Gold Coast Fire and Security
11840 Lacy Lane
Ft Myers, Fl. 33966
239-822-3157
EF0001025

To: Collier County Fire Plan Review 4-10-17
For Milano Lakes Bldg 4
3765 Milano Lakes Circle
Naples FL.
Install Fire permit

Following you will a submittal for a fire permit. The structure is a four story 32 unit multifamily. An addressable Silent Knight 5808 FCP will be installed. WP Pulls, Smokes, Heats, Input modules, WP Horn Strobes, WP Strobes, and Low Freq Mini Horns will be installed. Flow and tampers will be tied into. An elevator recall system will be installed. Wire will be 14-2, 18-2 FPLR. 18-2 FPLUG will be pulled to the exterior tampers. Surge will be installed as required. The system will be both piped in the common areas and free wired in the units. Stub downs will be supplied at each device. Battery backup will be 24 hour with 5 minutes of alarm capacity. The system will be Remote Station monitored (separate permit)

1-	SK 5808 Panel	2-	SK Smokes
2-	SK Dual Input Modules	14-	Mini Input Modules
2-	Dual Input Modules	4-	Heats WP 302
3-	SK Relay	10-	Wp Pull Stations BG12 LOB
20-	Horn Strobes WP P2RKs	71-	Low Freq Mini Horn HWLF
	6- 7 amp Batteries		
2-	SK 5496 Power Supplies		Wire
	Surge		

Please see spec sheets calculations and drawings.

Call with questions. 822-3157

Thanks,

Chuck Simonson

SILENT KNIGHT

5808 Calculations

Version 10.24.14

Global Project Values:

Project Name:	MILANO LAKES BLDG 4	Standby Hours:	24
Project ID:		Alarm Mins:	5
Prepared By:		Derating Factor:	1.2
Date:	4/10/2017	Voltage Drop Warning Threshold % :	10

Panel ID: 5808 Model: 5808 Add. Fire Alarm Control Panel Max NAC Current: 3.0 Amps

Location: Volts: 24 VDC Max Panel Current: 6.0 Amps

Ckt.#	Circuit Name	Qty	Current Draw Standby	Current Draw Alarm	Wire AWG & Type	Ohms Per 1000 Ft.	Length(ft) One-Way	Actual Ohms	Volts @ EOL	%Drop
5808	5808 CTRL Panel	1	0.170	0.365	N/A					
SK	Photo, Photo-T, PhotoR	3	0.001	0.001						
SK	Ion		0.000	0.000						
SK	Heat, Heat-HT, ROR		0.000	0.000						
SK	Beam, Beam-T		0.000	0.000						
SK	Duct		0.000	0.000						
SK	Acclimate		0.000	0.000						
SK	FIRE-CO		0.000	0.000						
SK	Control		0.000	0.000						
SK	Control-6		0.000	0.000						
SK	RelayMon-2		0.000	0.000						
SK	Monitor, Minimon	14	0.005	0.005						
SK	Monitor-2	2	0.002	0.002						
SK	Monitor-10		0.000	0.000						
SK	Pull-SA, Pull-DA		0.000	0.000						
SK	Relay	3	0.001	0.001						
SK	Relay-6		0.000	0.000						
SK	Zone		0.000	0.000						
SK	Zone-6		0.000	0.000						
SK	Isolator Module		0.000	0.000						
B224BI	Isolator Base		0.000	0.000						
B200SR	Sounder Base		0.000	0.000						
B200S	Intelligent Sounder Base		0.000	0.000						
B200SR-LF	Low Freq Sounder Base		0.000	0.000						
B200S-LF	Low Freq Sounder Base		0.000	0.000						
B224RB	Relay Base		0.000	0.000						
RTS151	Magnetic Remote Test		0.000	0.000						
RTS151KEY	Key Activated Test		0.000	0.000						
RA100Z	Remote LED		0.000	0.000						
5860	LCD Remote Annunc		0.000	0.000						
5824	Serial/Parallel Module		0.000	0.000						
5496	Power Expander		0.000	0.000						
5895XL	Power Expander		0.000	0.000						
5865-4	LED Annunciator (4G)		0.000	0.000						
5865-3	LED Annunciator (3G)		0.000	0.000						
5880	LED Driver Module		0.000	0.000						
5883	Relay Module		0.000	0.000	#14 Solid	2.52		0.00	20.40	0.00%
NAC #1	Notification Appl Circuit			1.350	#14 Solid	2.52		0.00	20.40	0.00%
NAC #2	Notification Appl Circuit		0.000	1.810	#12 Solid	1.59		0.00	20.40	0.00%
NAC #3	Notification Appl Circuit		0.000	1.490	#14 Solid	2.52		0.00	20.40	0.00%
NAC #4	Notification Appl Circuit		0.000	0.000	Total Alarm Current (Amps)					
	Total Standby Current (Amps)		0.178	5.023	Alarm Time In Minutes / 60		(5 Mins)			
	Standby Time In Hours		24	0.083	Total Alarm AH Required					
	Total Standby AH Required		4.282	0.419						
	Total Combined AH Required		4.70							
	Multiply By The Derating Factor		1.20							
	Minimum Battery AmpHours Required		**5.64**							

Command Shortcuts

Configure Circuits

Print Page

SILENT KNIGHT

5496 Power Expander Calculations

Version 02.24.09

Global Project Values:

Project Name:	Milano 32 Unit	Standby Hours:	24
Project ID:		Alarm Mins:	5
Prepared By:		Derating Factor:	1.2
Date:	4/10/2017	Voltage Drop Warning Threshold % :	10

Panel ID: Power Supply1 | Model: 5496 Power Expander | Max NAC Current: 3.0 Amps

Location: FCP Rm | Volts: 24 VDC | Max Panel Current: 6.0 Amps

Part.#	Description	Qty	Current Draw Standby	Current Draw Alarm	Wire AWG & Type	Ohms Per 1000 Ft.	Length(ft) One-Way	Actual Ohms	Volts @ EOL	%Drop
5496	5496 Pwr Module	1	0.040	0.400						
NAC 4	Notification Appl Circuit		0.000	1.490	#14 Solid	2.52		0.00	20.40	0.00%
NAC 5	Notification Appl Circuit		0.000	1.650	#14 Solid	2.52		0.00	20.40	0.00%
NAC 6	Notification Appl Circuit		0.000	1.490	#14 Solid	2.52		0.00	20.40	0.00%
	Notification Appl Circuit		0.000		#14 Solid	2.52		0.00	20.40	0.00%
	Total Standby Current (Amps)		0.040	5.030	Total Alarm Current (Amps)					
	Standby Time In Hours		24	0.083	Alarm Time In Minutes / 60		(5 Mins)			
	Total Standby AH Required		0.960	0.419	Total Alarm AH Required					

Total Combined AH Required	1.38
Multiply By The Derating Factor	1.20
Minimum Battery AmpHours Required	**1.66**

Command Shortcuts

Configure Circuits

Print Page

SILENT KNIGHT

5496 Power Expander Calculations

Version 02.24.09

Global Project Values:

Project Name:	Milano 32 Unit	Standby Hours:	24
Project ID:		Alarm Mins:	5
Prepared By:		Derating Factor:	1.2
Date:	4/10/2017	Voltage Drop Warning Threshold % :	10

Panel ID: Power Supply 2 | Model: 5496 Power Expander | Max NAC Current: 3.0 Amps

Location: FCP Rm | Volts: 24 VDC | Max Panel Current: 6.0 Amps

Part.#	Description	Qty	Current Draw Standby	Current Draw Alarm	Wire AWG & Type	Ohms Per 1000 Ft.	Length(ft) One-Way	Actual Ohms	Volts @ EOL	%Drop
5496	5496 Pwr Module	1	0.040	0.400						
NAC 7	Notification Appl Circuit		0.000	1.490	#14 Solid	2.52		0.00	20.40	0.00%
NAC 8	Notification Appl Circuit		0.000	1.650	#14 Solid	2.52		0.00	20.40	0.00%
	Notification Appl Circuit		0.000		#14 Solid	2.52		0.00	20.40	0.00%
	Notification Appl Circuit		0.000		#14 Solid	2.52		0.00	20.40	0.00%
	Total Standby Current (Amps)		0.040	3.540	Total Alarm Current (Amps)					
	Standby Time In Hours		24	0.083	Alarm Time In Minutes / 60		(5 Mins)			
	Total Standby AH Required		0.960	0.295	Total Alarm AH Required					

Total Combined AH Required	1.26
Multiply By The Derating Factor	1.20
Minimum Battery AmpHours Required	**1.51**

Command Shortcuts

Configure Circuits

Print Page

SILENT KNIGHT®
by Honeywell

IntelliKnight® 5808 Single Loop Addressable Fire Alarm Control System

The convenience of an addressable fire alarm control panel in a cost-effective easy to use package.

IntelliKnight Model 5808 is a 127 point class leading single loop addressable fire alarm control/communicator system. 5808 provides you with the revolutionary value and performance of addressable sensing technology combined with exclusive, built-in digital communication, distributed intelligent power, easy to use interface. Powerful features such as drift compensation and maintenance alert are delivered in this powerful FACP from Silent Knight.

For more information about the IntelliKnight system, or to locate your nearest source, please call 1-800-328-0103.

Description

The basic 5808 system can be enhanced by adding modules such as 5860 remote annunciator, 5824 serial/parallel printer interface module (for printing system reports), and 5496 intelligent power module. 5808 supports SD or SK protocol devices. 5808 also features a powerful built-in dual line fire communicator that allows for reporting of all system activity to a remote monitoring location.

Features

- Built-in support for up to 99 SK detectors *and* 99 SK modules.
- Built in support for 127 SD devices.
- Up to 125 zones and 125 output groups.
- Uses standard wire—no shielded or twisted pair required
- Built-in digital communicator.
- Central station reporting by point or by zone
- Supports Class B (Style 4) and Class A (Style 6 or 7) configuration for SLC.
- Distributed, intelligent power.
- Drift compensation.
- 13 pre-programmed output cadences, (including ANSI-3.41), and 4 programmable outputs.
- Notification circuits can be configured as 2 Class A (Style Z) or 4 Class B (Style Y), or auxiliary power for resettable, constant, or door holder power.
- Built-in annunciator with 80-character LCD display.
- RS-485 bus provides communication to system accessories.
- Built-in RS-232 and USB interface for programming via a PC.
- Upload or download programming, event history, or detector status via remote or direct connection.
- Improvements in SKSS deliver five times faster upload/downloads.
- Built-in synchronization for appliances from AMSECO, Gentex®, Faraday, System Sensor®, and Wheelock®.
- One Form C trouble relay rated at 2.5A at 27.4 VDC and two Form C programmable relays rated at 2.5A at 27.4 VDC.

Model 5808

- Plex-2 door option combines a dead front cabinet door with a clear window, limiting access to the panel while providing single button operation of the reset and silence functions.
- Integrated dead front panel protects operator from exposure to electrical components.
- The FACP enclosure features a Plexiglass® viewing window to protect annunciator.
- Acknowledge function allows operator to keep track of event status.

Installation

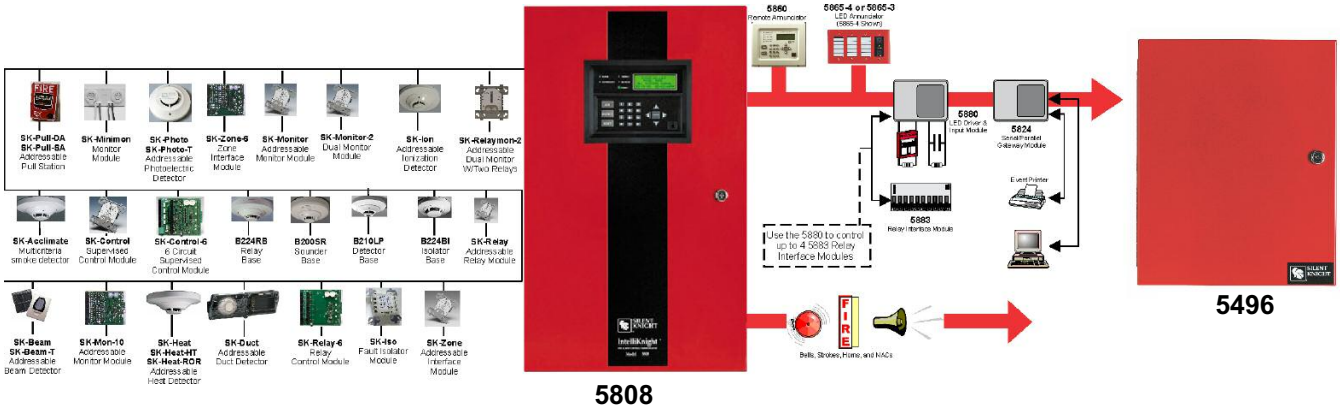
The 5800 can be surface or flush mounted.

