



**BOSCH**

## **Ceiling loudspeaker**

LC4-UC06E, LC4-UC12E, LC4-UC24E



en

Installation manual



# 1 Installation

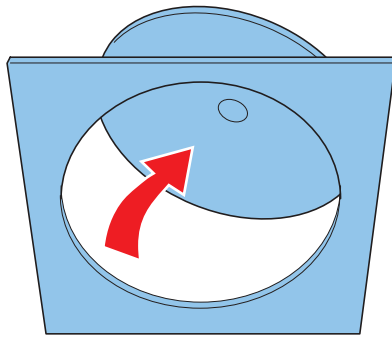


Fig. 1

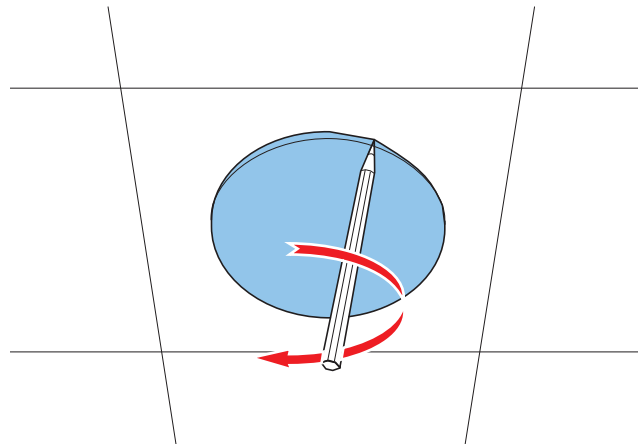


Fig. 2

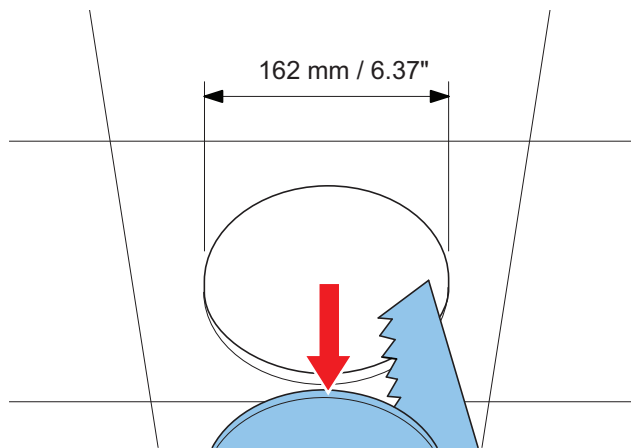


Fig. 3

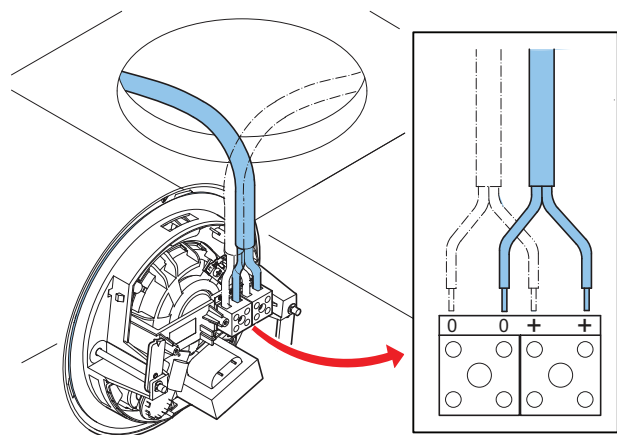


Fig. 4

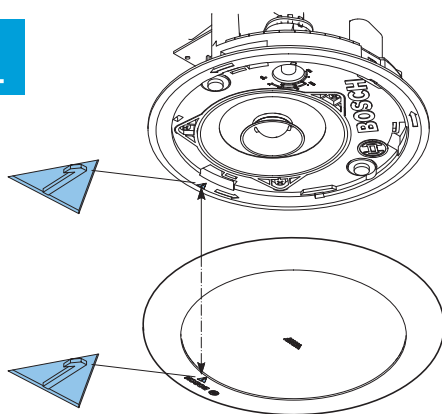


Fig. 5

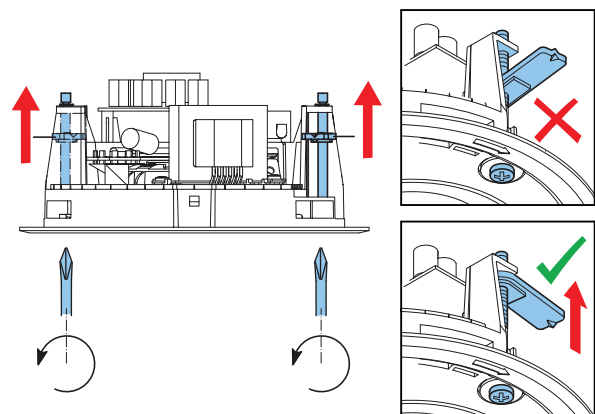


