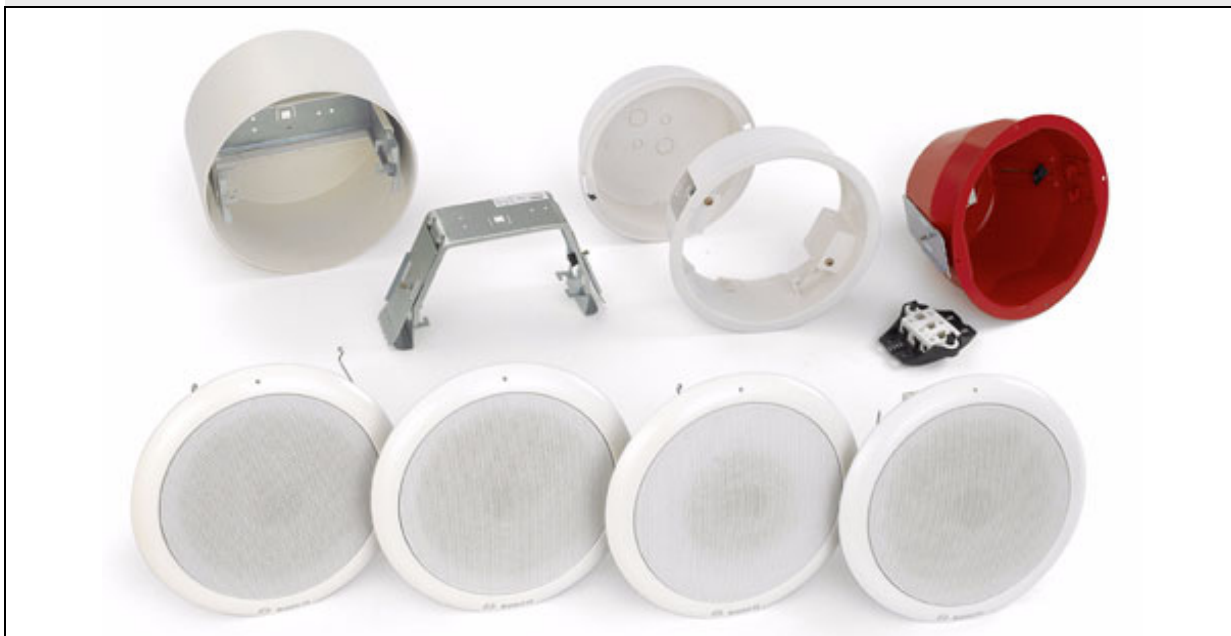


# LC1 Modular Ceiling Loudspeaker Range



en | Installation and User Instructions  
Loudspeakers



**BOSCH**



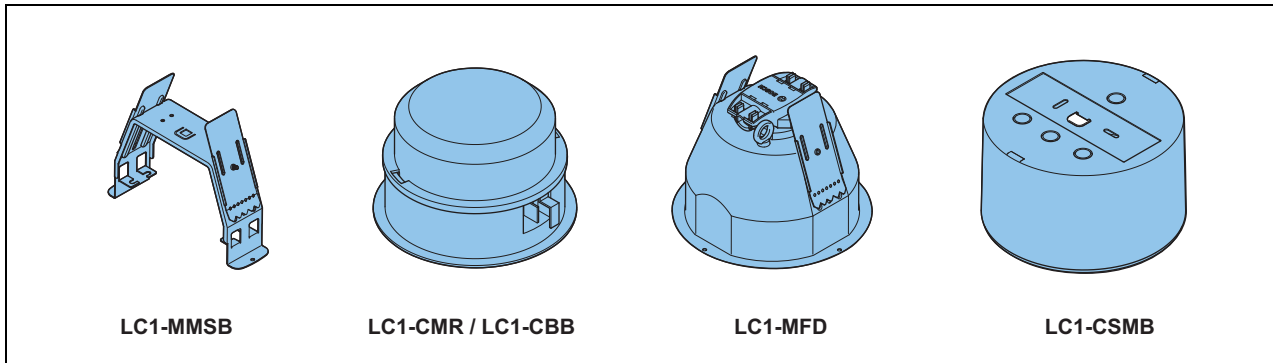
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# 1 Housings

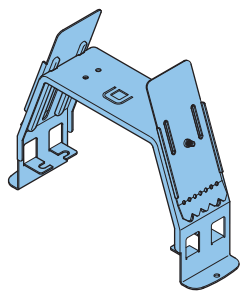
## 1.1 Overview



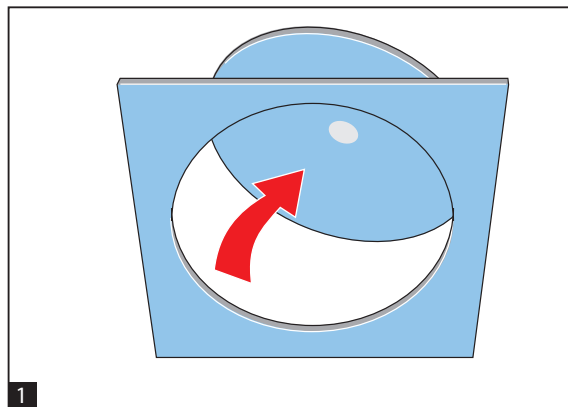
### Note

To be compliant with UL-1480 the loudspeaker must be installed with the LC1-CMR **including** LC1-CBB or LC1-MFD or LC1-CSMB.

