS (remote Sync)	0	x	0.000000	=		0	x	0.021700	=		
Total Standby Load					**0.219500**	**Total Alarm Load**				**0.813000**	

FIRE-LITE ALARMS by Honeywell

ES-50X Battery Calculation

Calculation in Total Sheet

		Required Standby Time in Hours			
		24 Hours			
Total Standby Current	**0.2195 Amps**	x	24	=	5.268 AH
		Required Alarm Time in Minutes			
		5 Minutes			
Total Alarm Load	**0.8130 Amps**	x	0.084	=	0.068 AH
			Total Current Load		**5.336 AH**
	Multiply by the Derating Factor		1.2	=	x 1.20
			Total Ampere Hours Required		**6.40 AH**

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Innovation that Endures

- Products
  - Annunciators & Accessories
  - AV Notification
  - Communicators
  - Control Panels (Addressable)
  - Control Panels (Conventional)
  - Devices (Addressable)
    - Detectors and Bases
    - Modules
  - Devices (Conventional)
  - Mass Notification
  - Power Supplies
  - Pull Stations
  - Releasing Panels
  - Wireless (SWIFT)
- All Products

Discontinued Products

Download the ECC APP

Honeywell Power Products

D355PL Detector

Fire-Lite's InnovairFlex D355PL non-relay photoelectric duct smoke detector features a pivoting housing that fits both square and rectangular footprints capable of mounting to a round or rectangular duct. The InnovairFlex duct smoke detector senses smoke in the most challenging conditions, operating in air flow speeds of 100 to 4,000 feet per minute, temperatures of -4 degrees F to 158 degrees F, and a humidity range of 0 to 95 percent (non-condensing).

Zoom

Features & Benefits | Accessories | Documents | Agencies

D355PL Detector Features and Benefits

- Photoelectric, integrated low-flow technology.
- Air velocity rating from 100 ft/min to 4,000 ft/min (0.5 m/s to 20.32 m/s).
- Versatile mounting options: square or rectangular configuration.
- Broad ranges for operating temperature (-4°F to 158°F, -20°C to 70°C) and humidity (0% to 95% non-condensing).
- Patented sampling tube installs from front or back of the detector with no tools required.
- Cover tamper signal.
- Easily accessible code wheels on sensor head (sold separately).
- Clear cover for convenient visual inspection.
- Remote testing capability.
- Accommodates the installation of an addressable relay module, sold separately, (CRF-300) for applications requiring a Form-C relay.

Related Resources

- N/A

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NAPCO | COMMERCIAL

StarLink™ SLE Commercial Fire and Burglary Alarm Radio Communicators

INTRODUCTION

The StarLink™ Commercial Fire and Burglary alarm capture radio communicators are fully supervised, wireless digital two-way subscriber units supported by an extensive nationwide wireless network. All models are compatible with most 12VDC alarm control panels (always adhere to the documentation provided by the control panel manufacturer). All can function as a backup to existing telephone lines, or as sole path primary communicators. In backup mode, all units will automatically switch the communication channel from the telephone line to the network when telephone line trouble is detected. **See WI2140 for programming information.**

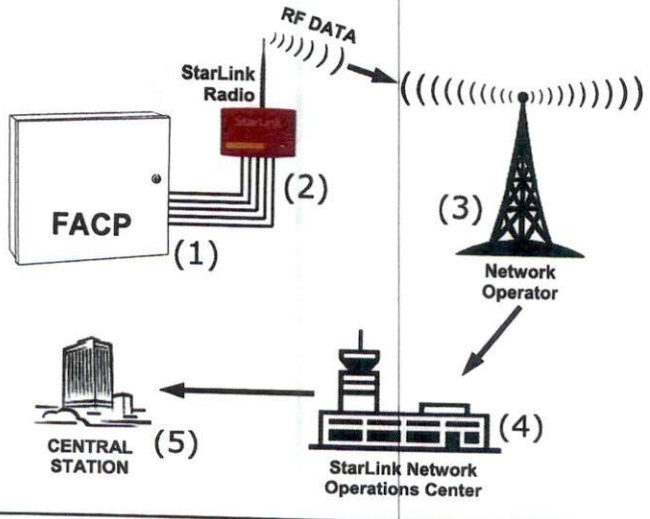
The SLE Series radios use data-capture technology that captures the alarm report from the control panel and transmits the alarm signals to the StarLink Control Center; the alarm signals are then forwarded to ANY central station via Contact ID and is compatible with Sur-Gard TCP/IP central station receivers. The StarLink Control Center reports a trouble signal in the event that the network does not receive the expected supervision signal from the wireless communicator.

For Commercial Burglary installations, under the armed condition, any loss of communication must be treated as a Burglary Alarm at the Central Station.

STARLINK RADIO REPORTING PATH

The diagram below shows the transmission path of a signal from the StarLink radio to the central station.

1. **Signal from a Control Panel.**
2. **StarLink** radio receives the signal transmission (from the TIP an RING wires); sends RF signal through the GPRS network operator.
3. **Network Operator**, part of the vendor system, a section of the cellular spectrum.
4. **SLE Control Center**, receives and routes data.
5. **Central Station**.



ORDERING INFORMATION

SLECDMA-CFB-PS: Commercial / Residential Fire and Burglary CDMA Radio in red metal housing with SLE-ULPS-R power supply and 16.5V / 20VA transformer mounted inside housing, for direct connect to 120V AC branch circuit.

SLECDMA-CFB: Commercial / Residential Fire and Burglary CDMA Radio in red metal housing. Powered directly from control panel (no power supply, no transformer).

SLE-CDMA-FIRE - Commercial / Residential Fire and Burglary CDMA radio in red plastic enclosure. Powered directly from control panel (no power supply, no transformer).

The above models are approved as Sole Path Commercial Fire Alarm Communicators.

- UL 864 Standard For Control Units and Accessories For Fire Alarm Systems, 9th Edition
- UL 1610 Standard For Central-Station Burglar-Alarm Units
- UL 985 Standard For Household Fire Warning System Units
- UL 1023 Standard For Household Burglar-Alarm System Units

SLECDMA-CB: Commercial / Residential Burglary and Residential Fire CDMA Radio in white metal housing. Powered directly from control panel (no power supply, no transformer).

SLECDMA-CB-TF: Commercial / Residential Burglary and Residential Fire CDMA Radio in white metal housing with SLE-ULPS-R power supply and TRF12 plug-in 16.5V / 20VA transformer.

