

LB1-UMx0E Premium-sound Cabinet Loudspeaker Range

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Invented for life



- ▶ High-fidelity music and speech reproduction
- ▶ Selectable 8 ohm, 70 V and 100 V inputs
- ▶ Compact yet robust aluminum extruded enclosure
- ▶ Supplied with adjustable wall-mounting bracket
- ▶ Self-restoring overload protection

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. The cabinets can be used as VA (Voice-Alarm) and are compliant with BS 5839-8 and EN 60849 standards. 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 compliant with British Standard 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 BS 5839-8
	according to 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

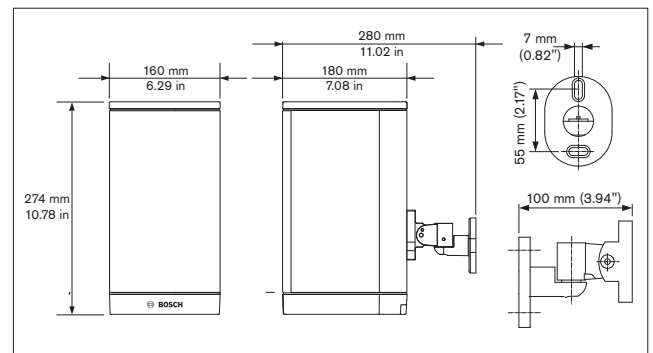
