SIEMENS

SA-SP-CR-F SA-SS-CR-F SA-SP-CW-F SA-SS-CW-F

Siemens Acend™ Intelligent Series

SA-SP-CR-F, SA-SS-CR-F, SA-SP-CW-F, SA-SS-CW-F

Installation

A6V15177193_en--_b

11/17/2025

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™ Intelligent speaker-only and speaker/strobe dual-type audible and/or visual notification appliances for ceiling mount applications. The included products are:

Speaker-only Appliances	Speaker/strobe Dual-type Appliances
SA-SP-CR-F	SA-SS-CR-F
SA-SP-CW-F	SA-SS-CW-F

The Acend™ Intelligent notification appliances conform to the UL requirements of a UL864 listed system. Each appliance has its own logical address which allows for configuration of appliance attributes including candela level, wattage setting and many other configuration options. Additionally, the logical address allows for various groupings of appliances to respond to different input criteria from the system such as changing sound output signals based on detector inputs or activating specific logical groupings based on different alarm and supervisory causing inputs.

All appliances are equipped with an LED indicator that communicates the appliance status such as alarm activation and trouble conditions.

Configuration of various appliance attributes is available through the system configuration tool and via an optional cloud connected interface. Appliance status is communicated through the on-board LED indicator, via the Person Machine Interface (PMI) of the system, and through the optional cloud connected interface.

Lens-based speaker/strobe dual-type appliances have six candela settings. The strobes synchronize by default when the connected Fire Alarm Control Unit (FACU) incorporates the Siemens sync protocol. 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 32VDC” when used in conjunction with products from Siemens. 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 ID A6V14373881 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 (Configurable). See Section 2 [→ 4] for more details.
Strobe Candela	6 Candela Levels (Configurable). See Section 3 [→ 5] for more details.

Input Voltage	• Audio: 25Vrms or 70.7Vrms • Strobe: Special Application 16 to 32VDC
Flash Rate	1Hz

Table 1: General Specifications

Items	Speaker/Strobe Appliances	Speaker-only Appliances
Max. Initial Peak (mA)	236	N/A
Max. Initial RMS (mA)	235	N/A
Max. Repetitive Peak (mA)	233	N/A
Max. Repetitive RMS (mA)	233	N/A
Surge Current Time Frame (ms)	16.7	16.7

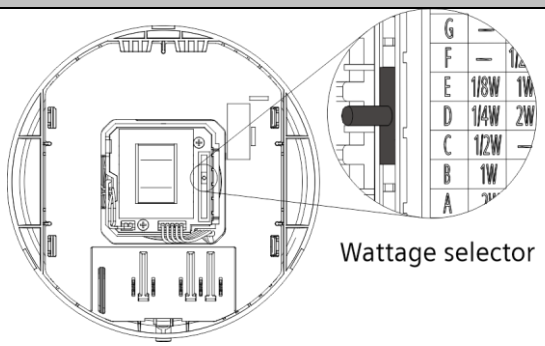
Table 2: Manufacturer Defined Surge Current for Strobe Input

Description	Parameter	Value
Maximum Line Voltage	V_{MAX}	32V
Minimum Line Voltage	V_{MIN}	16V
Maximum Rated Continuous Current with Isolator Closed	$I_{C\ MAX}$	1.5A
Maximum Rated Switching Current (short circuit condition)	$I_{S\ MAX}$	2A
Maximum Voltage at which Device Isolates (isolator opens)	$V_{SO\ MAX}$	10.5V
Minimum Voltage at which Device Isolates (isolator opens)	$V_{SO\ MIN}$	7.5V

Table 3: Isolation Ratings

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. Note that unlike some other Acend™ Intelligent appliance settings, wattage must be set at each device and cannot be set/adjusted at the panel or in the configuration.

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
SA-SP-CR-F	25/70.7	75	79	82	84	87
SA-SP-CW-F	25/70.7	75	79	82	84	87
SA-SS-CR-F	25/70.7	75	79	82	84	87
SA-SS-CW-F	25/70.7	75	79	82	84	87

Table 4: 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 5: Directional Characteristics

3 CANDELA LEVEL SETTINGS

The intelligent speaker/strobe appliances containing a strobe element support the following settings. Six candela levels are selectable via the system configuration tool: 15cd (default), 30cd, 75cd, 110cd, 135cd, and 185cd.

