

SIEMENS



Siemens ACEND Series

**SC-SP-WR-F, SC-SS-WR-F, SC-SP-WW-F
SC-SS-WW-F**

Installation

1 GENERAL

⚠ WARNING! Read this instruction manual carefully before using the product. Failure to comply with any of the following instructions, cautions and warnings could result in improper application, candela/wattage setting, installation and/or operation of these products in an emergency, which could result in property damage and serious injury or death to you and/or others.

The Siemens ACEND speaker-only and speaker/strobe dual-type appliances are a family of audible and/or visual notification appliances for wall mount only. The included products are:

Speaker-only Appliances	Speaker/strobe Dual-type Appliances
SC-SP-WR-F	SC-SS-WR-F
SC-SP-WW-F	SC-SS-WW-F

Lens-based speaker/strobe dual-type appliances have six candela settings. They can be provided as non-synchronized or synchronized strobe appliances, depending on whether the connected Fire Alarm Control Panel (FACP) incorporates the Siemens sync protocol or the Siemens Power Supply. All appliances meet NFPA72 20 millisecond light pulse duration code requirements.

All speaker/strobe appliances are UL/ULC listed as “Special Application 16 to 33VDC” when used in conjunction with products from Siemens. The design incorporates a high efficiency speaker for maximum output at minimum power across a frequency range of 300-8000Hz. If the appliances are required to produce a distinctive three-pulse Temporal Pattern Fire Alarm Evacuation Signal (for total evacuation) in accordance with NFPA 72, the appliances must be used with a fire alarm control unit that can generate the temporal pattern signal. Refer to manufacturer’s installation manual for details.

All appliances are intended to be used with compatible FACPs (the appliances are identified to be compatible in installation instructions of FACPs or FACPs are identified to be compatible in this instruction manual).

All appliances support 25Vrms and 70.7Vrms audio inputs and have five wattage settings to determine how loud the appliances can go when receiving audio source from voice system.

General Specifications

Compliant Standards	<ul style="list-style-type: none"> UL 1480, UL 1638, UL 1971 ULC 526, ULC 541 FCC Part 15
Compatible Fire Alarm Control Panels (FACP)	See document IDs 315-096363, A6V10333530 and A6V10333532 for all compatible FACPs.
Environmental	<ul style="list-style-type: none"> Operation: Indoor dry environment only; 32 to 122 °F (0 to 50 °C); 95% R.H. The product environmental declaration contains data on environmentally compatible product design and assessments (RoHS compliance, materials composition, packaging, environmental benefit, disposal).
Wattage Position	8 Positions (Field Selectable). See Section 2 [→ 3] for more details.
Strobe Candela	6 Candela Levels (Field Selectable). See Section 3 [→ 4] for more details.
Input Voltage	<ul style="list-style-type: none"> Audio: 25Vrms or 70.7Vrms Strobe: Special Application 16 to 33VDC
Flash Rate	1 to 2Hz
Speaker Supervision voltage at standby	16VDC maximum

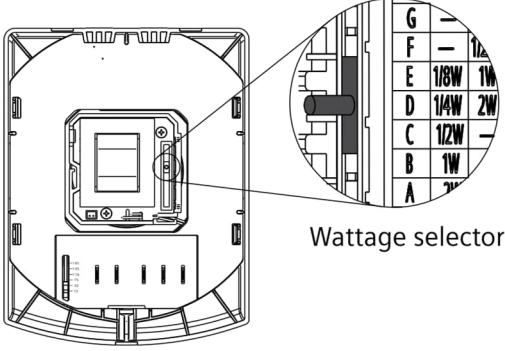
Table 1: General Specifications

Max. Initial Peak(mA)	36
Max. Initial RMS(mA)	33
Max. Repetitive Peak(mA)	160
Max. Repetitive RMS(mA)	158
Surge Current Time Frame(ms)	16.7

Table 2: Manufacturer Defined Surge Current for Strobe Input

2 SETTING WATTAGE

Multiple wattage positions are field selectable using the wattage selector on the appliance. See the following table for position indications for different speaker voltages:

Wattage selector	Position	Speaker voltage	
		25Vrms	70.7Vrms
 <p>Wattage selector</p>	H	-	1/8W
	G	-	1/4W
	F	-	1/2W
	E	1/8W	1W
	D (default)	1/4W	2W
	C	1/2W	-
	B	1W	-
	A	2W	-

Move the protruded pole of the wattage selector to a position to select the corresponding wattage setting. In the illustration above, the horizontal alignment between the pole and position D indicates position D is selected.

