

LC3 Ceiling Loudspeaker Range

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Invented for life



- ▶ Suitable for speech and music reproduction
- ▶ Light weight ABS material
- ▶ Easy to install
- ▶ Optional back-box
- ▶ Unobtrusive design

The LC3-UC06 is a general purpose, cost-effective 6 W ceiling loudspeaker, suitable for 100 V connection with power tapping of: 6, 3 and 1.5 Watt.

The LC3-UC06-LZ is a low impedance (4 Ohm) version ceiling loudspeaker for direct connection to a low impedance amplifier output.

The optional back-box LC3-CBB fully protects the loudspeaker from dust, falling objects and prevents sound traveling via the ceiling cavity to adjacent areas. The loudspeaker frame, grill and back-box are manufactured from self-extinguishing ABS according to UL 94V0.

Certifications and approvals

All Bosch loudspeakers are designed to withstand operating at their rated power for 100 continuous 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 improved reliability under extreme conditions, leading to higher customer satisfaction, longer operating life, and lessens the chance of failure or performance deterioration.

| | |
|--------|---------------------------|
| CE | Declaration of Conformity |
| Safety | According to EN 60065 |

| Region | Certification |
|--------|---------------|
| Europe | CE |

Installation/configuration notes

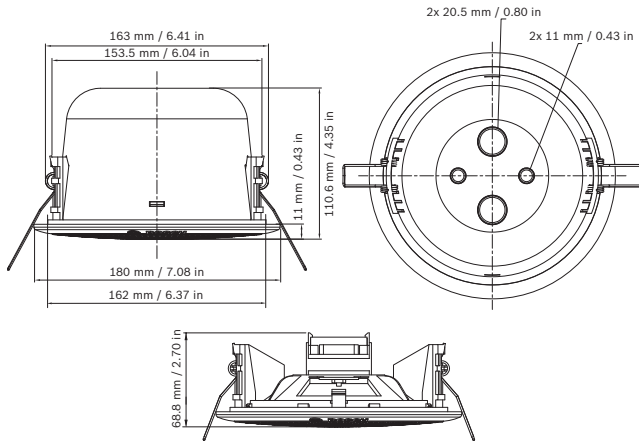
Installation is easy with integral spring arms that securely hold the ceiling loudspeaker in its cut-out. Ceilings from 5 to 25 mm thick can be accommodated. A template is also provided for accurately marking the cut-out in ceiling panels.

The electrical connection is by means of flying leads, with each color connected to a different primary tap of the matching transformer.

Three primary taps for 100 V are provided on the matching transformer to allow selection of nominal full-power, half-power and quarter-power.

The optional back-box (LC3-CBB) protects the rear of the loudspeaker from dust, falling objects, makes the unit vermin proof and prevents sound traveling via the ceiling cavity to adjacent areas.

The back-box is assembled with the loudspeaker by means of a snap-in construction and has knock-out holes for two grommets (11 mm) and for two cable glands (20.5 mm).