Installation/Configuration Notes

LB1-UMx0E-D/L

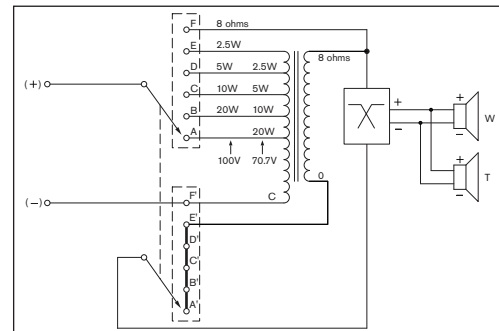


Mounting bracket

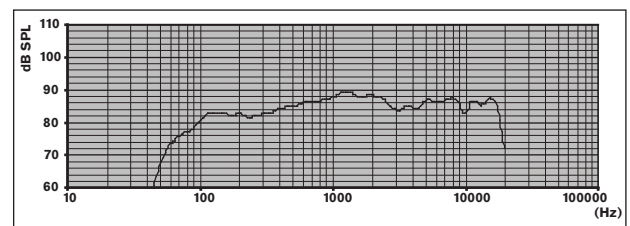
LB1-UM20E-D/L



Dimensions

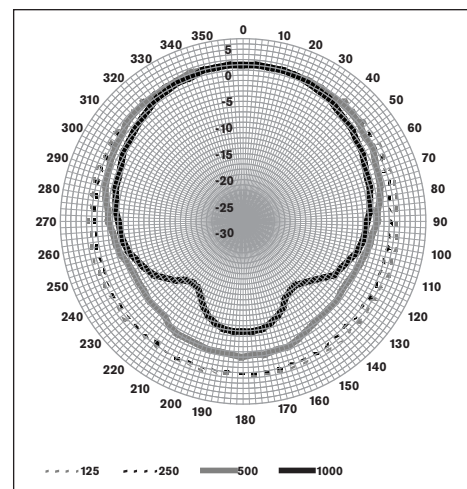


Circuit diagram

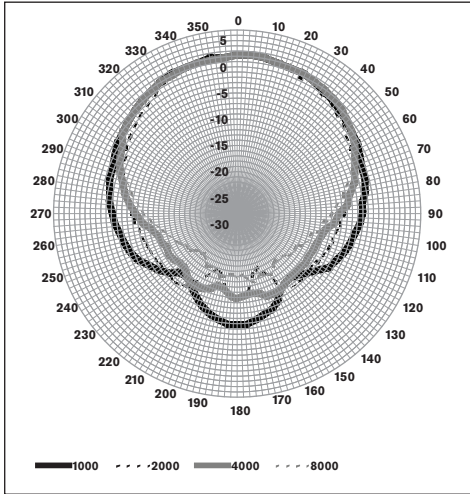


Frequency response

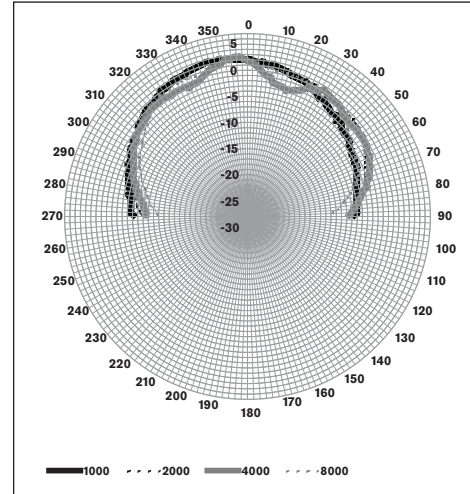
LB1-UM20E-D/L



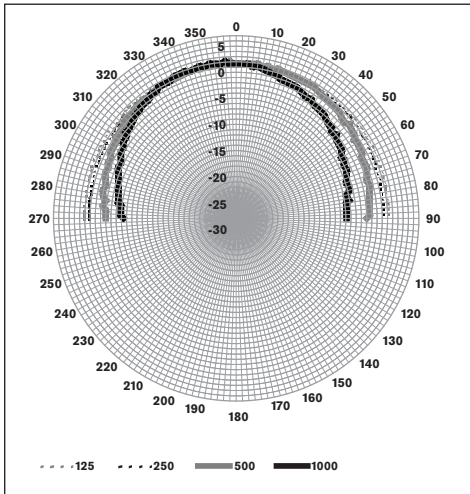
Polar diagram horizontal



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

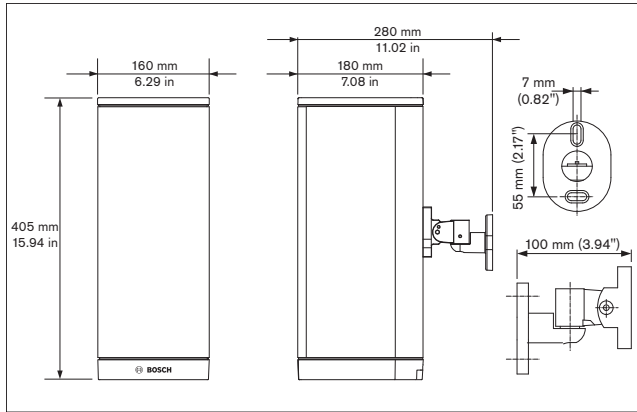
Octave band opening angles

	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	

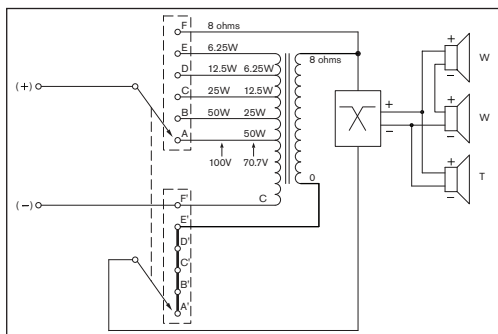
Acoustical performance specified per octave

* (all measurements are done with a pink noise signal; the values are in dB SPL)

