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**FIRE ALARM  
SUBMITTALS**

**PROJECT:  
CASCADE CHRISTIAN PORTABLE**

# 5895XL

## Intelligent Distributed Power Module

The 5895XL is an intelligent distributed power module that adds 6.0 amps of power, six Flexput® I/O circuits, and two Form C relay circuits to a compatible Honeywell Silent Knight Series addressable system.

The 5895XL is available in a red cabinet for 120VAC operation and in a red cabinet for 240VAC operation (RPS-1000HV).

The 5895XL connects to the FACP via the RS-485 system bus allowing up to an additional 6,000 feet of wiring. Each 5895XL is optically isolated providing ground loop isolation and transient protection. The 5895XL supports its own backup battery and monitors the AC power.

The green LED on the 5895XL board indicates communication with a Honeywell Silent Knight Series FACP.

The Flexput circuits can be used as notification appliance circuits, continuous power, resettable power, door holder power, or as conventional initiation circuits that can support both 2- and 4-wire smoke detectors and contact devices (e.g. pull stations). All Flexput circuits and relay outputs are individually mappable from the Silent Knight FACP.

### COMPATIBILITY

The 5895XL is compatible with the following Silent Knight FACP:

- 6820/EVS (16 max. per panel)
- 6808 (8 max. per panel)
- 6700 (8 max. per panel)
- 5820XL/-EVS (8 max. per panel)
- 5808 (8 max. per panel)
- 5700 (8 max. per panel)

### FEATURES AND BENEFITS

- Complies with UL 864 10th Edition and ULS 2572 2nd Edition Standards
- Provides 6.0 amps output power
- Uses Flexput I/O circuits, 3A each, programmable as notification circuits, auxiliary power, circuits, or initiation circuits
- Supports Class A and Class B configuration of the SBUS and Flexput circuits
- Includes Two Form C programmable relays rated at 2.5A @ 24 VDC
- Ground loop isolation and transient protection
- SBUS optical isolation and re-conditions the RS-485 signal
- Built-in synchronization compatible with appliances from System Sensor®, AMSECO®, Gentex®, and Wheelock®
- Up to 6,000 foot wiring distance from the 5895XL
- Battery charging capacity is 35AH
- Offers a large cabinet size that can house the following:
  - two 18AH backup batteries
  - RBB accessory cabinet that can house battery sizes larger than 18AH
- Allows space to mount two 6815 or 5815XL SLC expander modules
- Provides transient protection
- SBUS repeater conditions the RS-485 signal 5895XL
- Six onboard Flexput circuits programmable for the following:
  - Notification appliance circuits (Class B/Class A)
  - Conventional initiation circuits (Class B/ Class A) both 2- and 4-wire
  - Auxiliary power (for door holders, continuous power, or resettable power)



# EVS-50W

## Intelligent 50 Watt Amplifier

The EVS-50W is an amplifier compatible with the Silent Knight Emergency Communication System. The EVS-50W is used to amplify audio messages for distribution throughout entire facilities.

Since the EVS-50W is designed as a self-contained distributed amplifier, it can be conveniently located near the area of protection to reduce wiring demands.

Each EVS-50W is capable of producing 50-watts of audio power. Up to four EVS-50W amplifiers can be used on the Emergency Voice System.

The EVS-50W has its own power supply with battery backup and four speaker circuits which can be expanded to eight speaker circuits using the optional EVS-CE4. The EVS-50W is fully supervised by the main panel to identify the trouble conditions.

### INSTALLATION

The user-friendly installation does not require special programming or a separate dialer capture module. The EVS-50W can be surface- or flush-mounted.

### COMPATIBILITY

The EVS-50W is compatible with the 6820EVS FACP Emergency Voice System.



## FEATURES AND BENEFITS

- Complies with UL 864 10th Edition and UL 2572 2nd Edition Standards
- Meets NFPA 72 code compliant for sole, primary, or backup communications
- Provides SBUS addressable, up to four EVS-50W amplifiers per system for a total of 500 watts
- Each EVS-50W amplifier is supervised and has four onboard audio circuits expandable to eight with the EVS-CE4 expander for a system total of 32 audio circuits
- Uses an easy-to-install wire harness to connect the EVS-CE4 audio circuit expander
- Extends remote installations up to 6,000 feet away from the EVS-Series panel
- Includes its own power supply and backup battery
- Selectable for 25V or 70.7V operation
- Provides six-wire connection to the EVS System:
  - Two-wires for the voice bus connections
  - Four-wires for the SBUS connections
- Available in a red cabinet can be surface- or flush-mounted

# Honeywell



# EVS-50W TECHNICAL SPECIFICATIONS

## PHYSICAL

**Flush Mount Dimensions:**  
14.05"W x 24.75"H x 3.04"D  
(36.08 W x 62.09 H x 8.07 D cm)

**Overall Dimensions:**  
16.0"W x 26.25"H x 4.01"D  
(40.06 W x 66.07 H x 10.05 D cm)

**Color:** Red

## ENVIRONMENTAL

**Operating Temperature:** 32°F to 120°F  
(0°C to 49°C)

**Humidity:** 10% to 93% relative humidity  
(non-condensing)

## ELECTRICAL

**Primary AC:** 120 VAC @ 60Hz

**Standby Current:** 85mA @ 25 Vrms;  
100mA @ 70.7Vrms

**Alarm Current:** 525mA @ 25 rms;  
580mA @ 70.7Vrm

**Total Power:** 50W @ 25 Vrms or 70.7Vrms

- **Circuit 1-4:** Rated at 50W each

- **EVS-CE4 Circuits 5-8:** Rated at 50W

**Main EVS Panel SBUS:**

**Standby Current:** 10mA

**Alarm Current:** 10mA

**Battery Charging Capacity:** 7 – 35AH

**Battery Size:** 18AH max allowed in cabinet.  
Use RBB accessory cabinet for larger  
batteries up to 35AH per system

**Voice Integration Wiring:**

-Six conductor

-Two voice bus

-Four SBUS

## ORDERING INFORMATION

**EVS-50W:** Intelligent 50 Watt Amplifier, red

## OPTIONAL ACCESSORIES

**EVS-CE4:** Audio Circuit Expander

**RBB:** Remote Battery Box accessory  
cabinet. Use for backup batteries up to  
35AH and too large to fit into a cabinet

**SK-SCK:** Seismic Compliance Kit

## STANDARDS AND CODES

The EVS-50W complies with the following  
standards and codes.

