

SIEMENS



SC-LFS-CR-N



SC-LFSS-CR-F



SC-LFS-CW-N



SC-LFSS-CW-F

Siemens ACEND Series

**SC-LFS-CR-N, SC-LFS-CW-N, SC-LFSS-CR-F
SC-LFSS-CW-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 sounder-only and sounder/strobe dual-type appliances are a family of audible and/or visual notification appliances for ceiling mount only. The included products are:

Sounder-only Appliances	Sounder/strobe Dual-type Appliances
SC-LFS-CR-N	SC-LFSS-CR-F
SC-LFS-CW-N	SC-LFSS-CW-F

Lens-based sounder/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 appliances are rated as low frequency devices per UL464, suitable for sleeping areas per NFPA 72. In addition, all appliances are UL/ULC listed as "Special Application 16 to 33VDC" and compliant with applicable clauses of FCC Part 15.

General Specifications

Compliant Standards	<ul style="list-style-type: none"> • UL 1971, UL 1638, UL 464 • ULC 525, ULC 526 • 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).
Tone Sound Output	High, Low (Field Selectable)
Tone Pattern	4 Patterns (Field Selectable). See Section 2 [→ 3] for more details.
Strobe Candela	6 Candela Levels (Field Selectable). See Section 3 [→ 4] for more details.
Input Power	16 to 33VDC
Flash Rate	1 to 2Hz

Table 1: General Specifications

Items	Sounder/strobe Appliances	Sounder-only Appliances
Max. Initial Peak(mA)	166	170
Max. Initial RMS(mA)	107	88
Max. Repetitive Peak(mA)	301	N/A
Max. Repetitive RMS(mA)	226	N/A
Surge Current Time Frame(ms)	16.7	16.7

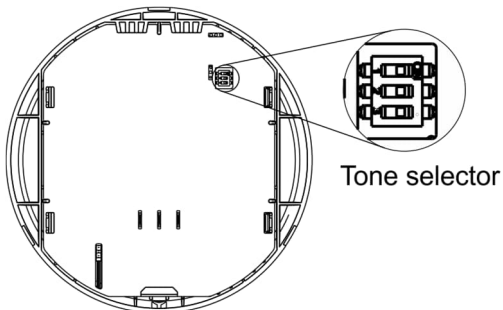
Table 2: Manufacturer Defined Surge Current

2 SETTING TONE PATTERN

Tone Pattern Overview

Tone Pattern	Description	Remark
Continuous	Continuous	UL Listed for Fire
T3 (temporal 3 for fire evacuation)	ANSI S3.41 Temporal Pattern	UL Listed for Fire
T4 (temporal 4 for carbon monoxide notification)	ANSI S3.41 Temporal Pattern	UL Listed for CO
T4, low power	Temporal 4 for carbon monoxide notification, switching to the low power mode after 4 mins	UL Listed for CO

Tone Pattern Selection



Use DIP switches on the appliance to select a tone pattern. Of the three DIP switches, the first one is for sound volume selection and the other two for tone pattern selection.

Tone Pattern	DIP Switch 2	DIP Switch 3
Continuous	1	1
T3 (temporal 3 for fire evacuation)	0	1
T4 (temporal 4 for carbon monoxide notification)	1	0
T4, low power	0	0

Note:

- 1 indicates **ON**, 0 indicates **OFF**.
- Switch **ON** DIP switch 1 to turn up the sound volume; switch it **OFF** to turn down the volume. The default volume is high.

2.1 Sound Output

Tone Pattern	Volume	Sound Output (dBA) at Voltage Range 16 to 33V		
		16V	24V	33V
Continuous	High	80	80	80
	Low	77	77	77
T3 (temporal 3 for fire evacuation)	High	80	80	80
	Low	77	77	77
T4 (temporal 4 for carbon monoxide notification)	High	80	80	80
	Low	77	77	77
T4, low power	High	80	80	80
	Low	77	77	77