- UL 1610 Standard For Central-Station Burglar-Alarm Units
- UL 985 Standard For Household Fire Warning System Units
- UL 1023 Standard For Household Burglar-Alarm System Units

CDMA models are *Verizon® Network Certified*

FEATURES

The following features are included with models that include a SLE-ULPS-R power supply:

- Power limited output to the StarLink radio PC board 12V input terminals

Napco Security Technologies, Inc., 333 Bayview Ave, Amityville, NY 11701 (800) 645-9445; fax (631) 789-9292

- Battery connection red and black flying leads
- Monitored battery charging and Active battery test circuits
- StarLink radio trouble input (from StarLink radio PC board **PGM1** terminal to detect StarLink radio trouble)
- Requires a sealed lead acid min 4AH / max 7AH battery for minimum 24-hour standby time (max charge current 200mA).
- Trouble relay output (**C**, **N/O** and **N/C** terminals) to wire to a panel zone dedicated to "GSM Trouble" (dry contacts). Remove jumper **"J2"** to isolate common from ground
- Green **AC ON** LED visible from the exterior housing
- Yellow **TROUBLE** LED on PC board. Flashes signify:

  One flash: AC fail / brownout
  Two flashes: Low battery
  Three flashes: Charging circuit trouble
  Four flashes: StarLink radio trouble

The housing-mounted transformer (when provided) is mounted inside its own housing compartment with a replaceable UL Listed .5A fast blow primary fuse. 120VAC connections are to be made by a licensed electrician using suitable connectors, in accordance with N.E.C. and local code requirements.

ADDITIONAL COMPONENTS

In addition to the models listed above, the following subassemblies are available:

SLE-ULPS-R - Power Supply. Required for installations where the control panel cannot provide the 65mA of Auxiliary power required to operate the StarLink radio. Uses a standard 4AH / 12V minimum (7AH maximum) rechargeable battery to provide radio standby power. Requires connection to either the model NAPCO TRF12 (16.5V / 20VA) external plug-in transformer or the chassis-mounted 16.5VAC / 20VA transformer affixed inside the housing (see wiring diagrams in WI2100 or WI2120).

Note: For models without the SLE-ULPS-R, connect the radio terminals 1 and 2 to the control panel Aux Power terminals (observing polarity).

SLE-DLCBL - Download Cable, 6 feet.

SLE-ANTEXT - Extended antenna with 15 feet of cable.

SPECIFICATIONS

The following specifications apply to all StarLink radio models unless otherwise stated:

Electrical Ratings for 120VAC, 60Hz
For Models <u>with</u> Power Supply
Input Voltage: 120VAC nominal
Input Current: 400mA maximum
Maximum Charging Current: 200mA

Electrical Ratings for +12V
For Models <u>without</u> Power Supply
Input Voltage: 11-15VDC (power-limited output from Listed control panel)
Input Current: 65mA with peak RF transmission current of 400mA.

Electrical Ratings for the IN 1 Burg/Fire Input:
Input Voltage: 9-15VDC
Maximum Input Current: Up to 2mA from FACP NAC circuit

Electrical Ratings for IN 2 and IN 3:
Maximum Loop Voltage: 15VDC
Maximum Loop Current: 1.2mA
End of Line Resistor (EOLR) Value: 10K (2 req'd)

Electrical Ratings for 3 PGM Outputs:
Open Collector Outputs: Maximum Voltage 3V when active; 15V maximum when not active
Maximum PGM Sink Current: 50mA

Physical (W x H x D)
Metal Housing: 11½ x 9½ x 3½" (29.2 x 24.1 x 8.9cm)
Mounting: Metal housing includes two keyhole slots for wall mounting (see measurements in WI2100)
Plastic Housing: 8 x 5-$^{29}/_{64}$ x 1½" (20.3 x 13.9 x 3.8cm)
Mounting: Plastic housing includes three keyhole slots for single, double or triple gang boxes (see scale template in WI2120)

Environmental
Operating Temperature: 0°C - 49°C (32°F - 120°F)
Humidity: Maximum 93% Non-Condensing
Indoor use only

NOTICE TO AUTHORITIES HAVING JURISDICTION, USERS, INSTALLERS, DEALERS, AND OTHER AFFECTED PARTIES

FIRE PROGRAMMING OPTION	PERMITTED IN UL864? (Y/N)	AVAILABLE SETTINGS	REQUIRED UL 864 SETTINGS
Unattended Remote Downloading	No	Enable / Disable	Disabled (Jumper 1 installed). Also required for Commercial / Burglary installations. **Note:** See WI2100 page 7 **"Configuration Download / Firmware Updates"** for jumper instructions.
IN2 and **IN3** Unsupervised	No	Supervised / Unsupervised	Supervised (Jumpers 4 and 5 installed)
7 Day Supervision, Radio to NOC	No	200 seconds, 5 minutes, 60 minutes, 7 days	200 seconds, 5 minutes
4/2 Reporting	No	4/2 or Contact ID	Contact ID

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A662 04/15

BG-12LX

Addressable Manual Pull Station

FIRE·LITE ALARMS by Honeywell

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 mm² 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

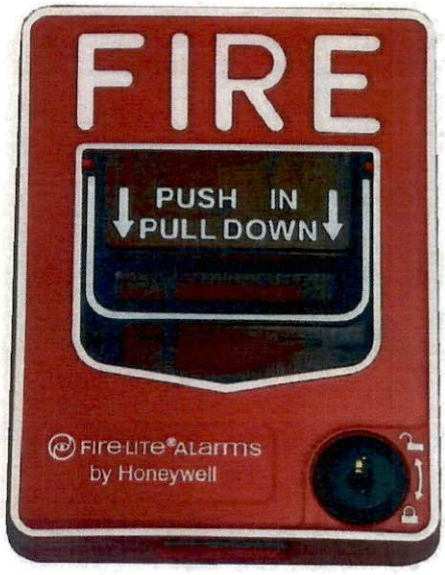
Shell, door, and handle are molded of durable polycarbonate material with a textured finish.

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



FLPullStation.jpg

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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ENGINEERING & MANUFACTURING QUALITY SYSTEMS

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Made in the U.S. A.

