



# LB3 Premium Cabinet Loudspeakers

LB3-PC250, LB3-PC350, LM1-MBx12/15



**BOSCH**

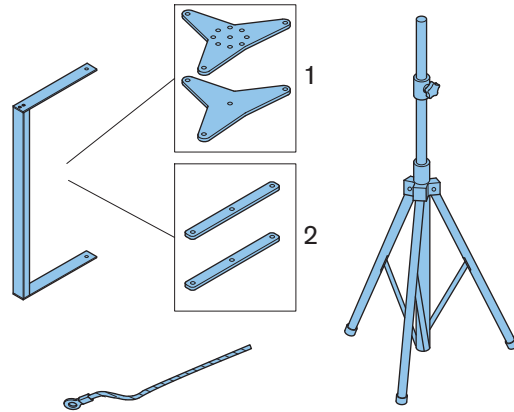
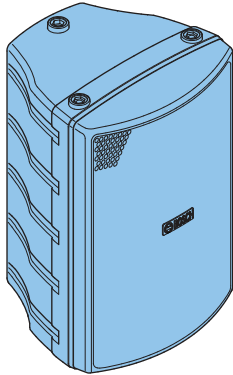
**en** Installation note



# 1 Important safeguards

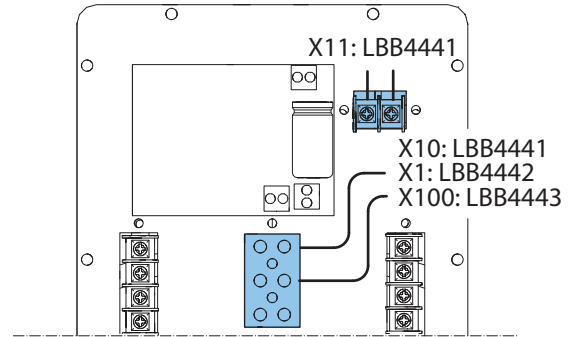
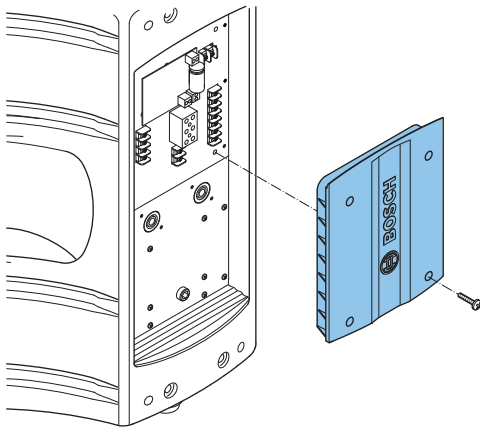
- Always mount the loudspeakers securely with the recommended bracket(s).
- If a generic bracket is used, use the inserts with the load distributed in the same way as with the recommended bracket.
- Only use the pole mount vertically with a maximum deflection of the vertical of 20 degrees.
- Do not place a heat source or an open flame on or near the loudspeaker.
- The mounting materials marked with an asterisk (\*) in the drawings are not supplied, but are generally available in your local hardware store. Make sure that the minimum tensile strength of these mounting materials (e.g. suspension chain, suspension cable, safety cord and shackle[s]) is 1,500 N/mm<sup>2</sup>. Always use a safety tether/ safety cord.

