

LH1-EC15-IN Horn loudspeaker 15W, Elliptical, ABS



The LH1-EC15-IN is a high-efficiency horn loudspeaker providing excellent speech reproduction and sound distribution for a wide scope of outdoor applications. It is ideal for sports grounds, places of worship, parks, exhibitions, factories and open meeting areas.

System overview

The LH1-EC15-IN is an elliptical horn loudspeaker and its horn and back-cover are made of ABS material. The speaker has a line matching transformer to connect to a 100 V output from an amplifier. The loudspeaker has power tapplings at full power, half power and quarter power to connect at different power levels.

Functions

The LH1-EC15-IN model horn speaker is for direct connection to a 100 V line output and is finished in light grey (RAL 7035) color. The horn speaker is water and dust protected. The horn loudspeaker includes a 100 V transformer with taps on the primary winding to allow different power tapplings. Nominal full-power, half-power or quarter-power radiation (in 3 dB steps) can easily be selected by connecting the amplifier output to the appropriate tapping. A two meter four-core cable is fitted to the horn for connectivity. Each core is a different color, and is connected to one of the primary tapplings on the transformer. Color code identification is provided on the product label.

The horn loudspeaker is supplied complete with sturdy adjustable mounting brackets, allowing the sound beam to be accurately directed.

- ▶ Excellent speech reproduction
- ▶ Water- and dust-protected to IP66
- ▶ Easy to install
- ▶ Simple power tapping through color code

Regulatory information

All Bosch loudspeakers are designed to withstand operating at their rated power for 100 hours in accordance with IEC 60268-1 and IEC 60268-5 Power Handling Capacity (PHC) standards. Bosch has also developed the Simulated Acoustical Feedback Exposure (SAFE) test to demonstrate that the speakers can withstand two times their rated power for short durations. This ensures extra reliability under extreme conditions, leading to greater customer satisfaction, longer operating life, and much less chance of failure or performance deterioration.

- Lab test for water and dust protection acc. to IEC 60529 IP66
- Lab test for wind force test acc. to NEM6702:2007 + A1:2008 Bft 11 (static condition)
- Lab test for climatic tests acc. to IEC 60068-x-xx

