

# Metal Column Loudspeaker

LA1-UM20E-1 | LA1-UM40E-1

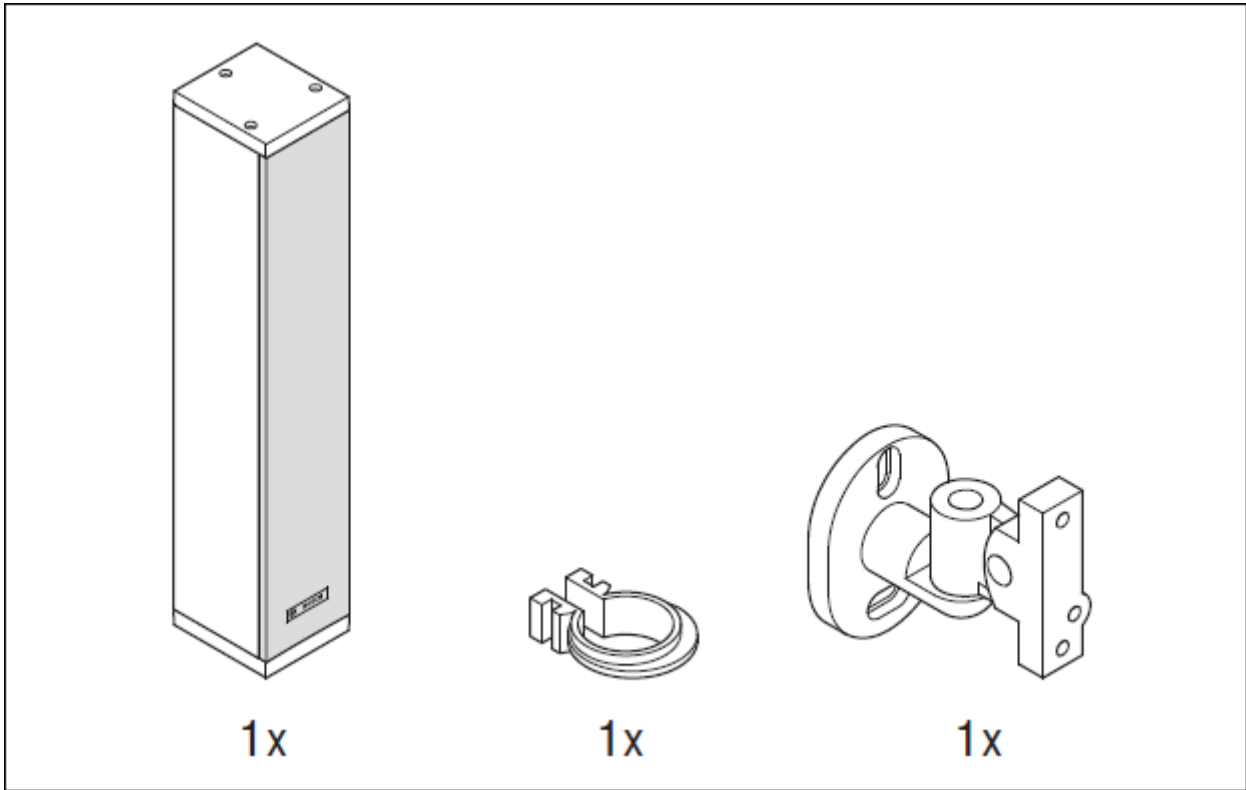


**BOSCH**

**en** Installation note







**Components**

## 2 Technical data

### Electrical\*

Description	LA1-UM20E-1				LA1-UM40E-1			
Maximum power	30 W				60 W			
Rated power (PHC)	20 W				40 W			
Power tapping	20 / 10 / 5 / 2.5 W				40 / 20 / 10 / 5 W			
Sound pressure level at rated power / 1 W (1 kHz, 1 m)	105 / 92 dB (SPL)				111 / 95 dB (SPL)			
Sound pressure level at rated power / 1 W (1 kHz, 4 m)	89 / 76 dB (SPL)				94 / 78 dB (SPL)			
Effective frequency range (-10 dB)	240 Hz to 16 kHz				250 Hz to 16 kHz			
Horizontal opening angle at 1 kHz / 4 kHz (-6 dB)	210°/ 94°				240°/ 92°			
Vertical opening angle at 1 kHz / 4 kHz (-6 dB)	80°/ 22°				40°/ 12°			
Rated input voltage		12.65 V	70 V	100 V		17.89 V	70 V	100 V
Rated impedance	20 W	8 Ohm	250 Ohm	500 Ohm	40 W	8 Ohm	125 Ohm	250 Ohm
	10 W	N/A	500 Ohm	1000 Ohm	20 W	N/A	250 Ohm	500 Ohm
	5 W	N/A	1000 Ohm	2000 Ohm	10 W	N/A	500 Ohm	1000 Ohm
	2.5 W	N/A	2000 Ohm	4000 Ohm	5 W	N/A	1000 Ohm	2000 Ohm

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

### Mechanical

	LA1-UM20E-1	LA1-UM40E-1