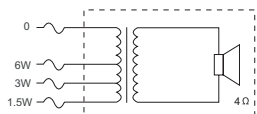
Mechanical diagram LC3-UC06 and LC3-CBB



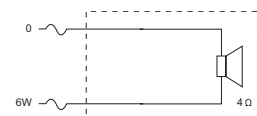
LC3-UC06 and LC3-CBB



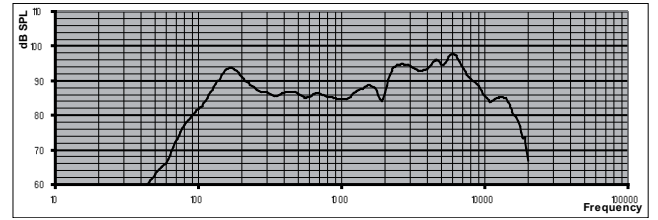
LC3-CBB



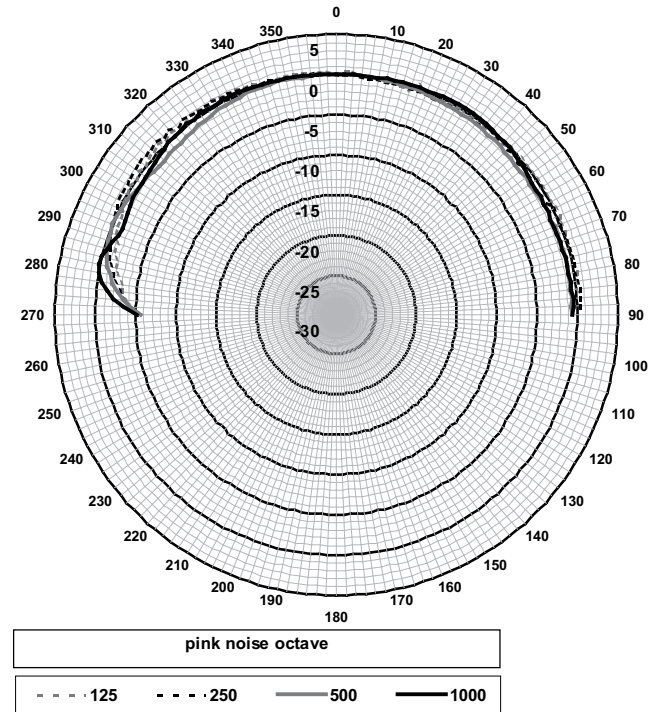
Circuit diagram LC3-UC06



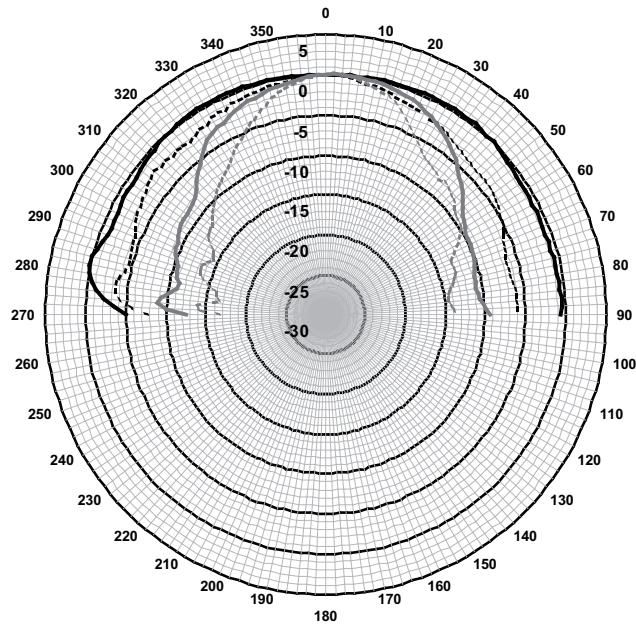
Circuit diagram LC3-UC06-LZ



Frequency response LC3-UC06



LC3-UC06 horizontal/vertical polar diagram (low frequency). Normalized at 0-degrees axis.



pink noise octave
 — 1000 - - - 2000 — 4000 - - - 8000

LC3-UC06 horizontal/vertical polar diagram (low frequency). Normalized at 0-degrees axis.

Octave band sensitivity LC3-UC06 *

| | Octave SPL 1W/1m | Total octave SPL 1W/1m | Total octave SPL Pmax/1m |
|--------------|---------------------|------------------------------|--------------------------------|
| 125 Hz | 90.7 | - | - |
| 250 Hz | 89.7 | - | - |
| 500 Hz | 86.3 | - | - |
| 1000 Hz | 85.9 | - | - |
| 2000 Hz | 91.4 | - | - |
| 4000 Hz | 94.5 | - | - |
| 8000 Hz | 93.4 | - | - |
| A-weighted | - | 89.1 | 95.9 |
| Lin-weighted | - | 89.7 | 96.7 |

