

OFFICE FIRE ALARM LAYOUT scale: 1/8"=1'

north

	SEQUENCE OF OPERATIONS														
FIRE ALARM SYSTEM MATRIX				-	-	BUIL	DING	SYSTE	ΕΜΟ	JTPUT	S	-			
	ACTUATE COMMON ALARM SIGNAL INDICATOR	ACTUATE AUDIBLE ALARM SYSTEM	ACTUATE COMMON SUPERVISORY SIGNAL INDICATOR	ACTUATE AUDIBLE SUPERVISORY SIGNAL	ACTUATE COMMON TROUBLE SIGNAL INDICATOR	ACTUATE AUDIBLE TROUBLE SIGNAL	ACTIVATE GENERAL EVACUATION SIGNAL	UNLOCK EXITS AND RELEASE DOOR HOLDERS	DISPLAY CHANGE OF STATUS	ACTIVATE EXTERNAL HORN/STROBE	TRANSMIT FIRE ALARM SIGNAL TO CENTRAL STATION	TRANSMIT SUPERVISORY SIGNAL TO CENTRAL STATION	TRANSMIT TROUBLE SIGNAL TO CENTRAL STATION	RETURN ELEVATOR TO 2ND FLOOR	RETURN ELEVATOR TO 1ST FLOOR
MANUAL FIRE ALARM PULL BOXES	Х	X					х	Х	х	х	Х				
AREA SMOKE AND CARBON MONOXIDE DETECTORS	Х	x					Х	Х	х	х	Х				
BUILDING MULTI CRITERIA DETECTORS	Х	Х					Х	Х	Х	Х	Х				
DUCT SMOKE DETECTOR			Х	Х			Х		Х			Х			
FIRE ALARM A.C. POWER FAILURE					Х	Х	Х		Х				Х		
FIRE ALARM SYSTEM LOW BATTERY					Х	Х	Х		Х				Х		
OPEN CIRCUIT					Х	Х	Х		Х				Х		
GROUND FAULT					Х	Х	Х		Х				Х		
NOTIFICATION APPLIANCE CIRCUIT SHORT					Х	Х			Х				Х		
SPRINKLER WATER FLOW	Х	Х					Х		Х	Х	Х				
SPRINKLER TAMPER			Х	Х			Х		Х			х			

# GENERAL NOTES

1. WORK SHALL COMPLY WIH ALL APPLICABLE CODES.

2. AS BUILT DRAWINGS ALONG WITH ONE YEAR WARRANTY LETTER WILL BE FORWARDED TO THE APPROPRIATE PARTY UPON COMPLETION OF PROJECT.

3. 1" CONDUIT MUST BE PROVIED AT ALL NAC PANELS. 4. MINIMUM OF 1/2" SLEEVE MUST BE PROVIDED FOR ALL RTU 2000 CFM OR GREATER.

5. ALL WAREHOUSE HORN-STROBES SHALL BE 30 FEET FROM FINSIHED FLOOR.

FIRE ALARM SYMBOL LEGEND								
FACP	-FIRE ALARM CONTROL PANEL		-HEAT DETECTOR					
NAC	-NAC PANEL	(WF)	-WATER FLOW MONITOR MODULE					
$\square$	-CEILING MOUNT HORN-STROBE	$\langle \uparrow \rangle$	-TAMPER MONITOR MODULE					
X	-CEILING MOUNT STROBE		- RETURN DUCT DETECTOR					
\$	-PHOTO ELECTRIC SMOKE DETECOR.	R	-RELAY					
F	-PULL-STATION	\$	-END OF LINE RESISTOR					
ANN	-Remote Annunciator		- MONITOR MODULE					



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LEE'S SUMMIT LOGISTICS BUILDING A LOT I

**PROJECT INFORMATION** 

NW CORNER OF NE TUDOR RD & MAIN ST LEE'S SUMMIT, MO 64086

ISSUE DATES	
PERMIT SET	02.18.22
CITY COMMENTS	10.17.22

210300











WAREHOUSE FIRE ALARM LAYOUT



	::::::::::::::::::::::::::::::::::::::	
	ANOTHER PROBLEM SULLA	
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		<b>A K G H I I E G I U K E</b> 5719 LAWTON LOOP E. DR. #212 INDIANAPOLIS, IN 46216 O :: 317 . 288 . 0681 F :: 317 . 288 . 0753
		SCANNELL PROPERTIES
		CERTIFICATION
		NUMBER HISSOCHING
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		LEE'S SUMMIT LOGISTICS BUILDING A LOT I
		NW CORNER OF NE TUDOR RD & MAIN ST LEE'S SUMMIT, MO 64086
		ISSUE DATES         PERMIT SET       02.18.22         CITY COMMENTS       10.17.22
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210300



# Submittal Catalog

For

# LEE'S SUMMIT LOGISTICS BUILDING A LOT I

NW CORNER OF NE TUDOR RD & MAIN ST LEE'S SUMMIT, MO 64086

Prepared By:



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Tel: 816-918-9917



# Table of Contents

FACP SILENT KNIGHT 6808

### **BATTERY CALCULATIONS**

SILENT KNIGHT SK-PHOTO-W

SILENT KNIGHT SK-PULL

SILENT KNIGHT MINI MON

SILENT KNIGHT SK-DUCT

SILENT KNIGHT SL-RELAY

SYSTEM SENSOR CEILING MOUNT HORN STROBE

SYSTEM SENSOR WALL MOUNT HORN STROBE



### Addressable Fire Alarm Control Panels

# 6808

Addressable Fire Alarm Control Panel

The 6808 is an addressable fire alarm control panel (FACP) that is a direct replacement for the 5808 FACP. The 6808 can be configured to achieve a point capacity of 198 points. It has one built-in signaling line circuit (SLC), which can support 99 System Sensor® (SK) sensors and 99 SK modules or 127 Hochiki® (SD) devices per loop.

A common communications and annunciation link allows up to 17 panels to be connected via copper or fiber optic cable. A designated panel is configured as the communicator for all panels in the link for convenient single-point communications. It also has a built-in, dualline POTS and IP communicator with additional cellular options available.

The 6808 system can be enhanced by adding modules such as the 6860 remote annunciator which also has four programmable function buttons to help automate tasks and reduce time spent at the panel.

SWIFT® wireless compatibility provides options for wireless detection through a Class A mesh network. It is ideal for hard-to-wire locations, buildings where new wiring is not allowed, or to provide an easy install fire system for new construction projects. SWIFT devices can be combined with other hard-wired 6808 compatible devices.

The 6808 also has a form-C trouble relay, two programmable form-C relays, along with powerful features such as drift compensation, pretrouble maintenance alert, a built-in sensor test to comply with NFPA 72 calibration testing requirements, and calibration trouble alert.



6808

The supports a variety of devices, including the 6860, 5860, and 6855 remote annunciators, 5824 serial parallel printer interface module (for printing system reports), the 5496 NAC expander, 5895XL power module, and SK or SD devices.

### FEATURES & BENEFITS

- Capable of providing up to 198 points to satisfy smaller installation needs
- Connect up to 17 panels on one site with convenient singlepoint access using the SK-NIC Network Interface Card. Connected panels can have mixed compatible FACP models
- Convenient field-upgradeable firmware
- Built-in dual path POTS and IP communications with optional cellular models available for reliable backup reporting
- 6860 annunciator with a 4 x 40 large display
- Four userprogrammable buttons minimize time spent executing complex or routine tasks
- Built-in USB interface for convenient and quick programming
- Programmable date setting for automatic and convenient Daylight Saving Time changes
- JumpStart<sup>®</sup> auto programming reduces installation time
- 125 software zones and 125 output groups for flexible design options

#### SIGNAL LINE CIRCUIT (SLC)

The 6808 SLC loop supports multiple device types, maintenance alerts, and a built-in sensor test to comply with NFPA 72 calibration testing requirements.

#### INDICATOR LIGHTS

- General Alarm (Red): Flashes if in alarm; solid when alarm is silenced
- Supervisory (Yellow): Flashes if a supervisory condition exists; solid when supervisory is silenced
- System Troubles (Yellow): Flashes if a trouble condition exists; solid when trouble is silenced
- System Silenced (Yellow): On when an alarm, trouble or supervisory condition has been silenced but not yet cleared
- System Power (Green): Flashes for AC failure; solid when power systems are normal

#### **USER INTERFACE**

The 6808 built-in 4 x 20 annunciator with 80 character LCD display and large easy-to-use tactile touchpad can be used for system operation, programming and maintenance. It has five LEDs for alarm, supervisory, system trouble, system silenced and system power.

System operations include silencing alarms and troubles, resetting alarms and the display of alarm troubles and memory. The system's non-volatile event history buffer stores 1,000 events for viewing from the builtin or remote annunciator. System operations can be initiated with a mechanical firefighter's key or a valid 4- to 7-digit operator's code.

#### PROGRAMMING

The 6808 system offers several options to simplify and speed-up programming. JumpStart® auto programming minimizes programming required to start a new system. The built-in keypad, or the 6860, 5860 or 6855 remote annunciators give you on-site access to current system programming. Programming can also be accomplished using the Windows®-based Honeywell Fire Software Suite (HFSS) program.

#### SOFTWARE TOOLS

**SKST:** Silent Knight Selection Tool provides the installer or design architect with a Windows® software system configuration tool to create a detailed Bill of Material (BOM) and battery calculations.

HFSS: Honeywell Fire Software Suite provides communication and panel programming, detector status, event history and additional data. Requires a PC running Microsoft® Windows®.

#### **ADDITIONAL INFORMATION**

Twisted-unshielded pair wire is recommended.

The 6808 also has 13 preset notification cadence patterns (including ANSI 3.41).

AGENCY LISTINGS AND APPROVALS NPFA 13, NFPA 15, NFPA 16, NFPA 70, NFPA 72: Central station; remote Signaling; Local Protective Signaling Systems; Auxiliary Protected Premises Unit; Water Deluge releasing service. Suitable for automatic, manual, waterflow, sprinkler supervisory (DACT non-coded) signaling services

- UL Listed: S2766
- CSFM: 7165-0559:0502
- FDNY: COA# 6246
- FM approved

#### ORDERING INFORMATION

6808: Addressable Fire Alarm Control Panel. (Red cabinet).

#### **COMPATIBLE ANNUNCIATORS**

6860: 4x40 LCD remote fire
annunciator (4 lines and up to
160 characters) per system; four
programmable buttons
5860: 4x20 LCD remote fire
annunciator. 5860 is gray; 5860R is red
6855: 4x20 LCD remote fire
annunciator

**5865-3 or 5865-4:** LED annunciators can display up to 30 LEDs (15 red and 15 yellow). The 5865-4 has key switches for silence and reset, and a system trouble LED.

**5880:** LED / IO module has 40 programmable LED outputs and eight supervised dry contact inputs which are useful for custom applications. You can use up to eight 5880 modules on one control panel for maximum flexibility. Its compact size allows mounting inside the annunciator, or in an accessory cabinet.

#### 6808 COMPATIBLE DEVICES AND ACCESSORIES

See the data sheets listed below for a complete listing of the SK, SD or SWIFT devices.

53623: SK Devices Data Sheet 53624: SD Devices Data Sheet 350614, 350616 & 350618: SWIFT wireless devices For a complete and current listing of compatible devices and accessories, visit www.silentknight.com.