- UL 864, 10th Edition: Standard for Control Units for Fire Alarm Systems
- UL 864, Local Protective and Signaling Systems
- UL 2572, 2nd Edition: Standard for Mass Notification Systems
- UL 1711
- NFPA:
  - NFPA 13
  - NFPA 70
  - NFPA 72
- Local Protective Signaling Systems
- Emergency Communication Systems

## AGENCY LISTINGS AND APPROVALS

- UL Listed: S2766
- CSFM Approved: 7165-0559:0500
- FDNY: Approved

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Country of origin: U.S.A.

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# LOCATION - SPRINKLER RISER ROOM JR HIGH- FOR PORTABLES 11&12

## Honeywell



## 5495

### Distributed Power Module

The 5495 Distributed Power Module 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®, AMSECO®, and Wheelock. The 5495's switch mode power supply design is up to 50% more efficient than competitive linear mode power supplies. Also, ADA retrofits are easier and less expensive with the 5495 because it integrates into current systems without the costly investment in new components.

The 5495 is a 6 amp notification power expander that provides its own AC power connection, battery charging circuit, and backup battery. The 5495 is the cost-effective solution for powering notification appliances required by the Americans with Disabilities Act (ADA). The 5495 has built-in ANSI cadence pattern, which can upgrade older control panels that lack cadence capability.

#### CONNECTION TO LOCAL FIRE CONTROL

The 5495 may be connected to a local fire control which utilizes Class A or Class B type notification circuits operating between 9 and 32 VDC. The control panel's notification circuit is connected to one of the inputs on the 5495. The control panel's notification circuit end-of-line resistor is also connected across two terminals on the 5495, which provides supervision between the 5495 and the fire control panel. Polarized audible and/or visual notification devices are then connected to the 5495 signal circuits using the 4.7kΩ end-of-line resistors provided. Since the 5495 draws very little power from the control, it is possible to connect one 5495 to each notification circuit on the control panel and still provide full supervision of the notification circuits all the way back to the control panel.

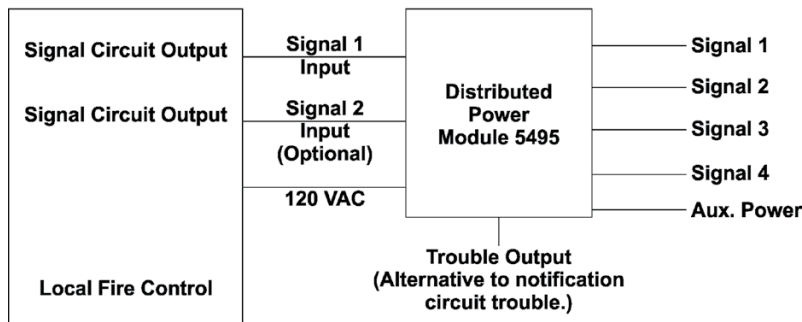
### FEATURES & BENEFITS

- 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
- Dip switches allow for easy reconfiguration
- 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
- Additional continuous auxiliary output
- 3 amps per output circuit
- 2 inputs; 2 Class B or 2 Class A
- Ground fault detector/indicator
- Independent trouble relay
- AC loss delay option shuts off power to non-essential high-current accessories like magnetic door holders
- Built-in synchronization for appliances from System Sensor®, Gentex®, AMSECO®, and Wheelock
- Stand alone operation
- Lightweight design adds to ease of installation and reduces shipping costs
- Operates with most polarized, UL Listed notification devices
- ANSI Cadence pattern output capability built-in



5495

## Model 5495 Block Diagram



### SUPERVISION

The 5495 supervises a variety of functions including:

- Low AC power
- Low battery condition
- Earth ground fault
- Auxiliary output power limit condition
- EOL supervision trouble or power limited condition at an output

When a trouble condition occurs, the 5495 creates a trouble condition on the host control signal circuits to which it is connected. The 5495 still maintains the ability to be activated by the host control. In addition, the 5495 provides a Form C trouble relay output as an alternative to using the notification circuit trouble.

### PHYSICAL

**Dimensions:** 12.25"W x 16"H x 3"D (30.88 cm W x 40.64 cm H x 7.62 cm D)

### ENVIRONMENTAL

**Operating Temperature:** 32°F to 120°F (0°C to 49°C)

**Humidity:** 10% - 93% non-condensing)

### ELECTRICAL

**AC input:** 120 VAC at 2A

**Output:** 24 VDC at 6A

**Current:** Standby 75mA; Alarm 205mA

**Auxiliary power circuit:** 1

**Notification 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:** Alarm Current (for typical voltages) drawn from main panel's notification appliance circuits.

**12 VDC 6.5 mA**

**24 VDC One input circuit:** 15 mA; Both input circuits: 0 mA

**No. of inputs:** 2

**Input configuration:** 2 Class B or 2 Class A

**Input voltage range:** 9 - 32VDC

**Battery charging capacity:** 35.0AH

### INDICATOR LIGHTS

**AC power on :** Green

**Battery trouble:** Yellow

**Ground fault:** Yellow

**Aux trouble:** Yellow

**Output troubles (1-4):** Yellow

### ORDERING INFORMATION

**5495:** Distributed Power Module

### ACCESSORIES

**SK-SCK:** Seismic Compliance Kit

### AGENCY LISTINGS

- UL listed
- CSFM 7300-0559:123
- Meets NFPA 72 requirements
- MEA 429-92-E Vol XII
- OSHPD (CA) OSP-0065-10

### For more information

Learn more about Honeywell Silent Knight and other products by visiting [www.silentknight.com](http://www.silentknight.com)

### Honeywell Silent Knight

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800-328-0103

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For Technical Support, call 800-446-6444.