Fig. 6

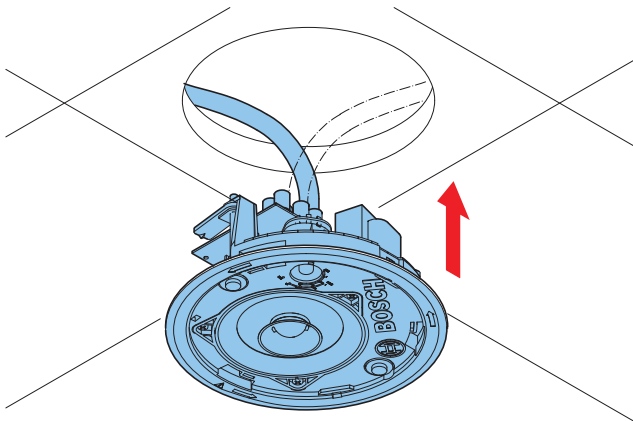


Fig. 7

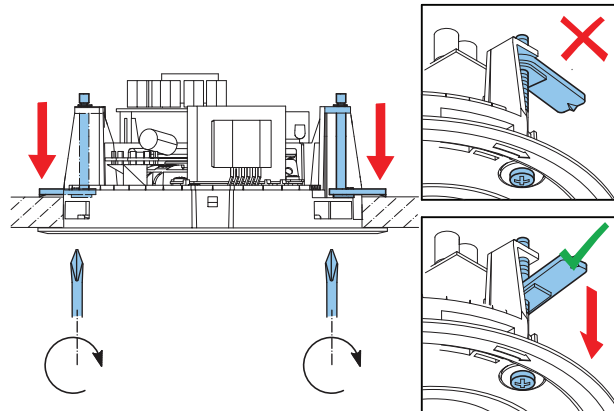


Fig. 8

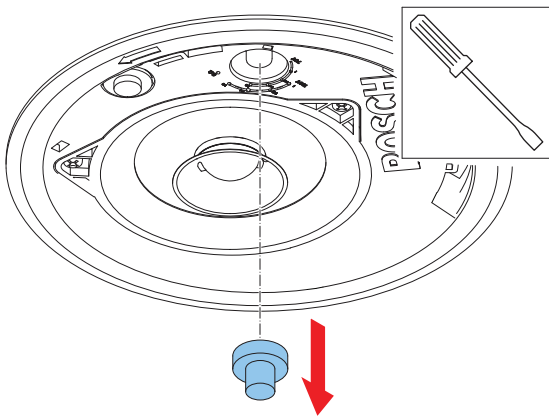


Fig. 9

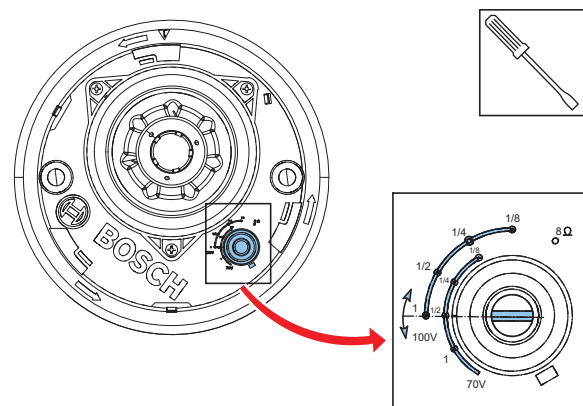


Fig. 10

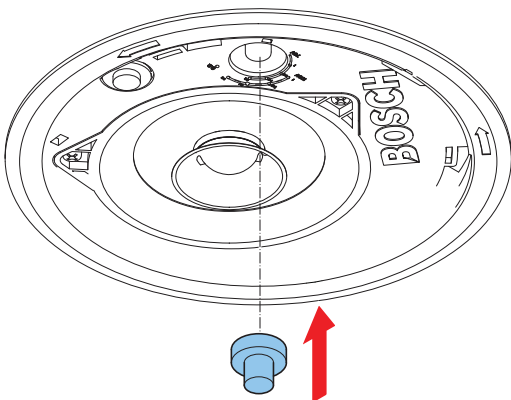


Fig. 11

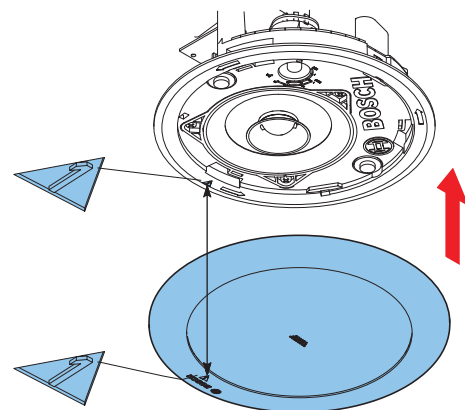
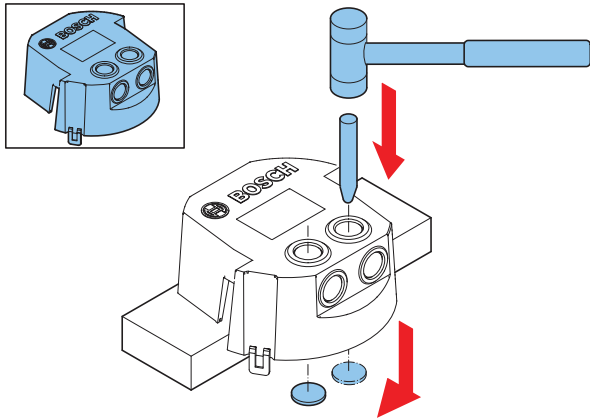
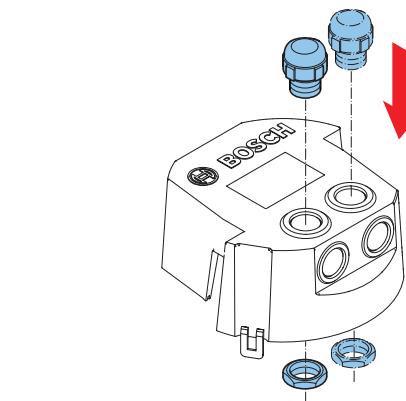