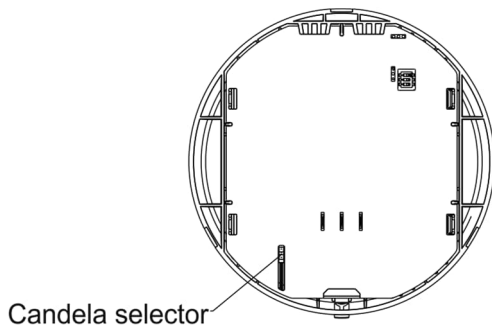
Table 3: Reverberant dBA Per UL 464 at Voltage Range 16 to 33V

-0.9dB	+90 degrees horizontal
-0.9dB	-90 degrees horizontal
-1.1dB	+90 degrees vertical
-1.1dB	-90 degrees vertical

Table 4: Directional Characteristics

3 SETTING CANDELA LEVEL (ONLY FOR SOUNDER/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.



3.1 Light Output

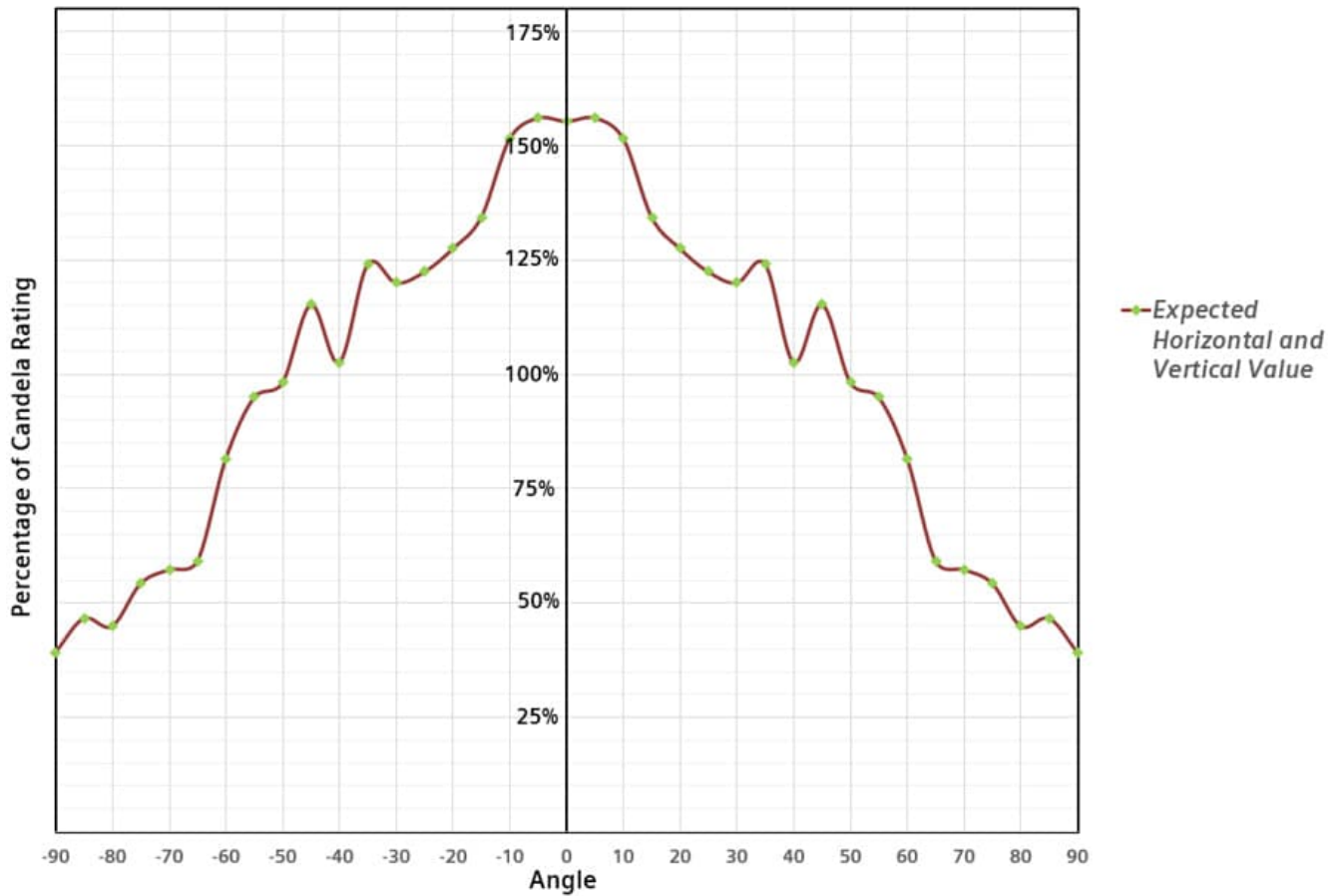


Fig. 1: SC-LFSS-CR-F and SC-LFSS-CW-F Expected Light Output

4 CURRENT DRAWS

Tone	Volume	Current Draw (mA) at Different Strobe Candela Settings					
		15cd	30cd	75cd	110cd	135cd	185cd
Continuous	High	101	108	127	151	179	223
	Low	46	54	72	95	126	172
T3 (temporal 3 for fire evacuation)	High	101	108	127	151	179	223
	Low	46	54	72	95	126	172
T4 (temporal 4 for carbon monoxide notification)	High	101	108	127	151	179	223
	Low	46	54	72	95	126	172
T4, low power	High	101	108	127	151	179	223
	Low	46	54	72	95	126	172

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

Tone	Volume	Current Draw (mA)
Continuous	High	114
	Low	47
