

## EN54 HORN SPEAKER

- 10W 100V LOUDSPEAKER
- HIGH SOUND PRESSURE LEVEL
- LOW DISTORTION SOUND
- U-BRACKET MOUNTING
- ROBUST ABS PLASTIC HOUSING
- WEATHERPROOF TO IP66
- UL94 V-0 COMPLIANT
- FULLY CERTIFIED TO EN54-24



### OVERVIEW

The SPHO-10W-EN54 is a 10W 100V horn loudspeaker which gives a high sound pressure level for internal and external applications, and which is certified to EN54-24. The speaker is fitted with a 100V transformer which has four power adjustment tapings of 10W, 5W, 2.5W, and 1.25W, plus a low-impedance setting (20 Ohms). The power adjustment is easily accessed at the rear of the speaker.

The SPHO-10W-EN54 has a robust impact resistant ABS housing, which is sealed to the IP66 environmental standard. Thus the speaker is sealed against the ingress of dust, and is sealed against high pressure water jets for sustained weather resistance in industrial applications. In addition, the body meets the UL94 V-0 flammability standard. The speaker is coloured to match RAL7035 'Light Grey'.

Mounting of the speaker is provided using a stainless-steel 'U' bracket, which provides a number of flexible mounting options.

The 100V loudspeaker line connection is provided via a one metre two core LSZH cable, which is terminated with an IP65 ingress protection rated connection box. In order to provide increased fire protection, the speaker is also fitted with a 2-pin ceramic block and a thermal fuse.

There is also a strap-on mast bracket available as an accessory, part number SPAC-MB-80. This mast bracket is suitable for use with masts of up to 200mm diameter.

Enhanced Acoustic Simulator for Engineers (EASE) data for this loudspeaker is available on request.

**TECHNICAL DATA**

Power Tappings	10W / 5W / 2.5W / 1.25W / 20 Ohms
Transformer Impedance	1000 / 2000 / 4000 / 8000 Ohms
Loudspeaker Impedance	8 Ohms
Frequency Range	569 — 7,000 Hz
Frequency Response	370 — 13,600 Hz
SPL 1W / 1m, peak	106.7 dB
SPL 1W / 4m, peak	94.7 dB
SPL Pmax / 4m, peak	104.7 dB
SPL, EN 54-24 rated noise power / 4m	91 dB
Sensitivity EN 54-24, 1W / 4m	83 dB
Sensitivity IEC 60268-5, 1W / 1m	74.5 dB
Dispersion (-6dB, 500Hz) Horizontal / Vertical Plane*	360° / 360°
Dispersion (-6dB, 1KHz) Horizontal / Vertical Plane*	360° / 360°
Dispersion (-6dB, 2KHz) Horizontal / Vertical Plane*	105° / 105°
Dispersion (-6dB, 4KHz) Horizontal / Vertical Plane*	50° / 50°
Temperature range	-25 / +75°C
Dimensions	142 x 208 mm
Weight (net)	1.81 kg
Colour	RAL7035 'Light Grey'
Connector	2-pin ceramic block in external enclosure
Mounting	'U' Universal mounting bracket
Verified IP Rating / EN 54 Speaker Type & Minimum Rating	IP66 / Type B (Outdoors), minimum rating IP33C
Maximum cable cross section	8mm <sup>2</sup>
Maximum cable cross section loop	2x2mm <sup>2</sup>
Packing Unit	8

**\* EN 54-24 Definitions for Speaker Reference Axis, Point, Plane + Horizontal & Vertical Planes:**

- Reference Axis: Axis is through the centre of the speaker grille surface and is perpendicular to the grille surface.
- Reference Plane: Plane is across the front of the speaker grille surface and is perpendicular to the reference axis.
- Horizontal Plane: Plane contains the reference axis and is perpendicular to the reference plane.
- Vertical Plane: Plane contains the reference axis and is perpendicular to the reference plane.
- Reference Point: Point is at the centre of the front of the speaker grille surface where all the above intersect.

