

Outdoor Rated Speakers and Strobes

Genesis WG4 Series



Patents pending

Overview

Genesis WG4 Series speakers and speaker-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 -31°F to as high as 151°F (-35°C to 66°C).

Field-configurable light and sound output settings add to their on-site flexibility, while optional FIRE or ALERT markings and colored lenses make them ideal for either emergency communications/mass notification (ECS/MNS) or 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 listed for mounting on the ceiling or the wall, and thanks to an ingenious full backplane sealing gasket, can be installed to recessed (in-the-pour/block) electrical boxes. WG4 signals also mount to suitable surface boxes served by raceways. Optional color-matched trim skirts provide a clean, finished appearance. All appliance wiring is accomplished room-side for easy installation.

WG4 Series appliances feature highly intelligible and efficient mylar-cone loudspeakers. These are dual-voltage (25.2V or 70.7V), and have field-selectable output taps ranging from 80.8 dBA to 90.0 dBA. The multi-candela strobes are available with clear or amber lenses and 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. Wattage and candela settings are viewable even after installation through an innovative sealed viewport display.

Standard Features

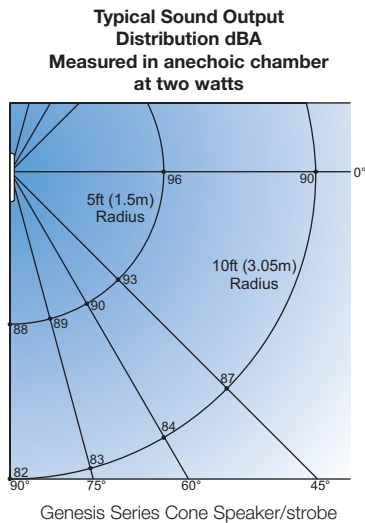
- Outdoor and indoor rated
- Low-profile design
- Wall or ceiling mount
- Room-side wiring accepts 18 to 12 AWG (0.75 to 2.5 mm²)
- Wide operating temperature range
- Field-selectable speaker wattage, voltage, and strobe candela settings
- Field-configurable temporal strobe output option
- Clear and amber lenses available
- Fully-compatible with Genesis synchronization protocols
- Standard and high-output strobe intensities
- Speaker only and Speaker/Strobe appliance options

Application

Speaker Application

The suggested sound pressure level for each signaling zone used with alert or alarm signals is a minimum of 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. This is measured 5 feet (1.5 m) above the floor.

Doubling the distance from the signal to the ear will theoretically cause a 6dB 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 1W to 2W) will increase the sound pressure level by 3dBA.



Strobe Application

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. UL 1638-listed colored lens strobe lights are available for ECS/MNS and outdoor applications.

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 one strobe appliance 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.

ECS/MNS Application

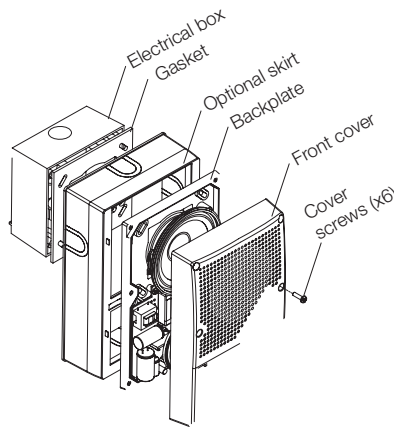


Genesis ECS/MNS appliances bring the same high-performance life safety features and unobtrusive design to mass notification applications. Standard models are available with clear or amber lenses and optional ALERT housing labels, they are ideal for applications that require differentiation between life safety and mass notification alerts. Appliances with red, green or blue lenses are also available. Contact EDWARDS Customer Service for details.