## 2 Installation



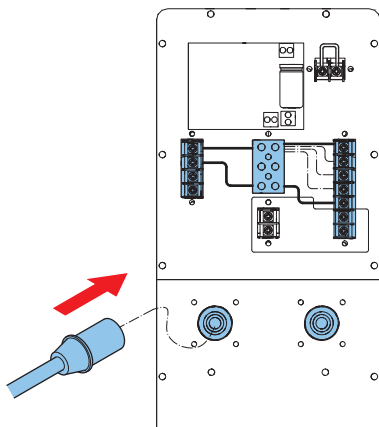
**Box contents**

**Mounting options 1 and 2 (mounting material is NOT included)**

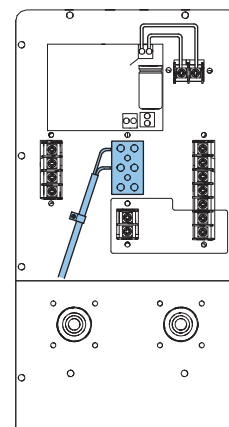


**Removing the splash proof cover**

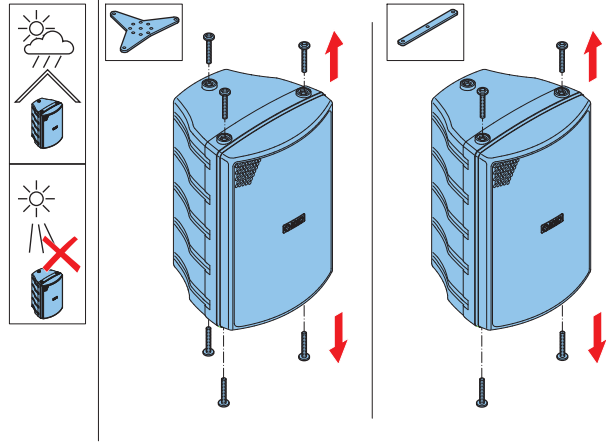
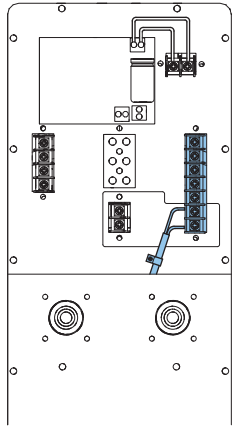
**WLX I and WLX II connection**



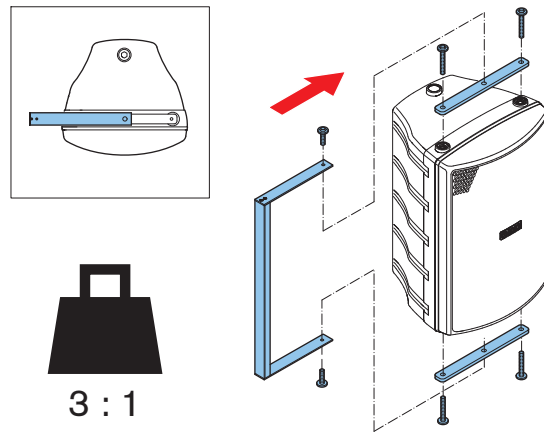
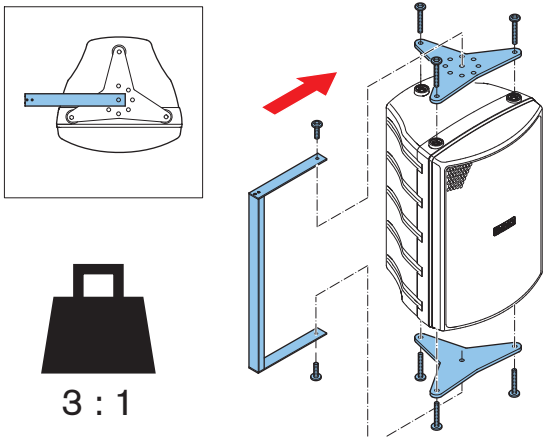
**SPEAKON connection**



**Direct connection EN 54-24**

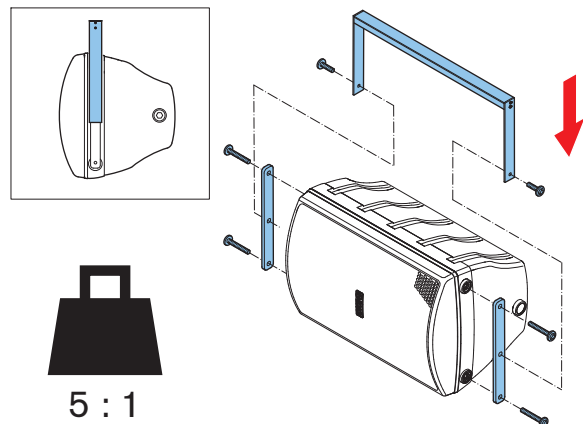
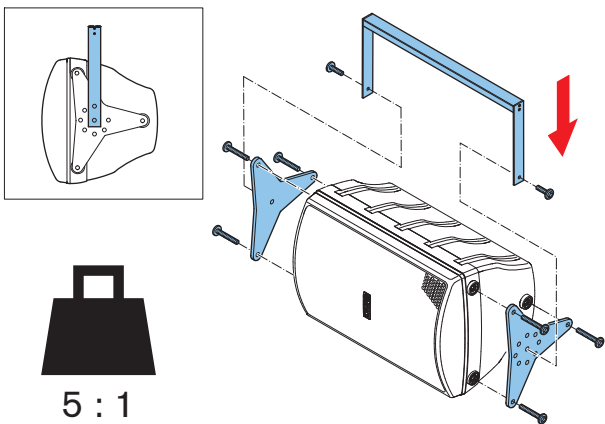


