

# LBC 3086/41 Ceiling Loudspeaker

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Voice alarm loudspeakers are specifically designed for use in buildings where performance of systems for verbal evacuation announcements is governed by regulations. The LBC 3086/41 is designed for use in voice alarm systems.

## Functions

The loudspeaker unit is a 6 W, dual-cone loudspeaker with an integrated circular metal grille. A 100 V matching transformer is mounted on the back. The appearance and neutral white RAL color have been selected to be unobtrusive in virtually all interiors. The loudspeaker has built-in protection to ensure that, in the event of a fire, damage to the loudspeaker does not result in failure of the circuit to which it is connected. In this way, system integrity is maintained, ensuring loudspeakers in other areas can still be used to inform people of the situation. The loudspeaker has ceramic terminal blocks, thermal fuse and heat-resistant, high-temperature wiring. It can also be fitted with an optional fire-dome to increase protection of the cable termination.

- ▶ Suitable for speech and music reproduction
- ▶ Easy to install
- ▶ Optional certified fire dome
- ▶ EN 54-24 certified

## 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
* Emergency	acc. to BS 5839-8 /* EN 54-24 / EN 60849
* Water and dust protection	acc. to EN 60529-IP32



## Notice

\* only in combination with the LBC 3081/02 Fire Dome

Region	Certification
Europe	CE
	CE
	CPD
Poland	CNBOP

### Installation/configuration notes

#### Installation

The assembly is quickly installed into a hole in the ceiling cavity. A separate mounting ring, secured by three integral spring-loaded ceiling locking clamps (for ceilings and wall boards from 9 to 25 mm thick) holds it in place. The clamps are provided with protective rubbers to avoid damaging soft ceiling material. A circular template for marking a 196 mm (7.7 in) diameter hole is included with the loudspeaker. The loudspeaker unit is held in the mounting ring with a bayonet fitting.

#### Terminal Block

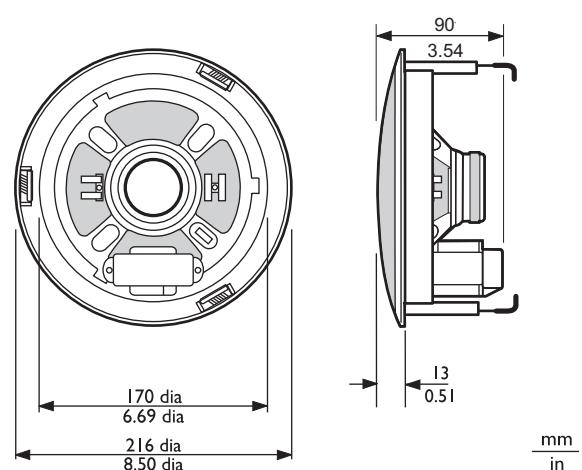
The unit has a three-way terminal block with screw connections suitable for loop-through wiring. Four primary taps are provided on the matching transformer to allow selection of nominal full-power, half-power, quarter-power or eighth power radiation (i.e. in 3 dB steps).

#### LBC 3081/02 Fire Dome Assembly

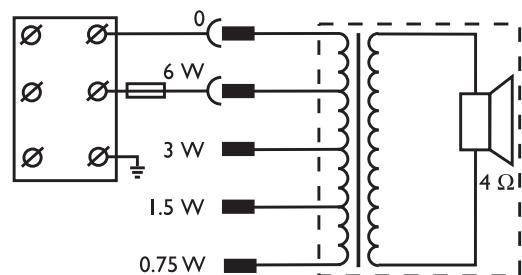
During a fire, the ceiling cavity in which loudspeakers are installed can allow flames to spread throughout a building. To prevent fire entering the caving via the loudspeaker, the ceiling loudspeaker can be fitted with a protective steel fire dome (LBC 3081/02).



