Junta Central Electoral (JCE)
27 de Febrero Esq. Luperon, Plaza de la Bandera
RNC:401-00754-1
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República Dominicana

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Junta Central Electoral (JCE)
27 de Febrero Esq. Luperon, Plaza de la
Bandera
RNC:401-00754-1
Santo Domingo DN
República Dominicana

Cotizacion Nº SO9044

Su referencia	Fecha cotizacion	Comercial	Plazo de pago
Sist. Detección de Incendios - JCE Nave la Colina	11/06/2019	Juan Thomas Perez	70 / 30

Descripción	Cantidad	Precio unidad	Precio
[MS-9600UDLS] Panel Direccionable 636 Zonas. FIRELITE	1.00 Unidad(es)	140,500.00	RD$ 140,500.00
[BAT-12/7] Bateria 12v/7amp	2.00 Unidad(es)	1,500.00	RD$ 3,000.00
[SLC-2LS] Módulo Expansor de Lazo SLC-2LS 318 Dispositivos. FIRELITE.	1.00 Unidad(es)	40,650.00	RD$ 40,650.00
[SD355] Detector de Humo Fotoelectrico Fire Lite.	25.00 Unidad(es)	3,600.00	RD$ 90,000.00
[BEAM355S] Intelligent beam smoke detector with integral sensitivity test.	4.00 Unidad(es)	38,000.00	RD$ 152,000.00
[BG-12LXSP] Pulsador manual inteligente-Fire Lite	8.00 Unidad(es)	4,660.00	RD$ 37,280.00
[P2R] Horn/Strobe, 12/24 Volt, Red, Multi-Candela .NOTIFIER	15.00 Unidad(es)	2,600.00	RD$ 39,000.00
[DTK120HW/DITEK] SUPRESOR DE VOLTAJE. DITEK	2.00 Unidad(es)	5,500.00	RD$ 11,000.00
[41061104] Cable 18/2 FPL .	3,000.00 Unidad(es)	5.12	RD$ 15,360.00
[11181101] Cable 18/2 STR (1000FT).	3,000.00 Unidad(es)	4.85	RD$ 14,550.00

Descripción	Cantidad	Precio unidad	Precio
[41075504] 18/4 Fpl 5C Bx Red.	1,000.00 Unidad(es)	9.00	RD$ 9,000.00
[Materiales] Materiales de canalización, tuberías y otros accesorios de instalación.	1.00 Unidad(es)	96,000.00	RD$ 96,000.00
[Servicio de Mano de Obra] Servicio de Instalación, configuración, y entrenamiento.	1.00 Unidad(es)	78,500.00	RD$ 78,500.00

Total neto	RD$ 726,840.00
Impuestos :	RD$ 130,831.20
Total :	**RD$ 857,671.20**

Vigencia: 30 Dias.

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RNC 101-70840-9
Santo Domingo
D.N., Rep. Dom.

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JUNTA CENTRAL ELECTORAL

JCE

Junta Central Electoral
Garantía de Identidad y Democracia

INPROTEC
INGENIERÍA DE PROTECCIÓN, S.R.L.
RNC 101-70840-9
Santo Domingo
D.N., Rep. Dom.

*SISTEMA DETECCIÓN DE INCENDIOS
- JCE NAVE LA COLINA

GENERALIDADES DE LA OFERTA

11 de Junio del 2019

Sres.:

JUNTA CENTRAL ELECTORAL

Estimado:

Por la presente les hacemos llegar nuestra oferta correspondiente a:

OFERTA ECONÓMICA

Hemos realizado un estudio de sus necesidades, y de igual manera verificado la forma más eficiente en que nuestras recomendaciones reflejen la flexibilidad de adaptación a futuras modificaciones, basadas en conjunción a los requerimientos de las normas internacionales y locales así como al avance de la tecnología.

En la siguiente le hacemos la propuesta de un sistema de seguridad electrónica integrada según sus especificaciones recomendadas. Esperando que todos los requerimientos tantos técnicos, como financieros, sean satisfechos en la siguiente propuesta. Si requiere información adicional sírvase contactarnos directamente.

Agradecemos nuevamente su interés y la oportunidad que nos brindan de servirles.

Muy atentamente,

Juan Thomas Perez
Gerente General

Calle Francisco Carias Lavandier
No. 3-B. Ens. Paraíso,
Santo Domingo,
República Dominicana.

Tel.: 809-562-5501
Fax: 809-563-2401

RNC 1-01-70840-9

info@inprotec.do
www.inprotec.do

INPROTEC

Generalidades:

En estos presupuestos se incluyen la ingeniería, materiales y mano de obra para la instalación de los equipo requeridos para la solucion propuesta

Se proveerá la totalidad de la documentación conforme a obra que describa detalladamente la instalación, que incluya cálculos hidráulicos, planos isométricos, etc.

Se proveerá los manuales de operación y mantenimiento.

Se dictará un curso de capacitación para los operadores del sistema.

Nota:
*- Presupuesto no contempla Obra Civil.

FORMA DE PAGO
Se solicita un primer pago del Setenta por ciento (70%) a la firma del contrato, un segundo pago del Treinta por ciento (30%) contra entrega.

GARANTÍA LIMITADA
Todos los equipos poseen una garantía limitada de Doce (12) meses a partir de su instalación o aceptación, siempre y cuando se mantengan según los requerimientos del fabricante y el instalador.

NOTAS
Estos presupuestos se mantendrán vigentes por un período de Treinta (30) días, a partir de la fecha de esta propuesta. El alcance de este presupuesto se limita a las partidas descritas en él, cualquier partida no especificada deberá ser considerada como adicional.

PRESUPUESTO SISTEMA DETECCIÓN DE INCENDIOS

INPROTEC
INGENIERÍA DE PROTECCIÓN

DESCRIPCIÓN Y ESPECIFICACIONES DE LOS EQUIPOS PROPUESTOS

MS-9600LS(E)/MS-9600UDLS(E)

Intelligent Addressable FACP
with Optional Second Loop

Fire·Lite Alarms
by Honeywell

Addressable Control Panels

General

Fire•Lite's MS-9600LS(E) and MS-9600UDLS(E) are compact, cost effective, intelligent addressable FACPs (Fire Alarm Control Panels) with an extensive list of powerful features. The combination of Fire•Lite's newer series devices and legacy 300 Series devices, along with the MS-9600LS(E) or MS-9600UDLS(E) FACP, offer the latest in fire protection technology. LiteSpeed™ is a patented technology that polls 10 devices at a time looking for new or different information. When new information is found at a specific address, the system polls that device several times for any new data. This improvement allows a fully loaded panel with up to 636 devices to report an incident and activate the notification circuits in under 10 seconds. With this polling scheme, devices can be wired on standard twisted, unshielded wire up to a distance of 10,000 feet per loop. Each Signaling Line Circuit (SLC) loop supports up to 159 addressable detectors including photoelectric, photoelectric with heat, beam, ionization, photoelectric duct, fixed heat, fixed heat with rate-of-rise, and fixed high-heat detectors. It also supports up to 159 addressable modules including monitor (two-wire detector, normally open devices), dual-monitor functions (two monitor circuits from one module, two addresses used), multi-monitor (multiple monitor circuits from one module, multiple addresses used), control (for Notification Appliance Circuits), and relay (two Form-C) modules.

The FLPS-7 power supply is a separate board while all other electronics are contained on a single main circuit board. Both boards are mounted to a quick-removable chassis and housed in a metal cabinet. The backbox can be installed allowing field wiring to be pulled. When construction is completed, the chassis with the electronics can be quickly installed with two bolts.

The MS-9600UDLS(E) includes a factory-installed 2 Digital Alarm Communicator Transmitter. The DACT transmits system status (alarm, troubles, AC loss, etc.) to a Central Station via internet (optional IPDACT installed) or the public switched telephone network.

Optional modules, which plug into the main circuit board, are available for special functions. Available accessories include LED, graphic and LCD annunciators, reverse polarity/city box transmitter, digital alarm communicator/transmitter, SLC expansion module, local and remote upload/download software and remote power expansion.

FM APPROVED to UL ANSI 864.

