

**Introduction**

**Ceiling mount Addressable Speaker (SO) notification appliances**

To power, address, and control ceiling mount SO notification appliances, use the Simplex Fire Alarm Control Unit (FACU) IDNAC Signaling Line Circuit (SLC). A separate compatible Simplex FACU audio NAC supplies audio. Electronic monitoring of wiring supervision means you can T-tap audio and IDNAC wiring for Class B wiring, reducing wiring costs and wiring distances.

Install ceiling mount SO notification appliances on a standard 4 in. or 101.6 mm square 2 1/8 in. or 53.97 mm deep electrical box, provided by others, for flush installations. Install on a surface or weatherproof backbox, see Table 6, for surface or weatherproof (WP) installations.

Appliances are available in 400 Hz to 4000 Hz and 200 Hz to 10000 Hz high fidelity models. Select the appliance and cover separately to simplify the ordering and installation process. Model numbers ending in -BA are assembled in the USA.

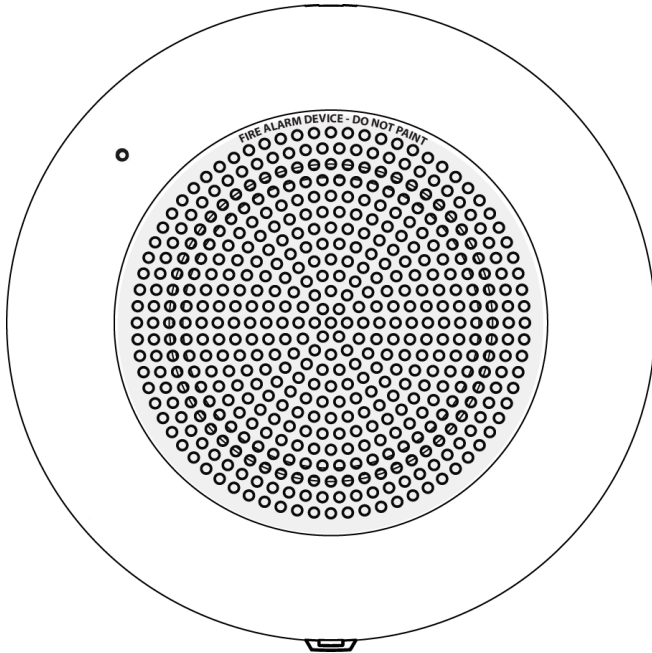
For more information, refer to datasheet *S49SWC-0001*.

**Table 2: High fidelity ceiling mount SO appliances**

Model	Description	Installation instructions
49HF-APPLC 49HF-APPLC-BA	High fidelity SO appliance only. If required, select the cover and surface or WP box separately.	579-1203

**Table 3: SO ceiling mount covers, required when ordering APPLC models**

Model	Color	Wording
49SOC-CK	Black	No logo or label
49SOC-CR	Red	
49SOC-CW	White	
49SOC-CRALT	Red	ALERT
49SOC-CWALT	White	
49SOC-CRFIRE	Red	FIRE
49SOC-CWFIRE	White	
49SOC-CRS	Red	Simplex
49SOC-CWS	White	



**Figure 1: Ceiling mount addressable speaker notification appliance**

**Ceiling mount addressable speaker product selection**

**Table 1: Ceiling mount SO appliances**

Model	Description	Installation instructions
49SO-APPLC 49SO-APPLC-BA	SO appliance only. If required, select the cover and surface or WP box separately.	579-1203

\* Additional listings may be applicable; contact your local Simplex product supplier for the latest status. Listings and approvals under Simplex Time Recorder Co.

