

TrueAlert Addressable Notification Appliances

Ceiling Mount Addressable Speaker (SO) Notification Appliances

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, which reduces 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.

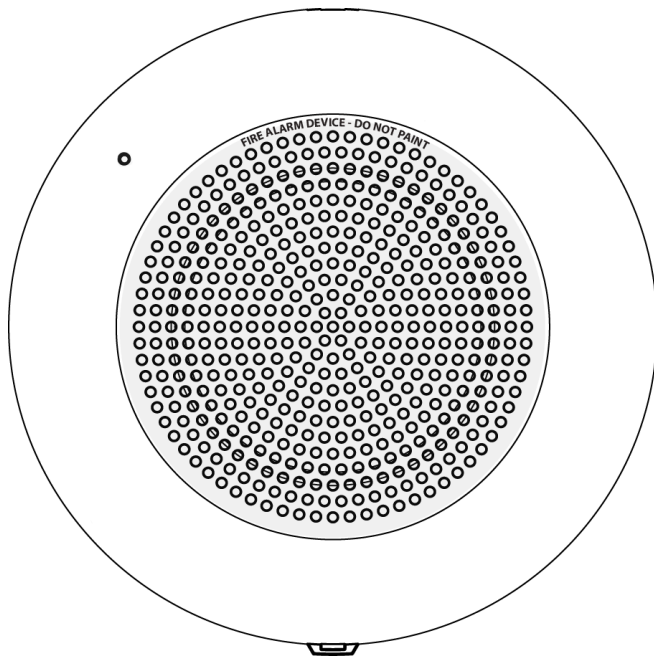


Figure 1: Ceiling mount addressable speaker notification appliance

Features

General

- Separate appliances, covers, back boxes, and wire guards provide complete flexibility for meeting customers installation requirements
- The TrueAlert device reports provide important appliance information details including point ID, custom label, type, and candela setting
- Rugged, high impact flame retardant thermoplastic housings
- The covers can be easily removed without disturbing the connected housing
- Terminals for wiring sizes 18 AWG to 12 AWG
- The appliance LED can be selected to display during each polling cycle indicating appliance supervision
- Magnet test diagnostics to assist checkout and testing of appliances
- Compatible with the Americans with Disabilities Act (ADA) requirements

IDNAC Signalling Line Circuit (SLC)

- The advanced addressable notification controlled by IDNAC SLCs provides regulated 29 VDC for low current operation even during battery backup conditions
- The wiring supervision is electronically monitored and allows IDNAC SLC wiring to be **T-tapped** for Class B wiring, which provides flexibility in reducing wiring sizes and or distance, and which reduces costs for wiring installation
- The strobe intensity can be selected within programming from the FACU

Audio (speaker)

- The wiring supervision is electronically monitored and allows audio (speaker) wiring to be **T-tapped** for Class B wiring, which provides flexibility in reducing wiring sizes and or distance, and which reduces costs for wiring installation
- High quality voice and tone reproduction with taps for 1/4 W, 1/2 W, 1 W, or 2 W at 25 VRMS or 70.7 VRMS
- The audio (speaker) circuits are wired separately from IDNAC SLCs
- High fidelity models (200 Hz to 10,000 Hz) are also available
- Compliant with NFPA 72, 520 Hz Low frequency signal requirements for sleeping areas
- Listed to UL 1480 and ULC S541*
- UL 1480 Reverberant dBA measurements (10 ft or 3 m)
- ULC S541 Anechoic dBA measurements (10 ft or 3 m)

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

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	

* 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	No logo or label
49SOC-CRALT-O	Red	ALERT
49SOC-CWALT-O	White	ALERT
49SOC-CRFIRE-O	Red	FIRE
49SOC-CWFIRE-O	White	FIRE
49SOC-CRS-O	Red	Simplex
49SOC-CWS-O	White	Simplex

