

LH1-UC30E Horn loudspeaker, 30W, music



The Bosch LH1-UC30E Music Horn Loudspeaker features a two-way system, resulting in an extended frequency range and high sensitivity which makes it ideal for high quality speech and music reproduction.

Functions

The rectangular horn features a unique combination of a re-entrant horn with two transducers, one for low- and the other for high frequencies, resulting in breathtaking sound clarity.

The horn is weather protected and can be used in areas with high humidity. It is therefore suitable for outdoor applications such as sport grounds, sports stadiums, leisure parks, exhibition areas and passenger terminals, as well as for indoor public address.

The ABS horn loudspeaker and aluminum bracket are finished in light grey (RAL 7035).

The LH1-UC30E is designed for use in voice alarm systems and is EN 54-24 certified and compliant with BS 5839-8 and EN 60849.

The horn loudspeaker has built-in protection to ensure that, in the event of a fire, damage to the loudspeaker does not result in failure of the circuit to which it is connected. In this way, system integrity is maintained, ensuring loudspeakers in other areas can still be used to inform people of the situation. The horn loudspeaker has ceramic terminal blocks, thermal fuse and heat resistant high temperature wiring.

- ▶ Excellent speech and music reproduction
- ▶ Two-way system
- ▶ Attractive ABS housing
- ▶ Provisions for internal mounting of the optional line / loudspeaker supervision board
- ▶ EN 54-24 certified

It has provision for internal mounting of the optional line / loudspeaker supervision boards.

Regulatory information

All Bosch loudspeakers are designed to withstand operating at their rated power for 100 hours in accordance with IEC 268-5 Power Handling Capacity (PHC) standards. Bosch has also developed the Simulated Acoustical Feedback Exposure (SAFE) test to demonstrate that they can withstand two times their rated power for short durations. This ensures extra reliability under extreme conditions, leading to higher customer satisfaction, longer operating life, and much less chance of failure or performance deterioration.

Safety	acc. to EN 60065
Emergency	acc. to EN 54-24 / BS 5839-8 / EN 60849
Self-extinguishing ABS	acc. to UL 94 V 0
Water and dust protection	acc. IP34C as verified for EN54-24 by CNBOP
Wind-force	Bft 11

Installation/configuration notes

The horn loudspeaker includes a transformer for both 70 V and 100 V with taps on the primary winding for different power settings.

Nominal full-power, half-power, quarter-power or eight-power radiation (i.e. in 3 dB steps) can easily be selected by connecting to the appropriate tap. The connection cable is fed out through an ABS cable gland (PG13.5) in the rear cover. For loop through connection, the rear cover is fitted with a second hole (covered as standard supplied) In the rear cover, a provision for inside mounting of the optional line/ loudspeaker supervision board is available.

