

# **EN54 CEILING SPEAKER**

- 20W 100V LOUDSPEAKER
- SIZE 8" (200MM)
- QUICK MOUNT
- SHOCK-RESISTANT HOUSING
- HIGH EFFICIENCY
- EXCELLENT SOUND QUALITY
- FULLY CERTIFIED TO EN 54-24



#### **OVERVIEW**

The SPCF-20W-80-EN54 is a 20W 100V flush mount ceiling loudspeaker, which has a 8" (200mm) full-range chassis providing excellent sound quality with speech and background music, and which is certified to EN 54-24. The speaker is fitted with a 100V transformer which has three power adjustment tappings of 20W, 15W, 10W and 5W.

The SPCF-20W-80-EN54 has a powder coated metal chassis and grille, with the high quality finish giving good long-term protection and resistance to corrosion. The speaker is supplied with a rear fire dome, and its enclosure is ingress protection rated to IP21C. As standard the speaker is coloured to match RAL9010 'Pure White', however the speakers can be supplied in any four-digit RAL or NCS colour, as a special order.

Quick and easy ceiling mounting is provided through the use of spring clamps, with a possible ceiling thickness of between 6mm and 45mm, and an inner ring attachment prevents the grille from falling. The 100V loudspeaker line cabling is connected by means of a two-pin ceramic block, with rubber grommets being provided for the cable connections. For additional reliability, a thermal fuse is provided and the speaker chassis is damp-resistant.

Please note that although thin ceilings can be used as a mounting surface, it should be ensured that the ceiling thickness and strength are appropriate to the weight of the speaker, and to the thickness and weight of the 100V line cable.

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





PRODUCT ATTRIBUTES	
Power Tappings	20W / 15W / 10W / 5W
Impedance (100V)	500 / 667 / 1000 / 2000 Ohms
Speaker Impedance	8 Ohms
Frequency Range	188 – 16,100 Hz
Frequency Response	103 – 24,000 Hz
SPL 1W / 1m, peak	94.1 dB
SPL 1W / 4m, peak	82.1 dB
SPL Pmax / 4m, peak	95.1 dB
SPL, EN 54-24 rated noise power / 4m	91.0 dB
Sensitivity EN 54-24, 1W / 4m	78.0 dB
Sensitivity IEC 60268-5, 1W / 1m	90.6 dB
Dispersion (-6dB, 500Hz) Horizontal / Vertical Plane*	180° / 180°
Dispersion (-6dB, 1KHz) Horizontal / Vertical Plane*	180° / 180°
Dispersion (-6dB, 2KHz) Horizontal / Vertical Plane*	100° / 100°
Dispersion (-6dB, 4KHz) Horizontal / Vertical Plane*	55° / 55°
Temperature Range	-10 / +55 °C
Dimensions	267 x 190 mm
Weight (net)	3.40 kg
Colour	RAL 9010 'Pure White'
Connector	2-pin ceramic block
Mounting	Quick fit mounting
Ceiling Cut-out	243 mm
Maximum cable cross section	8mm²
Maximum cable cross section loop	2 x 2mm²
EN 54-24, Speaker Type & Minimum IP Rating	Type A (Indoors), minimum IP rating IP21C
Packing Unit	8

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

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

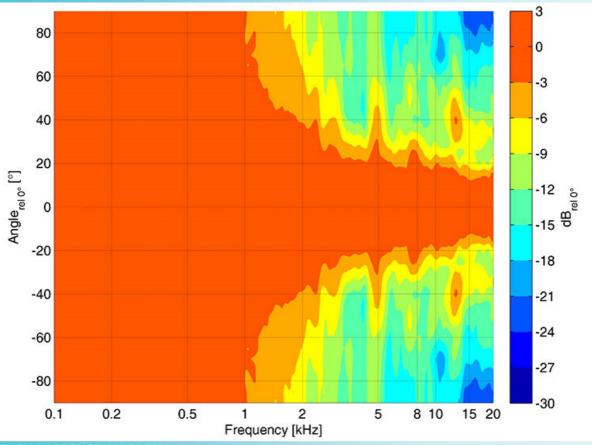
All measurements in the table above relate to the Reference Axis unless otherwise stated

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

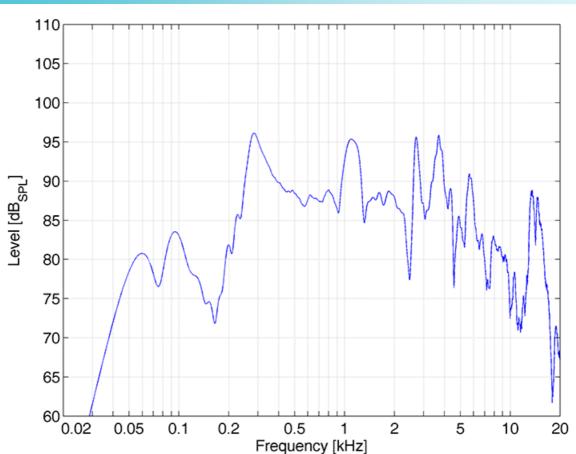
Flush-mounted loudspeakers e.g. ceiling loudspeakers, shall be measured under half-space free field conditions. All other speakers shall be measured under free-field conditions or in a ground plane arrangement that simulates a free-field condition.



# POLAR DIAGRAM

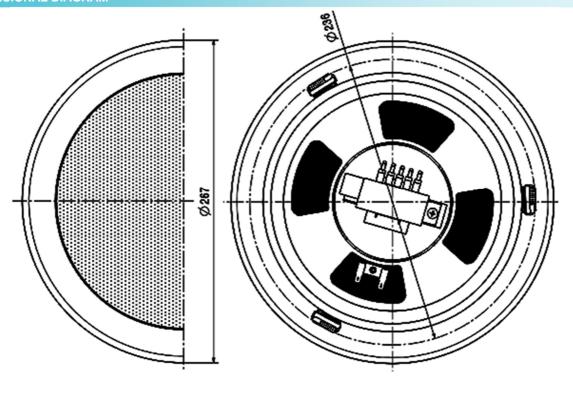


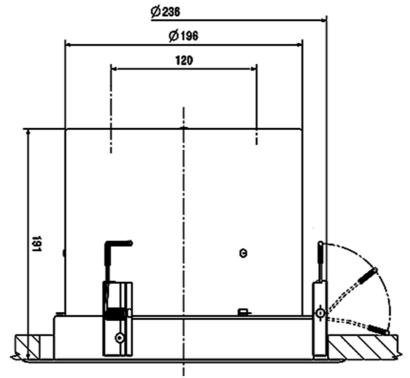
# FREQUENCY RESPONSE DIAGRAM





# **DIMENSIONAL DIAGRAM**







This equipment is designed and manufactured to conform to the following EU Directives:

Electromagnetic Compatibility (EMC): 2014/30/EU Low Voltage: 2014/35/EU

Restriction of Hazardous Substances (RoHS): 2011/65/EU & 2015/863/EU

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