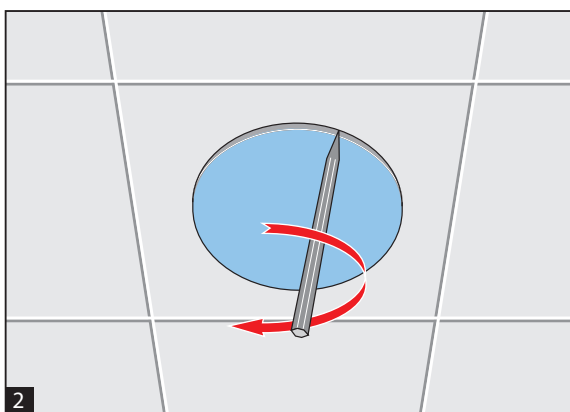
## 1.2 LC1-MMSB



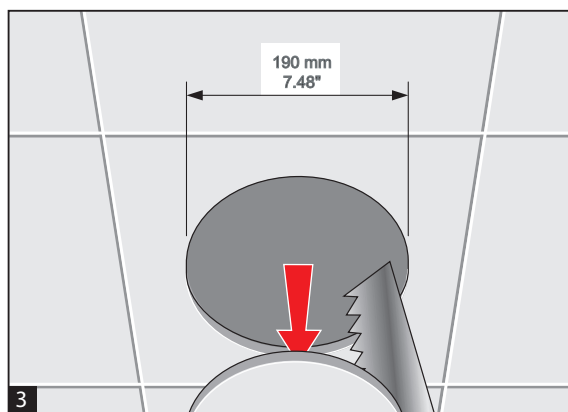
LC1-MMSB



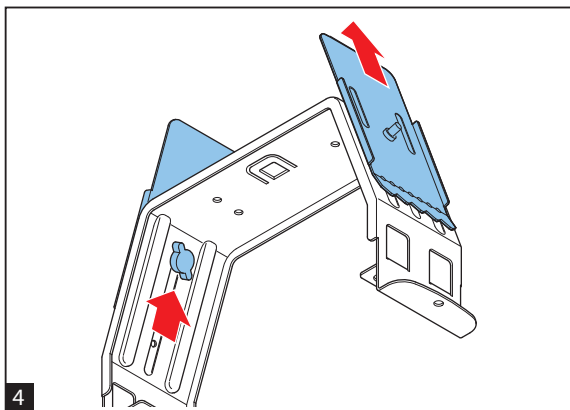
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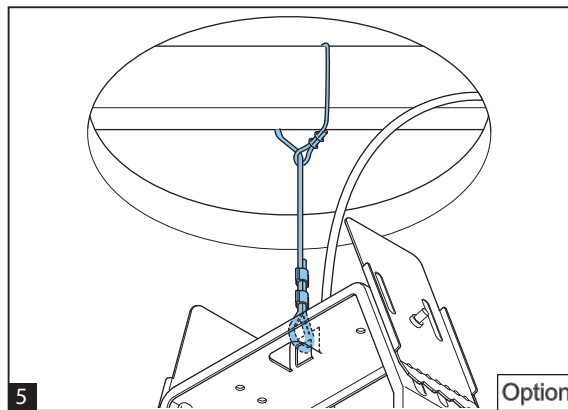
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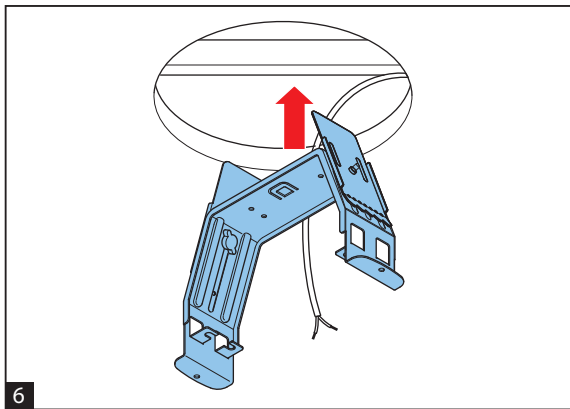
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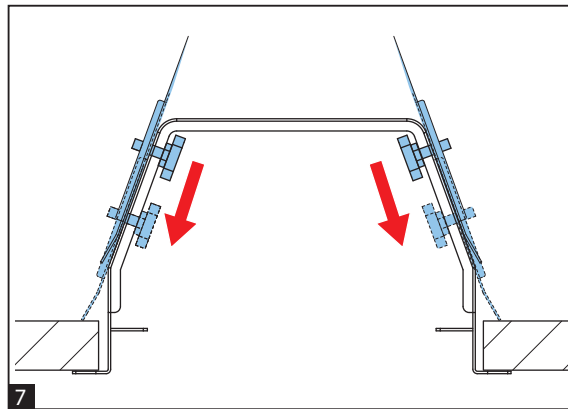
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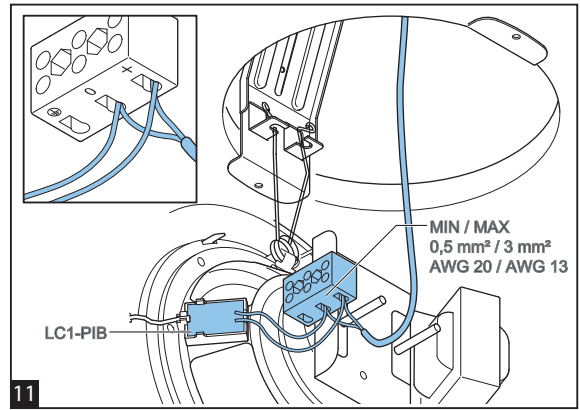
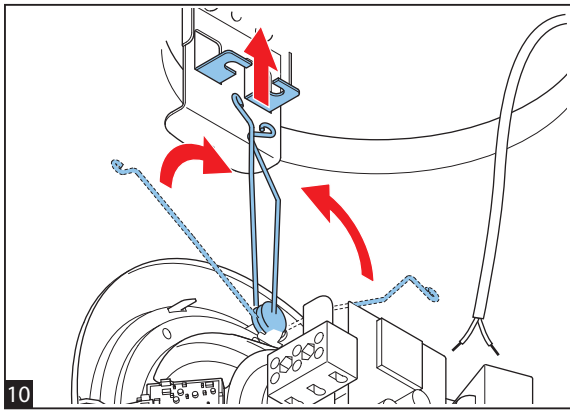
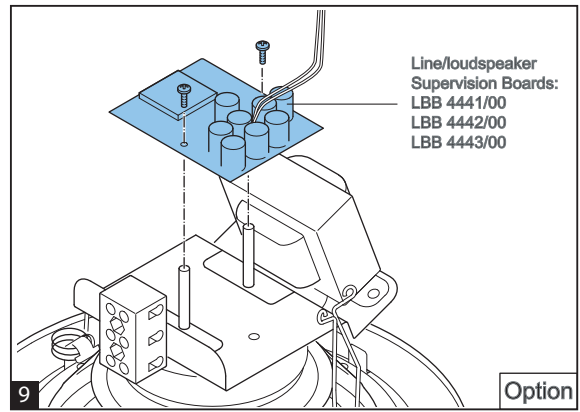
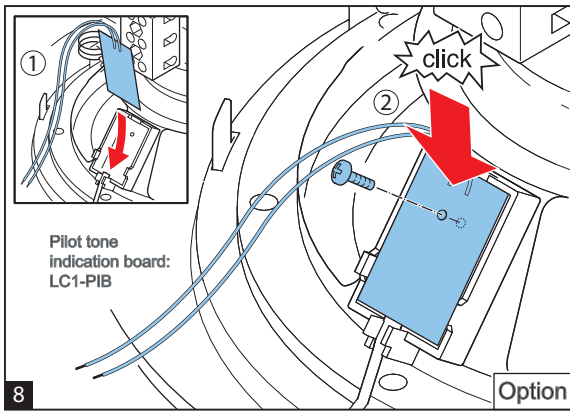
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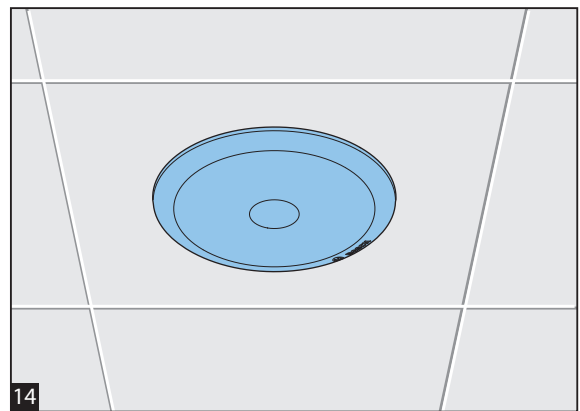
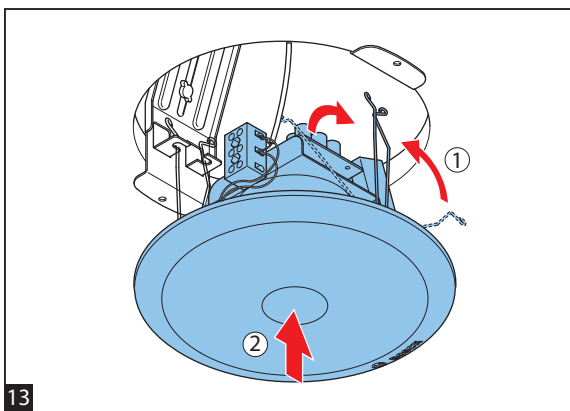
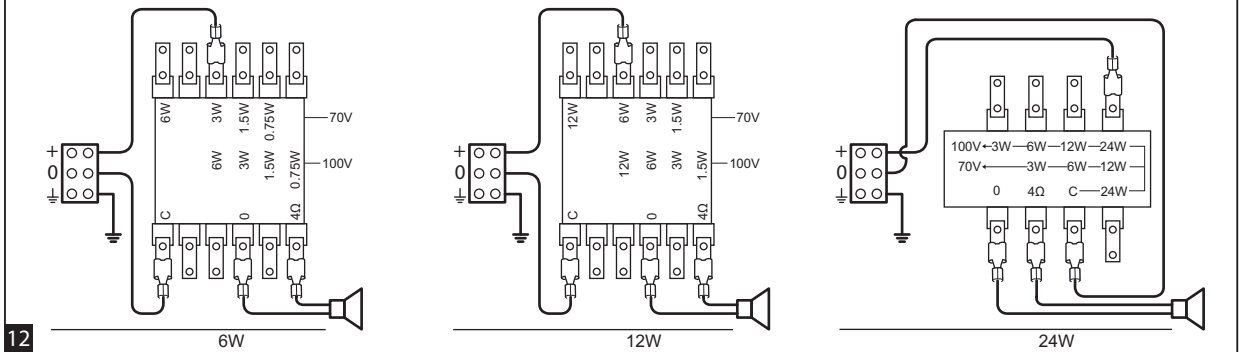
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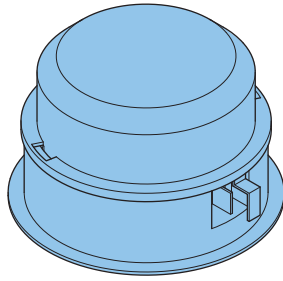
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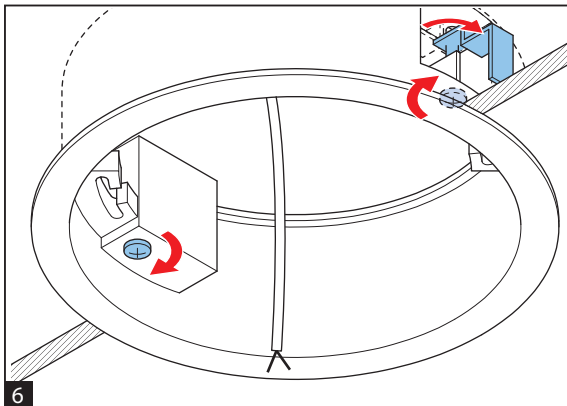
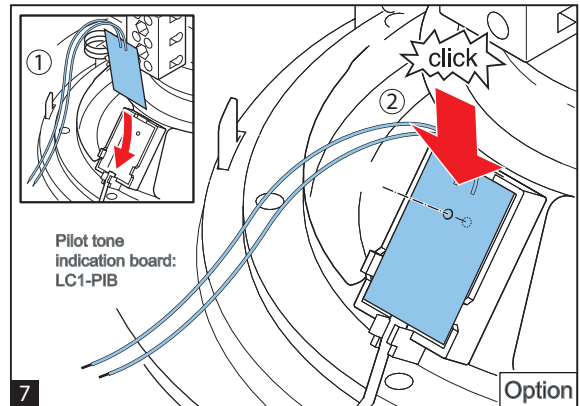
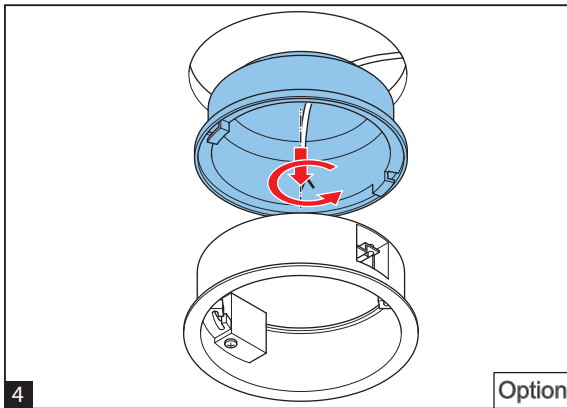
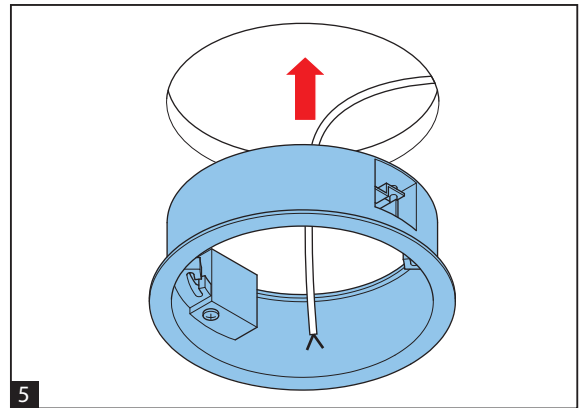
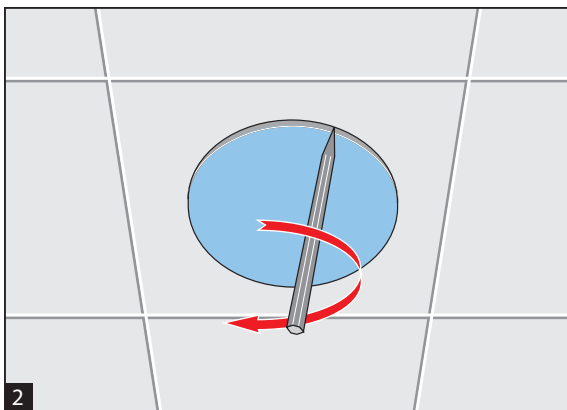
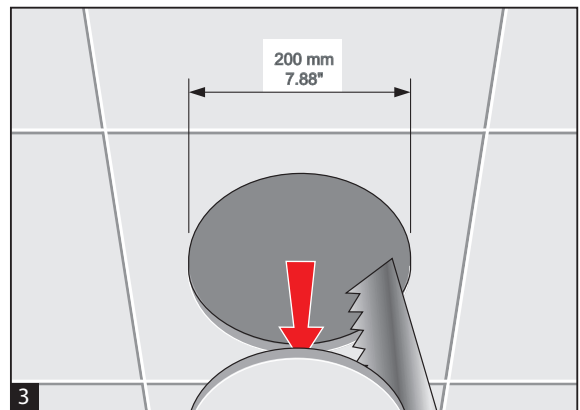
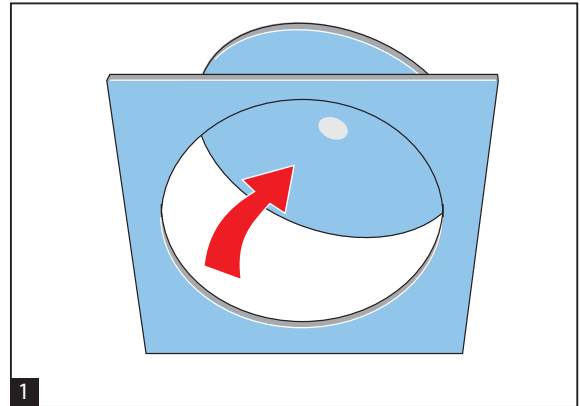
**i** Standard connected to rated power at 100V



