# SC-615BS
# Paging Horn Speaker 15W BS/EN/ISO


## DESCRIPTION

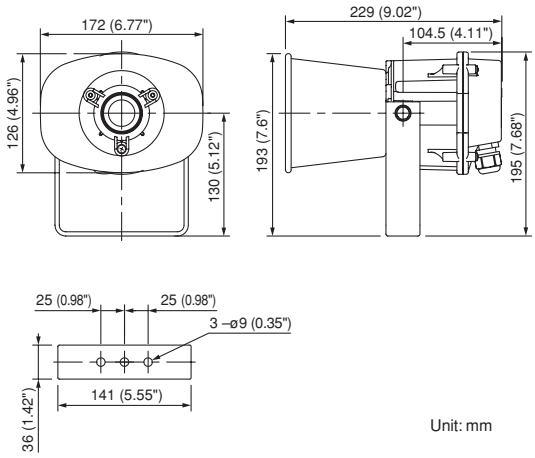
The SC-615BS Paging Horn Speaker is designed for both indoor and outdoor applications, as a 15W, high-impedance (70V/100V lines) system. Its diaphragms employ special heat-resistant fibers impregnated with phenolic resin to prevent shape-changing moisture absorption. A minimal gap between diaphragm bobbin and magnetic circuitry slit enhances efficiency. The aluminum foil bobbin dissipates heat from high power inputs, enhancing durability. Mounting brackets and all external hardware are stainless steel. This, together with the horn treated with a 50-micron thick powdered paint coating, gives the speaker excellent weatherproofing and corrosion resistance. The aluminum external horn flare offers better shock resistance than resin. EN 54-24*: 2008 and ISO 7240-24: 2010 certified, the SC-615BS is authorized for use in fire detection systems. It is also in compliance with BS 5839-8: 2008 14.8.

*EN 54-24: Loudspeaker for voice alarm systems for fire detection and fire alarm systems.

## FEATURES

- Stainless steel brackets and hardware and metallic-powder coated horn ensure superb weatherproofing and corrosion resistance.
- Shock-resistant aluminum oval horn
- Panel input impedance selector
- Unobtrusive off-white color (RAL 9010) helps match surroundings.
- In compliance with IP65.
- EN 54-24: 2008 and ISO 7230-24: 2010 certified (Certificate No. 0359-CPD-0109)
- In compliance with BS 5839-8: 2008 14.8
- Ideally suited for voice alarm system applications

## APPEARANCE AND DIMENSIONAL DIAGRAM




Unit: mm

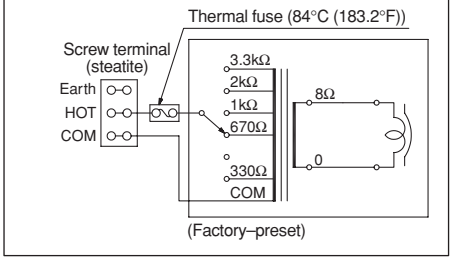
## SPECIFICATIONS

| | |
|---|---|
| **Rated Noise Power:** | 15W (100V line and 70V line) |
| **Rated Impedance:** | 100V line: 670Ω (15W), 1kΩ (10W), 2kΩ (5W), 3.3kΩ (3W)<br>70V line: 330Ω (15W), 670Ω (7.5W), 1kΩ (5W), 2kΩ (2.5W) |
| **Sensitivity:** | 109dB (1W, 1m) (500Hz – 5kHz, pink noise)<br>100dB (1W, 1m) (100Hz – 10kHz, pink noise)<br>88dB (1W, 4m) (100Hz – 10kHz, pink noise) |
| **Maximum Sound Pressure Level:** | 110dB (6W, 1m) (100Hz – 10kHz, pink noise)<br>98dB (6W, 4m) (100Hz – 10kHz, pink noise) |
| **Frequency Response:** | 315Hz – 12.5kHz |
| **Coverage Angle:** | Horizontal: 360° (500Hz), 160° (1kHz), 85° (2kHz), 45° (4kHz)<br>Vertical: 300° (500Hz), 200° (1kHz), 115° (2kHz), 60° (4kHz) |
| **Environmental type:** | B (outdoor applications) |
| **Operating Temperature:** | -20°C to +55°C (-4°F to 131°F) |
| **Dust/Water Protection:** | IP65 |
| **Speaker Mounting Method:** | Wall-mount |
| **Applicable Cable Size:** | Outer diameter: ø8 – 12.5mm<br>Conductor: Solid wire or 7-core wire<br>No bridge connection:<br>0.8 – 10mm² (AWG18 – AWG7) for solid wire,<br>0.8 – 8mm² (AWG18 – AWG8) for 7-core wire<br>Bridge connection:<br>0.8 – 2.5mm² (AWG18 – AWG13) for solid wire,<br>0.8 – 1.5mm² (AWG18 – AWG15) for 7-core wire |
| **Cable Connection:** | Screw terminal (steatite), can be bridge-connected |
| **Finish:** Horn flare: | Aluminum, off-white, powder coating |
| Reflector horn, Trans case and Terminal cover: | ABS resin, off-white |
| Bracket, screw and bolts: | Stainless steel |
| **Dimensions:** | 172 (W) × 195 (H) × 229 (D) mm<br>(6.77" × 7.68" × 9.02") |
| **Weight:** | 1.5kg (3.31 lb) |
| **Accessory:** | Terminal cover × 1 |
| **Option:** | Swivel bracket: YS-151S<br>(Can be use instead of the supplied bracket.) |

* Suppliable cable gland's part cord and name: 525-52-011-70 Cable gland AVC PGB13.5-12 (GRY)

Note: Never connect the 330Ω position ton the 100V line.