Compatibility

The 5808 signal line circuit (SLC) supports multiple device types of the *same* protocol:

- SK (System Sensor)
- SD

You cannot mix SD and SK SLC devices on a FACP.



Specifications

Electrical

Primary AC: 120 VRMS at 50/60 Hz, 2.75A

Total Accessory Load: 6A @ 27.4 VDC

Notification Power: 6A @ 27.4 VDC, power-limited

Standby Current: 170 mA

Alarm Current: 325 mA

Notification & Auxiliary Circuits: 3A @ 27.4 VDC per circuit,power-limited

Battery Charging Capacity: 7.0-35 AH

Battery Size: 18 AH max. allowed in FACP. Larger capacity batteries can be housed in an RBB accessory cabinet

Physical

Flush Mount Dimensions: 14.5” W x 24.75” H x 3.5” D (36.8 W x 62.9 H x 8.73 D cm)

Overall Dimensions: 16" W x 26.4" H x 4.65" D (40.6 W x 67 H x 11.8 D cm)

Weight: 28 lbs. (12.8 kg)

Color: Red

Telephone Requirements: FCC Part 15 and Part 68 approved Type of Jack: RJ31X (two required)

Approvals

NFPA 13, NFPA 15, NFPA 16, NFPA 70, & NFPA 72: Central Station; Remote Signalling; Local Protective Signalling Systems; Auxiliary Protected Premises Unit; & Water Deluge Releasing Service. Suitable for automatic, manual, waterflow, sprinkler supervisory (DACT non-coded) signalling services.
UL Listed
CSFM 7165-0559:0142;
MEA 429-92-E Vol. XIV

S-BUS Accessories

5860/R Remote Fire Annunciator
Features the same 80 character backlit LCD display keypad and firefighter's key switch as the 5808. 5860 is gray and 5860R is red.

5496 Intelligent Power Module
A 6 amp notification power expander that provides four additional power-limited notification appliance circuit outputs.

5880 LED/IO Module
Features 40 LED outputs, 8 normally open dry contact inputs and one piezo output.

5865-3 and 5865-4 Remote LED Annunciator
Features 30 programmable LED (15 red and 15 yellow) outputs and a piezo sounder. The 5865-4 adds a silence and reset switch to the package.

5824 Serial/Parallel Printer Interface Module
Provides one parallel and one RS-232 serial port for connecting a printer to 5808. Use to print a real-time log of system events, detector status reports, and event history.

5883 Relay Board
Features 10 general purpose Form C relays. Used with 5880 module.

Miscellaneous Accessories

5660 Silent Knight Software Suite
PC-base software for FACP programming. Upload and view panel account information, event history, and detector status.

5670 Silent Knight Software Suite
End-user facility management software allows viewing of detector status and event history via modem or direct connection.

Plex-2 Door
Dead front cabinet door with clear window to limit access to the FACP.

RBB
Remote Battery Box Accessory Cabinet. Use if backup batteries are too large to fit into FACP cabinet. Dimensions:

16” W x 10” H x 6” D(406 mm W x 254 mm H x 152 mm D)

SD and SK Devices

See the specification sheets listed below for a complete listing of the SD and SK devices.

53624 SD Devices data sheet

53623 SK Devices data sheet

SILENT KNIGHT by Honeywell

MADE IN AMERICA

350386 Rev. J

SILENT KNIGHT
by Honeywell

5496 Intelligent Power Module

A dynamic combination of power and intelligence for your notification expansion needs.

The Model 5496 Intelligent Power Module by Silent Knight is the most-powerful and cost-effective power supply available today. It delivers 6 amps of notification appliance circuit power and built-in synchronization for appliances from System Sensor®, Gentex®, Faraday, AMSECO and Wheelock® — what you need to drive power-hungry components like ADA notification appliances. The 5496's advanced microprocessor design is years ahead of the competition. Its switch mode power supply design is up to 50% more efficient than competitive linear mode power supplies.

For the most sophisticated and cost-effective notification power supply available, you need Model 5496. Call Silent Knight today for more information at 1-800-328-0103.

Model 5496 Intelligent Power Module

The model 5496 is a 6 amp notification power expander that provides its own AC power connection, battery charging circuit, and backup battery for use with fire and security controls such as the IntelliKnight Model 5808 Fire Control /Communicator. The 5496 is the cost-effective solution for powering notification appliances required by the Americans with Disabilities Act (ADA). The 5496 has built-in ANSI cadence pattern, which can upgrade older control panels that lack cadence capability. The Output circuits can be programmed as Notification Appliance Circuits, or as Auxiliary Power (configurable for, constant, resettable, or door holder power).

Features

- UL Listed for 6 amps of notification power
- Power supply's advanced switch mode design reduces damaging heat and manages power up to 50% more efficiently than other systems
- Built-in synchronization for appliances from AMSECO, Gentex®, Faraday, System Sensor®, and Wheelock®
- 24 VDC filtered output voltage
- Four power-limited notification outputs; 2 Class A or 4 Class B, or 1 Class A and 2 Class B
- NACs are programmable as Notification Appliance Circuits, or as auxiliary power to be used as constant, resettable, or door holder power
- 3 amps per output circuit
- Ground fault detector
- Communicates to the FACP via 4-wire SBUS (wire runs up to 6000 ft)
- AC loss delay option shuts off power to non-essential high-current accessories like magnetic door holders
- Lightweight design adds to ease of installation and reduces shipping costs
- UL 864,1481 & 1971 listed
- ANSI Cadence pattern output capability built-in

Specifications

AC Input	120 VAC at 2.7 A
Output:	24 VDC at 6 amps
Current:	
Standby	40 mA
Alarm	160 mA
Notification/Aux. Power circuits:	4
Output configuration:	2 Class A (Style Z) 4 Class B (Style Y) (1 Class A & 2 Class B)
Amps per output circuit:	3.0 (6.0 amps total)
Notification circuit output:	20.4 to 27.3 VDC @ 3.0 amps each, 4.7k EOL resistor required on each Class B circuit
Battery charging capacity:	35.0 AH

Model 5496 Intelligent Power Module

Ambient Temp.:	32° to 120° F 0° to 49° C
Dimensions:	12.25" W x 16" H x 3" D (30.88 cm W x 40.64 cm H x 7.62 D cm)
Approvals:	UL
	CSFM
	MEA 429-92-E vol. XIV

Compatible FACPs

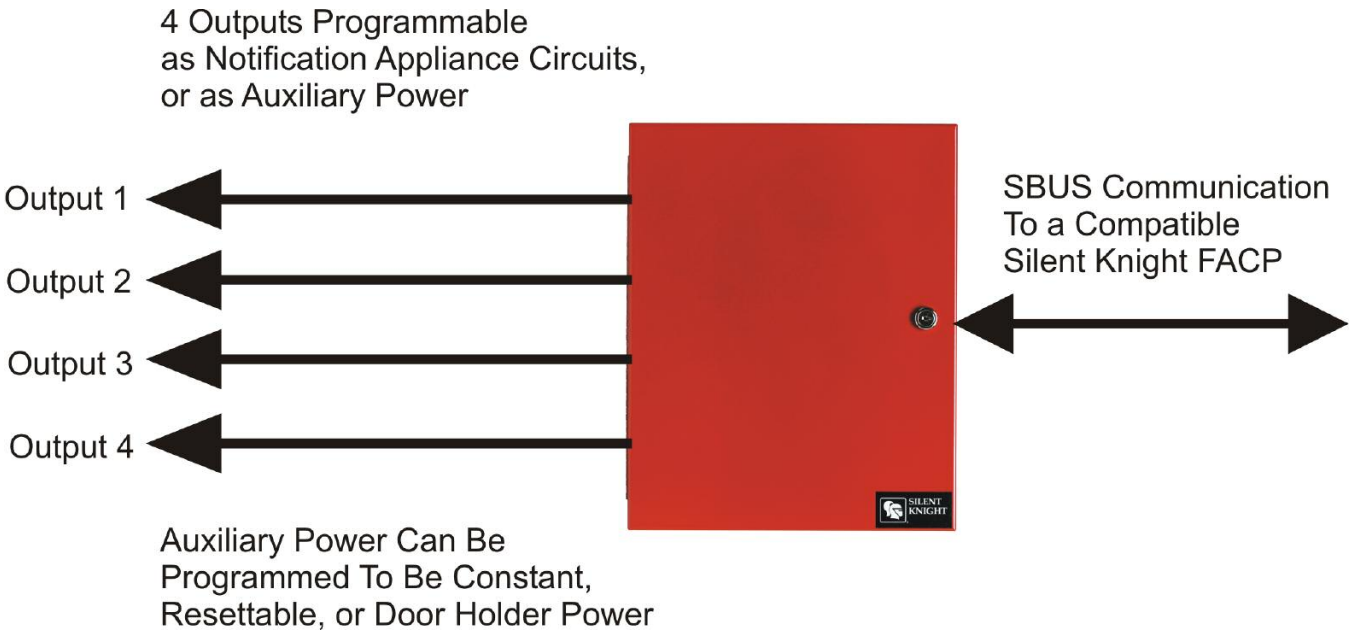
- IntelliKnight 5700
- IntelliKnight 5808
- IntelliKnight 5820XL

Firepower 5496
Distributed Power Module

Engineering Specifications

The contractor shall supply a power module compatible with the Silent Knight FACP. The power module must have 6.0 amps of output power. The power module shall connect to the main FACP via an RS 485 system bus (SBUS). The Outputs shall be programmable as Notification Appliance Circuits, or as Auxiliary Power (configurable for, constant, resettable, or door holder power). The power module shall have four separate outputs.

The power module RS 485 bus shall be optically isolated providing ground loop isolation and transient protection.



SILENT KNIGHT
by Honeywell

MADE IN AMERICA

FORM# 350387 Rev D

SILENT KNIGHT
by Honeywell

SK-Photo, SK-Photo-T and SK-PhotoR

Intelligent Photoelectric Smoke Sensors

The SK-Photo is a photoelectric smoke detector, the SK-Photo-T is a photoelectric smoke detector with thermal and SK-PhotoR is a photoelectric detector with remote test capability. These plug in smoke detectors, with integral communication, provide features that surpass conventional detectors and are for use with Silent Knight IntelliKnight Fire Alarm Control Panels (FACPs).

For more information about the IntelliKnight system, or to locate your nearest source, please call 800-328-0103.

Description

SK-Photo and SK-Photo-T are plug-in type smoke sensors that combine a photoelectric sensing chamber with addressable analog communications. Point ID capability allows each detector's address to be set with rotary address switches, providing exact detector locations for selective maintenance when chamber contamination reaches unacceptable levels.

SK-Photo and SK-Photo-T have a unique optical sensing chamber that is engineered to sense smoke produced by a wide range of combustion sources. In the SK-Photo-T, dual electronic thermistors add 135ºF (57ºC) thermal technology to maximize detection.

The SK-PhotoR is a remote test capable detector for use with the DNR/DNRW duct smoke detector. (not included)

Features

- Sleek, low-profile design
- Base included
- Reliable analog communications for trouble-free operation
- Age resistant polymer housing
- Dual electronic thermistor design on the SK-Photo-T
- Superior EMI resistance for reliability
- Simple field cleaning for code compliance
- Variety of mounting options to meet any application
- Dual LED indicators for 360º visibility
- Detector transmits signal to indicate maintenance is required
- Optional remote LED annunciator (System Sensor® PN RA100Z)
- Plug-in mounting provides ease of installation
- Tamper-proof feature available on mounting bases
- Listed for use in duct applications
- Rotary address switches for fast installation
- UL Listed
- FM Approved

Specifications

Physical

Height: 2.0" (5.0 cm)

Diameter: 4.1" (10.4 cm) installed in B501 base

Electrical

Operating Voltage: 15–32 VDC

Standby Current:

300 µA @ 24 VDC Maximum

Alarm Current: 6.5 mA @ 24 VDC max (with LED on)

Environmental

Operating Temperature

SK-Photo: 32º – 120ºF (0ºC – 49ºC)

SK-Photo-T: 32º – 100ºF (0ºC – 38ºC)

Humidity: 10% – 93% non-condensing

Other Ratings

SK-Photo-T Thermal: Fixed temperature set point 135ºF (57ºC)

Velocity: 0 – 4000 fpm (0 – 20 m/sec)

SK-Photo (Base included)

Installation

The SK-Photo and SK-Photo-T plug into a compatible IntelliKnight-series detector base. The SK-PhotoR is a remote test capable detector head included within the DNR (W) duct smoke detector.