NOTE: Unless otherwise specified, the term MS-9600LS is used in this document to refer to the MS-9600LS, MS-9600UDLS, MS-9600LSE, and MS-9600UDLSE FACPs (Fire Alarm Control Panels).

Controls And Indicators

LED INDICATORS
- AC POWER (green)
- FIRE ALARM (red)
- SUPERVISORY (yellow)
- ALARM SILENCED (yellow)
- SYSTEM TROUBLE (yellow)
- MAINTENANCE/PRESIGNAL (yellow)
- DISABLED (yellow)
- BATTERY FAULT (yellow)
- GROUND FAULT (yellow)
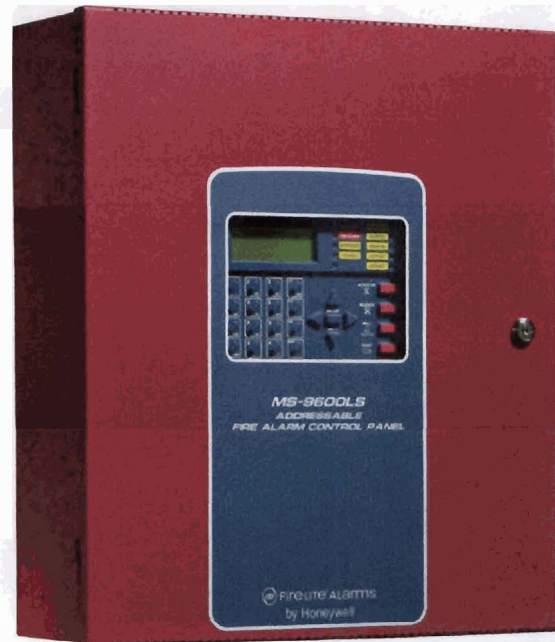
MEMBRANE SWITCH CONTROLS
- ACKNOWLEDGE/STEP
- ALARM SILENCE
- DRILL
- SYSTEM RESET (lamp test)
- 12-key pad with full alphabet
- 4 cursor keys
- ENTER

Special Features

- Easy mount chassis.
- 7 amp switching power supply.
- Large enclosure allows 18 amp-hour batteries
- 2 plug-in communicator standard with MS-9600UDLS/E.
- Optional IPDACT Internet Protocol Digital Alarm Communicator/ Transmitter
- Four Style Y (Class B) or two Style Z (Class A) NAC circuits.
- Selectable strobe synchronization per NAC for System Sensor, Wheelock, and Gentex devices.
- Certified for seismic applications when used with the appropriate seismic mounting kit
- Seamless integration between fire and mass notification with the ECC-50/100 Emergency Command Center via ANN-BUS connections.
- ECC-FFT Firefighter Telephone Option
- ANN-BUS for connection to following optional modules Note: cannot be used if ACS annunciators are used.
  – ANN-80(-W) Remote LCD Annunciator
  – ANN-I/O LED Driver Module
  – ANN-S/PG Serial/Parallel Printer Module

- ANN-RLY Relay Module
- ANN-LED Annunciator Module
- ANN-RLED Annunciator Module (alarms only)
- Compatible with SWIFT® wireless devices

Standard Features

SLC LOOP
- SLC can be configured for NFPA Style 4, 6, or 7 operation.
- SLC supports up to 318 addressable devices per loop (159 detectors and 159 monitor, control, or relay modules).
- SLC loop maximum length 10,000 ft. (3,048 m) @ 12 AWG (3.1 mm²) using twisted, unshielded wire (see Wire Table on page 5).

NOTIFICATION APPLIANCE CIRCUITS (NACS):
- Four onboard NACs with additional NAC capability using output control modules (CMF-300 or CMF-300-6). The four Class B NACs can be converted to two Class A NACs with the NACKEY (included).
- Silence Inhibit and Auto Silence timer options.
- Continuous, March Time, Temporal or California code for main circuit board NACs with two-stage capability.
- Selectable strobe synchronization per NAC.
- 3.0 amps special application, 300mA regulated maximum per each NAC circuit
  Note: Maximum 24 VDC system power output is shared among all NAC circuits and 24 VDC special application auxiliary power outputs. Total available output is 7.0 amps.

ADVANCED FIRE TECHNOLOGY:
- Sensitivity testing with printable results, on-site or off-site.
- Automatic drift compensation.

PROGRAMMING AND SOFTWARE:
- Autoprogramming (learn mode) reduces installation time.
- Fully programmable from local keypad, local PS/2 keyboard or PC (using the standard PS-Tools Windows® utility).
- Two-level user-programmable passwords.
- Custom English labels (per point) may be manually entered or selected from an internal library file.
- Three Form-C relay outputs (two programmable).
- 99 software zones.

USER INTERFACE:
- Optional plug-in 2 communicator (standard with MS-9600UDLS(E) with USB port for local upload/download.
- Remote Acknowledge, Silence, Reset and Drill via addressable monitor modules, ACS Series annunciators, LCD-80F remote annunciator, or ANN-80 Series Annunciators.
- EIA-232 printer/PC interface (variable baud rate) on main circuit board.
- Integral 80-character LCD display with backlighting.
- Real-time clock/calendar with automatic daylight savings adjustments.
- History file with 1,000-event capacity.
- EIA-485/ANN-BUS supporting up to 8 ANN Series Annunciators or 32 ACS Series annunciators.
- EIA-485 supporting up to 32 ACS annunciators.
- Maintenance alert warns when smoke detector dust accumulation is excessive.
- Automatic device type-code verification.
- One person audible or silent walk test with walk-test log and printout.
- Point trouble identification.

- Local piezo sounder.
- Waterflow (non-silenceable) selection per monitor point.
- System alarm verification selection per detector point.
- PAS (Positive Alarm Sequence) and presignal delay per point (NFPA 72 compliant).
- Optional 4XTMF module (conventional reverse polarity/city box transmitter).

Field-programming Features

Off-line Programming: Create the entire program in your office using a Windows®-based software package (download PS-Tools from www.firelite.com). Upload/download system programming locally to the MS-9600LS in less than one minute.

Autoprogramming: Command the MS-9600LS to program itself (takes less than 30 seconds). In the Auto-Program mode, the MS-9600LS scans for all possible devices at all addresses, stores the device types, and addresses found, and then loads default values for all options (General Alarm). It also checks for two or more devices set to the same address.

Online Editing: While still providing fire protection, the MS-9600LS/E may be programmed from the front panel. Simple menu trees displayed on the LCD allow the trained user to perform all functions without referring back to the programming manual.

English Label Library: Quickly select labels from a standard library of more than 50 adjectives/nouns, such as "FLR 3 HALLWAY," or enter custom labels letter-by-letter. Use recall function to repeat previously used label.

Program Check: Automatically catch common errors, such as control modules not linked to any zone or input point.

Maintenance Alert

The MS-9600LS(E) continuously monitors each smoke detector and is capable of reporting maintenance conditions. This reduces the risk of false alarms due to dust accumulation. Refer to the control panel installation manual for more information.

Automatic Test Operation

The MS-9600LS(E) performs an automatic test of each detector every two hours. Failure to meet the test limits causes an AUTO TEST FAIL trouble type. System Reset clears this trouble.

Terminal Blocks

AC Power – TB1: 120 VAC, 60 Hz, 3.0 amps or 240 VAC, 50 Hz, 1.5 amps. Wire size: minimum 14 AWG (2.00 mm²) with 600 V insulation.

Battery (lead acid only) – TB2: Maximum charging circuit: Normal float charge 27.6 VDC @ 1.0 amp. Maximum battery charger capacity: 26 AH. Minimum battery 12 AH. MS-9600LS cabinet holds maximum of two 18 AH batteries. For 26 – 120 AH batteries, use the CHG-120F or CHG-75 Battery Charger and BB-55F Battery Box.

NOTE: Jumper JP3, on the FACP main circuit board, must be cut to disable the FACP battery charger when using the CHG-120F or CHG-75.

Communication Loop – (standard) TB8: 24 VDC nominal, 27.6 VDC maximum. Maximum length: 10,000 ft. (3048 m) total twisted, unshielded pair length. Maximum loop current: 400 mA (short circuit) or 100 mA (normal). Maximum loop resistance: 40 ohms. Supervised and power-limited.