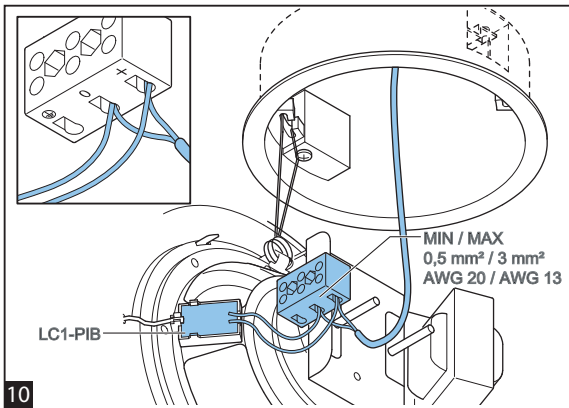
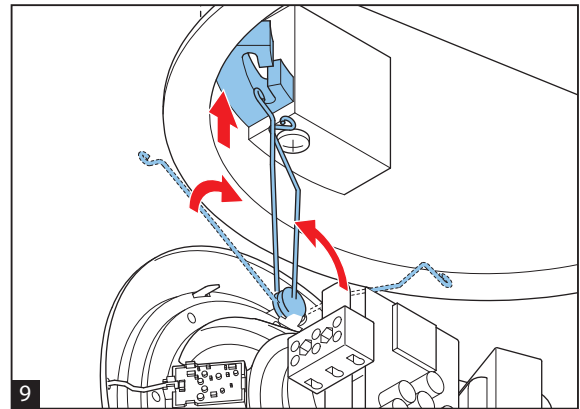
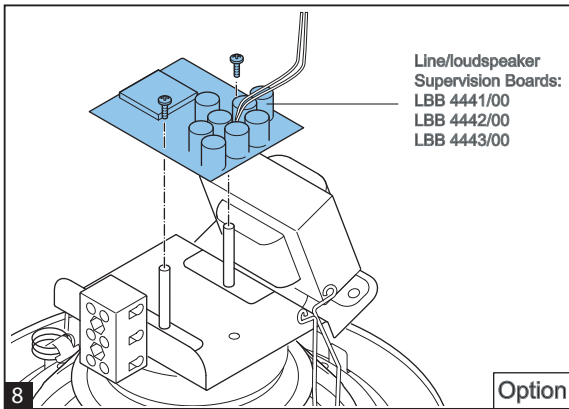
### 1.3 LC1-CMR / LC1-CBB



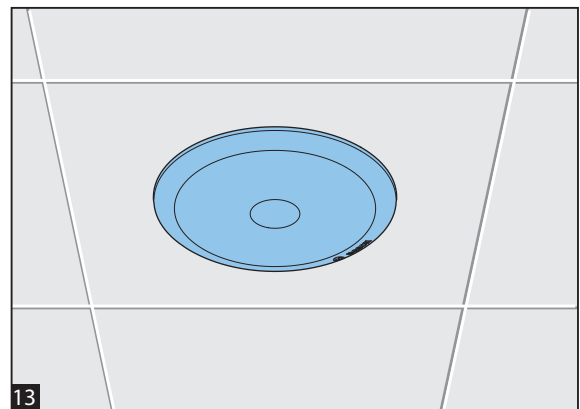
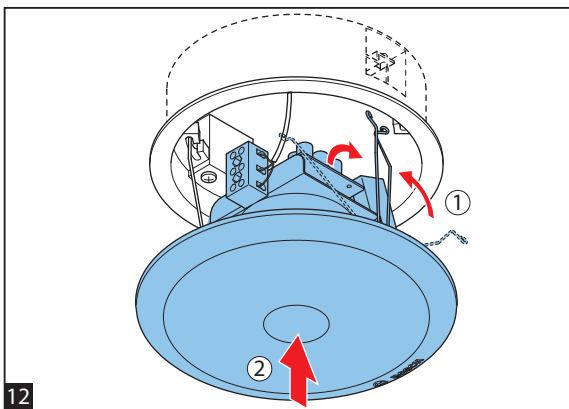
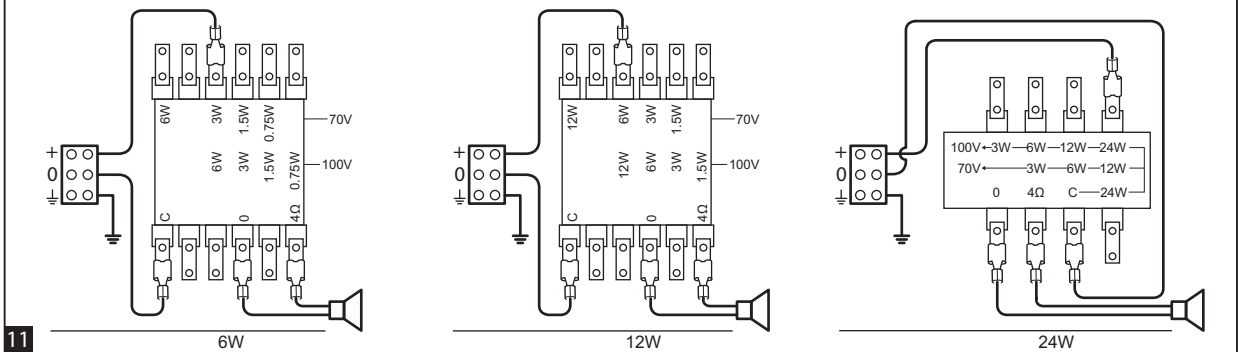
LC1-CMR / LC1-CBB



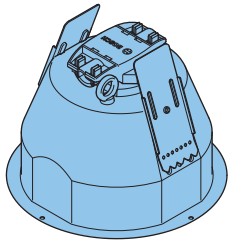




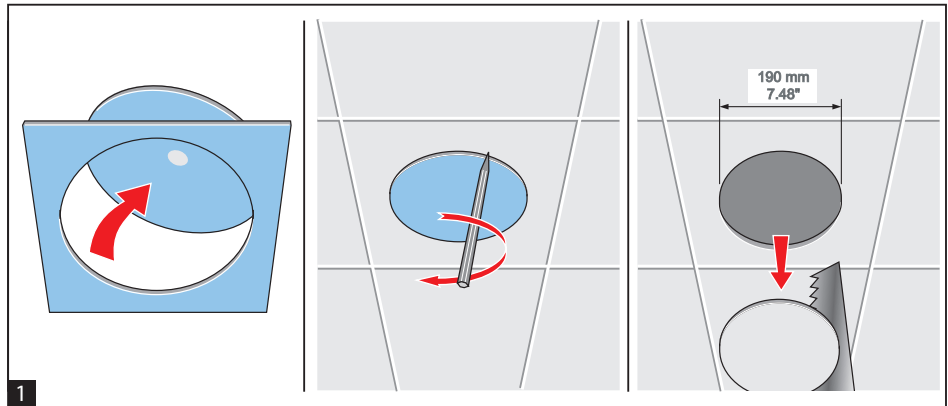
**i** Standard connected to rated power at 100V



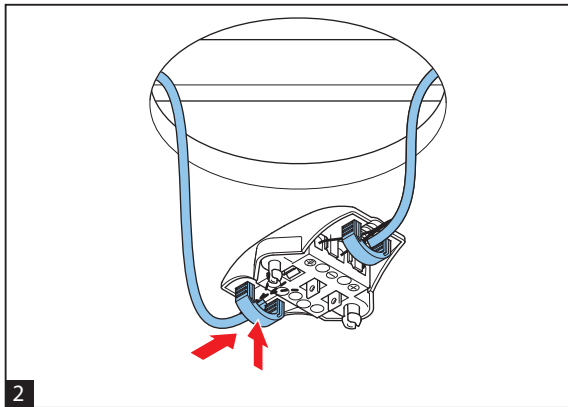
### 1.4 LC1-MFD



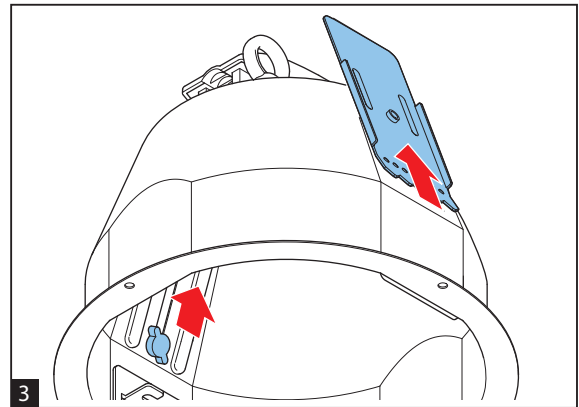
LC1-MFD



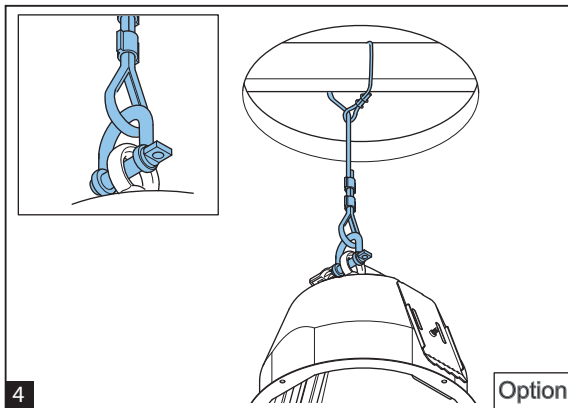
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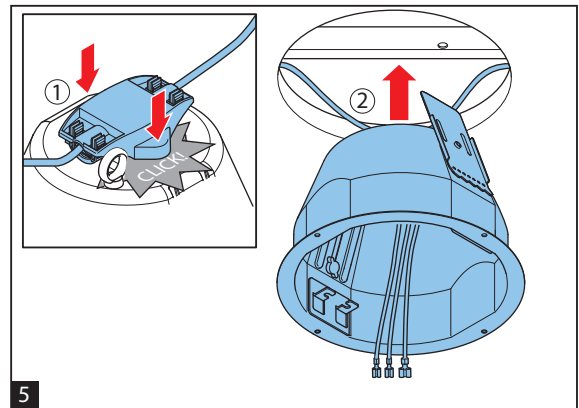


