EDWARDS

LIFE SAFETY & INCIDENT MANAGEMENT

Outdoor-Rated Horns, Strobes, and Horn-Strobes

Genesis LED WG Series

S218, S5389

7135-1657:0522
7125-1657:0521

Overview

Genesis LED WG Series horn, strobe and horn-strobe appliances are among the most versatile emergency appliances of their kind. They are exceptionally capable as they are designed for outdoor wet applications with a NEMA 4X / IP66 UL listing[1], and IP67 Compliant[2]. Genesis LED WG appliances operate seamlessly in extreme temperatures, with a listed operating temperature range of as low as -40 °F to as high as 151 °F (-40 °C to 66 °C). These features make them suitable for a wide range of wet and harsh environments and applications, such as exposure to rain, snow, and sleet, and challenging conditions such as process areas.

Genesis LED WG Series feature a sleek low-profile design and offer energy-efficient technology that makes them less expensive to install and operate by reducing overhead. Genesis LED WG Series strobes feature high-efficiency optics, combined with patented electronics, to deliver a highly controlled and efficiently focused light distribution pattern in exchange for lower current requirements. Strobes have field-selectable 15 or 30 cd light output. They are precision-timed to meet UL 1971 synchronization standards. Candela settings are viewable even after installation through an innovative sealed viewport display.

Compared with Xenon-type strobes, High-Performance LED strobes require fewer power supplies, backup power, batteries, and often smaller wire gauge, which lightens conduit requirements. They are also backwards-compatible with legacy strobes, so there's no need to replace all your existing devices to upgrade to new LED technology. In fact, Genesis LED WG Series strobes can be mixed on the same circuit and used in the same field of view as Xenon-based strobes. This makes Genesis LED WG Series ideal for new installations and retrofits alike.

Genesis LED WG Series appliances feature an efficient and powerful piezo sounder. Field-configurable sound output levels provide the flexibility modern life safety projects demand, while the Genesis LED control protocol keeps multiple strobes on compatible NAC circuits synchronized to well within NFPA 72 requirements.

They are available for mounting on the ceiling or the wall. They can be installed to recessed (in-the-pour/block) electrical boxes. Genesis LED WG notification appliances also mount to suitable surface boxes. Replaceable Cover skins are available with FIRE, ALERT, FEU/FIRE (French/English), FUEGO (Spanish), and no marking configurations.

[1]UL Listed for Type 4X and IP66 when installed in surface/flush-mount applications as described under "Specifications."
[2]Device only (standalone) is IP67 compliant.

Standard Features

- **Designed for Outdoor & Wet-Rated Applications**
  - NEMA 4X / IP66[1] UL listing (when installed in surface/flush-mount applications)
  - IP67[2] Compliant Device only (standalone)
- **High-Performance LED Strobe Technology**
  Ultra-low device current consumption allows:
  – More devices per circuit
  – Ability to use lower-gauge wire
  – Longer wire runs
  – Fewer booster power supplies
  – High-efficiency optics
  – Selectable 15 or 30 cd light output
  – LED devices may be mixed with legacy Xenon strobes
- **Efficient Audible Output**
  – Selectable high or low dB horn output
  – Selectable temporal or steady horn output
  – Improved audio frequency range for better wall penetration
- **Low-Profile Design**
  – Ultra-slim... protrudes about 1.55 in. (3.94 cm) from the mounting surface
  – Attractive appearance... no visible mounting screws
- **Multiple Marking Options**
  – Order FIRE, ALERT, FEU/FIRE (French/English), FUEGO (Spanish), or no marking configurations.
  – Change markings at any time with replaceable quick-swap covers
- **Easy to Install**
  – Suitable for mount on walls or ceilings (indoor or outdoor)
  – Compatible with Model 449 (gray) or 74347U (red) deep 4-inch-square electrical box
  – Field-selectable settings
  – Fully compatible with Genesis synchronization protocols
  – Horn only, strobe only, and horn-strobe options
- **Current draw is the same for all candela output settings**
  – Easier for new system design
  – Flexible for future changes in light output needs

Application

Horns

Genesis LED WG Series horn output reaches as high as 86 dBA in accordance with UL 464 (88 dBA in accordance with ULC-S525) and features a unique frequency tone that results in excellent sound penetration and an unmistakable warning of danger. Horns may be configured for either coded or non-coded notification circuits.