# SK-PHOTO, SK-PHOTO-T, and SK-PHOTOR

## Intelligent Photoelectric Smoke Detectors

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 the Honeywell Silent Knight series fire alarm control panels (FACPs).

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 135°F (57°C) 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).

### 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

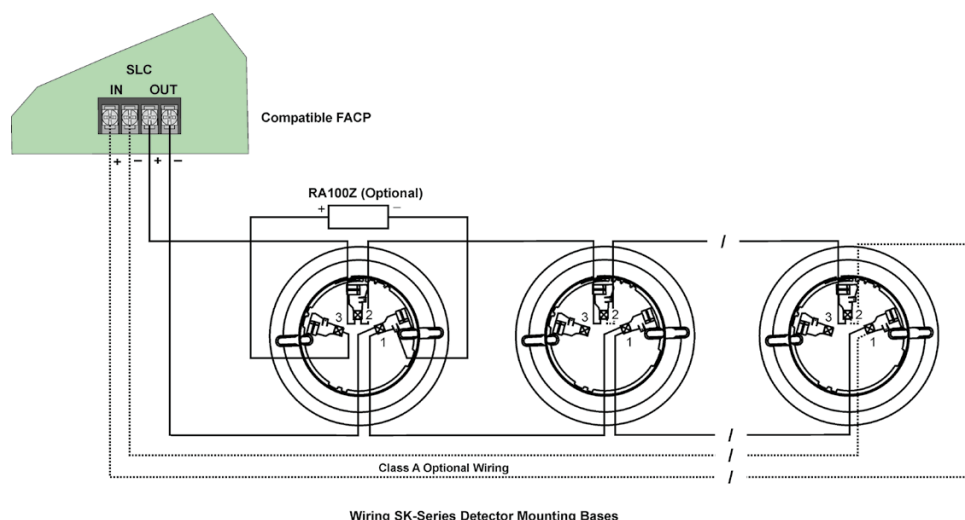
## FEATURES & BENEFITS

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



**SK-PHOTO (BASE INCLUDED)**

# SK-PHOTO, SK-PHOTO-T and SK-PHOTOR Technical Specifications



For a complete listing of all compliance approvals and certifications, please visit [www.silentknight.com](http://www.silentknight.com).

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## PHYSICAL

Height: 2.0" (5.0 cm)

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

## ELECTRICAL

Operating Voltage: 15–32VDC

Standby Current: 300  $\mu$ A @ 24VDC Maximum

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

## ENVIRONMENTAL

Operating Temperature

SK-Photo: 32° – 120°F (0°C – 49°C)

SK-Photo-T: 32° – 100°F (0°C – 38°C)

Humidity: 10% – 93% non-condensing

## OTHER RATINGS

SK-Photo-T Thermal: Fixed temperature set point 135°F (57°C)

Velocity: 0 – 4000 fpm (0 – 20 m/sec)

## INSTALLATION

The SK-PHOTO and SK-PHOTO-T plug into a compatible Silent Knight series detector bases. The SK-PHOTOR is a remote test capable detector head included within the DNR (W) duct smoke detector.

## ORDERING INFORMATION

SK-PHOTO: Photoelectric smoke detector

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

SK-PHOTOR: Photoelectric detector with remote test capability

## ACCESSORIES

RA100Z: Remote LED annunciator

XR2B: Detector removal tool. A removal and replacement tool for SK series plug-in detectors. Includes the T55-127-000

M02-04-01: Detector test magnet.

M02-09-00: Test magnet with telescoping handle

XP-4: Extension Pole for XR2B. Extends from 5 – 15 ft.

T55-127-000: Detector Removal Head

BCK-200B: Black Detector Kit. For SK series detectors

## COMPATIBILITY

The SK-PHOTO, SK-PHOTO-T and SK-PHOTOR 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 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-EVS: Addressable fire alarm control panel with an emergency mass notification system.

## For more information

Learn more about Honeywell Silent Knight and other products by visiting [www.silentknight.com](http://www.silentknight.com)

## Honeywell Silent Knight

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# Honeywell



## 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 activate 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®
- 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

**Operating Voltage:** 15 – 32VDC

**SLC Standby and Alarm Current:** 350 $\mu$ A

**Wire Gauge:** Up to 12AWG (3.1 mm<sup>2</sup>)

## 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 with an emergency voice system

For a complete listing of all compliance approvals and certifications, please visit [www.silentknight.com](http://www.silentknight.com).

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# Indoor Selectable-Output Speaker Strobes and Dual Voltage Evacuation Speakers for Wall Applications

*System Sensor L-Series selectable output speaker strobes and dual-voltage evacuation speakers can reduce ground faults and enable faster installation with lower current draw and modern aesthetics.*

## Features

- Plug-in design and protective cover reduce ground faults
- Universal mounting plate with an onboard shorting spring tests wiring continuity before installation
- No extension ring required
- Field selectable candela settings on wall units: 15, 30, 75, 95, 110, 135, 185
- Automatic selection of 12- or 24-volt operation at 15 and 30 candela
- Rotary switch simplifies field selection of speaker voltage (25 and 70.7 Vrms) and power settings (1/4, 1/2, 1 and 2 watts)
- Speakers offer high fidelity and high volume sound output
- 520 Hz +/- 10% square wave tone capable with compatible FACP
- Compatible with System Sensor synchronization protocol
- Electrical compatibility with existing SpectrAlert and SpectrAlert Advance products
- Tamper-resistant construction
- Updated modern aesthetics

## Agency Listings



7320-1653:0505



**The System Sensor L-Series** of speakers and speaker strobes reduce costly ground faults using a plug-in design and universal mounting plate that allow the installer to pre-wire mounting plates, dress the wires, and confirm wiring continuity before plugging in the speakers. In addition, a protective plastic cover prevents nicked wires by covering exposed speaker components.

These devices also enable faster installations by providing instant feedback to ensure that wiring is properly connected, rotary switches to select voltage and power settings, and 7 field-selectable candela settings for wall speaker strobes.

The low total harmonic distortion of the speaker offers high fidelity sound output while still offering high volume sound output for use in high ambient noise applications.

