LB1-UMx0E Premium-sound Cabinet Loudspeaker Range

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BOSCH
Invented for life

- High-fidelity music and speech reproduction
- Supplied with adjustable wall-mounting bracket
- Self-restoring overload protection
- Provision for internal mounting of the optional line / loudspeaker supervision board
- EN 54-24 certified

The Premium-sound range of cabinets is intended for clear reproduction of speech, foreground and background music to be used in general indoor and outdoor applications. The range comprises two models, offering a choice of 20 W or 50 W power handling capacity. The enclosures are made from aluminum with ABS top and bottom covers and are available in charcoal (D) and white (L).
Typical applications for these products are: theme bars, music restaurants, theme parks, retail outlets, audio visual, boardrooms and offices, exhibition areas and presentation environments, fitness centre.
Its excellent sound reproduction capability is attributed the superb to the use of high-quality driver components and crossover network design.
A self-restoring passive element protects the high frequency driver against incidental overload.
A three-way ceramic terminal block with screw connections suitable for loop-through wiring is located in the compartment in the base of the unit.
An easy to install, sturdy wall mounting bracket is standard supplied. The same bracket can be used in combination with the universal floor stand LBC 1259/00 for temporary installations.

All models are supplied with a built-in 70/100 V transformer with taps on the primary winding for full-power, half-power, quarter-power and one-eighth power radiation. These taps are connected to a rotary vari-tap switch located in the compartment in the base of the enclosure, to allow simple output power setting. A low ohmic connection is also provided on the vari-tap switch.

Functions

Voice alarm
Voice alarm loudspeakers are specifically designed for use in buildings, where the performance of Public Address systems is subject to official regulations. The LB1-UMx0E-x are designed for voice alarm systems, and are EN 54-24 certified and compliant with BS 5839-8 and EN 60849.

Protection
The loudspeakers have 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 loudspeakers have a ceramic terminal block, thermal fuse, and heat-resistant, high-temperature wiring. The cabinets have 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.

Safety	according to EN 60065
Emergency	according to EN 54-24
	according to BS 5839-8 / EN 60849
Water and dust protection	according to EN 60529 IP 65
Self-extinguishing ABS	according to UL 94 V 0
Wind-force	according to NEN 6702:2007 + A1: 2008, Bft11