Notification Appliance Circuits – TB4: Power-limited circuitry. Nominal operating voltage: 24 VDC. Current limit: fuseless, electronic, power-limited circuitry. Maximum signaling current per circuit: 3.0 amps special application, 300mA regulated. End-of-Line Resistor: 4.7K ohm, 1/2 watt (P/N 71252 UL listed) for NACs. Refer to *Fire•Lite Device Compatibility Document* for listed compatible devices.

Programmable and Trouble Output Relays – TB5: Contact rating: 2.0 amps @ 30 VDC (resistive), 0.5 amps @ 30 VAC (resistive). Form-C relays.

**Four-Wire Resettable Smoke Detector Power
(24 VDC nominal) – TB3, Terminals 1(+) & 2(–):**
Maximum ripple voltage: 10 mVRMS. Up to 1.5 amps for powering four-wire smoke detectors. Power-limited circuit. Refer to *Fire•Lit-eDevice Compatibility Document* for listed compatible devices.

Nonresettable Power #1 (24 VDC Nominal) –TB3, Terminals 3 (+) & 4 (–): Maximum ripple voltage: 10 mVRMS. Up to 1.5 amps total DC current available from each output. Power-limited circuit. TB3, Terminals 5 (+) & 6 (–): non-resettable power #2.

Nonresettable Special Application Power #2 (24 VDC Nominal) - TB3, Terminals 5 (+) & 6 (-): Maximum ripple voltage: 10mVRMS. Total DC current available from each output is up to 1.5 amps. Power-limited circuit, non-supervised.

EIA-485 (ACS/ANN) – TB6: Annunciator connector, programmable for type ANN or ACS. Terminal 1 (+) and Terminal 2 (–).

EIA-485 (TERM) – TB7: Terminal mode annunciator connector, Terminal 1 (Out +), 2 (In +), 3 (Out –), 4 (In –).

EIA-232 – TB8: PC/printer connector, Terminal 1 (Transmit), 2 (Receive), 3 (DTR), 4 (Ground).

Ordering Options

MS-9600LS(E): 318-point addressable Fire Alarm Control Panel, one SLC loop. Includes 80-character LCD display, single printed circuit board, and cabinet.

MS-9600UDLS(E): 318-point addressable Fire Alarm Control Panel, one SLC loop. Includes 2, 80-character LCD display, single printed circuit board, and cabinet.

DACT-UD2: Optional communicator for remote monitoring (standard with MS-9600UDLS).

SLC-2LS: Optional expander module, enables second SLC loop.

4XTMF: Optional Transmitter Module provides a supervised output for local energy municipal box transmitter, alarm and trouble reverse polarity. It includes a disable switch and disable trouble.

IPDACT-2/2UD, IPDACT Internet Monitoring Module: Mounts in bottom of enclosure with optional mounting kit (P/N: IPBRKT). Connects to primary and secondary DACT telephone output ports for internet communications over customer provided ethernet internet connection. Requires compatible Teldat VisorALARM Central Station Receiver. Can use DHCP or static IP. (See data sheet DF-60407 or DF-52424 for additional information.

IPBRKT: Optional mounting bracket kit consisting of screws and battery shield with standoffs required when mounting the IPDACT in lower enclosure section of FACP.

IPSPLT: Optional Y-Adaptor which allows connection of both panel dialer outputs to one cable input to IPDACT (sold separately).

ACM-8RF: Optional plug-in relay module provides 8 Form-C 5.0 amp relays.

PS-Tools: Programming software for Windows®-based PC computer (cable not included). Available for download at www.fire-lite.com.

PRT/PK-CABLE: Cable printer/personal computer interface cable.

DP-9692: Optional dress panel for MS-9600LS(E).

TR-CE: Optional Trim Ring for semi-flush mounting.

BB-55F: Battery box, required to house two 25 AH batteries and one CHG-120F battery charger. For batteries greater than 25 AH, consult factory for housing/mounting arrangements.

BB-26: Battery backbox, holds up to two 25 AH batteries.

CHG-120F: Remote battery charging system for lead-acid batteries with a rating of 25 to 120 AH. CHG-120F or CHG-75 required for charging greater than 25 AH batteries.

CHG-75: Battery charger for lead-acid batteries with a rating of 25 to 75 AH. CHG-120F or CHG-75 required for charging greater than 25 AH batteries.

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

PRN Series: UL listed compatible event printer which uses tractor-fed paper.

SEISKIT-COMMENC: Seismic kit for the MS-9600UDLS backbox. Includes battery bracket for two 7, 12, or 18 AH batteries.

Compatible Addressable Devices

All feature a polling LED and rotary switches for addressing.

AD355/AD365(-IV): Low-profile, intelligent, "Adapt" multi-sensor detector; B350LP base included.

BEAM355: Intelligent beam smoke detector.

BEAM355S: Intelligent beam smoke detector with integral sensitivity test.

CP355: Addressable low-profile ionization smoke detector.

D355PL: Photoelectric low-flow duct smoke detector, SD355R included.

H355/H365: Fast-response, low-profile heat detector.

H355R/H365R(-IV): Fast-response, low-profile heat detector with rate-of-rise option.

H355HT/H365HT(-IV): Fast-response, low-profile heat detector that activates at190° F (88°C).

OSI-RI-FL: Addressable long range projected beam smoke detector designed to provide open area protection

SD355/SD365(-IV): Addressable low-profile photoelectric smoke detector

SD355T/SD365T(-IV): Addressable low-profile photoelectric smoke detector with thermal sensor

CDRM-300: Dual relay Monitor Module

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. Notification Appliance Circuit 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.

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

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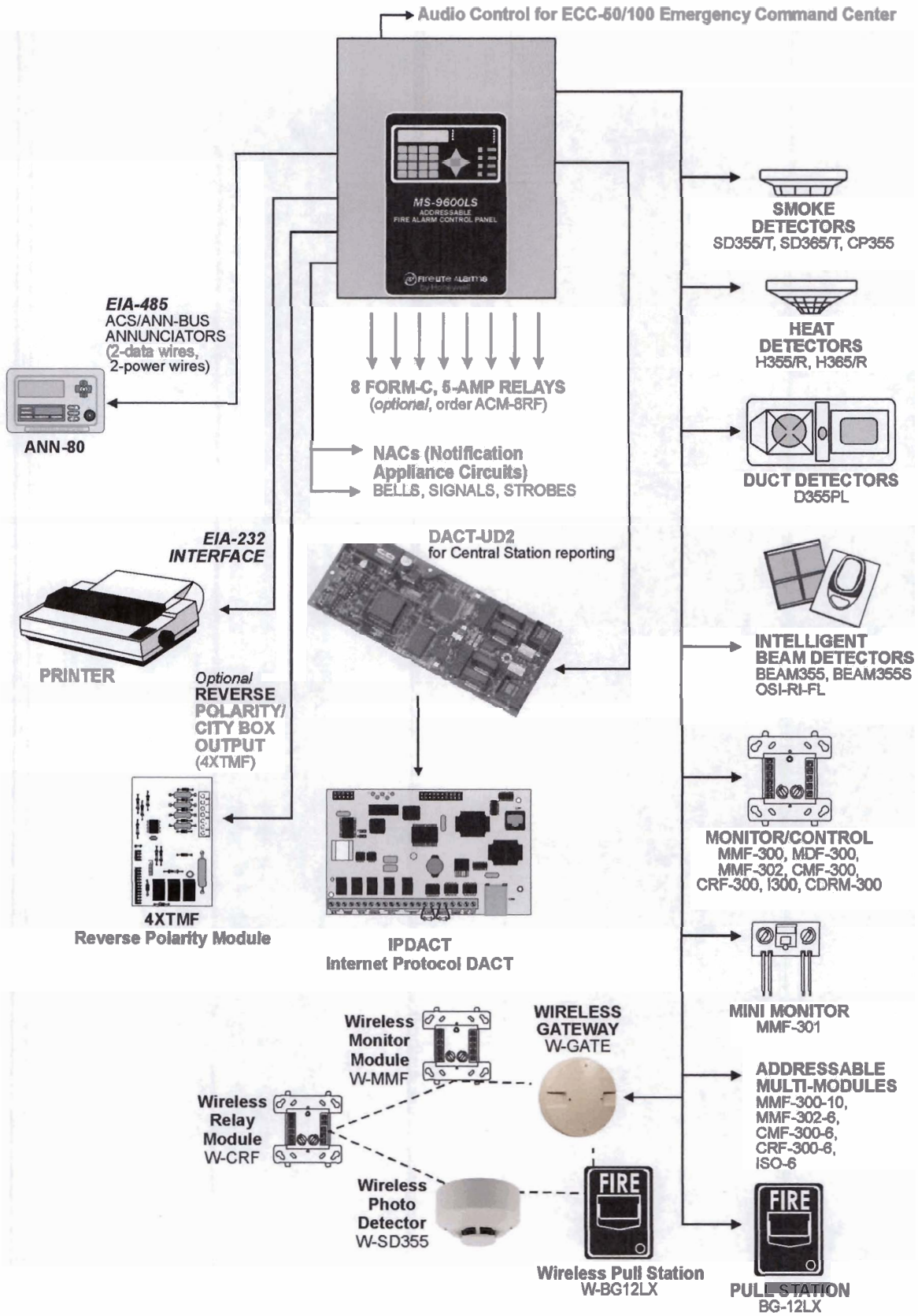
MMF-301: Miniature version of MMF-300. Excludes LED and Style D option. Connects with wire pigtails. May mount in device backbox.

