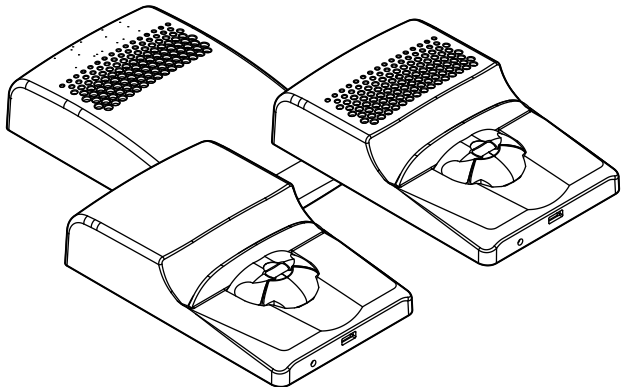
Genesis LED EN 54 Sounder-Beacon Installation Sheet



Description

Genesis LED EN 54 sounders, beacons, and combination sounder-beacons are compact, wall-mounted, indoor fire alarm devices used to signal building occupants that a fire condition exists. See Table 1, Table 2, and Table 3 for a list of models.

Table 1: Sounder models

Number	Description
G1ARF-E	Compact wall sounder, red, FIRE, EN 54
G1ARN-E	Compact wall sounder, red, no marking, EN 54
G1AWF-E	Compact wall sounder, white, FIRE, EN 54
G1AWN-E	Compact wall sounder, white, no marking, EN 54

Table 2: Beacon models

Number	Description
G1VRF-E	Compact wall beacon, red, FIRE, EN 54
G1VRN-E	Compact wall beacon, red, no marking, EN 54
G1VWF-E	Compact wall beacon, white, FIRE, EN 54
G1VWN-E	Compact wall beacon, white, no marking, EN 54

Table 3: Sounder-beacon models

Number	Description
G1AVRF-E	Compact wall sounder-beacon, red, FIRE, EN 54
G1AVRN-E	Compact wall sounder-beacon, red, no marking, EN 54
G1AVWF-E	Compact wall sounder-beacon, white, FIRE, EN 54
G1AVWN-E	Compact wall sounder-beacon, white, no marking, EN 54

Genesis LED EN 54 fire alarm devices feature:

- Field-configurable sound output (see Figure 2)
- Fixed light output
- Enhanced synchronization circuitry to comply with the latest requirements of EN 54-3 and EN 54-23
- Input wiring test points on the front of the fire alarm device when the cover is removed

Note: Synchronized operation requires a separately installed synchronization device. See the control and indicating equipment's compatibility list for compatible synchronization devices.

Configuration

Caution: Equipment damage hazard. Using excessive force when removing the fire alarm device cover may damage the cover and prevent it from latching in place.

To configure the fire alarm device:

1. Remove the device cover.

   Insert a small, flat-bladed screwdriver into the slot at the bottom of the device. See Figure 1A.

   Gently pull up on the screwdriver to pry the bottom of the cover down and away from the device.

   Lift the bottom of the cover out and over the top of the device. See Figure 1B.
2. Set the sound output switches. See Figure 2.
3. Replace the cover by hooking it to the top of the device, and then snapping the bottom into place. Use the retaining screw provided in the accessory bag to secure the cover. See Figure 1C.

