



BOSCH
Invented for life

LS1-OC100E Hemi-directional Loudspeaker



- For large area, high-ceiling applications
- Architecturally and acoustically innovative
- Hemi-directional pattern
- Optional bracket for fixed mounting
- Provision for internal mounting of the optional line/loudspeaker supervision board
- Complies with EVAC
- Complies with international and safety regulations

The Bosch Hemi-directional Loudspeaker is an easy to install, innovative loudspeaker which projects consistent and high quality sound, ensuring superb reproduction of background music and high speech intelligibility for paging or emergency calls. The speaker's opening angle and high sound pressure level allows it to cover at least 600 m², making it extremely suitable for indoor high-ceiling areas like warehouses, transport and exhibition halls, mega stores and swimming pools.

Functions

Voice alarm loudspeaker

The LS1-OC100E is used in voice alarm systems and is compliant with EVAC standards. The loudspeaker has built-in protection to ensure that a fire-damaged loudspeaker does not cause failure of the connected circuit. This ensures system integrity, meaning loudspeakers in other areas can still be used to inform people of the fire. The loudspeaker has ceramic terminal blocks, a thermal fuse and heat-resistant, high-temperature wiring.

Materials

The loudspeaker is made of high-impact ABS TSG, self-extinguishing according to class UL 94 V 0 and with the highest flame retardant rating (UL 94 5VA). The loudspeaker has a white and silver finish; the metal grille has a silver finish.

Drivers

This acoustically innovative loudspeaker accommodates 14 drivers in combination with advanced positioning and filtering. *

* *patent pending*

Certifications and Approvals

Region	Certification
Europe	CE
Safety	acc. to EN 60065
EVAC compliant	acc. to BS 5839 part 8 and EN 60849
Self-extinguishing	acc. to UL 94 V 0
Flame retardant	acc. to UL 94 5VA
Water and dust protected	acc. to EN 60529 IP 42
Chlorine resistant	acc. to IEC 600068/2-60
Mechanical impact	acc. to EN 50102 IK 07

Installation/Configuration Notes

The loudspeaker can be suspended from a steel wire or chain using Dee shackles (not supplied).

A separate accessory, LM1-MSB, is available for applications where fixed suspension is required to avoid any loudspeaker movement (such as rotation, wobbling).

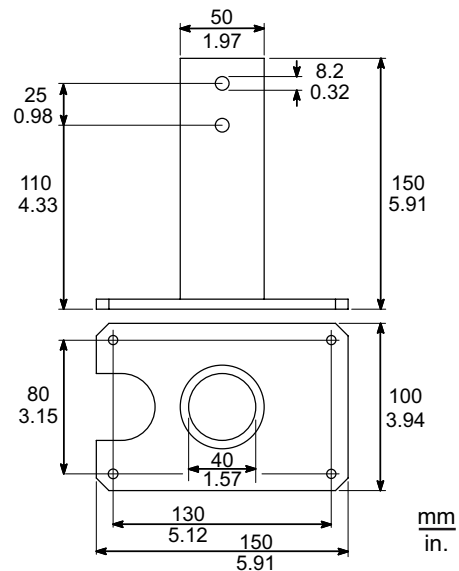
This accessory uses a set of stainless steel mounting plates:

- one plate for mounting centrally onto the loudspeaker (with fixing provisions)
- one plate for fixing onto the ceiling or roof construction
- four fixing pins and spring clips
- four fixing screws

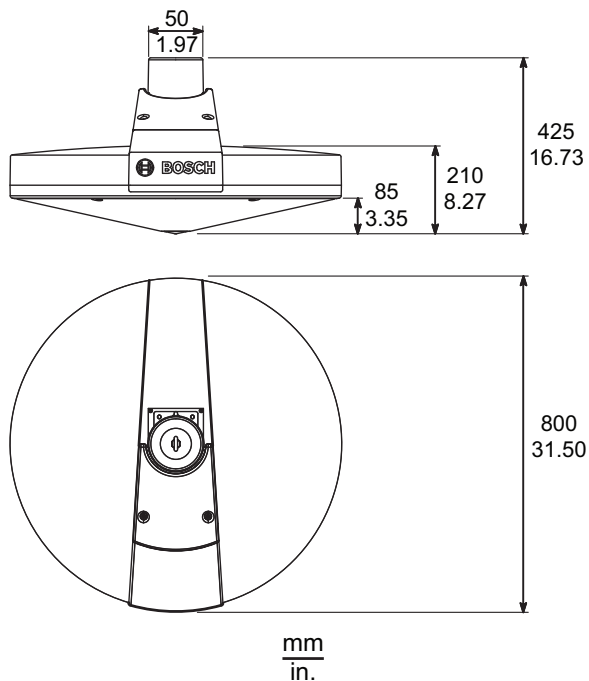
The mounting plates can be mechanically connected with a standard 39 mm dia. tube (not supplied by Bosch, but generally available in any required length).