MMF-302: Similar to MMF-300, but may monitor up to 20 conventional two-wire detectors. Requires resettable 24 VDC power. Consult factory for compatible smoke detectors.

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).

Audio Control for ECC-50/100 Emergency Command Center

MS-9600LS
ADDRESSABLE
FIRE ALARM CONTROL PANEL

Fire•Lite Alarms
by Honeywell

EIA-485
ACS/ANN-BUS
ANNUNCIATORS
(2-data wires,
2-power wires)

ANN-80

8 FORM-C, 5-AMP RELAYS
(*optional*, order ACM-8RF)

**NACs (Notification
Appliance Circuits)**
BELLS, SIGNALS, STROBES

**EIA-232
INTERFACE**

DACT-UD2
for Central Station reporting

PRINTER

Optional
**REVERSE
POLARITY/
CITY BOX
OUTPUT
(4XTMF)**

**4XTMF
Reverse Polarity Module**

**IPDACT
Internet Protocol DACT**

**Wireless
Monitor
Module
W-MMF**

**WIRELESS
GATEWAY
W-GATE**

**Wireless
Relay
Module
W-CRF**

**Wireless
Photo
Detector
W-SD355**

**Wireless Pull Station
W-BG12LX**

**SMOKE
DETECTORS**
SD355/T, SD365/T, CP355

**HEAT
DETECTORS**
H355/R, H365/R

DUCT DETECTORS
D355PL

**INTELLIGENT
BEAM DETECTORS**
BEAM355, BEAM355S
OSI-RI-FL

MONITOR/CONTROL
MMF-300, MDF-300,
MMF-302, CMF-300,
CRF-300, I300, CDRM-300

MINI MONITOR
MMF-301

**ADDRESSABLE
MULTI-MODULES**
MMF-300-10,
MMF-302-6,
CMF-300-6,
CRF-300-6,
ISO-6

PULL STATION
BG-12LX

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.

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

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

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

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

CRF-300-6: Six Form-C relay 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

W-GATE: SWIFT Wireless Gateway

W-DIS-D: LCD user interface for use with the W-GATE wireless gateway and an ANN-80-W Remote Annunciator

W-SD355: Intelligent, wireless photo detector

W-H355R: Intelligent wireless rate of rise (135°) heat detector

W-SD355T: Intelligent wireless photo/heat detector

W-H355: Intelligent wireless fixed-temperature (135°) heat detector

W-MMF: Intelligent wireless monitor module

W-CRF: Intelligent wireless relay module

W-BG12LX: Intelligent wireless pullstation

WAV-CRL/WAV-CWL: Intelligent wireless AV bases

W-SYNC: Intelligent wireless sync module.

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.

Compatible Annunciators

ANN-80(-W): Remote LCD annunciator that mimics the information displayed on the FACP's LCD display. Recommended wire type is unshielded. (Basic model is red; order -W version for white; *see DF-52417*).

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, which can be mounted inside the cabinet, provides 10 programmable Form-C relays *(see DF-52431)*.

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

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

ACS-LED Zone Series: LED-type fire annunciators capable of providing up to 99 software zones of annunciation. Available in increments of 16 or 32 points to meet a variety of applications.

ACS-LDM Graphic Series: Lamp Driver Module series for use with custom graphic annunciators.

LCD-80F Annunciator: 80-character, backlit LCD-type fire annunciators capable of displaying English-language text. Up to 32 LCD-80F annunciators may be connected to the EIA-485 terminal mode serial interface on the MS-9600LS(E) motherboard.

NOTE: For more information on Compatible Annunciators for use with the MS-9600LS(E), see the following data sheets (document numbers) ACM-8RF (DF-51555), ACS/ACM Series (DF-52378), LDM Series (DF-51384), LCD-80F (DF-52185).

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 expandable to 2
- Intelligent detectors .... 159 per loop
- Addressable monitor/control modules .... 159 per loop
- Programmable software zones... 99
- ANN-BUS devices 8
- ACS Annunciators 32
- LCD Annunciators... 32

Electrical Specifications

- Primary input power:
  120 VAC, 50/60 Hz, 3.0 A.
  240 VAC, 50 Hz, 1.5 A.
- Battery: 27.6 VDC @ 1.0 A (max).
  Maximum battery charger capacity: 26 AH.
  Minimum battery: 12 AH.
  MS-9600LS cabinet holds maximum of two 18 AH batteries.
- Communication Loop: 24 VDC nominal, supervised and power-limited.
- Notification Appliance Circuits: terminal block provides connections for four Style Y (Class B) or two Style Z (Class A) NACs.
  Maximum signaling current per circuit: 3.0 amps special application, 300mA regulated.
  End-of-Line Resistor: 4.7 K ohms, ½ watt (P/N 71252 UL listed) for Style Y (Class B) NAC.
  Supervised and power-limited.
  Refer to panel documentation and *Fire-Lite Device Compatibility Document* for listed compatible devices.
- Two Programmable Form-C Relays and One Fixed Trouble Form-C Relay: Contact rating: 2.0 A @ 30 VDC (resistive) 0.5 A @ 30 VAC (resistive).
- Four-wire Resettable Special Application Power (24 VDC nominal): Up to 1.5 A for powering four-wire smoke detectors. Power-Limited, non-supervised.
  Refer to *Fire-Lite Device Compatibility Document* for listed compatible devices.
- Non-resettable Special Application Power #1 (24VDC nominal) TB3, Terminals 3 (+) & 4 (-):
  Maximum ripple voltage: 10 mV$_{RMS}$
  Total DC current available from each output is up to 1.5 A.
  Power-limited, non-supervised.
- Non-resettable Special Application Power #2 (24VDC nominal) TB3, Terminals 5 (+) & 6 (-):
  Maximum ripple voltage: 10 mV$_{RMS}$
  Total DC current available from each output is up to 1.5 A.
  Power-limited, non-supervised.

NOTE: Although each Special Application power output can deliver 1.5 A individually, the total power output from these circuits cannot exceed 1.5 A in standby. The total Alarm output for all Special Application power and NAC circuits cannot exceed 7 A.

Cabinet Specifications

Door: 19.26" (48.92 cm.) high x 16.82" (42.73 cm.) wide x 0.67" (1.70 cm.) deep. **Backbox:** 19.00" (48.26 cm.) high x 16.65" (42.29 cm.) wide x 5.21" (13.23 cm.) deep. **Trim Ring (TR-CE):** 22.00" (55.88 cm.) high x 19.65" (49.91 cm.) wide.

Shipping Specifications

Dimensions: 20.00" (50.80 cm) high, 22.5" (57.15 cm) wide, 8.5" (21.59 cm) deep. **Weight:** 27.3 lbs (12.38 kg).

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.

Agency Listings and Approvals

The listings and approvals below apply to the MS-9600LS(E) and MS-9600UDLS(E) control panels. In some cases, certain modules may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.