T3 (temporal 3 for fire evacuation)	High	114
	Low	47
T4 (temporal 4 for carbon monoxide notification)	High	114
	Low	47
T4, low power	High	114
	Low	47

Table 6: Tone Current Draw (mA) 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

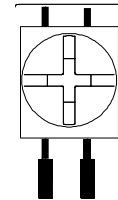
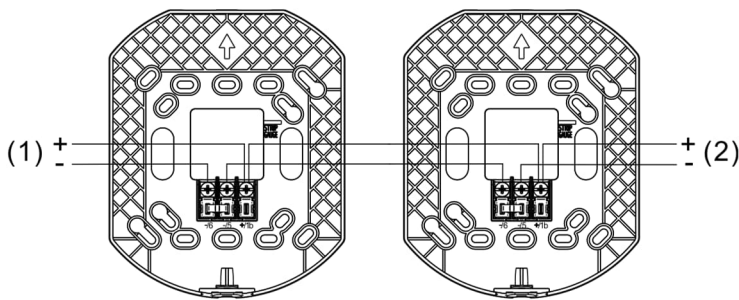


Overloading power sources or exceeding fuse ratings could result in loss of power and failure to alert occupants during an emergency, which could result in property damage and serious injury or death to you and/or others.

5 WIRING

- All appliances have three in-out wiring terminals (-/6, -/5 and +/1b) 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.
- The polarity shown in **Wiring Diagram** is in the alarm state. The FACP reverses the polarity during supervision.
- Do not fully back out terminal screws.
- A continuity switch is factory installed between terminals 5 and 6 to allow wiring continuity test before installation of appliance electronics. 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