⚠ WARNING! Depending on speaker voltages, D and E positions may indicate different wattage settings. Select the correct settings for different speaker voltages; otherwise, it might result in appliance damage or failure to alert occupants during an emergency, which could result in property damage and serious injury or death to you and/or others.

⚠ WARNING! Always operate audio amplifiers and speakers within their specified ratings. Excessive input may distort sound quality and may damage audio equipment. Improper input voltage can damage speaker. If distortion is heard, check for clipping of the audio signal voltage with an oscilloscope and reduce the amplifier input level or gain level to eliminate any clipping.

2.1 Sound Output

Selecting different wattage settings means sound outputs of the appliance are different:

Model	Speaker Voltage (Vrms)	dBA at 10 Feet (Rated Watts)				
		1/8W	1/4W	1/2W	1W	2W
SC-SP-WR-F	25/70.7	75	79	82	84	88
SC-SP-WW-F	25/70.7	75	79	82	84	88
SC-SS-WR-F	25/70.7	75	79	82	84	88
SC-SS-WW-F	25/70.7	75	79	82	84	88

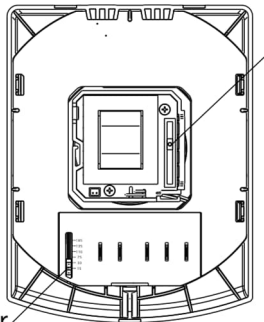
Table 3: UL/ULC Listed Speaker Models and Ratings

-3dB	+26 / -31 degrees horizontal; +27 / -32 degrees vertical
-6dB	+40 / -46 degrees horizontal; +43 / -48 degrees vertical
-10.9dB	+90 degrees horizontal
-9.9dB	-90 degrees horizontal
-11.5dB	+90 degrees vertical
-10.3dB	-90 degrees vertical

Table 4: Directional Characteristics

3 SETTING CANDELA LEVEL (ONLY FOR SPEAKER/STROBE DUAL-TYPE APPLIANCES)

Six candela levels are field selectable using the candela selector on the appliance: 15cd (default), 30cd, 75cd, 110cd, 135cd, and 185cd. The selected candela level is displayed on the faceplate.