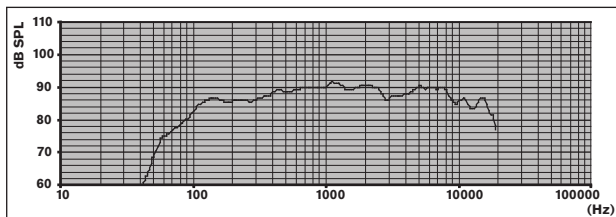
LB1-UM50E-D/L



Dimensions

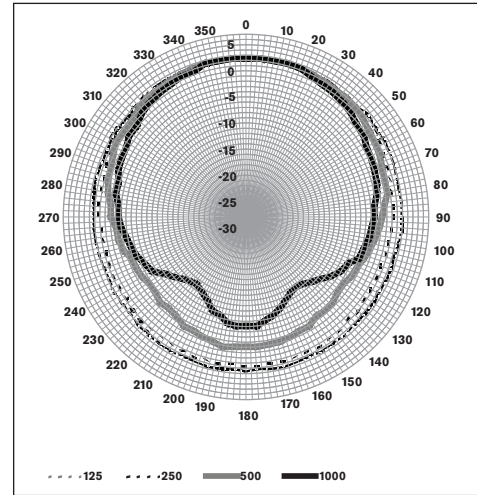


Circuit diagram

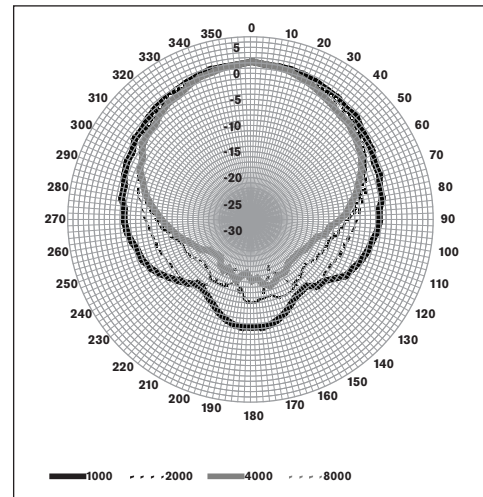


Frequency response

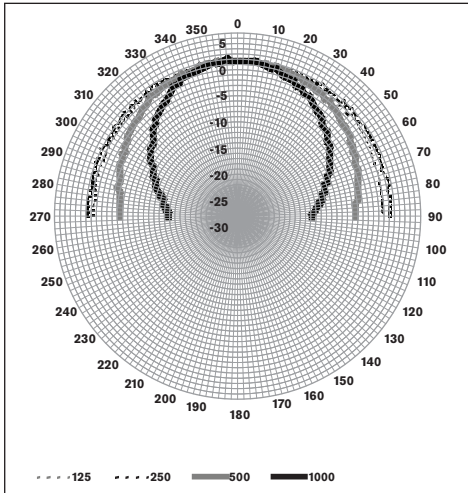
LB1-UM50E-D/L



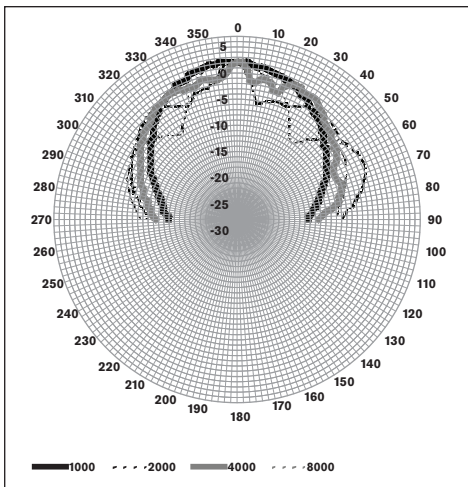
Polar diagram horizontal



Polar diagram horizontal



Polar diagram vertical



Polar diagram vertical

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 dB SPL)

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 / 6.2 5 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

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	-	-

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%

Ordering Information

LB1-UM20E-D Premium-sound Cabinet Loudspeaker 20 W Charcoal

metal housing, for indoor and outdoor use
Order number **LB1-UM20E-D**

LB1-UM20E-L Premium-sound Cabinet Loudspeaker 20 W White

metal housing, for indoor and outdoor use
Order number **LB1-UM20E-L**

LB1-UM50E-D Premium-sound Cabinet Loudspeaker 50 W Charcoal

metal housing, for indoor and outdoor use
Order number **LB1-UM50E-D**

LB1-UM50E-L Premium-sound Cabinet Loudspeaker 50 W White

metal housing, for indoor and outdoor use
Order number **LB1-UM50E-L**

Accessories

LBC 1259/00 Universal Floorstand

Lightweight aluminum construction, foldable, M10 x 12 reducer flange.
Order number **LBC1259/00**

LBC 1259/01 Universal Floorstand

Lightweight aluminum construction, foldable, M10 x 12 reducer flange.
Order number **LBC1259/01**

Represented by:

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