

LC5-WC06E4 Ceiling loudspeaker, 6W, ABS, 2"



The LC5-WC06E4 is an extreme compact ceiling loudspeaker, suitable for speech and background music reproduction. The design of the front grille perfectly matches with current available recessed luminaires, integrating light and sound.

The optional back-box LC5-CBB fully protects the rear of the loudspeaker from dust and dripping water from above, making the combination IP 44 protected.

The loudspeaker frame, grille and back-box are manufactured from self-extinguishing ABS according to UL 94 V 0.

This ceiling loudspeaker is suitable for use in low ceiling applications with low noise level. The small driver used in the unit stands for delivering good sound quality from a small sized unit and provides a wide opening angle for the important frequency octaves. Fewer loudspeakers are needed to cover a given area, and the noticeable "fading" that occur as a listener walks from one loudspeaker to another area is eliminated.

The loudspeaker (with assembled back-box) is suitable for use in humidity-, chlorine- and salty environments.

Regulatory information

Quality assurance

All Bosch loudspeakers are designed to withstand operating at their rated power for 100 hours in accordance with IEC 60268-5 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

- ▶ Suitable for speech and music reproduction
- ▶ Extreme compact size
- ▶ Suitable for use in humidity-, chlorine- and salty environments
- ▶ Selectable 70 V ,100 V and 8 Ohm input
- ▶ EN 54-24 certified

extreme conditions, leading to higher customer satisfaction, longer operating life, and lessens the chance of failure or performance deterioration.

Safety	according to IEC/EN 62368-1
Emergency*	according to EN 54-24 according to BS 5839 part 8
Water and dust protection*	according to IEC/EN 60529, IP44
Chlorine resistant*	according to IEC/EN 60068-2-60
Salt mist*	according to IEC/EN 60068-2-11

* With LC5-CBB back-box.

Installation/configuration notes

Installation is easy with two integral leaf springs that securely hold the loudspeaker in its cut-out. The integral leaf springs can be adjusted in three positions to accommodate ceiling thicknesses from 5 mm to 25 mm. The size of the ceiling cut-out opening is standardized on available 3" (76.2 mm) cutting hole saws. No tool required for fitting the loudspeaker into the ceiling cut-out.

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 screw-terminal connection blocks, thermal fuse and heat-resistant high temperature wiring.

Connections are made using two 2-way screw terminal blocks at the rear of the loudspeaker, where each incoming and outgoing conductor of the same potential can be connected to a separate terminal.

Power tapping on both 70 V and 100 V allows selection of full-power, half-power, quarter-power and eight-power radiation, and 8 Ohm.

The optional back-box (LC5-CBB) protects the rear of the loudspeaker from water and 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 on top two knock-out holes for two rubber cable grommets (11 mm/0.43"), standard supplied.