- **ULC: S624** (MS-9600LSC only; see DF-60438)
- **FM APPROVED:** to UL ANSI 864
- **CSFM:** 7170-0075:217
- **MEA:** 87-08-E
- **IBC 2012, IBC 2009, IBC 2006, IBC 2003, IBC 2000** (Seismic).
- **CBC 2007** (Seismic)

NFPA Standards

The MS-9600LS(E) and MS-9600UDLS(E) control panels comply 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) (Requires 4XTMF where DACT-UD2 is not accepted.)
- **PROPRIETARY** (Automatic, Manual and Waterflow).
- **CENTRAL STATION** (Automatic, Manual and Waterflow, and Sprinkler Supervised).
- **OT (Other Technologies-PSDN)** For use with IPDACT.

SD355(A) Series

Addressable Photoelectric Smoke Detectors

Fire·Lite·Alarms
by Honeywell

General

The **SD355(A)**, **SD355T(A)**, and **SD355R(A)** addressable, low-profile plug-in photoelectric detectors use a state-of-the-art photoelectric sensing chamber with communications to provide open area protection and are used exclusively with Fire•Lite's Addressable Fire Alarm Control Panels (FACPs). The **SD355T(A)** adds thermal sensors that will alarm at a fixed temperature of 135°F (57°C). Since these detectors are addressable, they will help emergency personnel 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. Remote LED annunciator capability is available as an optional accessory, PN RA100Z(A). The **SD355R(A)** is a remote test capable detector for use with D355PL(A) or DNR(A)/DNRW duct smoke detector housings.

SD355(A) in B210LP(A) Base

Features

SLC LOOP
* Two-wire loop connection.
* Unit uses base for wiring.

ADDRESSING
* Addressable by device.
* Rotary, decimal addressing: 01 – 99 with MS-9200UD(LS), and 01 – 159 with MS-9600UD(LS).

ARCHITECTURE
* Unique single-source, dual-chamber design to respond quickly and dependably to a broad range of fires.
* Sleek, low-profile design.
* Integral communications and built-in type identification.
* Built-in tamper-resistant feature.
* Removable cover and insect-resistant screen for simple field cleaning.

OPERATION
* Withstands air velocities up to 4,000 feet-per-minute (20 m/sec.) without triggering a false alarm.
* Factory preset at 1.5% nominal sensitivity for panel alarm threshold level.
* Visible LED "blinks" when the unit is addressed (communicating with the fire panel) and latches on in alarm.

MECHANICALS
* Sealed against back pressure.
* Direct surface mounting or electrical box mounting.
* Mounts to: single-gang box, 3.5" (8.89 cm) or 4.0" (10.16 cm) octagonal box, or 4.0" (10.16 cm) square electrical box *(using a plaster ring — included).*

OTHER SYSTEM FEATURES
* Fully coated circuit boards and superior RF/transient protection.
* 94-V0 plastic flammability rating.
* Low standby current.

OPTIONS
* Remote LED output connection, PN RA100Z(A).

Applications

Use photoelectric detectors in life-safety applications to provide a broad range of fire-sensing capability, especially where smoldering fires are anticipated. Ionization detectors are often better than photoelectric detectors at sensing fast, flaming fires.

Construction

These detectors are constructed of off-white fire resistant plastic. SD355(A) series plug-in, low-profile smoke detectors are designed to commercial standards and offer an attractive appearance.

Installation

SD355(A) series plug-in detectors use a detachable mounting base to simplify installation, service and maintenance.

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

NOTE: Because of the inherent supervision provided by the SLC loop, end-of-line resistors are not required. Wiring "T-taps" or branches are permitted for Style 4 (Class B) wiring. SD355R(A) mounts in a D355PL(A) or DNR(A)/DNRW duct detector housing.

Operation

Each SD355(A) series detector uses one of 99 possible addresses on the MS-9200UD(LS) and up to 318 (159 on each loop) on the MS-9600UD(LS) Signaling Line Circuit (SLC). It responds to regular polls from the system and reports its type and status.

The addressable photoelectric sensor in the SD355(A) series has a unique unipolar chamber that responds quickly and uniformly to a broad range of smoke conditions. It can withstand wind gusts up to 4,000 feet-per-minute (20 m/sec.) without sending an alarm level signal. Because of its unipolar chamber, the SD355(A) series is approximately two times more responsive than most photoelectric sensors. This makes it a more stable detector.

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 a MS-9200UD(LS) or MS-9600UD(LS) addressable fire alarm control panel. The results of the sensitivity test can be printed off the MS-9200UD(LS) or MS-9600UD(LS) for record keeping.

Specification

Voltage range: 15 – 32 VDC (peak).

Standby current: 300 µA @ 24 VDC.

LED current: 6.5 mA @ 24 VDC (latched "ON").

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

Size: 2.1" (5.33 cm) high; base determines diameter.

- B210LP(A): 6.1" (15.5 cm) diameter.
- B501(A): 4.1" (10.4 cm) diameter.
- B200SR(A): 6.875" (17.46 cm) diameter.
- B224RB(A): 6.2" (15.748 cm) diameter.

Weight: 3.6 oz. (102 g).

Operating temperature range: *for SD355(A):* 0°C to 49°C (32°F to 120°F); *for SD355T(A):* 0°C to 38°C (32°F to 100°F). *SD355R(A):* installed in a DNR(A)/DNRW -20°C to 70°C (-4°F to 158°F).

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

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

Listings

Listings and approvals below apply to the SD355(A), SD355T(A), and SD355RT(A) 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 Listed:** S1059.
- **ULC Listed:** S1059.
- **CSFM:** 7272-0075:0194.
- **MEA:** 243-02-E.
- **FM approved.**

Product Line Information

NOTE: "A" suffix indicates ULC Listed model.

SD355: Addressable photoelectric detector; B210LP base included.

SD355A: Sames as SD355 with ULC Listing; B210LPA base included.

SD355T: Same as SD355 but with *thermal* element; B210LP base included.

SD355TA: Same as SD355T with ULC Listing; B210LPA base included.

SD355R: Remote test capable addressable photoelectric detector for use with a D355PL(A) or DNRA/DNRW duct detector housing; B210LP base included.

SD355RA: Same as SD355R with ULC Listing for use with a D355PLA or DNRA duct detector housing; B210LPA base included.

INTELLIGENT BASES

NOTE: "A" suffix indicates ULC Listed model.

NOTE: The detector's plug-in base can be changed off for special applications. For details about intelligent bases and their mounting, see DF-60059.

B210LP(A): Plug-in detector base (included); standard U.S. flanged low-profile mounting base.

B210LPBP: Bulk pack of B210LP; package contains 10.

B501(A): Standard European flangeless mounting base.

B501BP: Bulk pack of B501; package contains 10.

B200SR(A): Intelligent sounder base capable of producing sound output with ANSI Temporal 3 or continuous tone. Replaces B501BH series bases in retrofit applications.

B224RB(A): Plug-in System Sensor **relay** base. Screw terminals: up to 14 AWG (2.0 mm²). Relay type: Form-C. Rating: 2.0 A @ 30 VDC resistive; 0.3 A @ 110 VDC inductive; 1.0 A @ 30 VDC inductive.

B224BI(A): Plug-in System Sensor *isolator* detector base. Maximum 25 devices between isolator bases *(see DF-52389).*

ACCESSORIES

F110: Retrofit flange to convert B210LP(A) to match the B350LP(A) profile, or to convert older high-profile bases to low-profile.

F110BP: Bulk pack of F110; package contains 15.

F210: 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 B210LP(A) bases only.

SMB600: Surface mounting kit

M02-04-00: Test magnet.

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

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

XP-4: Extension pole for XR2B. Comes in three 5-foot (1.524 m) sections.

T55-127-010: Detector removal tool without pole.

BCK-200B: Black detector covers for use with SD355(A) only; box of 10.

WCK-200B: White detector covers for use with SD355(A) only; box of 10.