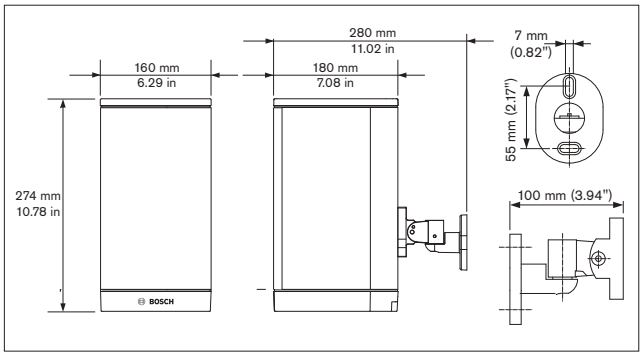
Region	Certification
Europe	CPD

Installation/configuration notes

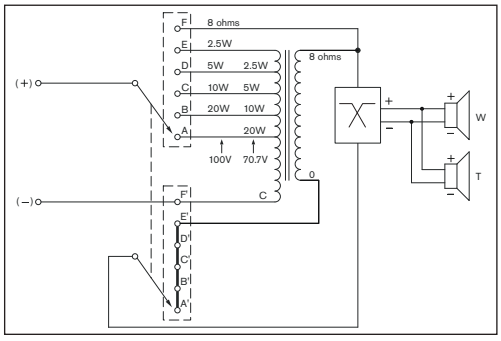
LB1-UMx0E-D/L

Mounting bracket

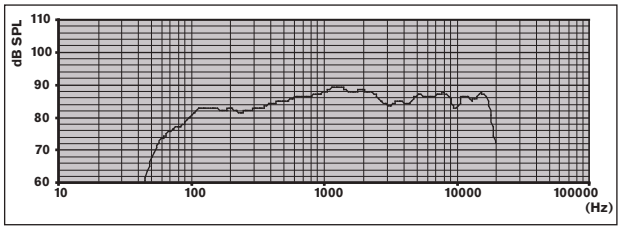
LB1-UM20E-D/L



Dimensions

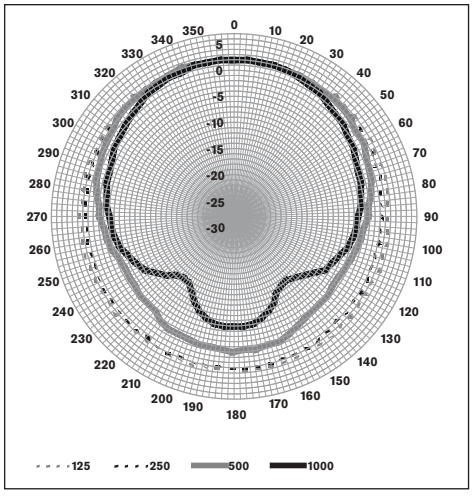


Circuit diagram

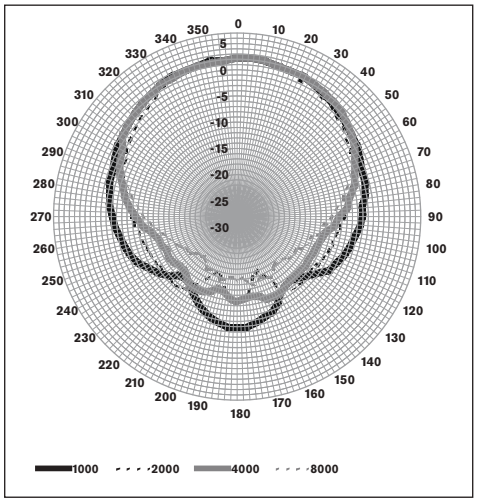


Frequency response

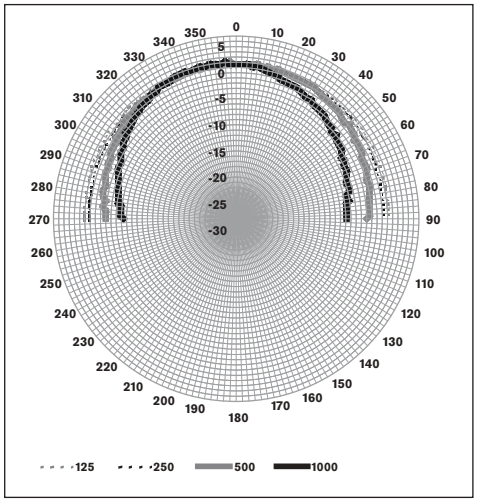
LB1-UM20E-D/L



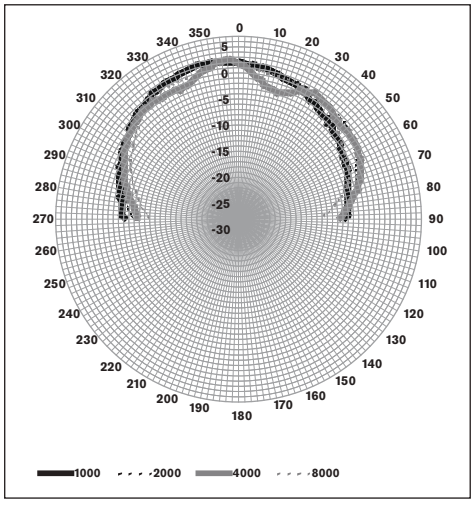
Polar diagram horizontal



Polar diagram horizontal



Polar diagram vertical



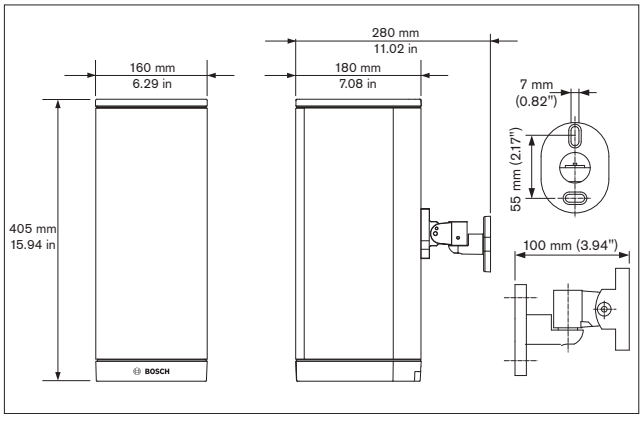
Polar diagram vertical

Octave band sensitivity *			
	Octave SPL 1W/1m	Total octave SPL 1W/1m	Total octave SPL Pmax/1m
125 Hz	82.5	-	-
250 Hz	82.5	-	-
500 Hz	85.4	-	-
1000 Hz	88.2	-	-
2000 Hz	88.0		
4000 Hz	85.5	-	-
8000 Hz	86.3	-	-
A-weighted	-	84.1	96.4
Lin-weighted	-	85.0	97.4

