

SIEMENS



SC-SP-CR-F



SC-SS-CR-F



SC-SP-CW-F



SC-SS-CW-F

Siemens Acend™ Series

**SC-SP-CR-F, SC-SS-CR-F, SC-SP-CW-F,
SC-SS-CW-F**

Installation

1 GENERAL INFORMATION

⚠ 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.

This document pertains to Siemens Acend™ speaker-only and speaker/strobe dual-type appliances audible and/or visual notification appliances for ceiling mount applications. The included products are:

Speaker-only Appliances	Speaker/strobe Dual-type Appliances
SC-SP-CR-F	SC-SS-CR-F
SC-SP-CW-F	SC-SS-CW-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 Unit (FACU) incorporates the Siemens sync protocol or the Siemens Power Supply. All appliances meet the NFPA72 20 millisecond light pulse duration code requirements.

All speaker/strobe appliances are UL/ULC listed as “Special Application 16 to 33VDC” and UL listed to meet the NFPA 72 requirement for 520Hz signals in sleeping areas when audio file "ACEND520HZ.WAV" is applied when used in conjunction with Siemens products. The design incorporates a high-fidelity speaker for maximum output at minimum power across a frequency range of 300-8000Hz for high intelligibility. 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.

These appliances are intended to be used with compatible FACUs (Compatibility charts can be found either in the FACU installation instructions or in the compatibility document listed in the table below).

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

General Specifications

Compliant Standards	- UL 1480, UL 1638, UL 1971 - ULC 526, ULC 541 - FCC Part 15
Compatible Fire Alarm Control Units (FACU)	See document IDs 315-096363, A6V10333530 and A6V10333532 for all compatible FACUs.
Environmental Specifications	- Operating Values: Indoor dry environment only; 32 to 122 °F (0 to 50 °C); 95% R.H. - The product's environmental declaration contains data on environmentally-friendly product design and assessments (RoHS compliance, materials composition, packaging, environmental benefit, disposal).
Wattage Position	8 Positions (Field Selectable). See Section 2 [→ 4] for more details.
Strobe Candela	6 Candela Levels (Field Selectable). See Section 3 [→ 5] for more details.
Input Voltage	- Audio: 25Vrms or 70.7Vrms - Strobe: Special Application 16 to 33VDC
Flash Rate	1Hz

Table 1: General Specifications

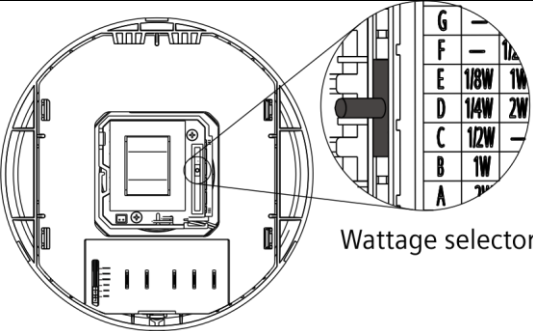
Max. Initial Peak(mA)	36
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Max. Initial RMS(mA)	33
Max. Repetitive Peak(mA)	160
Max. Repetitive RMS(mA)	158
Surge Current Time Frame(ms)	16.7

Table 2: Manufacturer Defined Surge Current for Strobe Input

2 WATTAGE SETTINGS

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
	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	-

To select the corresponding wattage setting, move the slider switch of the wattage selector to the appropriate positions. In the illustration above, the horizontal alignment between the switch arm and position D indicates position D is selected.

NOTICE! Depending on the speaker voltage, position D and position E may indicate different wattage settings. Select the correct setting specific to the speaker voltage; otherwise, it might result in appliance damage or failure to alert occupants during an emergency, which could result in property damage and/or 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 the speaker. If distortions are 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 Values

Model	Speaker Voltage (Vrms)	dBA at 10 Feet (Rated Watts)				
		1/8W	1/4W	1/2W	1W	2W
SC-SP-CR-F	25/70.7	75	79	82	84	87
SC-SP-CW-F	25/70.7	75	79	82	84	87
SC-SS-CR-F	25/70.7	75	79	82	84	87
SC-SS-CW-F	25/70.7	75	79	82	84	87