Dimensions (L x W x D)	478 x 84 x 96 mm (18.8 x 3.3 x 3.8 in)	778 x 84 x 96 mm (30.6 x 3.3 x 3.8 in)
Weight	2.9 kg (6.4 lb)	4.4 kg (9.7 lb)
Color	White (RAL 9010)	White (RAL 9010)
Material		
– enclosure	Aluminium	Aluminium
– front grille	Aluminium	Aluminium
– top and bottom	ABS	ABS

Connection	1 m (39.37 in) 3-wire cable	1 m (39.37 in) 3-wire cable
Connector (phase, common, earth)	3-pole screw block	3-pole screw block

**Environmental**


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

**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

**2.1****Certification and approvals**

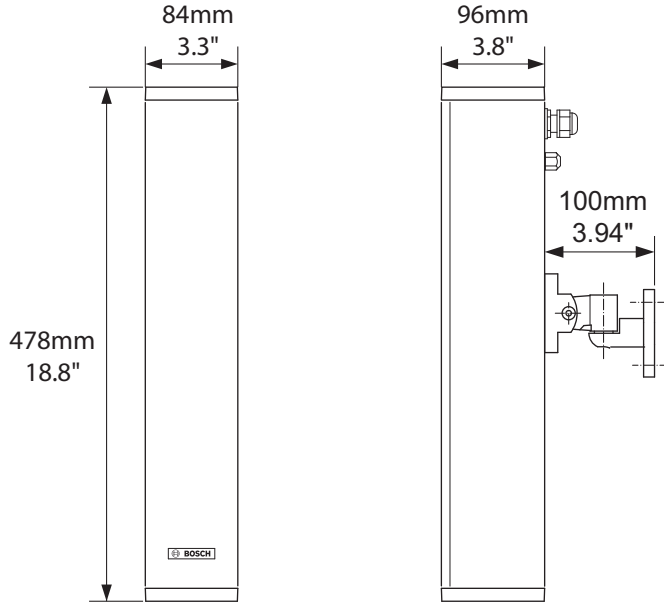
	LA1-UM20E-1	LA1-UM40E-1
Safety	acc. to EN 60065	acc. to EN 60065
Water and dust protected	acc. to EN 60529 IP 65	acc. to EN 60529 IP 65
EVAC compliant	acc. to BS5839 part 8 acc. to EN 60849	acc. to BS5839 part 8 acc. to EN 60849
Emergency	acc. to EN 54-24	acc. to EN 54-24

 1438
Bosch Security Systems BV Torenallee 49, 5617 BA Eindhoven, the Netherlands 11 1438-CPR-0203
EN 54-24:2008  Loudspeaker for voice alarm systems for fire detection and fire alarm systems for buildings  Metal Column 20 W and 40 W LA1-UM20E-1 and LA1-UM40E-1 Type B DoP: LP042905