**Wiring Diagram**

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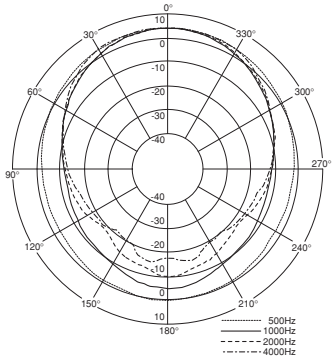
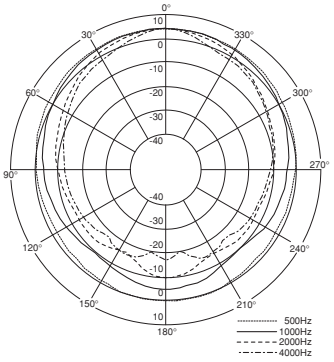
## CHARACTERISTIC DIAGRAMS based on EN 54-24 measurement conditions (Pink noise, 1W, 4m)

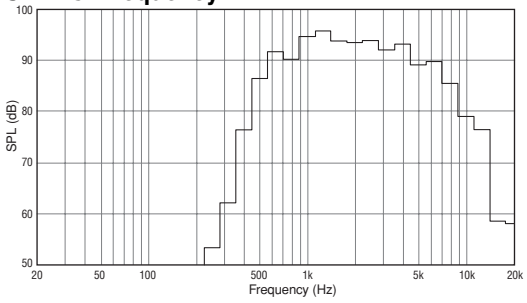
### Polar Response (Horizontal)



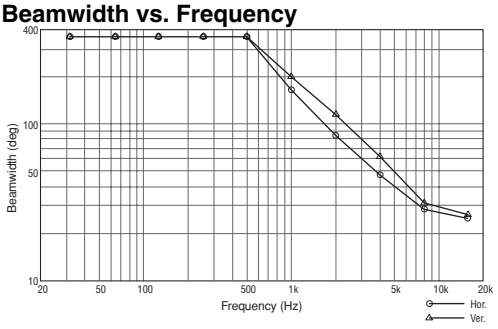

### Polar Response (Vertical)



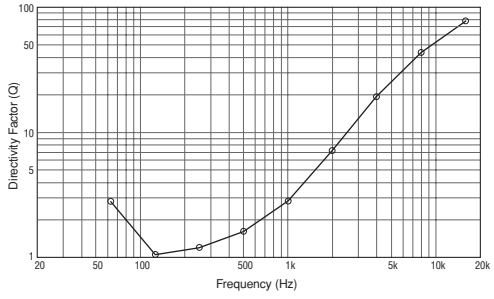

### SPL vs. Frequency




### Beamwidth vs. Frequency




### Directivity Factor vs. Frequency




## ARCHITECTURAL AND ENGINEERING SPECIFICATIONS

The speaker shall be a weatherproof horn speaker suitable for both indoor and outdoor applications. It is also designed for use in voice evacuation systems.

Rated input shall be 15 W. Input impedance shall be easily adjustable with rotary switch on the rear side of the speaker. The speaker shall include a transformer having multiple taps (3 W, 5 W, 10 W, 15 W at 100 V and 1.5 W, 2.5 W, 5 W, 7.5 W, 15 W at 70 V) adjustable.

The sensitivity at a distance of 1m with a 1W input level applied shall be 109 dB, high efficiency. The speaker shall have a frequency response of 315 – 12.5 kHz. Horizontal and vertical dispersion at -6 dB below the on-axis reference at 2 kHz shall be 85° (H) x 115° (V). The speaker shall have an operating temperature of -20°C to +55°C.

The speaker diaphragms shall be employing special heat-resistant fibres impregnated with phenolic resin to prevent the diaphragm from absorbing moisture and changing shape.

The aluminium foil bobbin shall have excellent heat dissipation properties to resist high power inputs and ensure high speaker durability.

The speaker shall have enhances excellent speech clarity. The mounting brackets and all external hardware (screws, bolts) shall be made of stainless steel.

The speaker shall have excellent weatherproofing and corrosion resistance. The speaker shall have an IEC 60529 / EN 60529 dust tight and jet-water proof rating of IP65c. The external horn flare shall be made of aluminium, which shall have more shock resistant than resin.

A fire-resistant steatite screw terminal block with thermal fuse with a blowing temperature of 84°C allows secure cable connections and bridge wiring. Internal cables shall be flame-resistant insulation. Fire Rated Cable can be directly connected to the speaker cabinet via 20 mm cable gland.

The switch is also equipped with an OFF position to prevent speaker damage resulting from incorrect impedance setting.

The speaker shall be certified according to EN 54-24 with CPD Number 0359-CPD-0109, certified according to ISO 7240-24 and in compliance with the British Standard BS 5839-8

The speaker shall be a TOA model SC-615BS.



TOA Corporation
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