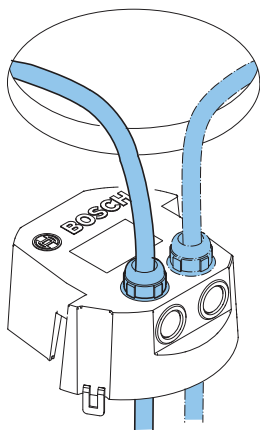
Fig. 12



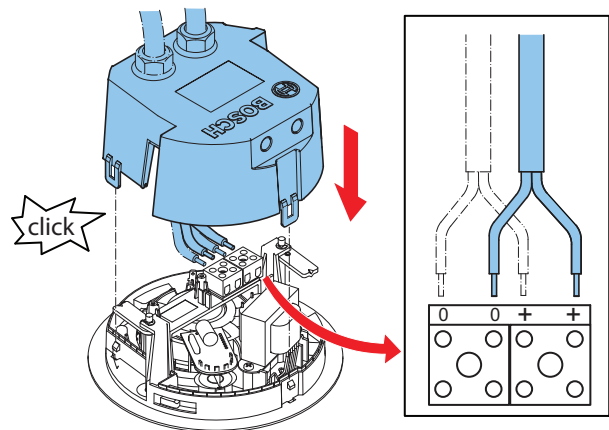
**Fig. 13**  
LC4-CBB



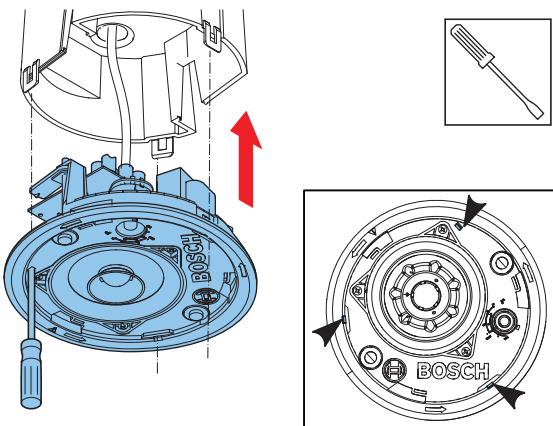
**Fig. 14**



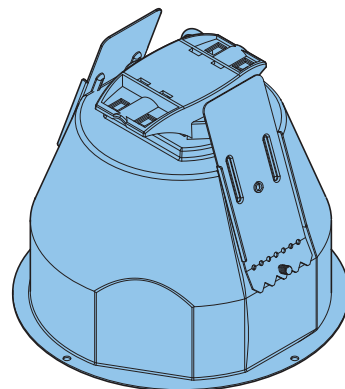
**Fig. 15**



**Fig. 16**  
Next steps: fig 5-12



**Fig. 17**



**Fig. 18**  
LC4-MFB