### System Sensor L-Series makes installation easy

- Attach a universal mounting plate to a 4 × 4 × 2 1/8 inch back box. Flush-mount applications do not require an extension ring.
- Connect the notification appliance circuit or speaker wiring to the terminals on the mounting plate.
- Attach the speaker or speaker strobe to the mounting plate by inserting the product tabs into the mounting plate grooves. Hinge the device into position to lock the product pins into the mounting plate terminals. The device will temporarily hold in place with a catch until it is secured with a captured mounting screw.

# L-Series Speaker and Speaker Strobe Specifications

## Architectural/Engineering Specifications

### General

L-Series speaker and speaker strobes shall mount to a 4 × 4 × 2<sup>1</sup>/<sub>8</sub>-inch back box. A universal mounting plate shall be used for mounting ceiling and wall products. The notification appliance circuit and amplifier wiring shall terminate at the universal mounting plate. Also, L-Series speaker strobes, when used with the Sync•Circuit™ Module accessory, shall be powered from a non-coded notification appliance circuit output and shall operate on a nominal 12 or 24 volts. When used with the Sync•Circuit Module, 12-volt rated notification appliance circuit outputs shall operate between 8.5 and 17.5 volts; 24-volt rated notification appliance circuit outputs shall operate between 16.5 and 33 volts. Indoor L-Series products shall operate between 32°F and 120°F from a regulated DC, or full-wave rectified, unfiltered power supply. Wall-mount speaker strobes shall have field-selectable candela settings including 15, 30, 75, 95, 110, 135, 185.

### Speaker

The speaker shall be aSp System Sensor L-Series model \_\_\_\_\_ dual-voltage transformer speaker capable of operating at 25.0 or 70.7 nominal Vrms. It should be listed to UL 1480 and shall be approved for fire protective service. The speaker shall have a frequency range of 400 to 4,000 Hz and shall have an operating temperature between 32°F and 120°F. The speaker shall have power taps and voltage that are selected by rotary switches.

### Speaker Strobe combination

The speaker strobe shall be a System Sensor L-Series model \_\_\_\_\_ listed to UL1480 and UL 1971 and be approved for fire protective signaling systems. The speaker shall be capable of operating at 25.0 or 70.7 nominal Vrms selected via rotary switch, and shall have a frequency range of 400 to 4,000 Hz. The speaker shall have power taps that are selected by rotary switch. The strobe shall comply with the NFPA 72 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.

### 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. The module shall mount to a 4<sup>1</sup>/<sub>16</sub> × 4<sup>1</sup>/<sub>16</sub> × 2<sup>1</sup>/<sub>8</sub>-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 Specifications

<b>Operating Temperature</b>	32°F to 120°F (0°C to 49°C)		
<b>Humidity Range</b>	10 to 93% non-condensing		
<b>Dimensions, Wall-Mount</b>	<b>Length</b>	<b>Width</b>	<b>Depth</b>
<b>SPL Speaker</b>	6.5 in, 165 mm	5 in, 127 mm	0.97 in, 23 mm
<b>With Surface Mount Back Box</b>	6.6 in, 168 mm	5.1 in, 130 mm	3.2 in, 82 mm
<b>SPSL Speaker/Strobe (including lens and speaker)</b>	6.5 in, 165 mm	5.0 in, 127 mm	2.3 in, 58 mm
<b>With Surface Mount Back Box</b>	6.6 in, 168 mm	5.1 in, 130 mm	4.5 in, 116 mm

\*When using 12AWG, 14 AWG, or adding extra wires in the box, a deeper box or extension ring is recommended.

## Electrical/Operating Specifications

<b>Nominal Voltage (speakers)</b>	25 Volts or 70.7 Volts (nominal)
<b>Maximum Supervisory Voltage (speakers)</b>	50 VDC
<b>Strobe Flash Rate</b>	1 flash per second
<b>Nominal Voltage (strobes)</b>	Regulated 12 VDC or regulated 24 DC/FWR <sup>1,2</sup>
<b>Operating Voltage Range (includes fire alarm panels with built in sync)</b>	8 to 17.5 V (12 V nominal) or 16 to 33 V (24 V nominal)
<b>Operating Voltage with MDL3 Sync Module</b>	8.5 to 17.5 V (12 V nominal) or 16.5 to 33 V (24 V nominal)
<b>Frequency Range</b>	400 to 4000 Hz <sup>3</sup>
<b>Power</b>	¼, ½, 1, 2 watts

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 and 30 cd

3. 520 Hz +/- 10% square wave tone capable with compatible FACP.