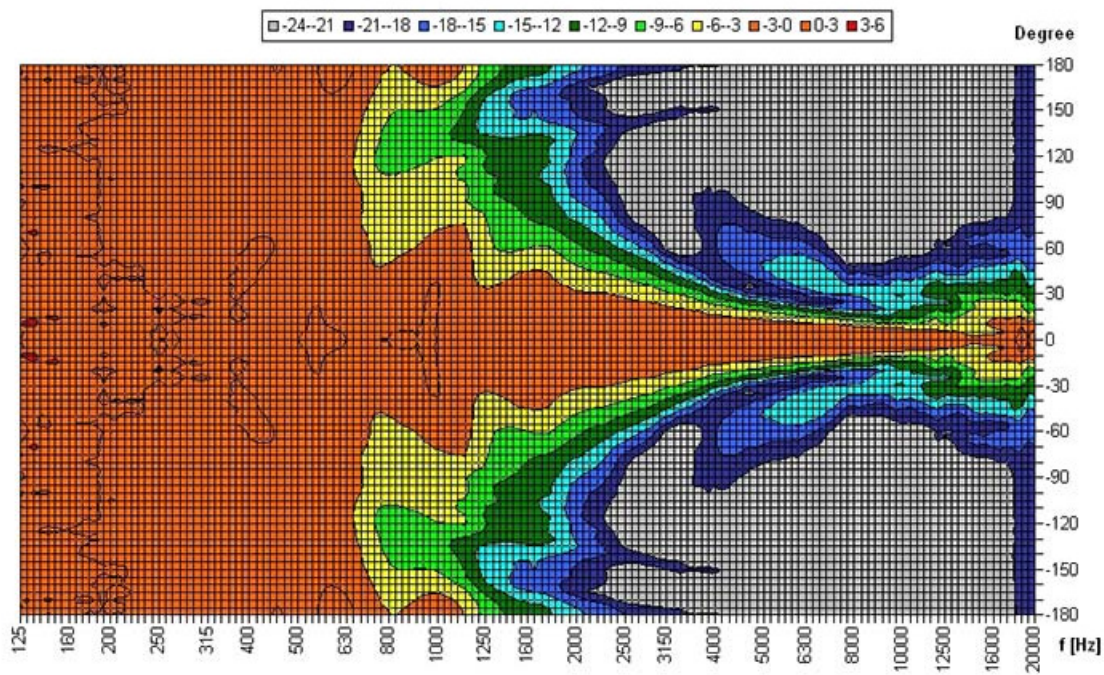
All measurements in the table above relate to the Reference Axis unless otherwise stated

**EN 54-24 Annex A, Measurement Environments:**

Flush-mounted loudspeakers e.g. ceiling loudspeakers, shall be measured under half-space free field conditions.

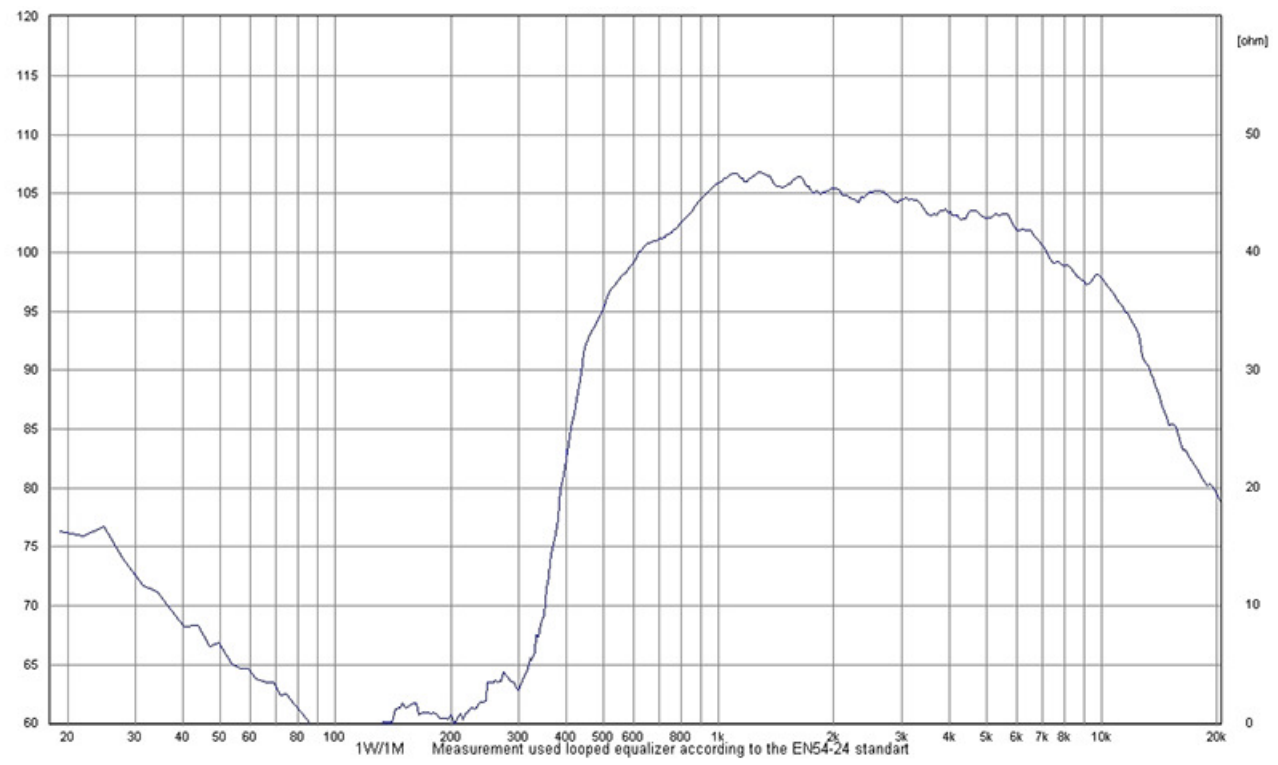
All other speakers shall be measured under free-field conditions or in a ground plane arrangement that simulates a free-field condition.

