

LBC 3090/31 Ceiling Loudspeaker

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BOSCH
Invented for life



- ▶ Suitable for speech and music reproduction
- ▶ Increased sensitivity
- ▶ Flush-mounting in ceiling cavity
- ▶ Easy to install
- ▶ Simple power setting

Bosch loudspeakers offer a combination of quality, performance and innovation in public address. They are the result of over half a century's experience in professional audio, and meet virtually all sound reinforcement system requirements.

Functions

A flush-mounting ceiling loudspeaker is available for general purpose applications. This full-range loudspeaker offers a high sound pressure level and a wide frequency range, and is suitable for both speech and music reproduction in shops, department stores, schools, offices, sports halls, hotels and restaurants. The loudspeaker assembly consists of a single-piece, 6 W dual-cone loudspeaker and frame, with a 100 V matching transformer mounted on the back. A circular metal grille is integrated with the front. The appearance and neutral white colour have been selected to be unobtrusive in virtually all interiors. A dust cover protects the rear.

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 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
Ball-proof	acc. to DIN VDE 0710 part-13

Region	Certification
Europe	CE

Installation/Configuration Notes

Installation

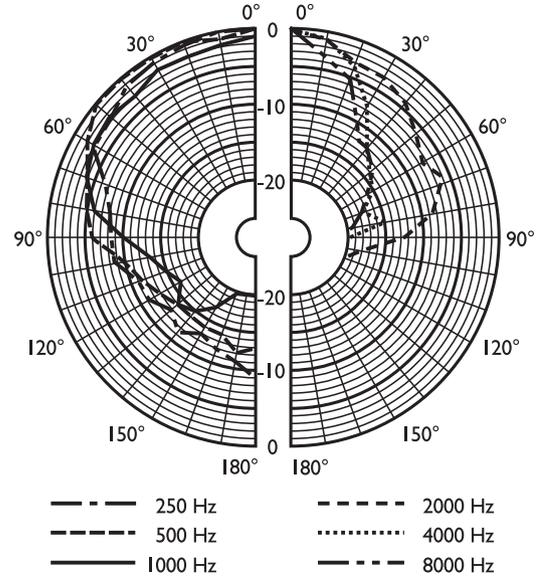
The assembly can be simply and quickly installed into a hole in the ceiling cavity and secured by two integral spring-loaded ceiling locking clamps (for ceilings and wall boards from 9 to 25 mm thick). A circular template for marking a 172 mm (6.7 in) diameter hole is included with the loudspeaker.

Terminal Block

The unit has a two-way terminal block with push connections suitable for loop-through wiring. Three primary taps are provided on the matching transformer to allow selection of nominal full-power, half-power or quarter-power radiation (i.e. in 3 dB steps).

LBC 3080/01 Fire Dome

During a fire, the ceiling cavity can allow fire or smoke to spread throughout a building. To inhibit fire entering the cavity via the ceiling loudspeaker, it can be fitted with an LBC 3080/01 steel fire dome. This is mounted on the loudspeaker assembly using four self-tapping screws supplied with the fire dome. The fire-dome has knock-out holes for two grommets (supplied) and two cable glands (PG 13).



Polar diagram (measured with pink noise)

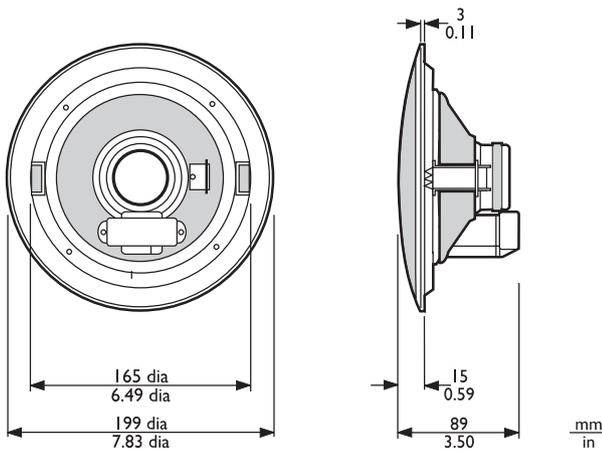
	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
SPL 1.1	94	91	88	91	93	96	92
SPL max.	102	99	96	99	101	104	100
Q-factor	4.8	5	3	3.4	6.3	18	20
Efficiency	0.66	0.32	0.27	0.47	0.4	0.28	0.1
H. angle	150	140	180	160	140	55	45
V. angle	150	140	180	160	140	55	45

