BOSCH
Invented for life

LH1-10M10E Horn Loudspeaker



- **High efficiency driver**
- **Excellent speech reproduction**
- **Provision for inside mounting of the optional line / loudspeaker supervision board**
- **Water-and dust protected to IP 65**
- **Compliant with EVAC standards**

The LH1-10M10E high-efficiency horn loudspeaker, provide excellent speech reproduction and sound distribution for a wide scope of indoor and outdoor applications. It is ideal for sports grounds, parks, exhibitions, factories and swimming pools.

The LH1-10M10E is a rectangular shaped 10 W horn loudspeaker, made from aluminum. The edge of the horn is covered with a PVC profile for protection against impact damage. The rear cover of the horn is made from self-extinguishing ABS (acc. to class UL 94 V0).

The housing color is light grey (RAL 7035), and is water and dust protected.

Functions

Voice Alarm

Voice alarm loudspeakers are specifically designed for use in buildings, where the performance of PA systems is subject to official regulations. The LH1-10M10E is designed for voice alarm systems, and is compliant with British Standards BS 5839-8 and EN 60849.

Protection

The horn loudspeaker has built-in protection to ensure that in the event of a fire damage does not cause failure of the connected circuit. In this way, system integrity is maintained, ensuring loudspeakers in other areas can still be used to inform people of the situation.

Connections and Safety

The horn loudspeaker has a ceramic terminal block, thermal fuse, and heat-resistant, high-temperature wiring. Four primary taps are provided on the built-in matching transformer to allow selection of the output power.

The horn loudspeaker has a provision for internally mounting the optional line/loudspeaker supervision board.

Certifications and Approvals

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 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.

Region	Certification	
Europe	CE	
Safety		acc. to EN 60065
EVAC		acc. to BS 5839-8 / EN60849
Water and dust protected		acc. to IEC 60529, IP 65

Installation/Configuration Notes

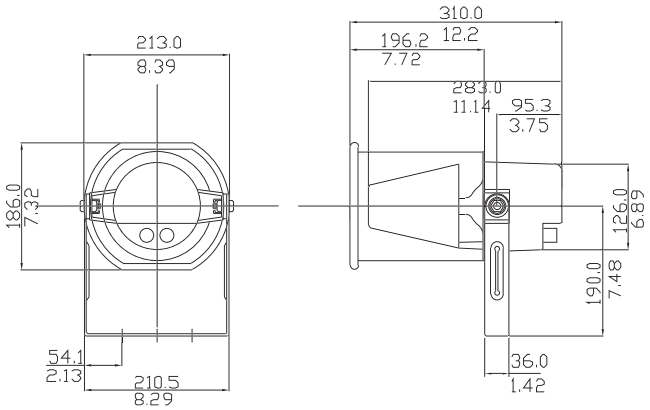
The connection cable could be fed through a cable gland (PG 13.5) in the rear cover. For loop- through connection, the rear cover is fitted with a second hole (covered as standard supplied).

Mounting

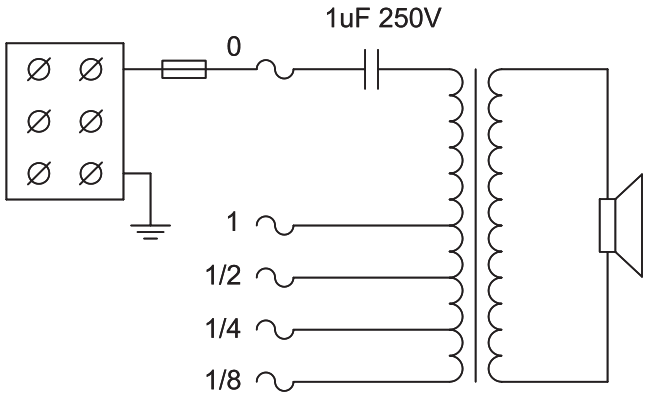
The horn loudspeaker is supplied, complete with sturdy adjustable steel U-shape bracket for mounting onto walls or ceilings, allowing the sound beam to be accurately directed.

Simple Power Setting

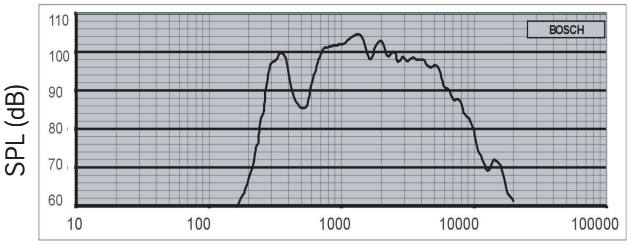
The horn has a three-way ceramic terminal block with screw connection (including earth). Four primary taps are provided on the matching transformer to allow selection of nominal full-power, half-power or quarter-power and eighth-power radiation (in 3 dB steps).