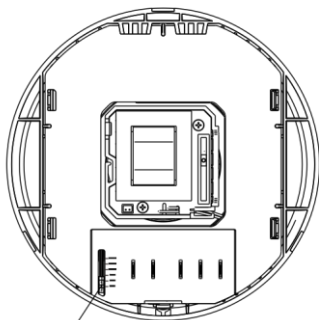
Table 3: UL/ULC Listed Speaker Models and Ratings

-3dB	+26 / -34 degrees horizontal; +27 / -32 degrees vertical
-6dB	+40 / -47 degrees horizontal; +45 / -48 degrees vertical
-11.0dB	+90 degrees horizontal
-10.0dB	-90 degrees horizontal
-11.3dB	+90 degrees vertical
-10.3dB	-90 degrees vertical

Table 4: Directional Characteristics

3 CANDELA LEVEL SETTINGS

The speaker/strobe appliances containing a strobe element support the following settings. 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

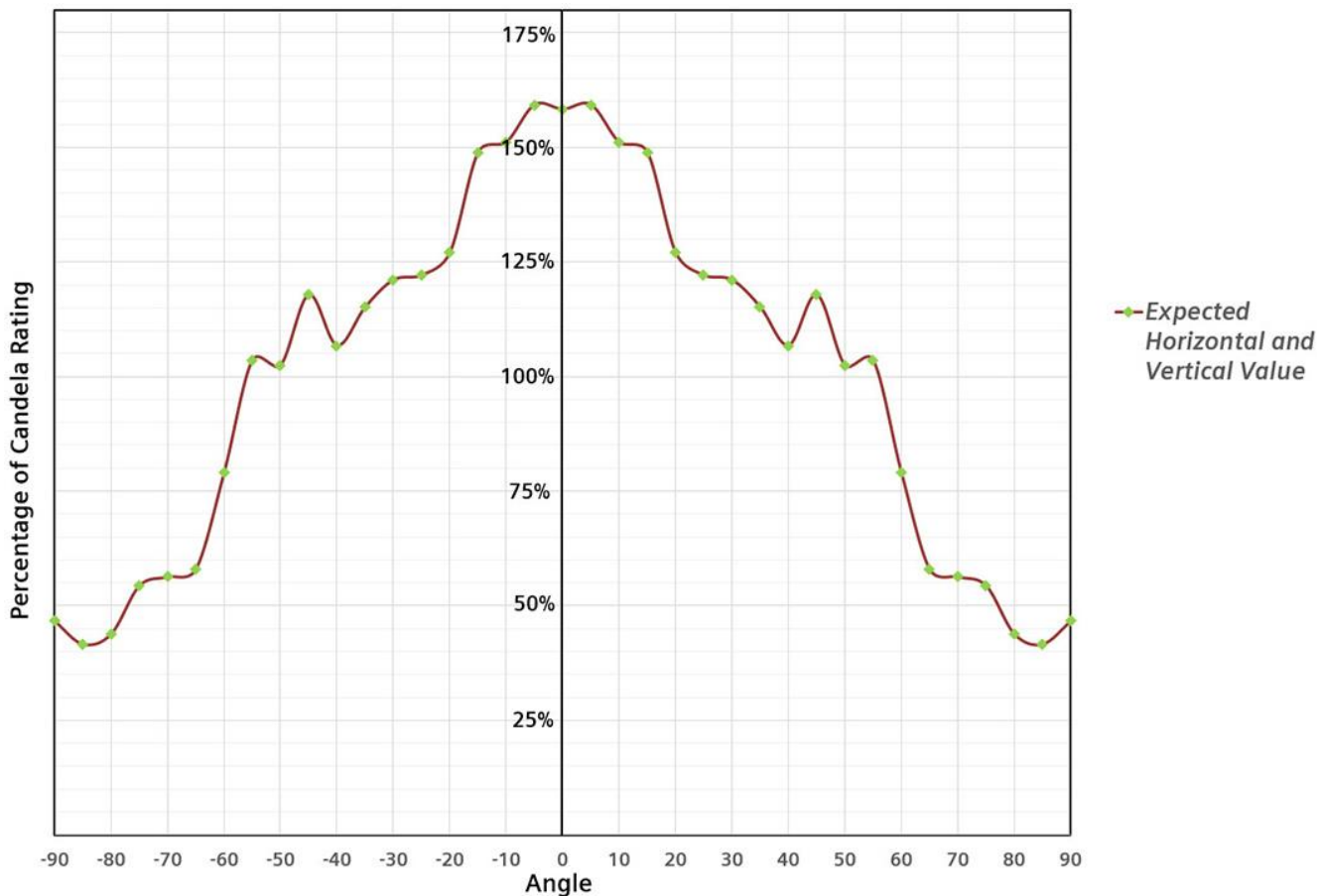


Fig. 1: SC-SS-CR-F and SC-SS-CW-F Expected Light Output

4 CURRENT DRAW INFORMATION

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 within a Voltage Range of 16 to 33V