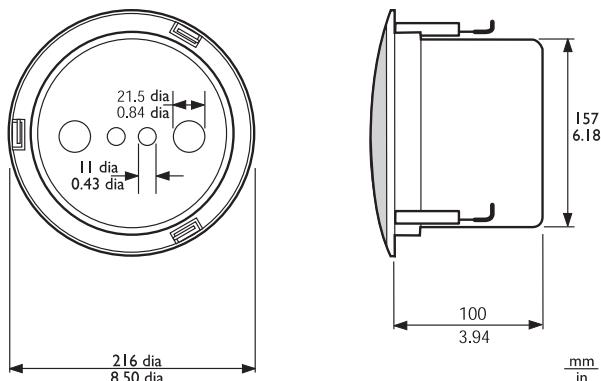
LBC 3086/41 with LBC 3081/02 fire dome assembly



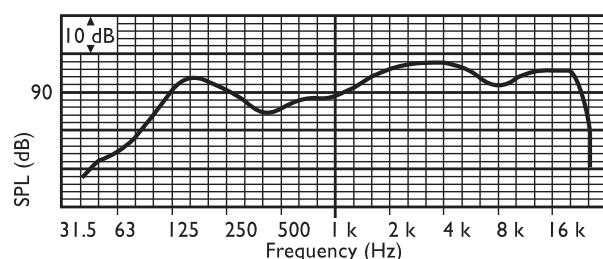
Dimensions in mm (in)



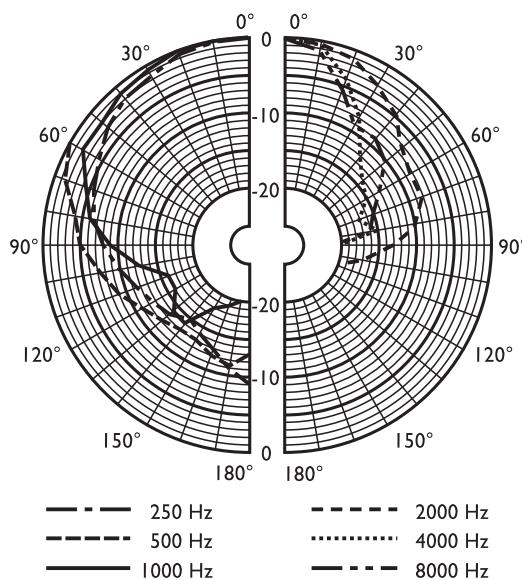
Circuit diagram



LBC 3086/41 with LBC 3081/02 fire dome assembly dimensions in mm (in)



Frequency response



Polar diagram (measured with pink noise)

	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
SPL 1.1	92	90	85	90	96	98	92
SPL max.	100	98	93	98	10 4	10 6	10 0
Q-factor	4.8	4.4	2.5	3.7	8.3	20	21
Efficiency	0.42	0.29	0.16	0.3 4	0.6	0.4	0.1
H. angle	160	160	180	16 0	90	50	40
V. angle	160	160	180	16 0	90	50	40

Acoustical performance specified per octave

## Parts included

Quantity	Components
1	LBC 3086/41 Ceiling Loudspeaker
1	196 mm circular template

## Technical specifications

### Electrical\*

Maximum power	9 W
Rated power	6 / 3 / 1.5 / 0.75 W
Sound pressure level at 6 W / 1 W (1 kHz, 1 m)	98 dB / 90 dB (SPL)

Effective frequency range (-10 dB)	90 Hz to 20 kHz
Opening angle at 1 kHz/4 kHz (-6 dB)	180° / 50°
Rated voltage	100 V
Rated impedance	1667 ohm
Connector	3-pole screw terminal block

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

### Mechanical

Diameter	216 mm (8.5 in)
Maximum depth	90 mm (3.54 in)
Ceiling thickness	9 to 25 mm (0.35 to 0.98 in)
Mounting cut-out	196 mm (7.7 in)
Weight	1.3 kg (2.86 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 and transport temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Relative humidity	<95%


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Bosch Security Systems BV Torenallee 49, 5617 BA Eindhoven, The Netherlands 10 1438-CPD-0193
EN 54-24:2008
Loudspeaker for voice alarm systems for fire detection and fire alarm systems for buildings Ceiling Loudspeaker 6 W with metal Fire-dome LBC3086/41 and LBC3081/02 Type A

## Ordering information

### LBC 3086/41 Ceiling Loudspeaker

Ceiling loudspeaker, 6 W, integrated circular metal grille, mounting-ring with three spring-loaded ceiling clamps and bayonet loudspeaker mounting, white RAL 9010.

Order number **LBC3086/41**

## Accessories

### LBC 3081/02 Fire Dome

Metal fire dome for LBC 3086/41 ceiling loudspeaker,  
flame red RAL 3000.

Order number **LBC3081/02**

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