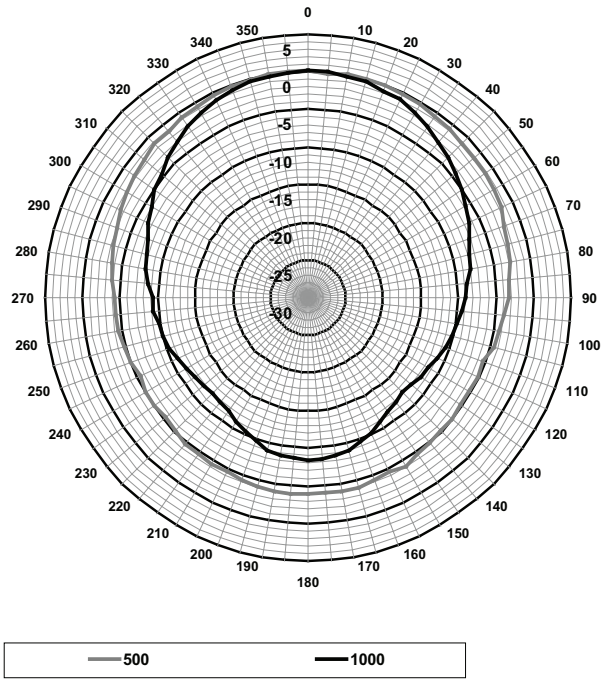
Dimensions in mm (in)