Compatibility

SK-Photo, and SK-Photo-T are compatible with the following detector bases:

B210LP	6" base (included)
B501	2 wire base
B224RB	Relay base
B224BI	Isolator base
B200SR	Sounder base

The SK-Photo, SK-Photo-T, and SK-PhotoR are compatible with the following IntelliKnight FACPs:

5820XL
5820XL-EVS
5808
5700
5600 (Rev 2.0 or higher)

Model SK-Photo, SK-Photo-T and SK-PhotoR Intelligent Photoelectric Smoke Sensors

Engineering Specifications

The contractor shall furnish and install where indicated on the plans, Intelligent photoelectric smoke sensors Silent Knight SK-Photo or SK-Photo-T with thermal. The combination detector head, and twist-lock base, shall be UL listed and compatible with Silent Knight's IntelliKnight fire control panels.

The base shall permit direct interchange with SK-Photo or SK-Photo-T. Base shall be the appropriate twist-lock base part number B210LP (included).

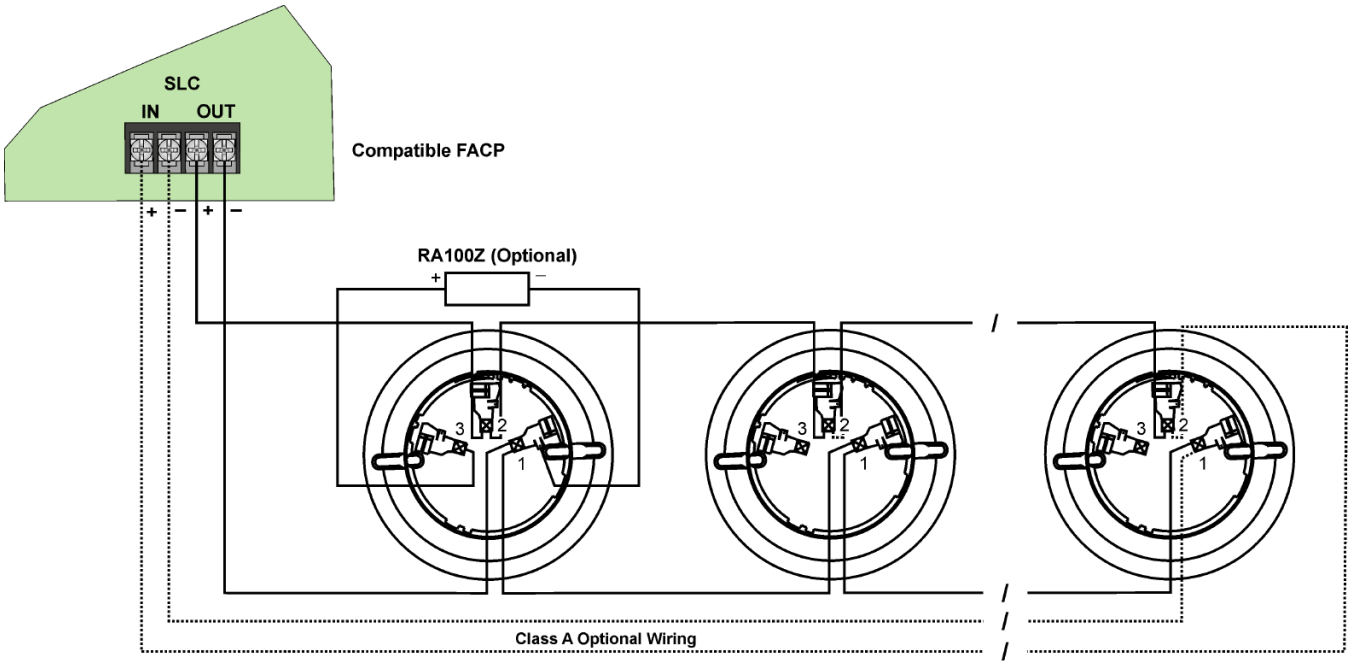
The PhotoR is a remote test capable detector for use with DNR(W) duct smoke detectors. (not included).

The smoke detector shall have a flashing status LED for visual supervision. When the detector is actuated, the flashing LED will latch on steady. The detector may be reset by actuating the control panel reset switch.

The calibration of the detector shall be capable of being selected and measured by the control panel without the need for external test apparatus.

The vandal-resistant, security locking feature shall be used in those areas as indicated on the drawing. The locking feature shall be field selectable as required.

The SK-Photo shall automatically perform a functional test of the detector. The test method shall simulate effects of products of combustion in the chamber to ensure testing of detector circuits.



Wiring SK-Series Detector Mounting Bases

SILENT KNIGHT
by Honeywell

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 Silent Knight 12 Clintonville Road, Northford, CT 06472-1610 Phone: (800) 328-0103, Fax: (203) 484-7118. For Technical Support, Please call 800-446-6444.
www.silentknight.com

MADE IN AMERICA

FORM# 350118 Rev E

BG-12 Series

Manual Fire Alarm Pull Stations

FIRE·LITE ALARMS by Honeywell

Conventional Initiating Devices

General

The Fire·Lite **BG-12 Series** is a cost-effective, feature-packed series of non-coded manual fire alarm pull stations. It was designed to meet multiple applications with the installer and end-user in mind. The BG-12 Series features a variety of models including single- and dual-action versions.

The BG-12 Series provides Fire·Lite Alarm Control Panels (FACPs), as well as other manufacturers' controls, with a manual alarm initiating input signal. Its innovative design, durable construction, and multiple mounting options make the BG-12 Series simple to install, maintain, and operate.

Features

- Aesthetically pleasing, highly visible design and color.
- Attractive contoured shape and light textured finish.
- Meets ADA 5 lb. maximum pull-force.
- Meets UL 38, Standard for Manually Actuated Signaling Boxes.
- Easily operated(single- or dual-action), yet designed to prevent false alarms when bumped, shaken, or jarred.
- PUSH IN/PULL DOWN handle latches in the down position to clearly indicate the station has been operated.
- The word "ACTIVATED" appears on top of the handle in bright yellow, further indicating operation of the station.
- Operation handle features white arrows showing basic operation direction for non-English-speaking persons.
- Braille text included on finger-hold area of operation handle and across top of handle.
- Multiple hex- and key-lock models available.
- U.S. patented hex-lock needs only a quarter-turn to lock/unlock.
- Station can be opened for inspection and maintenance without initiating an alarm.
- Product ID label viewable by simply opening the cover; label is made of a durable long-life material.
- The words "NORMAL" and "ACTIVATED" are molded into the plastic adjacent to the alarm switch (located inside).
- Four-position terminal strip molded into backplate.
- Terminal strip includes Phillips combination-head captive 8/32 screws for easy connection to Initiating Device Circuit (IDC).
- Terminal screws backed-out at factory and shipped ready to accept field wiring (up to 12 AWG/3.1 mm²).
- Terminal numbers are molded into the backplate, eliminating the need for labels.
- Switch contacts are normally open.
- 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.
- Backplate is large enough to overlap a single-gang backbox cutout by 1/2" (1.27 cm).
- Optional trim ring (**BG12TR**).
- Spanish versions *(FUEGO)* available (**BG-12LSP**, **BG-12LPSP**).
- Designed to replace the Fire·Lite legacy **BG-10** Series.
- Models packaged in attractive, clear plastic (PVC), clam-shell-style, Point-of-Purchase packages. Packaging includes a cutaway dust/paint cover in shape of pull station.

52004p4c.jpg

Construction

- Cover, backplate and operation handle are all molded of durable polycarbonate material.
- Cover features white lettering and trim.
- Red color matches System Sensor's popular SpectrAlert® Advance horn/strobe series.

Operation

The BG-12 manual pull stations provide a textured finger-hold area that includes Braille text. In addition to PUSH IN and PULL DOWN text, there are arrows indicating how to operate the station, provided for non-English-speaking people.

Pushing in and then pulling down on the handle activates the normally-open alarm switch. Once latched in the down position, the word "ACTIVATED" appears at the top in bright yellow, with a portion of the handle protruding at the bottom as a visible flag. Resetting the station is simple: insert the key, twist one quarter-turn, then open the station's front cover, causing the spring-loaded operation handle to return to its original position. The alarm switch can then be reset to its normal (non-alarm) position manually (by hand) or by closing the station's front cover, which automatically resets the switch.

Specifications

PHYSICAL SPECIFICATIONS:

	pull station	SB-I/O	SB-10
Height	5.5 inches (13.97 cm)	5.601 inches (14.23 cm)	5.5 inches (13.97 cm)
Width	4.121 inches (10.47 cm)	4.222 inches (10.72 cm)	4.121 inches (10.47 cm)
Depth	1.39 inches (3.53 cm)	1.439 inches (3.66 cm)	1.375 inches (3.49 cm)

52004dim.tbl

ELECTRICAL SPECIFICATIONS:

Switch contact ratings: gold-plated; rating 0.25 A @ 30 VAC or VDC.

ENGINEERING/ARCHITECTURAL SPECIFICATIONS

Manual Fire Alarm Stations shall be non-code, with a key- or hex-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 or hex. An operated station shall automatically condition itself so as to be visually detected as activated. Manual stations shall be constructed of red colored LEXAN (or polycarbonate equivalent) 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.

NOTE: **The words "FIRE/FUEGO" on the BG-12LSP shall appear on the front of the station in white letters, approximately 3/4" (1.905 cm) high.*

Agency Listings and Approvals

The listings and approvals below apply to the BG-12 Series pull stations. 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.

- **C(UL)US:** S711
- **FM Approved**
- **CSFM:** 7150-0075:184
- **MEA:** 67-02-E
- **Patented:** U.S. Patent No. D428,351; 6,380,846; 6,314,772; 6,632,108.

Product Line Information

BG-12S: Single-action pull station with pigtail connections, hex lock.

BG-12SL: Same as BG-12 with key lock.

BG-12: Dual-action pull station with SPST N/O switch, screw terminal connections, ***hex lock***.

BG-12L: Same as BG-12 with key lock.

BG-12LSP: Same as BG-12L with English/Spanish *(FIRE/FUEGO)* labeling.

BG-12LOB: Same as BG-12L with "outdoor use" listing. Includes outdoor listed backbox, and sealing gasket.

BG-12LO: Same as BG-12L with "outdoor use" listing. Does not include backbox.

BG-12LA: Same as BG-12L with auxiliary contacts.

BG-12LPS: Dual-action pull station with pre-signal option.

BG-12LPSP: Same as BG-12LPS with English/Spanish *(FIRE/FUEGO)* labeling.

SB-10: Surface-mount backbox, metal.

SB-I/O: Surface-mount backbox, plastic. *(Included with BG-12LOB.)*

BG12TR: Optional trim ring for semi-flush mounting.

17003: Keys, set of two. (Included with key-lock pull stations.)

17007: Hex lock, 9/64". (Included with hex-lock pull stations.)

NOTE: *For addressable BG-12LX models, see data sheet DF-52013.*

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

SILENT KNIGHT
by Honeywell

SK-Relay

Intelligent Relay Module

The SK-Relay Module is intended for use in intelligent, two-wire systems where the individual address of each module is selected using the built in rotary switches.

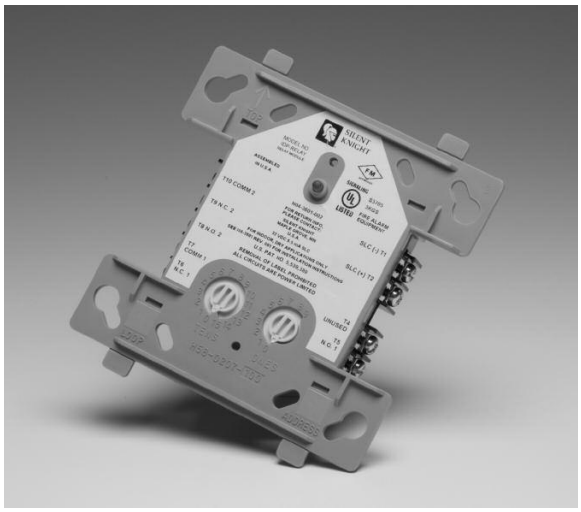
For more information about the Intelliknight system, or to locate you nearest source, please call 800-328-0103.

Description

The SK-Relay is an addressable relay module for use with Silent Knight IntelliKnight series fire alarm control panels (FACPs).

The SK-Relay allows a Silent Knight FACP to switch discrete contacts by code command. The relay contains two isolated sets of Form C contacts, which operate as a DPDT switch. No supervision is provided for the notification appliance circuit.

The SK-Relay contacts can be used for virtually any normally open or normally closed application. Each SK-Relay is programmed with a unique signaling line circuit (SLC) loop address. When an event occurs that controls the SK-Relay, the relay is triggered by the FACP.