**Important:** You cannot mix SK and SD devices in the same fire alarm system.

#### SK COMPATIBLE ADDRESSABLE DEVICES

**SK-ACCLIMATE:** Multi criteria photoelectric smoke detector with thermal 135°F fixed temperature

**SK-BEAM:** Reflected beam smoke detector without test feature

**SK-BEAM-T:** Reflected beam smoke detector with test feature

SK-CONTROL: Supervised control module SK-CONTROL-6: Six circuit supervised control module

**SK-DUCT:** Photoelectric duct smoke detector with extended air speed range **SK-FIRE-CO:** Four criteria fire and carbon monoxide detector

**SK-HEAT:** Fixed thermal detector (135°F) **SK-HEAT-W:** Fixed thermal detector (135°F), white

**SK-HEAT-ROR:** Fixed rate of rise detector (135°F)

**SK-HEAT-ROR-W:** Fixed rate of rise detector (135°F), white

**SK-HEAT-HT:** Fixed high temperature thermal detector (190°F)

**SK-HEAT-HT-W:** Fixed high temperature thermal detector (190°F), white

SK-ISO: Fault isolator module

SK-MINIMON: Mini monitor module

SK-MONITOR: Monitor module

**SK-MONITOR-2:** Dual input monitor module

SK-MON-10: 10 input monitor module

SK-PHOTO: Photoelectric smoke detector SK-PHOTO-W: Photoelectric smoke detector, white

**SK-PHOTO-T:** Photoelectric smoke detector with thermal (135°F fixed temperature)

**SK-PHOTO-T-W:** Photoelectric smoke detector with thermal (135°F fixed temperature), white

**SK-PHOTOR:** Photoelectric detector with remote test capability

**SK-PHOTO-R-W:** Photoelectric detector with remote test capability, white

**SK-PULL-SA:** Addressable single action pull station

**SK-PULL-DA:** Addressable dual action pull station

SK-RELAY: Addressable relay module SK-RELAY-6: Addressable Six relay control module

**SK-RELAYMON-2:** Addressable Dual relay/monitor module

**SK-ZONE:** Addressable zone interface module

**SK-ZONE-6:** Six zone interface module

B300-6(-IV): 6" base for SK-W Series B210LP: 6" mounting base

B501(-BL,-IV,-WHITE): 4"flangeless base B501: 4" Flangeless mounting base B200S(-IV,-WH): Intelligent sounder base B200S: Intelligent sounder base B200S-LF(-IV,-WH): Low-Frequency intelligent sounder base B200S-LF: Low-frequency intelligent sounder base B224RB(-IV,-WH): Relay base B224RB: Relay base B224BI(-IV,-WH): Isolator base B224BI: Isolator base

# SD COMPATIBLE ADDRESSABLE DEVICES

**SD505-6AB:** Addressable 6" base **SD505-6IB:** Addressable 6" short circuit isolator base

SD505-6RB: Addressable 6" relay base SD505-6SB: Addressable 6" sounder base SD500-AIM: Addressable input module (switch input)

**SD500-ANM:** Addressable notification module

**SD500-ARM:** Addressable relay module **SD505-DTS-K:** Remote test switch and LED indicator for the SD505-DUCTR

**SD505-DUCT:** Addressable Duct Smoke Detector.

**SD505-DUCTR:** Addressable Duct Detector housing with relay base.

**SD505-HEAT:** Absolute temperature heat detector. Trip point range from 135°F–150°F (0°C–37°C).

**SD500-LIM:** Addressable Line isolator module

**SD500-MIM:** Addressable Mini input monitor module (switch input)

**SD505-PHOTO:** Photoelectric smoke detector

**SD500-PS/-PSDA:** Addressable Single or dual action pull station

**SD500-SDM:** Addressable smoke detector module

#### AUDIBLE/VISIBLE DEVICES

These AV devices are all 2-wire. Color: "R" indicates red; "W" denotes white. For a complete listing of Silent Knight AV devices go to www.silentknight.com.

CHSRL/CHSWL: Wall chime/strobe CHSCRL/CHSCWL: Ceiling chime/strobe CHRL/CHWL: Wall chime HRL/HWL: Wall horn P2RL/P2WL: Wall horn/strobe PC2RL/PC2WL: Ceiling horn/strobe SRL/SWL: Wall strobe SCRL/SCWL: Ceiling strobe SPSRL/SPSCWL: Ceiling speaker/strobe SPSRL/SPSWL: Wall speaker SPCRL/SPCWL: Ceiling speaker

#### SWIFT WIRELESS DEVICES

SWIFT is only compatible with System Sensor (SK) devices. It is not compatible with Hochiki (SD) devices. WSK-WGI: Wireless Gateway

**WSK-PHOTO:** Wireless Photoelectric smoke detector

**WSK-PHOTO-T:** Wireless Multi-criteria photoelectric smoke detector with thermal detection (135°F fixed temperature) and B510W 4" base

**WSK-HEAT:** Wireless Heat, (135°F fixed temperature) and B510W 4" base

WSK-HEAT-ROR: Wireless heat, ROR (135°F fixed temperature) and B510W 4" base

WSK-MONITOR: Wireless monitor module WSK-RELAY: Wireless relay module

**W-USB:** SWIFT Tools USB transceiver used for communication with SWIFT devices

#### SBUS ACCESSORIES

**5496:** A 6 amp notification power expander with four power-limited notification appliance circuit outputs.

**5883:** Relay Interface. Provides 10 Form C relays.

**5824:** Serial/Parallel Printer Interface Module for printer connection.

**5895XL:** Power Supply with six Flexput<sup>™</sup> circuits, and two Form C relays. Max. 16 per system.

**5815RMK:** Remote mounting kit. Dimensions: 10 3/8"W x 10-3/16"H x 3"D

#### **COMMUNICATION OPTIONS**

**CELL-CAB-SK:** Cellular communicator, metal enclosure with lock/key\*

**CELL-MOD:** Cellular communicator, plastic enclosure\*

\*Sole path, powered by panel.

**IPGSM-4G:** Dual path fire alarm communicator, cellular and/or IP (primary or backup, selectable)

**SK-IP-2:** Remote reporting via the Internet. Requires a VisorAlarm<sup>®</sup> receiver at the central station

#### MISC. ACCESSORIES

**SK-NIC:** Network Interface Card. Provides a common communications link for the 6808.

SK-NIC-KIT: Installation Accessory Kit SK-FML: Fiber-Optic Multi Mode, transmitter and receiver

SK-FSL: Fiber-Optic Single Mode

**RBB:** Remote battery box accessory cabinet for batteries that are too large to fit in the FACP cabinet. Dimensions: 16" W x 10" H x 6" D (406mm W x 254mm H x 152mm D).

**SK-SCK:** Seismic Compliance Kit used to securely fasten batteries to the fire panel.

# 6808 Technical Specifications

#### PHYSICAL

Overall Dimensions: 16.36"W x 26.37"H x 3.91"D Shipping Weight: 32 lbs. Color: Red

#### ENVIRONMENTAL

**Operating Temperature:** 32°F to 120°F (0°C to 49°C) **Humidity:** 0 to 93% relative humidity (non-condensing)

#### ELECTRICAL

6808 Primary AC: 120 VAC @ 60Hz, 3.3A Total Accessory Load: 6A @ 27.4VDC power-limited Standby Current: 190mA Alarm Current: 250mA Battery Charging Capacity: 7 to 35AH Battery Size: 7AH to 18AH max. allowed in control panel cabinet. Larger capacity batteries can be housed in RBB accessory cabinet.

#### **NOTIFICATION APPLIANCE CIRCUITS (NACs)**

## Four programmable circuits which can be programmed individually as:

NACs: 3A @ 27.4VDC per circuit, power-limited (with a maximum current of 6A)

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

Supports Class B (Style 4) and Class A (Style 6 or 7) configuration for the SLC  $\,$ 

WIRING: See the product manual for wiring details

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This document is not intended to be used for installation purposes. We try to keep our product information up-to date and accurate. We cannot cover all specific applications or anticipate all requirements. All specifications are subject to change without notice.

For Technical Support, call 800-446-6444.

#### Honeywell Silent Knight

12 Clintonville Road Northford, CT 06472 800-328-0103



(P	POT	TFR	Project Name:	ZEODIS		Standby Hours:	24
C	The Sy	mbol of Protection				Alarm Mins:	5
PSI	N-106		Installed By:	APS		Efficiency Factor:	20%
Bai	ttery & Voltage D	)rop	Designed By:	APS	APS		
Cal	lculations		Date:	4/15/2023	4/15/2023		20.4
	Mc	odel #: PSN-106			Max	Panel Current (amps):	10
	Par	nel ID: NAC 1		]			
	Loc	ation: WAREHOUSE		]	User assumes all respo	onsibility to ensure the qua	ntities and current
	Panel				rksheet are accurate prior	to submittal.	
Otv	Pan Part #	nel Description		Each	(amps) Total	Alarm (a Each	imps) Total
1	PSN-106	NAC Power Expander		0.075	0.075	0.075	0.075
		·		Panel Standby:	0.075	Panel Alarm:	0.075
N Ckt	IAC Circuits (See NAC Use	Configuration below) Description		Class	Standby (amps) Total		Alarm (amps) Total
1	Notification	CKT 1		Class B	0.00000		0.68400
2	Notification	CKT 2		Class B	0.00000		0.91200
3	Notification	CKT 3		Class B	0.00000		0.91200
4	Notification	CKT 4		Class B	0.00000		0.91200
5	Notification	CIRCUIT 5		Class B	0.00000		0.91200
6	Unused			Class B	0.00000		0.00000
AUX					0.00000		0.00000
				NAC Standby:	0.00000	NAC Alarm:	4.33200
	Battery Calcul	ation Summary			Standby (amps)		Alarm (amps)

Battery Calculation Summary		Standby (amps)		Alarm (amps)
	Panel Current:	0.07500		0.07500
	NAC Circuit Current:	0.00000		4.33200
	Total Standby:	0.075000	Total Alarm:	4.40700
	Standby Hours:	24	Alarm Mins:	5
	AH Required:	1.80	AH Required:	0.37
	Total Combin	ed Standby & Alarm Ai	mpHours Required:	2.17
			Efficiency Factor:	20%
Required Battery AmpHours:				
		Battery Am	pHours Provided:	7

Summer of ALE E-14378 23



#### NAC Circuit Configuration & Voltage Drop

ZEODIS

NAC 1		MAX Cir	cuit Current (amps):	3	Source Voltage Used (VDC): 20.4			
Class:	Class B	Usage:	Notification		Description:	CKT 1		
					-			
	Wire Type	Ohms/1000ft	Length 1-Way	Actual Ohms	Max Load (amps)	Volts @ EOL	Min Volts Req'd	
	#14 Solid	3.19	695	4.434	0.684	17.37	16	

	Circ	uit Devices	Standby	(amps)	Alarm (amps)		
Qty	Lookup Type	Description	Each	Total	Each	Total	
3	User Defined	SYSTEM SENSOR HORN-STROBE 150CD	0.000000	0.000000	0.228000	0.684000	
			0.00000	Total Alarm:	0.68400		

NAC 2		MAX Cir	cuit Current (amps):	3	Source Voltage Used (VDC): 20.4			
Class:	Class B	Usage:	Notification		Description:	CKT 2		
	Wire Type	Ohms/1000ft	Length 1-Way	Actual Ohms	Max Load (amps)	Volts @ EOL	Min Volts Req'd	
	#14 Solid	3.19	527	3.362	0.912	17.33	16	

