

# LBC 3950/01 Ceiling Loudspeaker

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**BOSCH**

Invented for life



- Compact yet powerful
- Very wide opening angle
- Modern unobtrusive styling
- Installation friendly
- Splash-waterproof

The LBC 3950/01 is a compact, 6 W loudspeaker with a circular plastic grille. It has excellent audio performance and is easy to install with its integral mounting clips. The loudspeaker is IPx4 water protected from the front so it can be installed in humid environments.

## Functions

The LBC 3950/01 has a circular pattern plastic grille with a plastic surround, finished in an attractive off-white RAL color. The unobtrusive styling of this loudspeaker complements modern interior lighting. The loudspeaker feature a very wide opening angle, which means fewer units are required to cover a given area. The wide frequency range means better speech and music reproduction. The unit is supplied with a 100 V matching transformer with taps on the primary winding for full-power, half-power, quarter-power and eighth-power radiation.

The loudspeaker (with special treated paper cone), is IP 4 water protected from the front and can be applied in humidity environments for example bathrooms, saunas, atriums and swimming pool areas.

## Certifications and approvals

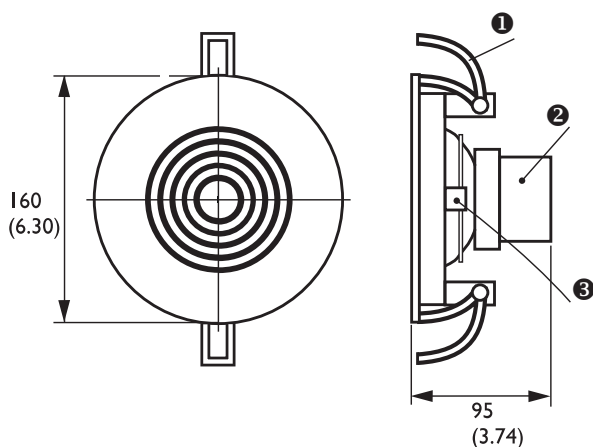
All Bosch loudspeakers are designed to withstand operating at their rated power for 100 hours in accordance with IEC 268-5 Power Handling Capacity (PHC) standards. Bosch has also developed the Simulated Acoustical Feedback Exposure (SAFE) test to demonstrate that they can withstand two times their rated 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.

All plastic parts are manufactured from self-extinguishing high-impact ABS material (according to UL 94V0).

| Safety          | acc. to EN 60065       |                           |
|-----------------|------------------------|---------------------------|
| Water protected | acc. to EN 60529, IPx4 |                           |
| Region          | Certification          |                           |
| Europe          | CE                     | Declaration of Conformity |

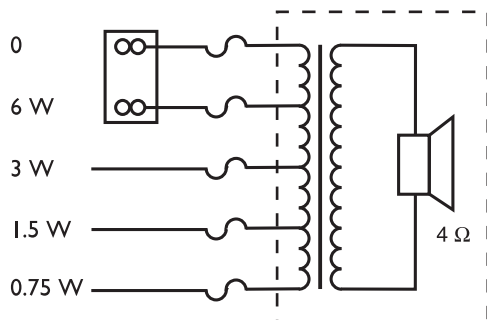
### Installation/configuration notes

Installation is easy with integral clips that securely hold the ceiling loudspeaker in its cut-out. Ceilings from 9 to 25 mm thick can be accommodated. A template is also provided for accurately marking the cutout in ceiling panels. Wiring is via a connection block with push-type terminals, making installation possible without using any special tools. The terminal blocks have provision for loop-through wiring. The transformer is delivered wired for 6 W rated output power, but can easily be changed for other connections using the color-coded wires and terminal block.

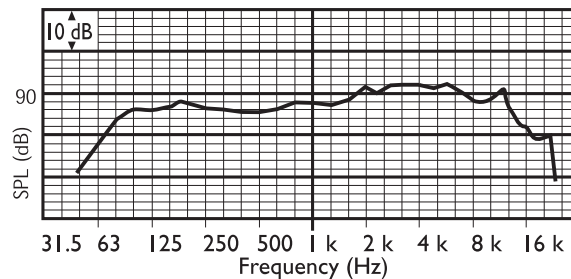


- 0 Clamp
- 1 Matching transformer
- 2 Terminal block
- 3

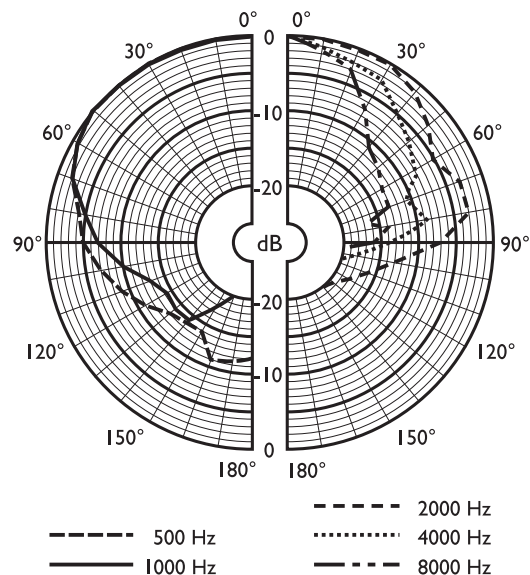
Dimensions in mm (in)



Circuit diagram



Frequency response



Polar diagram

|            | 125 Hz | 250 Hz | 500 Hz | 1 kHz | 2 kHz | 4 kHz | 8 kHz |
|------------|--------|--------|--------|-------|-------|-------|-------|
| SPL 1.1    | 87     | 88     | 86     | 88    | 89    | 91    | 89    |
| SPL max.   | 95     | 96     | 94     | 96    | 97    | 99    | 97    |
| Q-factor   | 4      | 5.6    | 2.6    | 3     | 3.8   | 8.1   | 15    |
| Efficiency | 0.16   | 0.14   | 0.19   | 0.27  | 0.26  | 0.19  | 0.06  |
| H. angle   | 180    | 180    | 180    | 170   | 165   | 90    | 55    |
| V. angle   | 180    | 180    | 180    | 170   | 165   | 90    | 55    |

Acoustical performance specified per octave

### 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) | 96 dB / 88 dB (SPL)  |

|   |                               |
|---|-------------------------------|
| Sound pressure level<br>at 6 W / 1 W (4 kHz, 1 m) | 99 dB / 91 dB (SPL)           |
| Effective frequency range<br>(-10 dB)             | 60 Hz to 18 kHz               |
| Opening angle<br>at 1 kHz/4 kHz (-6 dB)           | 170° / 90°                    |
| 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          | 160 mm (6.30 in)             |
| Maximum depth     | 95 mm (3.74 in)              |
| Ceiling thickness | 9 to 25 mm (0.35 to 0.98 in) |
| Mounting cut-out  | 145 mm (5.71 in)             |
| Speaker diameter  | 101.6 mm (4 in)              |
| Weight            | 690 g (1.52 lb)              |
| Color             | White (RAL 9010)             |
| Magnet weight     | 101 g (3.57 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%                                 |

### Ordering information

#### LBC 3950/01 Ceiling Loudspeaker

Ceiling loudspeaker 6 W, circular ABS grille, integral clips for easy mounting, push terminal block, white RAL 9010.

Order number **LBC3950/01**

#### Accessories

#### LBC 1256/00 EVAC Connection Adapter

Emergency connection adapter, 3-pole screw ceramic connector with a pre-mounted thermal fuse, to be installed in series with the 100 V primary connection of a loudspeaker unit, set of 100 pieces.

Order number **LBC1256/00**