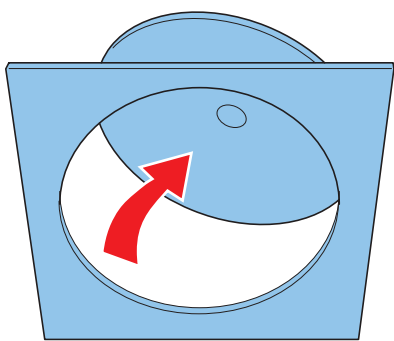


Fig. 19

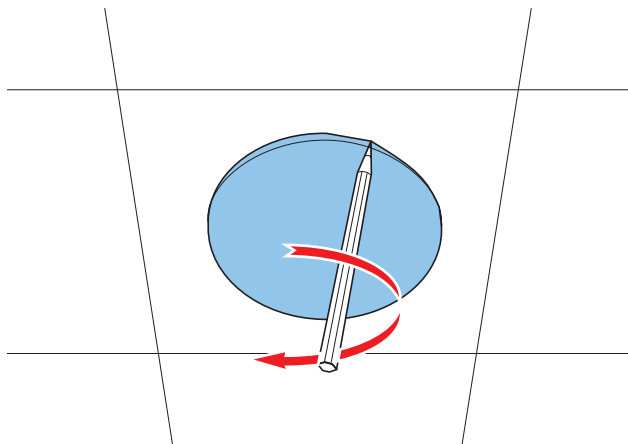


Fig. 20

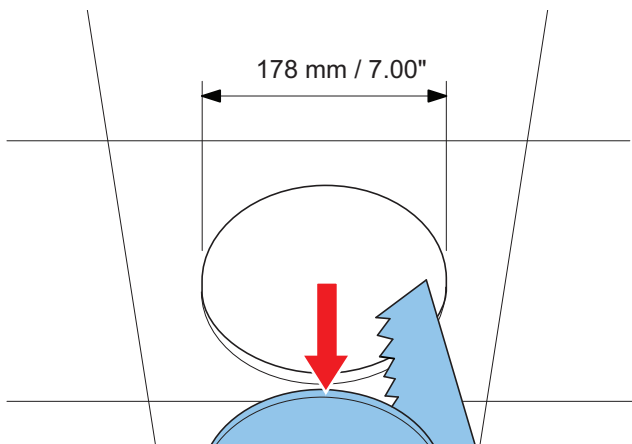


Fig. 21

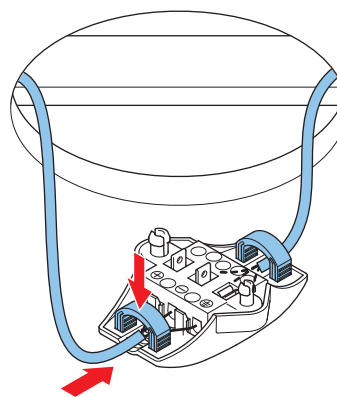


Fig. 22

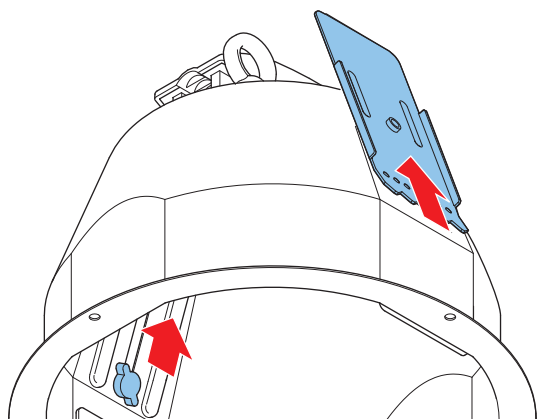


Fig. 23