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

BEAM355 and BEAM355S

**Single-Ended, Reflected-Type
Addressable Beam Smoke Detectors**

Fire-Lite Alarms
by Honeywell
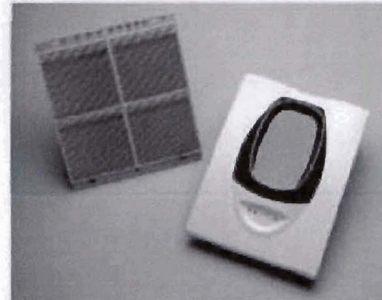
Addressable Devices

GENERAL

The FireLite BEAM355 and BEAM355S are intelligent, addressable reflected beam smoke detectors for protecting open areas with high and sloping ceilings, and wide-open areas, where spot-type smoke detectors are difficult to install and maintain. Ideal applications are atriums, cathedral ceilings, aircraft hangars, warehouses, sporting arenas, concert halls, and enclosed parking facilities. They are compatible with the MS-9600 Series and MS9200 Series in LiteSpeed® or CLIP mode. Installation of the single-ended reflective design is much quicker than a dual-ended projected beam detector. Alignment is easily accomplished with an optical sight and a two-digit signal strength meter incorporated into the beam detector. Listed for operation from –22°F to 131°F, the BEAM355 and BEAM355S are usable in open area applications where temperature extremes exceed the design limits of other types of smoke detection.

The BEAM355 and BEAM355S are a transmitter/receiver unit and a reflector. When smoke enters the area between the unit and the reflector it causes a reduction in the signal strength. When the smoke level (signal strength) reaches the predetermined threshold, an alarm is activated. The detectors have four standard sensitivity selections as well as two Acclimate® settings. When either Acclimate® setting is selected, the detector's advanced software algorithms automatically adjust to the optimum sensitivity for the specific environment.

The BEAM355S has an integral sensitivity test feature of a filter attached to a servomotor inside the detector optics. Activation of the RTS151 or RTS151KEY remote test stations moves the filter into the pathway of the light beam, testing the detector's sensitivity. This sensitivity test feature allows the user to quickly and easily meet the annual maintenance and test requirements of NFPA 72, without physical access to the detector. The servomotor must be powered by +24 VDC, not SLC power.
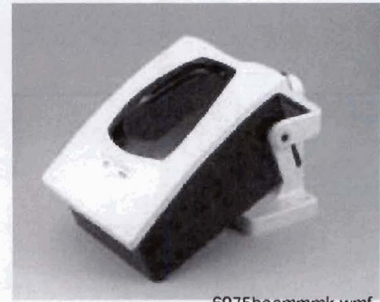

BEAM355 with Relective Plate

6975reflect.wmf

BEAM355 with BEAMMMK

6975beammmk.wmf

FEATURES

- Listed to UL 268, ULC CAN/ULC S529.
- Transmitter/receiver built into same unit.
- Six user-selectable sensitivity levels.
- 16' to 328' (use BEAMLRK beyond 230') protection range.
- Removable plug-in terminal blocks.
- Digital display — no special tools required.
- Built-in automatic gain control compensates for signal deterioration from dust buildup.
- Optional remote test station.
- Optional long-range kit (BEAMLRK) for applications in excess of 230' (70 m).
- Optional multi-mount kit (BEAMMMK) providing ceiling or wall mount capability with increased angular adjustment.
- Optional heater kits (BEAMHK and BEAMHKR) for prevention of condensation (not intended to increase or reduce the specified operating temperature).
- Paintable cover.

SPECIFICATIONS

OPERATIONAL SPECIFICATIONS

Protection Range: 16 to 230 feet (5 to 70 m), 230 to 328 feet (70 to 100 m) using optional BEAMLRK kit.

Adjustment Angle: ±10° horizontal and vertical. Note that the optics move independently of the unit.

Sensitivity (6 levels):

NOTE: Sensitivity settings are a feature of specific control panels.

- Level 1 — 25%.
- Level 2 — 30%.
- Level 3 — 40%.
- Level 4 — 50%.
  Acclimate® Level 5 — 30% to 50%.
  Acclimate® Level 6 — 40% to 50%.

Fault Condition (trouble):

- 96% or more obscuration blockage.
- In alignment mode.
- Improper initial alignment.
- Self-compensation limit reached.

Alignment Aid:

- Optical gunsight.
- Integral signal strength indication.
- Two-digit display.

Indicators:

- Alarm — local red LED and remote alarm.
- Trouble — local yellow LED and remote trouble.
- Normal — local flashing green LED.

Test/reset features:

- Integral sensitivity test filter (BEAM355S only, requires external power supply).
- Sensitivity filter (incremental scale on reflector).
- Local alarm test switch.
- Local alarm reset switch.
- Remote test and reset switch (compatible with RTS151 and RTS151KEY test stations).

Smoke Detector Spacing: On smooth ceilings, 30 – 60 feet (9.1 to 18.3 m) between projected beams and not more than one-half that spacing between a projected beam and a sidewall. Other spacing may be used depending on ceiling height, airflow characteristics, and response requirements. See NFPA 72.

ENVIRONMENTAL SPECIFICATIONS

Temperature: –22°F to 131°F (–30°C to 55°C).

Humidity: 10 – 93% RH noncondensing.

ELECTRICAL SPECIFICATIONS

- **Voltage:** 15 to 32 VDC.
- **Average Standby Current (24 VDC):** 2 mA maximum (LED flashing, SLC @ 24 V).
- **Alarm Current (LED on):** 8.5 mA maximum.
- **Trouble Current (LED on):** 4.5 mA maximum.
- **Alignment Current:** 20 mA maximum.
- **External Supply (BEAM355S only):**
  Voltage — 15 to 32 VDC
  Current — 0.5 A maximum.
- **Remote Output (Alarm):**
  Voltage - 15 to 32 VDC (Output voltage same as device input voltage)
  Current - 15 mA maximum, 6 mA minimum (Output current is limited by 2.2K ohm resistor)
- **Heater Kit BEAMHK:** *Voltage* - 15 to 32 V; *Current* - 92 mA maximum @ 32 V (heater only); *Power Consumption* - nominal 1.6 W @ 24 V, maximum 3.0 W @ 32 V.
- **Reflector Heater Kit BEAMHKR:** *Voltage* - 15 to 32 V; *Current* - 450 mA maximum @ 32 V (per reflector); *Power Consumption (per reflector)* - nominal 7.7 W @ 24 V, maximum 15.0 W @ 32 V.

MECHANICAL SPECIFICATIONS

Shipping Weight: 3.7 lbs (1.68 kg)

Detector Dimensions: 10.0" H x 7.5" W x 3.3" D (254 mm H x 191 mm W x 84 mm D).

Reflector Dimensions for 16' to 230' (5 to 70m) Applications: 7.9" x 9.1" (200 x 230 mm).

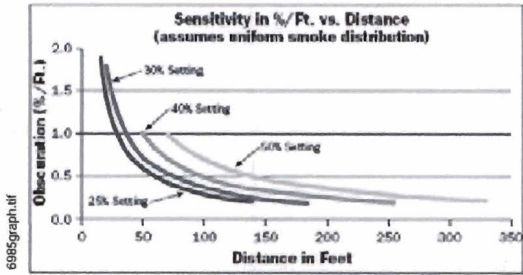**Reflector Dimensions for Applications Beyond 230'/70m:** 15.7" x 18.1" (400 x 460 mm).