Candela selector

3.1 Light Output

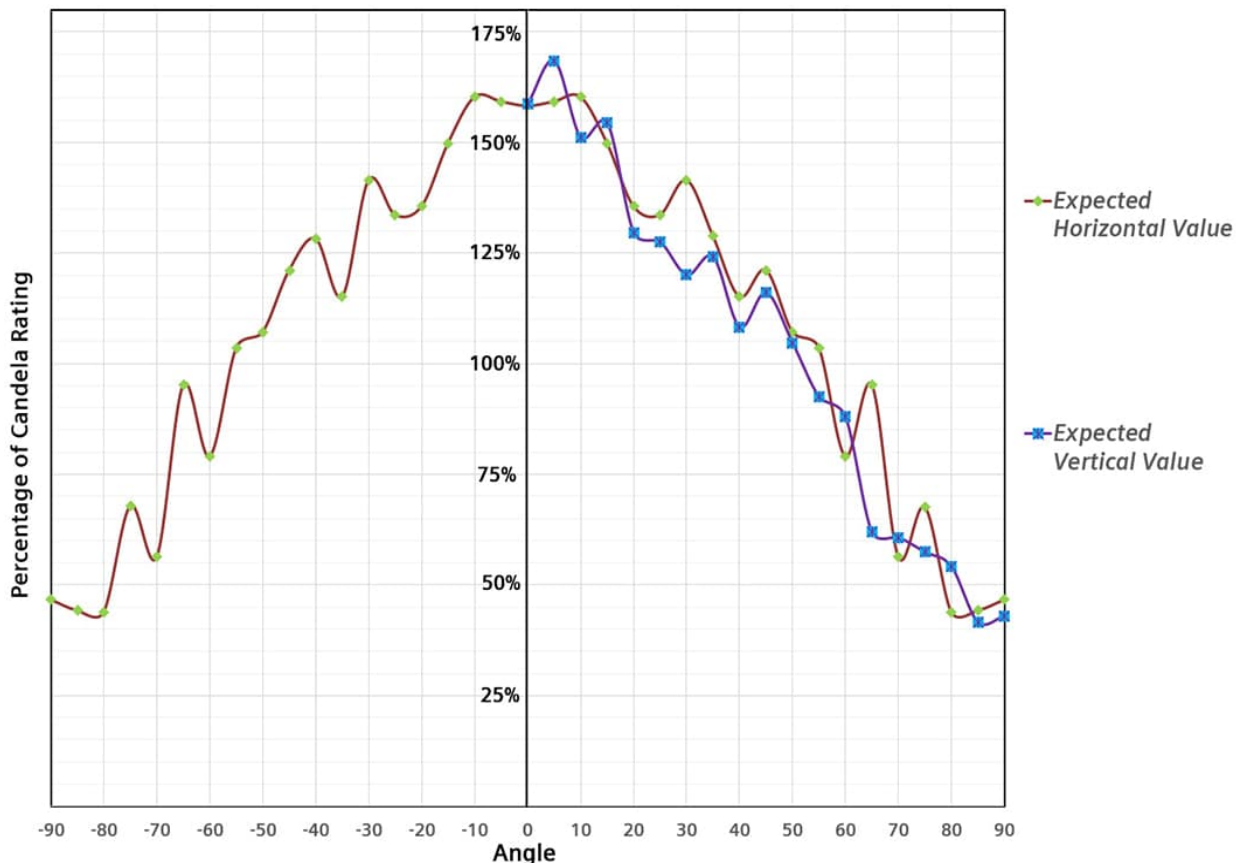



Fig. 1: SC-SS-WR-F and SC-SS-WW-F Expected Light Output

4 CURRENT DRAWS

Current Draw (mA) at Different Strobe Candela Settings (cd)					
15	30	75	110	135	185
24	27	39	68	93	143

Table 5: Strobe Current Draw (mA) at Different Candela Settings at Voltage Range 16 to 33V

NOTICE	
!	Refer to "Compatibility list" to calculate the maximum number of appliances when the appliances are used with FACPs.

⚠ WARNING	
	Overloading power sources or exceeding fuse ratings could result in loss of power and failure to alert occupants during an emergency, which could result in property damage and serious injury or death to you and/or others.

5 WIRING

- Speaker-only appliances have three in-out wiring terminals (-, - and +) that accept two #12 to #18 American Wire Gauge (AWG) solid and stranded wires at each screw terminal. Strip leads 3/8 inches and connect to screw terminals. A strip gauge is available on the mounting plate to guide in wire stripping.
 - Speaker/strobe dual-type appliances have five in-out wiring terminals (-/6, -/5, +/1b, - and +). Max. 8 wires are allowed to connect to the appliance. The allowed wire types and strip leads are the same with speaker-only appliances. Of the five terminals, three (-/6, -/5 and +/1b) are for strobe wiring and two (- and +) for speaker wiring.
- ⚠ WARNING! Improper electrical input could damage the appliance or cause it to malfunction.**
- Do not fully back out terminal screws.
 - A continuity switch is factory installed to allow wiring continuity test before installation of appliance electronics. It is between terminals - and - for speaker-only appliances and terminals 5 and 6 for speaker/strobe dual-type appliances. Remove the switch after the test is completed.
 - Wiring method shall be in accordance with:
 - In the United States, the National Electrical Code, NFPA 70, and the National Fire Alarm and Signaling Code, NFPA 72.
 - In Canada, CSA C22.1, Canadian Electrical Code, Part 1, Safety Standard for Electrical Installations, Section 32.
 - In Canada, CAN/ULC S524, Standard for Installation of Fire Alarm Systems