For extra safety, the loudspeaker has an eye bolt with a maximum tensile strain of 1500 N for attaching an optional safety cord.

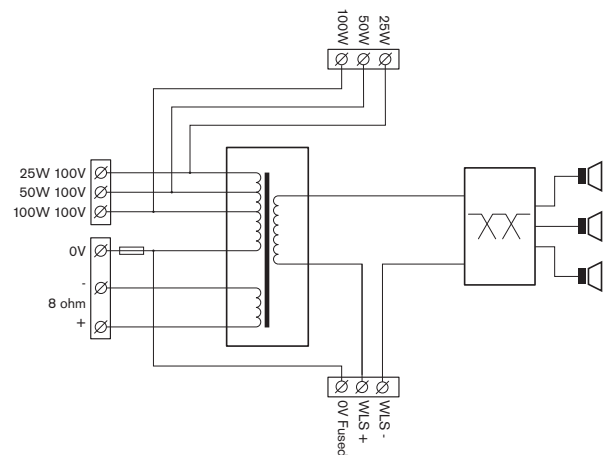
The electrical connection box, under the suspension cover, provides connection of the installation cable, allowing loop through and provision for internally mounting the optional line/loudspeaker supervision board.



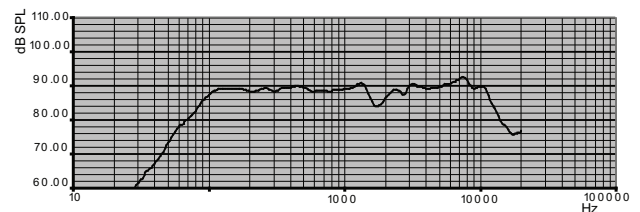
Dimensions LM1-MSB



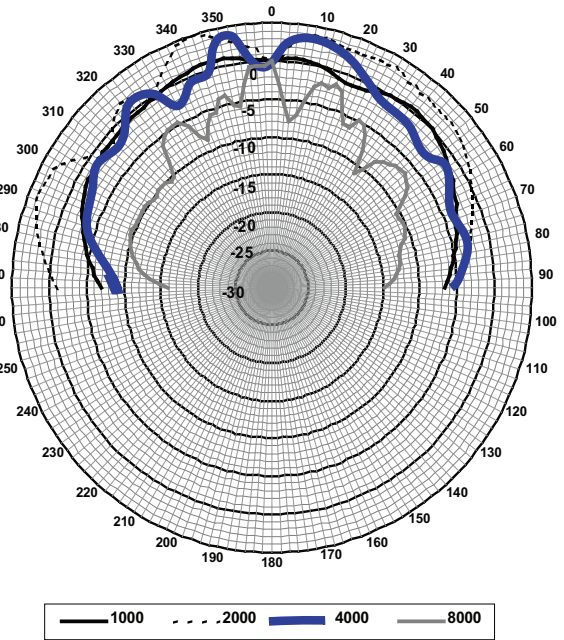
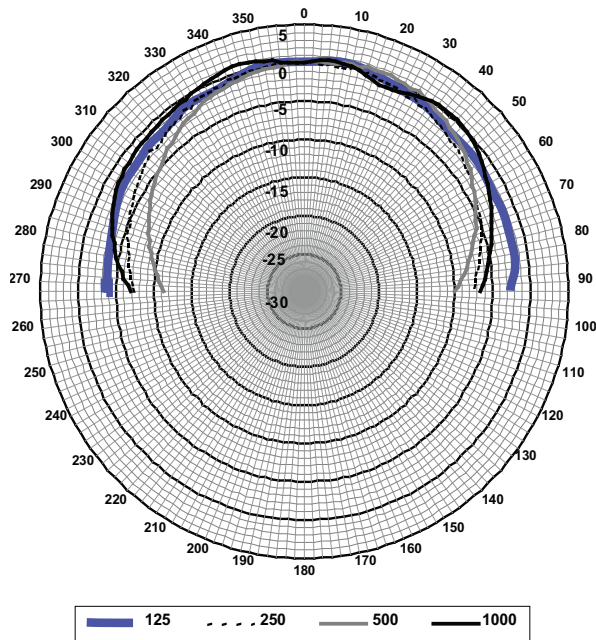
Dimensions LS1-OC100E