3.1 Light Output

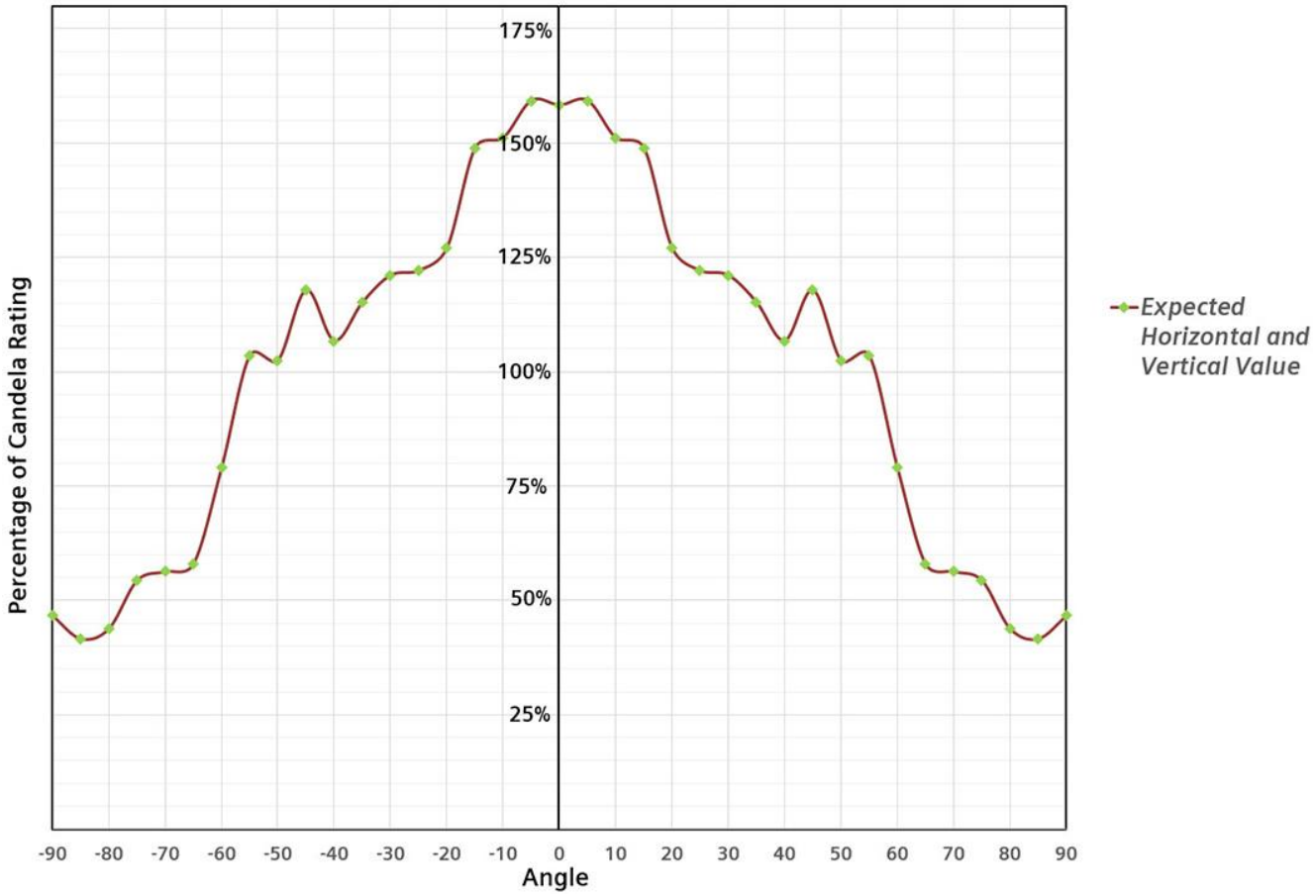


Fig. 1: SA-SS-CR-F and SA-SS-CW-F Expected Light Output

4 CURRENT DRAW INFORMATION

Type	Supervisory Current Average (mA)
SA-SP-CR-F	0.27
SA-SP-CW-F	0.27
SA-SS-CR-F	0.69
SA-SS-CW-F	0.69

Table 6: Supervisory Current Average (mA)

Current Draw (mA) at Different Strobe Candela Settings (cd)					
15	**30**	**75**	**110**	**135**	**185**
20	20	44	73	141	173

Table 7: Strobe Current Draw (mA) at Different Candela Settings within a Voltage Range of 16 to 32V

Operating Current Draw (mA) at Alarming Mode (for Speaker-only Appliances)
1.6

Table 8: Operating Current Draw (mA) at Alarming Mode (for Speaker-only Appliances)

⚠ 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.