**LOW Z connection**



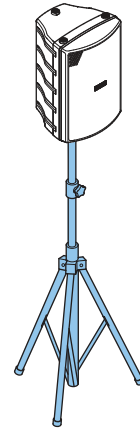
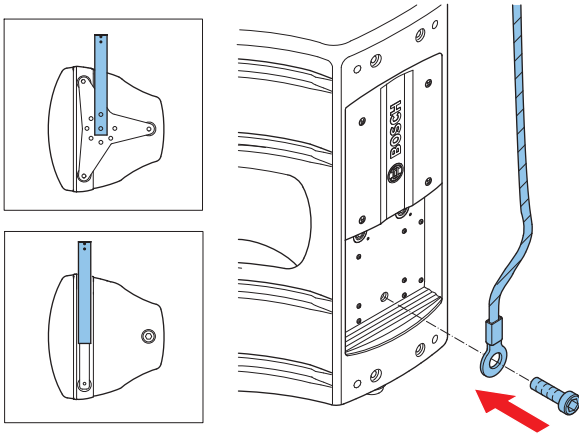
**Wall mounting (option 1)**

**Wall mounting (option 2)**



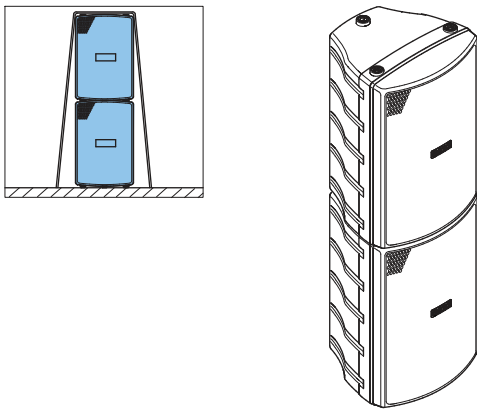
**Ceiling mounting (option 1) EN 54-24**

