

# Outdoor Rated Horns and Horn-Strobes

## Genesis WG4 Series

### Overview

Genesis WG4 Series horns and horn-strobe appliances are among the most versatile emergency appliances of their kind. Rated for indoor or outdoor use, they are suitable for a wide range of wet and harsh environments with a listed operating temperature range of as low as -40 °F to as high as 151 °F (-40 °C to 66 °C).

Field-configurable light and sound output settings add to their on-site flexibility, while optional FIRE markings make them ideal for fire alarm applications.

These appliances are suitable for indoor and outdoor applications, and are ideal for challenging conditions such as parking garages and process areas. They are available for mounting on the ceiling or the wall, and thanks to an ingenious optional full backplane sealing gasket, can be installed to recessed (in-the-pour/block) electrical boxes. WG4 notification appliances also mount to suitable surface boxes. Optional color-matched trim skirts provide a clean, finished appearance. All appliance wiring is accomplished room-side for easy installation.

WG4 Series appliances feature an efficient and powerful piezo sounder. The multi-candela strobes are available with clear lenses in two output categories – standard and high-output. They are precision-timed to meet UL 1971 synchronization standards, and field-configurable for one of four candela intensities. Candela settings are viewable even after installation through an innovative sealed viewport display.

### Standard Features

- Outdoor and indoor rated
- Low-profile design
- Wall or ceiling mount
- Room-side wiring accepts 18 to 12 AWG (0.75 to 2.5 mm<sup>2</sup>)
- Wide operating temperature range
- Field-selectable settings
- Fully-compatible with Genesis synchronization protocols
- Standard and high-output strobe intensities
- Horn only and horn-strobe options

## Application 1

### Horns 3

Genesis horn output reaches as high as 97 dBA in accordance with UL 464 (104 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. They can also be set for low dB output with a jumper cut that reduces horn output by about 5 dB.

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.

### Strobe Application 7

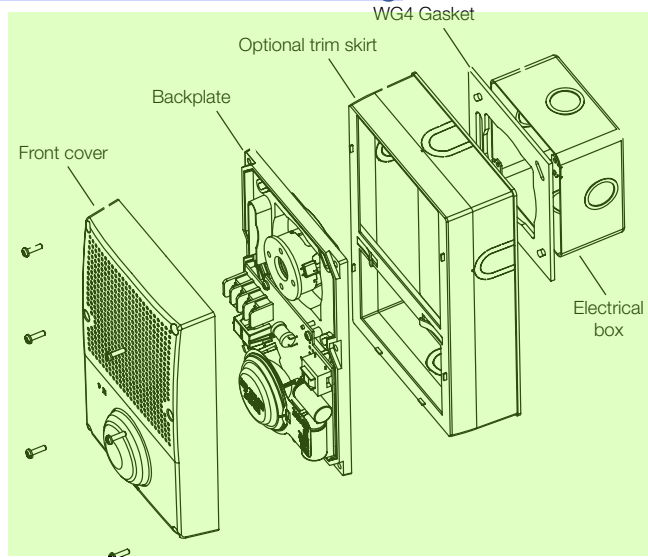
Genesis clear-lensed strobes are UL 1971-listed for use indoors as wall- or ceiling-mounted public-mode notification appliances for the hearing impaired, and UL 1638-listed for outdoor applications. Prevailing codes require strobes to be used where ambient noise conditions exceed specified levels, where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

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.

**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.

## Installation and Mounting 2

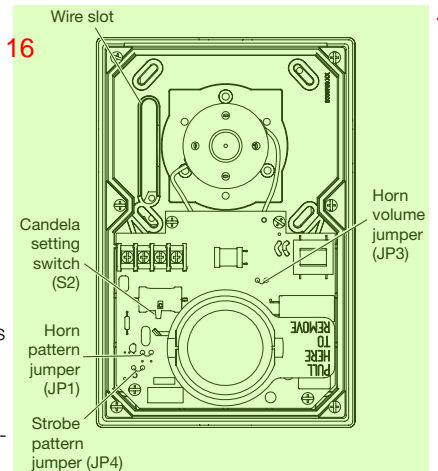


WG4 notification appliances are rated for outdoor use and are suitable for indoor or outdoor applications on walls or ceilings. For surface-mounting in outdoor or wet applications, appliances must be mounted to a 449 or 74347U electrical box. In dry conditions, they are compatible with standard 4-inch square by 1½-inch deep electrical boxes. When using the optional WG4WTS or WG4RTS trim skirt, a 449 or 4-inch square by 2-1/8" deep box must be used.

The Genesis WG4 horn and horn-strobe may be wall- or ceiling-mounted, and may be placed in one of four positions: strobe above, strobe below, and strobe to either side. The shallow depth of Genesis devices leaves room behind the appliance for extra wiring.

### Field Configuration 15

**Horn pattern:** Audible output for WG4 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. 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. A Genesis Signal Master is required when horn-strobe models are configured for coded systems.



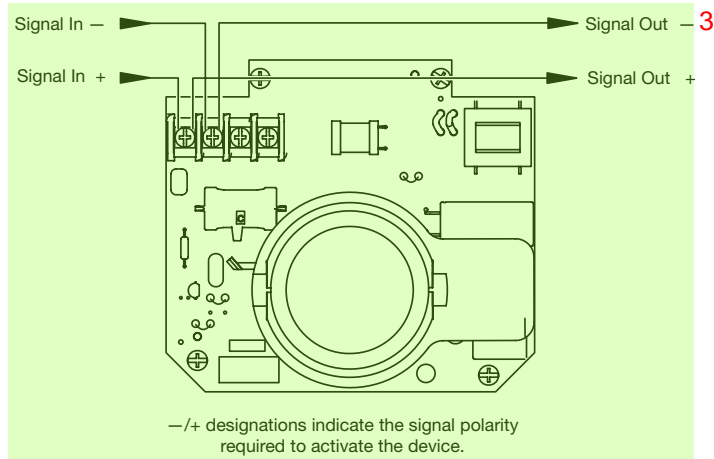
**Horn output:** Horns and horn-strobes are factory set for high dB output. Low dB output may be selected by cutting a jumper on the circuit board. This reduces the output by about 5 dB.