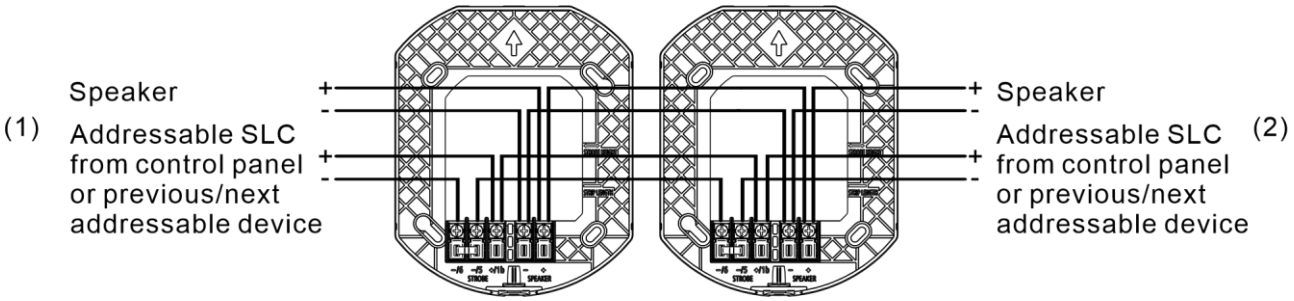
5 WIRING

- All appliances have five in-out wiring terminals (-/6, -/5, +/1b, - 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. A maximum of 8 wires are allowed to connect to each appliance.

  ⚠ WARNING! Improper electrical input could damage the appliance or cause it to malfunction.

  ⚠ WARNING! Wire all appliances correctly to ensure successful addressing. This must be done before activation of any speaker to prevent damage to the device.
- Of the five terminals of each appliance, three (-/6, -/5 and +/1b) are for the addressable SLC wires from the control panel and two (- and +) for speaker wiring.
- Do not fully back out terminal screws.
- ● A continuity jumper is factory installed between terminals 5 and 6 to allow wiring continuity testing before installation of appliance electronics. 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.

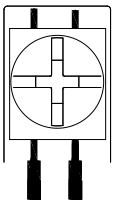
Wiring Diagram



(1) To next appliance, or EOL (for speaker-only appliances)

(2) From preceding appliance or FACU

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

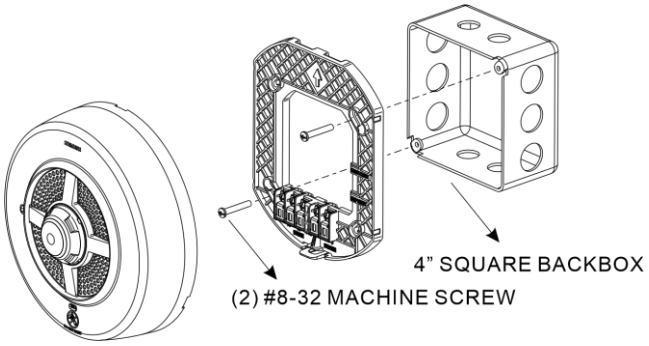


⚠ CAUTION! Check the installation instructions of the manufacturers of third-party equipment used in the system for any guidelines or restrictions on wiring and/or locating notification appliance circuits and notification appliances. Some system communication circuits and/or audio circuits, for example,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