**Ceiling mounting (option 2) EN 54-24**

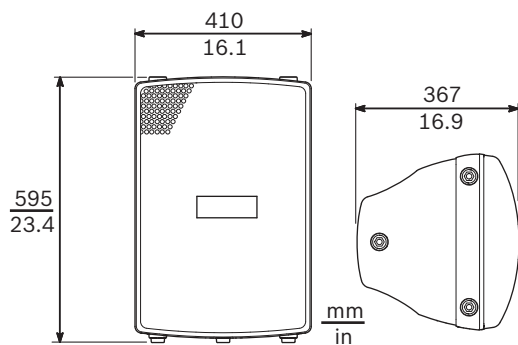


**Attaching the safety tether to the safety tether mounting point at the rear**

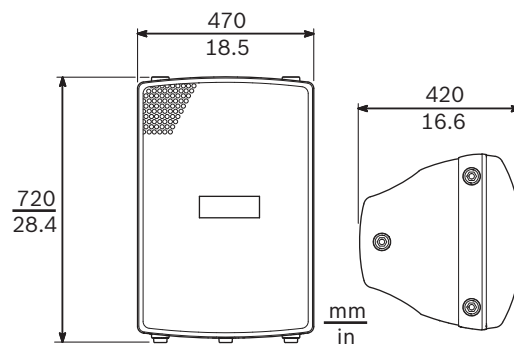
**Installing the tripod**



**Stacking the loudspeakers (max. 2 loudspeakers - use a strap)**



**Dimensions LB3-PC250**



**Dimensions LB3-PC350**

### 3 Technical data

#### Electrical\*

Product	LB3-PC250		LB3-PC350	
Description	Premium 250 W Cabinet Loudspeaker		Premium 350 W Cabinet Loudspeaker	
Maximum power	500 W		700 W	
Rated power (PHC)	250 W		350 W	
Power tapping	250 / 125 / 62.5 W		350 / 175 / 87.5 W	
Sound pressure level at rated power / 1 W (1 kHz, 1 m)	117 dB / 94 dB (SPL)		122 dB / 97 dB (SPL)	
Sound pressure level at rated power / 1 W (1 kHz, 4 m)	108 dB / 85 dB (SPL)		111 dB / 86 dB (SPL)	
Effective frequency range (-10 dB)	55 Hz to 18 kHz		48 Hz to 18 kHz	
Opening angle at 1 kHz / 4 kHz (-6 dB)				
horizontal	100 °/ 87 °		100 °/ 87 °	
vertical	70 °/ 44 °		70 °/ 44 °	
Product	<b>LB3-PC250</b>			
Rated input voltage		44.7 V	70 V	100 V
Rated impedance	250 W	8 Ohm	20 Ohm	40 Ohm
	125 W	N.A.	40 Ohm	80 Ohm
	62.5 W	N.A.	80 Ohm	160 Ohm
Product	<b>LB3-PC350</b>			
Rated input voltage		52.9 V	70 V	100 V
Rated impedance	350 W	8 Ohm	14 Ohm	28 Ohm
	175 W	N.A.	29 Ohm	57 Ohm
	87.5 W	N.A.	57 Ohm	114 Ohm

\* Technical performance data acc. to IEC 60268-5

#### Mechanical

Product	LB3-PC250	LB3-PC350
Dimensions (W x D x H)	410 x 367 x 595 mm (16.1 x 16.9 x 23.4 in)	470 x 420 x 720 mm (18.5 x 16.6 x 28.4 in)
Connectors	SPEAKON	SPEAKON

	3-pole ceramic screw block	3-pole ceramic screw block
Loudspeaker diameter		
Woofer	305 mm (12 in)	381 mm (15 in)
Driver	25.4 mm (1 in)	25.4 mm (1 in)
Material		
Cabinet	ABS VO	ABS VO
Front grille	Powder coated steel	Powder coated steel
Color	Charcoal (RAL 7021) (D)	Charcoal (RAL 7021) (D)
Weight	19 kg (42 lb)	34 kg (74 lb)

**Environmental**

Operating temperature	-10 °C to +40 °C (-14 °F to +104 °F)
Storage and transport temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Relative humidity	<95%

**LB3-PC250 - Octave and 1/3 octave related measure results**

<b>Octave band opening</b>							
Frequency (Hz)	125	250	500	1000	2000	4000	8000
Horizontal opening angle	360	183	152	100	77	87	86
Vertical opening angle	360	180	162	70	66	44	32

**Table 3.1: Octave band opening angles**

<b>Octave band sensitivity</b>							
Frequency (Hz)	125	250	500	1000	2000	4000	8000
Octave SPL 1 W / 1 m	92.8	93.3	93.6	94.7	97.0	96.8	98.0

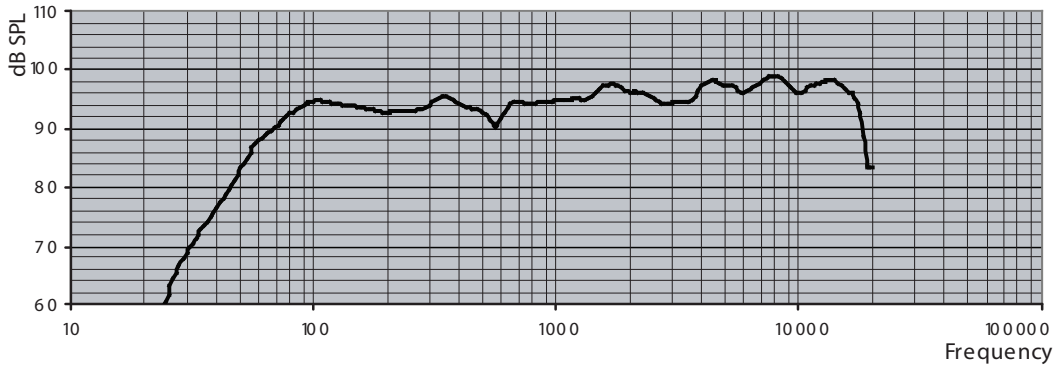
**Table 3.2: Octave band sensitivity of 250 W / 100 V-tap**

<b>Total octave SPL</b>	<b>A-weighted (in dBSPL)</b>	<b>C-weighted (in dBSPL)</b>
Total octave SPL 1 W / 1 m	93.7	95.1
Total octave SPL Pmax / 1 m	117.7	119.1