The suggested sound pressure level for each notification zone used with alarm notification appliances is at least 15 dB above the average ambient sound level, or 5 dB above the maximum sound level having a duration of at least 60 seconds, whichever is greater, measured 5 feet (1.5 m) above the floor. The average ambient sound level is A-weighted (fast response) sound pressure measured over a 24-hour period.

Doubling the distance from the notification appliance to the ear will theoretically result in a 6 dB reduction of the received sound pressure level. The actual effect depends on the acoustic properties of materials in the space. A 3 dBA difference represents a barely noticeable change in volume.

Strobes

Genesis LED WG Series clear-lensed strobes are UL 1971-listed for use indoors as wall- or ceiling-mounted public-mode notification appliances for the hearing impaired, and UL 1638-listed for outdoor applications. Prevailing codes require strobes to be used where ambient noise conditions exceed specified levels, where occupants use hearing protection, and in areas of public accommodation as defined in the Americans with Disabilities Act.

Visible appliance synchronization is required to avoid causing issues with people who have Photosensitive Epilepsy (PSE). Notification appliance synchronization is also generally required when more than two strobe appliances are in the same field of view from any one location. All Genesis strobes meet UL synchronization requirements (within 10 milliseconds over a two-hour period) when used with a synchronization source. See the specifications table for a list of compatible sources.

Installation and Mounting

Genesis LED WG Series notification appliances are rated for outdoor use and are suitable for indoor or outdoor applications on walls or ceilings. When installing the notification appliance in flush-mount outdoor or wet applications on a standard 4-inch-square-deep electrical box, WGWMA (white) or WGRMA (red) adapter plate must be ordered separately; remove the trim skirt from the adapter ring by removing the two screws from the back of the adapter ring.

For surface-mount installation in outdoor or wet applications, appliances must be mounted to a 449 (gray) or 74347U (red) weatherproof electrical box, and a WGWMA (white) or WGRMA (red) adapter plate with ring is required and must be ordered separately.

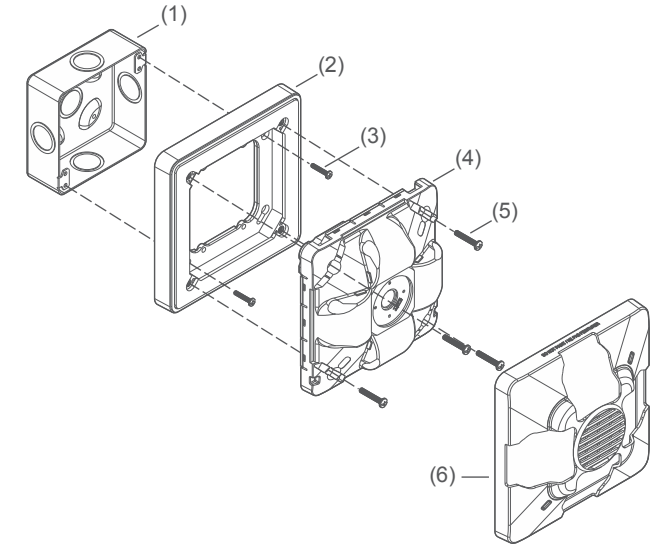
The shallow depth of Genesis LED devices leaves room behind the appliance for extra wiring.

See “Specifications” below for a list of compatible electrical boxes that meet UL/ULC, IP66, and NEMA 4X requirements.

To meet IP66 requirements, plumbing tape (Teflon tape) must be applied to all threaded conduit plugs and connectors.