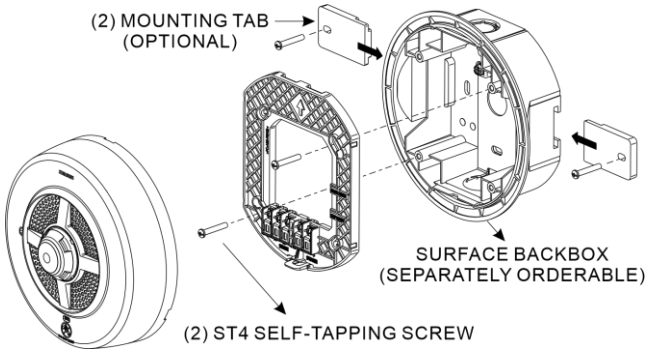
6 MOUNTING

6.1 MOUNTING OPTIONS

Option 1: 4" Square Backbox (Depth: 2-⅛") Mount

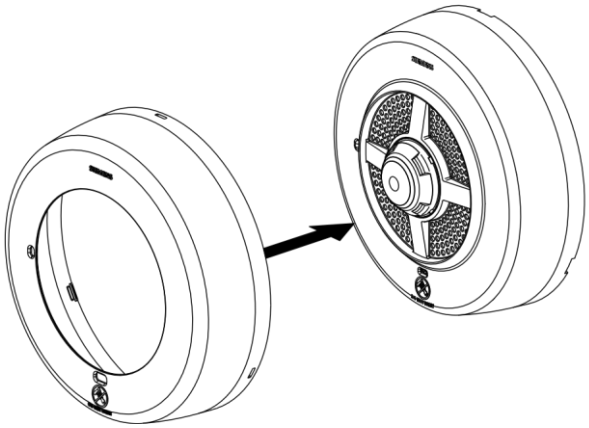


Option 2: Surface Mount

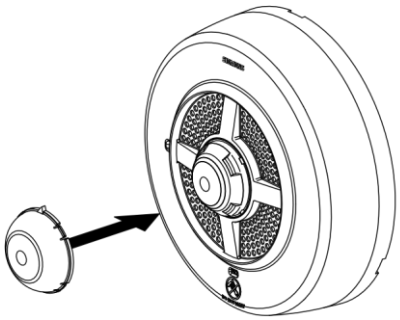


6.2 MOUNTING PROCEDURE

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 (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 5 and 6.
   NOTICE! **Remove the continuity jumper after wire continuity test is completed.**
6. Set wattage by manually switching the wattage selector on the back of the appliance. See WATTAGE SETTINGS [→ 4] 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.

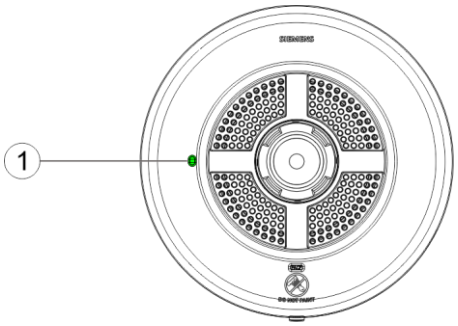
Lens Color	Candela De-Rating on-axis (straight on)
Amber	0%
Green	0%
Blue	-30%
Red	-40%

6.3 MOUNTING MATRIX

Accessories	Notification Appliances			
	SA-SP-CR-F	SA-SP-CW-F	SA-SS-CR-F	SA-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 LED INDICATOR

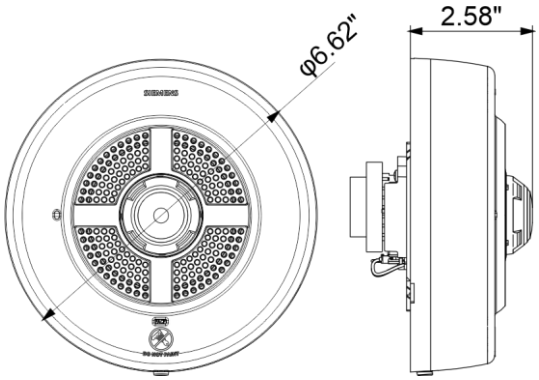
There is one LED used as an internal alarm indicator (1) on all appliances. It can indicate the following statuses:



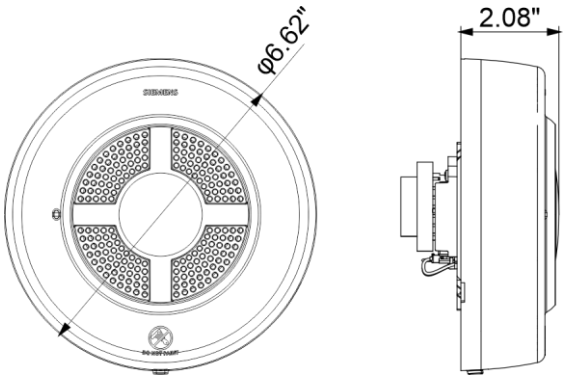
Status	Color	Flashing Pattern	Description
Alarm	Red	1× per 10s	Indicates that fire alarm and signaling is activated.
Trouble	Yellow	1× per 4s	Indicates that the appliance has unresolved reported troubles.
Normal	Green	1× per 10s	Indicates that the appliance works in the normal mode.