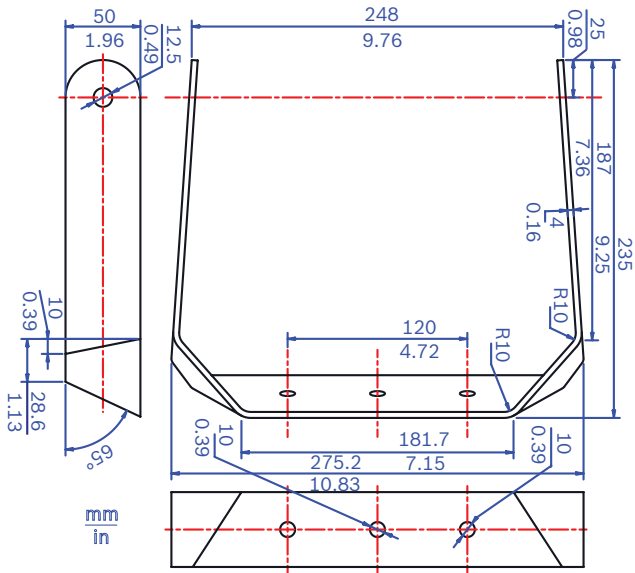


Fig. 1: Bracket dimensions

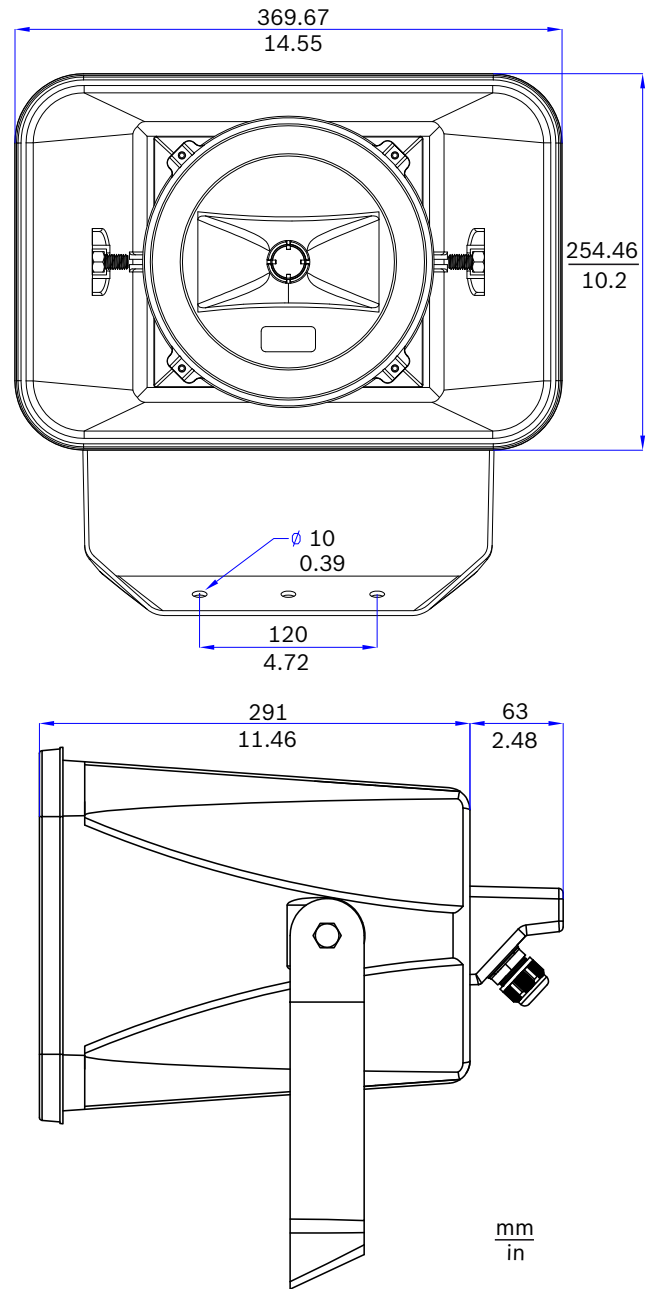


Fig. 2: Dimensions

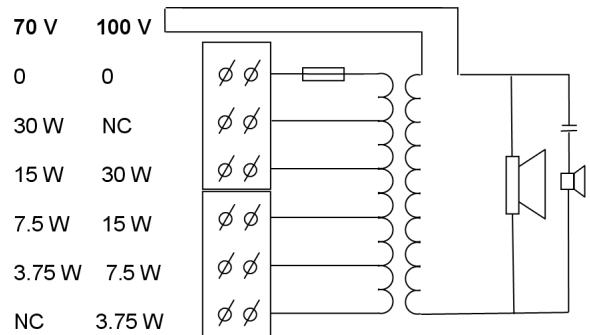


Fig. 3: Circuit diagram

Parts included

Quantity	Component
1	LH1-UC30E Music Horn loudspeaker
1	PG 13.5 cable gland (fitted)

Technical specifications

Electrical*	
Maximum power (W)	45 W
Rated power (W)	30 W
Transformer taps 70 V line (W)	3.75 W; 7.5 W; 15 W; 30 W
Transformer taps 100 V line (W)	3.75 W; 7.5 W; 15 W; 30 W
Sensitivity (1 W, 1 m, 1 kHz octave) (dB)	100 dB
Sensitivity (1 W, 4 m, 100 Hz - 10 kHz) (dB), acc. EN54-24	85 dB
Sound pressure level (rated power, 1 m, 1 kHz octave) (dB)	114 dB
Sound pressure level (rated power, 4 m, 100 Hz - 10 kHz) (dB), acc. EN54-24	100 dB
Frequency range (-10 dB) (Hz)	210 Hz – 20,000 Hz
Coverage angle HxV (-6 dB, 500 Hz) (°)	141° x 180°
Coverage angle HxV (-6 dB, 1 kHz) (°)	68° x 100°
Coverage angle HxV (-6 dB, 2 kHz) (°)	60° x 110°
Coverage angle HxV (-6 dB, 4 kHz) (°)	68° x 120°
Rated input voltage (V)	70 V; 100 V
Rated impedance 70 V line (Ω)	1333 Ω @3.75 W
	667 Ω @7.5 W
	333 Ω @15 W
	167 Ω @30 W
Rated impedance 100 V line (Ω)	2667 Ω @3.75 W
	1333 Ω @7.5 W
	667 Ω @15 W

333 Ω @30 W

*Technical performance data acc. to IEC 60268-5

Note:

- The specification data was measured in an anechoic chamber, free-field.
- The reference plane is on the grille surface and perpendicular to the reference axis.
- The reference axis is perpendicular to the center point of the front grille surface.
- The horizontal plane contains the reference axis and is perpendicular to the reference plane.