**Table 3.3: Total octave SPL**

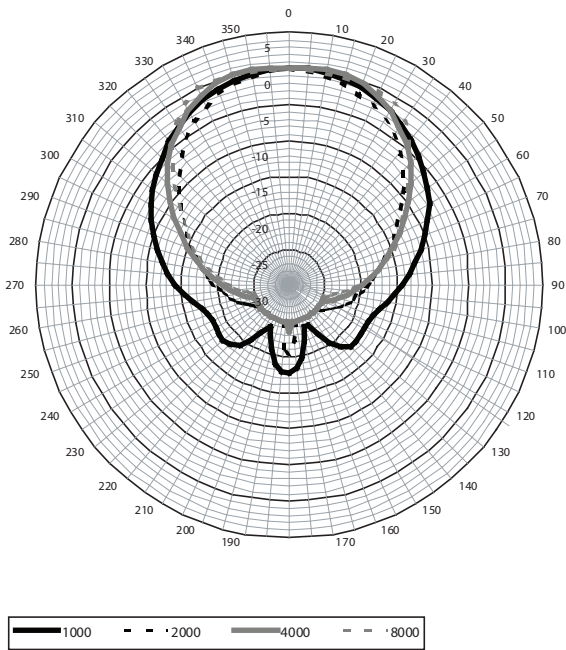


### LB3-PC250 - Frequency and impedance graphs

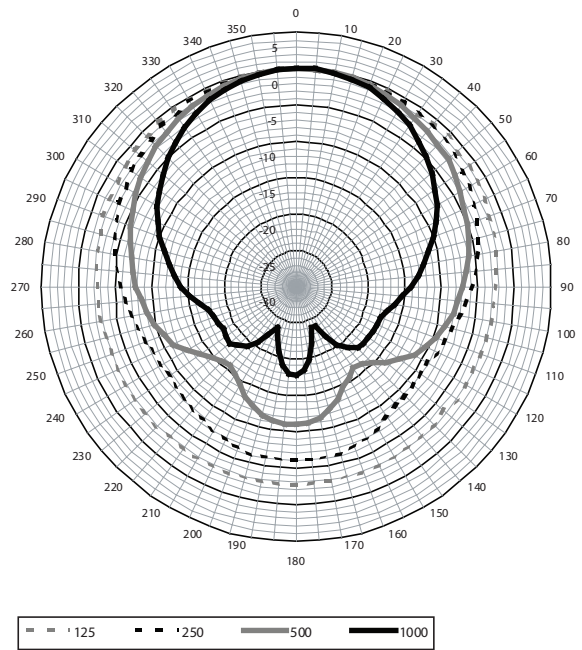


Frequency response on 0-degrees axis measured with 1 W at 1 m.  
Connected to 250 W/100 V-tap and measured with 1/3 octave smoothing.

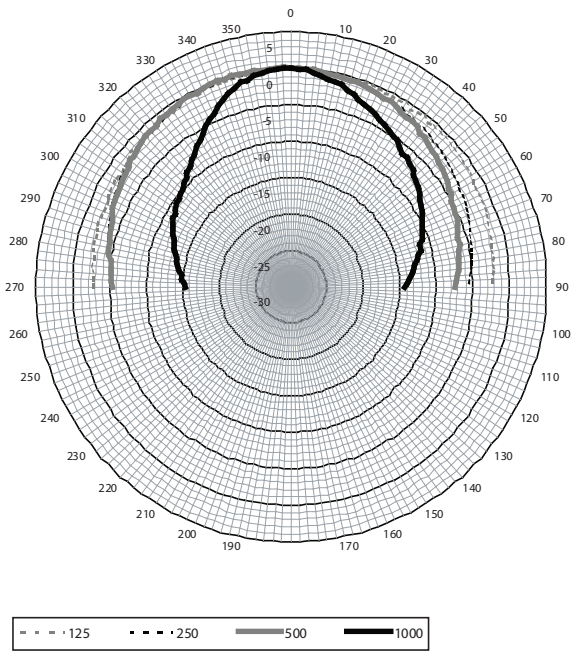
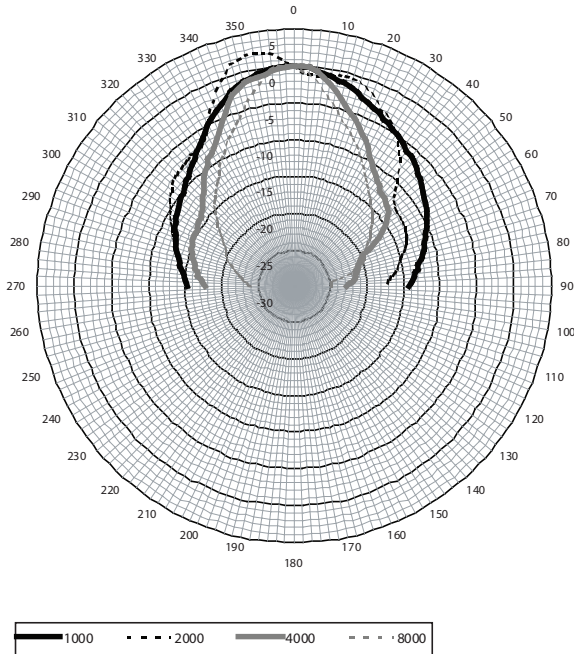
### LB3-PC250 - Polar diagrams