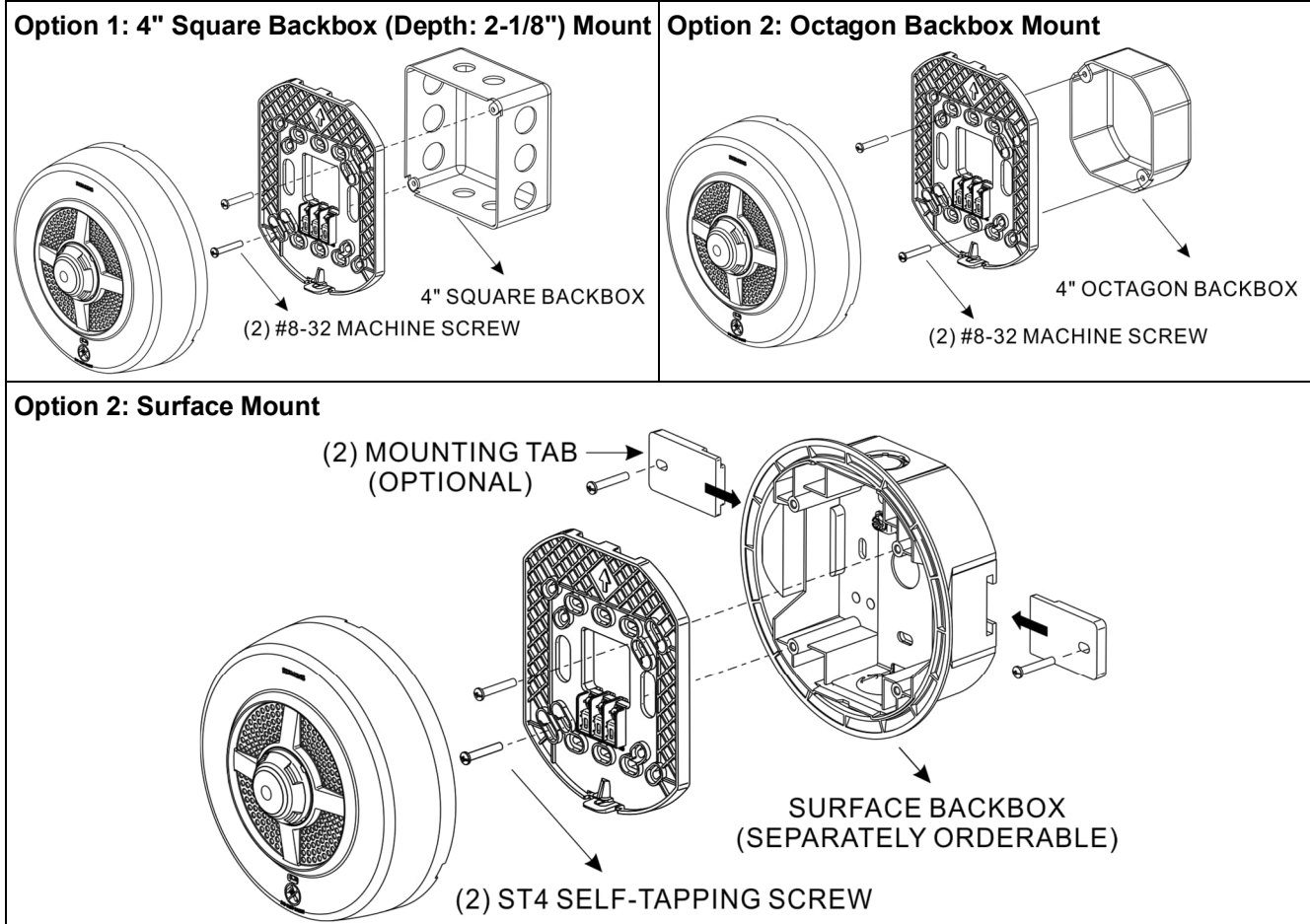
Note: Break all in-out wire runs on supervised circuits to ensure integrity of circuit supervision.

(1) To next appliance or EOL

(2) From preceding appliance or FACP

6 MOUNTING

6.1 MOUNTING OPTIONS

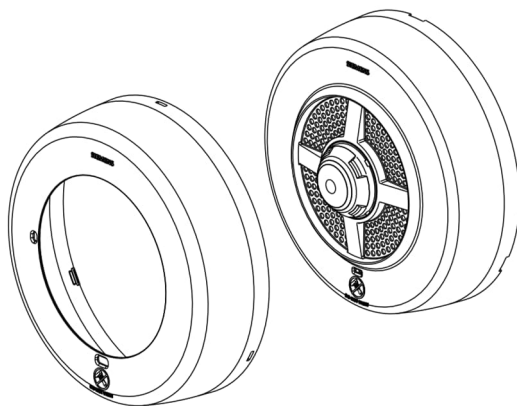


6.2 MOUNTING PROCEDURE

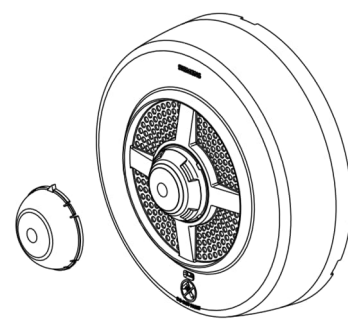
1. Ensure there is enough clearance and wiring room before installing backboxes and conduit, especially if sheathed multiconductor cable or 3/4-inch conduit fittings are used.
2. Select a mounting option (see MOUNTING OPTIONS [→ 8]) and install the backbox. Supported backboxes are octagon and 4" backboxes. If surface mounting is needed, install in place a separately orderable surface backbox from Siemens.
NOTICE! Conduit entrances to the backbox should be selected to provide sufficient wiring clearance for the installed product. 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 or octagon 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 [→ 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 FACP with the continuity switch between terminals 5 and 6.
NOTICE! Remove the continuity switch after wire continuity test is completed.
6. Verify appliance settings are correct for your application:
 - Set tone pattern and tone volume using DIP switches for sounder and sounder/strobe appliances. See SETTING TONE PATTERN [→ 3] for more information.
 - Set candela level by manually switching the candela selector for sounder/strobe dual-type appliances. See SETTING CANDELA LEVEL (ONLY FOR SOUNDER/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 and color lens, optional) in place if needed. See the following graphics.



