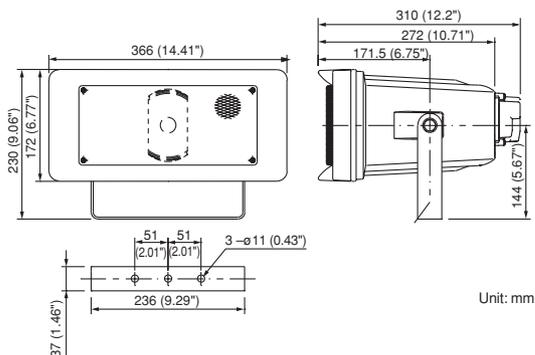


# CS-154BS

## Wide Range Speaker 15W BS/EN/ISO



### APPEARANCE AND DIMENSIONAL DIAGRAM



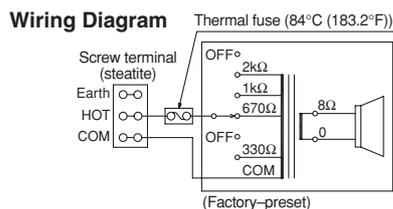
### DESCRIPTION

The outdoor-use CS-154BS incorporates a wide-range horn, making it ideal for background music or paging announcements with high-quality sound. The use of a horn in combination with a cone speaker increases acoustic conversion efficiency, producing high output. A constant-directivity horn (90° horizontal) enables uniform and clear sound dispersion over a wide area. The CS-154BS BS has a resin enclosure that is lightweight, strong and resistant to impacts, as well as able to withstand outdoor installation weather conditions. Stainless-steel brackets and screws further protect against rust and corrosion. The speakers also comply with the IP65 Standard for dust- and waterproofing. Internal speaker parts feature a special weatherproofing treatment, while weatherproof polyurethane resin paint makes the enclosures extremely resistant to ultraviolet light. EN 54-24\*: 2008 and ISO 7240-24: 2010 certified, the CS-154BS is authorized for use in fire detection systems. It is also in compliance with BS 5839-8: 2008 14.8. Speaker impedance can be externally changed during and after speaker installation with a rotary switch.

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

### FEATURES

- Wide-range speaker for voice paging/alarm, background music and tone signaling
- Constant directivity horn for uniform and clear sound dispersion
- Polyurethane resin paint and stainless steel hardware offer excellent weatherproofing, and corrosion resistance.
- IP65 standard compliant for dust- and water-proofing
- Lightweight and strong ABS resin enclosure that is impact-resistant
- Stainless steel mounting bracket for secure installation
- Ideal for schools, parking facilities, boats, factories, parks, swimming pools, etc
- Certified to EN 54-24: 2008 and ISO 7240-24: 2010 (Certificate No.:0359-CPD-0108)
- In compliance with BS 5839-8: 2008 14.8
- Ideally suited for voice alarm system application



### SPECIFICATIONS

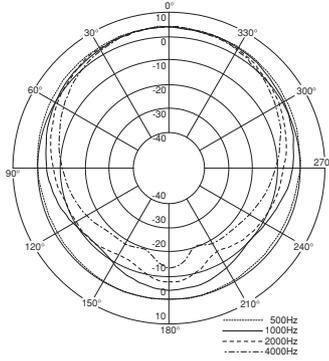
<b>Rated Noise Power:</b>	15W (100V line and 70V line)
<b>Rated Impedance:</b>	100V line: 670Ω (15W), 1kΩ (10W), 2kΩ (5W) 70V line: 330Ω (15W), 670Ω (7.5W), 1kΩ (5W), 2kΩ (2.5W)
<b>Sensitivity:</b>	97dB (1W, 1m) (500Hz – 5kHz, pink noise) 94dB (1W, 1m) (100Hz – 10kHz, pink noise) 82dB (1W, 4m) (100Hz – 10kHz, pink noise)
<b>Maximum Sound Pressure Level:</b>	104dB (6W, 1m) (100Hz – 10kHz, pink noise) 92dB (6W, 4m) (100Hz – 10kHz, pink noise)
<b>Frequency Response:</b>	150Hz – 15kHz
<b>Coverage Angle:</b>	Horizontal: 140° (500Hz), 90° (1kHz), 90° (2kHz), 100° (4kHz) Vertical: 200° (500Hz), 155° (1kHz), 90° (2kHz), 60° (4kHz)
<b>Environmental type:</b>	B (outdoor applications)
<b>Speaker Component:</b>	12cm (5") cone-type (treated for splash proof)
<b>Operating Temperature:</b>	-20°C to +55°C (-4°F to 131°F)
<b>Dust/Water Protection:</b>	IP65
<b>Speaker Mounting Method:</b>	Wall-mount
<b>Cable Gland:</b>	Size: PG 13.5 One cable gland is factory-installed, For bridge connection, one cable gland can be added*
<b>Applicable Cable Size:</b>	Outer diameter: ø8 – 12.5mm Conductor: Solid wire or 7-core wire No bridge connection: 0.8 – 10mm <sup>2</sup> (AWG 18 – AWG7) for solid wire 0.8 – 8mm <sup>2</sup> (AWG 18 – AWG8) for 7-core wire Bridge connection: 0.8 – 2.5mm <sup>2</sup> (AWG 18 – AWG13) for solid wire 0.8 – 1.5mm <sup>2</sup> (AWG 18 – AWG15) for 7-core wire
<b>Cable Connection:</b>	Screw terminal (steatite), can be bridge-connected
<b>Finish:</b>	Horn, Cover and Terminal cover: ABS resin, off-white, paint Bracket: Stainless steel Net: Aluminum, gray, paint Screw: Stainless steel
<b>Dimensions:</b>	366 (W) × 230 (H) × 310 (D) mm (14.41" × 9.06" × 12.2")
<b>Weight:</b>	3.0kg (6.61 lb)
<b>Accessory:</b>	Terminal cover × 1