NOTICE	
	Refer to “Compatibility list” to calculate the maximum number of appliances when the appliances are used with FACUs.

⚠ WARNING	
	Overloading power sources or exceeding 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 them 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 +). A maximum of 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 jumper is factory installed to allow wiring continuity testing 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 jumper after the test is completed.
- Wiring shall be done 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

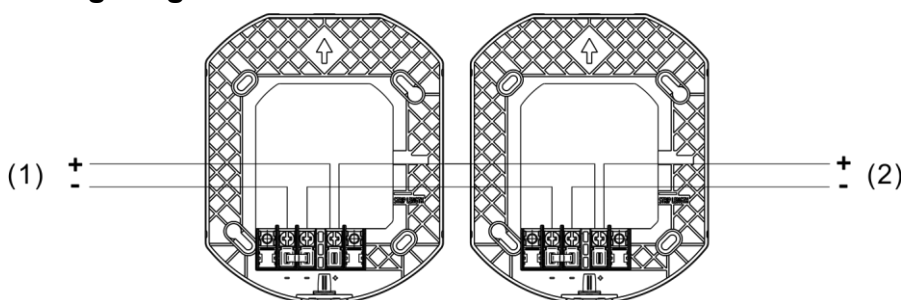


Fig. 2: Wiring Diagram of Speaker-only Appliances

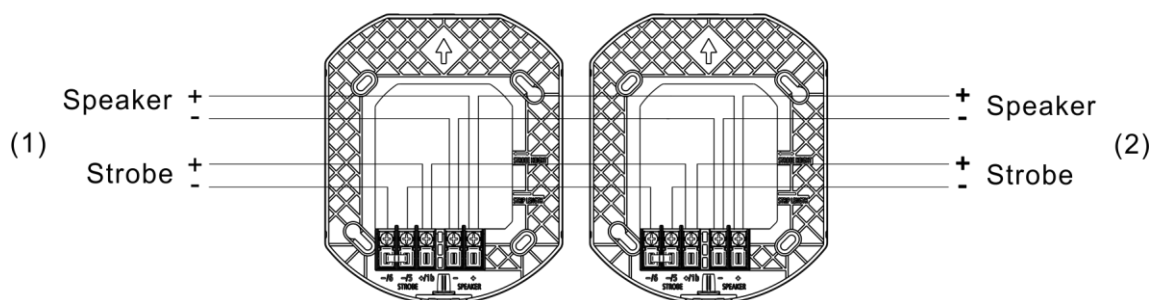


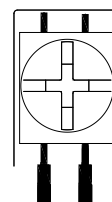
Fig. 3: Wiring Diagram of Speaker/strobe Dual-type Appliances

(1) To next appliance or EOL

(2) From preceding appliance or FACU

Note:

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

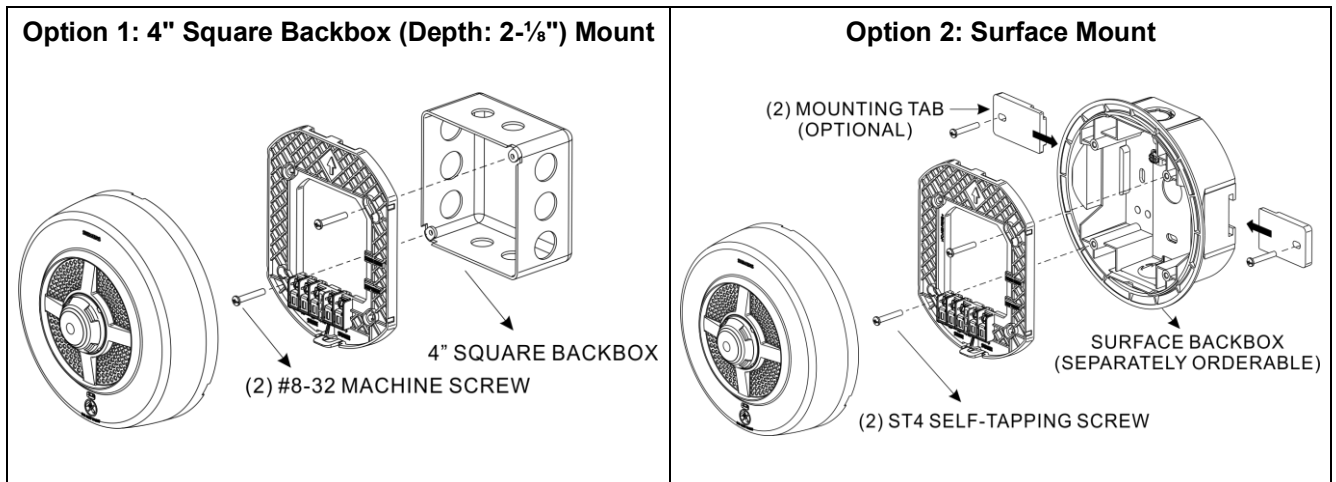


⚠ CAUTION! Check the installation instructions of the manufacturers of third-party equipment used in the system for any guidelines or restrictions on wiring and/or locating Notification Appliance Circuits

(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

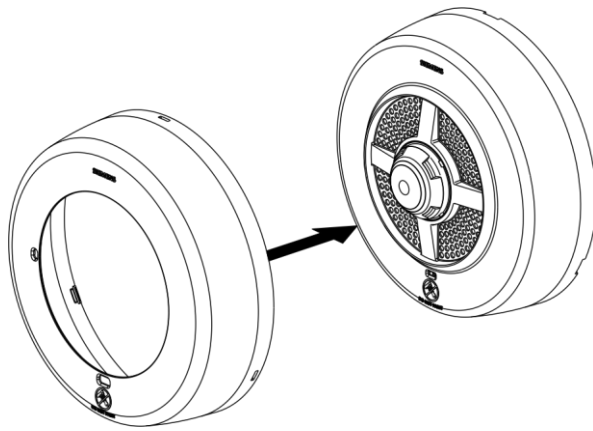
6.1 MOUNTING OPTIONS



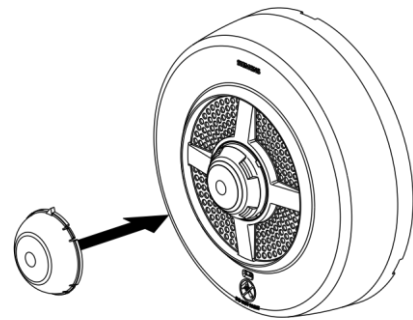
6.2 MOUNTING PROCEDURE

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 [→ 9]) 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 anything other than the signaling appliance) through the backbox; doing so could result in insufficient wiring space for the signaling appliance.
3. Install the mounting plate on the backbox. 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 mounting plate and may affect operability; 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 [→ 7]). 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 the FACU with the continuity jumper between terminals - and - for speaker-only appliances or terminals 5 and 6 for speaker/strobe dual-type appliances.
NOTICE! Remove the continuity jumper 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 WATTAGE SETTINGS [→ 4] 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 CANDELA LEVEL SETTINGS [→ 5] for more information.
7. Snap the notification appliance onto the mounting plate.

8. Install the LK-11 separately orderable locking screw (optional) to secure the appliance in place on the mounting plate and reduce risk of tampering.
9. If needed, snap separately orderable accessories (alternate cover and colored lens, optional) onto the appliance as demonstrated in the following graphics.



Snap Alternate Cover onto The Appliance



Snap Colored 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.