	Circ	uit Devices	Standby	(amps)	Alarm (amps)		
Qty	Lookup Type	Description	Each	Total	Each	Total	
4	User Defined	SYSTEM SENSOR HORN-STROBE 150CD	0.000000	0.000000	0.228000	0.912000	
			Total Standby:	0.00000	Total Alarm:	0.91200	



#### NAC Circuit Configuration & Voltage Drop (cont'd)

ZEODIS

NAC 3		MAX Circuit Current (amps): 3			Source Voltage Used (VDC): 20.4			
Class:	Class B	Usage:	Notification		Description:	CKT 3		
	Wiro Tupo	Ohms/1000ft	Longth 1 Way	Actual Ohms	Max Load (amos)	Volte @ EOI	Min Volts Pog'd	
	#14 Solid	3.19	421	2.686	0.912	17.95	16	

	Circ	uit Devices	Standby	r (amps)	Alarm (amps)		
Qty	Lookup Type	Description	Each	Total	Each	Total	
4	User Defined	SYSTEM SENSOR HORN-STROBE 150CD	0.000000	0.000000	0.228000	0.912000	
			Total Standby:	0.00000	Total Alarm:	0.91200	

NAC 4	4	MAX Cir	MAX Circuit Current (amps): 3			Source Voltage Used (VDC): 20.4		
Class:	Class B	Usage:	Notific	Notification		СКТ	4	
	Wire Type	Ohms/1000ft	Length 1-Way	Actual Ohms	Max Load (amps)	Volts @ EOL	Min Volts Req'd	
	#14 Solid	3.19	369	2.354	0.912	18.25	16	
	Circ	uit Devices		Standby	/ (amps)	Alarm (a	mps)	
Qty	Lookup Type	Description		Each	Total	Each	Total	
4	User Defined	SYSTEM SENSOR HORN-STROBE 150CD		0.000000	0.000000	0.228000	0.912000	

 Total Standby:			0.00000	Total Alarm:	0.91200



#### NAC Circuit Configuration & Voltage Drop (cont'd)

ZEODIS

NAC 5		MAX Circuit Current (amps): 3			Source Voltage Used (VDC): 20.4		
Class:	Class B	Usage:	Notification		Description:	CIRCUIT 5	
	Wire Type	Ohms/1000ft	length 1-Way	Actual Ohms	Max Load (amps)	Volts @ FOI	Min Volts Rea'd
	#14 Solid	3.19	316	2.016	0.912	18.56	16

	Circ	cuit Devices	Standby	(amps)	Alarm (amps)	
Qty	Lookup Type	Description	Each	Total	Each	Total
4	User Defined	SYSTEM SENSOR HORN-STROBE 150CD	0.000000	0.000000	0.228000	0.912000
		User can add devices on the fly				
		to these bottom 5 rows				
		(No lookup function)				
			Total Standby:	0.00000	Total Alarm:	0.91200

NAC 6		MAX Circuit Current (amps): 3		Source Voltage Used (VDC): 20.4			
Class:	Class B	Usage:	Unused		Description:		
	Wire Type	Ohms/1000ft	Length 1-Way	Actual Ohms	Max Load (amps)	Volts @ EOL	Min Volts Req'd
		#N/A		#N/A	0.000	#N/A	16
	Circ	Circuit Devices		Standby	/ (amps)	Alarm (amps)	
Qty	Lookup Type	Desc	ription	Each	Total	Each	Total
		User can add devic	es on the fly				
		to these bottom 5 r	OWS				
		(No lookup function)					
				Total Standby:	0.0000	Total Alarm:	0.00000

AUX Power MAX Circuit Current (amps):		3	Source Voltage Used (VDC): 20.4				
	Usage:		Description:			]	
1	Wire Type	Ohms/1000ft	Length 1-Way	Actual Ohms	Max Load (amps)	Volts @ Last Device	Min Volts Reg'd
	#12 Solid	2.01		0.000	0.000	20.40	16

	Circ	uit Devices	Standby	(amps)	Alarm (amps)	
Qty	Lookup Type	ookup Type Description		Total	Each	Total
		User can add devices on the fly				
		to these bottom 5 rows				
		(No lookup function)				
			0.00000	Total Alarm:	0.00000	

(P	POTT	FR	Project Name:	ZEODIS		Standby Hours:	24
C.	The Symb	ool of Protection				Alarm Mins:	5
PSI	V-106		Installed By:	APS		Efficiency Factor:	20%
Bat	tery & Voltage Dro	q	Designed By:	APS			
Cal	culations	•	Date:	4/15/2023	]	NAC Source Voltage:	20.4
	Mode	ı #: PSN-106			Max	Panel Current (amps):	10
	Panel	ID: NAC 2		]			
	Locati	ion: WAREHOUSE		]	User assumes all respo	onsibility to ensure the quar	ntities and current
	D				draw values in this wo	rksheet are accurate prior t	o submittal.
Otv	Paner Part #	Description		Standby Each	(amps) Total	Alarm (a Each	imps) Total
1	PSN-106	NAC Power Expander		0.075	0.075	0.075	0.075
		·		Panel Standby:	0.075	Panel Alarm:	0.075
N/ Ckt	AC Circuits (See NAC Co Use	nfiguration below) Description		Standby (amps) Class Total			Alarm (amps) Total
1	Notification	CKT 1		Class B	0.00000		1.59600
2	Notification	CKT 2		Class B	0.00000		0.91200
3	Notification	CKT 3		Class B	0.00000		0.91200
4	Notification	CKT 4		Class B	0.00000		0.91200
5	Notification	CIRCUIT 5		Class B	0.00000		0.91200
6	Notification	CKT 6		Class B	0.00000		0.91200
AUX					0.00000		0.00000
				NAC Standby:	0.00000	NAC Alarm:	6.15600
	Battery Calculat	ion Summary			Standby (amps)		Alarm (amps)

Panel Current:0.075000.07500NAC Circuit Current:0.000006.15600Total Standby:0.075000Total Alarm:6.23100Standby Hours:24Alarm Mins:5AH Required:1.80AH Required:0.52Total Combined Standby & Alarm AmpHours Required:2.3220%Efficiency Factor:20%7Battery AmpHours Provided:7	Battery Calculation Summary		Standby (amps)		Alarm (amps)	
NAC Circuit Current:0.000006.15600Total Standby:0.075000Total Alarm:6.23100Standby Hours:24Alarm Mins:5AH Required:1.80AH Required:0.52Total Combined Standby & Alarm AmpHours Required:2.3220%Efficiency Factor:20%Required Battery AmpHours:2.78Battery AmpHours Provided:7		Panel Current:	0.07500		0.07500	
Total Standby:0.075000Total Alarm:6.23100Standby Hours:24Alarm Mins:5AH Required:1.80AH Required:0.52Total Combined Standby & Alarm AmpHours Required:2.3220%Efficiency Factor:20%Required Battery AmpHours:2.78Battery AmpHours Provided:7		NAC Circuit Current:	0.00000		6.15600	
Standby Hours:24Alarm Mins:5AH Required:1.80AH Required:0.52Total Combined Standby & Alarm AmpHours Required:2.32Efficiency Factor:20%Required Battery AmpHours:2.78Battery AmpHours Provided:7		Total Standby:	0.075000	Total Alarm:	6.23100	
AH Required:       1.80       AH Required:       0.52         Total Combined Standby & Alarm AmpHours Required:       2.32         Efficiency Factor:       20%         Required Battery AmpHours:       2.78         Battery AmpHours Provided:       7		Standby Hours:	24	Alarm Mins:	5	
Total Combined Standby & Alarm AmpHours Required:       2.32         Efficiency Factor:       20%         Required Battery AmpHours:       2.78         Battery AmpHours Provided:       7		AH Required:	1.80	AH Required:	0.52	
Efficiency Factor: 20% Required Battery AmpHours: 2.78 Battery AmpHours Provided: 7		Total Combin	ed Standby & Alarm A	mpHours Required:	2.32	
Required Battery AmpHours: 2.78 Battery AmpHours Provided: 7				Efficiency Factor:	20%	
Battery AmpHours Provided: 7	Required Battery AmpHours:					
			Battery Am	pHours Provided:	7	

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#### NAC Circuit Configuration & Voltage Drop

ZEODIS

NAC 1		MAX Circuit Current (amps): 3			Source Voltage Used (VDC): 20.4		
Class:	Class B	Usage:	Notification		Description:	CKT 1	
		-			-		
	Wire Type	Ohms/1000ft	Length 1-Way	Actual Ohms	Max Load (amps)	Volts @ EOL	Min Volts Req'd
	#14 Solid	3.19	303	1.933	1.596	17.31	16

	Circ	uit Devices	Standby	(amps)	Alarm (a	mps)
Qty	Lookup Type	Lookup Type Description		Total	Each	Total
7	User Defined	SYSTEM SENSOR HORN-STROBE 150CD	0.000000	0.000000	0.228000	1.596000
			0.00000	Total Alarm:	1.59600	

NAC 2		MAX Circuit Current (amps): 3			Source Voltage Used (VDC): 20.4		
Class:	Class B	Usage:	Notification		Description:	CKT 2	
1							
	Wire Type	Ohms/1000ft	Length 1-Way	Actual Ohms	Max Load (amps)	Volts @ EOL	Min Volts Req'd
	#14 Solid	3.19	252	1.608	0.912	18.93	16

	Circ	uit Devices	Standby	(amps)	Alarm (a	Alarm (amps)	
Qty	Lookup Type	Description	Each	Total	Each	Total	
4	User Defined	SYSTEM SENSOR HORN-STROBE 150CD	0.000000	0.000000	0.228000	0.912000	
			Total Standby:	0.00000	Total Alarm:	0.91200	



#### NAC Circuit Configuration & Voltage Drop (cont'd)

ZEODIS

4/15/2023

NAC 3		MAX Cir	cuit Current (amps):	3	Source Voltage Used (VDC): 20.4		
Class:	Class B	Usage:	Notification		Description:	CKT 3	
					_		
	Wire Type	Ohms/1000ft	Length 1-Way	Actual Ohms	Max Load (amps)	Volts @ EOL	Min Volts Req'd
	#14 Solid	3.19	472	3.011	0.912	17.65	16

	Circ	uit Devices	Standby	r (amps)	Alarm (amps)	
Qty	Lookup Type	Description	Each	Total	Each	Total
4	User Defined	SYSTEM SENSOR HORN-STROBE 150CD	0.000000	0.000000	0.228000	0.912000
			Total Standby:	0.00000	Total Alarm:	0.91200

NAC 4	4	MAX Circuit Current (amps): 3			Source Voltage Used (VDC): 20.4			
Class:	Class B	Usage:	Notific	Notification		СКТ	4	
	Wire Type	Ohms/1000ft	Length 1-Way	Actual Ohms	Max Load (amps)	Volts @ EOL	Min Volts Req'd	
	#14 Solid	3.19	521	3.324	0.912	17.37	16	
	Circ	uit Devices		Standby	/ (amps)	Alarm (a	mps)	
Qty	Lookup Type	Desc	Description		Total	Each	Total	
4	User Defined	SYSTEM SENSOR HORN-STROBE 150CD		0.000000	0.000000	0.228000	0.912000	