Snap Decoration Cover onto The Appliance



Snap Color Lens onto The 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.

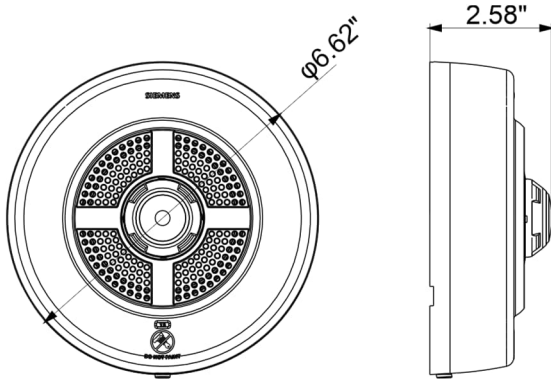
Lens Color	Candela De-Rating on-axis (straight on)
Amber	0%
Green	0%
Blue	-30%
Red	-40%

6.3 MOUNTING MATRIX

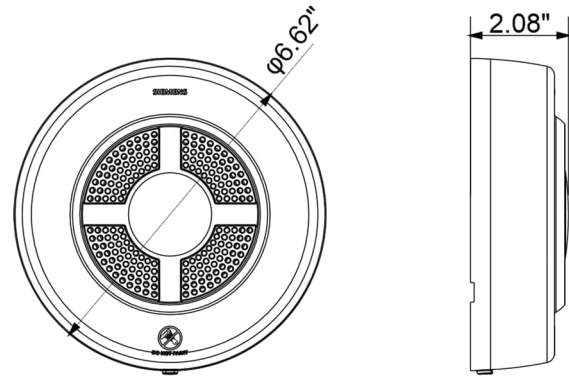
Accessories	Notification Appliances			
	SC-LFS-CR-N	SC-LFS-CW-N	SC-LFSS-CR-F	SC-LFSS-CW-F
SCVR-SS-CR-EMG	x		x	
SCVR-SS-CW-EMG		x		x
SCVR-SS-CR-ALR	x		x	
SCVR-SS-CW-ALR		x		x
SCVR-SS-CR-AGT	x		x	
SCVR-SS-CW-AGT		x		x
SCVR-SS-CR-HOF	x		x	
SCVR-SS-CW-HOF		x		x
SCVR-SS-CR-BNK	x		x	
SCVR-SS-CW-BNK		x		x
SMB-SS-CR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