Acoustical performance specified per octave

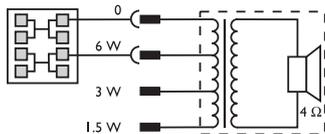
LBC 3080/01 Fire Dome



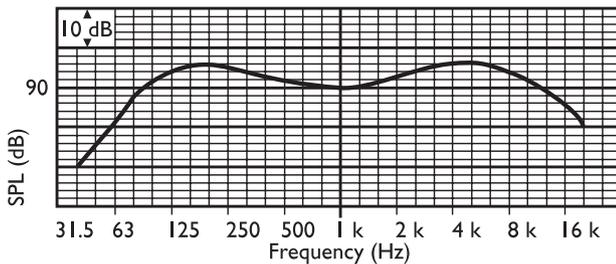
LBC 3080/01



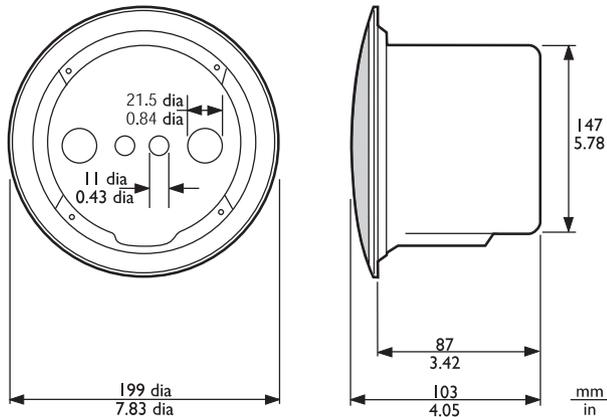
Dimensions in mm (in)



Circuit diagram



Frequency response



LBC 3090/31 + LBC 3080/01 fire dome assembly dimensions in mm (in)

Parts Included

Quantity	Component
1	LBC 3090/31 Ceiling Loudspeaker
1	172 mm circular template

Technical Specifications

Electrical*

Maximum power	9 W
Rated power	6 / 3 / 1.5 W
Sound pressure level at 6 W / 1 W (1 kHz, 1 m)	99 dB / 91 dB (SPL)
Sound pressure level at 6 W / 1 W (4 kHz, 1 m)	104 dB / 96 dB (SPL)
Effective frequency range (-10 dB)	70 Hz to 18 kHz
Opening angle at 1 kHz/4 kHz (-6 dB)	160° / 55°
Rated voltage	100 V
Rated impedance	1667 ohm
Connector	2-pole push-in terminal block

* Technical performance data acc. to IEC 60268-5

Mechanical

Diameter	199 mm (7.8 in)
Maximum depth	89 mm (3.5 in)
Mounting cut-out	172 mm (6.5 in)
Speaker diameter	152.4 mm (6 in)
Weight	990 g (2.2 lb)

Color	White (RAL 9010)
Magnet weight	150 g (5.3 oz)

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%

LBC 3080/01

Diameter	147 mm (5.8 in)
Maximum depth	87 mm (3.4 in)
Weight	360 g (0.8 lb)
Color	Flame red (RAL 3000)
Certified B15	acc. to DIN 4102

Ordering Information

LBC 3090/31 Ceiling Loudspeaker

6 W dual-cone loudspeaker and frame, with a 100 V matching transformer mounted on the back.
Order number **LBC3090/31**

Accessories

LBC 1256/00 EVAC Connection Adapter

3-pole screw connector, 100 pieces
Order number **LBC1256/00**

LBC 3080/01 Fire Dome

metal fire dome for the LBC 3087/41, LBC 3090/01, LBC 3090/31, LHM 0606/00 and LHM 0606/10 ceiling loudspeakers
Order number **LBC 3080/01**

Represented by:

Americas:

Bosch 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.boschsecurity.com

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