SENSITIVITY SELECTION

The detector has six sensitivity selections (sensitivity settings are a feature of specific control panels). Each of these selections is only acceptable over a specific distance separation between the detector and the reflector per UL 268. The chart below determines which selections are acceptable for your installed distance. The sensitivity of the detector can be set only when the housing is removed and the detector is not in the fine adjustment step of the alignment mode, indicated by the illumination of the dual digital display. To set the sensitivity, depress the sensitivity button one time. See Switch Locations diagram. Once the switch is pressed, the digital display will illuminate and read the current sensitivity setting in percent obscuration. To change the sensitivity, continue to depress the sensitivity switch until the desired setting is achieved. The digital display will turn off automatically if no further switch presses occur.
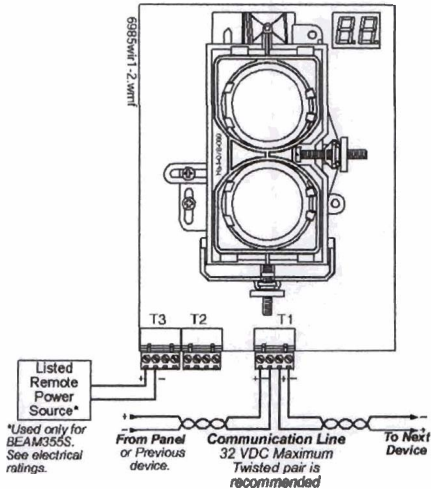
Sensitivity Setting	Percent Obscuration	Display Reading	Acceptable DISTANCE between Detector and Reflector (ft)	Acceptable DISTANCE between Detector and Reflector (m)
Level 1	25%	25	16.4 to 120	5.0 to 36.6
Level 2	30%	30	25 to 150	7.6 to 45.7
Level 3	40%	40	60 to 220	18.3 to 67
Level 4	50%	50	80 to 328	24.4 to 100
Acclimate ® Level 1	30% to 50%	A1	80 to 150	24.4 to 45.7
Acclimate ® Level 2	40% to 50%	A2	80 to 200	24.4 to 67

In addition to the four standard sensitivity selections, the detector has two Acclimate® settings. When either Acclimate® setting is chosen the detector will automatically adjust its sensitivity using advanced software algorithms to select the optimum sensitivity for the environment. The sensitivity will be continuously adjusted within the ranges specified in the chart above.
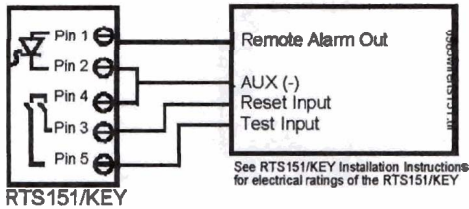
Total obscuration can be converted to percent per foot, assuming uniform smoke density for the entire length of the beam. The chart below converts total obscuration percent per foot for all acceptable sensitivity settings.
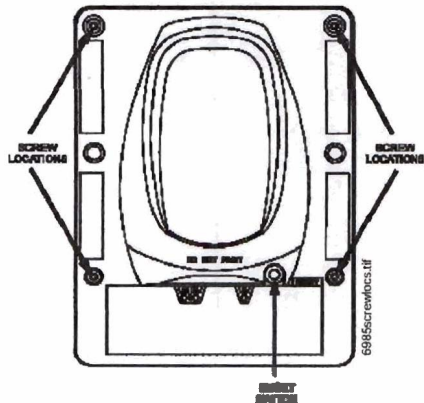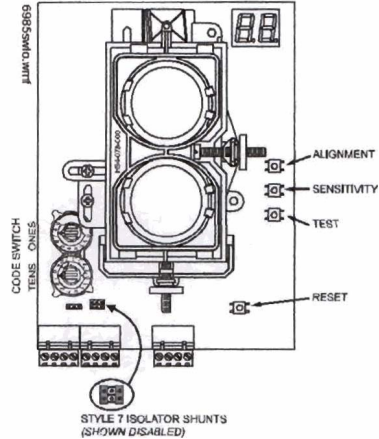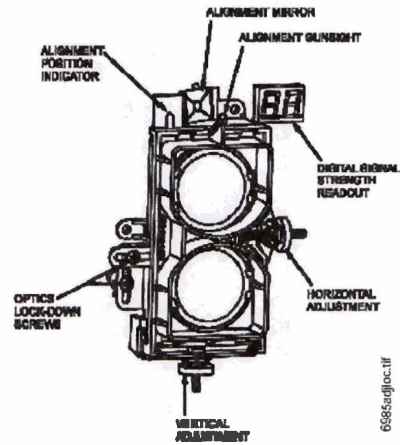
Total Obscuration

Sensitivity in %/ Ft. vs. Distance
(assumes uniform smoke distribution)

Switch Locations

ALIGNMENT
SENSITIVITY
TEST
RESET

CODE SWITCH
TENS ONES

STYLE 7 ISOLATOR SHUNTS
(SHOWN DISABLED)

Wiring Diagram

Listed
Remote
Power
Source*

*Used only for
BEAM355S.
See electrical
ratings.

From Panel
or Previous
device.

Communication Line
32 VDC Maximum
Twisted pair is
recommended

To Next
Device

Alignment and Adjustment Locations

ALIGNMENT MIRROR
ALIGNMENT GUNSIGHT
ALIGNMENT
POSITION
INDICATOR
DIGITAL SIGNAL
STRENGTH
READOUT
OPTICS
LOCK-DOWN
SCREWS
HORIZONTAL
ADJUSTMENT
VERTICAL
ADJUSTMENT

Wiring Diagram with RTS151/KEY

Pin 1
Pin 2
Pin 4
Pin 3
Pin 5

Remote Alarm Out

AUX (-)
Reset Input
Test Input

RTS151/KEY

See RTS151/KEY Installation Instructions
for electrical ratings of the RTS151/KEY

PARTS LIST

Item	Quantity
Transmitter/Receiver Unit	1
Paintable Trim Ring	1
Reflector	1
Plug-In Terminal Blocks	3
Isolator Shunts	2
Instruction Manual	1
Orange Sticky Paper	1

Housing Screw Locations

SCREW
LOCATIONS

SCREW
LOCATIONS

RESET
SWITCH
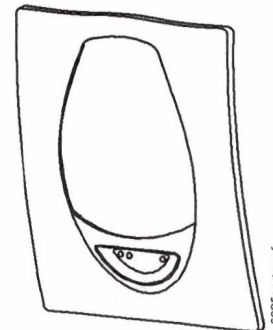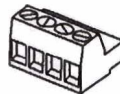
AGENCY LISTINGS AND APPROVALS

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

- **UL Listed:** S1059
- **ULC Listed:** S1059
- **CSFM:** 7260-0075:209
- **MEA:** 143-04-E
- **FM Approved**

PRODUCT LINE INFORMATION

BEAM355: Intelligent beam smoke detector

BEAM355S: Intelligent beam smoke detector with integral sensitivity test.

BEAMLRK: Long range accessory kit (required for applications in excess of 230 ft/70 m).

BEAMMMK: Multi-mount kit (provides ceiling or wall mount capability with increased angular adjustment).

BEAMSMK: Surface-mount kit.

RTS151: Remote test station.

RTS151A: Same RTS151 with ULC listing.

**RTS151KEY:** Remote test station with key lock.

RTS151KEYA: Same as the RTS151KEY with ULC listing.

BEAMHK: Heating kit for use with the transmitter/receiver unit of BEAM355S. For prevention of condensation.

BEAMHKR: Heating kit for use with the reflector on BEAM355S. For prevention of condensation
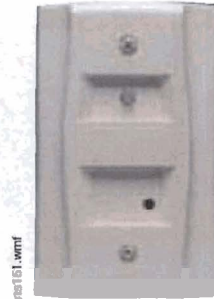
6500-MMK: Heavy-duty multi-mount kit for installations prone to vibration or where there is difficulty mounting the set angle. When installed with the transmitter/receiver unit, the 6500-SMK must be used as well.

6500-SMK: Surface-mount kit (required when using 6500-MMK to mount transmitter/receiver).
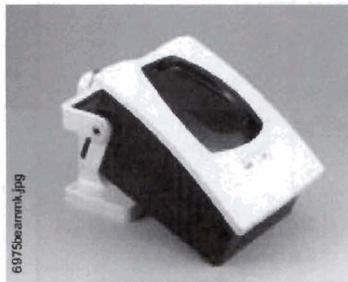
BEAMMMK
(ceiling or wall mount kit sold separately)

RTS151

RTS151KEY

BEAMHK

ISO 9001 CERTIFIED
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

BG-12LX

Addressable Manual Pull Station

Fire·Lite Alarms
by Honeywell

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 guide-lines (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 back-box. If the BG-12LX is being semi-flush mounted, then the optional trim ring (BG12TR) may be used. The BG12TR is

FLPullStation.jpg

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

Operation

Pushing in, then pulling down on the handle causes it to latch in the down/activated position. Once latched, the word "ACTI-VATED" (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; clos-ing 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 sta-tion 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 operat-ing 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.

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

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

SpectrAlert® Advance audible visible notification products are rich with features guaranteed to cut installation times and maximize profits.