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

SD365 Series

Addressable Photoelectric Smoke Detectors

FIRE-LITE ALARMS by Honeywell

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 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 LiteSpeed 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 LiteSpeed 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

Sensitivity:

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

Size: 2.0" (51mm) 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 (o ne 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 SPAG91, is available at **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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ISO 9001 CERTIFIED ENGINEERING & MANUFACTURING QUALITY SYSTEMS

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: 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

SIGNALING UL LISTED
S5512
S4011

FM APPROVED
FM approved except for ALERT models 3057383, 3057072

7125-1653:0504
7135-1653:0503

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

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

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

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

L-Series Specifications

Architect/Engineer Specifications

General

L-Series standard horns, strobes, and horn strobes shall mount to a standard 2 x 4 x 17/8-inch back box, 4 x 4 x 1½-inch back box, 4-inch octagon back box, or double-gang back box. L-Series compact products shall mount to a single-gang 2 x 4 x 17/8-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 11/16 x 4 11/16 x 2 1/8-inch back box. The module shall also control two Style Y (class B) circuits or one Style Z (class A) circuit. The module shall synchronize multiple zones. Daisy chaining two or more synchronization modules together will synchronize all the zones they control. The module shall not operate on a coded power supply.

Physical/Electrical Specifications

Standard Operating Temperature	32°F to 120°F (0°C to 49°C)
Humidity Range	10 to 93% non-condensing
Strobe Flash Rate	1 flash per second
Nominal Voltage	Regulated 12 DC or regulated 24 DC/FWR[1]
Operating Voltage Range[2]	8 to 17.5 V (12 V nominal) or 16 to 33 V (24 V nominal)
Operating Voltage Range MDL3 Sync Module	8.5 to 17.5 V (12 V nominal) or 16.5 to 33 V (24 V nominal)
Input Terminal Wire Gauge	12 to 18 AWG
Wall-Mount Dimensions (including lens)	5.6˝L x 4.7˝W x 1.91˝D (143 mm L x 119 mm W x 49 mm D)
Compact Wall-Mount Dimensions (including lens)	5.26" L x 3.46" W x 1.91" D (133 mm L x 88 mm W x 49 mm D)
Horn Dimensions	5.6˝L x 4.7˝W x 1.25˝D (143 mm L x 119 mm W x 32 mm D)
Compact Horn Dimensions	5.25" L x 3.45" W x 1.25" D (133 mm L x 88 mm W x 32 mm D)

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

UL Current Draw Data

UL Max. Strobe Current Draw (mA RMS)

		8–17.5 Volts	16–33 Volts	
	Candela	DC	DC	FWR
Candela Range	15	88	43	60
	30	143	63	83
	75	N/A	107	136
	95	N/A	121	155
	110	N/A	148	179
	135	N/A	172	209
	185	N/A	222	257

UL Max. Horn Current Draw (mA RMS)

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

UL Max. Current Draw (mA RMS), Wall Horn Strobe, Candela Range (15–185 cd)

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

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

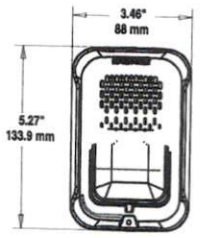
Horn Tones and Sound Output Data

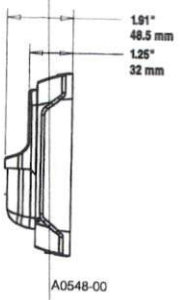
Horn and Horn Strobe Output (dBA)

Switch Position	Sound Pattern	dB	8–17.5 Volts DC	16–33 Volts DC	16–33 Volts FWR
1	Temporal	High	84	89	89
2	Temporal	Low	75	83	83
3	Non-Temporal	High	85	90	90
4	Non-Temporal	Low	76	84	84
5	3.1 KHz Temporal	High	83	88	88
6	3.1 KHz Temporal	Low	76	82	82
7	3.1 KHz Non-Temporal	High	84	89	89
8	3.1 KHz Non-Temporal	Low	77	83	83
9*	Coded	High	85	90	90
10*	3.1 KHz Coded	High	84	89	89

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

L-Series Dimensions





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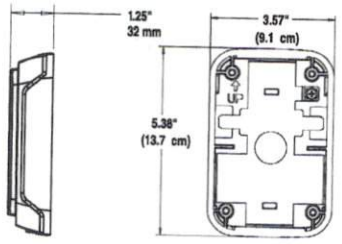
Compact Strobe, Horn Strobe

Compact Horn



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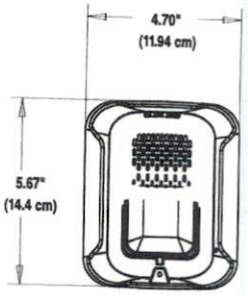
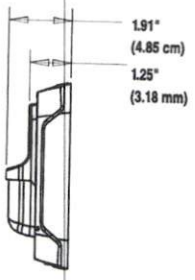
Compact Wall Surface Mount Back Box
SBBGRL, SBBGWL





Strobe, Horn Strobe

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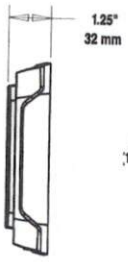
Horn



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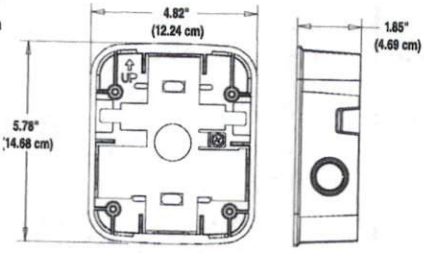

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Wall Surface Mount Back Box
SBBRL/SBBWL