**Strobe pattern:** Genesis WG4 horn-strobes are factory set for use as UL 1971 compliant notification appliances for public mode operation. These notification appliances may be configured for temporal flash by cutting JP4 on the circuit board. This battery-saving feature is intended for private mode signaling only.

**Strobe output:** Genesis WG4 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.

## Wiring 1

Field wiring is connected to WG4 notification appliances with terminals that accommodate #18 to #12 AWG (0.75 mm<sup>2</sup> to 2.5 mm<sup>2</sup>) wiring. 2



## Specifications 4

### Horns and Horn-strobes 5

Operating voltage	24 VDC, 24 VFWR nominal	6
Dimensions (W x H x D)	5.6 x 8.5 x 1.4 in. (142 x 216 x 36 mm)	
Horn tone	3.2 kHz	
Wire size	12 to 18 AWG (0.75 to 2.50 mm <sup>2</sup> )	
Compatible electrical box		
Outdoor	Model 449 or 74347U	
Indoor	4 in. square by 1.5 in. deep box	
Operating environment		
Temperature	-40 to 151°F (-40 to 66°C)	
Relative humidity	0 to 95% noncondensing	

## Compatible Synchronization Sources 7

### Horn-strobes 8

Auto-sync Output Modules	SIGA-CC1S, SIGA-CC2A, SIGA-MCC1S, SIGA-MCC2A	9
Genesis Signal Master	G1M-RM	
Booster & Auxiliary Power Supplies	APS6A, APS10A, BPS6A, BPS10A	
Control Panels with Genesis Synchronization built-in	FireShield Plus, iO Series, EST3X	

## Sound Output 10

### Horns and Horn-strobes (dBA) 11

Volume Setting	16V		24V		33V		12
	UL 464	ULC-S525	UL 464	ULC-S525	UL 464	ULC-S525	
Continuous High	89.7	94.0	94.7	99.6	97.4	102.9	
Continuous Low	85.4	92.8	89.5	97.2	92.5	98.6	
Temporal High	84.2	96.5	90.5	100.5	93.5	104.2	
Temporal Low	81.7	90.3	85.4	94.2	88.1	97.0	

dBA = Decibels, A-weighted.

UL 464: Sound level output measured in a reverberant room at 10 ft. (3.05m).

CAN/ULC-S525: Sound level output measured in an anechoic room at 10ft (3.05m).

### Standard Candela Horn-strobes 14

Standard/rating		Strobe Switch Position				15
		D	C	B	A	
UL 1971	Indoor	15 cd	29 cd	70 cd	87 cd	
UL 1638	Outdoor @ -35°C	6 cd	12 cd	28 cd	35 cd	
CAN/ULC-S526	Outdoor @ -40°C	1 cd	3 cd	8 cd	10 cd	

### High Candela Horn-strobes 16

Standard/rating		Strobe Switch Position				17
		D	C	B	A	
UL 1971	Indoor	102cd	123cd	147cd	161cd	
UL 1638	Outdoor @ -35°C	41cd	50 cd	60 cd	65 cd	
CAN/ULC-S526	Outdoor @ -40°C	11 cd	14 cd	17 cd	18 cd	

## Operating Current 18

(UL specifies current ratings at 16 volts)

### Standard Candela Horn-strobes in RMS (mA), continuous 19

Input Voltage	Strobe Switch Position				20
	D	C	B	A	
16 VDC	127	168	297	351	
16 VFWR	218	239	393	422	
24 VDC	107	130	210	238	
24 VFWR	190	222	325	356	

### High Candela Horn-strobes in RMS (mA), continuous 21

Input Voltage	Strobe Switch Position				22
	D	C	B	A	
16 VDC	342	408	517	526	
16 VFWR	447	502	614	679	
24 VDC	240	271	327	365	
24 VFWR	390	400	486	540	

### Horn only models (mA) 23

Setting	16V RMS, continuous		24V, typical		24
	High dB	Low dB	High dB	Low dB	
VDC	69.1	41.2	49.0	32.3	
VFWR	135	91.3	99.1	67.1	

## Ordering Information <sup>1</sup>

Model	Housing	Marking	Strobe Output	Ship Wt.
WG4RF-HVMC	Red	FIRE	Selectable standard candela output	1.5 lbs. (0.68 kg)
WG4WF-HVMC	White			
WG4RN-HVMC	Red	None		
WG4WN-HVMC	White			
WG4RF-HVMHC	Red	FIRE	Selectable high candela output	
WG4WF-HVMHC	White			
WG4RN-HVMHC	Red	None		
WG4WN-HVMHC	White			
WG4RF-H	Red	FIRE	Horn Only	
WG4WF-H	White			
WG4RN-H	Red	None		
WG4WN-H	White			

## Accessories <sup>3</sup>

WG4WTS	Surface Skirt for Genesis WG4 appliance family, white.	<sup>4</sup>
WG4RTS	Surface Skirt for Genesis WG4 appliance family, red.	
WG4GSKT	Full Body Mounting Gasket for smooth surfaces, WG4 appliance family	
74347U	Surface mount box, outdoor rated, red	
449	Surface mount box, outdoor rated, gray	