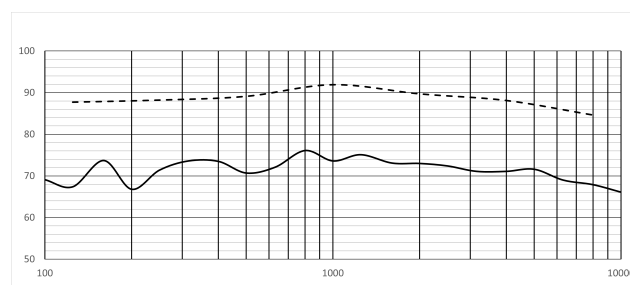


Fig. 4: Frequency response graph (– 1/3rd octave dB SPL @1 W(100 Hz – 10 kHz), 4 m; -- 1/1th octave dB SPL @1 W(100 Hz – 10 kHz), 1 m)

(1/3) rd octave band	dB SPL at 4 m
100	69.1
125	67.4
160	73.7
200	66.8
250	71.4
315	73.6
400	73.5
500	70.7
630	72.1
800	76.1
1000	73.6
1250	75.1
1600	73.1
2000	73
2500	72.4

(1/3) rd octave band	dB SPL at 4 m
3150	71.1
4000	71.1
5000	71.6
6300	69
8000	67.9
10000	66.1

(1/1) th octave band	dB SPL at 1 m
125	87.7
250	88.2
500	89.1
1000	91.9
2000	89.7
4000	88.1
8000	84.6

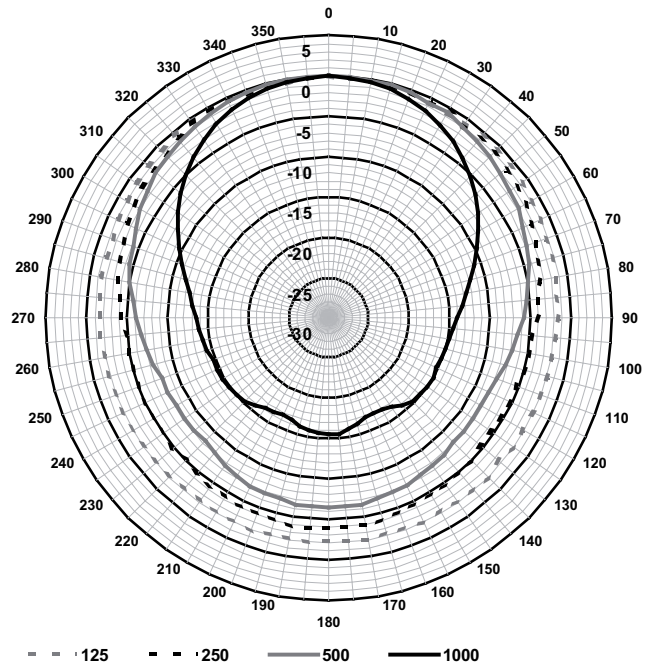


Fig. 5: Vertical polar diagram (pink noise octave, normalized @0° axis) (125-1000)

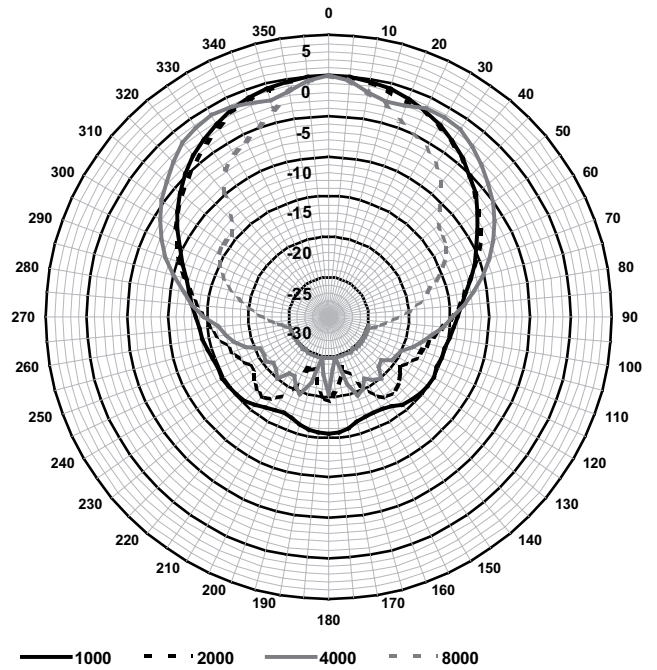


Fig. 6: Vertical polar diagram (pink noise octave, normalized @0° axis) (1000-8000)