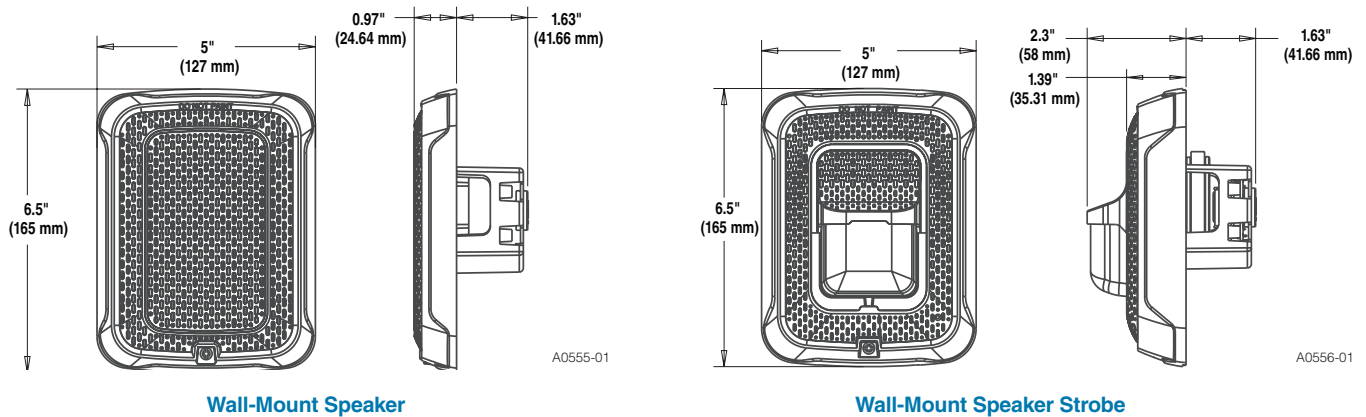
## UL Current Draw Data

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

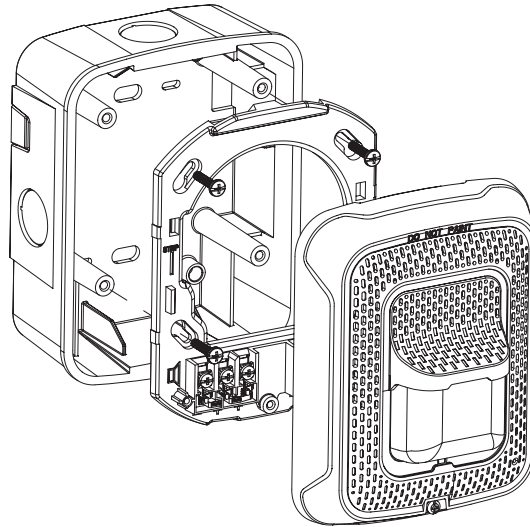
Sound Output Speaker Strobe				
	¼ W	½ W	1 W	2 W
UL Reverberant (dBA @10 ft)	77	80	83	86
UL Anechoic (dBA @10 ft)	77	80	83	86

Sound Output Speaker				
	¼ W	½ W	1 W	2 W
UL Reverberant (dBA @10 ft)	79	82	85	88
UL Anechoic (dBA @10 ft)	79	82	85	88

## L-Series Dimensions



## Surface Mounting



A0523-01

**Wall-Mount Speaker Strobe  
with SBBSPRL/ SBBSPWL Surface Mount Back Box**

## L-Series Ordering Information

Wall Mount		
White	Red	Description
SPWL	SPRL	Speaker only
SPSWL	SPSRL	Speaker Strobe
SPSWL-P	SPSRL-P	Plain Speaker Strobe
SPSWL-ALERT	—	Speaker Strobe, Amber Lens
SPSWL-CLR-ALERT	—	Speaker Strobe Clear Lens
—	SPSRL-SP	Speaker Strobe, Fuego

Accessories		
White	Red	Description
RFPW	RFP	7 in × 9.5 in Retrofit Plate
SBBSPWL	SBBSPRL	Surface Mount Back Box for Speakers and Speaker Strobes
TR-2W	TR-2	Wall Mount Trim Ring

### Notes:

All -P models have a plain housing (no "FIRE" marking on the cover)



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for current product information, including the latest version of this data sheet.  
AVDS867-03 • 6/6/2019



# L-Series and L-Series with LED Indoor Selectable Horns, Strobes and Horn Strobes

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



## Features

- LED technology provides lower current draw
- Digital Voltage Meter (DVM) diagnostic test points for Horn Strobes and Strobes
- Common aesthetics across the L-Series platform
- Standard and compact sizes
- Tamper-resistant construction
- Field-selectable candela settings on wall units: 15, 30, 75, 95, 110, 135, and 185
- Field-selectable candela settings on ceiling units: 15, 30, 75, 95, 115, 150, and 177
- Rotary switches for candela, tone and volume selections
- Mounting plate provides plug-in design for easier installation and shorting springs to check wiring continuity
- Electrically compatible with legacy SpectrAlert, SpectrAlert Advance and L-series devices
- Synchronization through use of UL approved power supplies that support System Sensor Sync protocol or System Sensor MDL3 Sync Module
- Horns, Strobes and Horn Strobes listed for wall or ceiling use

## The System Sensor L-Series and L-Series with LED platform

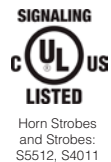
offers the most versatile and easy-to-use line of horns, strobes, and horn strobes in the industry with lower current draw and modern aesthetics. LED lighting technology offers significantly lower current draw compared to older Xenon bulbs across a full candela range. This improves design flexibility for notification appliance circuits (NACs) while also reducing power supply requirements allowing for simpler and lower cost installations.

Flexible design options meet virtually any application requirement: wall or ceiling mount, standard or compact sizes, red or white color choices, bezel kits for alternate markings and languages, and LED color lenses for distinctive visual signaling. In addition, installers can easily adapt devices using field selectable candela, tone and volume settings using rotary switches.

The L-Series and L-Series with LED line is developed to simplify 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. The universal mounting plate includes an onboard shorting spring, so installers can test wiring continuity before the device is installed.

In addition, the System Sensor L-Series with LED notification appliances offer a new diagnostic test point feature that allows you to measure device voltage with a digital voltage meter (DVM) without removing the appliance from the wall or ceiling. The DVM test points are discreetly located on the face of the notification appliance which enable faster troubleshooting and end of line (EOL) voltage checks while greatly reducing the risk of misplacing or damaging appliances during troubleshooting.

## Agency Listings



## L-Series and L-Series with LED Specifications

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, LED Strobes and Horn Strobes	Regulated 24 VDC
Nominal Voltage, Horns	Regulated 12 VDC or regulated 24 DC/FWR
Operating Voltage Range, LED Strobes and Horn Strobes	16 to 33 V (24 V nominal)
Operating Voltage Range, Horns	8 to 17.5 V (12 V nominal) or 16 to 33 V (24 V nominal)
Input Terminal Wire Gauge	12 to 18 AWG

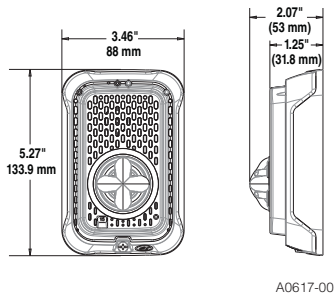
## UL/ULC Current Draw Data, Horn Tones, and Sound Output Data

UL/ULC Maximum Strobe Current Draw (mA)			
Candela Range	Candela Rating	16–33 Volts	
		Wall	Ceiling
Candela Range	15	18	18
	30	22	22
	75	70	70
	95	75	75
	110	85	—
	115	—	90
	135	105	—
	150	—	110
	177	—	115
	185	120	—