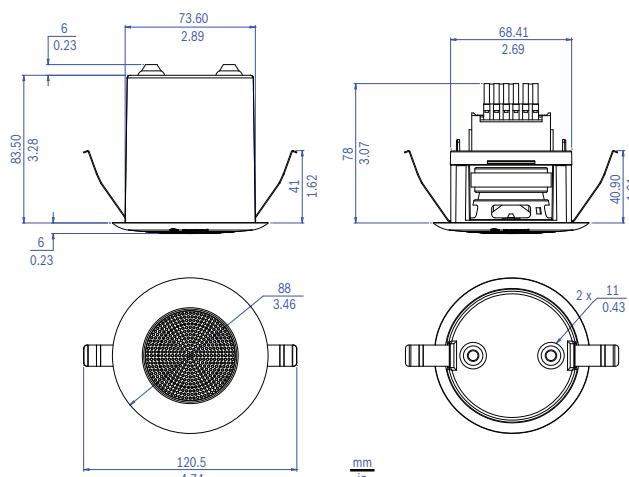


Fig. 1: Dimensions LC5-WC06E4 and LC5-CBB

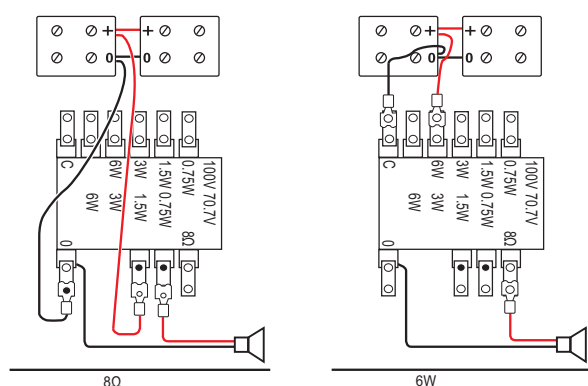


Fig. 2: Circuit diagrams 8 Ohm and 6 W connection

Parts included

Quantity	Component
1	LC5-WC06E Ceiling Loudspeaker
1	Installation Instruction

Quantity	Component
1	Ceiling cut-out template

Technical specifications

Electrical*

Maximum power (W)	9 W
Rated power (W)	6 W
Transformer taps 70 V line (W)	6 W; 3 W; 1.5 W; 0.75 W
Transformer taps 100 V line (W)	6 W; 3 W; 1.5 W; 0.75 W
Sensitivity (1 W, 1 m, 1 kHz octave) (dB)	82 dB
Sensitivity (1 W, 4 m, 100 Hz - 10 kHz) (dB), acc. EN 54-24	71 dB
Sound pressure level (rated power, 1 m, 1 kHz octave) (dB)	90 dB
Sound pressure level (rated power, 4 m, 100 Hz - 10 kHz) (dB), acc. EN 54-24	76 dB
Frequency range (-10 dB) (Hz)	85 Hz - 20,000 Hz
Coverage angle HxV (-6 dB, 500 Hz) (°)	180° x 180°
Coverage angle HxV (-6 dB, 1 kHz) (°)	180° x 180°
Coverage angle HxV (-6 dB, 2 kHz) (°)	180° x 180°
Coverage angle HxV (-6 dB, 4 kHz) (°)	180° x 180°
Rated input voltage (V)	70 V; 100 V
Rated impedance 70 V line (Ω)	833 Ω @6 W
	1666 Ω @3 W
	3333 Ω @1.5 W
	6666 Ω @0.75 W
Rated impedance 100 V line (Ω)	1666 Ω @6 W
	3333 Ω @3 W
	6666 Ω @1.5 W
	13333 Ω @0.75 W

* Technical performance data acc. to IEC 60268-5

Note:

- The specification data is measured in an anechoic chamber, mounted in an IEC-baffle.
- The reference axis is perpendicular to the center point of the front grille

- The reference plane is perpendicular to the center of the reference axis
- The horizontal plane is perpendicular to the center of the reference plane

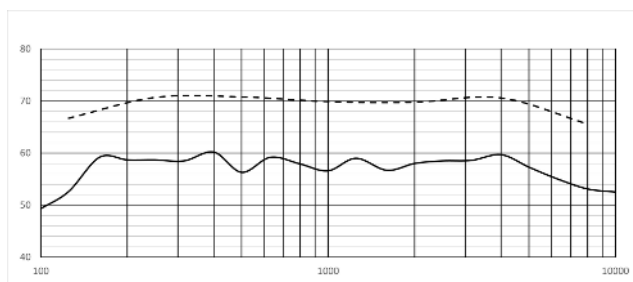


Fig. 3: Frequency response graph (— dB SPL at 4 m, (1/3)rd octave; -- dB SPL at 1 m, (1/1)th octave)

(1/1) th octave band	dB SPL at 1 m
125	66.7
250	70.7
500	70.8
1000	69.9
2000	69.8
4000	70.6

(1/3) rd octave band	dB SPL at 4 m
100	49.3
125	52.6
160	59.2
200	58.7
250	58.7
315	58.5
400	60.2
500	56.3
630	59.2
800	57.9
1000	56.6
1250	59.0
1600	56.7
2000	58.0
2500	58.5
3150	58.6
4000	59.7
5000	57.3
6300	55.0
8000	53.1
10000	52.5

