Introduction

Ceiling mount Addressable Speaker (S/O) Notification Appliances are individually powered, addressed, and controlled from the Autocall Fire Alarm Control Unit IDNAC Signaling Line Circuit (SLC). Audio is supplied from a separate compatible Autocall Fire Alarm Control Unit audio NAC. Wiring supervision is electronically monitored allowing audio and IDNAC wiring to be T-tapped for Class B wiring, reducing wiring costs and wiring distances.

Installation on standard 4 inch square 2 1/8 inch deep USA electrical boxes for flush installations (provided by others) or surface/WP backboxes (order below) for surface or WP installations.

Appliances are available in 400 - 4000 Hz and 200 – 10000 Hz high fidelity models. Separate appliance and cover selection greatly simplifies the ordering and installation process. Model numbers ending in –BA are assembled in the USA.

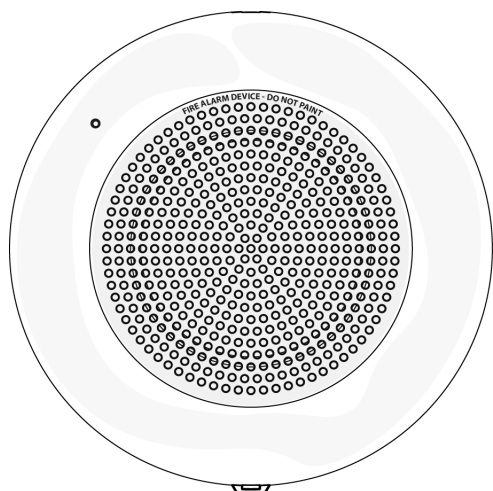For more detailed information, please consult datasheet AC49SWC-0001.

Figure 1: Ceiling Mount Addressable Speaker Notification Appliance

Table 3: S/O Ceiling Mount Covers (Required when ordering APPLC models)

SKU	Color	Wording
A49SOC-CK	Black	No logo or label
A49SOC-CR	Red	
A49SOC-CW	White	
A49SOC-CRALT	Red	ALERT
A49SOC-CWALT	White	
A49SOC-CRFIRE	Red	FIRE
A49SOC-CWFIRE	White	
A49SOC-CRS	Red	Autocall
A49SOC-CWS	White	

Ceiling Mount Addressable Speaker Product Selection

Table 1: Ceiling Mount S/O Appliances

SKU*	Description	Installation Instructions
A49SO-APPLC A49SO-APPLC-BA	S/O Appliance Only. Select cover and surface/WP box (if required) separately.	579-1203AC

Table 2: High Fidelity Ceiling Mount S/O Appliances

SKU*	Description	Installation Instructions
A49HF-APPLC A49HF-APPLC-BA	High Fidelity S/O Appliance Only. Select cover and surface/WP box (if required) separately.	579-1203AC

* Additional listings may be applicable; contact your local product supplier for the latest status.

Weatherproof Product Selection

Table 4: Weatherproof Ceiling Mount Addressable S/O Appliances

SKU*	Description	Installation Instructions
A49SO-APPLC-O A49SO-APPLC-O-BA	High Fidelity S/O Appliance Only. Select cover and weatherproof box (if required) separately.	579-1241AC

Table 5: S/O Covers (Required when ordering APPLC-O models)

SKU	Color	Wording
A49SOC-CR-O	Red	No logo or label
A49SOC-CW-O	White	No logo or label
A49SOC-CRALT-O	Red	ALERT
A49SOC-CWALT-O	White	ALERT
A49SOC-CRFIRE-O	Red	FIRE
A49SOC-CWFIRE-O	White	FIRE
A49SOC-CRS-O	Red	Autocall
A49SOC-CWS-O	White	Autocall
A49SOC-CK-O	Black	Autocall

Table 6: Surface/WP Back Boxes

SKU	Color	Description	Installation Instructions
A49WPBB-SOCR	Red	Surface/WP back box in Red	579-1240AC
A49WPBB-SOCW	White	Surface/WP back box in White	579-1240AC

Table 7: Wire Guards and Wire Guard Back Boxes

SKU	Description
A49WG-SOCR-O	Wire Guard Back Box, Ceiling, Red, WP
A49WG-SOCR	Wire Guard, Ceiling, Red

Ceiling Mount Speaker Specifications

Table 8: Appliance General Specifications

Specification	Rating
Dimensions	7 1/8" H x 7 1/8" W x 1 1/4" D (180mm x 180mm x 32mm)
Environmental	32° to 120° F (0° to 49° C); 10% to 93%, non-condensing at 104° F (40° C)
Connections	Terminal blocks for 18 AWG to 12 AWG (0.82 mm^2 to 3.31 mm^2); two wires per terminal for in/out wiring. Use Unshielded Twisted Pair (UTP) for IDNAC and audio wiring.