L-Series Ordering Information

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

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

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

SYSTEM SENSOR

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

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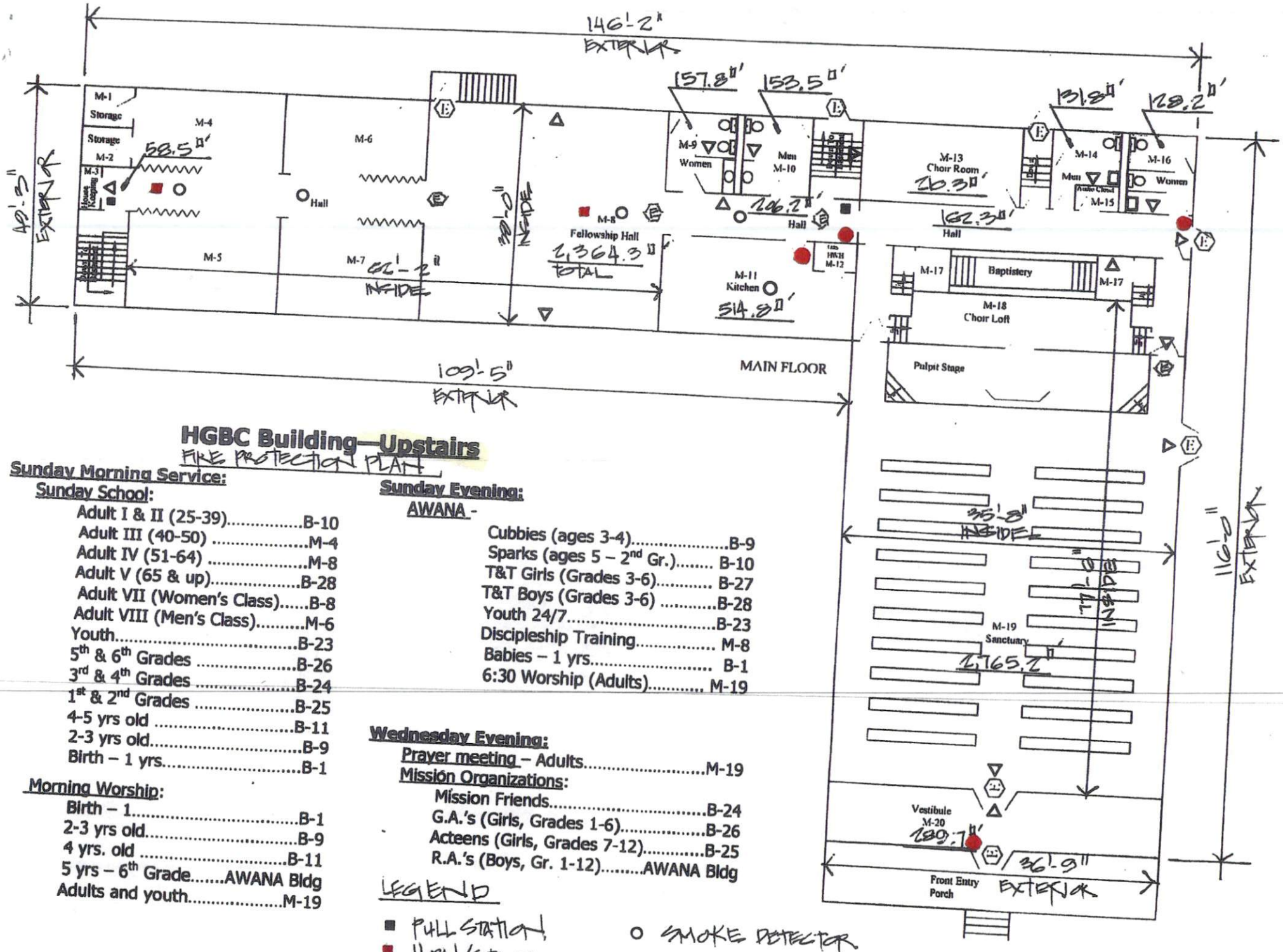
Product specifications subject to change without notice. Visit systemsensor.com for current product information, including the latest version of this data sheet.
AVDS865-05 • 2/22/2018



HGBC Building—Upstairs

FIRE PROTECTION PLAN

Sunday Morning Service:

Sunday School:

- Adult I & II (25-39).....B-10
- Adult III (40-50) M-4
- Adult IV (51-64) M-8
- Adult V (65 & up).....B-28
- Adult VII (Women's Class).....B-8
- Adult VIII (Men's Class).....M-6
- Youth.....B-23
- 5th & 6th Grades B-26
- 3rd & 4th Grades B-24
- 1st & 2nd Grades B-25
- 4-5 yrs old B-11
- 2-3 yrs old.....B-9
- Birth – 1 yrs.....B-1

Morning Worship:

- Birth – 1.....B-1
- 2-3 yrs old.....B-9
- 4 yrs. old B-11
- 5 yrs – 6th Grade.....AWANA Bldg
- Adults and youth.....M-19

Sunday Evening:

AWANA -

- Cubbies (ages 3-4).....B-9
- Sparks (ages 5 – 2nd Gr.)..... B-10
- T&T Girls (Grades 3-6)..... B-27
- T&T Boys (Grades 3-6) B-28
- Youth 24/7.....B-23
- Discipleship Training..... M-8
- Babies – 1 yrs..... B-1
- 6:30 Worship (Adults)..... M-19

Wednesday Evening:

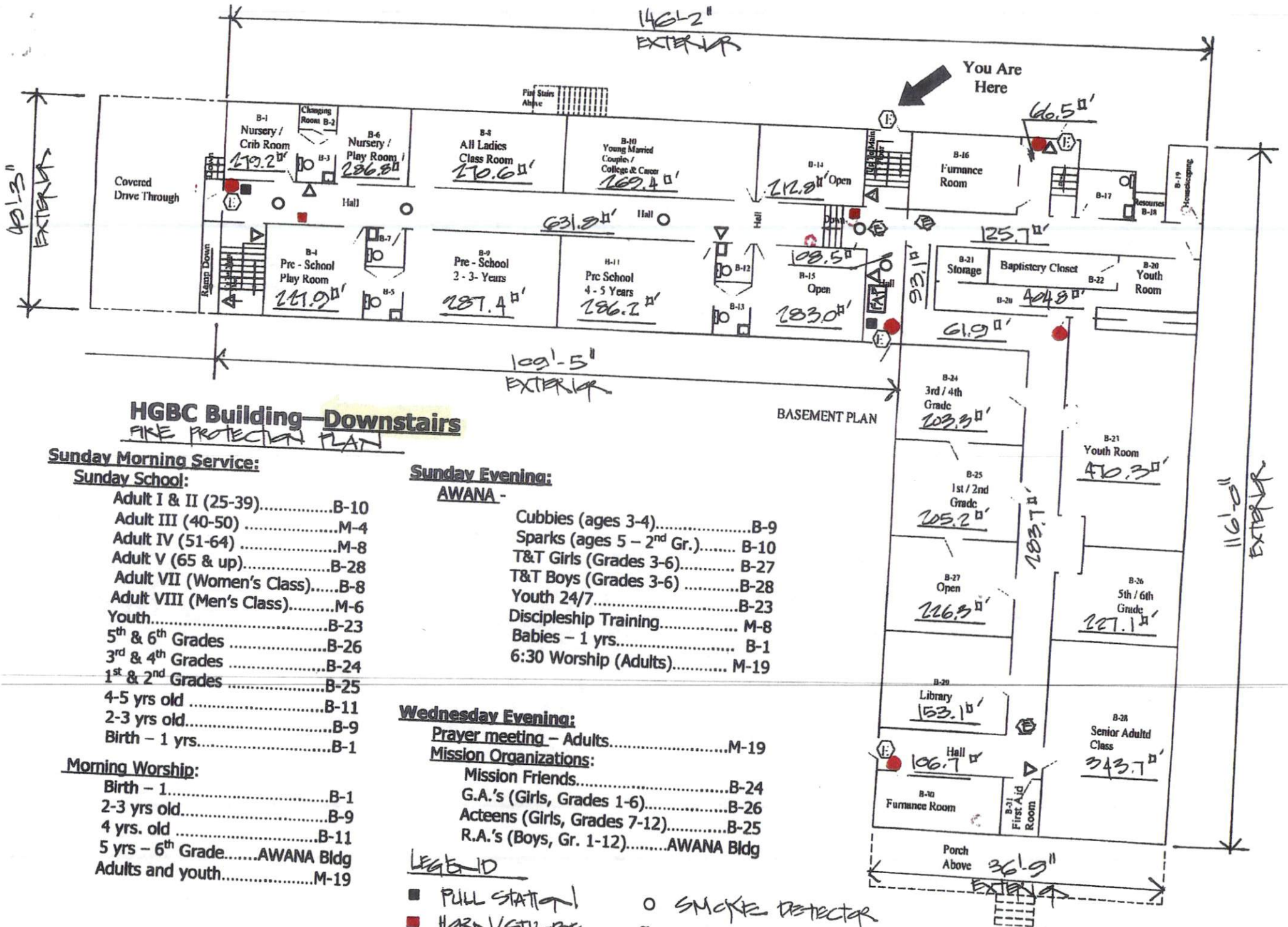
- Prayer meeting – Adults.....M-19

Mission Organizations:

- Mission Friends.....B-24
- G.A.'s (Girls, Grades 1-6).....B-26
- Acteens (Girls, Grades 7-12).....B-25
- R.A.'s (Boys, Gr. 1-12).....AWANA Bldg

LEGEND

- ■ PULL STATION
- ■ HORN/STROBE
- ◁ EMERGENCY LIGHT
- ○ SMOKE DETECTOR
- (E) EXIT
- ● FIRE EXTINGUISHER



HGBC Building—Downstairs

FIRE PROTECTION PLAN

Sunday Morning Service:

Sunday School:

- Adult I & II (25-39).....B-10
- Adult III (40-50) M-4
- Adult IV (51-64) M-8
- Adult V (65 & up).....B-28
- Adult VII (Women's Class).....B-8
- Adult VIII (Men's Class).....M-6
- Youth.....B-23
- 5th & 6th Grades B-26
- 3rd & 4th Grades B-24
- 1st & 2nd Grades B-25
- 4-5 yrs old B-11
- 2-3 yrs old.....B-9
- Birth – 1 yrs.....B-1

Morning Worship:

- Birth – 1.....B-1
- 2-3 yrs old.....B-9
- 4 yrs. old B-11
- 5 yrs – 6th Grade.....AWANA Bldg
- Adults and youth.....M-19

Sunday Evening:

AWANA -

- Cubbies (ages 3-4).....B-9
- Sparks (ages 5 – 2nd Gr.)..... B-10
- T&T Girls (Grades 3-6)..... B-27
- T&T Boys (Grades 3-6) B-28
- Youth 24/7.....B-23
- Discipleship Training..... M-8
- Babies – 1 yrs..... B-1
- 6:30 Worship (Adults)..... M-19

Wednesday Evening:

- Prayer meeting – Adults.....M-19
- Mission Organizations:
  - Mission Friends.....B-24
  - G.A.'s (Girls, Grades 1-6).....B-26
  - Acteens (Girls, Grades 7-12).....B-25
  - R.A.'s (Boys, Gr. 1-12).....AWANA Bldg

LEGEND

- ■ PULL STATION
- ■ HORN/STROBE
- ○ SMOKE DETECTOR
- (E) EXIT
- ◁ EMERGENCY LIGHT
- FAP FIRE ALARM PANEL
- ● FIRE EXTINGUISHER

ES-50X

Intelligent Addressable FACP with Communicator

FIRE-LITE ALARMS by Honeywell

Addressable Fire Alarm Control Panels

General

The **ES-50X** is the latest intelligent addressable fire alarm control panel (FACP) from Fire•Lite Alarms and is a direct replacement for the MS-9050UD/LS. The ES-50X comes with a pre-installed communi-cator 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).

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 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 capacity 50
- Programmable software zones 50
- 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 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 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-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
- **FM approved**
- **CSFM:** 7165-0075:0500
- **FDNY:** COA #6261

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

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ISO 9001 CERTIFIED ENGINEERING & MANUFACTURING QUALITY SYSTEMS

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

Fire-Lite Alarms by Honeywell

ES-50X Battery Calculation

Secondary Power Source Requirements

	Standby Current (amps)					Secondary Alarm Current (amps)				
Device	Qty		Current Draw		Total	Qty		Current Draw		Total
Main Circuit Board	1	x	0.141000	=	0.141000	1	x	0.257000	=	0.257000
IPOTS-COM Communicator	0	x	0.040000	=		0	x	0.041000	=	
4XTMF	0	x	0.005000	=		0	x	0.011000	=	
EOLR-1	0	x	0.020000	=		0	x	0.020000	=	
CELL-MOD-FL / CELL-CAB	1	x	0.055000	=	0.055000	1	x	0.100000	=	0.100000
ANN-BUS Devices										
ANN-SEC Card	0	x	0.003000	=		0	x	0.003000	=	
ANN-80(-W)	1	x	0.015000	=	0.015000	1	x	0.040000	=	0.040000
ANN-100	0	x	0.020000	=		0	x	0.025000	=	
ANN-(R)LED	0	x	0.028000	=		0	x	0.068000	=	
ANN-RLY	0	x	0.015000	=		0	x	0.075000	=	
ANN-I/O	0	x	0.035000	=		0	x	0.200000	=	
ANN-I/O LED	0	x	0.000000	=		0	x	0.010000	=	
ANN-S/PG	0	x	0.045000	=		0	x	0.045000	=	
Addressable Devices										
BEAM355	0	x	0.002000	=						
BEAM355S	0	x	0.002000	=						
CP355	0	x	0.000300	=						
SD365CO	0	x	0.002000							
SD355CO	0	x	0.000300	=						
SD355	0	x	0.000300	=						
SD365	10	x	0.000200	=	0.002000					
SD355T	0	x	0.000300	=						
SD365T	0	x	0.000200	=						
H355	0	x	0.000300	=						
H365	4	x	0.000200	=	0.000800					
H355HT	0	x	0.000300	=						
H365HT	0	x	0.000200	=						
H350R	0	x	0.000300	=						
H355R	0	x	0.000300	=						
H365R	0	x	0.000200	=						
D350RPL	0	x	0.000300	=						
D355PL	5	x	0.000300	=	0.001500					
MMF-300	0	x	0.000375	=						
MMF-300-10	0	x	0.003500	=						
MDF-300	0	x	0.000750	=						
MMF-301	3	x	0.000350	=	0.001050					
MMF-302	0	x	0.000270	=						
MMF-302-6	0	x	0.002000	=						
BG-12LX	5	x	0.000375	=	0.001875					
CMF-300	0	x	0.000390	=						
CMF-300-6	0	x	0.002250	=						
CRF-300	5	x	0.000255	=	0.001275					
CRF-300-6	0	x	0.001450	=						
CDRM-300	0	x	0.001300	=						
I300	0	x	0.000400	=						