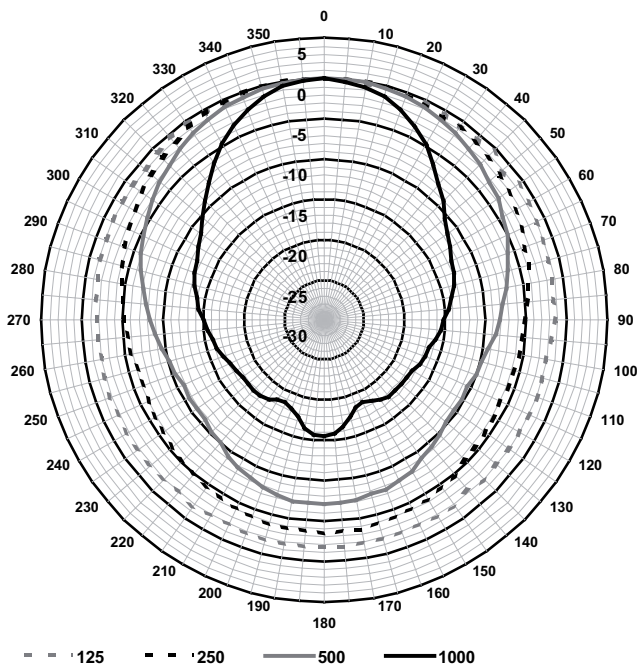


Fig. 7: Horizontal polar diagram (pink noise octave, normalized @0° axis) (125-1000)

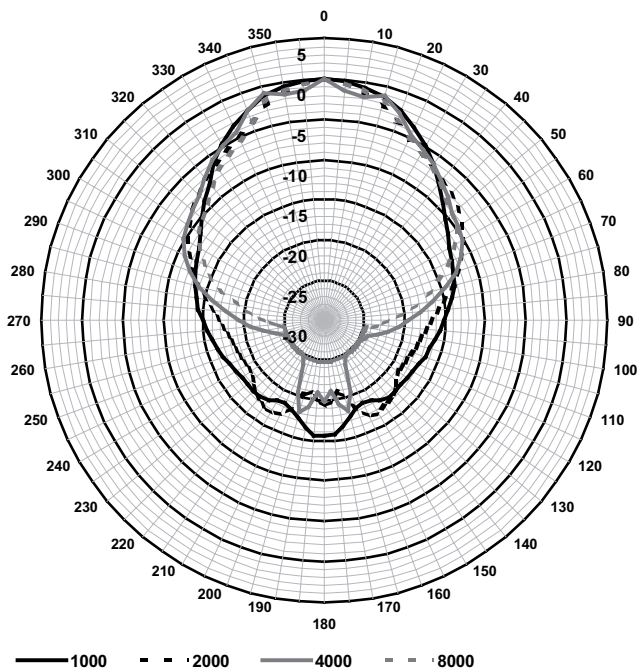



Fig. 8: Horizontal polar diagram (pink noise octave, normalized @0° axis) (1000-8000)

Mechanical

Dimensions (H x W x D) (mm)	255 mm x 370 mm x 354 mm
Dimensions (H x W x D) (in)	10.04 in x 14.56 in x 13.93 in
Weight (kg)	5.50 kg
Weight (lb)	12.45 lb

Color (RAL)	RAL 7035 Light gray
Material (horn/bracket)	Aluminum; Plastic (ABS)
Cable diameter (mm)	6 mm - 12 mm
Cable diameter (in)	0.24 in - 0.47 in

Environmental	
Operating temperature (°C)	-25 °C – 55 °C
Operating temperature (°F)	-13 °F – 131 °F
Storage temperature (°C)	-40 °C – 70 °C
Storage temperature (°F)	-40 °F – 158 °F
Transportation temperature (°C)	-40 °C – 70 °C
Transportation temperature (°F)	-40 °F – 158 °F
Operating relative humidity, non-condensing (%)	0% – 95%

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Bosch Security Systems BV Torenallee 49, 5617 BA Eindhoven, the Netherlands 13 1438-CPR-0252
EN 54-24:2008 Loudspeaker for voice alarm systems for fire detection and fire alarm systems for buildings Music Horn Loudspeaker 30 W LH1-UC30E Type B DoP: LP062922v1

Ordering information

LH1-UC30E Horn loudspeaker, 30W, music
 Music horn loudspeaker 30 W, ABS material, two-way system for high-quality speech and music reproduction, water and dust protected IP66, EN54-24 certified, light gray RAL 7035.
 Order number **LH1-UC30E | F.01U.169.386**
F.01U.381.492

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