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



WG4 signals 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 an EDWARDS 449 electrical box. In dry conditions, they are compatible with standard 4-inch by 1½-inch deep electrical boxes. When using the optional

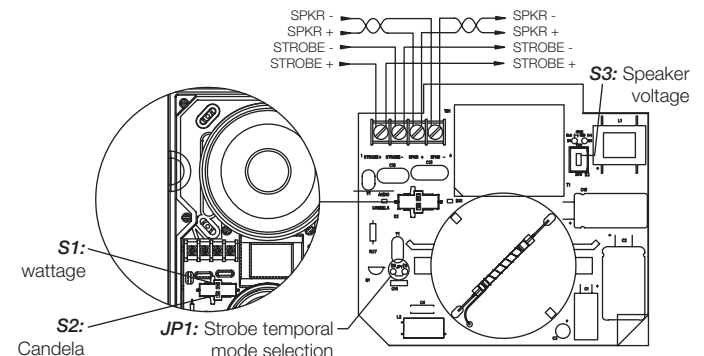
WG4WTS or WG4RTS trim skirt, a 449 or 2-1/8" deep box must be used.

The Genesis WG4 Speaker-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

Genesis WG4 speakers may be set to 70- or 25-Volt operation, and for ¼, ½, 1, or 2 watt operation. The wattage setting (represented by the letters Z, Y, X, and T) is changed by removing the cover and simply sliding the **S1** switch until the desired setting appears. The setting remains visible through a small window on the front of the device after the cover is installed. The voltage setting (70V or 25V) is toggled at **S3**. This setting is not visible after the cover is replaced.

Genesis WG4 speaker-strobes also feature selectable candela output. The actual light output for a given selection depends on the color of the strobe lens and whether it is a high output model or a standard output model. Refer to the specification tables for corresponding settings. The candela setting (represented by the letters D, C, B, and A) is changed by removing the cover and simply sliding the **S2** switch until the desired setting appears. The setting remains visible through a small window on the front of the device after the cover is installed.



Genesis speaker-strobes may also be configured for temporal flash. This power-saving feature is intended for private mode signaling only. To set the device for temporal flash, snip the jumper at **JP1**.

Specifications

Operating voltage	
Speaker	25 VRMS or 70 VRMS, switch selectable
Default	70 VRMS
Strobe	24 VDC, 24 VFWR nominal
Supervisory voltage	30 V max.
Speaker response	300 to 8,000 Hz
Wire size	12 to 18 AWG (0.75 to 2.50 mm ²)
Compatible strobe synchronization sources	SIGA-CC1S, SIGA-MCC1S, SIGA-CC2A, SIGA-MCC2A, G1M-RM, BPS6A, BPS10A, APS6A, APS10A, 3X-SFS1, iO64, iO500, Fireshield Plus 3, 5 and 10 zone.
Compatible electrical boxes	<i>Wet:</i> Model 449 (WG4 trim skirt recommended) <i>Dry:</i> 4" square by 1-1/2" deep box when used without a trim skirt. When trim skirt is used, box must be 4" square by 2-1/8" deep.
Operating environment	Wet
Temperature	-31 to 151 °F (-35 to 66 °C)
Relative humidity	0 to 95% noncondensing

Sound level output (dBA)

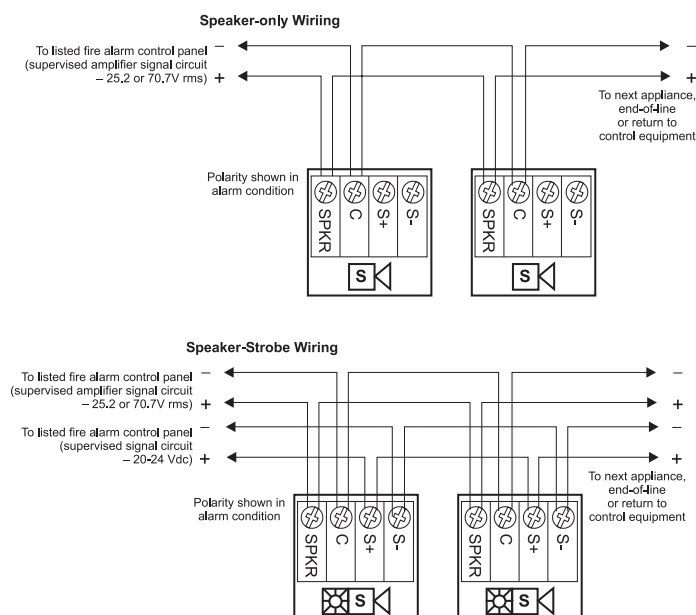
Wattage	Switch Position	25 V	70 V
2 W	T	90.0	89.7
1 W	X	87.1	86.9
1/2 W	Y	84.0	83.9
1/4 W	Z	80.8	80.8

dBA = Decibels, A-weighted.