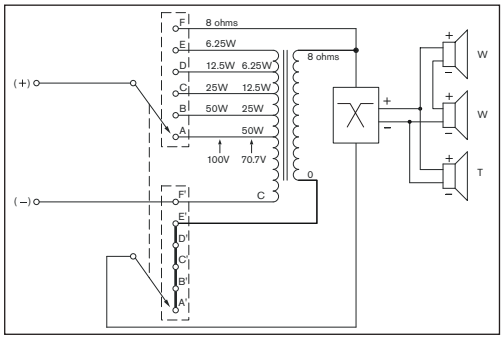
Octave band opening angles		
	Horizontal	Vertical
125 Hz	360	360
250 Hz	360	360
500 Hz	206	360
1000 Hz	174	127
2000 Hz	128	141
4000 Hz	136	141
8000 Hz	132	117

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

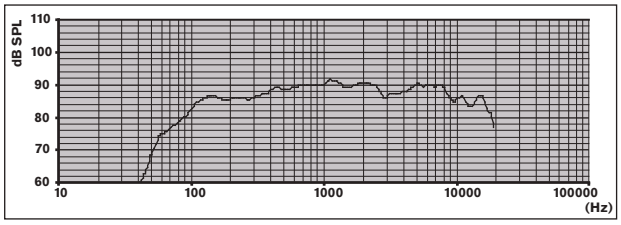
LB1-UM50E-D/L



Dimensions

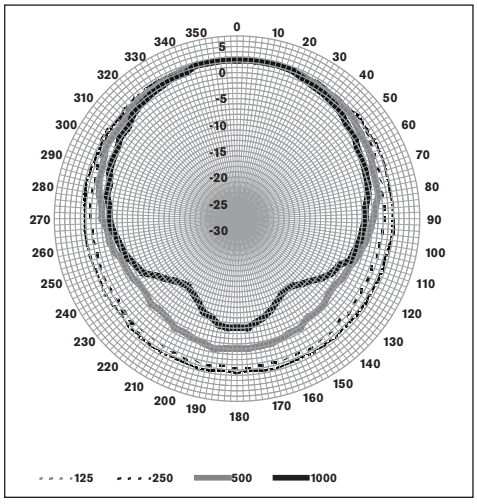


Circuit diagram

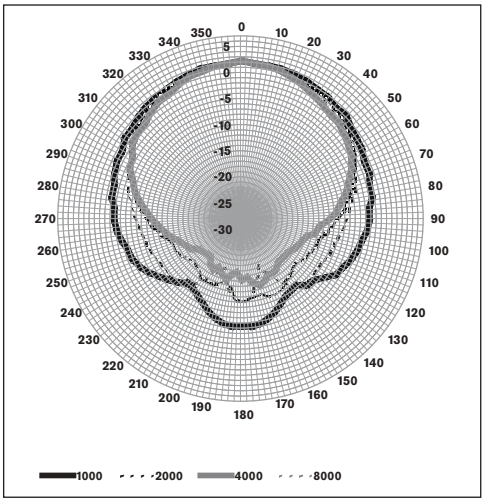


Frequency response

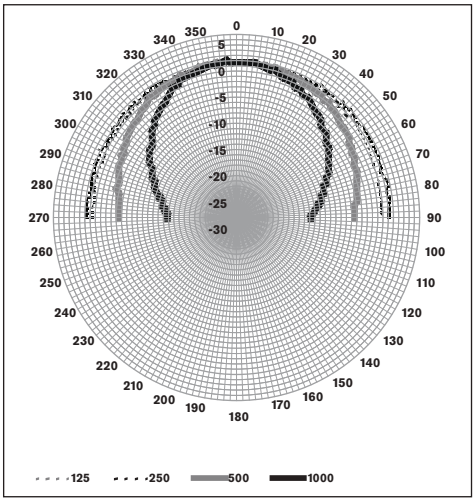
LB1-UM50E-D/L



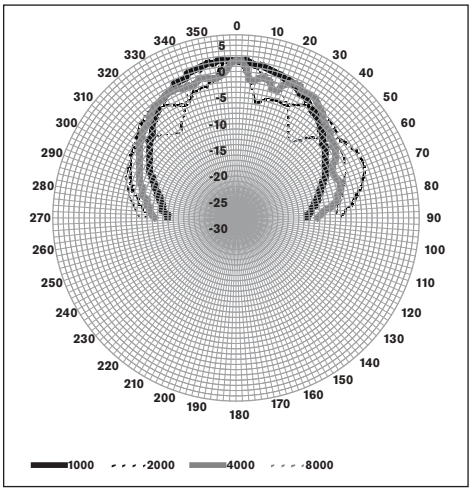
Polar diagram horizontal



Polar diagram horizontal



Polar diagram vertical



Polar diagram vertical

Octave band sensitivity *			
	Octave SPL 1W/1m	Total octave SPL 1W/1m	Total octave SPL Pmax/1m
125 Hz	85.3	-	-
250 Hz	86.1	-	-
500 Hz	89.0	-	-
1000 Hz	90.7	-	-
2000 Hz	90.1		
4000 Hz	88.5	-	-
8000 Hz	89.0	-	-
A-weighted	-	86.7	102.9
Lin-weighted	-	87.6	102.9