UL/ULC Maximum Horn Current Draw (mA RMS)					
Sound Pattern	dB	8–17.5 Volts			FWR
		DC	DC	DC	
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	

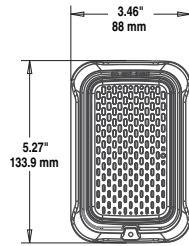
UL/ULC Maximum Horn Strobe Current Draw (mA) and Sound Output (dBA)														
Switch Pos.	Sound Pattern	Volume Setting	Current Draw (mA RMS), Horn Strobe, Candela Range (15-185 cd)										Sound Output (dBA)	
			16-33 Volts											16-33V DC
			15cd	30cd	75cd	95cd	110cd	115cd	135cd	150cd	177cd	185cd		
			WALL	CEILING	WALL	CEILING	WALL	CEILING	CEILING	WALL				
1	Temporal 3	High	35	38	87	92	94	120	189	189	190	190	87	
2	Temporal 3	Low	35	38	87	92	94	120	135	135	145	145	79	
3	Non-Temporal	High	50	52	87	92	94	120	127	127	135	135	87	
4	Non-Temporal	Low	35	38	87	92	94	120	125	125	130	130	79	
5	3.1KHz Temporal 3	High	35	38	87	89	91	115	155	155	165	165	86	
6	3.1KHz Temporal 3	Low	35	38	87	89	91	115	128	130	135	135	80	
7	3.1KHz Non-Temporal	High	40	42	87	89	91	115	125	125	135	135	86	
8	3.1KHz Non-Temporal	Low	35	38	87	89	91	115	120	120	130	130	80	

## L-Series with LED Dimensions: Wall-Mounted Equipment



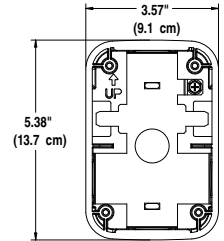
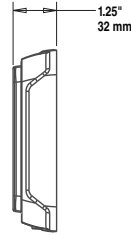
A0617-00

**Compact Strobe, Horn Strobe  
for Wall**



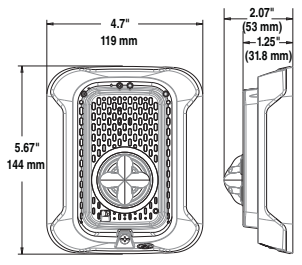
A0547-00

**Compact Horn**



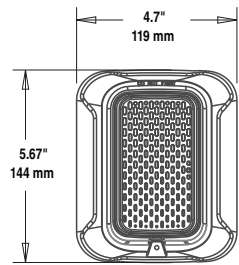
A0557-00

**Compact Surface Mount Back Box  
for Walls (SBBGRL, SBBGWL)**



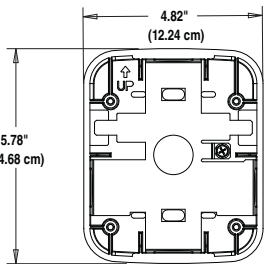
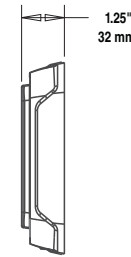
A0613-00

**Strobes, Horn Strobes  
for Walls**



A0549-00

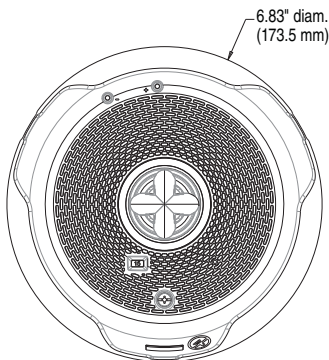
**Horn**



A0554-01

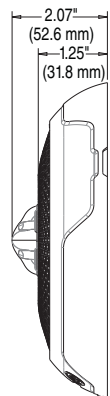
**Surface Mount Back Box  
for Walls (SBBRL/SBBWL)**

## L-Series with LED Dimensions: Ceiling-Mounted Equipment

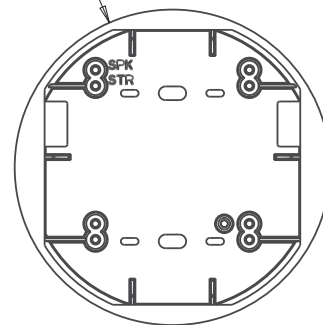


A0608-00

**Strobes and Horn Strobes  
for Ceilings**

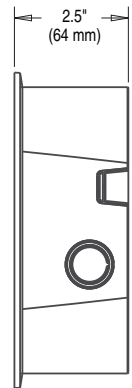


6.92" diam.  
(175.77 mm)