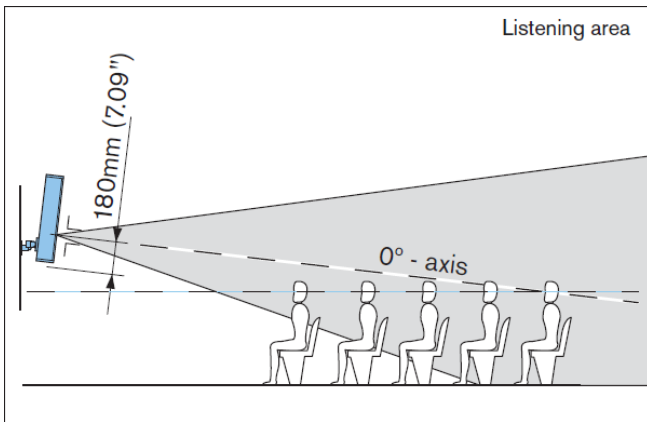
**CE label**

## 2.2 Additional technical data

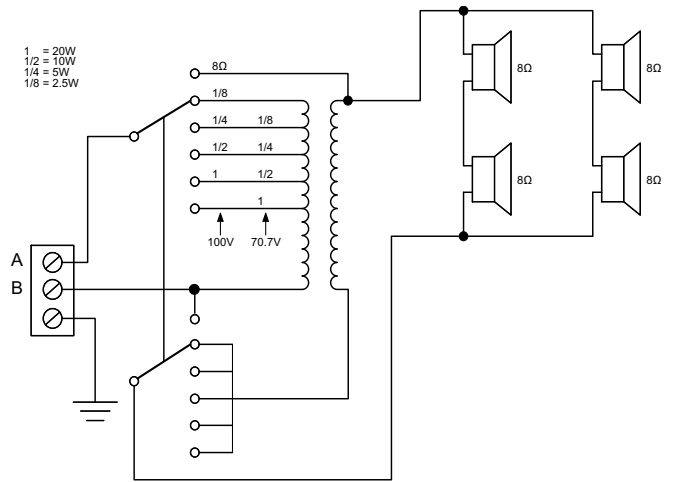
### LA1-UM20E-1



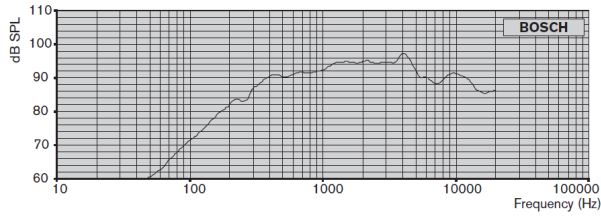
Dimensions



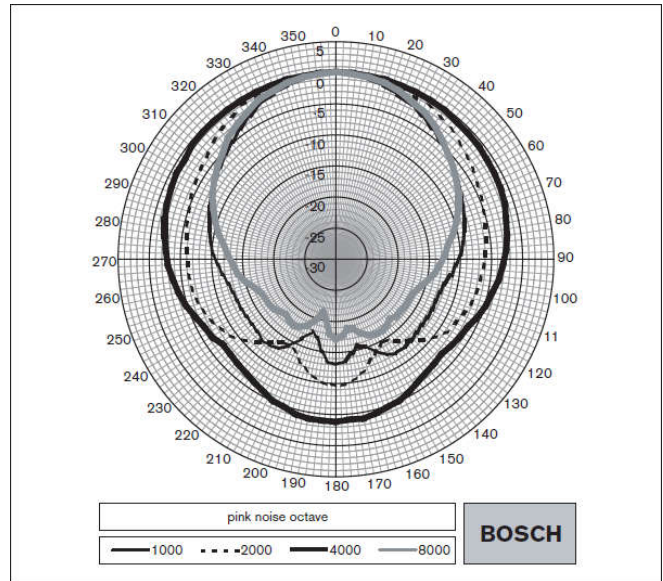
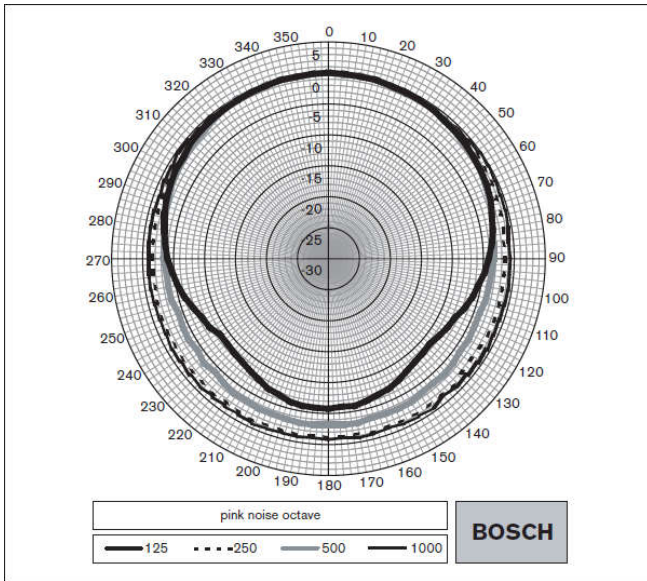
Listening area