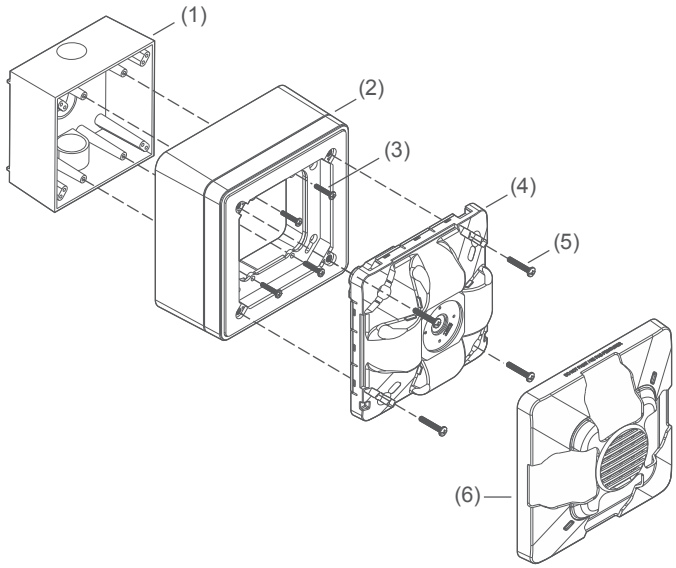
The Genesis LED WG series notification appliances listed in the data sheet are for DC rated operating voltage applications only. See Application Bulletin for details on application requirements requiring FWR operating voltage.

Flush-mount installation – 4-inch-square-deep electrical box



(1) 4-inch-square-deep electrical box
(2) WGWMA or WGRMA adapter plate (required, ordered separately)
(3) 8-32 machine screw (2X, supplied with electrical box)
(4) Notification appliance
(5) 8-32 machine screws (4X, supplied with appliance)
(6) Cover

Surface-mount Installation – Model 449 (gray) or 74347U (red) weatherproof electrical box



(1) Model 449 or 74347U weatherproof surface-mount electrical box
(2) WGWMA or WGRMA adapter plate with ring (required, ordered separately)
(3) 6-32 machine screw (4X, supplied with appliance)
(4) Notification appliance
(5) 8-32 machine screws (4X, supplied with appliance)
(6) Cover

WARNING: These devices will not operate without electrical power. As fires frequently cause power interruptions, we suggest you discuss further safeguards with your local fire protection specialist.

EDWARDS recommends that these devices always be installed in accordance with the latest recognized edition of national and local codes. Refer to the appropriate codes and standards for mounting height information.

Field Configuration

Horn pattern

Audible output of Genesis LED WG horns and horn-strobes is factory-set to sound in a three-pulse temporal pattern. Units may be configured for use with coded systems by cutting a JP1 on the circuit board, setting the switch to continuous mode. This results in a steady output that can be turned on and off (coded) as the system applies and removes power to the notification circuit. Note: Temporal 3 coding is the required output for fire notification devices per NFPA 72. Any device coding other than temporal 3 is at the discretion and approval of the local authority having jurisdiction (AHJ).

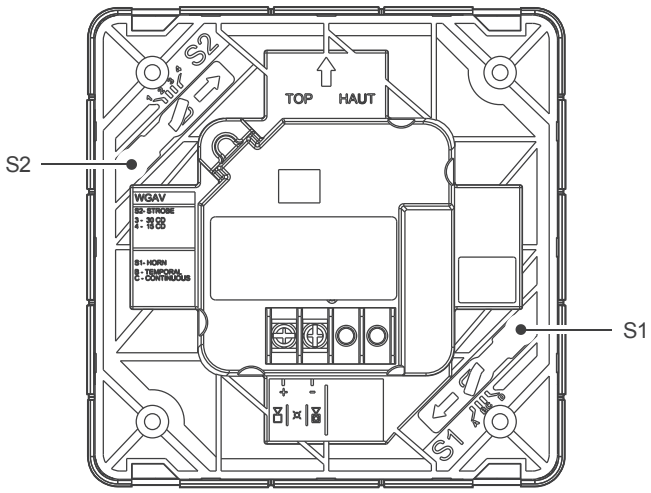
Strobe pattern

Genesis LED WG horn-strobes are factory-set for use as UL 1971-compliant notification appliances for public mode operation, and UL 1638-listed as protective visual signaling appliances.