Total Standby:				0.00000	Total Alarm:	0.91200



#### NAC Circuit Configuration & Voltage Drop (cont'd)

ZEODIS

NAC 5		MAX Circuit Current (amps): 3			Source Voltage Used (VDC): 20.4		
Class:	Class B	Usage:	Notification		Description:	CIRCUIT 5	
	Wire Type	Ohms/1000ft	Length 1-Way	Actual Ohms	Max Load (amps)	Volts @ FOL	Min Volts Rea'd
	#14 Solid	3.19	572	3.649	0.912	17.07	16

	Circ	cuit Devices	Standby	(amps)	Alarm (a	mps)
Qty	Lookup Type	Description	Each	Total	Each	Total
4	User Defined	SYSTEM SENSOR HORN-STROBE 150CD	0.000000	0.000000	0.228000	0.912000
		User can add devices on the fly				
		to these bottom 5 rows				
		(No lookup function)				
			Total Standby:	0.00000	Total Alarm:	0.91200

NAC 6		MAX Cir	cuit Current (amps):	3	Source Voltage Used (VDC): 20.4		
Class:	Class B	Usage:	Notification		Description:	СКТ 6	
		Ohme /1000ft	Longth 1 May	Actual Ohma			Min Valte Deald
	#14 Solid	3.19	624	3.981	0.912	16.77	16

	Cir	Standby	(amps)	Alarm (amps)		
Qty	Lookup Type	Description	Each	Total	Each	Total
4	User Defined	SYSTEM SENSOR HORN-STROBE 150CD	0.000000	0.000000	0.228000	0.912000
		User can add devices on the fly				
		to these bottom 5 rows				
		(No lookup function)				
			Total Standby:	0.00000	Total Alarm:	0.91200

AUX Power		MAX Circuit Current (amps): 3			Sourc	20.4	
	Usage:			Description:			]
1	Wire Type	Ohms/1000ft	Length 1-Wav	Actual Ohms	Max Load (amps)	Volts @ Last Device	Min Volts Rea'd
	#12 Solid	2.01		0.000	0.000	20.40	16

	Circ	uit Devices	Standby	(amps)	Alarm (amps)	
Qty	Lookup Type	Description	Each	Total	Each	Total
		User can add devices on the fly				
		to these bottom 5 rows				
		(No lookup function)				
			Total Standby:	0.00000	Total Alarm:	0.00000

(P	POTTE	<b>R</b>	Project Name:	ZEODIS		Standby Hours:	24
C	The Symbol o	f Protection				Alarm Mins:	5
PSI	V-106		Installed By:	APS		Efficiency Factor:	20%
Bat	ttery & Voltage Drop		Designed By:	APS			
Cal	culations		Date:	4/15/2023		NAC Source Voltage:	20.4
	Model #:	PSN-106			Max	Panel Current (amps):	10
	Panel ID:	NAC 3		]			
	Location:	WAREHOUSE			User assumes all respo	onsibility to ensure the quai	ntities and current
	Panel			draw values in this worksheet are accurate p		Alarm (a	in submittal.
Qty	Part #	Description		Each	Total	Each	Total
1	PSN-106	NAC Power Expander		0.075	0.075	0.075	0.075
				Panel Standby:	0.075	Panel Alarm:	0.075
N Ckt	AC Circuits (See NAC Config Use	uration below) Description		Class	Standby (amps) Total		Alarm (amps) Total
1	Notification	CKT 1		Class B	0.00000		0.91200
2	Notification	CKT 2		Class B	0.00000		0.91200
3	Notification	CKT 3		Class B	0.00000		0.91200
4	Notification	CKT 4		Class B	0.00000		0.91200
5	Notification	CIRCUIT 5		Class B	0.00000		0.91200
6	Notification	CKT 6		Class B	0.00000		0.91200
AUX					0.00000		0.00000
				NAC Standby:	0.00000	NAC Alarm:	5.47200
	Battery Calculation Summary				Standby (amps)		Alarm (amps)
					, (* * * *		· · · · · ·

Battery Calculation Summary		Standby (amps)		Alarm (amps)
	Panel Current:	0.07500		0.07500
	NAC Circuit Current:	0.00000		5.47200
	Total Standby:	0.075000	Total Alarm:	5.54700
	Standby Hours:	24	Alarm Mins:	5
	AH Required:	1.80	AH Required:	0.47
	Total Combin	ed Standby & Alarm	AmpHours Required:	2.27
			Efficiency Factor:	20%
Required Battery AmpHours:				
		Battery Ar	npHours Provided:	7





#### NAC Circuit Configuration & Voltage Drop

ZEODIS

NAC 1	1	MAX Cir	cuit Current (amps):	3	Source Voltage Used (VDC): 20.4		20.4
Class:	Class B	Usage:	Notification		Description:	CKT 1	
		-			-		
	Wire Type	Ohms/1000ft	Length 1-Way	Actual Ohms	Max Load (amps)	Volts @ EOL	Min Volts Req'd
	#14 Solid	3.19	553	3.528	0.912	17.18	16

	Circ	uit Devices	Standby	(amps)	Alarm (a	mps)
Qty	Lookup Type	Lookup Type Description		Total	Each	Total
4	User Defined	SYSTEM SENSOR HORN-STROBE 150CD	0.000000	0.000000	0.228000	0.912000
			0.00000	Total Alarm:	0.91200	

NAC 2	2	MAX Cir	cuit Current (amps):	3	Source Voltage Used (VDC): 20.4		
Class:	Class B	Usage:	Notification		Description:	СКТ 2	
	Wire Type	Ohms/1000ft	Length 1-Way	Actual Ohms	Max Load (amps)	Volts @ EOL	Min Volts Req'd
	#14 Solid	3.19	495	3.158	0.912	17.52	16

	Circ	uit Devices	Standby	(amps)	Alarm (a	Alarm (amps)	
Qty	Lookup Type	Description	Each	Total	Each	Total	
4	User Defined	SYSTEM SENSOR HORN-STROBE 150CD	0.000000	0.000000	0.228000	0.912000	
			Total Standby:	0.00000	Total Alarm:	0.91200	



#### NAC Circuit Configuration & Voltage Drop (cont'd)

ZEODIS

NAC 3 MAX Circuit Current (am		cuit Current (amps):	3	Sourc	e Voltage Used (VDC):	20.4	
Class:	Class B	Usage:	Notification		Description:	CKT 3	
	Wire Type	Ohms/1000ft	Length 1-Way	Actual Ohms	Max Load (amos)	Valts @ FOI	Min Volts Rea'd
	#14 Solid	3.19	442	2.820	0.912	17.83	16

	Circ	uit Devices	Standby	r (amps)	Alarm (amps)	
Qty	Lookup Type	Description	Each	Total	Each	Total
4	User Defined	SYSTEM SENSOR HORN-STROBE 150CD	0.000000	0.000000	0.228000	0.912000
			Total Standby:	0.00000	Total Alarm:	0.91200

NAC 4	4	MAX Cir	cuit Current (amps):	3	Source Voltage Used (VDC): 20.4		
Class:	Class B	Usage:	Notific	ation	Description:	СКТ	1
	Wire Type	Ohms/1000ft	Length 1-Way	Actual Ohms	Max Load (amps)	Volts @ EOL	Min Volts Req'd
	#14 Solid	3.19	390	2.488	0.912	18.13	16
	Circuit Devices		Standby (amps)		Alarm (amps)		
Qty	Lookup Type	Desc	ription	Each	Total	Each	Total

Qty	соокир туре	Description	Each	Total	Each	Total
4	User Defined	SYSTEM SENSOR HORN-STROBE 150CD	0.000000	0.000000	0.228000	0.912000
Total Standby:				0.00000	Total Alarm:	0.91200



#### NAC Circuit Configuration & Voltage Drop (cont'd)

ZEODIS

NAC 5 MAX Circuit Current (amps): 3		Source Voltage Used (VDC): 20.4					
Class:	Class B	Usage:	Notification		Description:	CIRCUIT 5	
	Wire Type	Ohms/1000ft	Length 1-Way	Actual Ohms	Max Load (amps)	Valts @ FOI	Min Volts Rea'd
	#14 Solid	3.19	336	2.144	0.912	18.44	16

	Circ	cuit Devices	Standby	(amps)	Alarm (amps)	
Qty	Lookup Type	Lookup Type Description		Total	Each	Total
4	User Defined	SYSTEM SENSOR HORN-STROBE 150CD	0.000000	0.000000	0.228000	0.912000
		User can add devices on the fly				
		to these bottom 5 rows				
		(No lookup function)				
			Total Standby:	0.00000	Total Alarm:	0.91200

NAC 6 MAX Circuit Current (amps): 3 Source Voltage Used (			ce Voltage Used (VDC):	20.4			
Class:	Class B	Usage:	Notification		Description:	СКТ 6	
		01	Lawath 1 Mars	A stud Okusa	Blev Leed (		Min Volte Deald
	wire Type	Unms/1000tt	Length 1-way	Actual Onms	IVIAX LOad (amps)	Volts @ EUL	win volts Req d
	#14 Solid	3.19	293	1.869	0.912	18.70	16

	Circ	cuit Devices	Standby	(amps)	Alarm (amps)	
Qty	Lookup Type	Description	Each	Total	Each	Total
4	User Defined	SYSTEM SENSOR HORN-STROBE 150CD	0.000000	0.000000	0.228000	0.912000
		User can add devices on the fly				
		to these bottom 5 rows				
		(No lookup function)				
			Total Standby:	0.00000	Total Alarm:	0.91200

AUX Power MAX Circuit Current (amps)		3 Source Voltage Used (VDC): 20.4			20.4		
	Usage:			Description:			]
	Wire Type	Ohms/1000ft	Length 1-Way	Actual Ohms	Max Load (amps)	Volts @ Last Device	Min Volts Reg'd
	#12 Solid	2.01		0.000	0.000	20.40	16

	Circ	uit Devices	Standby (amps)		Alarm (amps)	
Qty	Lookup Type	Lookup Type Description		Total	Each	Total
		User can add devices on the fly				
		to these bottom 5 rows				
		(No lookup function)				
			0.00000	Total Alarm:	0.00000	

(Р	POTTF	R	Project Name:	ZEODIS		Standby Hours:	24
· ·	The Symbol o	of Protection				Alarm Mins:	5
PSI	V-106		Installed By:	APS		Efficiency Factor:	20%
Bat	ttery & Voltage Drop		Designed By:	APS			
Cal	culations		Date:	4/15/2023		NAC Source Voltage:	20.4
	Model #:	PSN-106			Max	Panel Current (amps):	10
	Panel ID:	NAC 4		]			
	Location:	IT ROOM		]	User assumes all respo draw values in this wo	onsibility to ensure the quar rksheet are accurate prior t	ntities and current to submittal.
	Panel			Standby	(amps)	Alarm (a	mps)
Qty	Part #	Description		Each	Total	Each	Total
1	PSN-106	NAC Power Expander		0.075	0.075	0.075	0.075
				Panel Standby:	0.075	Panel Alarm:	0.075
N	AC Circuits (See NAC Config	guration below)		Class	Standby (amps)		Alarm (amps)
	Notification	CVT 1		Class B	10tal		10tal
2	Notification			Class B	0.00000		0.92400
2	Notification			Class B	0.00000		0.83400
4	Unused	CKI 5		Class B	0.00000		0.45200
5	Unused			Class B	0.00000		0.00000
6	Unused			Class B	0.00000		0.00000
AUX					0.00000		0.00000
				NAC Standby:	0 0000	NAC Alarm:	2,19000