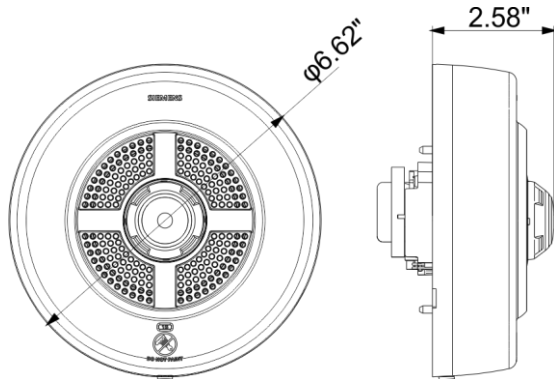
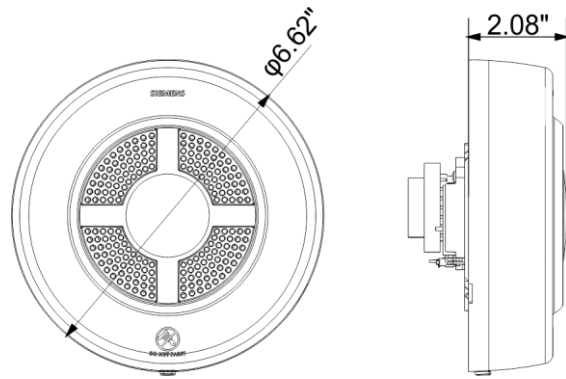
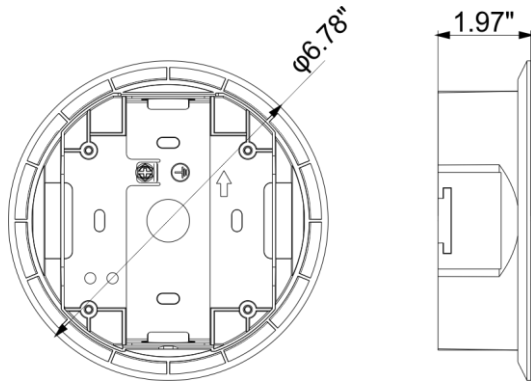
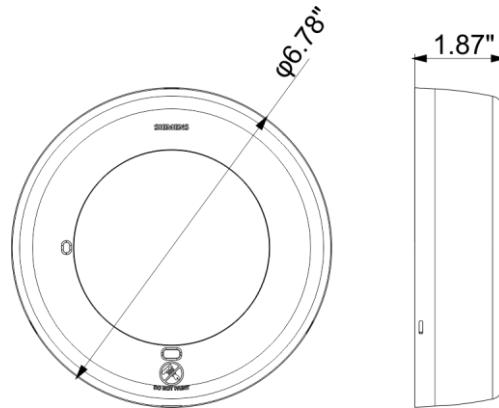
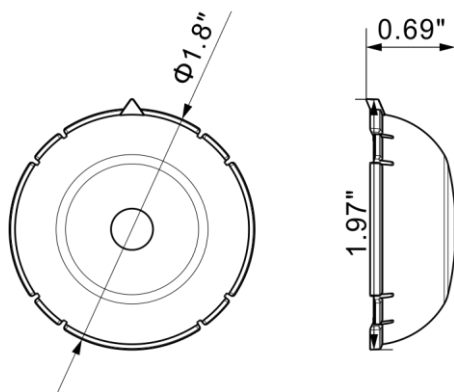
⚠ WARNING! Colored lenses must only be used with devices that are not fire printed. Colored lens strobes are UL Listed under UL 1638 (Visual Signaling Appliances) for Private Mode Signaling; this includes Emergency Warning Signaling (not for Fire Evacuation). See table below for candela deratings of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