Strobe output

Genesis LED WG horn-strobes may be set for one of four output intensities.The output setting is changed by simply opening the device and sliding the switch to the desired setting. The device does not have to be removed to change the output setting. The setting remains visible after the cover is closed through a small window on the front of the device.

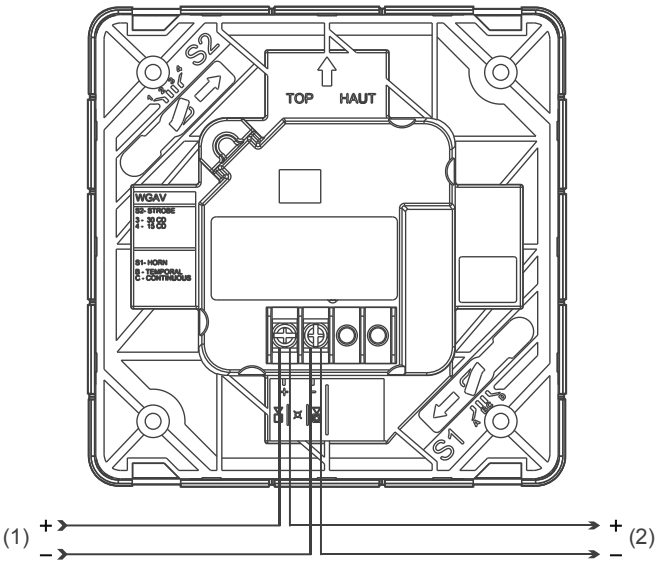
Light and Sound Output Settings



S1 switch settings		S2 switch settings	
A	Not used	1	Not used
B	Temporal	2	Not used
C	Continuous	3	30 candela
D	Not used	4	15 candela

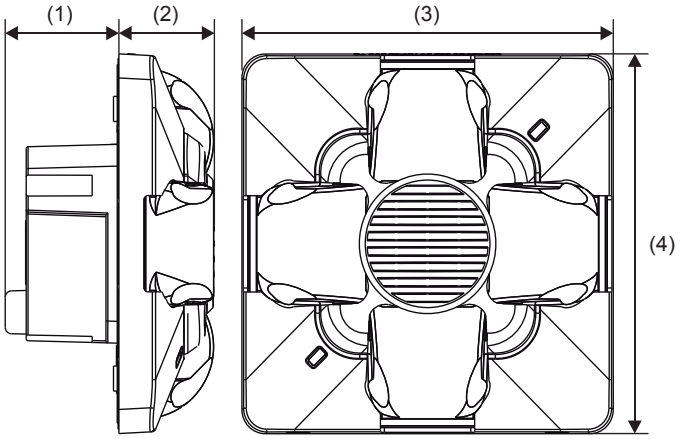
Note: Temporal 3 coding is the required output for fire notification devices per NFPA 72. Any device coding other than temporal 3 is at the discretion and approval of the local authority having jurisdiction (AHJ).

Wiring



(1) Horn/strobe circuit in (signal polarity shown in the active condition)
(2) Horn/strobe circuit out

Dimensions



(1) 1.8 in. (4.57 cm)
(2) 1.55 in. (3.94 cm)
(3) 6.0 in. (15.24 cm)
(4) 6.0 in. (15.24 cm)

Sound Output

Horn & Horn-Strobe

Sound setting	Reverberant (UL 464)	Anechoic (CAN/ULC-S525)
Continuous/Temporal	86 dBA	88 dBA