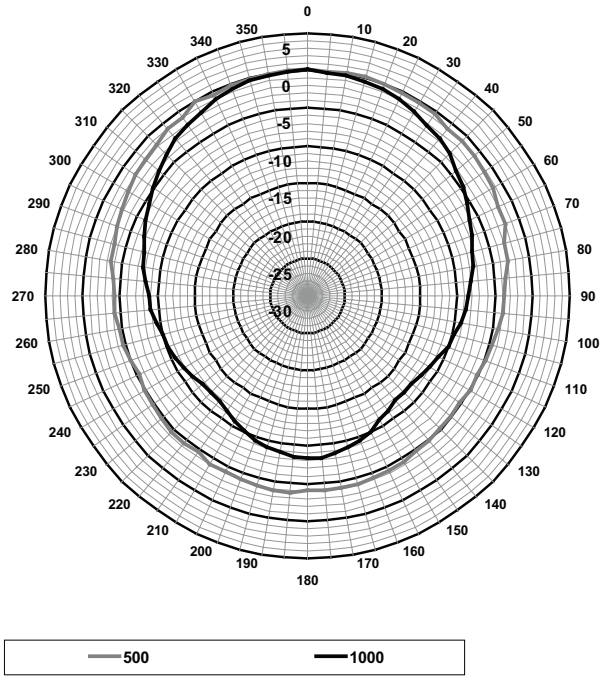


Circuit diagram

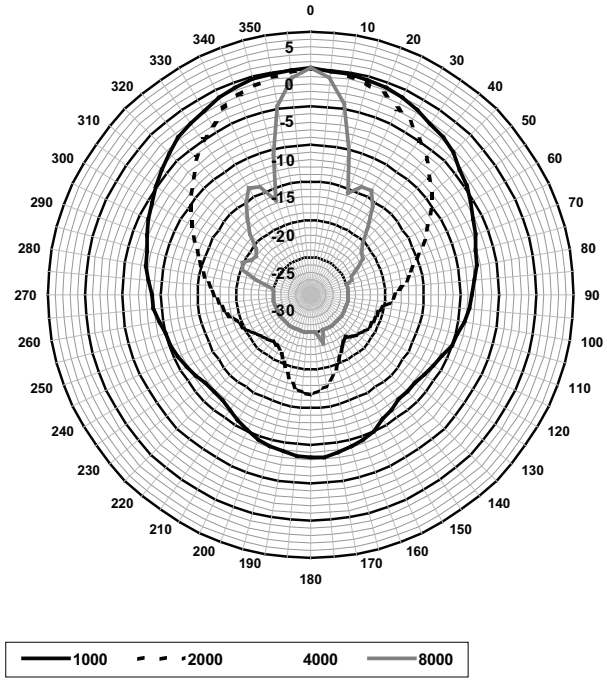


Frequency response

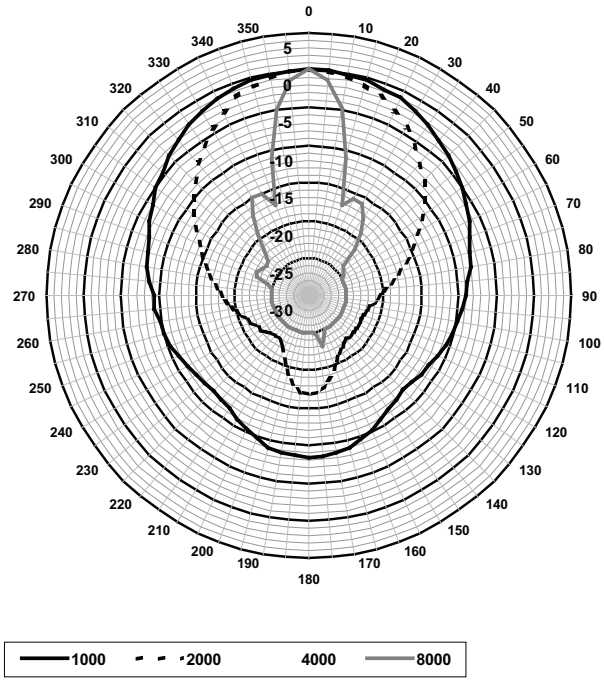




Polar diagrams (Horizontal and Vertical, measured with pink noise)



Polar diagrams (Horizontal and Vertical, measured with pink noise)



Octave band sensitivity *

	Octave SPL 1W/m	Total octave SPL 1W/m	Total octave SPL Pmax/1m
125 Hz	55.1	-	-
250 Hz	93.1	-	-
500 Hz	93.9	-	-
1000 Hz	102.0	-	-
2000 Hz	100.1		
4000 Hz	97.2	-	-
8000 Hz	87.4	-	-
A-weighted	-	95.8	105.7
Lin-weighted	-	95.6	104.6

Octave band opening angles

	Horizontal	Vertical
125 Hz	-	-
250 Hz	360	360
500 Hz	360	360
1000 Hz	120	125
2000 Hz	72	76
4000 Hz	35	36
8000 Hz	22	24

Acoustical performance specified per octave

* (all measurements are done with a pink noise signal; the valuals are in dBSPL)

Parts Included

1	LH1-10M10E Horn Loudspeaker
1	Installation instruction

Technical Specifications

Electrical*

Maximum power	15 W
Rated power (PHC)	10 W
Power tapping	10 / 5 / 2.5 / 1.25 W
Sound pressure level at 10 W / 1 W (1 kHz, 1 m)	112 / 102 dB (SPL)
Effective frequency range (- 10 dB)	280 Hz to 5800 Hz
Opening angle at 1 kHz / 4 kHz (-6 dB)	
Horizontal	120° / 35°
Vertical	125° / 35°
Rated input voltage	100 V
Rated impedance	1000 ohm
Connector	Screw terminal block

** Technical performance data acc. to IEC 60268-5*

Mechanical

Dimensions (W x D)	(213 x 186) x 310 mm (8.39 x 7.32) x 12.2 in)
Weight	3.6 kg (7.93 lb)
Color	Light grey (RAL 7035)
Material (horn / rear cover)	Aluminum / ABS
Cable diameter	6 mm to 12 mm (0.24 in to 0.47 in)

Environmental

Operating temperature	-25 ºC to +55 ºC (-13 ºF to +131 ºF)
Storage temperature	-40 ºC to +70 ºC (-40 ºF to +158 ºF)
Relative humidity	<95%

Ordering Information

LH1-10M10E Horn Loudspeaker **LH1-10M10E**
10 W, made from aluminum.

Americas:
Bosch Security Systems, Inc.
Communications Systems
12000 Portland Avenue, South
Burnsville, Minnesota 55337, USA
Phone: +1-800-392-3497
Fax: +1-800-955-6831
audiosupport@US.bosch.com
www.boschcommunications.us

Europe, Middle East, Africa:
Bosch Security Systems B.V.
P.O. Box 80002
5600 JB Eindhoven, The Netherlands
Phone: + 31 40 2577 284
Fax: +31 40 2577 330
emea.securitysystems@bosch.com
www.boschsecurity.com

Asia-Pacific:
Robert Bosch (SEA) Pte Ltd
11 Bishan Street 21
Singapore 573943
Phone: +65 6571 2600
Fax: +65 6571 2698
apr.securitysystems@bosch.com
www.boschsecurity.com

Represented by

© Bosch Security Systems Inc. 009 | Data subject to change without notice
T4509098763 | Cur: en-US, V15, 1 Dec 2009