SK-Relay

Features

- Two sets of Form C contacts
- Rotary address switches for fast installation
- Contacts are rated for a variety of amps (see Specifications)
- Panel controlled status LED that flashes green in normal state and is solid red in alarm
- Relay programming is completely flexible–can be mapped to zone conditions
- Polling LED visible through the cover plate
- Attractive ivory cover plate
- SEMS screws for easy wiring
- UL Listed

Installation

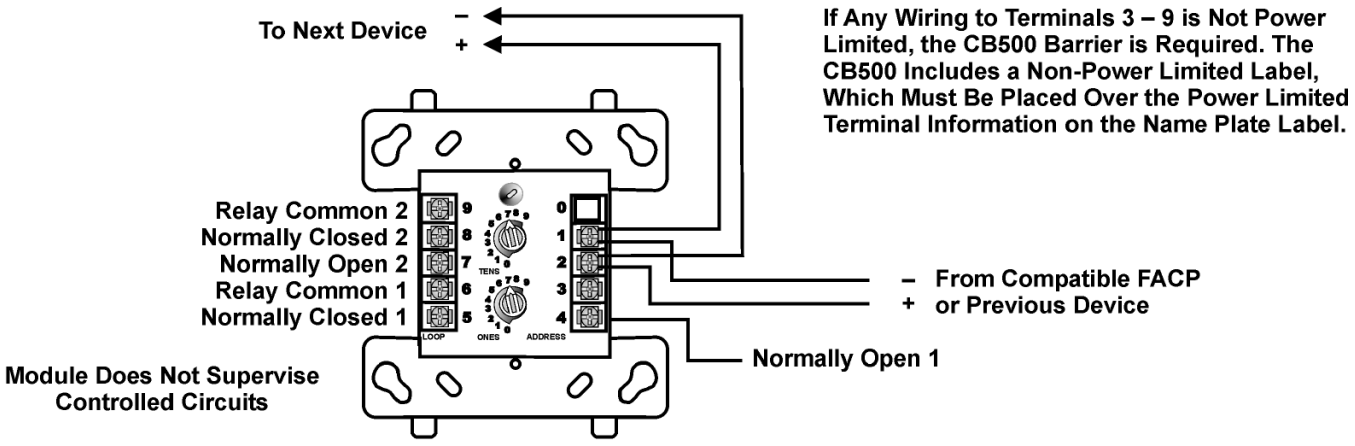
The SK-Relay mounts directly into a 4” square electrical box. The box must have a minimum depth of 2-1/8”. A surface mount electrical box (System Sensor® PN SMB500) is available from Silent Knight

Compatibility

The SK-Relay is compatible with the following IntelliKnight FACP’s:

5820XL
5808
5700
5600 (Rev 2.0 or higher)

Model SK-Relay
Intelligent Relay Module



Wiring the SK-Relay Module

Specifications

Physical

Height: 4.65”

Width: 4.25”

Depth: 1.1”

Shipping Weight: 6.3 oz (196 g)

Electrical

Operating Voltage: 15 – 32 VDC

Current Draw: 6.5 mA max (LED on)

Operating Current:

230 µA (LED flashing) direct poll

255 µA (LED flashing) group poll

End-of-Line Resistance: not used

Standby Current: 300 µA max @ 24 VDC (one communication every 5 sec with LED enabled)

LED Current: 5.5 mA (with LED latched on)

SLC Loop Resistance: 40Ω max.

Relay Contact Ratings

3.0A @ 30 VDC resistive

0.9A @ 110 VDC resistive

0.9A @ 125 VAC resistive

0.5A @ 125 VAC inductive (PF = .35)

0.7A @ 75 VAC inductive (PF = .35)

SILENT KNIGHT
by Honeywell

MADE IN AMERICA

FORM# 350127 Rev C

SILENT KNIGHT
by Honeywell

SK-Monitor-2

Intelligent Dual Monitor Module

The SK-Monitor-2 module is capable of monitoring two separate Class B circuits simultaneously, making it ideal for waterflow tamper switch and flow switch monitoring.

For more information about the IntelliKnight system, or to locate you nearest source, please call 1-800-328-0103.

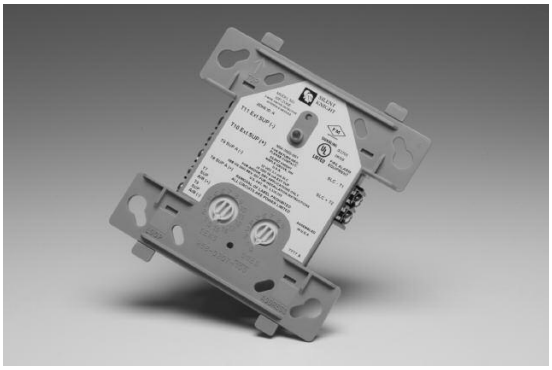
Description

The SK-Monitor-2 is an addressable monitor module with two initiating circuits for use with Silent Knight IntelliKnight series fire alarm control panels (FACPs). The SK-Monitor-2 acts as an interface to contact devices, such as waterflow switches and pull stations.

The SK-Monitor-2 supports Class B supervised wiring to the load device. Conventional 4-wire smoke detectors can be monitored for alarm and trouble conditions.

Features

- Monitor two circuits, with unique addresses, simultaneously
- Support for Class B wiring
- Fully supervised
- Panel controlled status LED that flashes green in normal state and is solid red in alarm
- Attractive ivory cover plate
- Rotary address switches for fast installation
- SEMS screws for easy wiring
- UL Listed



SK-Monitor-2

Installation

SK-Monitor-2 mounts directly into a 4” square electrical box. The box must have a minimum depth of 2-1/8”. A surface mount electrical box (System Sensor® part number SMB500) is available from Silent Knight.

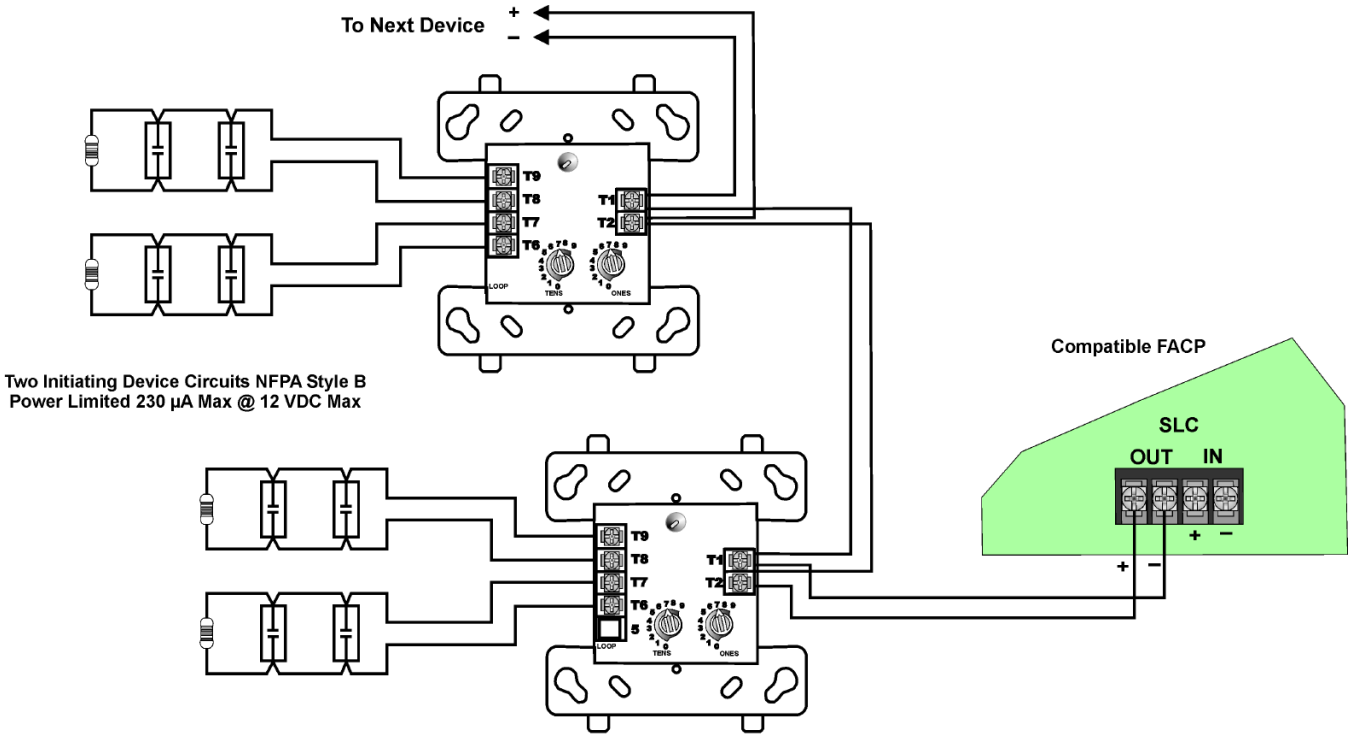
Compatibility

The SK-Monitor-2 is compatible with the following IntelliKnight FACP’s:

5700
5808
5820XL

Model SK-Monitor-2

Intelligent Dual Monitor Module



Wiring SK-Monitor-2 Modules

Specifications

Physical

Height: 4.5” H x 4” W x 1.25” D

Shipping Weight: 6.3 oz (196 g)

Electrical

Operating Voltage: 15 – 32 VDC

Current Draw (LED on): 6.4 mA max

Operating Current (LED flashing): 750 µA

End-of-Line Resistance: 47K Ω

Max IDC wiring resistance: 1,500Ω

SLC Line Loop Resistance: 40Ω max.

Environmental

Operating Temperature: 32ºF – 120ºF (0ºC – 49ºC)

Humidity: 10% – 93% non-condensing

Accessories

SMB500 4” Square Surface Mount Electrical Box

SILENT KNIGHT
by Honeywell

MADE IN AMERICA

FORM# 350124 Rev B

SILENT KNIGHT
by Honeywell

SK-Monitor

Intelligent Monitor Module

The SK-Monitor module provides an interface to contact devices, such as security contacts, waterflow switches, or pull stations.

For more information about the IntelliKnight system, or to locate you nearest source, please call 1-800-328-0103.

Description

The SK-Monitor is an addressable monitor module for use with Silent Knight IntelliKnight series fire alarm control panels (FACPs). The SK-Monitor is intended for use in intelligent, two-wire systems, where individual address of each module is selected using the built-in rotary switches.

The SK-Monitor supports Class A supervised or Class B supervised wiring to the load device. Conventional 4-wire smoke detectors can be monitored for alarm and trouble conditions.

Features

- Single contact monitor
- Support for Class A and Class B wiring
- Fully supervised
- Panel controlled status LED that flashes green in normal state and is solid red in alarm
- Attractive ivory cover plate
- Rotary address switches for fast installation
- SEMS screws for easy wiring
- UL Listed

Installation

The SK-Monitor mounts directly into a 4” square electrical box. The box must have a minimum depth of 2-1/8”. A surface mount electrical box (System Sensor® PN SMB500) is available from Silent Knight.