POLAR DIAGRAM

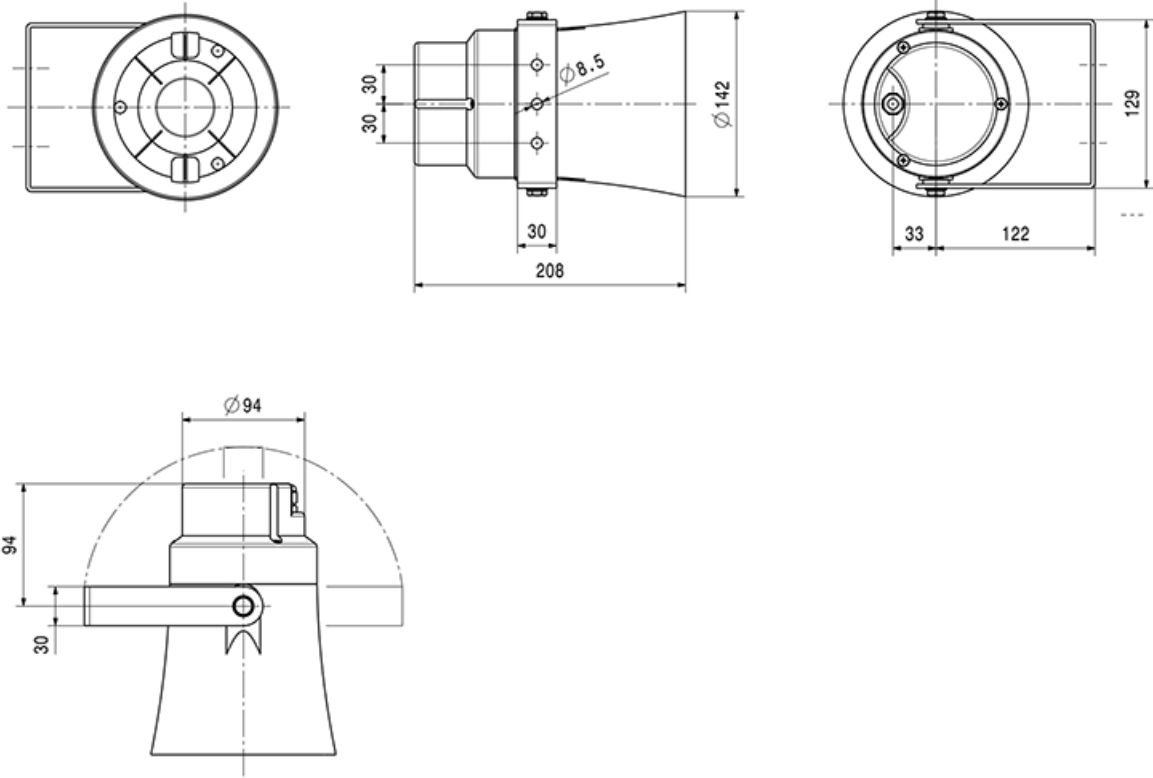


Parameters: Cyclic Move: 0° ; Symmetry: average sym ; Freq.Smooth: 1/3 Oct ; Ang.Resol.: 5° ; Rel. to: 0° Axis 0°

FREQUENCY RESPONSE DIAGRAM



**DIMENSIONAL DIAGRAM**



Measurements according to DIN IEC 268-5

RoHS compliant (2011/65/EU & 2015/863/EU)



This equipment is designed and manufactured to conform to the following EU Directives:  
 Low Voltage: 2014/35/EU  
 Restriction of Hazardous Substances (RoHS): 2011/65/EU & 2015/863/EU

Made for:

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**Assessed to ISO 9001  
 LPCB Cert No: C1043**