8 DIMENSIONS

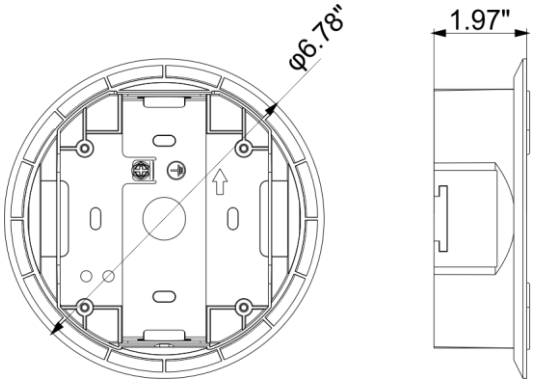
Speaker/strobe



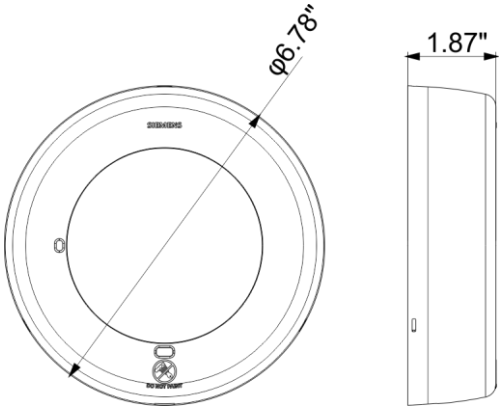
Speaker-only



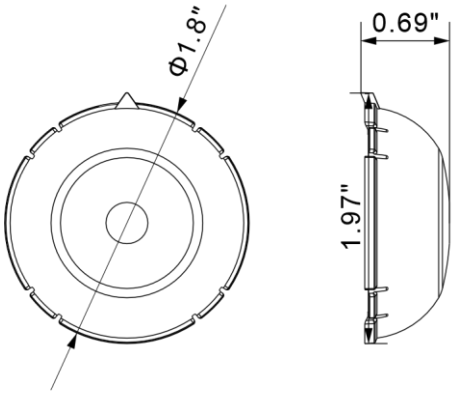
Surface Mounting Box



Alternate Cover

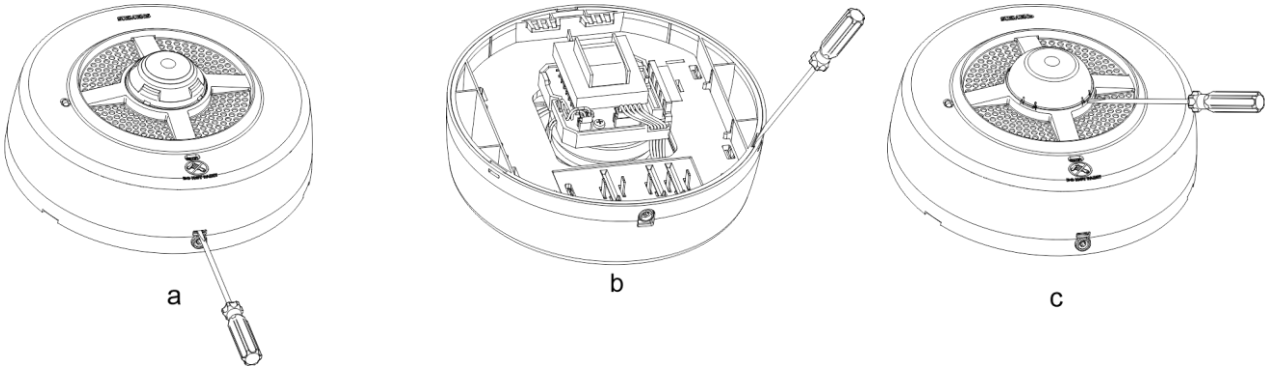


Colored Lens



9 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.



10 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.

11 ORDERING INFORMATION

Model Number	Part Number	Description
SA-SP-CR-F	S54362-F2-A1	Speaker (ceiling, red, Fire)
SA-SP-CW-F	S54362-F2-A2	Speaker (ceiling, white, Fire)
SA-SS-CR-F	S54362-F4-A1	Speaker-Strobe (ceiling, red, Fire)
SA-SS-CW-F	S54362-F4-A2	Speaker-Strobe (ceiling, white, Fire)

11.1 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) ( )
SCVR-SS-CW-HOF	S54370-F62-A1	Alternate Cover (ceiling, white, HOF) ( )
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

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