## Weatherproof product selection

**Table 4: Weatherproof ceiling mount addressable SO appliances**

Model	Description	Installation instructions
49SO-APPLC-O 49SO-APPLC-O-BA	High fidelity SO appliance only. If required, select the cover and weatherproof box separately.	579-1241

**Table 5: SO covers, required when ordering APPLC-O models**

Model	Color	Wording
49SOC-CR-O	Red	No logo or label
49SOC-CW-O	White	
49SOC-CRALT-O	Red	ALERT
49SOC-CWALT-O	White	
49SOC-CRFIRE-O	Red	FIRE
49SOC-CWFIRE-O	White	
49SOC-CRS-O	Red	Simplex
49SOC-CWS-O	White	

**Table 6: Surface or WP back boxes**

Model	Color	Description	Installation instructions
49WPBB-SOCR	Red	Surface or WP back box in red	579-1240
49WPBB-SOCW	White	Surface or WP back box in white	

**Table 7: Wire guards and wire guard back boxes**

Model	Description
49WG-SOCR-O	Wire guard back box, ceiling, red, WP
49WG-SOCR	Wire guard, ceiling, red

## Ceiling mount speaker specifications

**Table 8: Non-weatherproof appliance general specifications**

Specification	Rating
<b>Dimensions</b>	7 1/8 in. H x 7 1/8 in. W x 1 1/4 in. D or 180 mm x 180 mm x 32 mm
<b>Environmental</b>	32°F to 120°F or 0°C to 49°C; 10% to 93%, non-condensing at 104°F or 40°C
<b>Connections</b>	Terminal blocks for 18 AWG to 12 AWG or 0.82 mm <sup>2</sup> to 3.31 mm <sup>2</sup> ; two wires for each terminal for in/out wiring. Use unshielded twisted pair (UTP) for IDNAC and audio wiring.

**Table 9: Weatherproof appliance general specifications**

Specification	Rating
<b>Dimensions</b>	7 1/8 in. H x 7 1/8 in. W x 1 1/4 in. D or 180 mm x 180 mm x 32 mm
<b>Environmental</b>	UL/ULC temperature rating, W110 CD/W135 CD/W185 CD: -40°F to 150.8°F (-40°C to 66°C)
	UL/ULC temperature rating for indoor and uncontrolled wet Public Mode - 110 CD: 32°F to 120°F (0°C to 49°C)
	FM temperature rating: -40°F to 120°F (-40°C to 49°C)
	UL/ULC humidity range: 95 %, non-condensing at 140°F (60°C)
<b>Connections</b>	Terminal blocks for 18 AWG to 12 AWG or 0.82 mm <sup>2</sup> to 3.31 mm <sup>2</sup> ; two wires for each terminal for in/out wiring. Use unshielded twisted pair (UTP) for IDNAC and audio wiring.

**Table 10: Speaker audio specifications**

Specification	Rating
<b>Input voltage</b>	25 VRMS or 70.7 VRMS
<b>Power taps</b>	1/4 W, 1/2 W, 1 W, and 2 W
<b>Frequency response</b>	400 Hz to 4000 Hz (SO), 200 Hz to 10000 Hz (H/F) General signaling = 125 Hz to 12 kHz

**Table 11: Speaker output ratings**

Wattage tap Model	1/4 W		1/2 W		1 W		2 W	
	SO	H/F	SO	H/F	SO	H/F	SO	H/F
Reverberant Chamber Test, in accordance with UL 1480 (dBA)	79	77	83	81	86	84	90	87
Anechoic Chamber Test, in accordance with ULC-S541 (dBA)	81	78	85	82	88	85	91	88