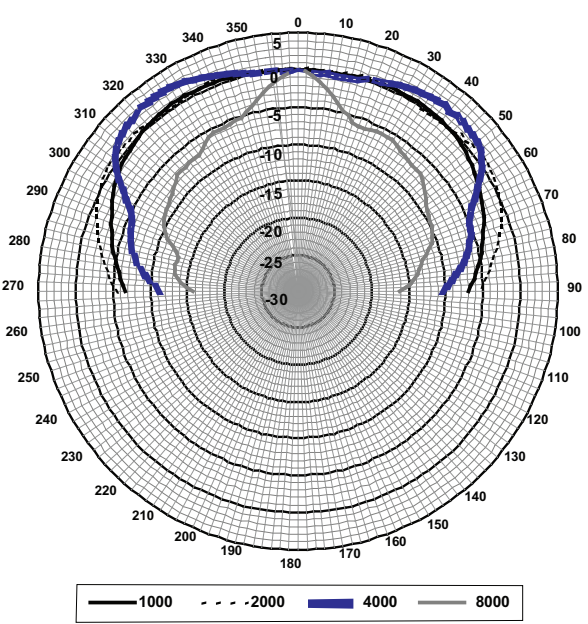
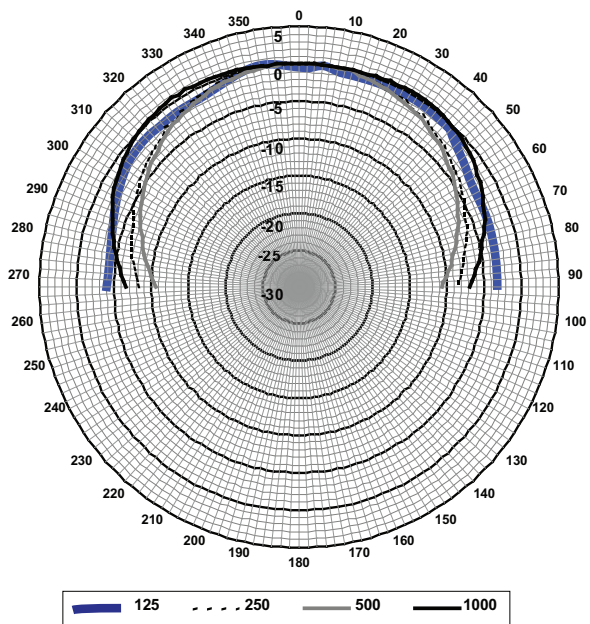
Circuit diagram



Frequency response



Vertical polar diagram of LS1-OC100E (pink noise octave, normalized at 0° axis)



Horizontal polar diagram of LS1-OC100E (pink noise octave, normalized at 0° axis)

Hz	125	250	500	1000	2000	4000	8000
SPL 1.1	89	89	89	89	86	88	93
Hor.	>180	145	125	170	>180	145	65
Vert.	>180	155	135	170	>180	170	70

Acoustical performance specified per octave

Parts Included

Quantity	Components
1	LS1-OC100E
1	Installation Instructions

Technical Specifications

Electrical*

Maximum power	150 W
Rated power	100 W (100 – 50 – 25 W)
Sound pressure level at 100 W / 1 W (1 kHz, 1 m)	109 / 89 dB
Sound pressure level at 100 W / 1 W (8 kHz, 1 m)	113 / 93 dB
Opening angle at 1 kHz / 4 kHz (-6 dB)	170° / 145° (horizontal) 170° / 170° (vertical)
Effective frequency range (-10 dB)	60 Hz to 17 kHz
Rated voltage	100 V and 28.3 V
Rated impedance	100 ohm and 8 ohm
Connector	Ceramic screw terminal

* Technical performance data acc. to IEC 60268-5

Mechanical

LS1-OC100E

Dimensions (dia. x H)	800 x 425 mm (31.50 x 16.74 in)
Weight	29 kg (63.93 lb)
Color baffle	White (RAL 9010)
Color top cover	Silver (RAL 9023)
Color grille	Silver (RAL 9006)
Material	ABS TSG

LM1-MSB

Dimensions (H x W x D)	150 x 100 x 150 mm (5.90 x 3.94 x 5.90 in)
Weight	2.9 kg (6.39 lb)
Color	Silver (RAL 9023)
Material	Stainless steel (sandblasted)

Environmental

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

Ordering Information

LS1-OC100E Hemi-directional Loudspeaker 100 W	LS1-OC100E
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Accessories

LM1-MSB Metal Suspension Bracket Adaptor Set Metal Suspension Bracket Adaptor Set	LM1-MSB
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