Battery Calculation Summary		Standby (amps)		Alarm (amps)	
	Panel Current:	0.07500		0.07500	
NA	AC Circuit Current:	0.00000		2.19000	
	Total Standby:	0.075000	Total Alarm:	2.26500	
	Standby Hours:	24	Alarm Mins:	5	
	AH Required:	1.80	AH Required:	0.19	
	Total Combin	ed Standby & Alarm	AmpHours Required:	1.99	
			Efficiency Factor:	20%	
Required Battery AmpHours:					
		Battery A	mpHours Provided:	7	

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#### NAC Circuit Configuration & Voltage Drop

ZEODIS

NAC 1		MAX Circuit Current (amps): 3			Source Voltage Used (VDC): 20.4		
Class:	Class B	Usage:	Notification		Description:	CKT 1	
	Wire Type	Ohms/1000ft	Length 1-Way	Actual Ohms	Max Load (amps)	Volts @ EOL	Min Volts Req'd
	#14 Solid	3.19	104	0.664	0.924	19.79	16

	Ciro	uit Devices	Standby	(amps)	Alarm (a	Alarm (amps)	
Qty	Lookup Type	Lookup Type Description		Total	Each	Total	
4	User Defined	SYSTEM SENSOR HORN-STROBE 95CD	0.000000	0.000000	0.164000	0.656000	
2	User Defined	SYSTEM SENSOR STROBE 95CD	0.000000	0.000000	0.134000	0.268000	
			0.00000	Total Alarm:	0.92400		

NAC 2		MAX Circuit Current (amps): 3			Source Voltage Used (VDC): 20.4		
Class:	Class B	Usage:	Notification		Description:	CKT 2	
		Ohme /1000ft	Longth 1 May	Astual Ohma			Min Volte Deald
	wire type	Unms/10001	Length 1-way	Actual Onms	iviax Load (amps)	VOILS @ EUL	win voits keq a
	#14 Solid	3.19	527	3.362	0.834	17.60	16

	Circ	uit Devices	Standby	(amps)	Alarm (a	Alarm (amps)	
Qty	Lookup Type	Description	Each	Total	Each	Total	
1	User Defined	SYSTEM SENSOR HORN-STROBE 95CD	0.000000	0.000000	0.164000	0.164000	
5	User Defined	SYSTEM SENSOR STROBE 95CD	0.000000	0.000000	0.134000	0.670000	
			Total Standby:	0.00000	Total Alarm:	0.83400	



#### NAC Circuit Configuration & Voltage Drop (cont'd)

ZEODIS

NAC 3		MAX Circuit Current (amps): 3			Source Voltage Used (VDC): 20.4		
Class:	Class B	Usage:	Notification		Description:	СКТ З	
	Wire Type	Ohms/1000ft	length 1-Way	Actual Ohms	Max Load (amos)	Volts @ FOI	Min Volts Rea'd
	#14 Solid	3.19	159	1.014	0.432	19.96	16

	Circ	cuit Devices	Standby	(amps)	Alarm (amps)	
Qty	Lookup Type Description		Each	Total	Each	Total
1	User Defined	SYSTEM SENSOR HORN-STROBE 95CD	0.000000	0.000000	0.164000	0.164000
2	User Defined	SYSTEM SENSOR STROBE 95CD	0.000000	0.000000	0.134000	0.268000
			Total Standby:	0.00000	Total Alarm:	0.43200

NAC 4		MAX Circuit Current (amps): 3		Source Voltage Used (VDC): 20.4			
Class:	Class B	Usage:	Unu	sed	Description:		
	Wire Type	Ohms/1000ft	Length 1-Way	Actual Ohms	Max Load (amps)	Volts @ EOL	Min Volts Req'd
		#N/A		#N/A	0.000	#N/A	16
	Circuit Devices		Standby	r (amps)	Alarm (amps)		
Qty	Lookup Type	Desc	ription	Each	Total	Each	Total
				Total Standby:	0.00000	Total Alarm:	0.00000

# **SK-PHOTO-W SERIES**

Addressable Photoelectric Smoke Detectors

The Silent Knight<sup>®</sup> SK-PHOTO-W Series feature a modern design and expanded color options support a variety of contemporary aesthetic demands. In addition, each detector is constructed for exceptional installation and maintenance efficiency.

The SK-PHOTO-W Series intelligent plug-in smoke detectors are designed for both performance and aesthetics, and are direct replacements for the SK-PHOTO Series detectors. A new modern, sleek, contemporary design and enhanced optical sensing chamber is engineered to sense smoke produced by a wide range of combustion sources in accordance with more stringent code standards. The SK-PHOTO-W Series detector sensitivity can be programmed in the control panel software. Sensitivity is continuously monitored and reported to the panel. Point ID capability allows each detector's address to be set with rotary, decimal address switches, providing exact detector location for selective maintenance when chamber contamination reaches an unacceptable level. Dual electronic thermistors add 135°F (57°C) fixed temperature thermal sensing on the SK-PHOTO-T-W. The SK-PHOTO-R-W is a remote test capable detector for use with DNR Series duct detector housings.



# **FEATURES AND BENEFITS**

- Designed to meet UL 1268 7th Edition
- Sleek and stylish contemporary design
- Stable communication technique with noise immunity
- Addressable by device
- Rotary, decimal addressing (Refer to the Silent Knight panel manuals for device capacity)
- Two-wire SLC connection
- LEDs blink every time the unit is polled
- 360°-field viewing angle of the visual alarm indicators (two bi-color LEDs); LEDs blink green in Normal condition and turn on

steady red in Alarm

- Integral communications and built-in device-type identification
- Remote test feature from the panel
- Built-in functional test switch activated by external magnet
- Walk test with address display (an address of 121 will blink the detector LED 12-(pause)-1)
- Low standby current
- Built-in tamper-resistant feature
- Designed for direct-surface or electricalbox mounting

- Sealed against back pressure
- Plugs into separate base for ease of installation and maintenance
- Expanded color options
- SEMS screws for wiring of the separate base
- Optional remote, single-gang LED accessory
- Optional sounder, relay, and isolator bases



#### **INSTALLATION**

The SK-PHOTO-W Series plug-in intelligent thermal detectors use a separate base to simplify installation, service, and maintenance. Installation instructions are shipped with each detector.

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 SK-61045.

**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.

**Note:** When using relay or sounder bases, consult the SK-ISO installation sheet I56-3627 for device limitations between isolator modules and isolator bases.

#### **OPERATION**

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

#### **PRODUCT LINE INFORMATION**

Note: "-IV" suffix indicates ivory color.

SK-PHOTO-W: White, low-profile photoelectric sensor

**SK-PHOTO-T-W:** White, same as SK-PHOTO-W but includes a built-in 135°F (57°C) fixed-temperature thermal device

**SK-PHOTO-R-W:** White, low-profile intelligent photoelectric sensor, remote test capable, for use with DNR/DNRW

B300-6: White, standard flanged low-profile mounting base

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

B300-6-IV: Ivory, standard flanged low-profile mounting base

**B501-WHITE:** White, standard European flangeless mounting base

B501-BL: Black, standard European flangeless mounting base

**B501-IV:** Ivory, standard European flangeless mounting base

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

B200S-WH: White, Intelligent, programmable sounder base

B200S-IV: Ivory, Intelligent, programmable sounder base

B200SR-WH: White, Intelligent sounder base for retrofit applications

B200SR-IV: Ivory, Intelligent sounder base for retrofit applications

**B200S-LF-WH:** White, Low Frequency Intelligent, programmable sounder base

**B200S-LF-IV:** Ivory, Low Frequency Intelligent, programmable sounder base

**B200SR-LF-WH:** White, Low Frequency Intelligent sounder base for retrofit applications

**B200SR-LF-IV:** Ivory, Low Frequency Intelligent sounder base for retrofit applications

B224RB-WH: White, plug-in System Sensor® relay base

B224RB-IV: Ivory, plug-in System Sensor relay base

B224BI-WH: White, plug-in System Sensor isolator detector base

B224BI-IV: Ivory, plug-in System Sensor isolator detector base

#### ACCESSORIES

TR300: White, replacement flange for B210LP or B300-6 bases

TR300-IV: Ivory, replacement flange for B210LP or B300-6 bases

**RA100Z(A):** Remote 3 – 32 VDC LED annunciator, mounts to a U.S. single-gang electrical box, for use with B501 and B300-6 bases only

M02-04-00: Test magnet

M02-09-00: Test magnet with telescoping handle

CK300: White, detector color kit, pack of 10

CK300-IV: Ivory, detector color kit, pack of 10

CK300-BL: Black, detector color kit, pack of 10

### **SK-PHOTO-W SERIES TECHNICAL SPECIFICATIONS**

#### PHYSICAL/ENVIRONMENTAL

#### Sensitivity:

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

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

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

For a complete list of detector bases, see SK-61045.

Shipping weight: 3.4 oz. (95 g)

#### Operating temperature range:

- SK-PHOTO-W: 32°F to 122°F (0°C to 50°C)
- SK-PHOTO-T-W: 32°F to 100°F(0°C to 38°C)
- SK-PHOTO-R-W installed in a DNR/DNRW: -4°F to 158°F (-20°C to 70°C)

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

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

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

#### **ELECTRICAL SPECIFICATIONS**

Voltage range: 15 - 32 volts DC peak

Standby current (max. avg.):  $200\mu A @ 24$  VDC (one communication every 5 seconds with LED enabled)

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

# DETECTOR SPACING AND APPLICATIONS

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

# 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: S6173
- FM Approved
- CSFM: 7272-0559:0512

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This document is not intended to be used for installation purposes. We try to keep our product information up-to-date and accurate. We cannot cover all specific applications or anticipate all requirements. All specifications are subject to change without notice.

Country of origin: Mexico

#### Honeywell Silent Knight

12 Clintonville Road Northford, CT 06472-1610 203.484.7161 www.silentknight.com

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# SK-PULL-SA / SK-PULL-DA

Intelligent Pull Stations

The SK-PULL-SA is a single action pull station requiring only one motion to activate the station. The SK-PULL-DA is a dual action pull station requiring two motions to active the station. The SK-PULL-SA and SK-PULL-DA are for use with Honeywell Silent Knight Series fire control panel (FACP).

Extremely easy to operate, the SK-PULL-DA and SK-PULL-SA provide a fast and practical means of manually initiating a fire alarm signal. The FACP recognizes each manual pull station by its specific address saving precious seconds in determining the location of an alarm.

#### INSTALLATION

The SK-PULL-SA and SK-PULL-DA can be surface mounted to an SB-I/O surface back box or semi-flush mounted on a standard single-gang with a minimum depth of 2.13"(5.40 cm) or double gang or 4" (10.61 cm) square electrical box. You can also use the optional (System Sensor® PN BG-TR) trim ring if the station is being semi-flush mounted.