Figure 1: Removing and replacing the cover

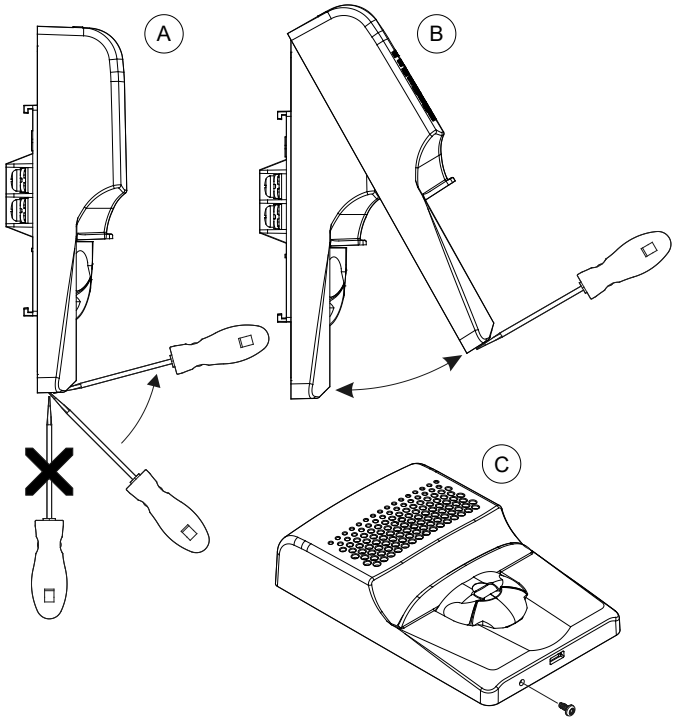


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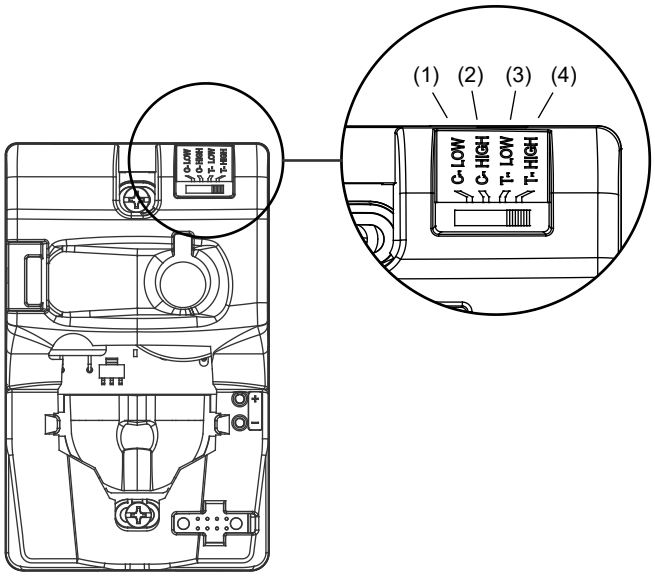
Figure 2: Sound output settings



(1) Constant, low dB
(2) Constant, high dB
(3) T3 temporal, low dB
(4) T3 temporal, high dB

Installation

Install and wire this device in accordance with applicable national and local codes, ordinances, and regulations.

To meet IP21C requirements, you must use one of the compatible electrical boxes listed in “Specifications” on page 3. You must use the knockouts provided on the electrical box and one of the following methods:

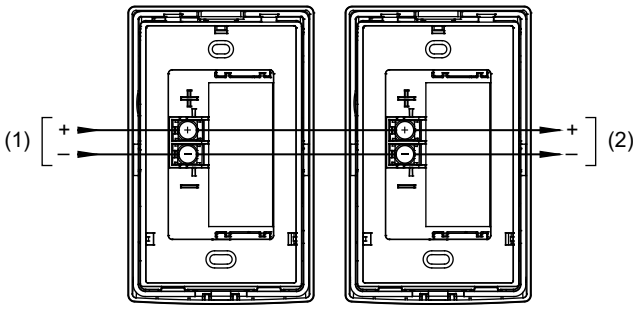
- Cabling with appropriate 20 mm or 25 mm cable glands and the minimum diameter specified by the gland manufacturer
- An enclosed conduit system with appropriate 20 mm or 25 mm conduit glands

Caution: Electrical supervision requires that you break the wire run at each terminal. Do not loop the field wires around the terminals.

