



Field Configurable Ceiling Speaker

Genesis Series



One or more patents pending.

Overview

Genesis life safety and mass notification/emergency communications (MNEC) ceiling speakers are small, compact, and attractive audible emergency signaling devices. Protruding no more than one inch from the ceiling, Genesis speakers blend with any decor.

Genesis notification appliances feature textured housings in architecturally neutral white or eye-catching fire alarm red.

Genesis MNEC appliances offer emergency signaling with white housings and optional ALERT housing labels. They are ideal for applications that require differentiation between life safety and mass notification alerts.

Genesis ceiling speakers feature ¼ W to 2 W operation, which is selectable with a conveniently-located switch. The wattage tap setting remains clearly visible even after final installation, yet it is locked in place to prevent movement after installation.

All Genesis ceiling speakers include a DC blocking capacitor to allow electrical supervision of the audio distribution circuit. Models for 25 V_{RMS} and 70 V_{RMS} audio circuits are available. The speaker with its sealed back construction is extra durable, is impervious to moisture and provides improved audibility.

Standard Features

- **Unique low-profile design**
 - Attractive appearance
 - No visible mounting screws
 - Available with white or red housings
- **Field configurable – no need to remove the device!**
 - Select ¼, ½, 1, or 2 watt operation
 - Switch setting remains visible even after the unit is installed
- **Unparalleled performance**
 - Loud 90 dBA output ensures clear, crisp audio
 - 25 V_{RMS} and 70 V_{RMS} models available, all supplied with a DC blocking capacitor for audio circuit supervision
- **Easy to install**
 - Fits all standard 4" square electrical boxes with plenty of room behind the signal for extra wire – no extension ring or trim plate needed
 - #18 - #12 AWG terminals – ideal for long runs, existing wiring
- **Approved for public and private mode applications**
 - UL 1480-listed as life safety speaker
 - UL/ULC listed for ceiling or wall use
- **MNEC models available**

Application

Standards generally require that notification systems produce signals a minimum of 15 dBA above the ambient sound pressure level, or 5 dBA above the maximum sound pressure level having a duration of 60 seconds, whichever is greater. This is measured 5 feet (1.5 m) above the floor.

Doubling the distance from the signal to the ear will theoretically cause a 6 dB reduction in the received sound pressure level. The actual effect depends on the acoustic properties of materials in the space. Doubling the power output of a device (e.g.: a speaker from 1 W to 2 W) will increase the sound pressure level by 3 dBA. A 3 dBA difference represents a barely noticeable change in volume.

MNEC Applications

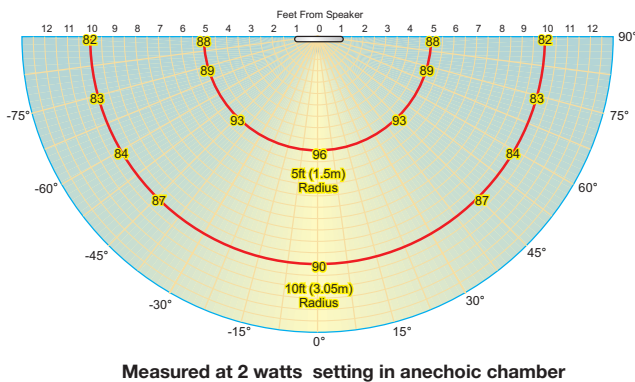
Genesis MNEC appliances bring the same high-performance life safety features and unobtrusive design to mass notification applications. Available with optional ALERT housing labels, they are ideal for applications that require differentiation between life safety and mass notification alerts.

Application Notes - Canada

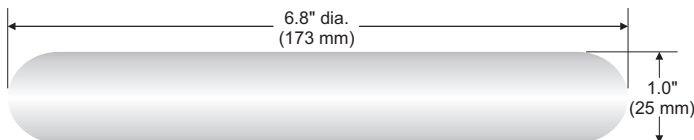
(Based in part on 1995 Canada National Building Code)

The signal sound pressure level shall not exceed 110 dBA in any normally occupied area. The sound pressure level from an audible signal in a floor area used for occupancies other than residential occupancies shall not be less than 10 dBA above ambient levels, and never less than 65 dBA. In sleeping rooms the sound pressure level from an audible signal shall not be less than 75 dBA when any intervening doors between the device and the sleeping room are closed.

Typical Sound Output (dBA)



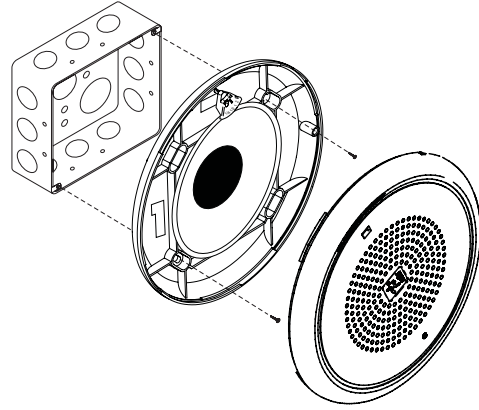
Dimensions



Installation and Mounting

All models are intended for indoor ceiling or wall applications only. Speakers are flush mounted to a North-American 4" square electrical box, 2 1/8" (54 mm) deep or a European 100 mm square box.