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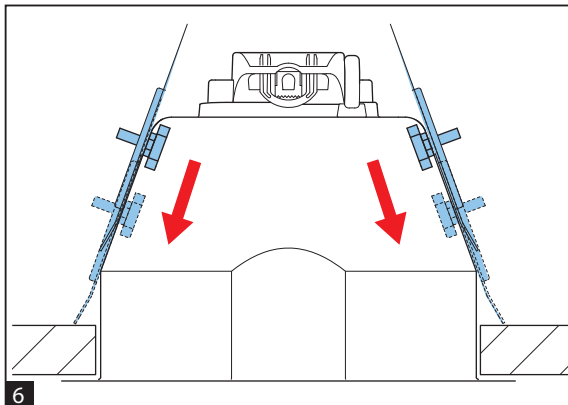


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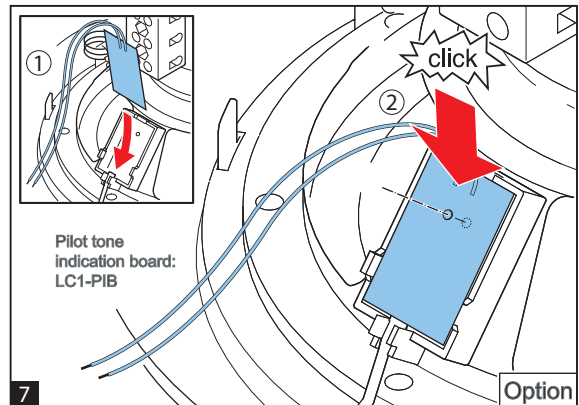
Option



5

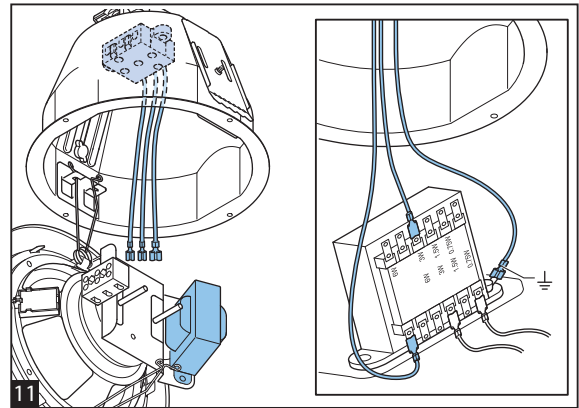
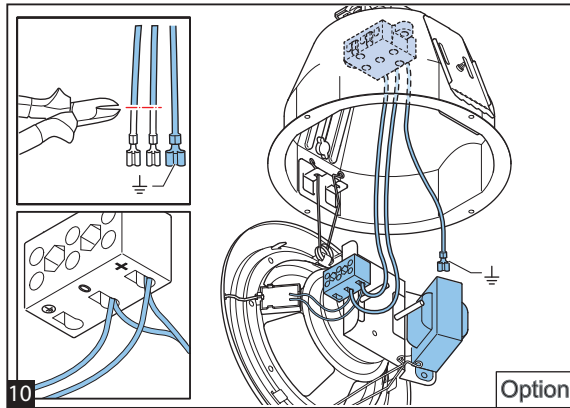
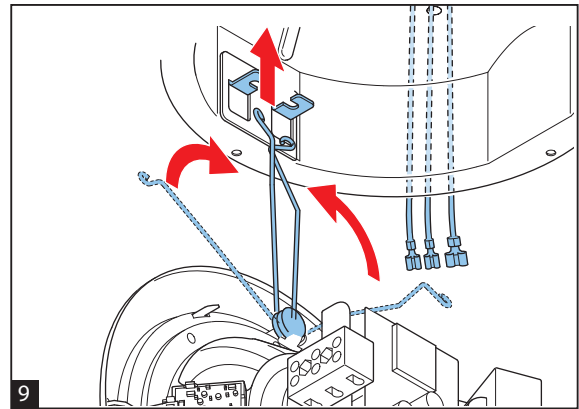
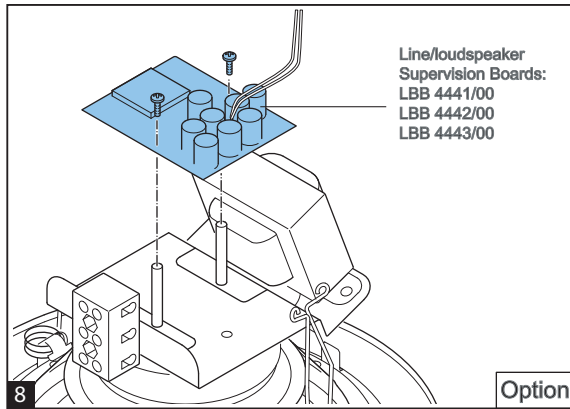


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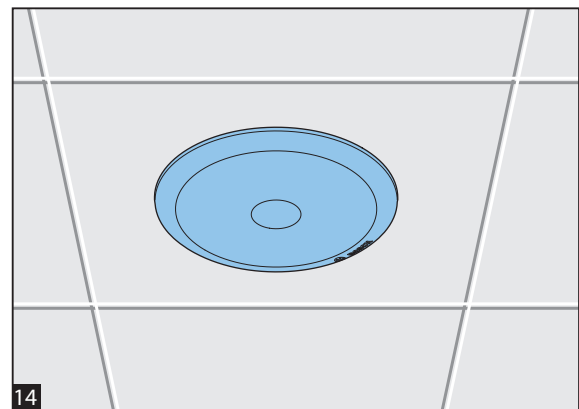
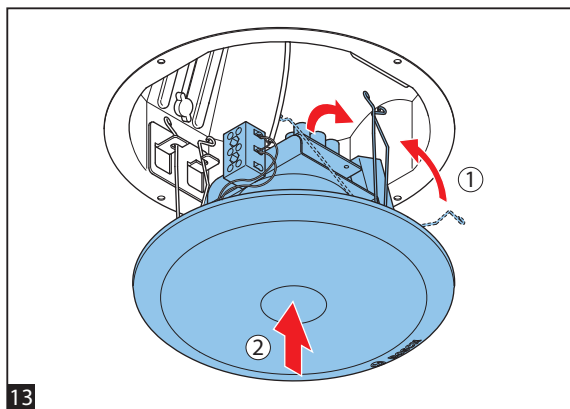
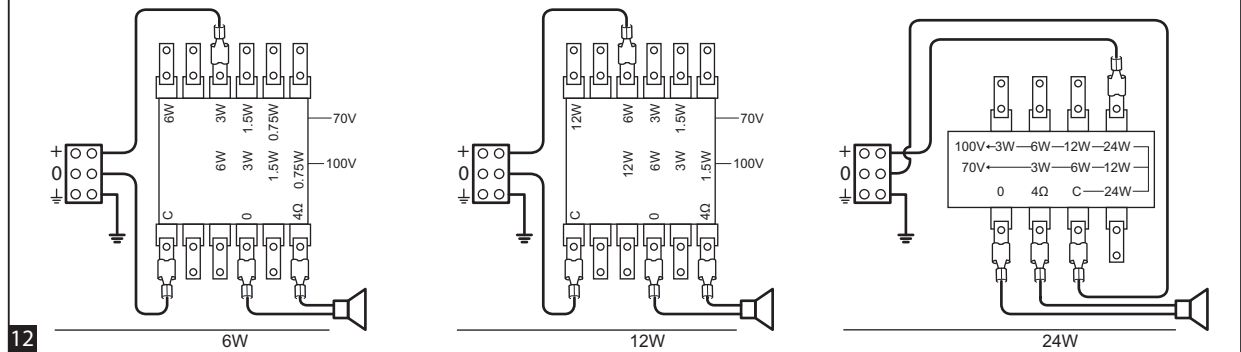


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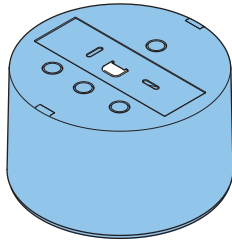
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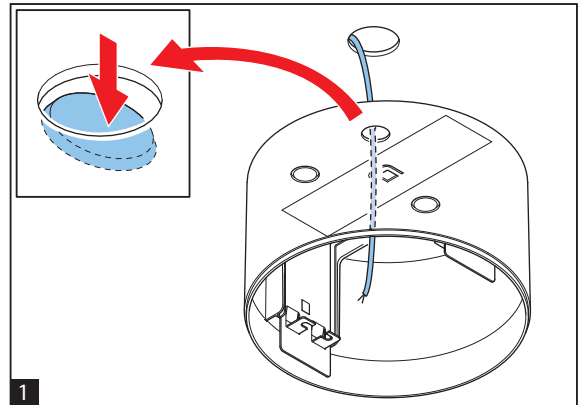
**i** Standard connected to rated power at 100V



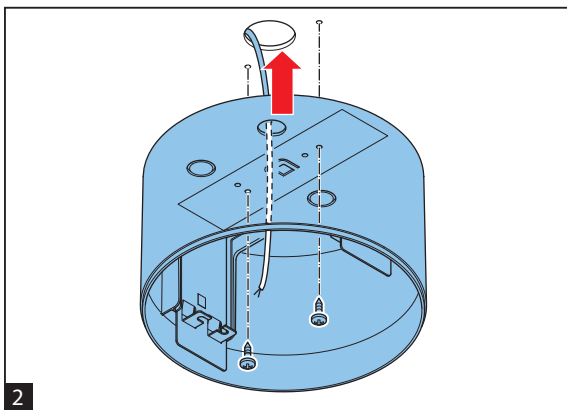
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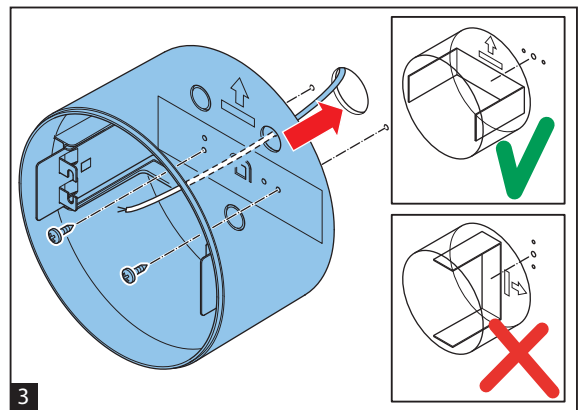
LC1-CSMB