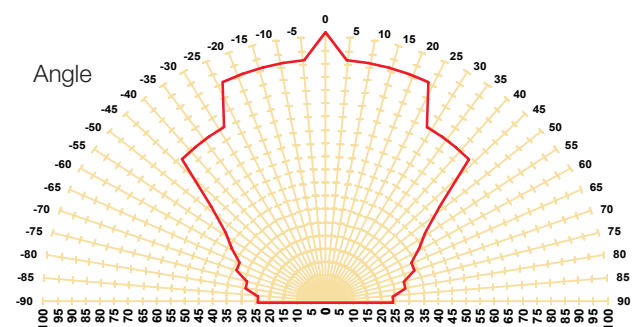
UL 1480: Sound level output at 10 ft. (3.05 m) measured in a reverberant room using 400 to 4,000 Hz band-limited pink noise.

Wiring

Field wiring is connected to Genesis signals with terminals that accommodate #18 to #12 AWG (0.75 mm² to 2.5 mm²) wiring.



Light output



UL off-axis candela requirements as a percent of the UL rated output

Indoor rating per UL 1971 (candela)			Strobe Switch Position			
			A	B	C	D
Standard Output Models (-SVMx)	Lens Color	Clear	87	70	29	15
		Amber*	62	59	25	13
	Current	VDC	319	167	144	106
		FWR	386	347	178	120
High Output Models (-SVMHx)	Lens Color	Clear	161	147	123	102
		Amber*	130	125	101	84
	Current	VDC	495	494	390	324
		FWR	646	607	487	412

* UL 1971 Equivalent candela value

Outdoor rating per UL 1638 (candela)			Strobe Switch Position			
			A	B	C	D
Standard Output Models (-SVMx)	Lens Color	Clear	35	28	12	6
		Amber*	25	24	10	5
	Current	VDC	319	167	144	106
		FWR	386	347	178	120
High Output Models (-SVMHx)	Lens Color	Clear	65	60	50	41
		Amber*	52	51	41	34
	Current	VDC	495	494	390	324
		FWR	646	607	487	412

* UL 1971 Equivalent candela value



LIFE SAFETY & INCIDENT MANAGEMENT

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Ordering Information



All speakers include field-selectable ¼, ½, 1, or 2 watt taps and selectable 25V or 70V operation.

Model	Housing	Marking	Lens	Strobe Output*	Ship Wt.
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Life safety Appliances

WG4RF-SVMC	Red	FIRE	Clear	Selectable standard output 15/29/70/87 cd	1.5 lbs. (0.68 kg)
WG4WF-SVMC	White				
WG4RN-SVMC	Red	None			
WG4WN-SVMC	White				
WG4RF-SVMHC	Red	FIRE		Selectable high output 102/123/147/161 cd	
WG4WF-SVMHC	White				
WG4RN-SVMHC	Red	None			
WG4WN-SVMHC	White				
WG4RF-S	Red	FIRE	Speaker Only		
WG4WF-S	White				
WG4RN-S	Red	None			
WG4WN-S	White				

ECS/MNS Appliances

WG4WA-SVMA	White	ALERT	Amber	Selectable standard output 13/25/59/62 cd	1.5 lbs. (0.68 kg)
WG4WN-SVMA		None			
WG4WA-SVMC		ALERT	Clear	15/29/70/87 cd	
WG4WA-SVMHA			Amber	Selectable high output 84/101/125/130 cd	
WG4WN-SVMHA		None			
WG4WN-SVMHC		Clear	Selectable high output 102/123/147/161 cd		
WG4WA-SVMHC				ALERT	
WG4WA-S		Speaker Only			

* See light output tables for more specific strobe values.

Accessories

WG4WTS	Surface Skirt for Genesis WG4 appliance family, white.
WG4RTS	Surface Skirt for Genesis WG4 appliance family, red.
WG4GSKT	Replacement Mounting Gasket
74347U	Surface mount box, outdoor rated