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



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



Vertical polar diagram (high frequency). Normalized at 0-degrees axis.

Vertical polar diagram (low frequency). Normalized at 0-degrees axis.

**LB3-PC350 - Octave and 1/3 octave related measure results**

Octave band opening							
Frequency (Hz)	125	250	500	1000	2000	4000	8000
Horizontal opening angle	360	183	152	100	77	87	86
Vertical opening angle	360	180	162	70	66	44	32

**Table 3.4: Octave band opening angles**

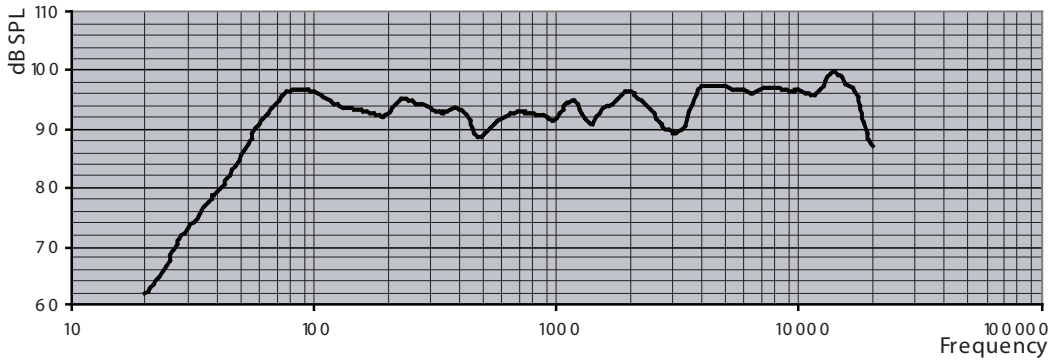
Octave band sensitivity							
Frequency (Hz)	125	250	500	1000	2000	4000	8000
Octave SPL 1 W / 1 m	93.3	93.8	93.0	93.6	95.2	96.6	98.4

**Table 3.5: Octave band sensitivity of 250 W / 100 V-tap**

Total octave SPL	A-weighted (in dB SPL)	C-weighted (in dB SPL)
Total octave SPL 1 W / 1 m	93.3	95.3
Total octave SPL Pmax / 1 m	118.7	120.7

