

# LC5-WC06E4 Ceiling Loudspeaker

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Invented for life



- ▶ 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

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.

## Certifications and approvals

### Quality assurance

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

Safety	According to EN 60065
Water and dust protected*	According to EN 60529 IP 44
Emergency*	Compliant to BS 5839 part 8
Salt mist*	According to IEC 60068-2-11
Chlorine resistant*	According to IEC 60068-2-60

\* 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.

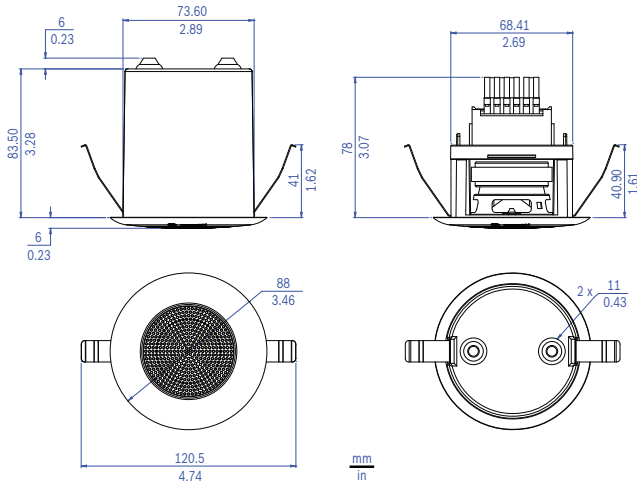
No tool required for fitting the loudspeaker into the ceiling cut-out.

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.

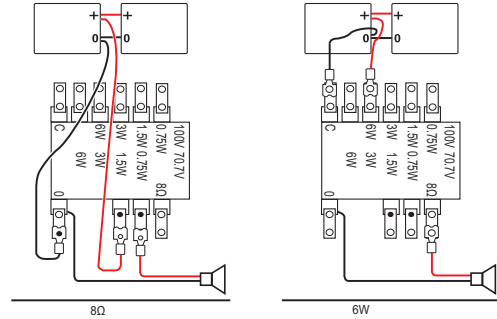
The loudspeaker has ceramic screw-terminal connection blocks, thermal fuse and heat-resistant high temperature wiring.

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.

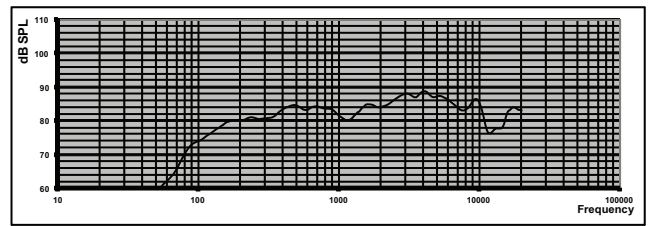
The optional back-box (LC5-CBB) protects the rear of the loudspeaker from water and dust, falling objects, makes the unit vermin proof and prevents sound traveling via the ceiling cavity to adjacent areas. The back-box is assembled with the loudspeaker by means of a snap-in construction and has on top two knock-out holes for two rubber cable grommets (11 mm/0.43"), standard supplied.