Octave band opening angles LC3-UC06

| | Horizontal | Vertical |
|---------|------------|----------|
| 125 Hz | 180 | 180 |
| 250 Hz | 180 | 180 |
| 500 Hz | 180 | 180 |
| 1000 Hz | 180 | 180 |
| 2000 Hz | 180 | 180 |

| | | |
|---------|----|----|
| 4000 Hz | 85 | 85 |
| 8000 Hz | 56 | 56 |

Acoustical performance specified per octave

* (all measurements are done with a pink noise signal; the values are in dB SPL)

Parts included

| Quantity | Components |
|----------|------------------------------|
| 1 | LC3-UC06 Ceiling Loudspeaker |
| 1 | Installation Instruction |
| 1 | Ceiling cut-out template |

Technical specifications

Electrical*

| | LC3-UC06 | LC3-UC06-LZ |
|--|--|----------------------|
| Description | Ceiling loudspeaker | |
| Maximum power | 9 W | 9 W |
| Rated power | 6 W (6/3/1.5 W) | 6 W |
| Sound pressure level at 6 W power / 1 W (1 kHz, 1 m) | 94 dB / 86 dB (SPL) | 94 dB / 86 dB (SPL) |
| Sound pressure level at 6 W power / 1 W (4 kHz, 1 m) | 103 dB / 95 dB (SPL) | 103 dB / 95 dB (SPL) |
| Opening angle at 1 kHz / 4kHz (-6 dB) | 180° / 85° | 180° / 85° |
| Effective frequency range (-10 dB) | 90 Hz to 20 kHz | 90 Hz to 20 kHz |
| Rated voltage | 100 V | 4.9 V |
| Rated impedance | 1667 Ohm | 4 Ohm |
| Electrical connection | Flying leads: Length is 150 mm (5.90 in) | |

*Technical performance according to IEC 60268-5

Mechanical

| | LC3-UC06 | LC3-UC06-LZ |
|------------------------|------------------------------|------------------------------|
| Description | Ceiling Loudspeaker | |
| Diameter | 180 mm (7.08 in) | 180 mm (7.08 in) |
| Mounting cut-out | 167 mm (6.57 in) | 167 mm (6.57 in) |
| Max. ceiling thickness | 5 to 25 mm (0.19 to 0.98 in) | 5 to 25 mm (0.19 to 0.98 in) |
| Maximum depth | 59 mm (2.32 in) | 59 mm (2.32 in) |

| | | |
|--------------------------------|------------------|------------------|
| Material (frame, front grille) | ABS | ABS |
| Weight | 475 g (1.04 lb) | 337 g (0.74 lb) |
| Color | White (RAL 9010) | White (RAL 9010) |

| | |
|---------------|-------------------|
| | LC3-CBB |
| Description | Back-Box |
| Diameter | 148 mm (5.82 in) |
| Maximum depth | 96.3 mm (3.79 in) |
| Material | ABS |
| Weight | 110 g (0.24 lb) |
| Color | White (RAL 9010) |

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

LC3-UC06 Ceiling Loudspeaker

Ceiling loudspeaker 6 W, circular ABS grille and frame, ceiling mounted by 2 integral spring arms, white RAL 9010.

Order number **LC3-UC06**

LC3-UC06-LZ Ceiling Loudspeaker

Ceiling loudspeaker 6 W, low impedance (4 ohm) version, circular ABS grille and frame, ceiling mounted by 2 integral spring arms, white RAL 9010.

Order number **LC3-UC06-LZ**

Accessories

LC3-CBB Back Box

Back box for LC3 ceiling speakers, fully protects the loudspeaker from dust and dripping water, makes the unit vermin proof and prevents sound traveling via the ceiling cavity to adjacent areas, white RAL 9010.

Order number **LC3-CBB**

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