ISO-6	0	x	0.002700	=							
B501BH-2	0	x	0.001000	=							
B501BHT-2	0	x	0.001000	=							
B224RB	0	x	0.000500	=							
B224BI	0	x	0.000450	=							
W-GATE	0	x	0.024000	=							
				Maximum alarm draw for all Addressable devices ---------->							0.20000
Resettable Power											
4-Wire Smoke Detectors	0	x	0.000000	=		0	x	0.000000	=		
SWIFT Wireless											
W-GATE	0	x	0.040000	=		0	x	0.040000	=		
Auxiliary Power											
CMF-300 (Aux. Power)	0	x	0.001700	=		0	x	0.007000	=		
CMF-300-6 (Aux. Power)	0	x	0.008000	=		0	x	0.020000	=		
MMF-302 (Aux. Power)	0	x	0.012000	=		0	x	0.090000	=		
MMF-302-6 (Aux. Power)	0	x	0.050000	=		0	x	0.270000	=		
B200SR (Aux. Power)	0	x	0.000500	=		0	x	0.035000	=		
B200SR-LF (Aux. Power)	0	x	0.001000	=		0	x	0.125000	=		
Miscellaneous Devices											
	0	x	0.000000	=		0	x	0.000000	=		
	0	x	0.000000	=		0	x	0.000000	=		
	0	x	0.000000	=		0	x	0.000000	=		
	0	x	0.000000	=		0	x	0.000000	=		
	0	x	0.000000	=		0	x	0.000000	=		
Output Circuits											
NAC/Output #1			0.000000	=				0.216000	=		0.216000
NAC/Output #2			0.000000	=				0.000000	=		
FCPS (remote Sync)	0	x	0.000000	=		0	x	0.021700	=		
			Total Standby Load		**0.219500**			**Total Alarm Load**			**0.813000**

Fire-Lite Alarms by Honeywell

ES-50X Battery Calculation

Calculation in Total Sheet

		Required Standby Time in Hours			
		24 Hours			
Total Standby Current	**0.2195 Amps**	x	24	=	5.268 AH
		Required Alarm Time in Minutes			
		5 Minutes			
Total Alarm Load	**0.8130 Amps**	x	0.084	=	0.068 AH
				Total Current Load	**5.336 AH**
			Multiply by the Derating Factor	=	x 1.20
				Total Ampere Hours Required	**6.40 AH**

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Honeywell Power Products

D355PL Detector

Fire-Lite's InnovairFlex D355PL non-relay photoelectric duct smoke detector features a pivoting housing that fits both square and rectangular footprints capable of mounting to a round or rectangular duct. The InnovairFlex duct smoke detector senses smoke in the most challenging conditions, operating in air flow speeds of 100 to 4,000 feet per minute, temperatures of -4 degrees F to 158 degrees F, and a humidity range of 0 to 95 percent (non-condensing).

Zoom

Features & Benefits | Accessories | Documents | Agencies

D355PL Detector Features and Benefits

- Photoelectric, integrated low-flow technology.
- Air velocity rating from 100 ft/min to 4,000 ft/min (0.5 m/s to 20.32 m/s).
- Versatile mounting options: square or rectangular configuration.
- Broad ranges for operating temperature (-4°F to 158°F, -20°C to 70°C) and humidity (0% to 95% non-condensing).
- Patented sampling tube installs from front or back of the detector with no tools required.
- Cover tamper signal.
- Easily accessible code wheels on sensor head (sold separately).
- Clear cover for convenient visual inspection.
- Remote testing capability.
- Accommodates the installation of an addressable relay module, sold separately, (CRF-300) for applications requiring a Form-C relay.

Related Resources

- N/A

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NAPCO | COMMERCIAL

StarLink™ SLE Commercial Fire and Burglary Alarm Radio Communicators

INTRODUCTION

The StarLink™ Commercial Fire and Burglary alarm capture radio communicators are fully supervised, wireless digital two-way subscriber units supported by an extensive nationwide wireless network. All models are compatible with most 12VDC alarm control panels (always adhere to the documentation provided by the control panel manufacturer). All can function as a backup to existing telephone lines, or as sole path primary communicators. In backup mode, all units will automatically switch the communication channel from the telephone line to the network when telephone line trouble is detected. **See WI2140 for programming information.**

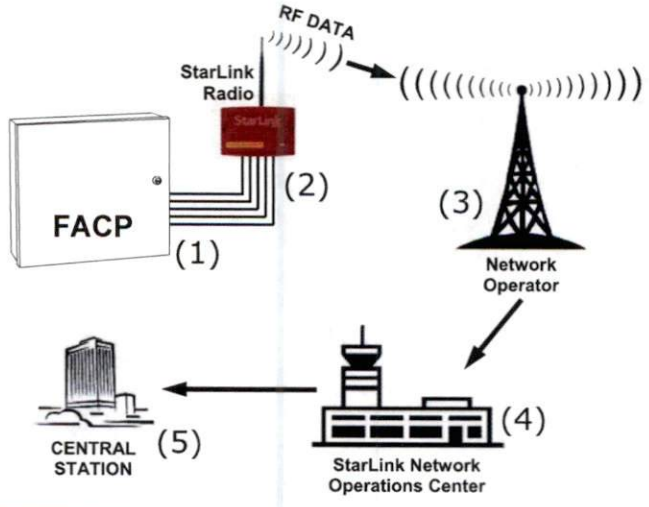
The SLE Series radios use data-capture technology that captures the alarm report from the control panel and transmits the alarm signals to the StarLink Control Center; the alarm signals are then forwarded to ANY central station via Contact ID and is compatible with Sur-Gard TCP/IP central station receivers. The StarLink Control Center reports a trouble signal in the event that the network does not receive the expected supervision signal from the wireless communicator.

For Commercial Burglary installations, under the armed condition, any loss of communication must be treated as a Burglary Alarm at the Central Station.

STARLINK RADIO REPORTING PATH

The diagram below shows the transmission path of a signal from the StarLink radio to the central station.

1. **Signal from a Control Panel.**
2. **StarLink** radio receives the signal transmission (from the TIP an RING wires); sends RF signal through the GPRS network operator.
3. **Network Operator**, part of the vendor system, a section of the cellular spectrum.
4. **SLE Control Center**, receives and routes data.
5. **Central Station**.