**Table 12: Polar dispersion**

Attenuation	Angle
-3 dB	70°
-6 dB	80°

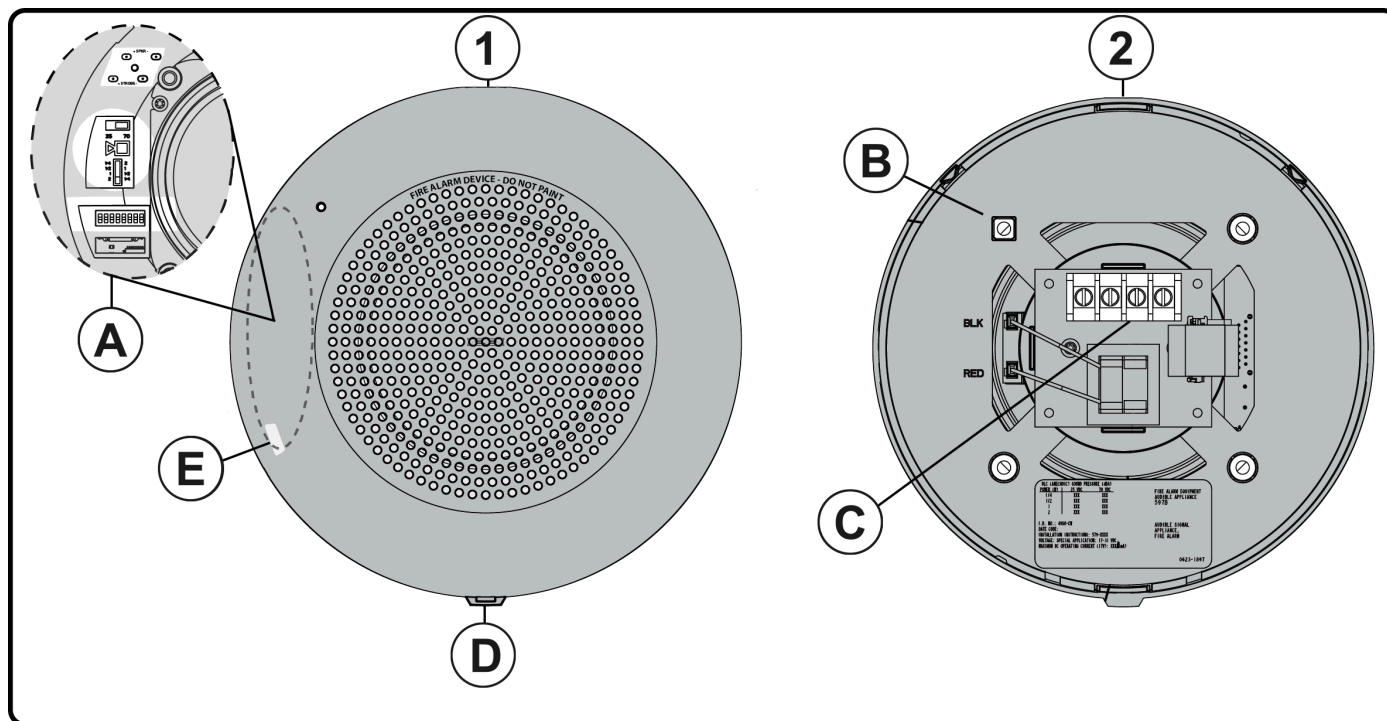
**Table 13: IDNAC SLC specifications**

Specification	Rating
<b>Typical operating voltage range</b>	23 VDC to 30 VDC, special application
<b>Appliance voltage design reference</b>	23 VDC (with 6 VDC drop)
<b>Current consumption</b>	9 mA
<b>Supervisory requirements</b>	1 unit load (= 0.8 mA control unit current)
<b>IDNAC SLC loading</b>	Maximum of 127 addresses for each SLC, 139 unit loads. See device and compatible fire control unit installation instructions for circuit current load limits.
<b>IDNAC SLC wiring specifications</b> refer to the control unit installation instructions for more information.	UTP, unshielded twisted pair recommended Maximum wire length allowed with T-Taps for Class B wiring for each SLC = 10,000 ft or 3048 m Maximum wire length to any appliance = 4000 ft or 1219 m. This can be doubled to 8000 ft or 2438 m by using a 4009 IDNAC Repeater.

**Table 14: Equipment compatibility references**

Compatible equipment	Data sheet reference
4100ES with EPS+ or EPS Power Supply	S4100-0100
4009 IDNAC Repeater	S4009-0004
4100ES Flex 35, and 50 Watt Amplifiers	S4100-0034
4100ES 100 Watt Amplifiers	
4100ES Constant Supervision and Audio NACs	

### Ceiling mount speaker installation reference


**Figure 2: Installation reference**

Callout	Description	Callout	Description
1	Appliance with cover, front	2	Appliance, rear
A	Appliance test points, audio circuit power taps, and address dip switch. Set audio circuit power taps and device address before fixing cover in place.	B	Mount to 4 in. x 4 in. 2 1/8 in. electrical box using 8-32 screws. For ceiling mount only.
C	The wiring terminals for speaker and strobe connections accept two #12-18 AWG wires.	D	Use slotted screwdriver here to remove cover.
E	Magnet test location indicated by area that is not textured.	—	—