SK-PULL-SA



SK-PULL-DA

### FEATURES & BENEFITS

- Installer can open station without causing an alarm condition
- Dual-color LED is visible through handle of station blinks green to indicate normal operation and remains steady red in an alarm condition
- Key operated test and reset lock using lock plate actuator
- Key matches compatible FACP locks
- Meets ADA requirement for 5 lbs maximum pull force to active
- Meets the Americans with Disabilities Act Accessibility Guidelines (ADAAG) controls and operating mechanisms guidelines (Section 4.1.3[13])
- Shell, door, and handle molded from durable LEXAN<sup>®</sup>
- Reliable analog communications for trouble-free operation
- Braille text on station handle
- Rotary address switches for fast installation
- Handle latches in down position and the word Activated appears, clearly indicating the station has been pulled
- UL Listed, including UL 38, Standard of Manually Actuated Signaling System
- CSFM Listed
- MEA Listed

### SK-PULL-SA / SK-PULL-DA Technical Specifications

#### PHYSICAL

**Dimensions:** 5.5" H x 4" W x 1.45" D (14 x 10.2 x 3.7cm)

Housing Material: LEXAN polycarbonate resin Bi-Colored LED:

Blinking Green: Normal

Steady Red: Alarm

Switch: Single pole, single throw (SPST) normally open (N/O) switch which closes upon activation of the pull station

#### ELECTRICAL

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#### ENVIRONMENTAL

**Operating Temperature:** 32°F – 120°F (0°C – 49°C) **Humidity:** 10% – 93% non-condensing

#### **ORDERING INFORMATION**

**SK-Pull-SA:** Single Action Pull Station **SK-Pull-DA:** Dual Action Pull Station

#### ACCESSORIES

**BG-TR:** Optional trim ring.

**SB-I/O:** Surface backbox, indoor/outdoor. \* Unless otherwise noted, specifications apply to SK-Pull-SA and SK-Pull-DA

#### COMPATIBILITY

# The SK-PULL-SA AND SK-PULL-DA are compatible with the following Honeywell Silent Knight fire alarm control panels:

**6820:** Addressable fire alarm control panel **6820EVS:** Addressable fire alarm control panel with an emergency voice system.

6808: Addressable fire alarm control panel
6700: Addressable fire alarm control panel
5700: Addressable fire alarm control panel
5808: Addressable fire alarm control panel
5820XL: Addressable fire alarm control panel
5820XL-EVS: Addressable fire alarm control panel

For a complete listing of all compliance approvals and certifications, please visit www.silentknight.com.

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For Technical Support, call 800-446-6444.

For more information

Learn more about Honeywell Silent Knight and other products by visiting www.silentknight.com

#### **Honeywell Silent Knight**

12 Clintonville Road Northford, CT 06472 800-328-0103







# **SK-MINIMON**

Intelligent Mini Monitor Module

The SK-MINIMON is an addressable monitor modules for use with the Honeywell Silent Knight fire alarm control panels (FACPs). The SK-MINIMON acts as an interface to contact devices, such as waterflow switches and pull stations. The SK-MINIMON supports Class B supervised wiring to the load device. Conventional 4-wire smoke detectors can be monitored for alarm and trouble conditions

The SK-MINIMON can be mounted in a single gang junction box directly behind the monitored device. Its small size and light weight allow it to be installed without rigid mounting requirements.



#### INSTALLATION

The SK-MINIMON can be mounted in a single gang junction box directly behind the monitored device. Its small size and light weight allow it to be installed without rigid mounting requirements.

# FEATURES & BENEFITS

- Single contact monitor Rotary address
- SK-Minimon support for Class B (Style B) contact monitor wiring
- Small and lightweight size allows for flexible mounting options
- Rotary address switches for fast installation
- UL Listed
- CSFM Listed
- FM Approved

#### PHYSICAL

**Dimensions:** 2.75" W x 1.3" H x 0.5" D **Weight:** 1.2 oz (37 g)

#### ELECTRICAL

Operating Voltage: 15 - 32VDC SLC Standby and Alarm Current:  $350 \mu$ A End-of-Line Resistance: 47K  $\Omega$ Initiating device circuit wiring resistance:  $1,500\Omega$  max SLC loop resistance:  $40\Omega$  max Wire Length: 6" min.

#### ENVIRONMENTAL

**Operating Temperature:** 32°F – 120°F (0°C – 49°C) **Humidity:** 10% – 93% non-condensing

#### **ORDERING INFORMATION**

SK-MINIMON: Mini monitoring module

#### COMPATIBILITY

# The SK-MINIMON is compatible with the following Honeywell Silent Knight fire alarm control panels:

6820: Addressable fire alarm control panel
6820EVS: Addressable fire alarm control panel
with an emergency voice system.
6808: Addressable fire alarm control panel
6700: Addressable fire alarm control panel
5700: Addressable fire alarm control panel
5808: Addressable fire alarm control panel
5820XL: Addressable fire alarm control panel
5820XL-EVS: Addressable fire alarm control panel

For a complete listing of all compliance approvals and certifications, please visit www.silentknight.com.

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# **SK-DUCT**

Intelligent Air Duct Smoke Detector

The SK-DUCT Intelligent air duct smoke detector is used with SK-PHOTOR (included) for detecting smoke and products of combustion present in air moving through an HVAC air handling system. When smoke is detected in a duct, the unit communicates the condition to the Honeywell Silent Knight control panel. The panel, in turn, depending on programming and wiring, turns off fans, blowers, and other devices. The duct housing allows for mounting of SK-RELAY addressable relay module.

The Model SK-DUCT Air Duct Smoke Detector utilizes photoelectric technology for the detection of smoke. It provides early detection of smoke and products of combustion present in air moving through HVAC ducts in Commercial and Industrial applications.

The SK-DUCT is in a heavy duty gray steel back box with a clear cover. It features a pivoting housing that fits both square and rectangular footprints capable of mounting to a round or rectangular duct. It installs quickly and easily.

The unit senses smoke in the most challenging conditions, operating in airflow speeds of 100 to 4000 feet per minute, temperatures of  $-4^{\circ}$ F to 158°F, and a humidity range of 0 to 95 percent (non-condensing).



SK-DUCT

## FEATURES & BENEFITS

- Versatile mounting options: square or rectangular configuration
- New Cover tamper signal
- LED alarm indication and communication on sensor head
- Detects and limits the spread of smoke

- Rugged steel back box with clear plastic cover
- Easy to clean
- Large terminal connection screws
- Transparent cover for convenient visual inspection
- Patented sampling tube installs from front or back of the detector with no tools required
- Available space within housing to accommodate mounting of relay module
- UL listed

### SK-DUCT Technical Specifications

#### PHYSICAL

(Rectangular): 14.38" (37 cm) L X 5" (12.7 cm) W X 2.5" (6.6 cm) D (Square): 7.75" (19.7cm) L x 9"(22.9cm) W x 2.5" D (6.35cm)

Weight: 1.6lb (0.73kg)

 $\begin{array}{l} \textbf{ELECTRICAL} \mbox{ (using SK-Photo or SK-PhotoR)} \\ \textbf{Operating Voltage: } 15-32 \mbox{ VDC} \\ \textbf{Standby Current: } 300 \mbox{ } \mu A @ 24 \mbox{ VDC max}. \\ \textbf{Alarm Current: } 6.5 \mbox{ } m A @ 24 \mbox{ VDC max} \mbox{ (with LED on)} \\ \end{array}$ 

#### ENVIRONMENTAL

**Operating Temperature:** -4°F – 158°F (-20°C – 70°C) **Humidity:** 0% – 95% (non-condensing)

#### AIR VELOCITY

100 to 4000 ft/min: (0.5 - 20.3 m/sec.)

#### **ORDERING INFORMATION**

**SK-DUCT:** Intelligent non-relay duct smoke detector

SK-PHOTO: Addressable Photo Detector
 SK-PHOTOR: Addressable Photo Detector with remote test capability (included with SK-Duct)
 SK-RELAY: Addressable Relay Module, must be added if relay function is required, (fits in housing)

#### ACCESSORIES

DST1: Metal Sampling Tube Duct Width up to 1' DST1.5: Metal Sampling Tube Duct Widths 1' - 2' DST3: Metal Sampling Tube Duct Widths 2' - 4' DST5: Metal Sampling Tube Duct Widths 4' - 8' DST10: Metal Sampling Tube Duct Widths 8' - 12' DH4000E-1: Weatherproof Enclosure ETX: Metal Exhaust Tube Duct width 1' RA100Z: Remote LED Annunciator

**DCOIL:** Duct accessory coil, required if using with SK-PHOTO and not SK-PHOTOR (included) with SK-DUCT

**RTS151:** Magnetic Remote Test station **RTS151KEY:** Key-Activated Remote Test station M02-04-00 Test Magnet P48-21-00 Replacement End Cap for Metal Sampling Tube

APA151: Remote annunciator with piezo alarm

#### **IMPORTANT NOTES:**

• The use of either RTS151 or RTS151KEY requires the installation of an accessory coil, DCOIL, sold separately. Please refer to the SK-DUCT installation instructions for more information

• The RTS151/RTS151KEY test coil circuit requires an external 24VDC power supply which must be UL listed.

ACCESSORY CURRENT LOADS AT 24VDC											
Device Standby Alarm											
RA100Z	OmA	12mA Max.									
RTS151	OmA	12mA Max									
RTS151KEY	12mA	12mA Max									

#### COMPATIBILITY

The SK-DUCT is compatible with the following Honeywell Silent Knight fire alarm control panels: 6820: Addressable fire alarm control panel 6820EVS: Addressable fire alarm control panel with an emergency mass notification system. 6808: Addressable fire alarm control panel 6700: Addressable fire alarm control panel 5700: Addressable fire alarm control panel 5808: Addressable fire alarm control panel 5820XL: Addressable fire alarm control panel 5820XL: Addressable fire alarm control panel with an emergency mass notification system. For a complete listing of all compliance approvals and certifications, please visit www.silentknight.com.

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#### For more information

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#### **Honeywell Silent Knight**

12 Clintonville Road Northford, CT 06472 800-328-0103

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# **SK-RELAY**

Intelligent Relay Module

The SK-RELAY is an addressable relay module for use with Honeywell Silent Knight 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.

#### 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.



SK-RELAY

### FEATURES & BENEFITS

- 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
- SEMS screws for easy wiring
- UL Listed

#### PHYSICAL

4.675" H x 4.275" W x 1.4" D Shipping Weight: 6.3 oz (196 g)

#### ELECTRICAL

**Operating Voltage:** 15 – 32 VDC **End-of-Line Resistance:** Not used

SLC Standby & Alarm Current: .255mA max @ 24VDC (one communication every 5 sec with LED enabled)

#### ENVIRONMENTAL

**Operating Temperature:** 32°F – 120°F (0°C – 49°C) **Humidity:** 10% – 93% non-condensing

#### **RELAY CONTACT RATINGS**

3.0A @ 30VDC resistive 0.9A @ 110VDC resistive 0.9A @ 125VAC resistive 0.5A @ 125VAC inductive (PF = .35) 0.7A @ 75VAC inductive (PF = .35)

#### **ORDERING INFORMATION**

SK-RELAY: Relay Module

#### ACCESSORIES.

SMB500: 4" Square Surface Mount Electrical Box CB500 :Module Barrier

#### COMPATIBILITY

The SK-RELAY is compatible with the following Honeywell Silent Knight fire alarm control panels: 6820: Addressable fire alarm control panel 6820EVS: Addressable fire alarm control panel with an emergency mass notification system. 6808: Addressable fire alarm control panel 6700: Addressable fire alarm control panel 5700: Addressable fire alarm control panel 5808: Addressable fire alarm control panel 5820XL: Addressable fire alarm control panel 5820XL: Addressable fire alarm control panel with an emergency mass notification system. For a complete listing of all compliance approvals and certifications, please visit www.silentknight.com.