ORDERING INFORMATION

SLECDMA-CFB-PS: Commercial / Residential Fire and Burglary CDMA Radio in red metal housing with SLE-ULPS-R power supply and 16.5V / 20VA transformer mounted inside housing, for direct connect to 120V AC branch circuit.

SLECDMA-CFB: Commercial / Residential Fire and Burglary CDMA Radio in red metal housing. Powered directly from control panel (no power supply, no transformer).

SLE-CDMA-FIRE - Commercial / Residential Fire and Burglary CDMA radio in red plastic enclosure. Powered directly from control panel (no power supply, no transformer).

The above models are approved as Sole Path Commercial Fire Alarm Communicators.

- UL 864 Standard For Control Units and Accessories For Fire Alarm Systems, 9th Edition
- UL 1610 Standard For Central-Station Burglar-Alarm Units
- UL 985 Standard For Household Fire Warning System Units
- UL 1023 Standard For Household Burglar-Alarm System Units

SLECDMA-CB: Commercial / Residential Burglary and Residential Fire CDMA Radio in white metal housing. Powered directly from control panel (no power supply, no transformer).

SLECDMA-CB-TF: Commercial / Residential Burglary and Residential Fire CDMA Radio in white metal housing with SLE-ULPS-R power supply and TRF12 plug-in 16.5V / 20VA transformer.

- UL 1610 Standard For Central-Station Burglar-Alarm Units
- UL 985 Standard For Household Fire Warning System Units
- UL 1023 Standard For Household Burglar-Alarm System Units

CDMA models are *Verizon® Network Certified*

FEATURES

The following features are included with models that include a SLE-ULPS-R power supply:

- Power limited output to the StarLink radio PC board 12V input terminals

Napco Security Technologies, Inc., 333 Bayview Ave, Amityville, NY 11701 (800) 645-9445; fax (631) 789-9292

- Battery connection red and black flying leads
- Monitored battery charging and Active battery test circuits
- StarLink radio trouble input (from StarLink radio PC board **PGM1** terminal to detect StarLink radio trouble)
- Requires a sealed lead acid min 4AH / max 7AH battery for minimum 24-hour standby time (max charge current 200mA).
- Trouble relay output (**C**, **N/O** and **N/C** terminals) to wire to a panel zone dedicated to "GSM Trouble" (dry contacts). Remove jumper "**J2**" to isolate common from ground
- Green **AC ON** LED visible from the exterior housing
- Yellow **TROUBLE** LED on PC board. Flashes signify:

  One flash: AC fail / brownout
  Two flashes: Low battery
  Three flashes: Charging circuit trouble
  Four flashes: StarLink radio trouble

The housing-mounted transformer (when provided) is mounted inside its own housing compartment with a replaceable UL Listed .5A fast blow primary fuse. 120VAC connections are to be made by a licensed electrician using suitable connectors, in accordance with N.E.C. and local code requirements.

ADDITIONAL COMPONENTS

In addition to the models listed above, the following subassemblies are available:

SLE-ULPS-R - Power Supply. Required for installations where the control panel cannot provide the 65mA of Auxiliary power required to operate the StarLink radio. Uses a standard 4AH / 12V minimum (7AH maximum) rechargeable battery to provide radio standby power. Requires connection to either the model NAPCO TRF12 (16.5V / 20VA) external plug-in transformer or the chassis-mounted 16.5VAC / 20VA transformer affixed inside the housing (see wiring diagrams in WI2100 or WI2120).

Note: For models without the SLE-ULPS-R, connect the radio terminals 1 and 2 to the control panel Aux Power terminals (observing polarity).

SLE-DLCBL - Download Cable, 6 feet.

SLE-ANTEXT - Extended antenna with 15 feet of cable.

SPECIFICATIONS

The following specifications apply to all StarLink radio models unless otherwise stated:

Electrical Ratings for 120VAC, 60Hz
For Models with Power Supply
Input Voltage: 120VAC nominal
Input Current: 400mA maximum
Maximum Charging Current: 200mA

Electrical Ratings for +12V
For Models without Power Supply
Input Voltage: 11-15VDC (power-limited output from Listed control panel)
Input Current: 65mA with peak RF transmission current of 400mA.

Electrical Ratings for the IN 1 Burg/Fire Input:
Input Voltage: 9-15VDC
Maximum Input Current: Up to 2mA from FACP NAC circuit

Electrical Ratings for IN 2 and IN 3:
Maximum Loop Voltage: 15VDC
Maximum Loop Current: 1.2mA
End of Line Resistor (EOLR) Value: 10K (2 req'd)

Electrical Ratings for 3 PGM Outputs:
Open Collector Outputs: Maximum Voltage 3V when active; 15V maximum when not active
Maximum PGM Sink Current: 50mA

Physical (W x H x D)
Metal Housing: 11½ x 9½ x 3½" (29.2 x 24.1 x 8.9cm)
Mounting: Metal housing includes two keyhole slots for wall mounting (see measurements in WI2100)
Plastic Housing: 8 x 5-$^{29}/_{64}$ x 1½" (20.3 x 13.9 x 3.8cm)
Mounting: Plastic housing includes three keyhole slots for single, double or triple gang boxes (see scale template in WI2120)

Environmental
Operating Temperature: 0°C - 49°C (32°F - 120°F)
Humidity: Maximum 93% Non-Condensing
Indoor use only

NOTICE TO AUTHORITIES HAVING JURISDICTION, USERS, INSTALLERS, DEALERS, AND OTHER AFFECTED PARTIES

FIRE PROGRAMMING OPTION	PERMITTED IN UL864? (Y/N)	AVAILABLE SETTINGS	REQUIRED UL 864 SETTINGS
Unattended Remote Downloading	No	Enable / Disable	Disabled (Jumper 1 installed). Also required for Commercial / Burglary installations. **Note:** See WI2100 page 7 **"Configuration Download / Firmware Updates"** for jumper instructions.
IN2 and **IN3** Unsupervised	No	Supervised / Unsupervised	Supervised (Jumpers 4 and 5 installed)
7 Day Supervision, Radio to NOC	No	200 seconds, 5 minutes, 60 minutes, 7 days	200 seconds, 5 minutes
4/2 Reporting	No	4/2 or Contact ID	Contact ID

Napco Security Technologies, Inc., 333 Bayview Ave, Amityville, NY 11701 (800) 645-9445; fax (631) 789-9292
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A662 04/15

BG-12LX

Addressable Manual Pull Station

FIRE·LITE ALARMS by Honeywell

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 mm² 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 µA.
- **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 usually needed for semi-flush mounting with 4" (10.16 cm) or double-gang boxes (not with single-gang boxes).

