

# BS-678BSB / BS-678BSW

## Wall Mount Speaker 6W EN/ISO/BS



### DESCRIPTION

The BS-678BSB/678BSW is a single cone type speaker with a wooden cabinet that has a stylish, compact and unobtrusive design, and that delivers highly cost-effective performance. The speaker can be quickly and easily installed in either a horizontal or a vertical orientation. The 16 cm (6") cone speaker unit ensures high-quality sound, making the BS-678BSB/678BSW ideal for BGM and announcement applications. The BS-678BSB/678BSW is EN 54-24\* and ISO 7240-24 certified and is therefore authorized for use in conjunction with fire detection systems. It is also in compliance with BS 5839-8: 2008 14.8.

Two steatite screw terminal blocks (1 cable to 1 connection type) allow bridge connection. The selectable input impedance can be easily adjusted by changing the tap position of the unit's transformer. Its structure permits direct wall installation with screws, making the speaker unit resistant to falling even if outward force is applied to it.

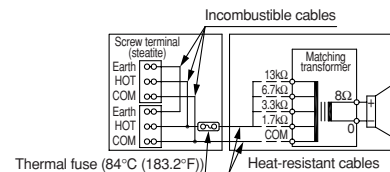
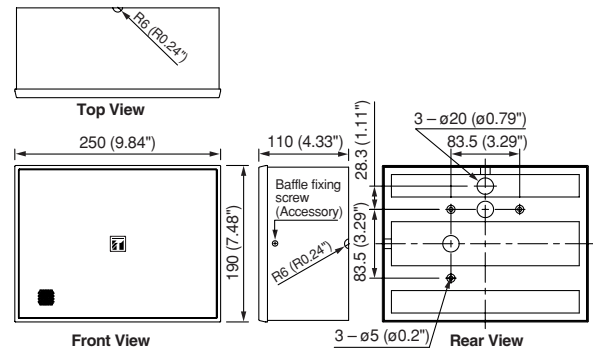
\*EN 54-24: Loudspeaker for voice alarm systems for fire detection and fire alarm systems.

### FEATURES

- Stylish, compact and unobtrusive design
- Quick and easy installation
- High cost-effectiveness
- Horizontal / vertical installation
- Two steatite screw terminal blocks and thermal fuse
- Certified to EN 54-24 and ISO 7230-24 (Certificate No.: 0359-CPD-0103)
- In compliance with BS 5839-8: 2008 14.8
- Ideally suited for voice alarm system applications



### APPEARANCE AND DIMENSIONAL DIAGRAM



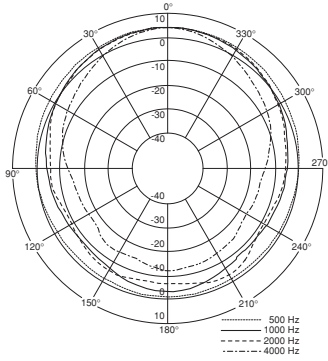
Wiring diagram

### SPECIFICATIONS

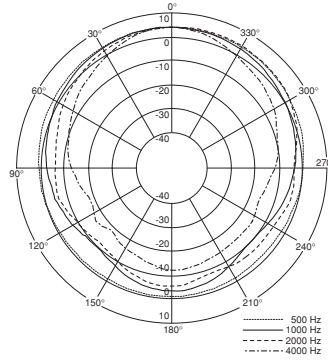
<b>Rated Noise Power:</b>	6 W (100 V line), 3 W (70 V line)
<b>Rated Impedance:</b>	100 V line: 1.7k Ω (6 W), 3.3k Ω (3 W), 6.7k Ω (1.5 W), 13k Ω (0.8 W) 70 V line: 1.7k Ω (3 W), 3.3k Ω (1.5 W), 6.7k Ω (0.8 W), 13k Ω (0.4 W)
<b>Sensitivity:</b>	94 dB (1 W, 1 m) (500 – 5,000 Hz, pink noise) 92 dB (1 W, 1 m) (100 – 10,000 Hz, pink noise) 80 dB (1 W, 4 m) (100 – 10,000 Hz, pink noise)
<b>Maximum Sound Pressure Level:</b>	98 dB (6 W, 1 m) (100 – 10,000 Hz, pink noise) 86 dB (6 W, 4 m) (100 – 10,000 Hz, pink noise)
<b>Frequency Response:</b>	150 – 18,000 Hz
<b>Coverage Angle:</b>	Horizontal: 360° (500 Hz), 135° (1,000 Hz), 130° (2,000 Hz), 70° (4,000 Hz) Vertical: 330° (500 Hz), 160° (1,000 Hz), 135° (2,000 Hz), 70° (4,000 Hz)
<b>Environmental Type:</b>	A (indoor applications)
<b>Speaker Component:</b>	16 cm (6") cone-type
<b>Operating Temperature:</b>	-10° C to +50° C (14° F to 122° F)
<b>Speaker Mounting Method:</b>	Wall-mount
<b>Applicable Cable:</b>	Conductor: Solid wire or 7-core wire 0.8 – 7 mm <sup>2</sup> (AWG 18 – AWG 9) for solid wire 0.8 – 4 mm <sup>2</sup> (AWG 18 – AWG 11) for 7-core wire
<b>Connection:</b>	Screw connector (steatite terminal × 2) bridging
<b>Finish:</b>	<b>BS-678BSB:</b> Baffle: HIPS resin, black (RAL 9011 or equivalent colour) Cabinet: Particle board with pvc sheet, black (RAL 9011 or equivalent colour) Grille: Surface-treated steel plate net, black (RAL 9011 or equivalent colour), paint <b>BS-678BSW:</b> Baffle: HIPS resin, white (RAL 9010 or equivalent colour) Cabinet: Particle board with pvc sheet, white (RAL 9010 or equivalent colour) Grille: Surface-treated steel plate net, white (RAL 9010 or equivalent colour), paint
<b>Dimensions:</b>	250 (W) × 190 (H) × 110 (D) mm (9.84" × 7.48" × 4.33")
<b>Weight:</b>	1.7 kg (3.75 lb)
<b>Accessory:</b>	Speaker mounting screw × 2, Baffle fitting screw × 2