Compatibility

The SK-Monitor is compatible with the following IntelliKnight FACP’s:

5700
5808
5820XL

SK-Monitor

Specifications

Physical

Height: 4.5” (11.4 cm)

Width: 4” (10.2 cm)

Depth: 1.25” (3 cm)

Shipping Weight: 6.3 oz (196 g)

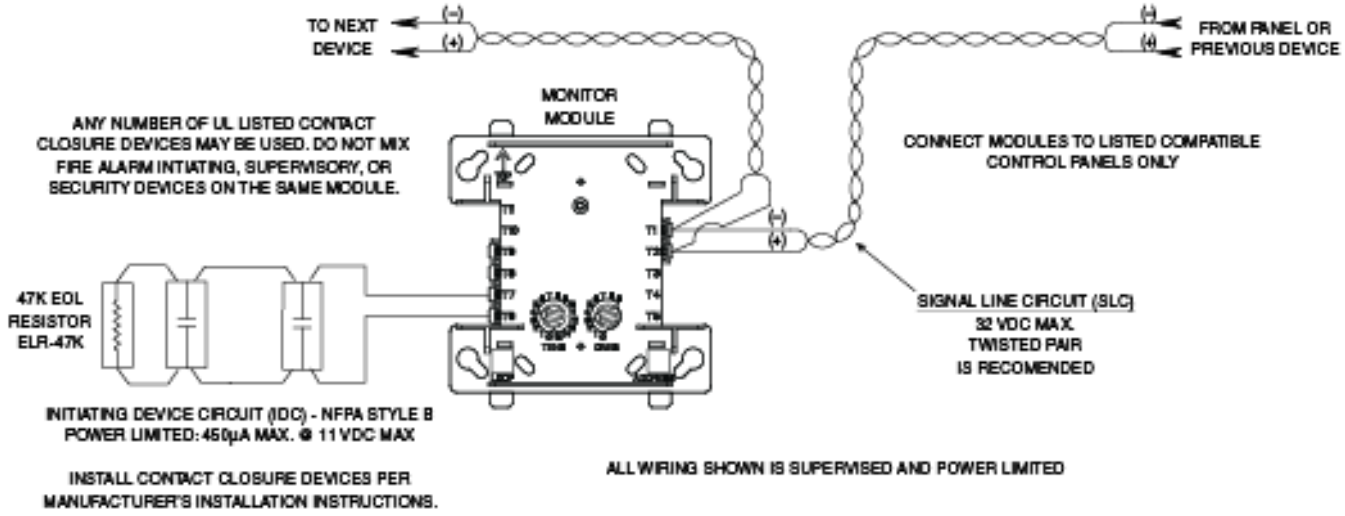
Electrical

Operating Voltage: 15 – 32 VDC

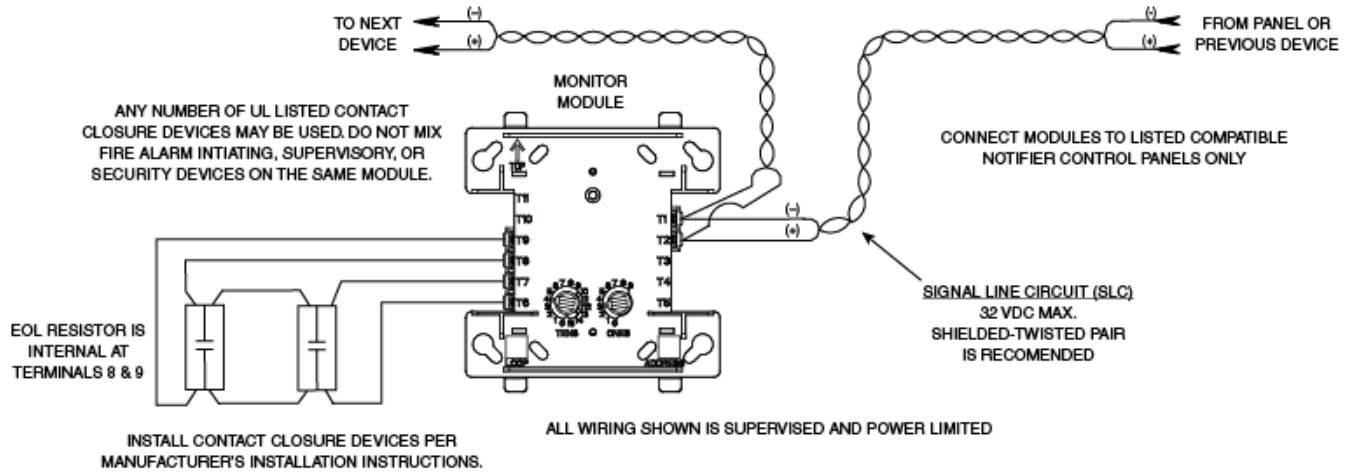
Current Draw (LED on): 5.0 mA max

Operating Current (LED flashing): 375 µA

Model SK-Monitor
Intelligent Monitor Module



2-Wire Initiating Circuit Configuration, NFPA Style B



4-Wire Initiating Circuit Configuration, NFPA Style D

Standby Current:

400 µA max @ 24 VDC (one communication every 5 sec with 47K EOL)

550 µA max @ 24 VDC (one communication every 5 sec with EOL <1K)

5.5 mA (with LED latched on)

LED Current: 5.5 mA (with LED latched on)End-of-Line Resistance: 47K Ω

Initiating Device Circuit Wiring Resistance: 1,500 Ω max

SLC Loop Resistance: 40 Ω max.

Environmental

Operating Temperature: 32ºF – 120ºF (0ºC – 49ºC)

Humidity: 10% – 93% non-condensing

Ordering Information

SK-Monitor	Monitoring Module

Accessories

SMB500	4” Square Surface Mount Electrical Box

SILENT KNIGHT by Honeywell

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 Silent Knight 12 Clintonville Road, Northford, CT 06472-1610
Phone: (800) 328-0103, Fax: (203) 484-7118. **www.silentknight.com**

MADE IN AMERICA

FORM# 350131 Rev C

302 Series

Rate-Anticipation Heat Detectors

FIRE·LITE ALARMS by Honeywell

Conventional Initiating Devices

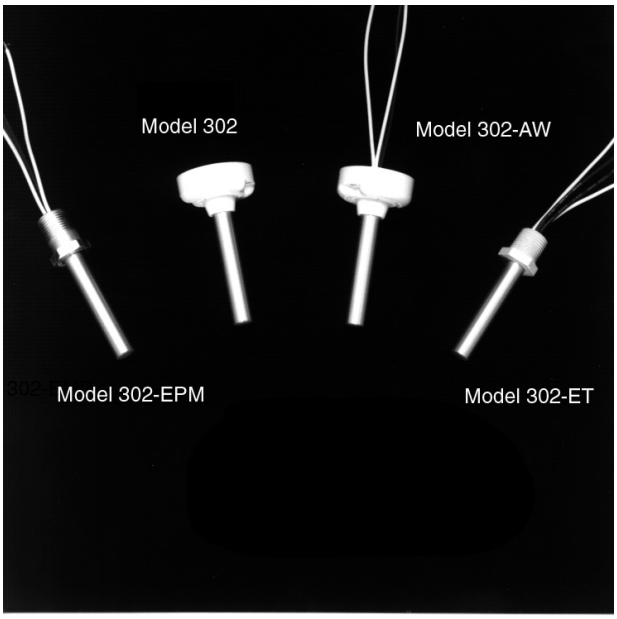
General

The **Thermotech 302 Series** rate-anticipation heat detectors operate within a controlled range of two to three degrees of their set points, regardless of the speed or rate of temperature rise. These detectors are available in either 135°F (57.2°C) or 194°F (90°C) ratings.

The 302 Series are normally-open devices designed especially for fire detection and alarm systems.

Features

- **Immediate response.** The 302 Series activate whenever ambient air temperature reaches a detector's setting, eliminating the thermal time lag inherent in conventional heat detectors.
- **Eliminates false alarms.** The 302 Series do not respond to momentary temperature fluctuations below the selected temperature.
- **Universal application.** The 302 Series can be used in all areas for any type of occupancy.
- **Self-restoring.**
- **Hermetically sealed.** Shock resistant, corrosion resistant, and tamper-proof.



1271pho1.jpg

Principles Of Operation

The 302 Series rate-anticipation heat detectors respond and activate the fire alarm immediately whenever the ambient temperature reaches the preset temperature setting. Under rapid heat rise conditions, the rate-anticipation feature enables the detector to respond one to three degrees ahead of the setting. At the same time, however, it does not respond to momentary temperature fluctuations below the selected protection level, thus eliminating false alarms. When temperature drops back down below the protection level, the detector automatically resets itself.

Dimensions (Model 302)

Total overall length: 4-1/8" (10.48 cm).

Base diameter: 2" (5.08 cm).

Electrical Ratings

Voltage	***Current***
6 - 125 VDC	5 amps
6 - 25 VDC	1 amp
125 VDC	0.5 amp

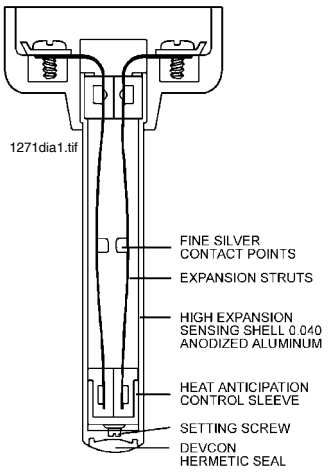
Application Information

302 Series detector have a smooth ceiling UL rating of 50' x 50' (15.24 x 15.24 meters) and are the only type of heat detectors having such a rating on both fixed temperature and rate anticipation.

Agency Listings and Approvals

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

- **UL Listed**: S539 (302-AW-135/-194; 302-ET-135/-194; 302-135-194)
- **FM Approved**: (302-AW-135/-194; 302-ET-135/-194; 302-135/-194)
- **CSFM**: 7270-0021:001



Cut-Away View

Thermotech Model 302 Series Rate-Anticipation Heat Detectors		
Model Number	**Description**	**Refer To**
302-135	135°F Interior Vertical Mounting	Note 1 below
302-194	194°F Interior Vertical Mounting	
302-AW-135	135°F All-Weather Vertical Mounting	Note 2 below
302-AW-194	194°F All-Weather Vertical Mounting	
302-ET-135	135°F All-Weather Vertical Mounting	Note 3 below
302-ET-194	194°F All-Weather Vertical Mounting	
302-EPM-135	135°F Explosion Proof Mounting	Note 4 below
302-EPM-194	194°F Explosion Proof Mounting	
AP-P	Decorative white plastic adaptor plate for mounting 302 and 302-AW to 4” outlet box.	

NOTE 1: *For interior mounting in any atmosphere that is compatible with terminal-screw-type connections. UL rating 50' x 50' (15.24 x 15.24 meters).*

NOTE 2: *Hermetically sealed for moisture-proof or dust-proof installations. Requires no special backbox when the all-weather leads are properly spliced to “THW” or equivalent type wire.*

NOTE 3: *Hermetically sealed for moisture-proof or dust-proof installations. Requires no special backbox. Has plastic hexagonal wrench grip bushing with 1/2” (1.27 cm) conduit threads for attachment to threaded hub cover, or any outlet box.*

NOTE 4: *Explosion-proof for installation in hazardous locations. Has hexagonal wrench-grip bushing with 1/2” (1.27 cm) conduit threads for attachment to threaded hub cover of Series JL fixture fitting as manufactured by Killark Electric Co., or equal.*

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

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

SPECTRAlert ADVANCE from System Sensor

SpectrAlert® Advance outdoor audible visible products are rich with features that cut installation times and maximize profits.

Features

- Weatherproof per NEMA 4X, IP56
- Listed to UL 1638 (strobe) and UL 464 (horn)
- Compatible with System Sensor synchronization protocol and legacy SpectrAlert products
- Field-selectable candela settings: 15, 15/75, 30, 75, 95, 110, 115, 135, 150, 177, and 185
- Automatic selection of 12- or 24-volt operation at 15 and 15/75 candela
- Rotary switch for horn tone and three volume selections
- Horn rated at 88+ dBA at 16 volts
- Rated from –40°F to 151°F
- Universal mounting plate with an onboard shorting spring that tests wiring continuity before devices are installed
- Plug-in design with minimal intrusion into the back box
- Tamper-resistant construction
- Listed for ceiling or wall mounting

Agency Listings

SIGNALING UL LISTED
S4011 (chimes, horn strobes, horns)
S3593 (outdoor and alert strobes)

FM APPROVED
3023572

MEA approved
MEA452-05-E

7300-1653:187 (outdoor strobes)
7125-1653:188 (horn strobes, chime strobes)
7135-1653:189 (horns, chimes)

SpectrAlert Advance offers the broadest line of outdoor horns, strobes, and horn strobes in the industry. With white or red plastic housings, wall or ceiling mounting options, and plain or FIRE-printed devices, SpectrAlert Advance can meet virtually any application requirement, including indoor, outdoor, wet, and dry applications in temperatures from –40°F to 151°F.

Like the entire SpectrAlert Advance line, outdoor horns, strobes, and horn strobes for wall applications include a variety of features that increase application flexibility and simplify installation. First, field-selectable settings, including candela, automatic selection of 12- or 24-volt operation, horn tones, and three volume options enable installers to easily adapt devices to meet requirements.

Next, SpectrAlert Advance devices use a universal mounting plate for both wall and ceiling applications. This mounting plate includes an onboard shorting spring that ensures wiring continuity before devices are installed, so installers can verify proper wiring without mounting the devices and exposing them to potential construction damage. Once the plates are mounted, all SpectrAlert Advance devices utilize a plug-in design with a single captured screw to speed installation and virtually eliminate costly ground faults.

Outdoor devices ship with weatherproof plastic back boxes (metal back boxes are available separately) that accommodate in-and-out wiring for daisy chaining devices. Plastic back boxes feature removable side flanges and improved resistance to saltwater corrosion. Knock-outs located on the back eliminate the need to drill holes for screw-in mounting. Plastic and metal weatherproof back boxes come with ¾-inch top and bottom conduit entries and ¾-inch knock-outs at the back. A screw-in NPT plug with an O-ring gasket for a watertight seal is included with each back box.