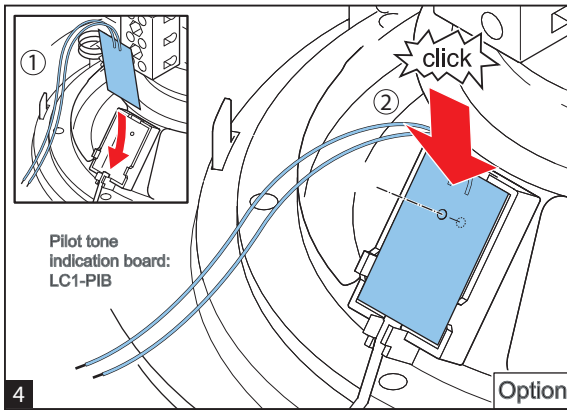
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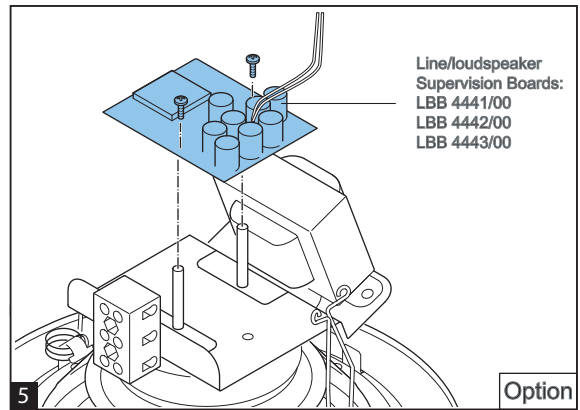


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4

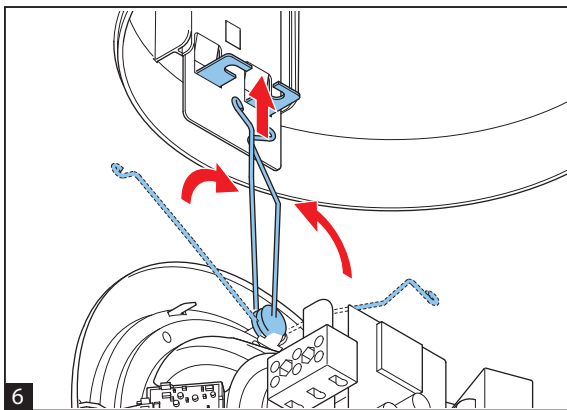
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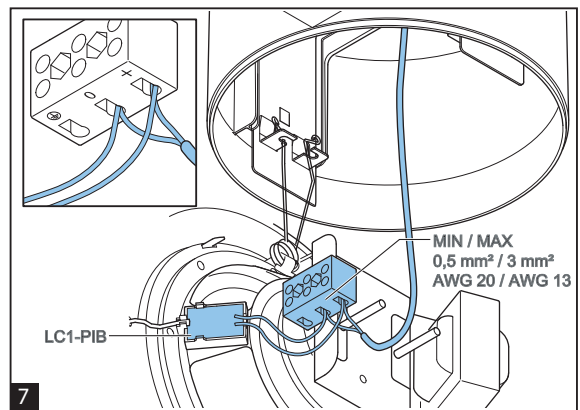
5

Option

Line/loudspeaker  
Supervision Boards:  
LBB 4441/00  
LBB 4442/00  
LBB 4443/00



6

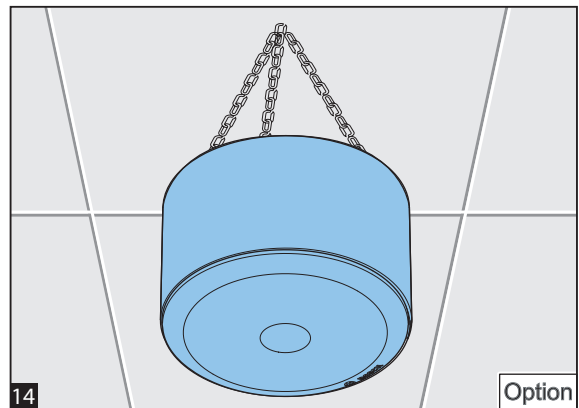
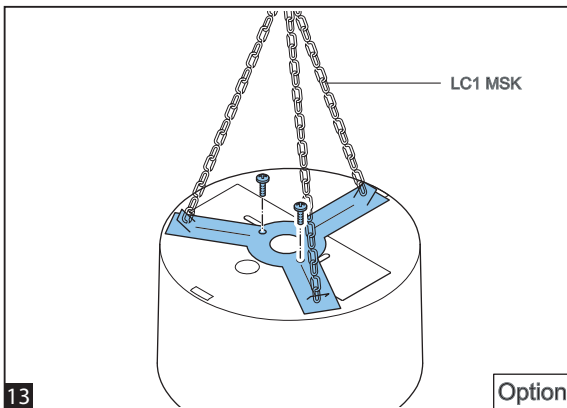
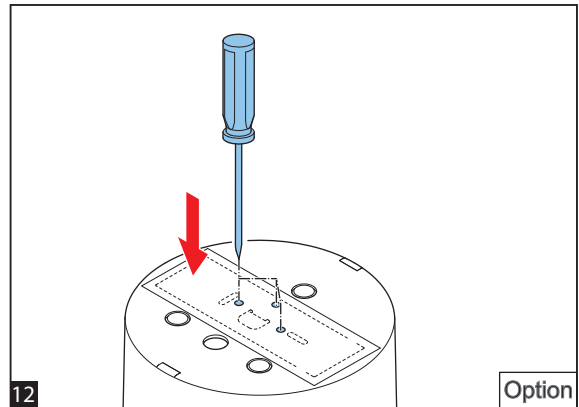
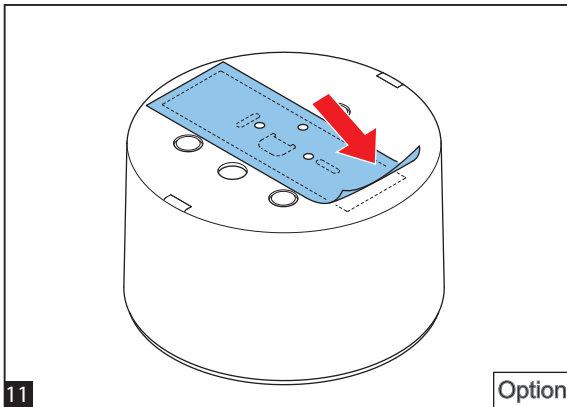
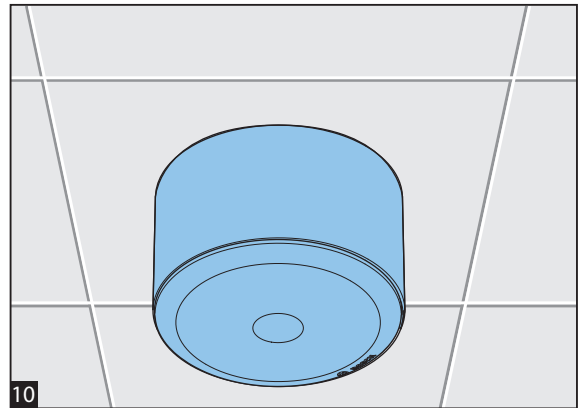
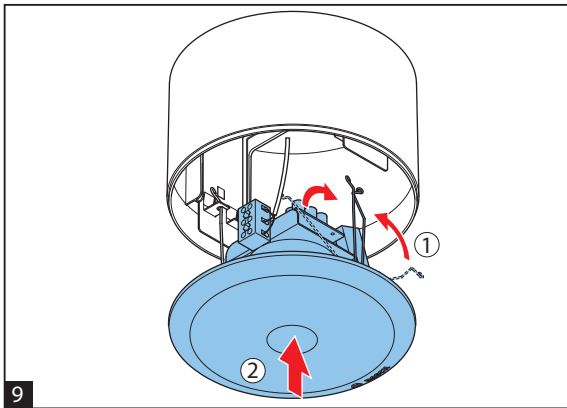
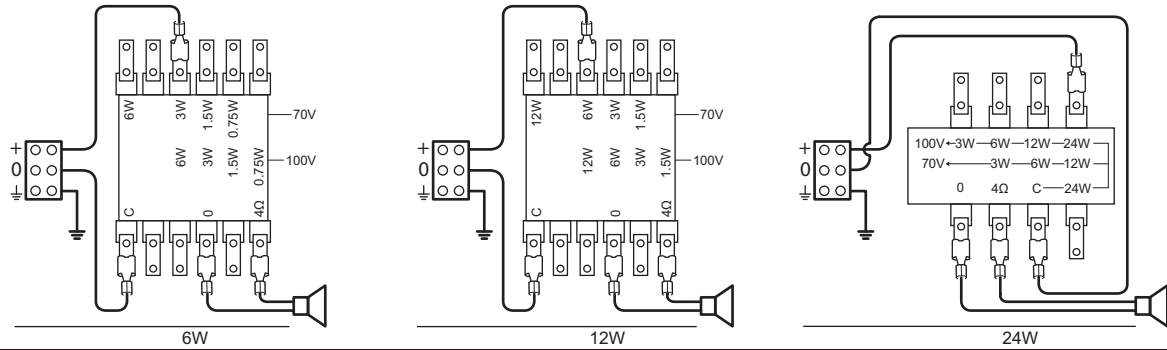