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

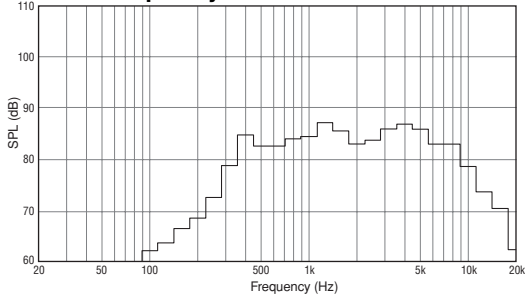
**Polar Response (Horizontal)**



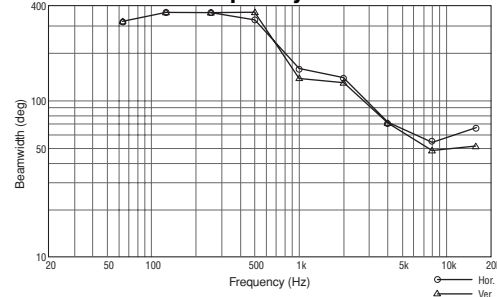
**Polar Response (Vertical)**



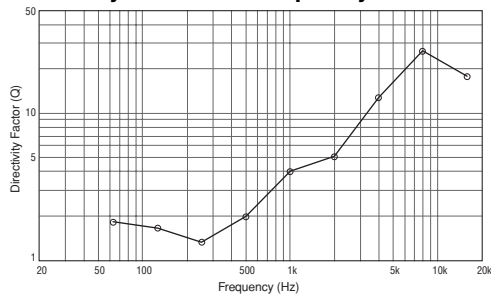
**SPL vs. Frequency**



**Beamwidth vs. Frequency**



**Directivity Factor vs. Frequency**



## ARCHITECTURAL AND ENGINEERING SPECIFICATIONS

The speaker shall be a 16 cm (6") cone-type speaker suitable for wall mounting, thermal fuse with a blowing temperature of 84°C, internal cables with insulation. Cable connection shall be by means of a screw connector (2 × fire-resistant terminal blocks made of steatite ), with bridging allowable. The speaker shall be certified according to EN 54-24 with CPD number 0359-CPD-0103, certified according to ISO 7240-24, complies with BS 5839-8.

The speaker shall include a transformer having multiple taps (0.8 W, 1.5 W, 3 W, 6 W) at 100 V adjustable. The output sound pressure level at a distance of 1 m with a 1 W input level applied

shall be 94 dB SPL (500 Hz to 5,000 Hz, pink noise). The speaker shall have a frequency response of 150 – 20,000 Hz. Ingress Protection, IP21C.

The speaker grill shall be constructed of steel and the cabinet shall be constructed of wood. The speaker shall be available in black (RAL9011) or white (RAL9010) colour. The unit shall have dimensions of 250 (W) × 190 (H) × 110 (D) mm, and a weight of 1.7 kg. Fire Rated Cable can be directly connected to the speaker via 20 mm cable glands drilled directly into the wooden cabinet.