Sound Pattern

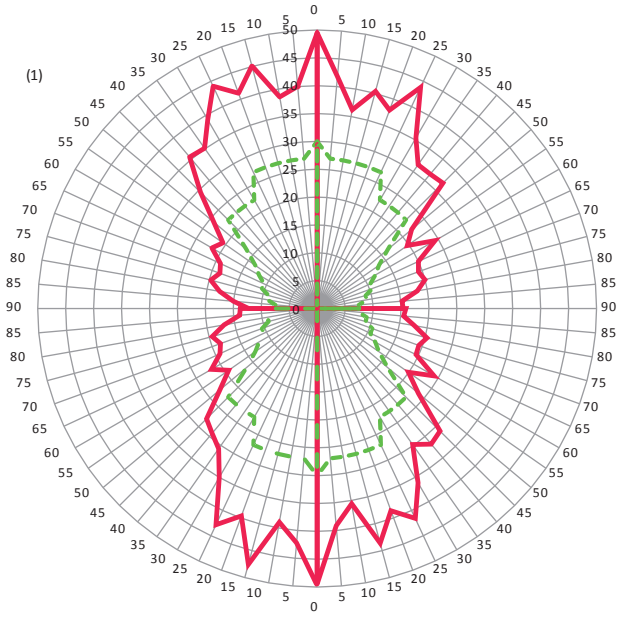
Horn Models

Axis	Angle	Change in output
Horizontal	± 46°	–3 dBA
	± 78°	–6 dBA
	± 90°	–8.5 dBA
Vertical	± 46°	–3 dBA
	± 78°	–6 dBA
	± 90°	–8.3 dBA

Horn-Strobe Models

Axis	Angle	Change in output
Horizontal	± 58°	–3 dBA
	± 84°	–6 dBA
	± 90°	–7.1 dBA
Vertical	± 48°	–3 dBA
	± 79°	–6 dBA
	± 90°	–8.1 dBA

Light Distribution



(1) Horizontal left

Measured
UL minimum

Operating Current

Horn Models

Sound setting	16 to 33 VDC
Continuous/Temporal	20 mA

Strobe Models

Strobe setting	16 to 33 VDC
15,30	35 mA

Horn-Strobe Models

Strobe setting	Sound setting	16 to 33 VDC
15,30	Continuous/Temporal	50 mA

Specifications

Operating voltage	16 to 33 VDC
Horn signal type	Continuous or T3 temporal
Light output	15, 30 cd
Strobe 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.
Synchronization Sources	Edwards CC/MCC Series Signal Modules[3], Universal Class A/B modules[3], FX-NAC[3], Booster and Auxiliary Power Supplies, Intelligent Control Panels
Wire size	12 to 18 AWG (0.75 to 2.50 mm²)
Screw torque	
Mounting screws	15 lbf-in (1.8 N-m) max.
Terminal screws	12 lbf-in (1.4 N-m) max.
Compatible electrical boxes[4]	
Surface mount[5]	
UL/ULC, IP66, NEMA 4X	Model 449 (gray) or 74347U (red) electrical box with WGWMA or WGRMA adapter plate with ring
Flush mount[5]	
UL/ULC, IP66, NEMA 4X	Deep 4-inch-square electrical box with WGWMA or WGRMA adapter plate
Compatible adapter rings	WGWMA, WGRMA
Operating environment	
Class	Outdoor wet
Temperature	–40 to 150.8°F (–40 to 66°C)
Relative humidity	0 to 95% noncondensing
Storage temperature	-40 to 158°F (-40 to 70°C)
RAL Color	Red=RAL 3013 White=RAL 9002
Environmental Compliance	RoHS directive 2011/65/EU

[3]Compatibility for these modules limited to 3 appliances.
[4]Electrical boxes must be at least 2 in. (5.08 cm) deep.
[5]To meet IP66 requirements, plumbing tape (Teflon tape) must be applied to all threaded conduit plugs and connectors.