Octave band opening angles		
	Horizontal	Vertical
125 Hz	360	> 180
250 Hz	360	> 180
500 Hz	209	142
1000 Hz	186	84
2000 Hz	126	47
4000 Hz	126	62
8000 Hz	119	95

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

Parts included

Quantity	Components
1	LB1-UMx0E-x
1	Mounting bracket
1	Installation instruction

Technical specifications

Electrical*

Product	LB1-UM20E-(D/L)	LB1-UM50E-(D/L)
Description	Premium-sound Cabinet Loudspeaker	Premium-sound Cabinet Loudspeaker
Maximum power	30 W	75 W
Rated power (PHC)	20 W	50 W
Power tapping	20 / 10 / 5 / 2.5 W	50 / 25 / 12.5 / 6.25 W
Sound pressure level at rated power / 1 W (1 kHz, 1 m)	101 dB / 88 dB (SPL)	108 dB / 91 dB (SPL)
Effective frequency range (-10 dB)	90 Hz to 20 kHz	90 Hz to 20 kHz
Opening angle at 1 kHz / 4 kHz (-6 dB)		
horizontal	174° / 136°	186° / 126°
vertical	127° / 141°	84° / 62°
Rated input voltage	12.65 / 70 / 100 V	20 / 70 / 100 V
Rated impedance	8 / 250 / 500 ohm	8 / 100 / 200 ohm
Connector	3-pole screw block	3-pole screw block

* Technical performance data acc. to IEC 60268-5

Mechanical

Product	LB1-UM20-(D/L)	LB1-UM50-(D/L)
Dimensions (W x D)	274x160x180mm 10.78x6.29x7.08in	405x160x180mm 15.94x6.29x7.08in
Loudspeaker diameter		
Woofer	134.5 mm (5 in)	134.5 mm (5 in)
Dome tweeter	25.4 mm (1 in)	25.4 mm (1 in)
Material		
Cabinet	Aluminum	Aluminum
Front grille	Aluminum	Aluminum
Top and bottom	ABS	ABS
Color	White (RAL 9010) (L) or Charcoal (RAL 7021) (D)	White (RAL 9010) (L) or Charcoal (RAL 7021) (D)
Weight	3.88 kg (8.55 lb)	5.58 kg (12.30 lb)

Environmental

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

CE

1438

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1438-CPD-0253

EN 54-24:2008

Loudspeaker for voice alarm systems
for fire detection and fire alarm systems for buildings

Premium-sound Cabinet
LB1-UM20E-(D/L), LB1-UM50E-(D/L)
Type B

Ordering information

LB1-UM20E-D Premium-sound Cabinet Loudspeaker 20 W Charcoal
Cabinet loudspeaker 20 W, aluminum extruded enclosure, two-way system, including wall bracket, EN54-24 certified, charcoal RAL 7021.
Order number **LB1-UM20E-D**

LB1-UM20E-L Premium-sound Cabinet Loudspeaker 20 W White
Cabinet loudspeaker 20 W, aluminum extruded enclosure, two-way system, including wall bracket, EN54-24 certified, white RAL 9010.
Order number **LB1-UM20E-L**

LB1-UM50E-D Premium-sound Cabinet Loudspeaker 50 W Charcoal
Cabinet loudspeaker 50 W, aluminum extruded enclosure, two-way system, including wall bracket, EN54-24 certified, charcoal RAL 7021.
Order number **LB1-UM50E-D**

LB1-UM50E-L Premium-sound Cabinet Loudspeaker 50 W White
Cabinet loudspeaker 50 W, aluminum extruded enclosure, two-way system, including wall bracket, EN54-24 certified, white RAL 9010.
Order number **LB1-UM50E-L**

Accessories

LBC 1259/00 Universal Floorstand
Universal floor stand lightweight aluminum construction, foldable, M10 x 12 reducer flange.
Order number **LBC1259/00**

LBC 1259/01 Universal Floorstand
Universal floor stand lightweight aluminum construction, foldable, M10 x 12 reducer flange.
Order number **LBC1259/01**

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