Table 9: Speaker Audio Specifications

Specification	Rating	
Input Voltage	25 or 70.7 Vrms	
Power Taps	¼, ½, 1, and 2 W	
Frequency Response	400 to 4000 Hz (S/O), 200 to 10000 Hz (H/F)	General Signaling = 125 to 12 kHz

Table 10: Speaker Output Ratings

Wattage Tap	¼ W		½ W		1 W		2 W	
SKU	S/O	H/F	S/O	H/F	S/O	H/F	S/O	H/F
Reverberant Chamber Test, per UL 1480 (dBA)	79	77	83	81	86	84	90	87
Anechoic Chamber Test, per ULC-S541 (dBA)*	81	78	85	82	88	85	91	88
Note: * Select taps as indicated to satisfy the ULC fire alarm applications requirement of 85 dBA minimum								

Table 11: Polar Dispersion

Attenuation	Angle
-3 dB	70°
-6 dB	80°

Table 12: IDNAC SLC Specifications

Specification	Rating
Typical Operating Voltage Range	23 VDC to 30 VDC, Special Application
Appliance voltage design reference	23VDC (with 6VDC drop)
Current consumption	9mA
Supervisory Requirements	1 unit load (= 0.8 mA control unit current)
IDNAC SLC Loading	Maximum of 127 addresses per SLC, 139 unit loads. See device and compatible fire control unit installation instructions for circuit current load limits.

Table 12: IDNAC SLC Specifications

Specification	Rating
IDNAC SLC Wiring Specifications (refer to control unit installation instructions for more information)	UTP, unshielded twisted pair recommended
	Maximum wire length allowed with "T-Taps" for Class B wiring per SLC = 10,000 ft (3048 m)
	Maximum wire length to any appliance = 4000 ft (1219 m). This can be doubled to 8000ft (2438m) by using a 4009 IDNAC Repeater.

Table 13: Equipment Compatibility References

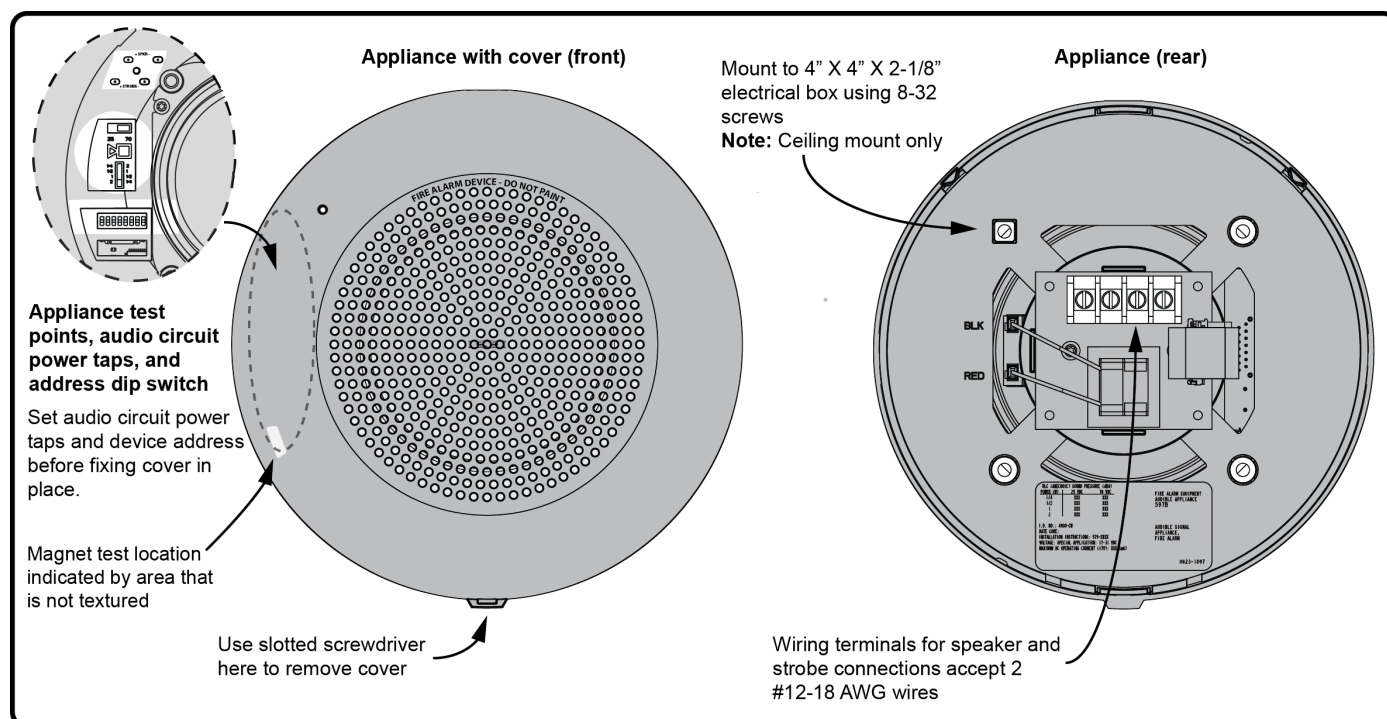| Compatible Equipment	Data Sheet Reference
4100ES with EPS+ or EPS Power Supply	AC4100-0100
4009 IDNAC Repeater	AC4009-0004
4100ES Flex 35, and 50 Watt Amplifiers	AC4100-0034
4100ES 100 Watt Amplifiers	
4100ES Constant Supervision and Audio NACs	

Ceiling Mount Speaker Installation Reference

Figure 2: Installation reference