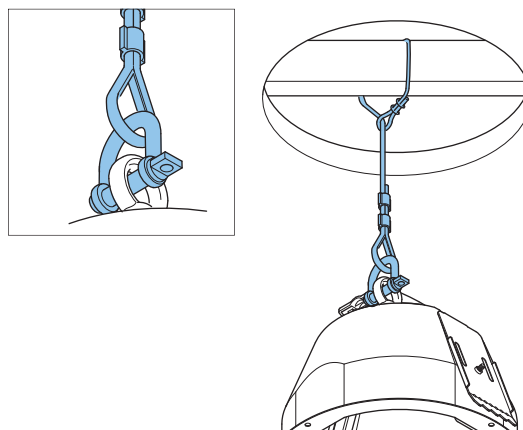


Fig. 24

Optional

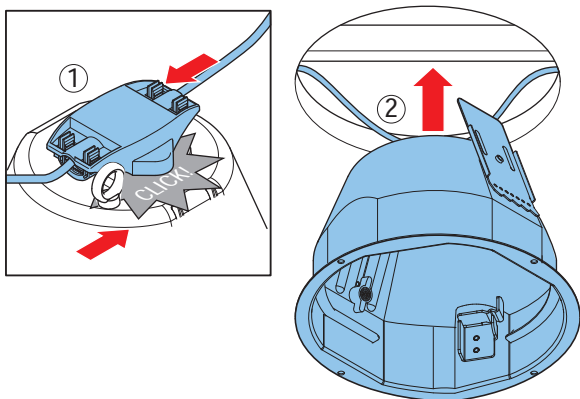


Fig. 25

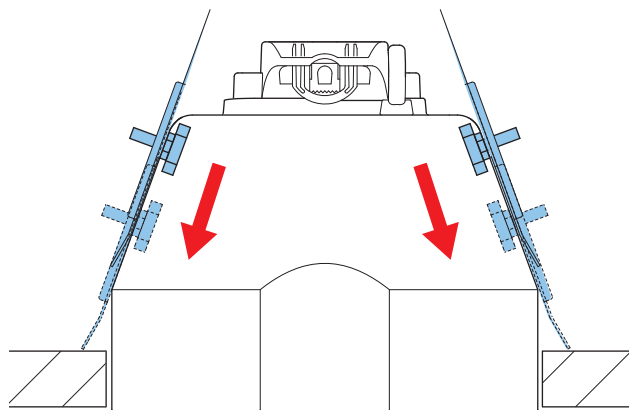


Fig. 26

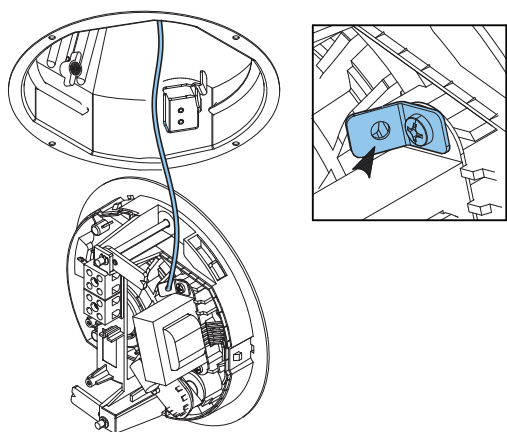


Fig. 27

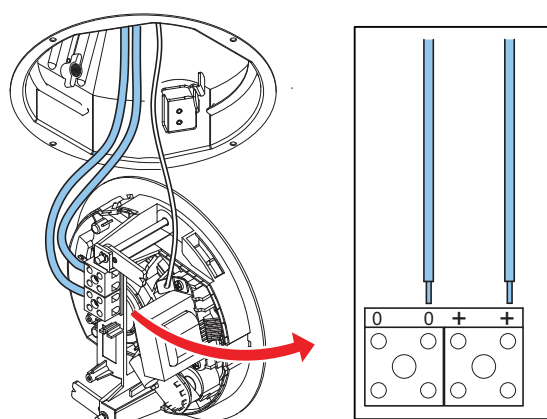


Fig. 28

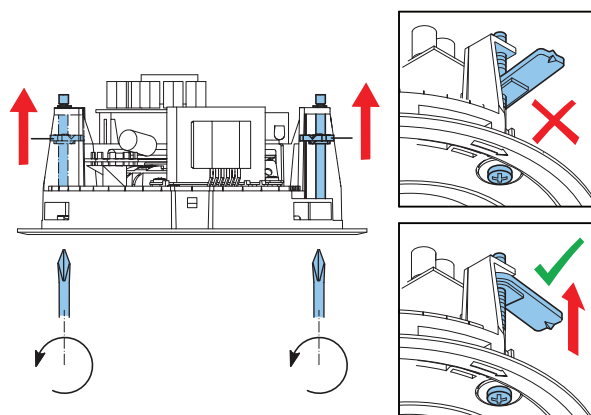