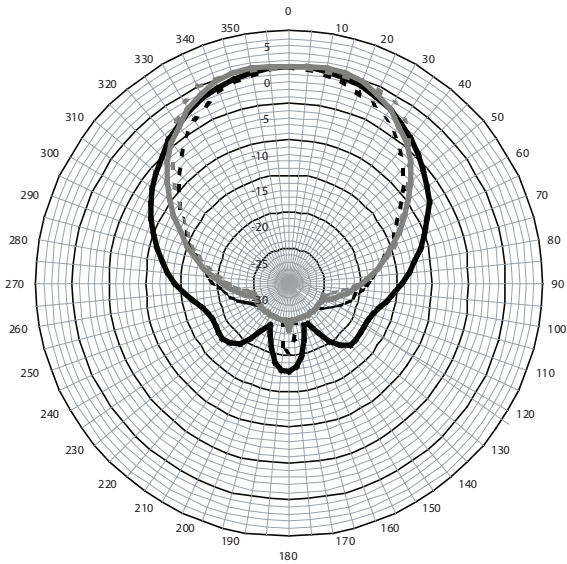
**Table 3.6: Total octave SPL**

### LB3-PC350 - Frequency and impedance graphs

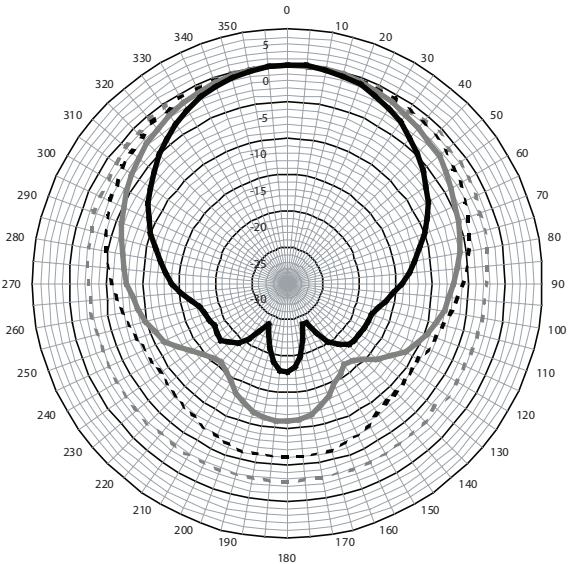


Frequency response on 0-degrees axis measured with 1 W at 1 m.  
Connected to 350 W/100 V-tap and measured with 1/3 octave smoothing.

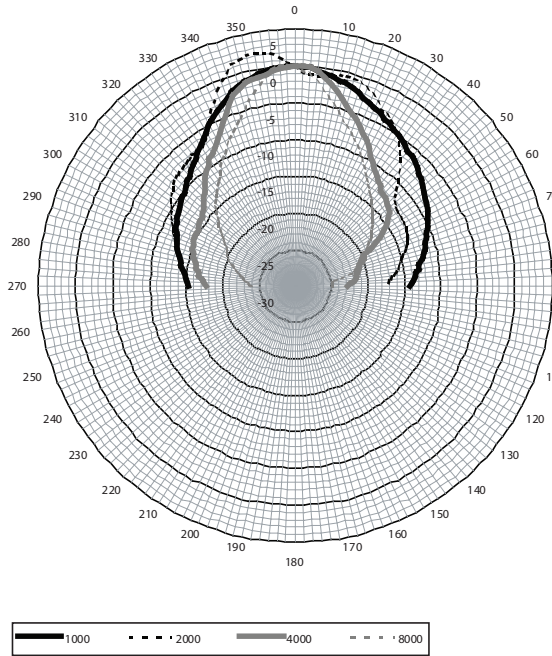
### LB3-PC350 - Polar diagrams



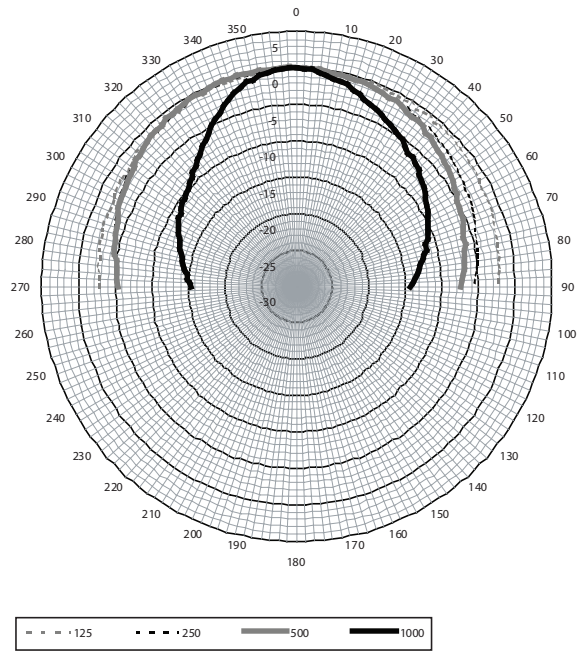
Horizontal polar diagram (high frequency). Normalized at 0-degrees axis.



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



Vertical polar diagram (high frequency). Normalized at 0-degrees axis.



Vertical polar diagram (low frequency). Normalized at 0-degrees axis.


 1438
Bosch Security Systems BV Torenallee 49, 5617 BA Eindhoven, the Netherlands 11 1438/CPD/0208
EN 54-24:2008  Loudspeaker for voice alarm systems for fire detection and fire alarm systems for buildings  Premium loudspeaker cabinet LB3-PC250 and LB3-PC350 Type B DoP: LP032921

Figure 3.1: CE-label

**Note:**

- The specification data is measured in an anechoic chamber, free field
- 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



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