SpectrAlert Advance Outdoor Horn, Strobe, and Horn Strobe Specifications

Architect/Engineer Specifications

General

SpectrAlert Advance outdoor horns, strobes, and horn strobes shall mount to a weatherproof back box. A universal mounting plate shall be used for mounting ceiling and wall products. The notification appliance circuit wiring shall terminate at the universal mounting plate. Also, SpectrAlert Advance products, when used with the Sync•Circuit™ Module accessory, shall be powered from a non-coded notification appliance circuit output and shall operate on a nominal 12 or 24 volts. When used with the Sync•Circuit Module, 12-volt-rated notification appliance circuit outputs shall operate between 9 and 17.5 volts; 24-volt-rated notification appliance circuit outputs shall operate between 17 and 33 volts. Outdoor SpectrAlert Advance products shall operate between –40 and 151 degrees Fahrenheit from a regulated DC or full-wave rectified unfiltered power supply. Strobes and horn strobes shall have field-selectable candela settings including 15, 15/75, 30, 75, 95, 110, 115, 135, 150, 177, and 185.

Strobe

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

Horn Strobe Combination

The horn strobe shall be a System Sensor SpectrAlert Advance Model _____ listed to UL 1971 and UL 464 and shall be approved for fire protective service. The horn strobe shall be wired as a primary-signaling notification appliance and comply with the Americans with Disabilities Act requirements for visible signaling appliances, flashing at 1 Hz over the strobe's entire operating voltage range. The strobe light shall consist of a xenon flash tube and associated lens/reflector system. The horn shall have three audibility options and an option to switch between a temporal three pattern and a non-temporal (continuous) pattern. These options shall be set by a multiple position switch. On four-wire products, the strobe shall be powered independently of the sounder. The horn or horn strobe models shall operate on a coded or non-coded power supply. The horn strobe must be installed with its weatherproof back box in order to remain outdoor approved per UL. The horn strobe shall be suitable for use in wet environments.

Physical/Electrical Specifications

Operating Temperature	–40°F to 151°F (–40°C to 66°C)
Strobe Flash Rate	1 flash per second
Nominal Voltage	Regulated 12 DC/FWR or regulated 24 DC/FWR[1]
Operating Voltage Range[2]	8 to 17.5 V (12 V nominal) or 16 to 33 V (24 V nominal)
Input Terminal Wire Gauge	12 to 18 AWG
Wall-Mount Dimensions (including lens)	5.6″L × 4.7″W × 2.5″D (142 mm L × 119 mm W × 64 mm D)
Horn Dimensions	5.6″L × 4.7″W × 1.3″D (142 mm L × 119 mm W × 33 mm D)
Wall-Mount Weatherproof Back Box Dimensions (SA-WBB)	5.7″L × 5.1″W × 2.0″D (145 mm L × 130 mm W × 51 mm D)

Notes:

1. Full Wave Rectified (FWR) voltage is a non-regulated, time-varying power source that is used on some power supply and panel outputs.
2. 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)

		8–17.5 Volts		16–33 Volts	
	Candela	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)

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

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

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

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

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

Candela Derating

For K series products used at low temperatures, listed candela ratings must be reduced in accordance with this table.

Strobe Output (cd)	
Listed Candela	Candela rating at –40°F
15	Do not use below 32°F
15/75	
30	
75	44
95	70
110	110
115	115
135	135
150	150
177	177
185	185

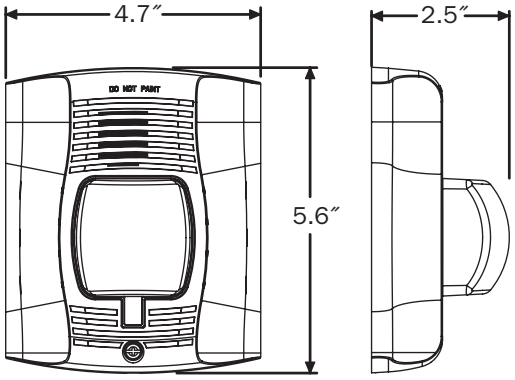
Horn Tones and Sound Output Data

Horn and Horn Strobe Output (dBA)

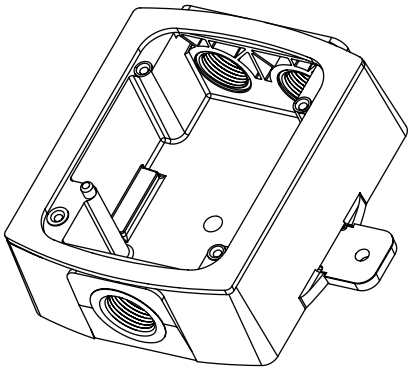
			8–17.5 Volts		16–33 Volts		24-Volt Nominal			
							Reverberant		Anechoic	
Switch Position	Sound Pattern	dB	DC	FWR	DC	FWR	DC	FWR	DC	FWR
1	Temporal	High	78	78	84	84	88	88	99	98
2	Temporal	Medium	74	74	80	80	86	86	96	96
3	Temporal	Low	71	73	76	76	83	80	94	89
4	Non-Temporal	High	82	82	88	88	93	92	100	100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

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

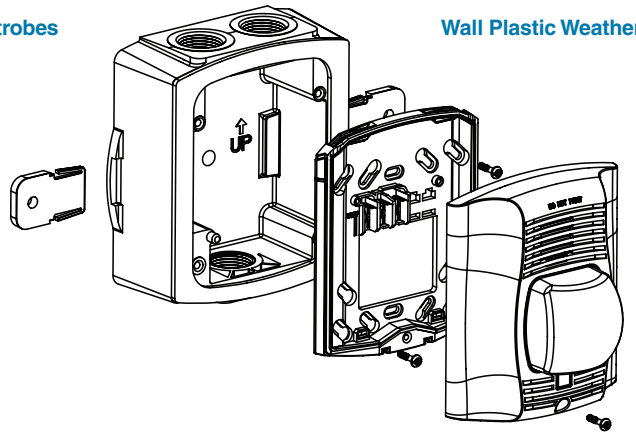
SpectrAlert Advance Diagrams



Wall-Mount Horn Strobes



Wall Plastic Weatherproof Back Box



Wall-Mount Horn Strobe with Plastic Weatherproof Back Box

SpectrAlert Advance Ordering Information

Model	Description
Wall Horn Strobes	
P2RK*†	2-Wire Horn Strobe, Standard cd, Red, Outdoor (includes plastic weatherproof back box)
P2RHK*†	2-Wire Horn Strobe, High cd, Red, Outdoor (includes plastic weatherproof back box)
P2WK*†	2-Wire Horn Strobe, Standard cd, White, Outdoor (includes plastic weatherproof back box)
P2WHK*†	2-Wire Horn Strobe, High cd, White, Outdoor (includes plastic weatherproof back box)
P4RK†	4-Wire Horn Strobe, Standard cd, Red, Outdoor (includes plastic weatherproof back box)
P4WK	4-Wire Horn Strobe, Standard cd, White, Outdoor (includes plastic weatherproof back box)
P2RHK-120	2-Wire Horn Strobe, High cd, Red, Outdoor, 120 V (includes plastic weatherproof back box)
Wall Strobes	
SRK*†	Strobe, Standard cd, Red, Outdoor (includes plastic weatherproof back box)
SRHK*†	Strobe, High cd, Red, Outdoor (includes plastic weatherproof back box)
SWK*†	Strobe, Standard cd, White, Outdoor (includes plastic weatherproof back box)
SWHK*†	Strobe, High cd, White, Outdoor (includes plastic weatherproof back box)
Horns	
HRK†	Horn, Red, Outdoor (includes plastic weatherproof back box)
Accessories	
SA-WBB	Red, Metal Weatherproof Back Box
SA-WBBW	White, Metal Weatherproof Back Box

Notes:
* Add "-P" to model number for plain housing (no "FIRE" marking on cover), e.g., P2RK-P.
† Add "-R" to model number for weatherproof replacement device (no back box included), only for use with weatherproof outdoor flush mounting plate, WTP and WTPW.
"Standard cd" refers to strobes that include 15, 15/75, 30, 75, 95, 110, and 115 candela settings. "High cd" refers to strobes that include 135, 150, 177, and 185 candela settings. **When replacing standard outdoor units both the device and back box must be replaced.**

SYSTEM SENSOR®
3825 Ohio Avenue • St. Charles, IL 60174
Phone: 800-SENSOR2 • Fax: 630-377-6495

AVDS01201 • 3/12

Selectable-Output Low Frequency Sounder and Low Frequency Sounder Strobes for Wall Applications

SPECTRAlert ADVANCE from System Sensor

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

Features

- 520 Hz ± 10% square wave tone
- Plug-in design with minimal intrusion into the back box
- Tamper-resistant construction
- Field-selectable candela settings on wall units: 135, 150, 177, and 185
- Rotary switch for low frequency sounder tone
- 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

Agency Listings

SIGNALING UL LISTED
S4011 (sounder)
S5512 (strobes)

FM APPROVED
3047563

MEA approved
MEA452-05-E

7135-1653:0223
7125-1653:0224

The SpectrAlert Advance series offers the most versatile and easy-to-use line of low frequency sounder and low frequency sounder strobes in the industry. With white and red plastic housings, dual listed for wall and ceiling mounting, SpectrAlert Advance can meet virtually any application requirement.

The wall-mount low frequency sounder, and low frequency sounder strobes were designed to address the NFPA 72 sleeping space requirements that require a low frequency notification appliance that operates within frequency range of 520 Hz ± 10% and is of a square wave tone. Like the entire SpectrAlert Advance product line they 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 520 Hz low frequency sounder tones.

SpectrAlert Advance Specifications

Architect/Engineer Specifications

General

SpectrAlert Advance low frequency sounder and low frequency sounder 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 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. Low Frequency Sounder strobes shall have field-selectable candela settings including 135, 150, 177, and 185. The field selectable tones will sound within the frequency range of 520 Hz ±10% square wave tone and have a permanent marking on the housing that reads “low frequency sounder”.

Low Frequency Sounder

The low frequency sounder shall be a System Sensor SpectrAlert Advance Model _____ listed to UL 464 and shall be approved for fire protective service. The low frequency sounder and the Sync•Circuit™ MDL3 Module accessory, if used, shall be powered from a notification appliance circuit output and shall operate on a nominal 12 or 24 volts (includes fire alarm panels with built in sync). When used with the Sync•Circuit Module MDL3, 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 to 33 volts. If the notification appliances are not UL 9th edition listed with the corresponding panel or power supply being used, then refer to the compatibility listing of the panel to determine maximum devices on a circuit. The low frequency sounder has an option to switch between temporal three pattern, non-temporal (continuous) pattern and coded supply within the frequency range of 520Hz ± 10% square wave tone. The low frequency sounder shall operate on a coded or non-coded power supply.

Low Frequency Sounder Strobe Combination

The low frequency sounder 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 low frequency sounder 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 sounder shall have 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 low frequency sounder on low frequency sounder strobe models shall operate on a non-coded power supply. The field selectable tones will sound within the frequency range of 520 Hz ±10% square wave tone.

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 low frequency sounder at temporal three. Also, while operating the strobes, the module shall silence the low frequency sounder on low frequency sounder strobe models over a single pair of wires. The module shall mount to a $4^{11}/_{16} \times 4^{11}/_{16} \times 2^{1}/_{8}$-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
Frequency Range	520 Hz ± 10%
Strobe Flash Rate	1 flash per second
Nominal Voltage Low Frequency Sounder	Regulated 12 DC/FWR or regulated 24 DC/FWR[1]
Nominal Voltage Range Low Frequency Sounder Strobe	Regulated 24 VDC/FWR[1]
Operating Voltage Range	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)	6.4 inches L x 4.7 inches W x 2.5 inches D (162 mm L x 119 mm W x 64 mm D)
Sounder Dimensions	5.6 inches L × 4.7 inches W × 1.3 inches D (142 mm L × 119 mm W × 33 mm D)
Low Frequency Sounder/Strobe with Surface Mount Back Box Dimensions (SBBR, SBBW)	6.4 inches L x 4.7 inches W x 4.3 inches D (162 mm L x 120 mm W x 108 mm D)
Low Frequency Sounder with Surface Mount Back Box Dimensions (SBBR, SBBW)	5.7 inches L x 4.8 inches W x 3 inches D (145 mm L x 120 mm W x 76 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.