Features

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

- Tamper-resistant construction

- Automatic selection of 12- or 24-volt operation at 15 and 15/75 candela

- Field-selectable candela settings on wall units: 15, 15/75, 30, 75, 95, 110, 115, 135, 150, 177, and 185

- Horn rated at 88+ dBA at 16 volts

- Rotary switch for horn tone and three volume selections

- Universal mounting plate for wall units

- Mounting plate shorting spring checks wiring continuity before device installation

- Electrically Compatible with legacy SpectrAlert devices

- Compatible with MDL3 sync module

- Listed for ceiling or wall mounting

The SpectrAlert Advance series offers the most versatile and easy-to-use line of horns, strobes, and horn strobes in the industry. With white and red plastic housings, wall and ceiling mounting options, and plain and FIRE-printed devices, SpectrAlert Advance can meet virtually any application requirement.

Like the entire SpectrAlert Advance product line, 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, SpectrAlert Advance utilizes a universal mounting plate 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 three volume selections.

Agency Listings

SIGNALING

UL LISTED
S4011 (chimes, horn strobes, horns)
S5512 (strobes)

FM
3023572

MEA approved
MEA452-05-E

7125-1653:186 (indoor strobes)
7125-1653:188 (horn strobes, chime strobes)
7135-1653:189 (horns, chimes)

SpectrAlert Advance Specifications

General

SpectrAlert Advance horns, strobes, and horn strobes shall mount to a standard 4 × 4 × 1½-inch back box, 4-inch octagon back box, or double-gang back box. Two-wire products shall also mount to a single-gang 2 × 4 × 17/8-inch back box. A universal mounting plate shall be used for mounting ceiling and wall products. The notification appliance circuit wiring shall terminate at the universal mounting plate. Also, SpectrAlert Advance products, when used with the Sync•Circuit™ Module accessory, shall be powered from a non-coded notification appliance circuit output and shall operate on a nominal 12 or 24 volts. When used with the Sync•Circuit Module, 12-volt-rated notification appliance circuit outputs shall operate between 8.5 and 17.5 volts; 24-volt-rated notification appliance circuit outputs shall operate between 16.5 and 33 volts. Indoor SpectrAlert Advance 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, 15/75, 30, 75, 95, 110, 115, 135, 150, 177, and 185.

Strobe

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

Horn Strobe Combination

The horn strobe shall be a System Sensor SpectrAlert Advance Model _____ listed to UL 1971 and UL 464 and shall be approved for fire protective service. The horn strobe shall be wired as a primary-signaling notification appliance and comply with the Americans with Disabilities Act requirements for visible signaling appliances, flashing at 1 Hz over the strobe's entire operating voltage range. The strobe light shall consist of a xenon flash tube and associated lens/reflector system. The horn shall have three audibility options and an option to switch between a temporal three pattern and a non-temporal (continuous) pattern. These options are set by a multiple position switch. On four-wire products, the strobe shall be powered independently of the sounder. 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 SpectrAlert strobes at 1 Hz and horns at temporal three. Also, while operating the strobes, the module shall silence the horns on horn strobe models over a single pair of wires. The module shall mount to a 411/16 × 411/16 × 21/8-inch back box. The module shall also control two Style Y (class B) circuits or one Style Z (class A) circuit. The module shall synchronize multiple zones. Daisy chaining two or more synchronization modules together will synchronize all the zones they control. The module shall not operate on a coded power supply.

Physical/Electrical Specifications	
Standard Operating Temperature	32°F to 120°F (0°C to 49°C)
Humidity Range	10 to 93% non-condensing
Strobe Flash Rate	1 flash per second
Nominal Voltage	Regulated 12 DC/FWR or regulated 24 DC/FWR[1]
Operating Voltage Range[2]	8 to 17.5 V (12 V nominal) or 16 to 33 V (24 V nominal)
Operating Voltage Range MDL3 Sync Module	8.5 to 17.5 V (12 V nominal) or 16.5 to 33 V (24 V nominal)
Input Terminal Wire Gauge	12 to 18 AWG
Wall-Mount Dimensions (including lens)	5.6"L × 4.7"W × 2.5"D (142 mm L × 119 mm W × 64 mm D)
Horn Dimensions	5.6"L × 4.7"W × 1.3"D (142 mm L × 119 mm W × 33 mm D)
Wall-Mount Trim Ring Dimensions (sold as a 5 pack) (TR-HS)	5.7"L × 4.8"W × 0.35"D (145 mm L × 122 mm W × 9 mm D)

Notes:

1. Full Wave Rectified (FWR) voltage is a non-regulated, time-varying power source that is used on some power supply and panel outputs.

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

UL Current Draw Data

UL Max. Strobe Current Draw (mA RMS)

	Candela	8–17.5 Volts		16–33 Volts	
		DC	FWR	DC	FWR
Standard Candela Range	15	123	128	66	71
	15/75	142	148	77	81
	30	NA	NA	94	96
	75	NA	NA	158	153
	95	NA	NA	181	176
	110	NA	NA	202	195
	115	NA	NA	210	205
High Candela Range	135	NA	NA	228	207
	150	NA	NA	246	220
	177	NA	NA	281	251
	185	NA	NA	286	258

UL Max. Horn Current Draw (mA RMS)

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

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

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

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

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

Horn Tones and Sound Output Data

Horn and Horn Strobe Output (dBA)

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

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

SpectrAlert Advance Dimensions
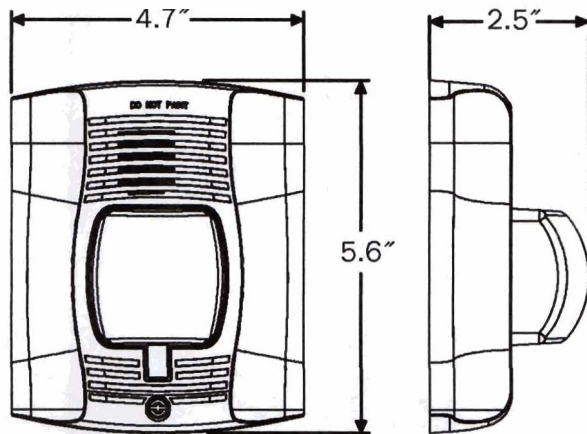
Wall-mount horn strobes

SpectrAlert Advance Ordering Information

Model	Description		Model	Description
Wall Horn Strobes			**Wall Strobes (cont.)**	
P2R	2-Wire Horn Strobe, Standard cd, Red		SRH	Strobe, High cd, Red
P2R-P	2-Wire Horn Strobe, Standard cd, Red, Plain		SRH-P	Strobe, High cd, Red, Plain
P2R-SP	2-Wire Horn Strobe, Standard cd, Red, "FUEGO"		SRH-SP	Strobe, High cd, Red, "FUEGO"
P2RH	2-Wire Horn Strobe, High cd, Red		SW	Strobe, Standard cd, White
P2RH-P	2-Wire Horn Strobe, High cd, Red, Plain		SW-P	Strobe, Standard cd, White, Plain
P2W	2-Wire Horn Strobe, Standard cd, White		SWH	Strobe, High cd, White
P2W-P	2-Wire Horn Strobe, Standard cd, White, Plain		SWH-P	Strobe, High cd, White, Plain
P2WH	2-Wire Horn Strobe, High cd, White		**Horns**	
P2WH-P	2-Wire Horn Strobe, High cd, White, Plain		HR	Horn, Red
P4R	4-Wire Horn Strobe, Standard cd, Red		HW	Horn, White
P4R-P	4-Wire Horn Strobe, Standard cd, Red, Plain		**Accessories**	
P4RH	4-Wire Horn Strobe, High cd, Red		TR-HS	Trim Ring, Wall, Red
P4W	4-Wire Horn Strobe, Standard cd, White		SBBR	Indoor Surface Mount Back Box, Red
Wall Strobes			SBBW	Indoor Surface Mount Back Box, White
SR	Strobe, Standard cd, Red			
SR-P	Strobe, Standard cd, Red, Plain			
SR-SP	Strobe, Standard cd, Red, "FUEGO"			

Notes:
All -P models have a plain housing (no "FIRE" marking on cover)
All -SP models have "FUEGO" marking on cover
"Standard cd" refers to strobes that include 15, 15/75, 30, 75, 95, 110, and 115 candela settings.
"High cd" refers to strobes that include 135, 150, 177, and 185 candela settings.

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