7

MIN / MAX  
0,5 mm² / 3 mm²  
AWG 20 / AWG 13

LC1-PIB

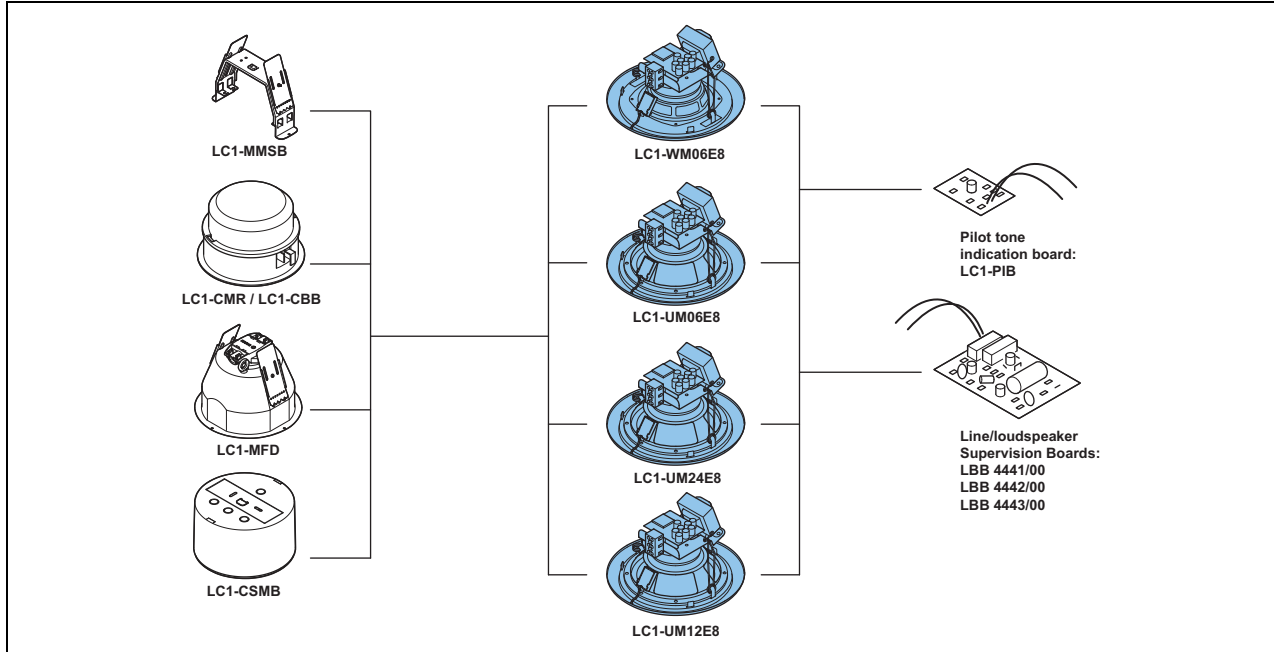
**i** Standard connected to rated power at 100V



## 2 Loudspeakers

### 2.1 Overview

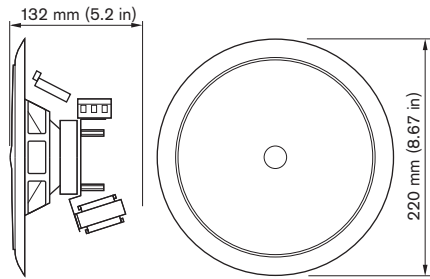
#### 2.1.1 Models



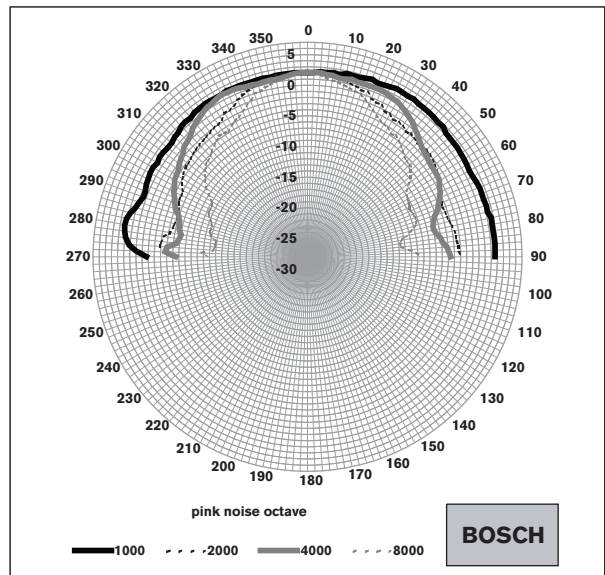
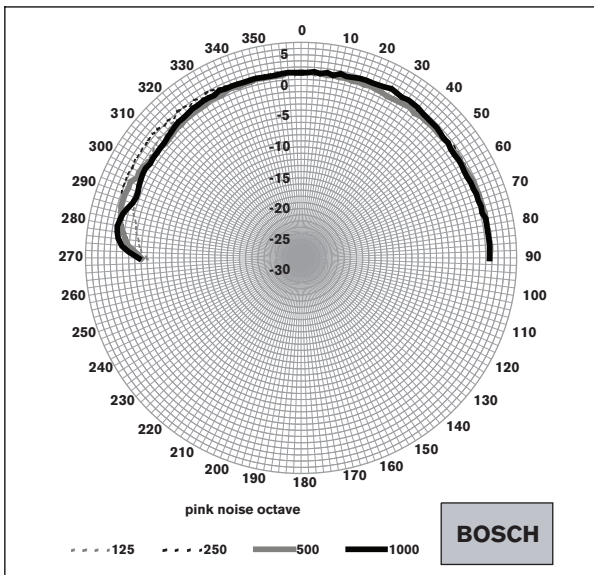
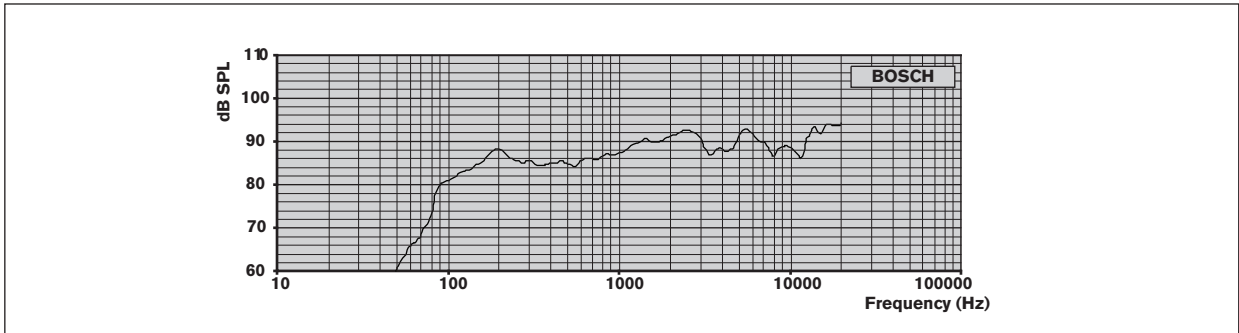
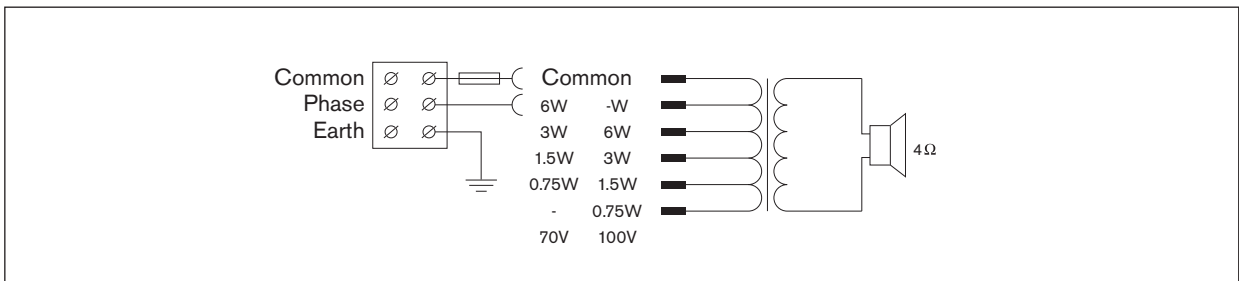
#### 2.1.2 Technical Specifications

	LC1-WM06E8	LC1-UM06E8	LC1-UM12E8	LC1-UM24E8
Description	Ceiling loudspeaker	Ceiling loudspeaker	Ceiling loudspeaker	Ceiling loudspeaker
<b>Electrical*</b>				
Maximum power	6 W	6 W	12 W	24 W
Rated power	6 W (6 - 3 - 1.5 - 0.75 W )	6 W (6 - 3 - 1.5 - 0.75 W )	12 W (12 - 6 - 3 - 1.5 W)	24 W (24 - 12 - 6 - 3 W)
Sound pressure level at rated power /1W (1 kHz, 1 m)	96 dB / 88 dB	97 dB / 89 dB	100 dB / 89 dB	103 dB / 89 dB
Opening angle at 1 kHz/4 kHz (-6dB)	180 / 128 °	180 / 62 °	180 / 64 °	180 / 58 °
Effective freq.range (-10dB)	85 Hz to 20 kHz	70 Hz to 20 kHz	55 Hz to 20 kHz	55 Hz to 20 kHz
Rated voltage	70 / 100 V	70 / 100 V	70 / 100 V	70 / 100 V
Rated impedance	835 / 1667 Ohm	835 / 1667 Ohm	418 / 833 Ohm	208 / 417 Ohm
Connector	3 pole screw terminal block	3 pole screw terminal block	3 pole screw terminal block	3 pole screw terminal block
*Technical performance acc. to IEC 60268-5				
<b>Mechanical</b>				
Diameter	220 mm (8.67 in)	220 mm (8.67 in)	220 mm (8.67 in)	220 mm (8.67 in)
Maximum depth	111 mm (4.37 in)	111 mm (4.37 in)	111 mm (4.37 in)	111 mm (4.37 in)
Mounting cut-out	190 mm (7.48 in)	190 mm (7.48 in)	190 mm (7.48 in)	190 mm (7.48 in)
Speaker diameter				
Color	White (RAL 9010)	White (RAL 9010)	White (RAL 9010)	White (RAL 9010)
Material (frame and front grille)	Steel	Steel	Steel	Steel
Weight	1.18 kg (2.6 lb)	1.16 kg (2.56 lb)	1.3 kg (2.86 lb)	1.75 kg (3.86 lb)
<b>Environmental</b>				
Operation temperature	-25 °C to +55 °C (-13 °F to +131 °F)	-25 °C to +55 °C (-13 °F to +131 °F)	-25 °C to +55 °C (-13 °F to +131 °F)	-25 °C to +55 °C (-13 °F to +131 °F)
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)	-40 °C to +70 °C (-40 °F to +158 °F)	-40 °C to +70 °C (-40 °F to +158 °F)	-40 °C to +70 °C (-40 °F to +158 °F)
Relative humidity	< 95%	< 95%	< 95%	< 95%
<b>Certification and Approvals</b>				
Safety	acc. to EN 60065	acc. to EN 60065	acc. to EN 60065	acc. to EN 60065
EVAC compliant	acc. to BS5839 part 8 acc. to EN 60849	acc. to BS5839 part 8 acc. to EN 60849	acc. to BS5839 part 8 acc. to EN 60849	acc. to BS5839 part 8 acc. to EN 60849