FLPullStation.jpg

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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ISO 9001 CERTIFIED
ENGINEERING & MANUFACTURING QUALITY SYSTEMS

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.

Made in the U.S. A.

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

SD365 Series

Addressable Photoelectric Smoke Detectors

FIRE-LITE ALARMS by Honeywell

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 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 LiteSpeed 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 LiteSpeed 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

Sensitivity:

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

Size: 2.0" (51mm) 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 (o ne 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 SPAG91, is available at **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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For more information, contact Fire•Lite Alarms. Phone: (800) 627-3473, FAX:(877) 699-4105.
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

SIGNALING UL LISTED
S5512
S4011

FM APPROVED
FM approved except for ALERT models 3057383, 3057072

7125-1653:0504
7135-1653:0503

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

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

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

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

L-Series Specifications

Architect/Engineer Specifications

General

L-Series standard horns, strobes, and horn strobes shall mount to a standard 2 x 4 x 1⁷/₈-inch back box, 4 x 4 x 1½-inch back box, 4-inch octagon back box, or double-gang back box. L-Series compact products shall mount to a single-gang 2 x 4 x 1⁷/₈-inch back box. A universal mounting plate shall be used for mounting ceiling and wall products for all standard models and a separate universal mounting plate shall be used for mounting wall compact models. The notification appliance circuit wiring shall terminate at the universal mounting plate. Also, L-Series products, when used with the Sync•Circuit™ Module accessory, shall be powered from a non-coded notification appliance circuit output and shall operate on a nominal 12 or 24 volts. When used with the Sync•Circuit Module, 12-volt-rated notification appliance circuit outputs shall operate between 8.5 and 17.5 volts; 24-volt-rated notification appliance circuit outputs shall operate between 16.5 and 33 volts. Indoor L-Series products shall operate between 32 and 120 degrees Fahrenheit from a regulated DC or full-wave rectified unfiltered power supply. Strobes and horn strobes shall have field-selectable candela settings including 15, 30, 75, 95, 110, 135, and 185.

Strobe

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

Horn Strobe Combination

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

Synchronization Module

The module shall be a System Sensor Sync•Circuit model MDL3 listed to UL 464 and shall be approved for fire protective service. The module shall synchronize Strobes at 1 Hz and horns at temporal three. Also, while operating the strobes, the module shall silence the horns on horn strobe models over a single pair of wires. The module shall mount to a 4¹¹/₁₆ x 4¹¹/₁₆ x 2¹/₈-inch back box. The module shall also control two Style Y (class B) circuits or one Style Z (class A) circuit. The module shall synchronize multiple zones. Daisy chaining two or more synchronization modules together will synchronize all the zones they control. The module shall not operate on a coded power supply.

Physical/Electrical Specifications

Standard Operating Temperature	32°F to 120°F (0°C to 49°C)
Humidity Range	10 to 93% non-condensing
Strobe Flash Rate	1 flash per second
Nominal Voltage	Regulated 12 DC or regulated 24 DC/FWR[1]
Operating Voltage Range[2]	8 to 17.5 V (12 V nominal) or 16 to 33 V (24 V nominal)
Operating Voltage Range MDL3 Sync Module	8.5 to 17.5 V (12 V nominal) or 16.5 to 33 V (24 V nominal)
Input Terminal Wire Gauge	12 to 18 AWG
Wall-Mount Dimensions (including lens)	5.6˝L x 4.7˝W x 1.91˝D (143 mm L x 119 mm W x 49 mm D)
Compact Wall-Mount Dimensions (including lens)	5.26" L x 3.46" W x 1.91" D (133 mm L x 88 mm W x 49 mm D)
Horn Dimensions	5.6˝L x 4.7˝W x 1.25˝D (143 mm L x 119 mm W x 32 mm D)
Compact Horn Dimensions	5.25" L x 3.45" W x 1.25" D (133 mm L x 88 mm W x 32 mm D)

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

UL Current Draw Data

UL Max. Strobe Current Draw (mA RMS)

		8–17.5 Volts	16–33 Volts	
	Candela	DC	DC	FWR
Candela Range	15	88	43	60
	30	143	63	83
	75	N/A	107	136
	95	N/A	121	155
	110	N/A	148	179
	135	N/A	172	209
	185	N/A	222	257

UL Max. Horn Current Draw (mA RMS)

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

UL Max. Current Draw (mA RMS), Wall Horn Strobe, Candela Range (15–185 cd)

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

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

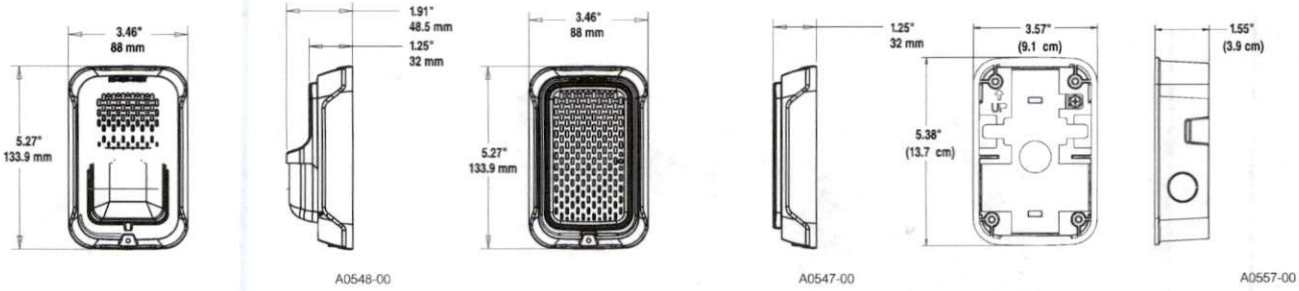
Horn Tones and Sound Output Data

Horn and Horn Strobe Output (dBA)

			8–17.5 Volts	16–33 Volts	
Switch Position	Sound Pattern	dB	DC	DC	FWR
1	Temporal	High	84	89	89
2	Temporal	Low	75	83	83
3	Non-Temporal	High	85	90	90
4	Non-Temporal	Low	76	84	84
5	3.1 KHz Temporal	High	83	88	88
6	3.1 KHz Temporal	Low	76	82	82
7	3.1 KHz Non-Temporal	High	84	89	89
8	3.1 KHz Non-Temporal	Low	77	83	83
9*	Coded	High	85	90	90
10*	3.1 KHz Coded	High	84	89	89

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

L-Series Dimensions



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

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

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

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