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#### **Honeywell Silent Knight**

12 Clintonville Road Northford, CT 06472 800-328-0103



# **Selectable Output Horn Strobes, Chime Strobes** and Strobes – Ceiling Mount

For use with the following models: Ceiling Mount Horn Strobes: PC2RL, PC2WL Ceiling Mount Chime Strobes: CHSCRL, CHSCWL Ceiling Mount Strobes: SCRL, SCWL, SCWL-CLR-ALERT

PRODUCT 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 12VDC or regulated 24DC/FWR
Operating Voltage Range:	8 to 17.5V (12V nominal) or 16 to 33V (24V nominal)
Operating Voltage with MDL3 Sync Module:	8.5 to 17.5V (12V nominal) or 16.5 to 33V (24V nominal)
Input terminal wire gauge:	12 to 18 AWG

DIMENSIONS FOR PRODUCTS AND ACCESSOR	MOUNTING BOX OPTIONS									
CEILING PRODUCTS	Diameter	Depth		2-Wire Indoor Products						
Strobe, Chime Strobe and Horn Strobe	6.83" (173.5mm)	2.47" (62.7mm)		4" x 4" x 1½", Single Gang, Double Ga						
Strobe, Chime Strobe, and Horn Strobe with SBBCRL/WL Surface Mount Back Box	6.92" (175.8mm)	2.50" (63.5mm)		4" Octagon, SBBCRL/WL (ceiling)						

**NOTICE:** This manual shall be left with the owner/user of this equipment.

#### **BEFORE INSTALLING**

Please read the System Sensor Audible Visible Application Reference Guide, which provides detailed information on notification devices, wiring and special applications. Copies of this manual are available from System Sensor. NFPA 72 and NEMA guidelines should be observed.

Important: The notification appliance used must be tested and maintained following NFPA 72 requirements.

#### **GENERAL DESCRIPTION**

System Sensor series of notification appliances offer a wide range of audible and visible devices for life safety notification. Our 2-wire horn strobes, chime strobes and strobes come with 8 field selectable tone and volume combinations and 7 field selectable candela settings. Intended for indoor applications and approved for ceiling mount installations.

2-wire horn strobes and strobes are public mode notification appliances intended to alert occupants of a life safety event. The 2-wire chime strobe is a private mode notification appliance. The horn is listed to ANSI/UL 464 requirements (public mode) and the strobe is listed to ANSI/UL 1638 (public mode). 2-wire chime strobe is a private mode notification appliances intended to alert trained personnel to investigate a life safety event and take appropriate actions. The chime portion of the chime strobe is listed to ANSI/UL 464 (private mode) and the strobe portion is listed to ANSI/UL 1638 (private mode).

System Sensor strobes are designed to be used in 12 VDC, 24VDC, or 24V FWR (full wave rectified) systems. System Sensor AV devices can be activated by a compatible fire alarm control panel or power supply. Refer to the appropriate fire alarm control panel manufacturer or power supply for more information.

System Sensor ceiling 2-wire horn strobes, 2-wire chime strobes, and strobes are electrically backward compatible with the previous generation, since 1996, of notification appliances. They come enabled with System Sensor synchronization protocol which requires connections to a power supply capable of generating the System Sensor synchronization pulses, a FACP NAC output configured to System Sensor synchronization protocol, or the use of MDL3 module to generate the synchronization protocol.

#### FIRE ALARM SYSTEM CONSIDERATIONS

The National Fire Alarm and Signaling Code, NFPA 72, requires that all notification appliances, used for building evacuation installed after July 1, 1996, ing,

produce temporal coded signals. Signals other than those used for evacuation purposes do not have to produce the temporal coded signal. System Sensor recommends spacing notification appliances in compliance with NFPA 72.

#### SYSTEM DESIGN

The system designer must make sure that the total current draw by the devices on the loop does not exceed the current capability of the panel supply, and that the last device on the circuit is operated within its rated voltage. The current draw information for making these calculations can be found in the tables within the manual. For convenience and accuracy, use the voltage drop calculator on the System Sensor website (www.systemsensor.com).

When calculating the voltage available to the last device, it is necessary to consider the voltage due to the resistance of the wire. The thicker the wire, the smaller the voltage drop. Wire resistance tables can be obtained from electrical handbooks. Note that if Class A wiring is installed, the wire length may be up to twice as long as it would be for circuits that are not fault tolerant. The total number of strobes on a single NAC must not exceed 69 for 24 volt applications.

#### **AVAILABLE TONES**

System Sensor offers a wide variety of tones for your life safety needs, including temporal 3 pattern (1/2 second on, 1/2 second off, 1/2 second on, 1/2 second off, 1/2 second on, 11/2 off and repeat) which is specified by ANSI and NFPA 72 for standard emergency evacuation signaling.

To select the tone, turn the rotary switch on the back of the product to the desired setting. (See Figure 1.) Available horn settings can be found in Table 1. Available chime settings can be found in Table 2.

#### **AVAILABLE CANDELA SETTINGS**

System Sensor offers a wide range of candela settings for your life safety needs. In order to select your candela output, adjust the slide switch on the rear of the product to the desired candela setting on the selector switch. (See Figure 2.)

The candela setting can also be verified by looking into the small window on the front of the unit. See Table 3 for candela settings for ceiling products. All products meet the light output profiles specified in the appropriate UL Standards. (See Figures 3 to 5.)

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800/736-7672, FAX: 630/377-6495

www.systemsensor.com

**FIGURE 1. AUDIO SELECTOR** 

AUDIO SELECT

#### FIGURE 2. CANDELA SELECTOR



A0518.00

#### **TABLE 1. HORN TONES**

Pos	Tone	Volume Setting
1	Temporal	High
2	Temporal	Low
3	Non-Temporal	High
4	Non-Temporal	Low
5	3.1 KHz Temporal	High
6	3.1 KHz Temporal	Low
7	3.1 KHz Non-Temporal	High
8	3.1 KHz Non-Temporal	Low

 TABLE 2. CHIME TONES

 Pos
 Tone

 1
 1 Second Chime

1	1 Second Chime	High
2	1 Second Chime	Low
3	1/4 Second Chime	High
4	1/4 Second Chime	Low
5	Temporal Chime	High
6	Temporal Chime	Low
7	5 Second Whoop	High
8	5 Second Whoop	Low

Volume

Setting

#### TABLE 3. CEILING-MOUNT STROBE CURRENT DRAW (mA)

Candela	8-17.5 Volts	16-33	Volts		
	DC	DC	FWR		
15	87	41	60		
30	153	63	86		
75	-	111	142		
95	-	134	164		
115	-	158	191		
150	-	189	228		
177	-	226	264		

# **NOTE:** Products set at 15 and 30 candela automatically work on either 12V or 24V power supplies. The products are not listed for 12V DC operation when set to any other candela settings.

#### **CURRENT DRAW AND AUDIBILITY RATINGS**

For the horn strobe, the current draw and audibility ratings for each setting is listed in Table 4. For the chime strobe, the current draw and audibility ratings for each setting is listed in Table 5. For the strobe, the current draw for each setting is listed in Table 3.

## FIGURE 3. LIGHT OUTPUT - VERTICAL DISPERSION, CEILING TO WALLS TO FLOOR





#### FIGURE 4. LIGHT OUTPUT – HORIZONTAL DISPERSION

r	
Degrees*	Percent of Rating
0	100
5-25	90
30-45	75
50	55
55	45
60	40
65	35
70	35
75	30
80	30
85	25
90	25
Compound 45	24
to the left	24
Compound 45	2.4
to the right	



#### FIGURE 5. VERTICAL DISPERSION, WALL TO FLOOR

Degrees*	Percent of Rating
0	100
5-30	90
35	65
40	46
45	34
50	27
55	22
60	18
65	16
70	15
75	13
80	12
85	12
90	12



\*Tolerance of  $\pm 1$  degree is permitted.

#### TABLE 4. CEILING--MOUNT HORN STROBE CURRENT DRAW (mA) AND SOUND OUTPUT (dBA)

					Current draw (mA)											Sound Output (dBA)					
Pos	Tone	Volume	8-17.	5 VDC			16	6-33 V	DC					16	6-33 F\	<b>NR</b>			8-17.5 V	16-3	33 V
1.03	Tone	Setting	15	30	15	30	75	95	115	150	177	15	30	75	95	115	150	177	DC	DC	FWR
1	Temporal	High	103	167	71	90	143	165	187	217	254	107	135	179	198	223	254	286	84	89	89
2	Temporal	Low	96	165	54	71	137	161	185	211	249	78	101	151	172	199	229	262	75	83	83
3	Non-Temporal	High	106	173	71	90	141	165	187	230	273	107	135	179	198	223	254	286	85	90	90
4	Non-Temporal	Low	95	166	54	71	124	161	170	216	258	78	101	151	172	199	229	262	76	84	84
5	3.1 KHz Temporal	High	111	164	69	94	147	163	184	229	257	108	135	179	200	225	255	289	83	88	88
6	3.1 KHz Temporal	Low	103	163	54	88	143	155	185	212	252	79	101	150	171	196	229	260	76	82	82
7	3.1 KHz Non-Temporal	High	111	172	69	94	144	164	202	229	271	108	135	179	200	225	255	289	84	89	89
8	3.1 KHz Non- Temporal	Low	103	169	54	88	131	155	187	217	259	79	101	150	171	196	229	260	77	83	83

**NOTE:** Products set at 15 and 30 candela automatically work on either 12V or 24V power supplies. The products are not listed for 12VDC operation when set to any other candela settings.

#### I56-5846-002 10/02/2018

#### WIRING AND MOUNTING

All wiring must be installed in compliance with the National Electric Code and the local codes as well as the authority having jurisdiction. Wiring must not be of such length or wire size which would cause the notification appliance to operate outside of its published specifications. Improper connections can prevent the system from alerting occupants in the event of an emergency.

Wire sizes up to 12 AWG  $(2.5 \text{ mm}^2)$  may be used with the mounting plate. The mounting plate ships with the terminals set for 12 AWG wiring.

Make wire connections by stripping about 3/8" of insulation from the end of the wire. Then slide the bare end of the wire under the appropriate clamping plate and tighten the clamping plate screw. We provide a wire strip guide. See Figure 6 for wiring terminals and strip guide reference.

#### 

Factory finish should not be altered: Do not paint!

#### ACAUTION

Do not over tighten mounting plate screws; this may cause mounting plate to flex.

#### FIGURE 6. WIRING TERMINALS, SHORTING SPRING, AND STRIP GUIDE



#### SYSTEM WIRING

The 2-wire horn strobe, chime strobe and strobe only require two wires for power and supervision. (See Figure 7.) Please consult your FACP manufacturer or power supply manufacturer for specific wiring configurations and special cases.

#### **FIGURE 7. 2-WIRE CIRCUIT**



#### SHORTING SPRING FEATURE

System Sensor notification appliances come with a shorting spring that is provided between terminals 2 and 3 of the mounting plate to enable system continuity checks after the system has been wired, but prior to installation of the final product. (See Figure 6.) This spring will automatically disengage when the product is installed, to enable supervision of the final system.

