



# LBC 3086/41 Ceiling Loudspeaker



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 and is compliant with British Standard BS5839 part 8.

## 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
- ▶ Flush-mounting in ceiling cavity
- ▶ Easy to install
- ▶ Simple power setting
- ▶ Optional certified fire dome
- ▶ Unobtrusive in virtually all interiors
- ▶ Complies with international installation and safety regulations
- ▶ BS5839 Part 8 compliant

## 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	EN 60065
EVAC compliant	BS5839 part 8

## Installation/Configuration Notes

### Installation

The assembly can be simply and 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). 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

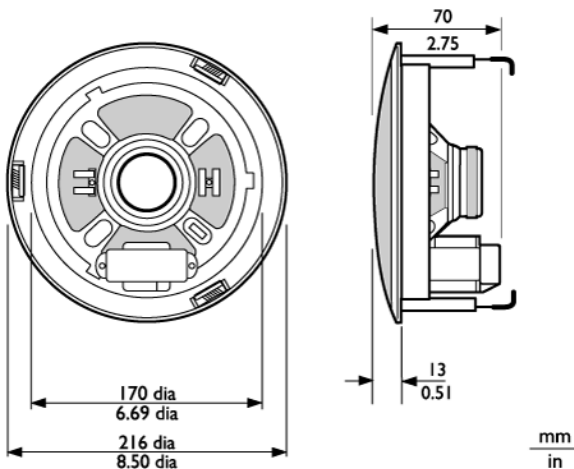
The unit has a three-way terminal block with screw connections suitable for loop-through wiring. Four primary taps are provided on the matching transformer to allow selection of nominal full-power, half-power, quarter-power or eighth power radiation (i.e. in 3 dB steps).

### 3081/02 Fire Dome Assembly

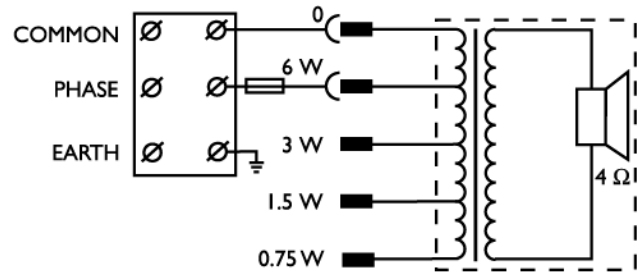
During a fire, the ceiling cavity in which loudspeakers are installed can allow flames to spread throughout a building. To prevent fire entering the caving via the loudspeaker, the ceiling loudspeaker can be fitted with a protective steel fire dome (LBC 3081/02).



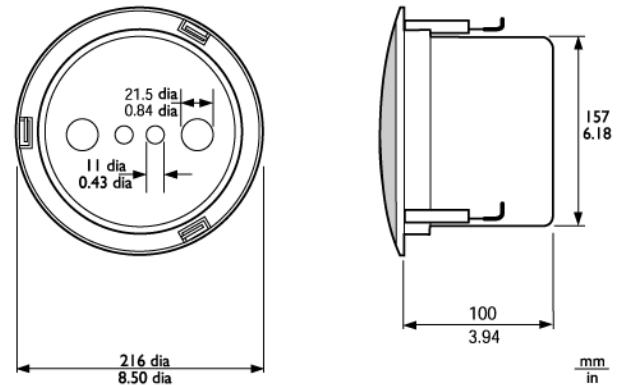
LBC 3086/41 with LBC 3081/02 fire dome assembly



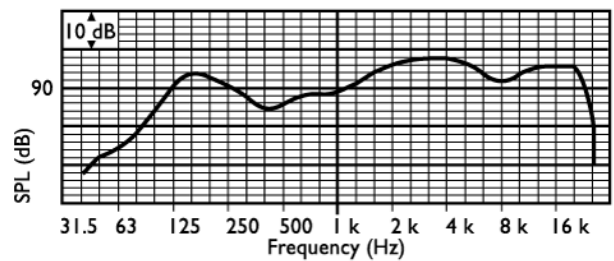
Dimensions (in mm/inch)



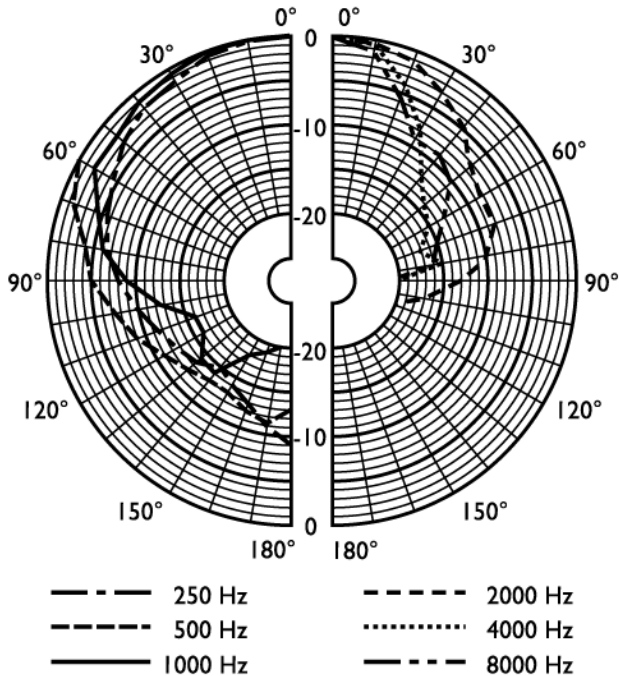
Circuit diagram



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



Frequency response



Polar diagram (measured with pink noise)

Octave band (Hz)	125	250	500	1k	2k	4k	8k
SPL 1.1	92	90	85	90	96	98	92
SPL max.	100	98	93	98	104	106	100
Q-factor	4.8	4.4	2.5	3.7	8.3	20	21
Efficiency	0.42	0.29	0.16	0.34	0.6	0.4	0.1
Hor. angle	160	160	180	160	90	50	40
Vert. angle	160	160	180	160	90	50	40

Quick reference table

## Parts Included

Quantity	Components
1	LBC 3086/41 Ceiling Loudspeaker
1	196mm Circular Template

## Technical Specifications

### Electrical\*

Max. Power	9 W
Rated Power (PHC)	6 W (6 - 3 - 1.5 - 0.75 W)
Sound Pressure Level at 6 W / 1 W (at 1 kHz, 1 m)	98 dB/90 dB (SPL)
Effective Frequency Range (-10 dB)	90 Hz to 20 kHz
Opening Angle	180° / 50°(at 1 kHz/4 kHz, -6 dB)
Rated Voltage	100 V
Rated Impedance	1667 ohm

### Mechanical

Speaker Size	152.4 mm (6 inch)
Magnet Weight	5.3 oz
Connection	3-pole screw connector
Dimensions (dia x max. depth)	216 x 70 mm (8.5 x 2.8 inch)
Mounting Cut-Out Dia.	196 mm (7.7 inch)
Color	White (RAL 9010)
Weight	1.3 kg (2.86 lb)

### Environmental

Ambient Temperature	-25°C to +55 °C (-13°F to 131°F)
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\*) Technical performance data acc. to IEC 60268-5

## Ordering Information

### Model | Description

LBC 3086/41 Ceiling Loudspeaker

### Hardware Accessories

LBC 3081/02 Fire Dome

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