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
Dimensions	7 1/8 in. x 7 1/8 in. x 1 1/4 in. or 180 mm x 180 mm x 32 mm (H x W x D)
Environmental	32°F to 120°F or 0°C to 49°C; 10% to 93%, non-condensing at 104°F or 40°C
Connections	Terminal blocks for 18 AWG to 12 AWG or 0.82 mm ² to 3.31 mm ² ; 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
Dimensions	7 1/8 in. x 7 1/8 in. x 1 1/4 in. or 180 mm x 180 mm x 32 mm (H x W x D)
Environmental	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)
Connections	Terminal blocks for 18 AWG to 12 AWG or 0.82 mm ² to 3.31 mm ² ; 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
Input voltage	25 VRMS or 70.7 VRMS
Power taps	1/4 W, 1/2 W, 1 W, and 2 W
Frequency response	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
Typical operating voltage range	23 VDC to 30 VDC, special application
Appliance voltage design reference	23 VDC (with 6 VDC drop)
Current consumption	9 mA
Supervisory requirements	1 unit load (= 0.8 mA control unit current)
IDNAC SLC loading	Maximum of 127 addresses for each SLC, 139 unit loads. See device and compatible fire control unit installation instructions for circuit current load limits.
IDNAC SLC wiring specifications	UTP, unshielded twisted pair recommended
refer to the control unit installation instructions for more information.	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

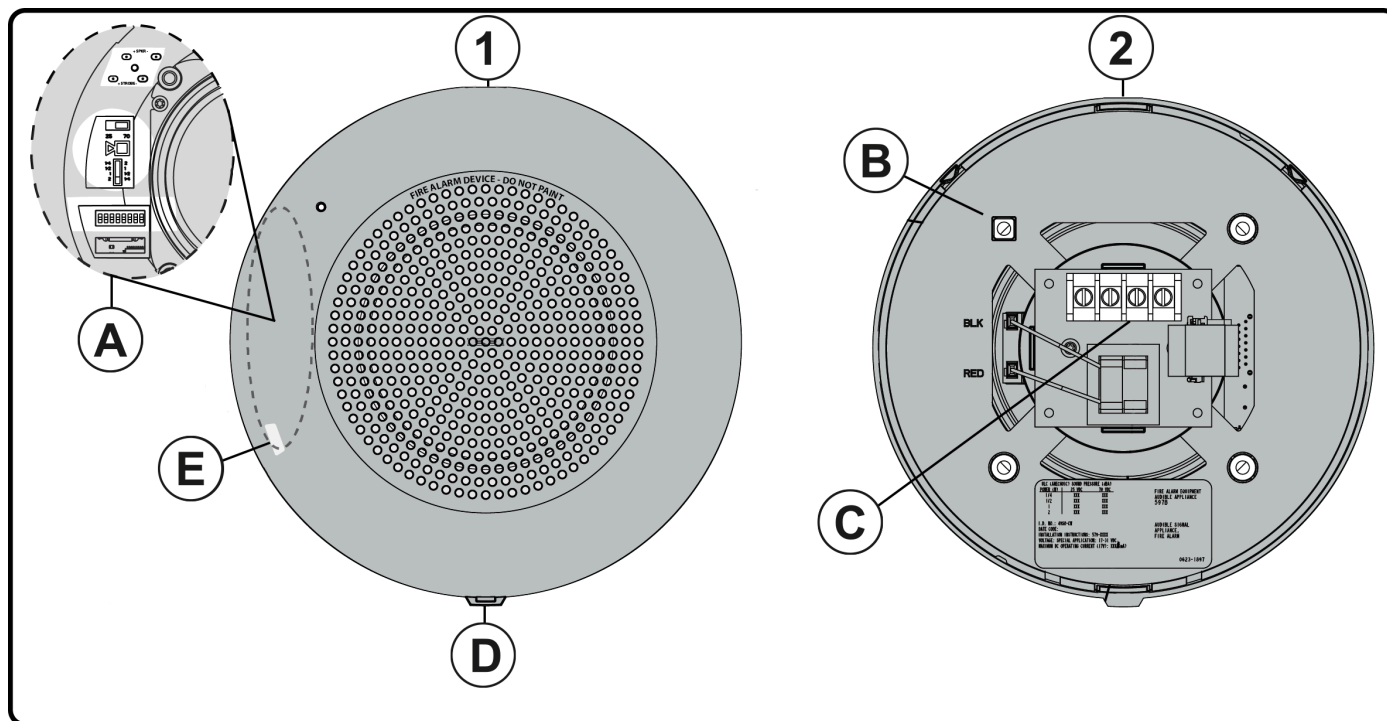


Figure 2: Installation reference

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 the cover in place.	B	Mount to 4 in. x 4 in. x 2 1/8 in. (101 mm x 101 mm x 53 mm) 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.	—	—