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

6.3 MOUNTING MATRIX

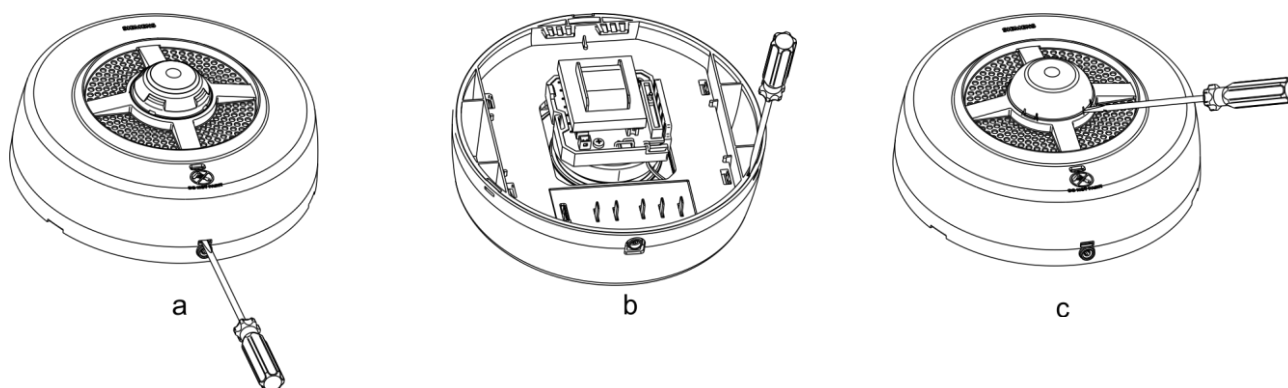
Accessories	Notification Appliances			
	SC-SP-CR-F	SC-SP-CW-F	SC-SS-CR-F	SC-SS-CW-F
SCVR-SS-CR-EMG	x		x	
SCVR-SS-CW-EMG		x		x
SCVR-SS-CR-ALR	x		x	
SCVR-SS-CW-ALR		x		x
SCVR-SS-CR-AGT	x		x	
SCVR-SS-CW-AGT		x		x
SCVR-SS-CR-HOF	x		x	
SCVR-SS-CW-HOF		x		x
SCVR-SS-CR-BNK	x		x	
SCVR-SS-CW-BNK		x		x
SMB-SS-CR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

7 DIMENSIONS

Speaker/strobe**Speaker-only****Surface Mounting Box****Alternate Cover****Colored Lens**

8 DISASSEMBLY

First, remove the LK-11 locking screw (if used). Then, insert a small flat blade screwdriver (e.g., 1/4 inch) into the slots as shown in the following illustrations. Push in to release and lift up to disassemble the appliance (a), then remove alternate cover (b) and colored lens (c) if installed. **Note:** Alternate covers can only be removed after the appliance is disassembled.



9 REGULATORY COMPLIANCE INFORMATION

FCC Statement

⚠ WARNING	
	Installation and usage of equipment not in accordance with instructions manual may result in: Radiation of radio frequency energy Interference to radio communications • 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 ORDERING INFORMATION

Model Number	Part number	Description
SC-SP-CR-F	S54361-F2-A1	Speaker (ceiling, red, Fire)
SC-SP-CW-F	S54361-F2-A2	Speaker (ceiling, white, Fire)
SC-SS-CR-F	S54361-F4-A1	Speaker-Strobe (ceiling, red, Fire)
SC-SS-CW-F	S54361-F4-A2	Speaker-Strobe (ceiling, white, Fire)

10.1 ACCESSORIES

Model Number	Part Number	Description
SCVR-SS-CR-EMG	S54370-F41-A1	Alternate Cover (ceiling, red, Emergency)
SCVR-SS-CW-EMG	S54370-F42-A1	Alternate Cover (ceiling, white, Emergency)
SCVR-SS-CR-ALR	S54370-F45-A1	Alternate Cover (ceiling, red, Alert)
SCVR-SS-CW-ALR	S54370-F46-A1	Alternate Cover (ceiling, white, Alert)
SCVR-SS-CR-AGT	S54370-F49-A1	Alternate Cover (ceiling, red, Agent)
SCVR-SS-CW-AGT	S54370-F50-A1	Alternate Cover (ceiling, white, Agent)
SCVR-SS-CR-HOF	S54370-F53-A1	Alternate Cover (ceiling, red, HOF) (L10)
SCVR-SS-CW-HOF	S54370-F62-A1	Alternate Cover (ceiling, white, HOF) (L10)
SCVR-SS-CR-BNK	S54370-F56-A1	Alternate Cover (ceiling, red, Blank)
SCVR-SS-CW-BNK	S54370-F57-A1	Alternate Cover (ceiling, white, Blank)
SMB-SS-CR	S54370-F60-A1	Surface Mount Box (ceiling, red)
SMB-SS-CW	S54370-F61-A1	Surface Mount Box (ceiling, white)
STLENS-R	S54370-F17-A1	Colored Lens Red
STLENS-A	S54370-F17-A2	Colored Lens Amber
STLENS-B	S54370-F18-A1	Colored Lens Blue
STLENS-G	S54370-F18-A2	Colored Lens Green

Issued by
Siemens Industry, Inc.
Smart Infrastructure
2 Gatehall Drive
Parsippany, NJ 07054
+1 973-593-2600
www.usa.siemens.com/fire