Wiring Diagram

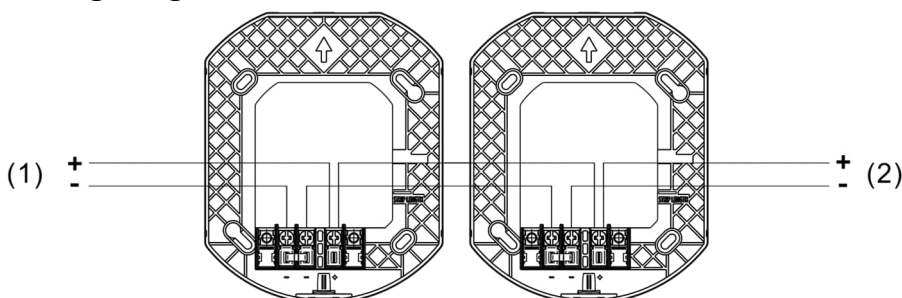


Fig. 2: Wiring Diagram of Speaker-only Appliances

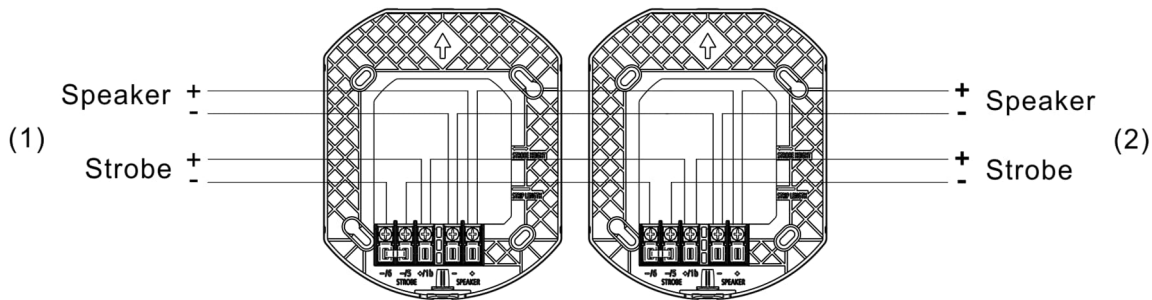
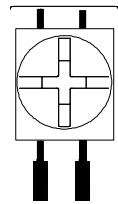


Fig. 3: Wiring Diagram of Speaker/strobe Dual-type Appliances

- (1) To next appliance or EOL (2) From preceding appliance or FACP

Note:

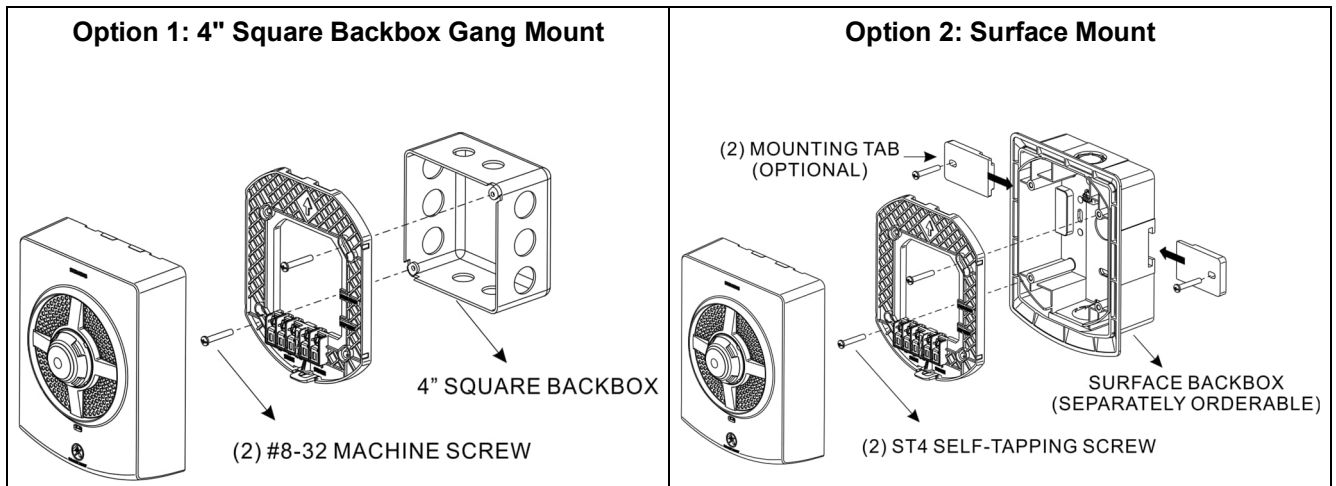
- Polarity is shown in the alarm state in the above diagram. The FACP reverses the polarity during supervision.
- Break all in-out wire runs on supervised circuits to ensure integrity of circuit supervision.



⚠ CAUTION! Check the installation instructions of the manufacturers of other equipment used in the system for any guidelines or restrictions on wiring and/or locating Notification Appliance Circuits (NAC) and notification appliances. Some system communication circuits and/or audio circuits, for example, may require special precautions to assure electrical noise immunity (e.g., audio crosstalk).