A0546-00

**Surface Mount Back Box  
for Ceilings (SBBCL, SBCWL)**



## L-Series with LED: Ordering Information

Model	Description
<b>L-Series with LED Horn Strobes</b>	
P2RLED	2-Wire, Horn Strobe, Wall, Red
P2RLED-B	2-Wire, Horn Strobe, Wall, Red, Bilingual
P2WLED	2-Wire, Horn Strobe, Wall, White
P2WLED-B	2-Wire, Horn Strobe, Wall, White, Bilingual
P2GRLED	2-Wire, Compact Horn Strobe, Wall, Red
P2GRLED-B	2-Wire, Compact Horn Strobe, Wall, Red, Bilingual
P2GWLED	2-Wire, Compact Horn Strobe, Wall, White
P2GWLED-B	2-Wire, Compact Horn Strobe, Wall, White, Bilingual
P2RLED-P	2-Wire, Horn Strobe, Wall, Red, Plain
P2WLED-P	2-Wire, Horn Strobe, Wall, White, Plain
P2RLED-SP	2-Wire, Horn Strobe, Wall, Red, FUEGO
P2WLED-SP	2-Wire, Horn Strobe, Wall, White, FUEGO
PC2RLED	2-Wire, Horn Strobe, Ceiling, Red
PC2RLED-B	2-Wire, Horn Strobe, Ceiling, Red, Bilingual
PC2WLED	2-Wire, Horn Strobe, Ceiling, White
PC2WLED-B	2-Wire, Horn Strobe, Ceiling, White, Bilingual
<b>L-Series with LED Strobes</b>	
SRLED	Strobe, Wall, Red
SRLED-B	Strobe, Wall, Red, Bilingual
SWLED	Strobe, Wall, White
SWLED-B	Strobe, Wall, White, Bilingual
SGRLED	Strobe, Compact, Wall, Red
SGRLED-B	Strobe, Compact, Wall, Red, Bilingual
SGWLED	Strobe, Compact, Wall, White
SGWLED-B	Strobe, Compact, Wall, White, Bilingual
SRLED-P	Strobe, Wall, Red, Plain
SWLED-P	Strobe, Wall, White, Plain
SRLED-SP	Strobe, Wall, Red, FUEGO
SWLED-CLR-ALERT	Strobe, Wall, White, ALERT
SWLED-ALERT	Strobe, Wall, White, ALERT, Amber Lens
SCRLED	Strobe, Ceiling, Red
SCRLED-B	Strobe, Ceiling, Red, Bilingual
SCRLED-P	Strobe, Ceiling, White, Plain
SCWLED	Strobe, Ceiling, White
SCWLED-B	Strobe, Ceiling, White, Bilingual
SCWLED-P	Strobe, Ceiling, White, Plain
SCWLED-CLR-ALERT	Strobe, Ceiling, White, ALERT
<b>L-Series Horns</b>	
HRL*	Horn, Red
HRLA*	Horn, Red, Plain, ULC
HWL*	Horn, White
HWLA*	Horn, White, Plain, ULC
HGRLED*	Compact Horn, Red
HGRLED*	Compact Horn, Red, Plain, ULC
HGWL*	Compact Horn, White
HGWL*	Compact Horn, White, Plain, ULC

Model	Description
<b>LED Lenses</b>	
LENS-A3	Lens LED Amber Wall/Ceiling
LENS-B3	Lens LED Blue Wall/Ceiling
LENS-G3	Lens LED Green Wall/Ceiling
LENS-R3	Lens LED Red Wall/Ceiling
<b>Accessories</b>	
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
TRC-2	Universal Ceiling Trim Ring, Red
TRC-2W	Universal Ceiling Trim Ring, White
SBBCL	Ceiling Surface Mount Back Box, Red
SBBCLW	Ceiling Surface Mount Back Box, White
<b>Bezels†</b>	
BZR	Wall Red Bezel Kit
BZW	Wall White Bezel Kit
BZGR	Compact Wall Red Bezel Kit
BZGW	Compact Wall White Bezel Kit
BZRC	Horn Strobe Ceiling Red Bezel Kit
BZWC	Horn Strobe Ceiling White Bezel Kit

### Notes for L-Series With LED Horn Strobes and Strobes:

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.  
 All -B models have "FIRE/FEU" marking on cover for use in Canadian applications.  
 Amber lenses are not for use in Canadian applications

### Notes for L-Series Horns:

\*Horn-only models are listed for wall or ceiling use.

### Notes for Bezels:

†Each bezel pack ships in a package of 5.  
 Add one of the following extensions for print/language options: -F (FIRE), -AL (ALERT), -EV (EVAC), -AG (AGENT), -P (Plain), -FR (FEU), -PG (FOGO), -SP (FUEGO), -SPE (FUEGO/FIRE).

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Absorbant Glass Mat (AGM) technology for superior performance. Valve regulated, spill proof construction allows safe operation in any position. Approved for transport by air. D.O.T., I.A.T.A., F.T.A. and C.A.B. certified. U.L. recognized under file number MH 20567.

## Specification

<b>Nominal Voltage</b>	12 volts		
<b>Nominal Capacity</b>	77° F (25° C)		
20-hr. (0.35A)	7.00 Ah		
10-hr. (0.65A)	6.51 Ah		
5-hr. (1.20A)	5.95 Ah		
1-hr. (4.20A)	4.20 Ah		
<b>Approximate Weight</b>	4.52 lbs (2.05 kgs)		
<b>Internal Resistance (approx.)</b>	30mΩ		
<b>Shelf Life</b> (% of normal capacity at 68° F (20° C)			
3 Months	6 Months	12 Months	
91%	83%	64%	
<b>Temperature Dependency of Capacity</b>	(20 hour rate)		
104° F (40°C)	77° F (25°C)	32° F (0°C)	5° F (-15°C)
102%	100%	85%	65%
<b>AGM Operational Temperature</b>			
Charge	32° F to 104° F (0° C to 40° C)		
Discharge	5° F to 113° F (-15° C to 45° C)		
<b>AGM Storage Temperature</b>	5° F to 104° F (-15° C to 40° C)		
<b>UPG Recommends</b>	32° F to 86° F (0° C to 30° C)		



Due to continuous improvements to our products, product may vary slightly from depiction.

## Charge Method (Constant Voltage)

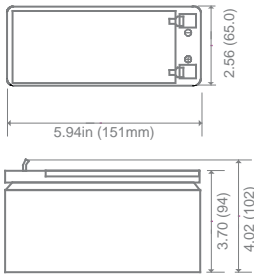
## Cycle Use (Repeating Use)

Initial Current	2.1 A or smaller
Control Voltage	14.6 - 14.8 V

## Float Use

Control Voltage	13.6 - 13.8 V
-----------------	---------------

## Physical Dimensions: in (mm)



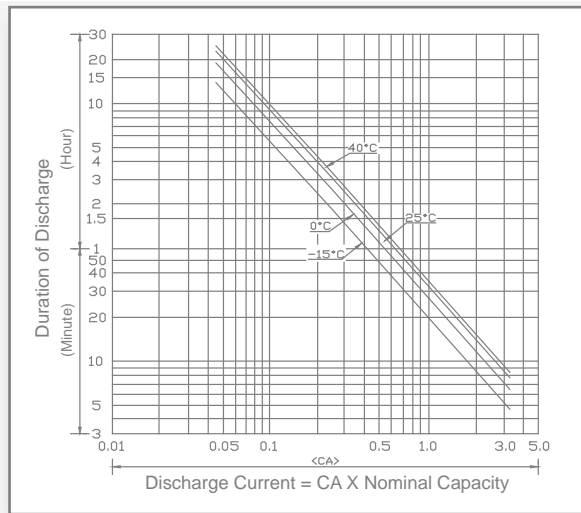
**L:** 5.94 in (151 mm)  
**W:** 2.56 in (65.0 mm)  
**H:** 3.70 in (94.0 mm)  
**TH:** 4.02 in (102 mm)