Fig. 29

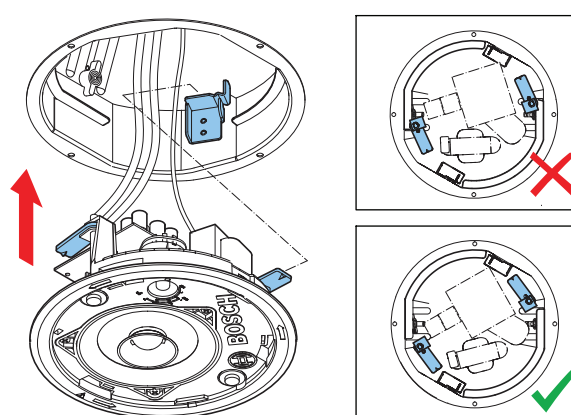


Fig. 30

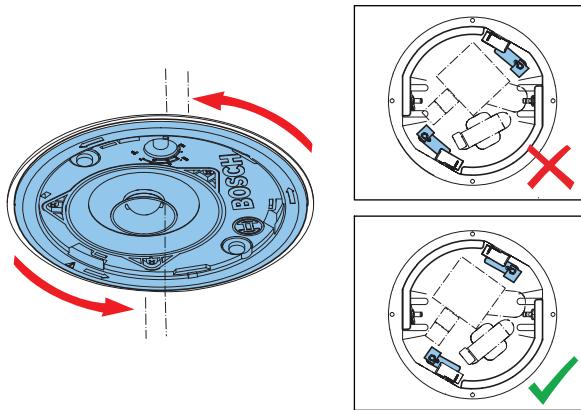


Fig. 31

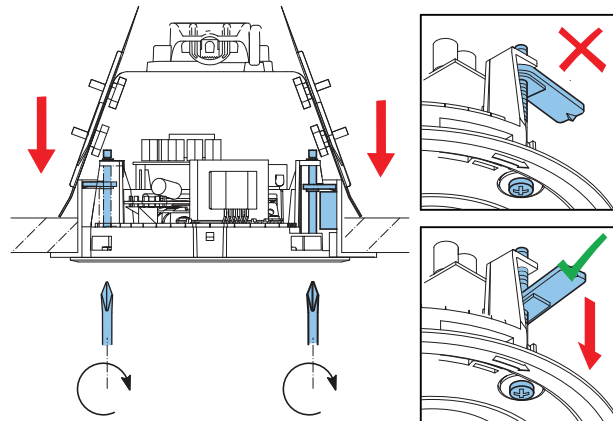
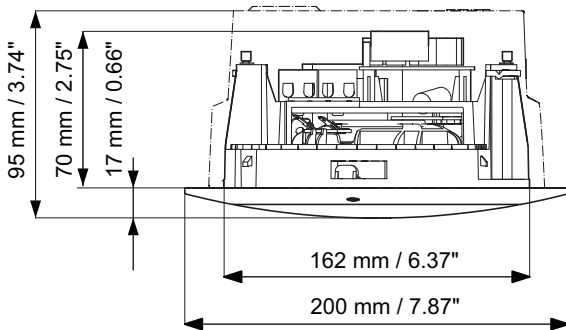
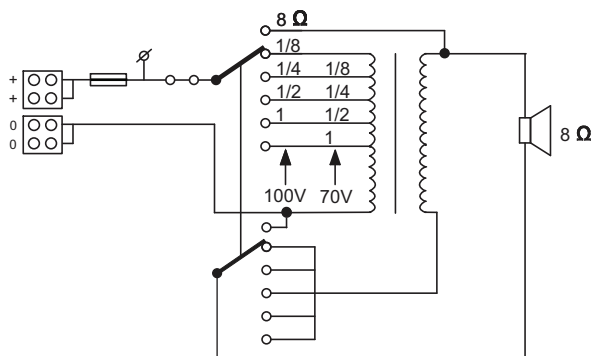
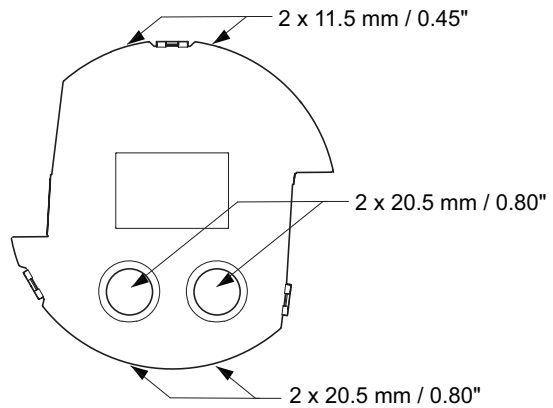