7 DIMENSION

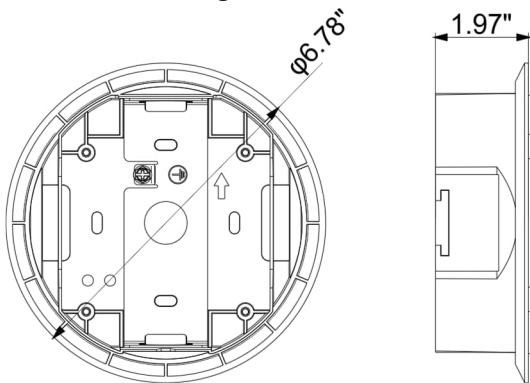
Sounder/strobe Dual-type Appliance



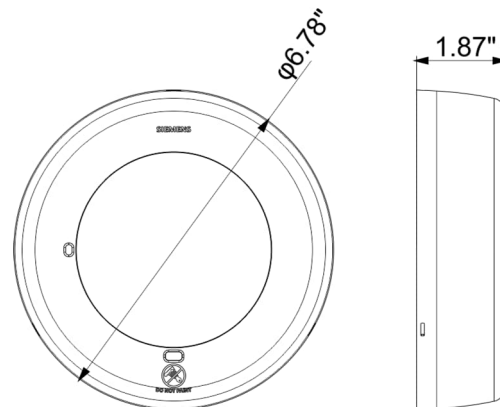
Sounder-only Appliance



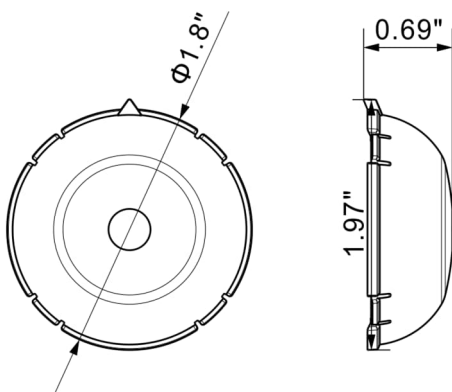
Surface Mounting Box



Decoration Cover

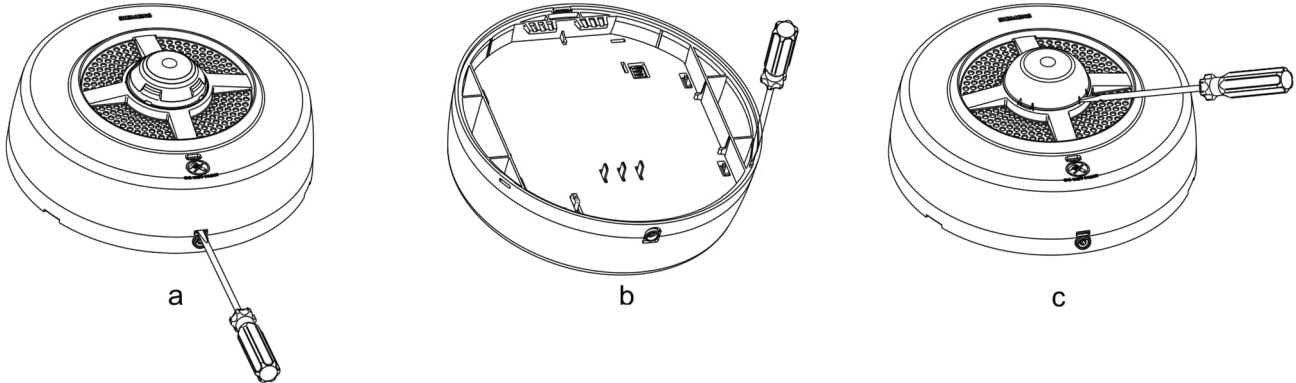


Color Lens




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-LFS-CR-N	S54361-F17-A1	Low Frequency Sounder (ceiling, red)
SC-LFS-CW-N	S54361-F17-A2	Low Frequency Sounder (ceiling, white)
SC-LFSS-CR-F	S54361-F23-A1	Low Frequency Sounder-Strobe (ceiling, red, Fire)
SC-LFSS-CW-F	S54361-F23-A2	Low Frequency Sounder-Strobe (ceiling, white, Fire)

10.1 ACCESSORIES

Type	Stock number	Description
SCVR-SS-CR-EMG	S54370-F41-A1	Decoration Cover (ceiling, red, Emergency)
SCVR-SS-CW-EMG	S54370-F42-A1	Decoration Cover (ceiling, white, Emergency)
SCVR-SS-CR-ALR	S54370-F45-A1	Decoration Cover (ceiling, red, Alert)
SCVR-SS-CW-ALR	S54370-F46-A1	Decoration Cover (ceiling, white, Alert)
SCVR-SS-CR-AGT	S54370-F49-A1	Decoration Cover (ceiling, red, Agent)
SCVR-SS-CW-AGT	S54370-F50-A1	Decoration Cover (ceiling, white, Agent)
SCVR-SS-CR-HOF	S54370-F62-A1	Decoration Cover (ceiling, red, HOF)
SCVR-SS-CW-HOF	S54370-F53-A1	Decoration Cover (ceiling, white, HOF)
SCVR-SS-CR-BNK	S54370-F56-A1	Decoration Cover (ceiling, red, Blank)
SCVR-SS-CW-BNK	S54370-F57-A1	Decoration 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	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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