UL Current Draw Data

UL Max. Low Frequency Sounder Current Draw (mA RMS)					
		8–17.5 Volts		16–33 Volts	
Sound Pattern	dB	DC	FWR	DC	FWR
Temporal 3	High	191	262	138	166
Continuous	High	292	384	138	208
Coded	High	292	388	153	205

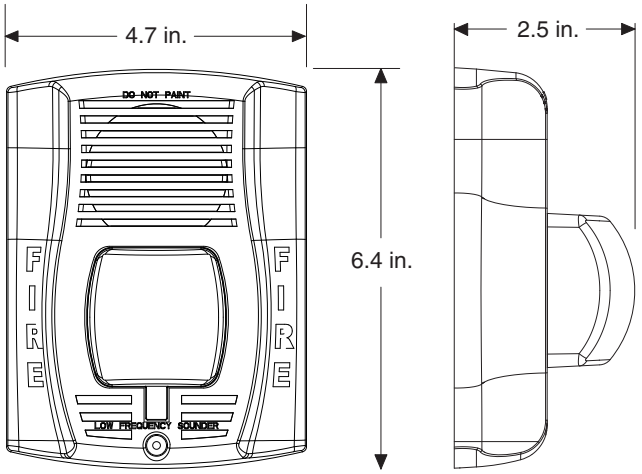
UL Max. Current Draw (mA RMS), 2-Wire Low Frequency Sounder Strobe, High Candela Range									
	16–33 Volts					16–33 Volts			
DC Input	135	150	177	185	FWR Input	135	150	177	185
Temporal 3	277	292	325	344	Temporal 3	296	309	343	351
Continuous	337	362	387	417	Continuous	393	395	432	433

Low Frequency Sounder Tones and Sound Output Data

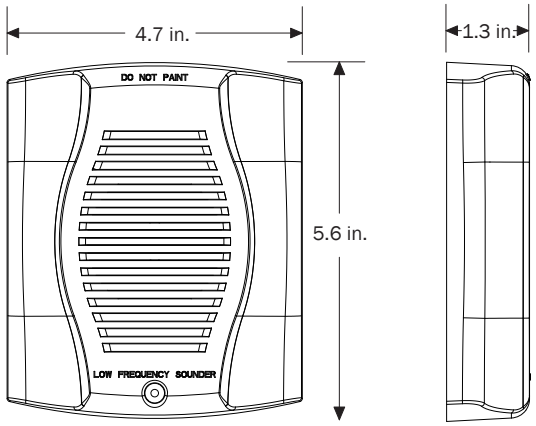
Low Frequency Sounder and Low Frequency Sounder Strobe Output (dBA)									
		8–17.5 Volts		16–33 Volts		24-Volt Nominal			
						Reverberant		Anechoic	
Switch Position	Sound Pattern	DC	FWR	DC	FWR	DC	FWR	DC	FWR
1	Temporal 3	76	76	76	76	76	76	86	86
2	Continuous	80	80	80	80	80	80	90	90
3†	Coded	80	80	80	80	80	80	90	90

† Sounder ratings provided are for continuous voltage as provided by the NAC

SpectrAlert Advance Dimensions



Wall-mount low frequency sounder strobes



Wall-mount low frequency sounder

SpectrAlert Advance Ordering Information

Model	Description
Wall Low Frequency Sounder Strobes	
P2RH-LF	2-Wire Low Frequency Sounder Strobe, High cd, Red
P2WH-LF	2-Wire Low Frequency Sounder Strobe, High cd, White
Low Frequency Sounders	
HR-LF	Low Frequency Sounder, Red
HW-LF	Low Frequency Sounder, White
Accessories	
SBBR	Surface Mount Back Box, Wall, Red
SBBW	Surface Mount Back Box, Wall, White
TR-HS	Trim Ring, Wall, Red

Notes:
"High cd" refers to strobes that include 135, 150, 177, and 185 candela settings.

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

AVDS16404 • 1/15

PRODUCT DATA SHEET

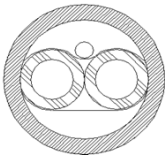
Controlled Document - Engineering Drive

1530 Shields Drive
Waukegan, IL 60085
Toll-Free (800) 323-9355
Fax: (847) 689-1192

PART NUMBER: 98300
DESCRIPTION: 18/2 SOLID SHIELDED FPLR
CONSTRUCTION: This cable consists of two bare copper insulated conductors with an overall shield with a drain. The overall assembly has an overall jacket.
APPROVALS: UL Standard 1424 and 444, NEC Articles 760 and 800.
APPLICATION: Power Limited Fire Alarm Cable and Communications Cable for Riser Applications

Construction Parameters:

Cable Cross-Section



Conductor	18 AWG Bare Copper
Stranding	Solid
Insulation Material	PVC
Insulation Thickness	0.008" Nom.
Insulated Conductor Diameter	0.056" Nom.
Number of Conductors	2
Lay Length	4.00" Nom.
Shield	Alum/Mylar
Drain	24 AWG Solid Tinned Copper
Jacket Material	PVC
Jacket Thickness	0.014" Nom.
Overall Cable Diameter	0.151" Nom.
Approximate Cable Weight	19.2 Lbs/1M' Nom.
Flame Rating	UL 1666 Riser Flame Test

Electrical Properties:

Temperature Rating	-20^{O}C to 60^{O}C
Operating Voltage	300 V RMS Max.
Capacitance Between Conductors @ 1 KHz	63 pF/ft Nom.
Capacitance Between Conductors to Shield @ 1 KHz	115 pF/ft Nom.
DC Resistance per Conductor @ 20^{O}C	6.32 Ohms/1M' Nom.

Insulation Colors	Black Red
Jacket Color	Red (Other colors available for minimum order)
Legend (Surface Ink Print)	COLEMAN CABLE 98300 18 AWG 2/C C(ETL)US (ETL CODE) TYPE CMR/CL3R/FPLR SUN RES - TYPE CMG FT4

This product complies with European Directive 2002/95/EC (RoHS)

On special orders, the customer will accept all factory lengths and +/- 10 percent of total order requested.
The jacket is sequentially footmarked. Rip cord added under jacket for ease of jacket removal.

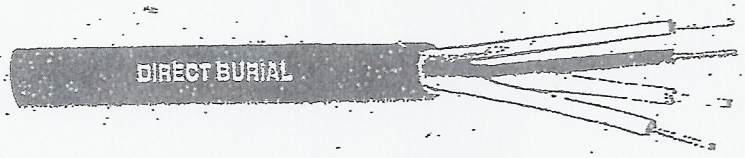
Customer Name_____ Date Signed _____

Customer Approval _____

Specification Issue Date: January 19, 2010

Series 213
Fire Protective

Solid Direct Burial/Sunlight Resistant Fire Alarm Cable



Underwriters Laboratories Inc.® Listed Type FPLR

- ASTM solid bare copper, 60 degree C PVC insulation.
- Fully color coded, cabled construction.
- Black 60 degree C direct burial and sunlight resistant PVC jacket (part numbers ending in SJ have an Aluminum Mylar Shield and a stranded tin copper drain wire).
- Underwriter's Laboratories FPLR subject UL 1424 NEC 760 direct burial/sunlight resistant.
- Fire Alarm Systems, with a need to run cable in direct sunlight or underground without the use of conduit. These cables can be used in a Riser application between floors in a building.

CATALOG NUMBER	NUMBER OF COND'S	NOMINAL O.D.	WEIGHT LBS/MFT
#18 AWG SOLID			
213-18-1-2J	2	.221	25
213-18-1-2SJ	2	.226	29
213-18-1-4J	4	.246	41
213-18-1-4SJ	4	.255	45
#16 AWG SOLID			
213-16-1-2J	2	.242	33
213-16-1-2SJ	2	.247	39
213-16-1-4J	4	.281	56
213-16-1-4SJ	4	.286	62

Color code: #1 Black, #2-Red, #3-Brown, #4-Blue (Color Code V)

CATALOG NUMBER	NUMBER OF COND'S	NOMINAL O.D.	WEIGHT LBS/MFT
#14 AWG SOLID			
213-14-1-2J	2	.270	45
213-14-1-2SJ	2	.275	54
213-14-1-4J	4	.314	79
213-14-1-4SJ	4	.320	89
#12 AWG SOLID			
213-12-1-2J	2	.304	64
213-12-1-2SJ	2	.310	78
213-12-1-4J	4	.347	115
213-12-1-4SJ	4	.362	129

Color code: #1-Black, #2-Red, #3-Brown, #4-Blue (Color Code V)

Note: California State Fire Marshal Listing # 7160-0972:100.
Higher Conductor Counts Available Subject to Minimum Orders.

PRODUCT DATA SHEET

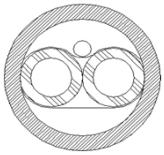
Controlled Document - Engineering Drive

1530 Shields Drive
Waukegan, IL 60085
Toll-Free (800) 323-9355
Fax: (847) 689-1192

PART NUMBER: 98430
DESCRIPTION: 14/2 SOLID SHIELDED FPLR
CONSTRUCTION: This cable consists of two bare copper insulated conductors with an overall shield with a drain. The overall assembly has an overall jacket.
APPROVALS: UL Standard 1424 , NEC Articles 760.
APPLICATION: Power Limited Fire Alarm Cable for Riser Applications

Construction Parameters:

Cable Cross-Section



Conductor	14 AWG Bare Copper
Stranding	Solid
Insulation Material	PVC
Insulation Thickness	0.008" Nom.
Insulated Conductor Diameter	0.080" Nom.
Number of Conductors	2
Lay Length	4.00" Nom.
Shield	Alum/Mylar
Drain	24 AWG Solid Tinned Copper
Jacket Material	PVC
Jacket Thickness	0.017" Nom.
Overall Cable Diameter	0.204" Nom.
Approximate Cable Weight	38.7 Lbs/1M' Nom.
Flame Rating	UL 1666 Riser Flame Test

Electrical & Enviromental Properties:

Temperature Rating	-20^{O}C to 60^{O}C
Operating Voltage	300 V RMS Max.
Capacitance Between Conductors @ 1 KHz	79 pF/ft Nom.
Capacitance Between Conductors to Shield @ 1 KHz	146 pF/ft Nom.
DC Resistance per Conductor @ 20^{O}C	2.54 Ohms/1M' Nom.

Insulation Colors	Black Red
Jacket Color	Red (Other colors available for minimum order)
Legend (Surface Ink Print)	COLEMAN CABLE * 98430 14 AWG 2/C (ETL)US (ETL CODE) TYPE FPLR SUN RES TYPE CMG FT4

This product complies with European Directive 2002/95/EC (RoHS)

On special orders, the customer will accept all factory lengths and +/- 10 percent of total order requested.
The jacket is sequentially footmarked. Rip cord added under jacket for ease of jacket removal.

Customer Name_____ Date Signed _____

Customer Approval _____

Specification Issue Date: December 29, 2010

DTK-120SRD

Series Connected Surge Protector with Dry Contacts

DITEK's DTK-120SRD protects dedicated 120VAC power circuits that feed control panels and other critical equipment. The hybrid series design provides maximum critical load protection, and includes dry contacts for remote notification of surge protection status. EMI/RFI filtering ensures clean power for connected equipment.

Product Features

- Series design for fast response and best protection
- Compact design fits in a variety of control panels
- Suitable for use on circuit breakers rated at 10kA AIC
- Multi-stage hybrid circuit design
- UL1283 EMI/RFI filtering
- LED indicates protection status
- Form C Dry Contact circuit

Application

- Fire Alarm Panels
- Control Panels
- 120VAC Single Phase Critical Loads
- UL Listed Control Panels where UL Recognized Components are Required

Accessories

- DIN Rail Mounting Kit – Part Number DTK-DRK

Technical Specifications

Service Voltage:	120VAC Single Phase
MCOV:	150VAC
Protection Modes:	All modes – L-G, L-N, N-G
Voltage Protection Rating:	600VAC
Surge Current Rating:	54,000 Amps per phase
Max. Continuous Current:	20 Amps
SCCR:	10kA
Nominal Discharge Current Rating (I_n):	3kA
Operation Frequency:	40Hz – 400Hz
EMI/RFI Filtering Attenuation:	Up to 35dB, 100kHz -100MHz

Mechanical Characteristics

Connection Method:	Hardwired, series configuration
Housing:	ABS
Operating Temperature:	-40°F - 185°F (-40°C - 85°C)
Maximum Humidity:	95% non-condensing
Dimensions:	6.87"L x 3.5W x 2.5"H (174050mm x 88.90mm x 63.50mm)
Weight:	12.16 oz (0.35kg)

Quality, Standards & Approval

Agency Approvals:	UL1449, cUL, UL1283
SPD Type:	Type 2 Component Assembly
Standards Compliance:	IEEE C62.41.1 –2, IEEE C62.45
Warranty:	Ten Year Limited Warranty

One DITEK Center 1720 Starkey Road - Largo, FL 33771
Phone: 1-800-753-2345 Direct: 727-812-5000
Technical Support: 1-888-472-6100
www.ditekcorp.com

Doc. Number: SPS-100007-005 Rev 3 03/16

DTK-LVLP Series

Voice, Data and Signaling Circuit Surge Protection

DTK-4LVLPX

DTK-2LVLPLV

DITEK's DTK-LVLP Low Voltage Line Protector series of signal, data and loop circuit surge protectors provide strong protection in a compact hard wired package. Models are available to protect up to 8 pairs. LVLAWG models can handle #14-#10 AWG wiring connections. Both are suitable for AC and DC circuits.