#### MOUNTING AND REMOVING APPLIANCE

1. Attach mounting plate to junction box using two of the provided Philips head screws. (See Figure 8.)

2. Connect field wiring according to terminal designations. (See Figures 6 and 7.)  $\,$ 

3. If the product is not to be installed at this point, use the protective dust cover to prevent contamination of the wiring terminals on the mounting plate.

- 4. To attach product to mounting plate:
- a. Remove the protective dust cover.
- b. Hook the tabs on the top of the product housing into the grooves on mounting plate.
- c. Pivot the product into position to engage the terminals on the mounting plate. Make sure that the tabs on the back of the product housing fully engage with the mounting plate.
- d. Hold product in place with one hand, and secure product by tightening the single mounting screw in the front of the product housing.

*Ceiling Models only:* To remove product from the mounting plate, loosen the captive mounting screw and press the locking button.

#### FIGURE 8. MOUNTING



#### TABLE 5. CEILING-MOUNT CHIME STROBE CURRENT DRAW (mA) AND SOUND OUTPUT (dBA)

					Current draw (mA)											Sound Output (dBA)					
Pos	Chimo Tono Volume		8-17.	5 VDC	16-33 VDC								16-33 FWR							16-3	33 V
		Setting	15	30	15	30	75	95	115	150	177	15	30	75	95	115	150	177	DC	DC	FWR
1	1 Second	High	96	165	47	69	117	137	165	202	238	63	90	147	169	184	212	245	61	62	62
2	1 Second	Low	93	162	47	68	116	137	165	200	238	63	88	147	169	183	212	244	56	55	55
3	1⁄4 Second	High	94	161	48	70	117	138	166	202	237	65	90	149	170	184	213	246	67	70	70
4	1⁄4 Second	Low	93	157	48	69	116	137	164	199	236	64	89	148	168	184	216	244	61	61	61
5	Temporal	High	93	163	48	70	116	138	165	199	238	64	89	148	169	184	212	245	64	66	66
6	Temporal	Low	92	160	47	69	116	136	164	198	237	63	88	147	169	183	212	245	59	60	60
7	5 Second Whoop	High	98	169	54	77	124	146	173	206	245	75	100	155	178	193	221	255	76	78	78
8	5 Second Whoop	Low	95	166	49	71	117	144	168	202	239	68	91	148	170	186	217	248	62	64	64

**NOTE:** Products set at 15 and 30 candela automatically work on either 12V or 24V power supplies. The products are not listed for 12VDC operation when set to any other candela settings.

#### TAMPER SCREW

For tamper resistance, the standard captive screw may be replaced with a Torx screw (sold separately).

1. To remove the captive screw, back out the screw and apply pressure to the back of the screw until it disengages from the housing. Replace with Torx screw. (See Figure 9.)

#### FIGURE 9. TAMPER SCREW



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#### **INSTALLING A SURFACE MOUNT BACK BOX**

1. The ceiling surface mount back box may be secured directly to the wall or ceiling. Use of grounding bracket with ground screw is optional. (See Figure 10.)

2. The ceiling mount box can be used on ceiling horn strobe, chime strobe, strobe as well as ceiling speaker and speaker strobe models. Use the STR cutouts for ceiling horn strobe, chime strobe and strobe installation needs. (See Figure 11.)

3. Threaded knockout holes are provided for the sides of the box for  $\frac{3}{4}$  inch and  $\frac{1}{2}$  inch conduit adapter. Knockout holes in the back of the box can be used for  $\frac{3}{4}$  inch and  $\frac{1}{2}$  inch rear entry.

4. To remove the  $\frac{3}{4}$  inch knockout, place the blade of a flat-head screwdriver along the outer edge and work your way around the knockout as you strike the screwdriver. (See Figure 12.)

# NOTE: Use caution not to strike the knockout near the top edge of the surface mount back box.

5. V500 and V700 raceway knockouts are also provided. Use V500 for low profile applications and V700 for high profile applications.

6. To remove the knockout, turn pliers up. (See Figure 12.)

FIGURE 10. SURFACE MOUNTING ON CEILING







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## FIGURE 12. KNOCKOUT AND V500/V700 REMOVAL FOR SURFACE MOUNT BACK BOX



#### **A**WARNING

#### THE LIMITATIONS OF HORN/STROBES

The horn and/or strobe will not work without power. The horn/strobe gets its power from the fire/security panel monitoring the alarm system. If power is cut off for any reason, the horn/strobe will not provide the desired audio or visual warning.

The horn may not be heard. The loudness of the horn meets (or exceeds) current Underwriters Laboratories' standards. However, the horn may not alert a sound sleeper or one who has recently used drugs or has been drinking alcoholic beverages. The horn may not be heard if it is placed on a different floor from the person in hazard or if placed too far away to be heard over the ambient noise such as traffic, air conditioners, machinery or music appliances that may prevent alert persons from hearing the alarm. The horn may not be heard by persons who are hearing impaired.

NOTE: Strobes must be powered continuously for horn operation.

The signal strobe may not be seen. The electronic visual warning signal uses an extremely reliable xenon flash tube. It flashes at least once every second. The strobe must not be installed in direct sunlight or areas of high light intensity (over 60 foot candles) where the visual flash might be disregarded or not seen. The strobe may not be seen by the visually impaired.

The signal strobe may cause seizures. Individuals who have positive photoic response to visual stimuli with seizures, such as persons with epilepsy, should avoid prolonged exposure to environments in which strobe signals, including this strobe, are activated.

The signal strobe cannot operate from coded power supplies. Coded power supplies produce interrupted power. The strobe must have an uninterrupted source of power in order to operate correctly. System Sensor recommends that the horn and signal strobe always be used in combination so that the risks from any of the above limitations are minimized.

#### FCC STATEMENT

System Sensor Strobes and Horn/Strobes have been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and

SUPPLEMENTAL INFORMATION

For the latest Warranty information, please go to: http://www.systemsensor.com/en-us/Documents/E56-4000.pdf For Limitations of Fire Alarm Systems, please go to: http://www.systemsensor.com/en-us/Documents/I56-1558.pdf Speakers only: For the latest Important Assembly Information, please go to: http://www.systemsensor.com/en-us/Documents/I56-6556.pdf





Limitations of

Fire Alarm Systems



Warranty

can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Speakers Only: Assembly Information



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

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

#### **Features**

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

### Agency Listings







FM approved except for ALERT models 3057383, 3057072

pt 7125-1653:0504 5 7135-1653:0503



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

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

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

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

#### **L-Series Specifications**

#### Architect/Engineer Specifications

#### General

L-Series standard horns, strobes, and horn strobes shall mount to a standard 2 x 4 x 17/e-inch back box, 4 x 4 x 1½-inch back box, 4-inch octagon back box, or double-gang back box. L-Series compact products shall mount to a single-gang 2 x 4 x 17/e-inch back box. A universal mounting plate shall be used for mounting ceiling and wall products for all standard models and a separate universal mounting plate shall be used for mounting ceiling and wall products for all standard models and a separate universal mounting plate shall be used for mounting ceiling and wall products for all standard models and a separate universal mounting plate shall be used for mounting wall compact models. The notification appliance circuit wiring shall terminate at the universal mounting plate. Also, L-Series products, when used with the SynceCircuit<sup>™</sup> 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 SynceCircuit 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 32 and 120 degrees Fahrenheit from a regulated DC or full-wave rectified unfiltered power supply. Strobes and horn strobes shall have field-selectable candela settings including 15, 30, 75, 95, 110, 135, and 185.

#### Strobe

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

#### **Horn Strobe Combination**

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

#### Synchronization Module

The module shall be a System Sensor Sync•Circuit model MDL3 listed to UL 464 and shall be approved for fire protective service. The module shall synchronize Strobes at 1 Hz and horns at temporal three. Also, while operating the strobes, the module shall silence the horns on horn strobe models over a single pair of wires. The module shall mount to a  $4^{11}/_{16} \times 4^{11}/_{16} \times 2^{1}/_{8}$ -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
Strobe Flash Rate	1 flash per second
Nominal Voltage	Regulated 12 DC or regulated 24 DC/FWR <sup>1</sup>
Operating Voltage Range <sup>2</sup>	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 $^{\prime\prime}$ L $\times$ 4.7 $^{\prime\prime}$ W $\times$ 1.91 $^{\prime\prime}$ D (143 mm L $\times$ 119 mm W $\times$ 49 mm D)
Compact Wall-Mount Dimensions (including lens)	5.26" L x 3.46" W x 1.91" D (133 mm L x 88 mm W x 49 mm D)
Horn Dimensions	$5.6^{\prime\prime}L \times 4.7^{\prime\prime}W \times 1.25^{\prime\prime}D$ (143 mm L $\times$ 119 mm W $\times$ 32 mm D)
Compact Horn Dimensions	5.25" L x 3.45" W x 1.25" D (133 mm L x 88 mm W x 32 mm D)

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

#### **UL Current Draw Data**

UL Max. Strobe Current Draw (mA RMS)										
		8-17.5 Volts 16-33 Volts								
	Candela	DC	DC	FWR						
Candela	15	88	43	60						
Range	30	143	63	83						
	75	N/A	107	136						
	95	N/A	121	155						
	110	N/A	148	179						
	135	N/A	172	209						
	185	N/A	222	257						

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

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

	8-17.5 Volt	s	16-33 Volt	S					
DC Input	15cd	30cd	15cd	30cd	75cd	95cd	110cd	135cd	185cd
Temporal High	98	158	54	74	121	142	162	196	245
Temporal Low	93	154	44	65	111	133	157	184	235
Non-Temporal High	106	166	73	94	139	160	182	211	262
Non-Temportal Low	93	156	51	71	119	139	162	190	239
3.1K Temporal High	93	156	53	73	119	140	164	190	242
3.1K Temporal Low	91	154	45	66	112	133	160	185	235
3.1K Non-Temporal High	99	162	69	90	135	157	175	208	261
3.1K Non-Temporal Low	93	156	52	72	119	138	162	192	242
	16–33 Volts								
FWR Input	15cd	30cd	75cd	95cd	110cd	135cd	185cd		
Temporal High	83	107	156	177	198	234	287		
Temporal Low	68	91	145	165	185	223	271		
Non-Temporal High	111	135	185	207	230	264	316		
Non-Temportal Low	79	104	157	175	197	235	283		
3.1K Temporal High	81	105	155	177	196	234	284		
3.1K Temporal Low	68	90	145	166	186	222	276		
3.1K Non-Temporal High	104	131	177	204	230	264	326		
3.1K Non-Temporal Low	77	102	156	177	199	234	291		

#### Horn Tones and Sound Output Data

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

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

#### **L-Series Dimensions**



Wall Surface Mount Back Box SBBRL/SBBWL

#### **L-Series Ordering Information**

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

Model	Description
Horns*	
HRL*	Horn, Red
HWL*	Horn, White
HGRL*	Compact Horn, Red
HGWL*	Compact Horn, White
Accessorie	98
TR-2	Universal Wall Trim Ring Red
TR-2W	Universal Wall Trim Ring White
SBBRL	Wall Surface Mount Back Box, Red
SBBWL	Wall Surface Mount Back Box, White
SBBGRL	Compact Wall Surface Mount Back Box, Red
SBBGWL	Compact Wall Surface Mount Back Box, White

#### Notes:

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



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