6 MOUNTING

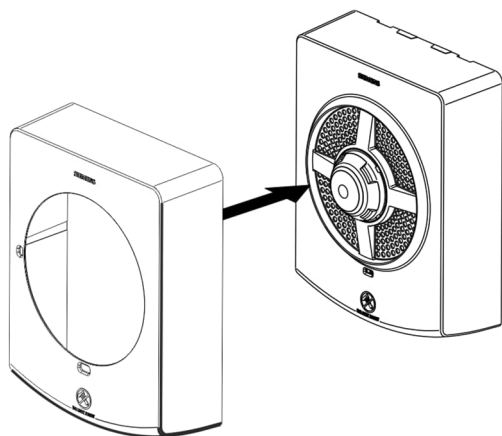
6.1 MOUNTING OPTIONS



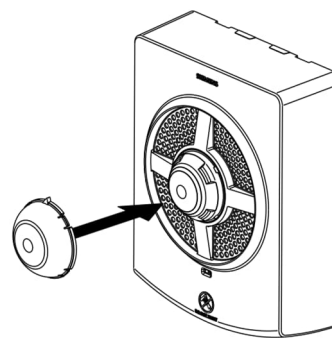
6.2 MOUNTING PROCEDURE

1. Ensure there is enough clearance and wiring room before installing backboxes and conduit, especially if sheathed multiconductor cable or 3/4-inch conduit fittings are used.
2. Select a mounting option (see MOUNTING OPTIONS [→ 7]) and install the backbox (4" backbox, or separately orderable surface backbox if surface mounting is needed).
NOTICE! Conduit entrances to the backbox should be selected to provide sufficient wiring clearance for the installed product. When installing a speaker/strobe dual-type appliance with a surface backbox, it is recommended to wire in from the top/bottom knockout rather than from the central one. Do not pass additional wires (used for other than the signaling appliance) through the backbox. Such additional wires could result in insufficient wiring space for the signaling appliance.
3. Install the mounting plate on the backbox with "TOP" facing up. Use 8-32 screws for 4" square backboxes, and ST4 self-tapping screws for surface backboxes.
NOTICE! 1) Do not over tighten mounting screws. Excessive torque can distort the base and may affect operation; 2) when using power tools to tighten mounting screws, ensure the torque is set to the lowest setting available.
4. Connect field wires to terminals on the mounting plate (see WIRING [→ 5]). Use care and proper techniques to position the field wires in the backbox so that they use minimum space and produce minimum stress on the product. This is especially important for stiff, heavy gauge wires and wires with thick insulation or sheathing. When terminating field wires, do not use more lead length than required. Excess lead length could result in insufficient wiring space for the signaling appliance.
5. Check wire continuity at FACP with the continuity switch between terminals - and - for speaker-only appliances or terminals 5 and 6 for speaker/strobe dual-type appliances.
NOTICE! Remove the continuity switch after wire continuity test is completed.
6. Verify appliance settings are correct for your application:
 - Set wattage by manually switching the wattage selector on the back of the appliance. See SETTING WATTAGE [→ 3] for more information.
 - Set candela level by manually switching the candela selector on the back of the appliance for speaker/strobe dual-type appliances. See SETTING CANDELA LEVEL (ONLY FOR SPEAKER/STROBE DUAL-TYPE APPLIANCES) [→ 4] for more information.

7. Snap the appliance over the mounting plate.
8. Install LK-11 separately orderable locking pin (optional) to hold the appliance in place on the mounting plate and prevent tampering.
9. Snap separately orderable accessories (decoration cover for all appliances and color lens for speaker/strobe dual-type appliances, optional) in place if needed. See the following graphics.



Snap Decoration Cover onto The Appliance



Snap Color Lens onto Speaker/strobe Dual-type Appliance

⚠ WARNING! Do not paint this device.

NOTICE! Final acceptance is subject to Authorities Having Jurisdiction.

⚠ WARNING! When installing strobes in an open office or other areas containing partitions or other viewing obstructions, special attention should be given to the location of the strobes so that their operating effect can be seen by all intended viewers, with the intensity, number, and type of strobes being sufficient to make sure that the intended viewer is alerted by proper illumination, regardless of the viewer's orientation.

⚠ WARNING! A small possibility exists that the use of multiple strobes within a person's field of view, under certain circumstances, might induce a photo-sensitive response in persons with epilepsy. Strobe reflections in a glass or mirrored surface might also induce such a response. To minimize this possible hazard, Siemens strongly recommends that the strobes installed should not present a composite flash rate in the field of view which exceeds five (5) hz at the operating voltage of the strobes. Siemens also strongly recommends that the intensity and composite flash rate of installed strobes comply with levels established by applicable laws, standards, regulations, codes and guidelines.