Product Features

- Protect 1, 2, 4 or 8 pairs to match your specific configuration needs
- Series connection, parallel function adds no resistance to loop circuits
- Seven voltage levels available to protect all types of voice/data/signaling applications
- "SCP" models provide automatic resetting fuse and sneak current protection

Applications

- 4-20mA Current Loops
- Alarm Panel NAC, SLC, PIV and IDC Loops
- Burglar Alarm Panels
- Speakers and Phones

Accessories

- DIN Rail Kit (DTK-DRK)

Technical Specifications

Protection Modes:	Line-Ground (All)
Surge Current Rating:	2,000 Amps per pair (5V – 48V) 9,000 Amps per pair (75V – 130V)
Max. Continuous Current:	5 Amps, 0.15 Amps (SCP)

Mechanical Characteristics

Connection Method:	Screw Terminals : #22 - #16 AWG (LVLP), #14 - #10 AWG (LVLAWG)
Housing:	ABS
Operating Temperature:	-40°F - 158°F (-40°C - 70°C)
Maximum Humidity:	95% non-condensing
Dimensions (1LVL – 4LVL):	3.0L x 1.6"W x 1.6"H (76mm x 41mm x 41mm)
Dimensions (8LVL):	4.8"L x 2.3"W x 1.5 "H (122mm x 58mm x 35mm)
Weight:	2.4 oz (68g)

Quality, Standards & Approval

Agency Approvals:	UL497A, UL497B
Warranty:	Ten Year Limited Warranty

Selection Guide

Example: DTK-2LVLPSCPLV

DTK-2LVLPSCPLV

2 Pairs 24 Volts

VOLTAGE LEVEL	D	X	LV	OPX	RUV
Pairs Available:	2, 4, 8	1, 2, 3, 4	1, 2, 4, 8	2, 4	2, 4
Service Voltage:	5V	12V	24V	48V	130V
Sneak Current Protection Available? (SCP):	Yes	Yes	Yes	No	Yes
MCOV:	8VDC	18VDC	38VDC	66VDC	175VDC
Clamping Voltage:	12V	22V	47V	82V	204V

One DITEK Center 1720 Starkey Road - Largo, FL 33771
Phone: 1-800-753-2345 Direct: 727-812-5000
Technical Support: 1-888-472-6100
www.ditekcorp.com

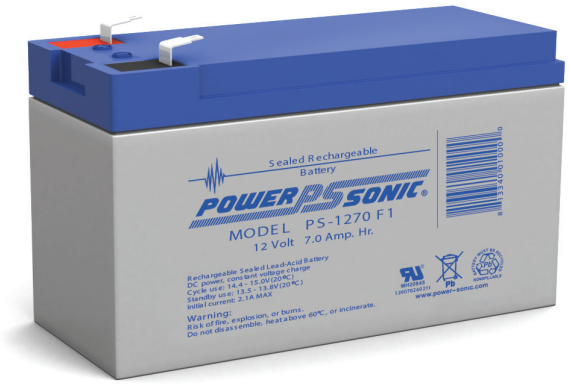
Doc. Number: SPS-100030-001 Rev 9 06/16

ISO 9001 UL LISTED c UL us MADE IN U. S. A.

PS-1270 12 Volt 7.0 AH

Rechargeable Sealed Lead Acid Battery

We've Got The Power.™



Features

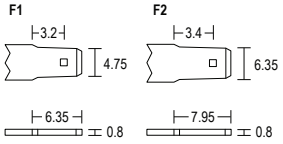
- Absorbent Glass Mat (AGM) technology for superior performance
- Valve regulated, spill proof construction allows safe operation in any position
- Power/volume ratio yielding unrivaled energy density
- Rugged impact resistant ABS case and cover (UL94-HB)
- Approved for transport by air. D.O.T., I.A.T.A., F.A.A. and C.A.B. certified
- U.L. recognized under file number MH 20845

Terminals: (mm)

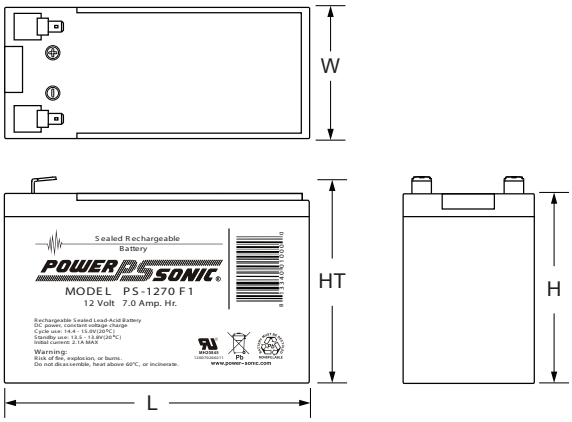
- F1 - Quick disconnect tabs, 0.187" x 0.032"- Mate with AMP. INC. FASTON "187" series

— OR —

- F2 - Quick disconnect tabs, 0.250" x 0.032" - Mate with AMP. INC FASTON "250" series



Physical Dimensions: in (mm)



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

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

Performance Specifications

Nominal Voltage ..... 12 volts (6 cells)

Nominal Capacity

20-hr.	(350mA to 10.50 volts)	7.00 AH
10-hr.	(650mA to 10.50 volts)	6.50 AH
5-hr.	(1.2A to 10.20 volts)	6.00 AH
1-hr.	(4.5A to 9.00 volts)	4.50 AH
15-min.	(14A to 9.00 volts)	3.50 AH

Approximate Weight ..... 4.80 lbs. (2.18 kg)

Energy Density (20-hr. rate) ..... 1.49 W-h/in3 (90.95 W-h/l)

Specific Energy (20-hr. rate) ..... 17.50 W-h/lb (38.58 W-h/kg)

Internal Resistance (approx.) ..... 23 milliohms

Max Discharge Current (7 Min.) ..... 21.0 amperes

Max Short-Duration Discharge Current (10 Sec.) .... 70.0 amperes

Shelf Life (% of nominal capacity at 68°F (20°C)

1 Month	97%
3 Months	91%
6 Months	83%

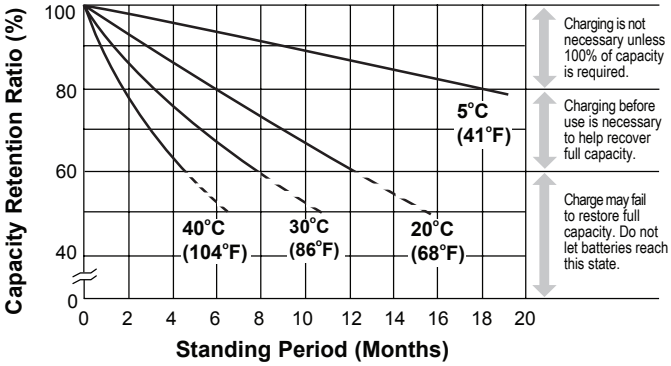
Operating Temperature Range

Charge	-4°F (-20°C) to 122°F (50°C)
Discharge	-40°F (-40°C) to 140°F (60°C)

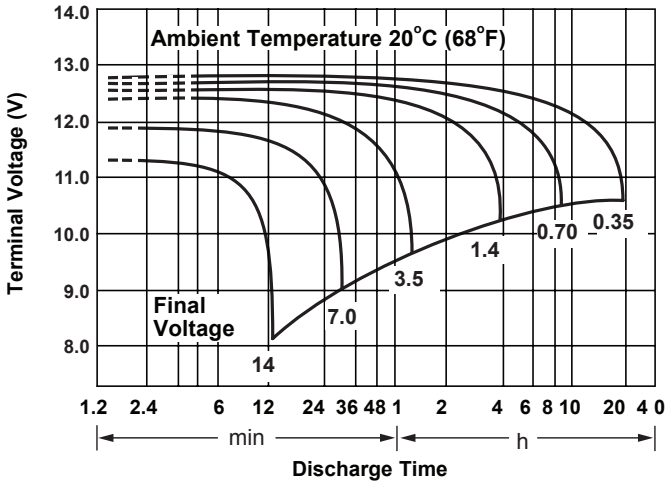
Case ..... ABS Plastic

Power-Sonic Chargers PSC-12800A, 12800A-C

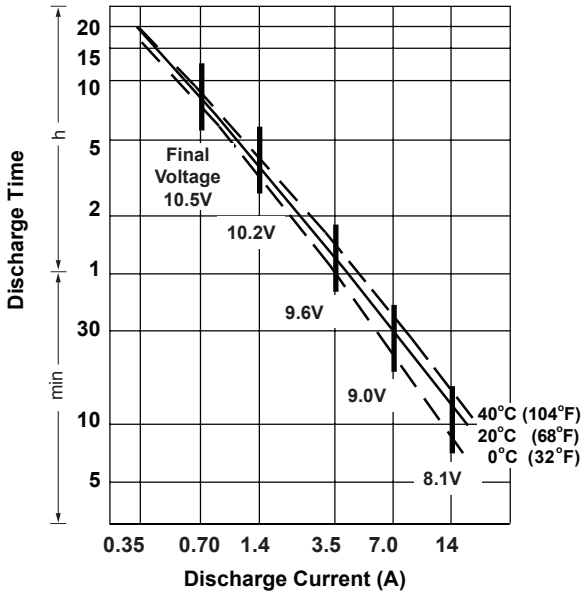
Shelf Life & Storage



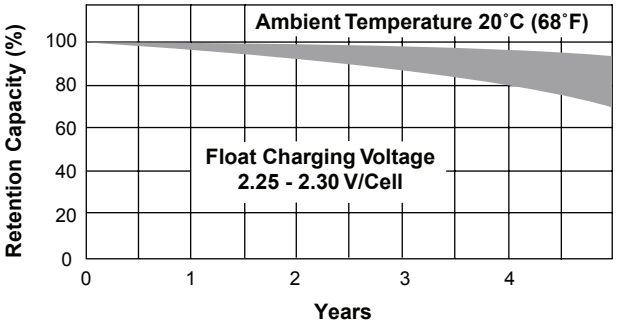
Discharge Characteristics



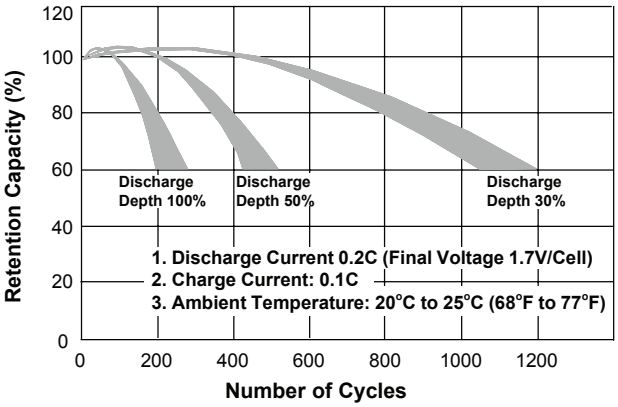
Discharge Time vs. Discharge Current



Life Characteristics in Stand-By Use



Life Characteristics in Cyclic Use



Charging

Cycle Applications: Limit initial current to 2.1A. Charge until battery voltage (under charge) reaches 14.4 to 14.7 volts at 68°F (20°C). Hold at 14.4 to 14.7 volts until current drops to under 70mA. Battery is fully charged under these conditions, and charger should be disconnected or switched to "float" voltage.

"Float" or "Stand-By" Service: Hold battery across constant voltage source of 13.5 to 13.8 volts continuously. When held at this voltage, the battery will seek its own current level and maintain itself in a fully charged condition.

Note: Due to the self-discharge characteristics of this type of battery, it is imperative that they be charged within 6 months of storage, otherwise permanent loss of capacity might occur as a result of sulfation.

Chargers

Power-Sonic offers a wide range of chargers suitable for batteries up to 100AH. Please refer to the Charger Selection Guide in our specification sheets for "C-Series Switch Mode Chargers" and "Transformer Type A and F Series". Please contact our Technical department for advice if you have difficulty in locating suitable models.

Further Information

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

Contact Information

www.power-sonic.com

DOMESTIC SALES	CUSTOMER SERVICE	TECHNICAL SUPPORT	INTERNATIONAL SALES
Tel: +1-619-661-2020	Tel: +1-619-661-2030	Tel: +1-619-661-2020	Tel: +1-650-364-5001
Fax: +1-619-661-3650	Fax: +1-619-661-3648	Fax: +1-619-661-3648	Fax: +1-650-366-3662
national-sales@power-sonic.com	customer-service@power-sonic.com	support@power-sonic.com	international-sales@power-sonic.com

CORPORATE OFFICE • 7550 Panasonic Way • San Diego, CA 92154 • USA • Tel: +1-619-661-2020 • Fax: +1-619-661-3650

0816 1M