## 2.2 LC1-WM06E8

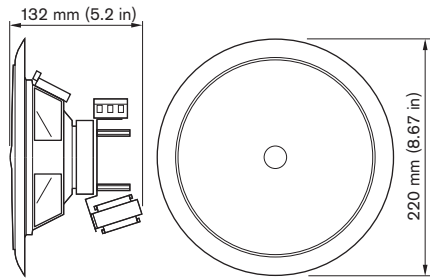


LC1-WM06E8

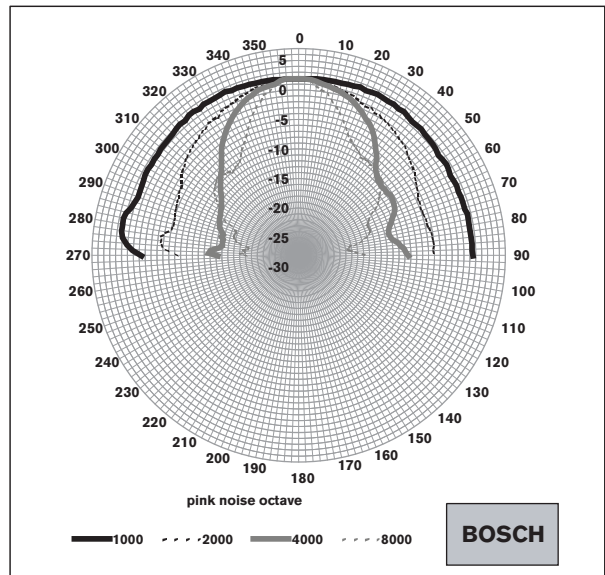
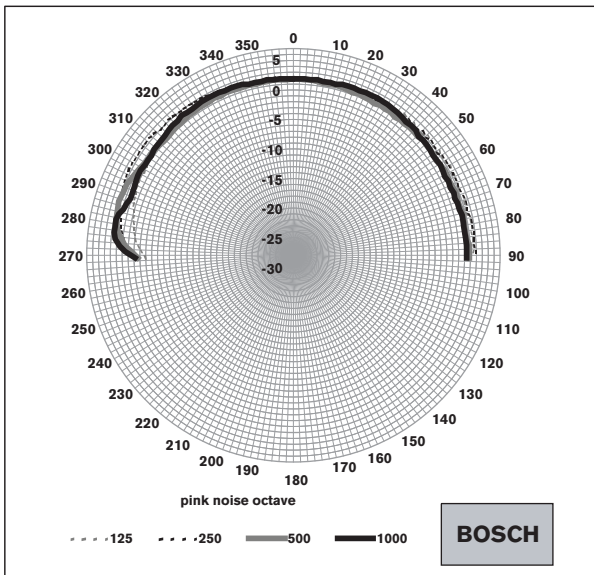
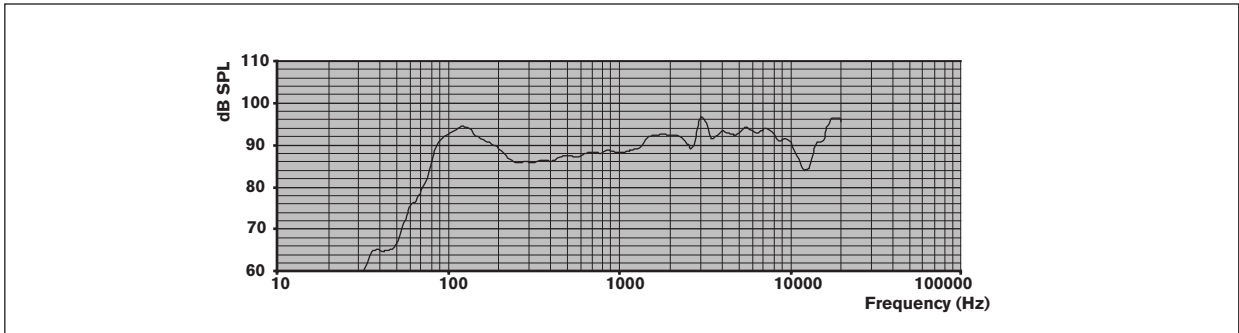
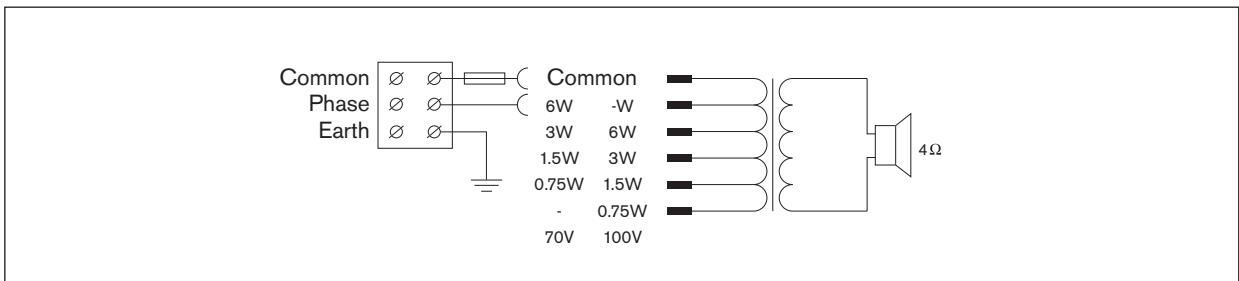




### 2.3 LC1-UM06E8

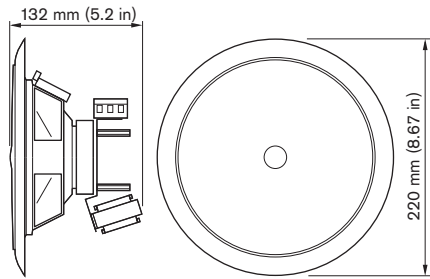


LC1-UM06E8

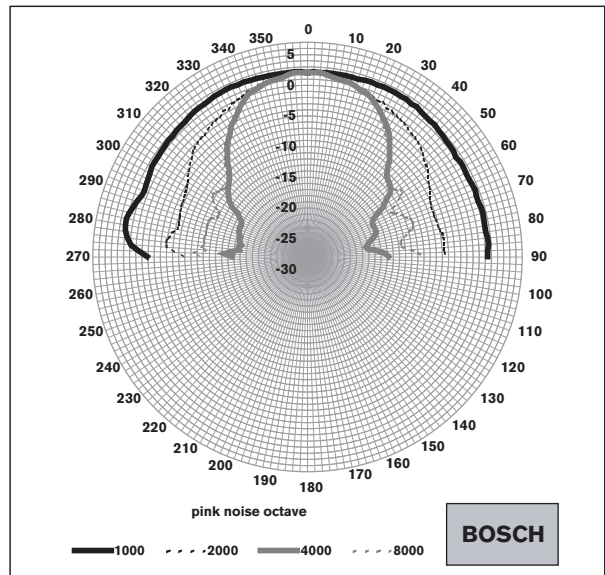
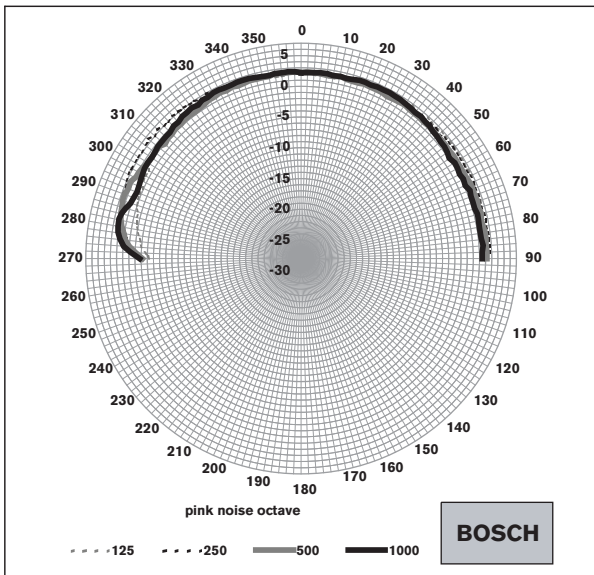
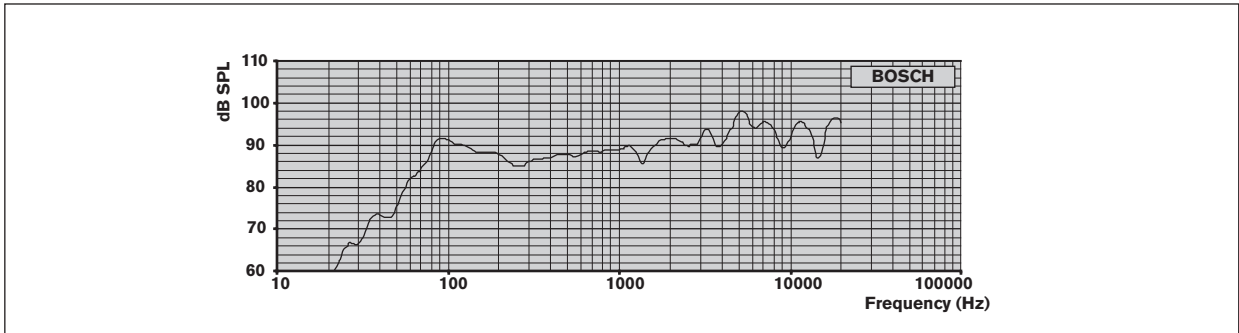
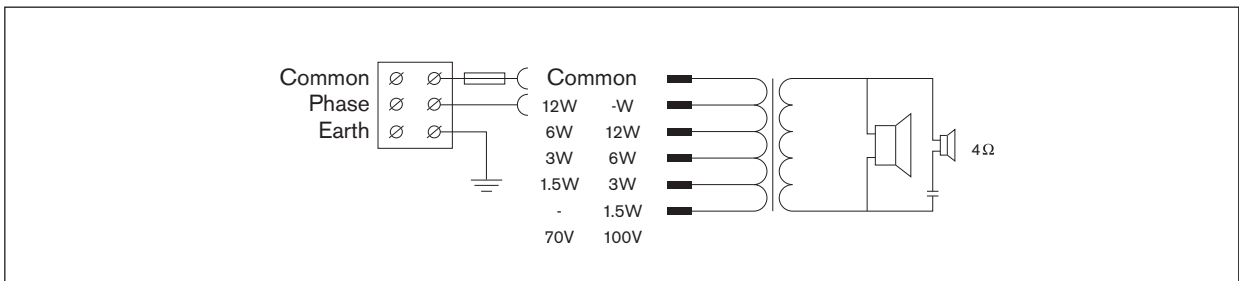