To install the fire alarm device:

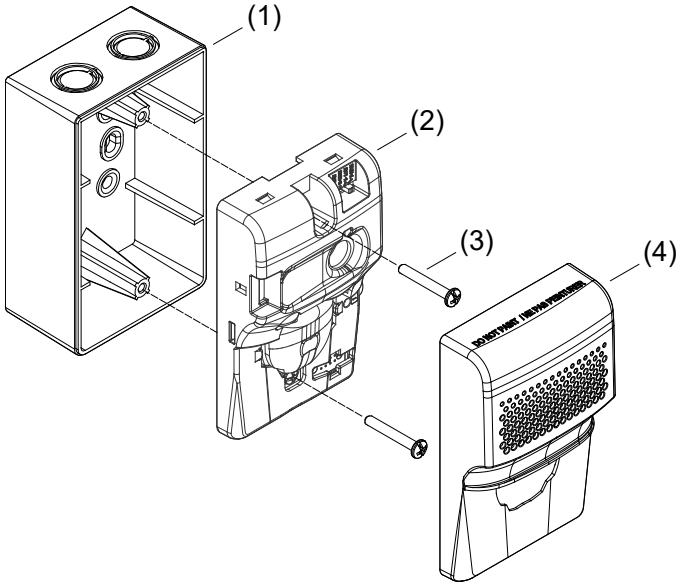
1. Remove the device cover.
2. Connect the field wiring. Observe signal polarity for the device to operate properly. See Figure 3.
3. Using the captive screws, attach the device to the electrical box. Do not overtighten the screws. See Figure 4.
4. Replace the cover by hooking it to the top of the device, and then snapping the bottom into place. See Figure 1.
5. Test the unit for proper operation.

Figure 3: Wiring



(1) Fire alarm signal circuit in (signal polarity shown in the active condition)
(2) Fire alarm signal circuit out

Figure 4: Mounting on a G1(R/W)B-E surface box



(1) Electrical box
(2) Fire alarm device
(3) Captive screw (2X)
(4) Device cover

Maintenance and testing

Caution: Equipment damage hazard. To maintain the required agency listings, do not change factory-applied finishes.

This unit is not serviceable or repairable. If the unit fails to operate, contact the supplier for a replacement.

Perform a visual and operational inspection in accordance with applicable codes and standards or as directed by the local authority having jurisdiction.

Input wiring test points are available on the front of the fire alarm device when the cover is removed. The test points let you easily spot-check the field circuit wiring without the need to remove the device from the wall. See Figure 5.

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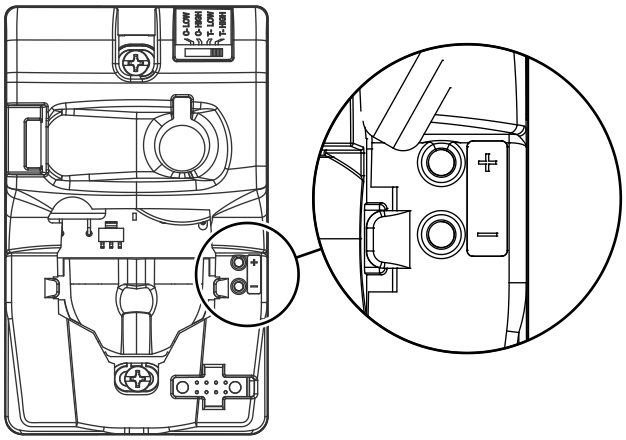
Figure 5: Test points



Note: Marking indicates signal polarity when the circuit is active.

Specifications

Operating voltage	16 to 33 VDC
Operating current	See Table 6 to Table 8
Sound signal pattern	Constant or T3 temporal
Sound level output	See Table 4 and Table 5
Light output	W-2.4-8.5
W–x-y cuboid coverage	2.4 m × 8.5 m × 8.5 m. See Figure 7.
Flash rate	1 fps (flash per second) approx.
Synchronization	20 Ω max. between any two devices. To determine allowed wire resistance, refer to these specifications, and the specifications for the synchronized signal source.
Wire size	0.75 to 2.50 mm² (12 to 18 AWG)
Screw torque Mounting screws Terminal screws	 15 lbf-in (1.8 N-m) max. 12 lbf-in (1.4 N-m) max.
Dimensions	See Figure 8
Light-to-box center offset	−1.8 cm
Compatible electrical boxes [1]	G1RB-E, G1WB-E
Operating environment Temperature Relative humidity	 −10 to 55°C 0 to 93% noncondensing
Storage temperature	−40 to 70°C

[1] Electrical boxes must be at least 3.81 cm deep. Electrical boxes greater than 7.62 cm wide require a trim ring.