⚠ WARNING! Color lenses must only be used with devices that are not fire printed. Color lens strobes are UL Listed under 1638 (Visual Signaling Appliances) for Private Mode Signaling. See table below for candela deratings of strobe devices.

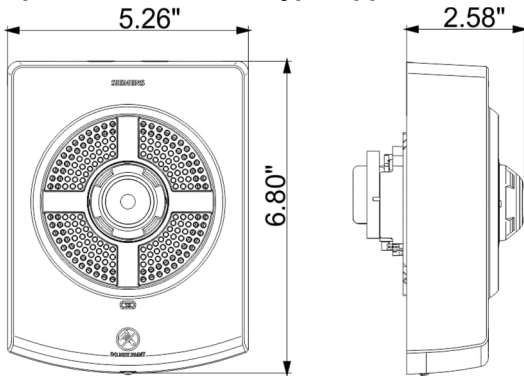
Lens Color	Candela De-Rating on-axis (straight on)
Amber	0%
Green	0%
Blue	-30%
Red	-40%

6.3 MOUNTING MATRIX

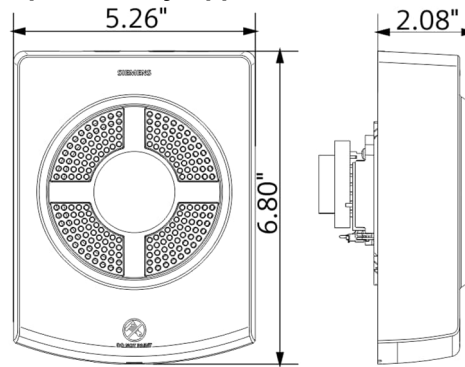
Accessories	Notification Appliances			
	SC-SP-WR-F	SC-SP-WW-F	SC-SS-WR-F	SC-SS-WW-F
SCVR-SS-WR-EMG	x		x	
SCVR-SS-WW-EMG		x		x
SCVR-SS-WR-ALR	x		x	
SCVR-SS-WW-ALR		x		x
SCVR-SS-WR-AGT	x		x	
SCVR-SS-WW-AGT		x		x
SCVR-SS-WR-HOF	x		x	
SCVR-SS-WW-HOF		x		x
SCVR-SS-WR-BNK	x		x	
SCVR-SS-WW-BNK		x		x
SMB-SS-WR	x		x	
SMB-SS-WW		x		x
STLENS-R			x	x
STLENS-A			x	x
STLENS-B			x	x
STLENS-G			x	x