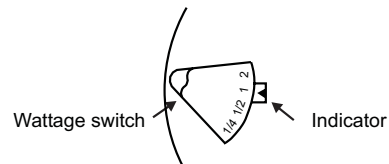
Genesis ceiling speakers simply unlatch and twist to open. This gains access to mounting screws. The shallow depth of Genesis devices leaves ample room behind the signal for extra wiring. Once installed with the cover in place, no mounting screws are visible.



Edwards recommends that these speakers always be installed in accordance with the latest recognized edition of national and local codes.

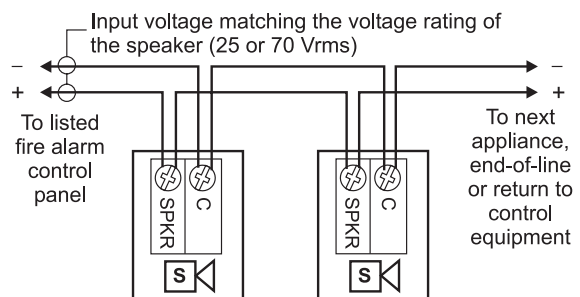
Field Configuration

Genesis ceiling speakers may be set for 1/4, 1/2, 1, or 2 watt operation. Wattage may be changed by simply opening the device and sliding the switch to the desired setting. The speaker does not have to be removed to change the output setting. The setting remains visible through a small window on the front of the device after the cover is closed.



Wiring

Field wiring terminals accommodate #18 to #12 AWG (0.75 mm² to 2.5 mm²) wiring.



Sound Level Output

Wattage	25V	25V	70V	70V
	UL Rated*	Typical	UL Rated*	Typical
¼ W	80 dBA	80.7 dBA	80 dBA	81.1 dBA
½ W	84 dBA	83.7 dBA	84 dBA	83.5 dBA
1 W	87 dBA	87.1 dBA	87 dBA	87.2 dBA
2 W	90 dBA	90.1 dBA	91 dBA	90.2 dBA

*Sound level output notes:

dBA = Decibels, A-weighted

UL1480: Sound level output at 10 ft (3.05 m) measured in a reverberant room using 400 to 4,000 Hz band limited pink noise.

ULC-S541: Meets or exceeds 85 dBA in an anechoic chamber at 10 ft (3.05 m).

Directional characteristics: Within 6 dB of on-axis sound level when measured 90° off-axis (horizontal).

Specifications

Housing	Textured UV stabilized, color impregnated engineered plastic. Exceeds 94V-0 UL flammability rating. Red and white models available.
Wire connections	Screw terminals: polarized inputs for speaker, #18 to #12 AWG (0.75 mm ² to 2.5 mm ²) wire size
Mounting	Flush mount to North American 4-inch square electrical box, 2-1/8 (54 mm) inches deep, or 960A-4RF round flush box. No extension ring required. Suitable for indoor wall or ceiling applications.
Operating environment	Indoor: 32-120° F (0-49° C) ambient temperature; 0-93% relative humidity.
Agency listings/approvals	Meets or exceeds UL1480 Fifth Edition, ULC-S541, and CSFM (FM and MEA pending).
Input/Operating Voltage	25 Vrms (Model S2) or 70 Vrms (Model S7).
Speaker Cone	Speaker frequency response: 250-13,000 Hz. Optimized for voice intelligibility. 4-inch (102mm) mylar cone, sealed back construction, rated for 8 watts, 8 ohm voice coil.

Ordering Information

All speakers include field-selectable ¼, ½, 1, or 2 watt taps

Model	Housing	Marking	Speaker	Ship Wt.
Life safety Appliances (c/w running man icon screen printed on housing)				
GC-S2	White	None	25 Volt	1.62 lb. (0.73 kg.)
GCF-S2	White	FIRE		
GCFR-S2	Red	FIRE		
GC-S7	White	None	70 Volt	
GCF-S7	White	FIRE		
GCFR-S7	Red	FIRE		
MNEC Appliances (no running man icon on housing)				
GCWA-S2	White	alert	25 Volt	1.62 lb. (0.73 kg.)
GCWN-S2	white	none		
GCWA-S7	white	alert	70 Volt	
GCWN-S7	white	none		



White Field Configurable Ceiling Speakers may be ordered with or without optional FIRE marking. Red speakers come with FIRE marking. MNEC speakers are available with white housing and optional ALERT marking.



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