Fig. 32

Next steps: fig. 9-12

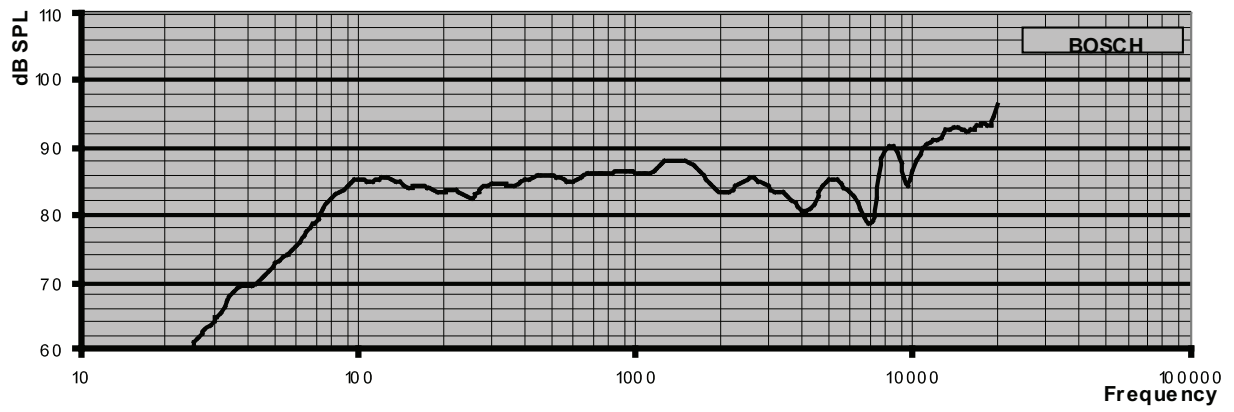


Dimensions



Circuit diagram





Frequency response

## 2 Technical specifications

### Electrical \*

	LC4-UC06E		LC4-UC12E	
Description	Ceiling loudspeaker			
Rated power	6 W (6/3/1.5/0.75W)		12 W (12/6/3/1.5W)	
Sound pressure level at 6 W power / 1 W (1 kHz, 1 m)	95 dB / 87 dB (SPL)		98 dB / 87 dB (SPL)	
Sound pressure level at rated power / 1 W (1 kHz, 4 m) (reference axis 0 degrees, free field)	84 dB / 75 dB (SPL)		86 dB / 75 dB (SPL)	
Opening angle at 1 kHz / 4kHz (-6 dB)	180° / 180° **		180° / 180° **	
Effective frequency range (-10 dB)	65 Hz to 20 kHz		65 Hz to 20 kHz	
Rated input voltage LC4-UC06E		6.93 V	70 V	100 V
Rated impedance LC4-UC06E	6 W	8 Ohm	835 Ohm	1667 Ohm
	3 W	N/A	1667 Ohm	3333 Ohm
	1.5 W	N/A	3333 Ohm	6667 Ohm
	0.75 W	N/A	6667 Ohm	13333 Ohm
Rated input voltage LC4-UC12E		9.8 V	70 V	100 V
Rated impedance LC4-UC12E	12 W	8 Ohm	418 Ohm	833 Ohm
	6 W	N/A	833 Ohm	1667 Ohm
	3 W	N/A	1667 Ohm	3333 Ohm
	1.5 W	N/A	3333 Ohm	6667 Ohm
Electrical connection	4-way screw terminal block			
Acceptable wire gauge	0.5 - 3 mm <sup>2</sup>			

	LC4-UC24E
Description	Ceiling loudspeaker
Rated power	24 W (24/12/6/3 W)
Sound pressure level at 6 W power / 1 W (1 kHz, 1 m)	101 dB / 87 dB (SPL)

Sound pressure level at rated power / 1 W (1 kHz, 4 m) (reference axis 0 degrees, free field)	88 dB / 75 dB (SPL)			
Opening angle at 1 kHz / 4kHz (-6 dB)	180° / 180° **			
Effective frequency range (-10 dB)	65 Hz to 20 kHz			
Rated input voltage LC4-UC24E		13.9 V	70 V	100 V
Rated impedance LC4-UC24E	24 W	8 Ohm	208 Ohm	416 Ohm
	12 W	N/A	416 Ohm	833 Ohm
	6 W	N/A	833 Ohm	1667 Ohm
	3 W	N/A	1667 Ohm	3333 Ohm
Electrical connection	4-way screw terminal block			
Acceptable wire gauge	0.5 - 3 mm <sup>2</sup>			