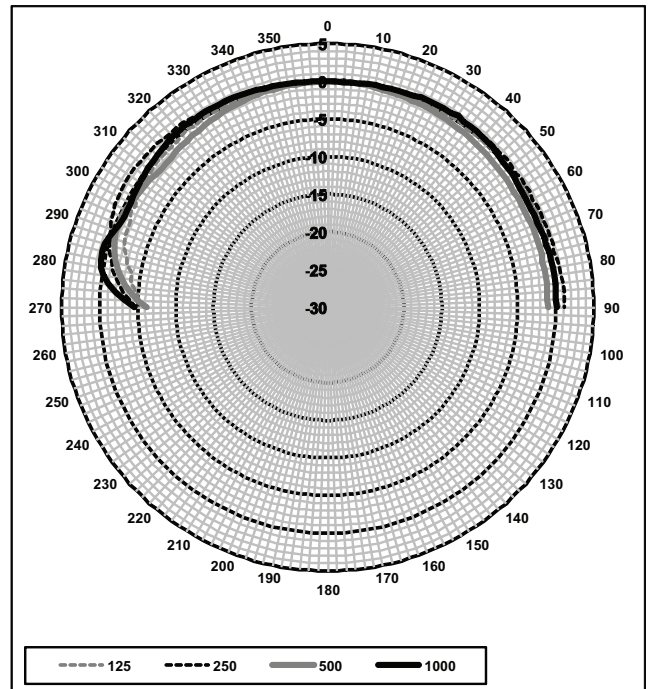
Dimensions LC5-WC06E4 and LC5-CBB



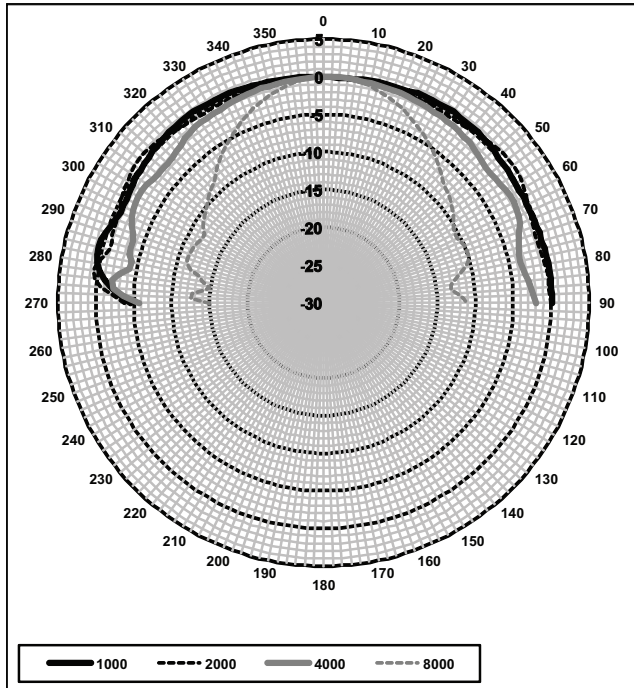
Circuit diagrams 8 Ohm and 6 W connection



Frequency response



Horizontal/vertical polar diagram (low frequency). Normalized at 0 degrees axis.



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

Octave band sensitivity \*

	Octave SPL 1W/1m	Total octave SPL 1W/1m	Total octave SPL Pmax/1m
125 Hz	77.3	-	-
250 Hz	80.8	-	-
500 Hz	83.6	-	-
1000 Hz	82.1	-	-
2000 Hz	84.8	-	-
4000 Hz	87.3	-	-
8000 Hz	84.4	-	-
A-weighted	-	82.0	88.6
Lin-weighted	-	82.5	89.4

Octave band opening angles \*

	Horizontal	Vertical	
125 Hz	180	180	
250 Hz	180	180	
500 Hz	180	180	
1000 Hz	180	180	
2000 Hz	180	180	
4000 Hz	180	180	
8000 Hz	72	72	

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	LC5-WC06E Ceiling Loudspeaker
1	Installation Instruction
1	Ceiling cut-out template

Technical specifications

Electrical\*

	LC5-WC06E4
Description	Ceiling Loudspeaker
Maximum power	9 W
Rated power	6 W (6/3/1.5/0.75W)
Sound pressure level at 6 W power / 1 W (1 kHz, 1 m)	90 dB / 82 dB (SPL)
Opening angle at 1 kHz / 4kHz (-6 dB)	180° / 180°
Effective frequency range (-10 dB)	85 Hz to 20 kHz
Rated voltage	6.93 / 70 / 100 V
Rated impedance	8 / 835 / 1667 Ohm
Electrical connection	2x two-way screw terminal block
Acceptable wire gauge	0.5 – 2 mm <sup>2</sup>

Mechanical

	LC5-WC06E4
Description	Ceiling Loudspeaker
Diameter	88 mm (3.46 in)
Mounting cut-out	76 mm (2.99 in)
Min./Max. ceiling thickness	5 to 25 mm (0.19 to 0.98 in)
Maximum depth	78 mm (3.07 in)
Material	ABS (V0)
Weight	395 g ( 0.87lb)
Color	White (RAL 9003)
	LC5-CBB
Description	Back-Box
Diameter	75 mm (2.95 in)
Maximum depth	83.5 mm (3.29 in)
Material	ABS (V0)

Weight	41 g (0.09 lb)
Color	White (RAL 9003)

### 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

#### LC5-WC06E4 Ceiling Loudspeaker

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

Order number **LC5-WC06E4**

#### LC5-CBB Back-Box

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**

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