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

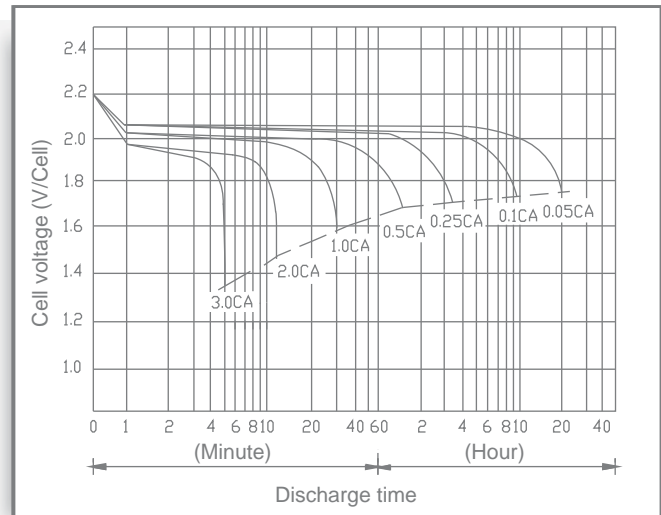
## Terminals

Dimension Type	L	W	w	H	T
F1	6.50	4.75	6.00	5.00	0.80

## Discharge Time vs. Discharge Current

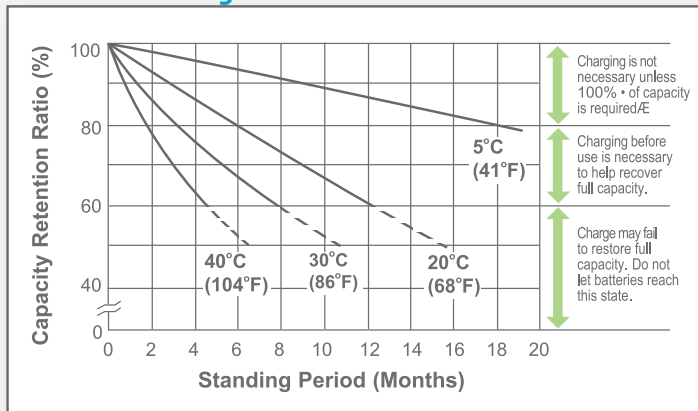


## Discharge Characteristics

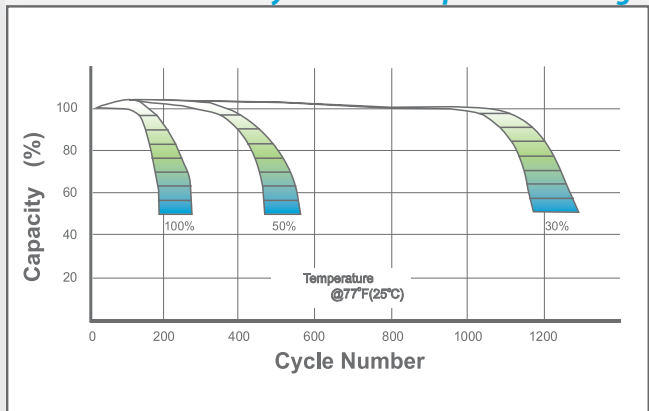


ISO 9001

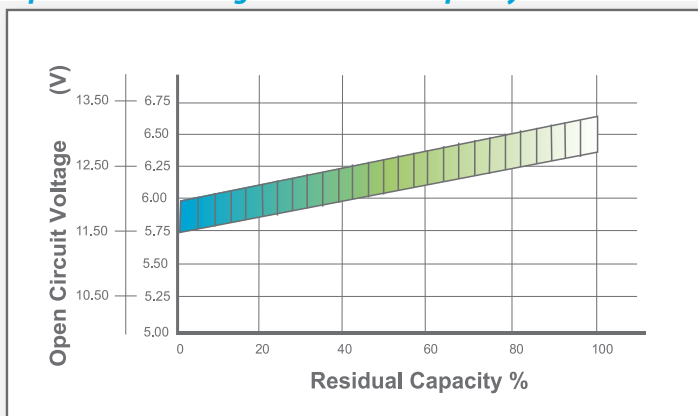
### Shelf Life & Storage



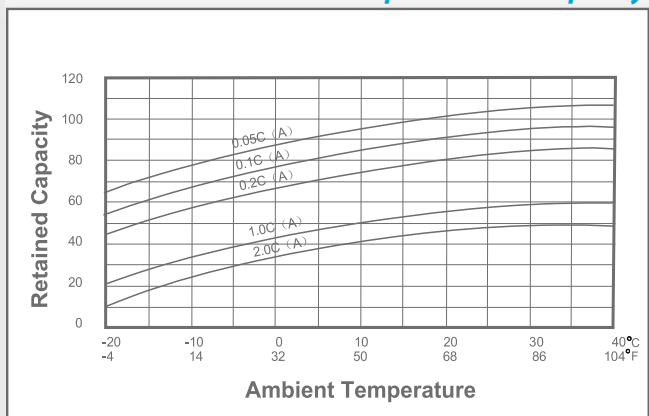
### Cycle Life vs Depth of Discharge



### Open Circuit Voltage vs Residual Capacity



### Effect of Temperature on Capacity



### Charge Current & Final Discharge Voltage

Application	Charge Voltage(V/Cell)			Max.Charge Current	Final Discharge Voltage V/Cell	1.75	1.70	1.60	1.30
	Temperature	Set Point	Allowable Range						
Cycle Use	25°C(77°F)	2.45	2.40~2.50	0.30C	Discharge Current(A)	0.2C>(A)	0.2C<(A)<0.5C	0.5C<(A)<1.0C	(A)>1.0C
Standby	25°C(77°F)	2.325	2.30~2.35						



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