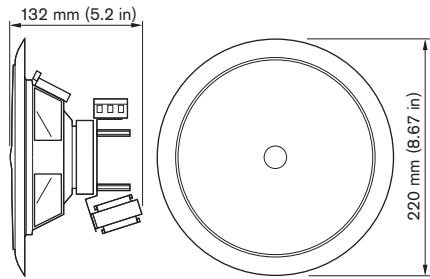
## 2.4 LC1-UM12E8



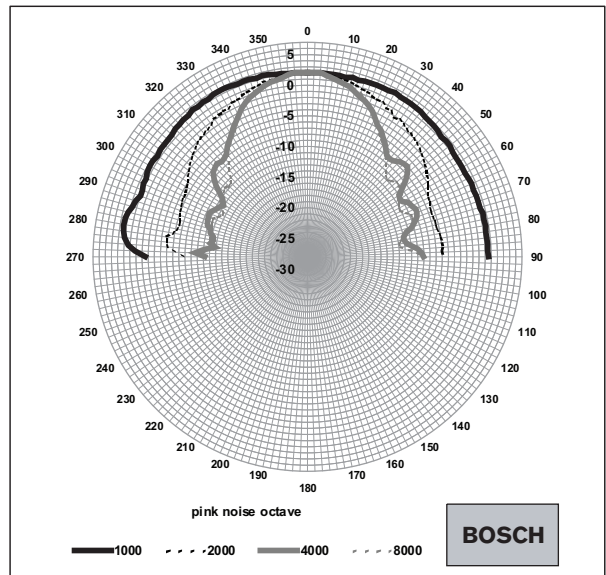
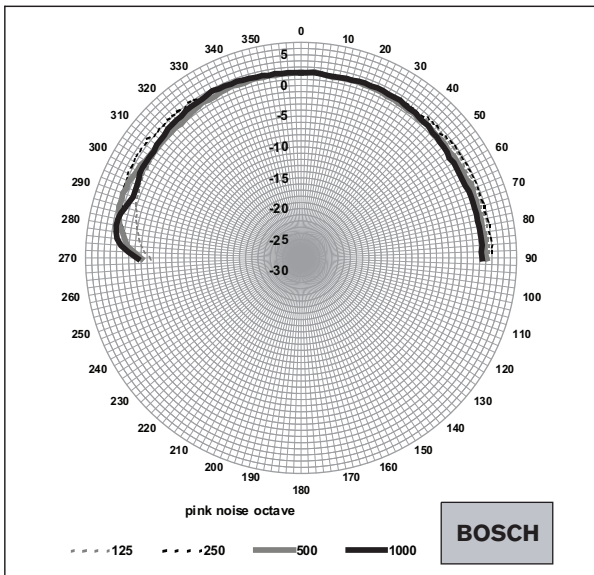
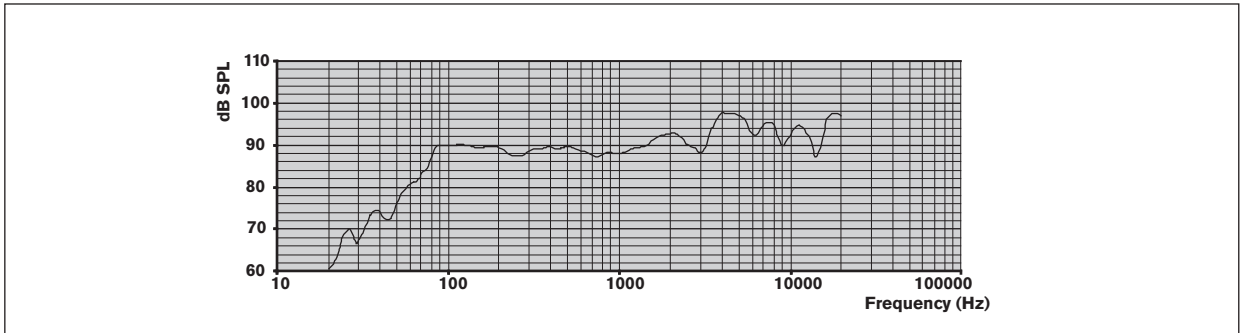
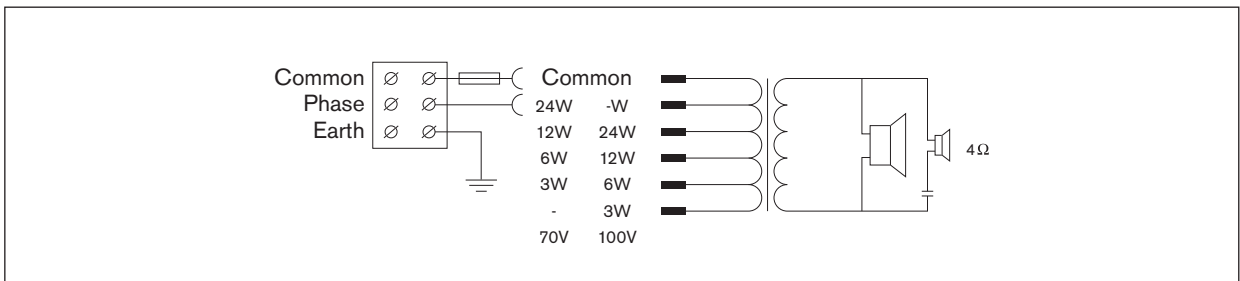
LC1-UM12E8



## 2.5 LC1-UM24E8



LC1-UM24E8



### 3 Acoustical Performance

#### LC1-WM06E8

Octave band sensitivity									
All measurements are done with a pink noise signal. The values are in dB SPL									
	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	8000Hz	A-weighted	lin-weighted
Octave SPL 1W/1m	83,4	86,1	85,1	87,8	91,2	89,7	89,3		
Total octave SPL 1W/1m								86,9	88,1
Total octave SPL Pmax/1m								94,2	94,9

Octave band opening angles									
	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	8000Hz		
Horizontal opening angle	180	180	180	180	120	128	75		
Vertical opening angle	180	180	180	180	120	128	75		

#### LC1-UM06E8

Octave band sensitivity									
All measurements are done with a pink noise signal. The values are in dB SPL									
	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	8000Hz	A-weighted	lin-weighted
Octave SPL 1W/1m	93,4	88,4	86,3	88,5	91,4	93,9	92,6		
Total octave SPL 1W/1m								88,9	90,4
Total octave SPL Pmax/1m								95,8	96,5

Octave band opening angles									
	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	8000Hz		
Horizontal opening angle	180	180	180	180	108	62	38		
Vertical opening angle	180	180	180	180	108	62	38		

#### LC1-UM12E8

Octave band sensitivity									
All measurements are done with a pink noise signal. The values are in dB SPL									
	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	8000Hz	A-weighted	lin-weighted
Octave SPL 1W/1m	89,4	87,3	86,5	88,6	90,0	94,0	93,7		
Total octave SPL 1W/1m								88,9	90,3
Total octave SPL Pmax/1m								99,3	100,2

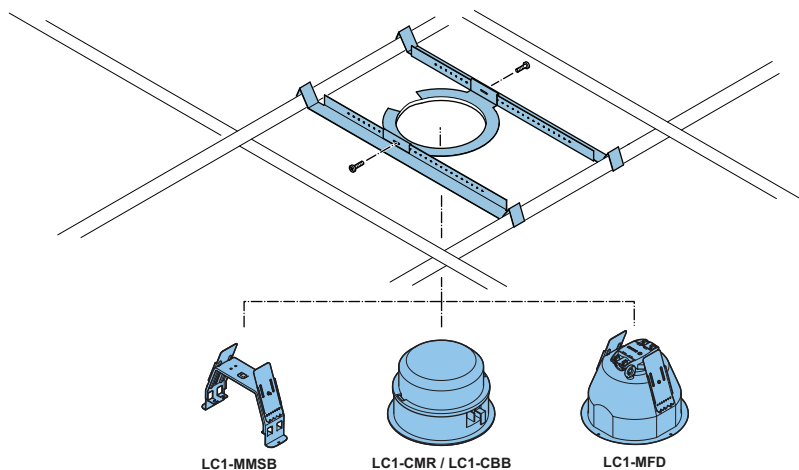
Octave band opening angles									
	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	8000Hz		
Horizontal opening angle	180	180	180	180	108	64	62		
Vertical opening angle	180	180	180	180	108	64	62		

#### LC1-UM24E8

Octave band sensitivity									
All measurements are done with a pink noise signal. The values are in dB SPL									
	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	8000Hz	A-weighted	lin-weighted
Octave SPL 1W/1m	89,9	88,3	89,0	88,6	91,5	95,6	93,8		
Total octave SPL 1W/1m								90,0	91,3
Total octave SPL Pmax/1m								103,1	103,8

Octave band opening angles									
	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	8000Hz		
Horizontal opening angle	180	180	180	180	106	58	57		
Vertical opening angle	180	180	180	180	106	58	57		

## 4 Accessories



### 4.1 Technical Specifications

Technical Specifications	LC1-MMSB	LC1-CMR	LC1- CBB	LC1-MFD
Description	Mounting support bracket	Ceiling mounting ring	Back box	Metal Fire-dome
<b>Mechanical</b>				
Dimensions	215 x 125 x 56 mm (8.47 x 4.92 x 2.2 in)	215 x 67 mm (8.47 x 2.64 in)	196 x 70 mm (7.72 x 2.75 in)	215 x 155 mm (8.47 x 6.1 in)
Mounting cut-out	190 mm (7.48 in)	200 mm (7.88 in)	n.a.	190 mm (7.48 in)
Material	Steel	ABS	ABS	Steel
Color	Zinc Plated	White (RAL 9010)	White (RAL 9010)	Flame red (RAL 3000)
Weight	320 g (0.70 lb)	210 g (0.46 lb)	174 g (0.38 lb)	1 kg (2.20 lb)

Technical Specifications	LC1-CSMB	LC1-MSK	LM1-TB	LC1-PIB
Description	Surface Mounting box	Metal Suspension Kit	Tile Bridge/C-ring	Pilot Tone indication board
<b>Mechanical</b>				
Dimensions	220 x 128 mm (8.67 x 5.04 in)		250 x 30 mm (9.85 x 1.18 in)	20 x 30 mm (0.78 x 1.18 in)
Mounting cut-out	n.a.		n.a.	n.a.
Material	ABS	Steel	Steel	n.a.
Color	White (RAL 9010)	Zinc Plated	Zinc Plated	n.a.
Weight	690 g (1.52 lb)	174 g (0.38 lb)	939 g (2.07 lb)	3 g (0.006 lb)



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