(1/1) th octave band	dB SPL at 1 m
8000	65.6

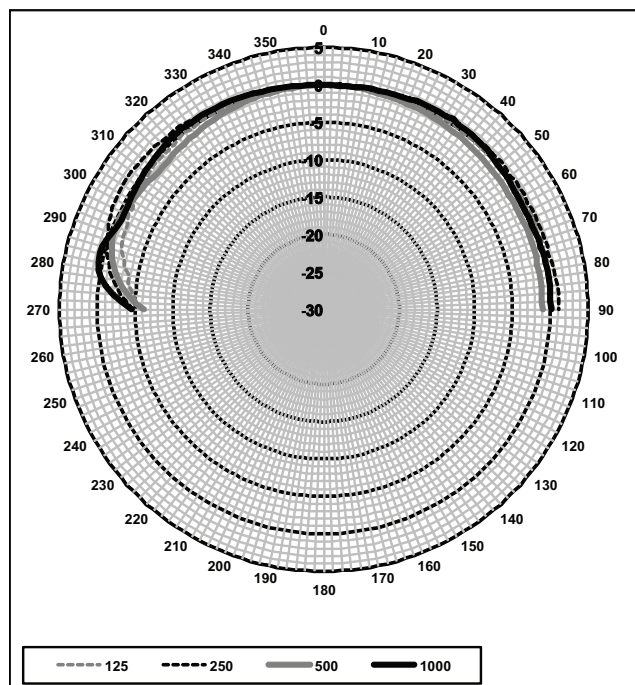


Fig. 4: Horizontal/vertical polar diagram (low frequency).
Normalized at 0-degrees axis.

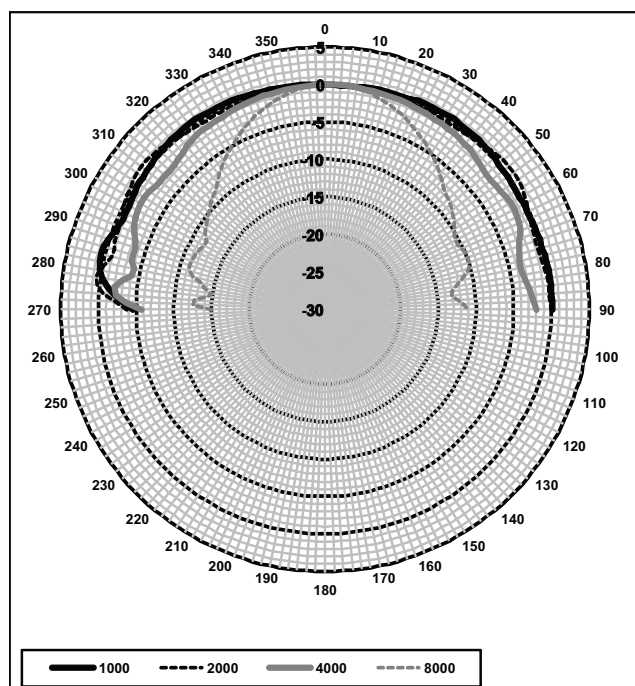


Fig. 5: Horizontal/vertical polar diagram (high frequency).
Normalized at 0-degrees axis.

Environmental

Operating temperature (°C)	-25 °C – 55 °C
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Operating temperature (°F)	-13 °F – 131 °F
Storage temperature (°C)	-40 °C – 70 °C
Storage temperature (°F)	-40 °F – 158 °F
Transportation temperature (°C)	-40 °C – 70 °C
Transportation temperature (°F)	-40 °F – 158 °F
Relative humidity	<95%

Mechanical

Color (RAL)	RAL 9003 Signal white
Connector type	Screw terminal
Wire diameter (mm)	0.50 mm
Dimensions (Ø x H) (mm)	88 mm x 89.5 mm
Weight (g)	395 g



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1438-CPR-1102

EN 54-24:2008
Loudspeaker for voice alarm systems for fire detection
and fire alarm systems for buildings
Ceiling loudspeaker LC5-WC06E4
with enclosure LC5-CBB
Type B
DoP: LP022927

Ordering information

LC5-WC06E4 Ceiling loudspeaker, 6W, ABS, 2"

Ceiling loudspeaker 6 W, circular, ABS grille, compact design,
ceiling mounted by two leaf springs, white RAL 9003.

Order number **LC5-WC06E4 | F.01U.282.353**

F.01U.425.178 Z.01X.001.423

Accessories

LC5-CBB Back box for LC5 speaker

Back box for mounting onto the LC5 loudspeaker, protects the rear of 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 9003.

Order number **LC5-CBB | F.01U.282.354**



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