7 DIMENSION

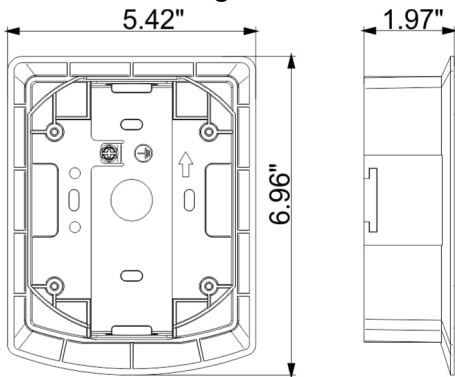
Speaker/strobe Dual-type Appliance



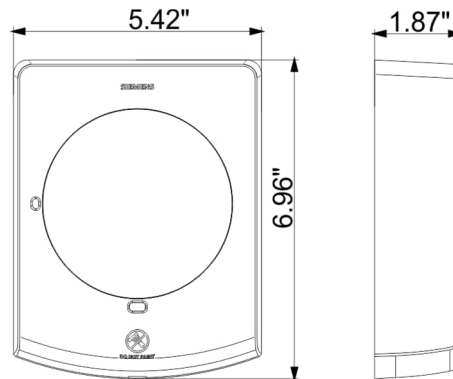
Speaker-only Appliance



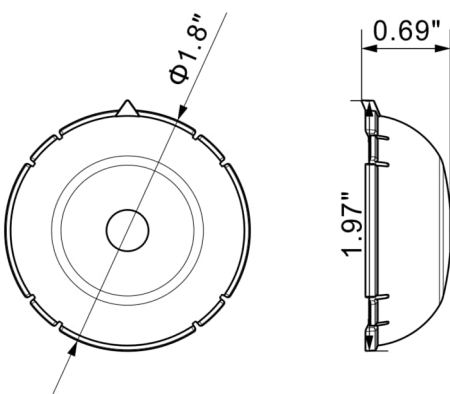
Surface Mounting Box



Decoration Cover

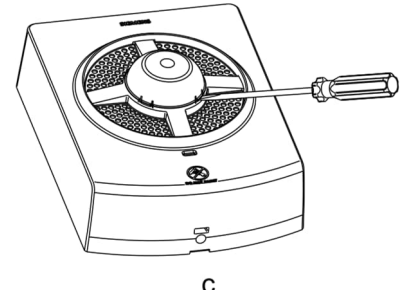
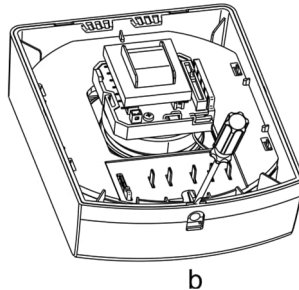
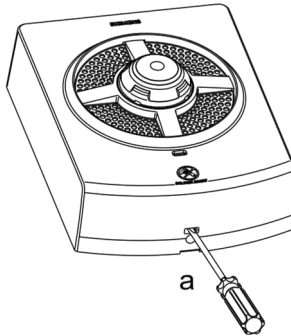


Color Lens




8 DISASSEMBLY

Insert a small flat blade screwdriver (e.g., 1/4 inch) into the slots shown in the following illustrations, push in to release snap and lift up to disassemble the appliance (a) and remove decoration cover (b) and color lens (c) if installed. **Note:** Decoration cover can only be removed after the appliance is disassembled.



9 REGULATORY COMPLIANCE INFORMATION

FCC Statement

⚠ WARNING	
	<p>Installation and usage of equipment not in accordance with instructions manual may result in:</p> <p>Radiation of radio frequency energy Interference to radio communications</p> <ul style="list-style-type: none"> ● Install and use equipment in accordance with installation instructions manual ● Read the following information

This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions manual, may cause interference to radio communications.

It has been tested and found to comply with the limits for a Class A computing device pursuant to Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment.

Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

IN NO CASE WILL SELLER'S LIABILITY EXCEED THE PURCHASE PRICE PAID FOR A PRODUCT.

10 ORDER INFORMATION

Type	Stock number	Description
SC-SP-WR-F	S54361-F1-A1	Speaker (wall, red, Fire)
SC-SP-WW-F	S54361-F1-A2	Speaker (wall, white, Fire)
SC-SS-WR-F	S54361-F3-A1	Speaker-Strobe (wall, red, Fire)
SC-SS-WW-F	S54361-F3-A2	Speaker-Strobe (wall, white, Fire)

10.1 ACCESSORIES

Type	Stock number	Description
SCVR-SS-WR-EMG	S54370-F39-A1	Decoration Cover (wall, red, Emergency)
SCVR-SS-WW-EMG	S54370-F40-A1	Decoration Cover (wall, white, Emergency)
SCVR-SS-WR-ALR	S54370-F43-A1	Decoration Cover (wall, red, Alert)
SCVR-SS-WW-ALR	S54370-F44-A1	Decoration Cover (wall, white, Alert)
SCVR-SS-WR-AGT	S54370-F47-A1	Decoration Cover (wall, red, Agent)
SCVR-SS-WW-AGT	S54370-F48-A1	Decoration Cover (wall, white, Agent)
SCVR-SS-WR-HOF	S54370-F51-A1	Decoration Cover (wall, red, HOF)
SCVR-SS-WW-HOF	S54370-F52-A1	Decoration Cover (wall, white, HOF)
SCVR-SS-WR-BNK	S54370-F54-A1	Decoration Cover (wall, red, Blank)
SCVR-SS-WW-BNK	S54370-F55-A1	Decoration Cover (wall, white, Blank)
SMB-SS-WR	S54370-F58-A1	Surface Mount Box (wall, red)
SMB-SS-WW	S54370-F59-A1	Surface Mount Box (wall, white)
STLENS-R	S54370-F17-A1	Color Lens Red
STLENS-A	S54370-F17-A2	Color Lens Amber
STLENS-B	S54370-F18-A1	Color Lens Blue
STLENS-G	S54370-F18-A2	Color Lens Green

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