Table 4: Operational performance, 16-33 V continuous or temporal tone in a G1(R/W)B-E surface box, high volume (dBA)

Angle	dBA
15°	98.9
45°	103.8
75°	99.5
105°	101.1
135°	103.1
165°	93.4

Table 5: Operational performance, 16-33 V continuous or temporal tone in a G1(R/W)B-E surface box, low volume (dBA)

Angle	dBA
15°	93.0
45°	96.2
75°	93.7
105°	95.4
135°	97.8
165°	88.3

Table 6: Operating current (sounder models)

Sound setting	16 to 33 VDC
C-LOW, T-LOW	13 mA
C-HIGH, T-HIGH	23 mA

Table 7: Operating current (beacon models)

Light output	16 to 33 VDC
W-2.4-8.5	24 mA

Table 8: Operating current (sounder-beacon models)

Light output	Sound setting	16 to 33 VDC
W-2.4-8.5	C-LOW, T-LOW	35 mA
	C-HIGH, T-HIGH	45 mA

Figure 6: Sound level patterns for Table 4 and Table 5

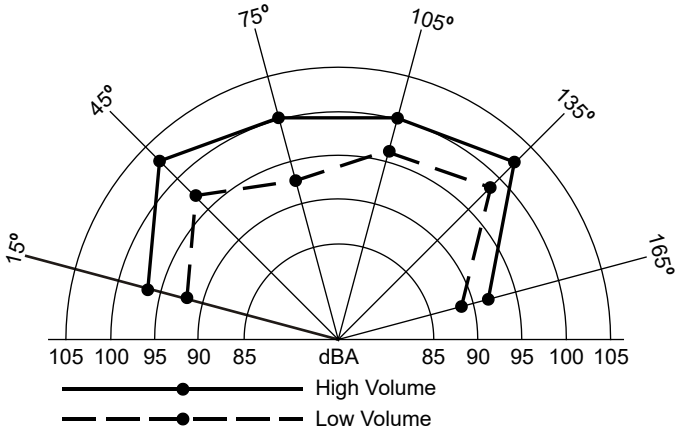
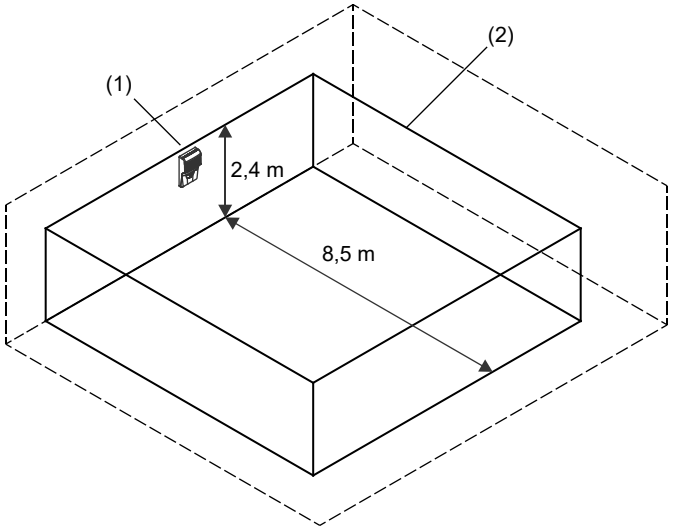
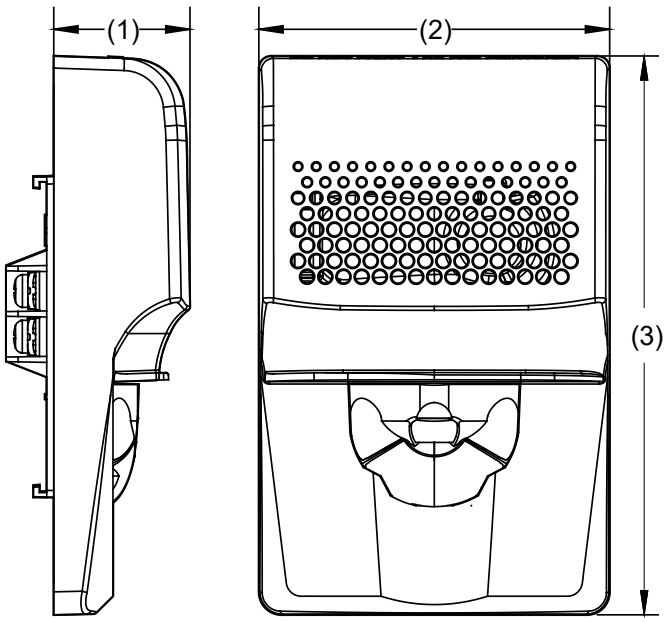