Installation/configuration notes

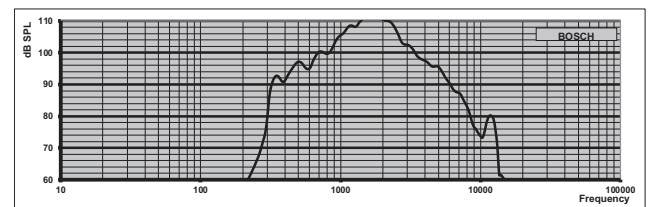


Fig. 1: Frequency response

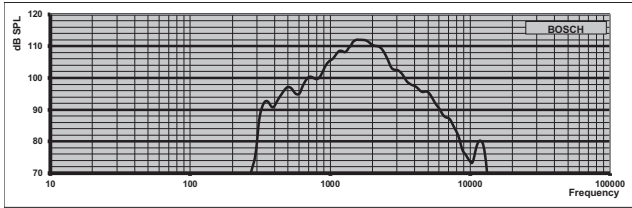


Fig. 2: Frequency response

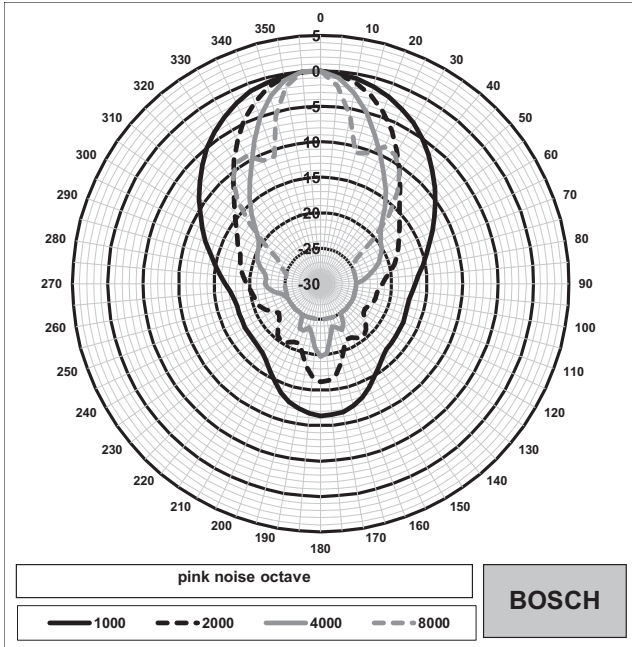


Fig. 3: Normalized horizontal polar plot

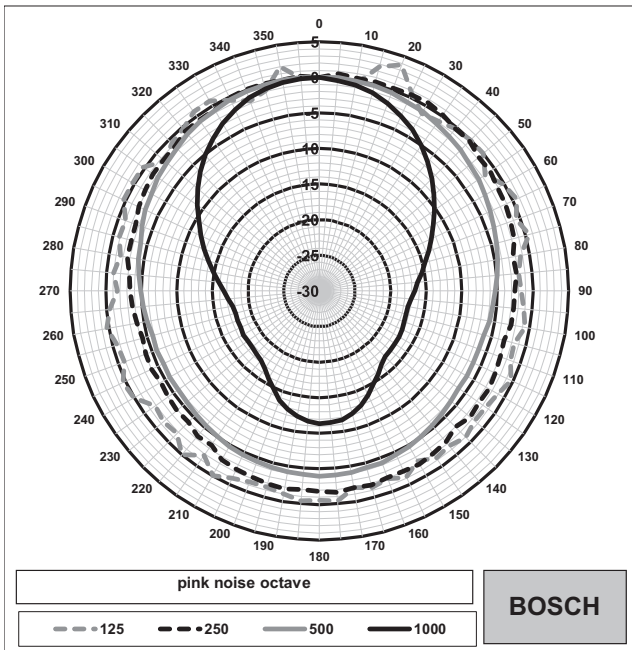


Fig. 4: Normalized horizontal polar plot

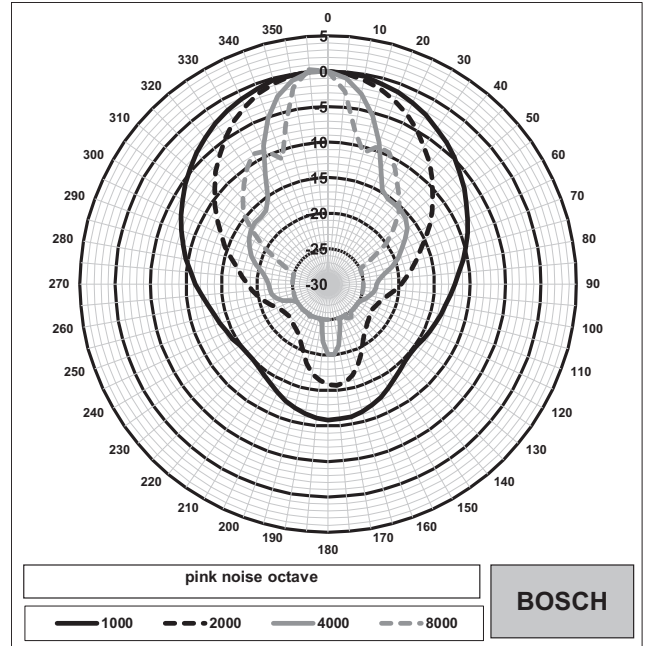


Fig. 5: Normalized vertical polar plot

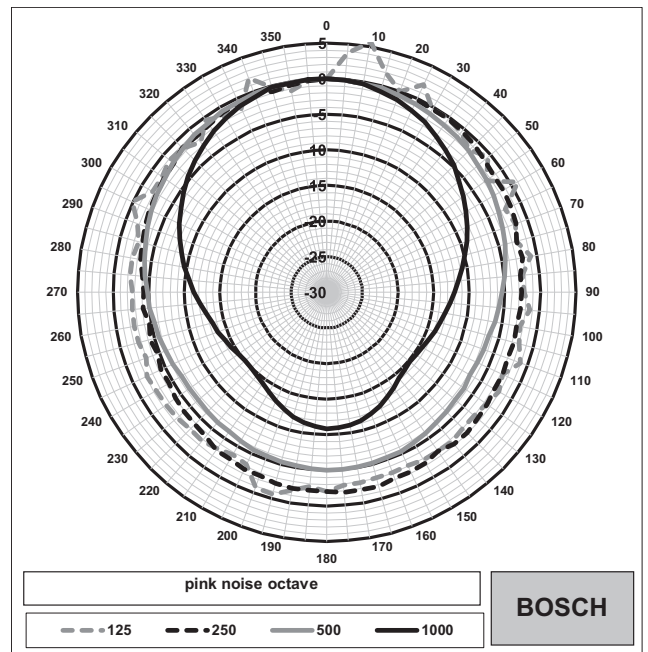


Fig. 6: Normalized vertical polar plot

Octave band sensitivity*

	Octave SPL 1W/1m	Total octave SPL 1W/1m	Total octave SPL Pmax/1m
125 Hz	50.8	-	-
250 Hz	85.0	-	-
500 Hz	96.3	-	-
1000 Hz	106.6	-	-

2000 Hz	110.3	-	-
4000 Hz	99.4	-	-
8000 Hz	87.2	-	-
A-weighted	-	103.1	113.0
Lin-weighted	-	102.2	112.8

(1/1)th octave band sensitivity

Octave band opening angles

	Horizontal	Vertical	
125 Hz	360	360	
250 Hz	360	360	
500 Hz	210	284	
1000 Hz	110	82	
2000 Hz	73	53	
4000 Hz	37	38	
8000 Hz	22	25	

Acoustical performance specified per octave.* (all measurements are done with a pink noise signal; the values are in dB SPL).

Parts included

Quantity	Component
1	LH1-EC15-IN Horn loudspeaker 15W, Elliptical, ABS
1	Manual

Technical specifications

Electrical

Maximum power	22.5 W
Rated power (PHC)	15 W (15 W / 7.5 W / 3.75 W)
Sound pressure level at 1 W (1 kHz, 1 m)	103.1 dB

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Effective frequency range (-10 dB)	500 Hz to 3500 Hz
Opening angle at 1 kHz (-6 dB)	Elliptical: 110 (H) / 82 (V)
Rated voltage	100 V
Rated impedance	666.7 Ohm

Mechanical

Dimensions (H x W x D)	Elliptical: 285 x 280 x 285 mm
Weight	Elliptical: 1.8 kg

Environmental

Operating temperature	-5 °C to +55 °C
Storage temperature	-40 °C to +70 °C

Ordering information

LH1-EC15-IN Horn loudspeaker 15W, Elliptical, ABS
 Horn loudspeaker 15 W, elliptical, ABS, water and dust protected IP66, light gray RAL 7035.
 Order number **LH1-EC15-IN | F.01U.315.104**