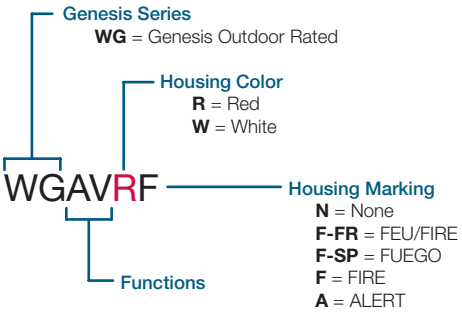
Ordering Information

Notification Appliances		Color	Marking
 Horns	WGARA	Red	ALERT
	WGARF	Red	FIRE
	WGARN	Red	None
	WGAWA	White	ALERT
	WGAWF	White	FIRE
	WGAWN	White	None
	WGARF-FR	Red	FIRE FEU
	WGAWF-FR	White	FIRE FEU
	WGARF-SP	Red	FUEGO
	WGAWF-SP	White	FUEGO
 Strobes	WGVRA	Red	ALERT
	WGVRF	Red	FIRE
	WGVRN	Red	None
	WGVWF	White	FIRE
	WGVWN	White	None
	WGVRF-FR	Red	FIRE FEU
	WGVWF-FR	White	FIRE FEU
	WGVRF-SP	Red	FUEGO
	WGVWF-SP	White	FUEGO
	WGVWA	White	ALERT
 Horn-Strobes	WGAVRA	Red	ALERT
	WGAVRF	Red	Fire
	WGAVRN	Red	None
	WGAVWA	White	ALERT
	WGAVWF	White	FIRE
	WGAVWN	White	None
	WGAVRF-FR	Red	FIRE FEU
	WGAVWF-FR	White	FIRE FEU
	WGAVRF-SP	Red	FUEGO
	WGAVWF-SP	White	FUEGO

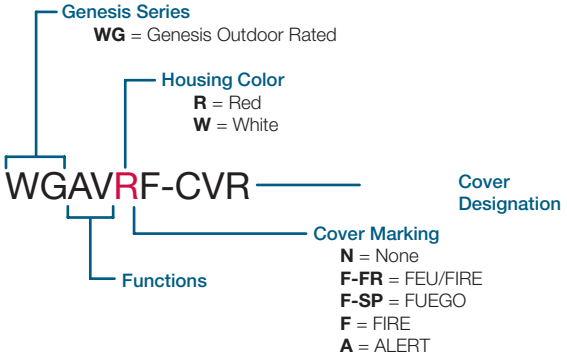
Replacement Appliance Covers		Color	Marking
 Horn Covers	WGARA-CVR	Red	ALERT
	WGARF-CVR	Red	FIRE
	WGARF-FR-CVR	Red	FIRE FEU
	WGARF-SP-CVR	Red	FUEGO
	WGARN-CVR	Red	None
	WGAWA-CVR	White	ALERT
	WGAWF-CVR	White	FIRE
	WGAWF-FR-CVR	White	FIRE FEU
	WGAWF-SP-CVR	White	FUEGO
	WGAWN-CVR	White	None
 Strobe Covers	WGVRA-CVR	Red	ALERT
	WGVRF-CVR	Red	FIRE
	WGVRF-FR-CVR	Red	FIRE FEU
	WGVRF-SP-CVR	Red	FUEGO
	WGVRN-CVR	Red	None
	WGVRA-CVR	White	ALERT
	WGVWA-CVR	White	ALERT
	WGVWF-CVR	White	FIRE
	WGVWF-FR-CVR	White	FIRE FEU
	WGVWN-CVR	White	None
 Horn-Strobe Covers	WGAVRA-CVR	Red	ALERT
	WGAVRF-CVR	Red	FIRE
	WGAVRF-FR-CVR	Red	FIRE FEU
	WGAVRF-SP-CVR	Red	FUEGO
	WGAVRN-CVR	Red	None
	WGAVWA-CVR	White	ALERT
	WGAVWF-CVR	White	FIRE
	WGAVWF-FR-CVR	White	FIRE FEU
	WGAVWF-SP-CVR	White	FUEGO
	WGAVWN-CVR	White	None

Accessories					
	74347U	Surface-mount box, outdoor rated, Red		WGWMA	Adapter Plate, White
	449	Surface-mount box, outdoor rated, Gray		WGRMA	Adapter Plate, Red

Model Number Syntax, Appliances



Model Number Syntax, Replacement Covers



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