Figure 7: W–x-y cuboid coverage



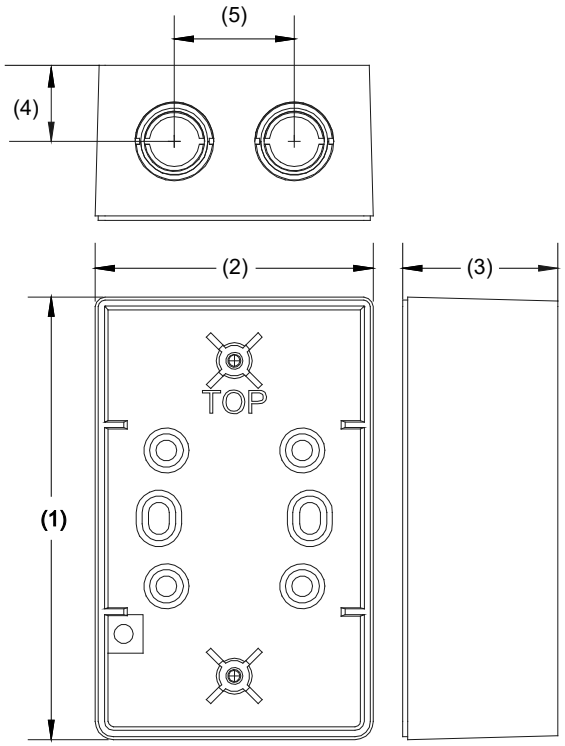
(1) Wall-mounted beacon
(2) Beacon coverage cuboid volume

Figure 8: Dimensions



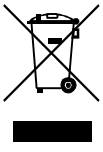
(1) 2.86 cm (1-1/8 in.)
(2) 7.62 cm (3 in.)
(3) 11.75 cm (4-5/8 in.)

Figure 9: G1(R/W)B-E surface box dimensions



(1) 11.75 cm (4-5/8 in.)
(2) 7.62 cm (3 in.)
(3) 4.12 cm (1-5/8 in.)
(4) 2.00 cm (3/4 in.)
(5) 3.12 cm (1-1/4 in.)

Regulatory information

EU compliance	CE
EU certificates	
G1Axx-E	2831-CPR-F4673
G1AVxx-E	2831-CPR-F4675
G1Vxx-E	2831-CPR-F4677
UK compliance	UKCA 0832
UKCA certificates	
G1Axx-E	0832-UKCA-CPR-F0274
G1AVxx-E	0832-UKCA-CPR-F0276
G1Vxx-E	0832-UKCA-CPR-F0278
EN 54	EN 54-3 and 54-23 Type A (IP21C to EN 60529:1991)
European Union directives	2014/53/EU (RED directive): Hereby, Carrier declares that this device is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU.
	2012/19/EU (WEEE directive): Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points. For more information see: www.recyclethis.info.

Contact information

For contact information, see www.edwardsfiresafety.com.

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