\*Suppliable cable gland\* part cord and name: 525-52-011-70 Cable gland AVC PGB13.5-12 (GRY)  
Note: Never connect the 330Ω position to the 100V line.

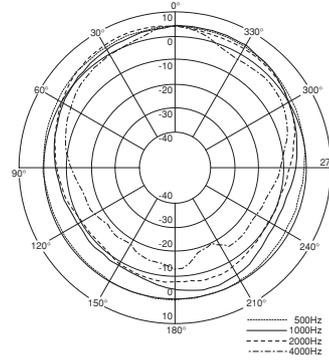


# CHARACTERISTIC DIAGRAMS based on EN 54-24 measurement conditions (Pink noise, 1W, 4m)

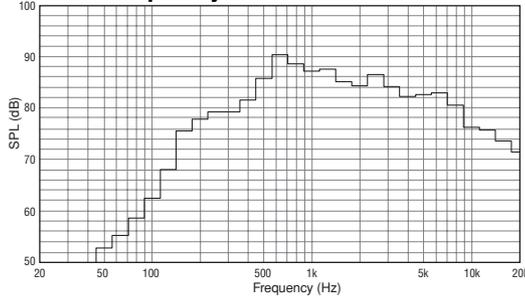
**Polar Response (Horizontal)**



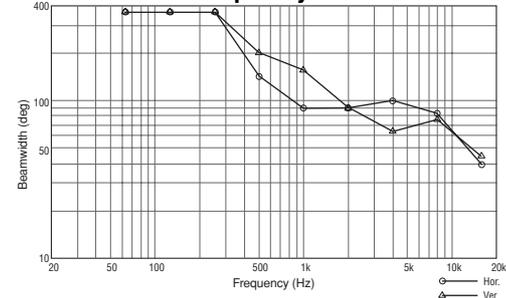
**Polar Response (Vertical)**



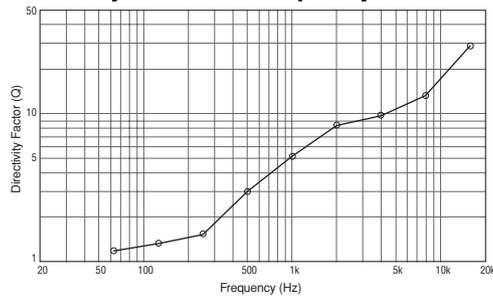
**SPL vs. Frequency**



**Beamwidth vs. Frequency**



**Directivity Factor vs. Frequency**



## ARCHITECTURAL AND ENGINEERING SPECIFICATIONS

The speaker shall be a wide-range weatherproof horn speaker suitable for paging, background music and voice evacuation for both indoor and outdoor applications. The speaker component shall be a 12 cm (4.72") cone-type speaker, treated for weather-resistance. The speaker shall have an IEC 60529 / EN 60529 dust tight and jet-water proof rating of IP65c.

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 (5 W, 10 W, 15 W at 100 V and 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 97 dB. The speaker shall have a frequency response of 150 – 15 kHz. Horizontal and vertical dispersion at -6 dB below the on-axis reference at 1 kHz shall be 90° (H) × 155° (V). The speaker shall have an operating temperature of -20°C to +55°C. The speaker enclosure shall be constructed of ABS resin and coated

with polyurethane resin paint to resist long-term exposure to ultraviolet light. The grille shall be constructed of protective aluminium net to prevent damage, grey paint. All mounting hardware, including screws and bolts, shall be stainless steel, which protects the speaker from corrosion. Dimensions shall be 366(W) × 230(H) × 310(D) mm (14.41" × 9.06" × 12.2"). Weight shall be 3.0 kg (6.61 lb.). A fire-resistant statite screw terminal block allows secure cable connections and bridge wiring with thermal fuse. Internal cables shall be flame-resistant insulation. Fire Rated Cable can be directly connected to the speaker cabinet via 20mm cable gland.

The speaker shall be certified according to EN 54-24 with CPD Number 0359-CPD-0108, certified according to ISO 7240-24 and in compliance with the British Standard BS 5839-8

The speaker shall be a TOA model CS-154BS



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