\* Technical performance according to IEC 60268-5

\*\* With mounted LC4-CBB or LC4-MFD: 80° @4 kHz

**Mechanical**

	LC4-UC06E	LC4-UC12E	LC4-UC24E
Description	Ceiling Loudspeaker		
Diameter	200 mm (7.87 in)		
Mounting cut-out	162 mm (6.38 in)		
Min./Max. ceiling thickness	5 to 50 mm (0.19 to 1.97 in)		
Maximum depth	70 mm (2.75 in)		
Material (Loudspeaker unit)	ABS (V 0)		
Material (front grille)	Steel mesh with ABS (V 0) rim		
Weight	800 g (1.77 lb)	840 g (1.86 lb)	990 g (2.18 lb)
Color (loudspeaker unit)	Black (RAL 9011)		
Color (front grille)	White (RAL 9003)		

	LC4-CBB	LC4-MFD
Description	Back-Box	Metal Fire-dome
Diameter	160 mm (6.29 in)	197 / 175 mm (7.75 / 6.88 in)
Maximum depth	78 mm (3.07 in)	156 mm (6.14 in)
Mounting cut-out	n.a.	178 mm (7.00 in)
Min./Max. ceiling thickness	n.a.	5 to 50 mm (0.19 to 1.97 in)
Material	ABS (V 0)	Steel
Weight	160 g (0.35 lb)	998 g (2.20 lb)
Color	Black (RAL 9011)	Flame red (RAL 3000)

**Environmental**

Operating temperature	-25 °C to +55 °C (-13 °F to +131 °F)
Storage and operating temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Relative humidity	<95%

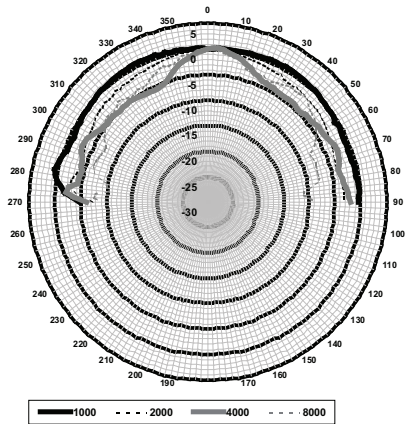
**Note:**

- The specification data is measured in an anechoic chamber, on a standard 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

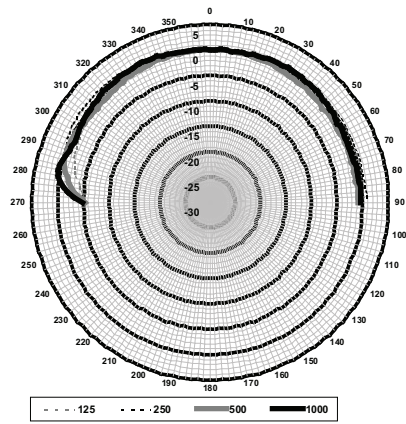
**Certification and Approvals**

Safety	According to EN 60065
Water and dust protected*	According to EN 60529 IP 21
Emergency*	Compliant to BS 5839 part 8
	According to EN 54-24
* With LC4-CBB Back-box or LC4-MFD Fire-dome	

<b>Model</b>	<b>Voltage (Vrms)</b>	<b>Tap (W)</b>	<b>Sound pressure level dB (A) at 3.1 m (10 Ft)</b>
LC-UC06E	70	6	85
	70	3	82
	70	1.5	79
	70	0.75	76
LC-UC06E	100	6	85
	100	3	82
	100	1.5	79
	100	0.75	77
LC-UC12E	70	12	88
	70	6	85
	70	3	82
	70	1.5	79
LC-UC12E	100	12	87
	100	6	85
	100	3	83
	100	1.5	80
LC-UC24E	70	24	90
	70	12	87
	70	6	84
	70	3	82
LC-UC24E	100	24	90
	100	12	87
	100	6	84
	100	3	82



Horizontal/Vertical polar diagram.  
Normalized at 0-degrees axis.



Horizontal/Vertical polar diagram.  
Normalized at 0-degrees axis.

 1438
Bosch Security Systems BV Torenallee 49, 5617 BA Eindhoven, the Netherlands 13 1438/CPD/0321
EN 54-24:2008  Loudspeaker for voice alarm systems for fire detection and fire alarm systems for buildings  Ceiling Loudspeaker LC4-UC06E, LC4-UC12E, LC4-UC24E and accessories LC4-CBB, LC4-MFD Type A  DoP: No. EC DoP EN54-24 LC4-UCxxE





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