Circuit diagram

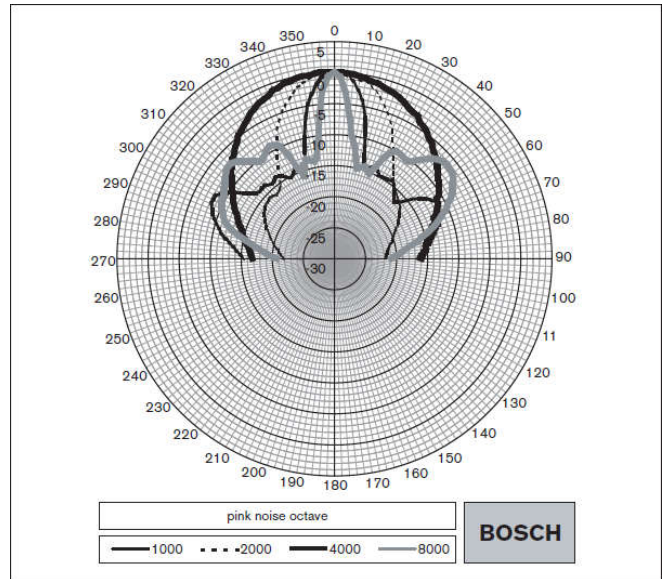
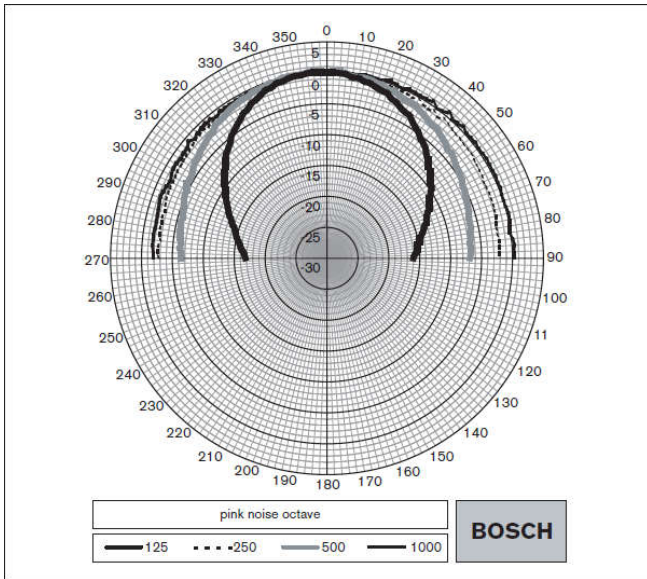


Frequency response



Horizontal polar diagram (measured with pink noise)

Horizontal polar diagram (measured with pink noise)

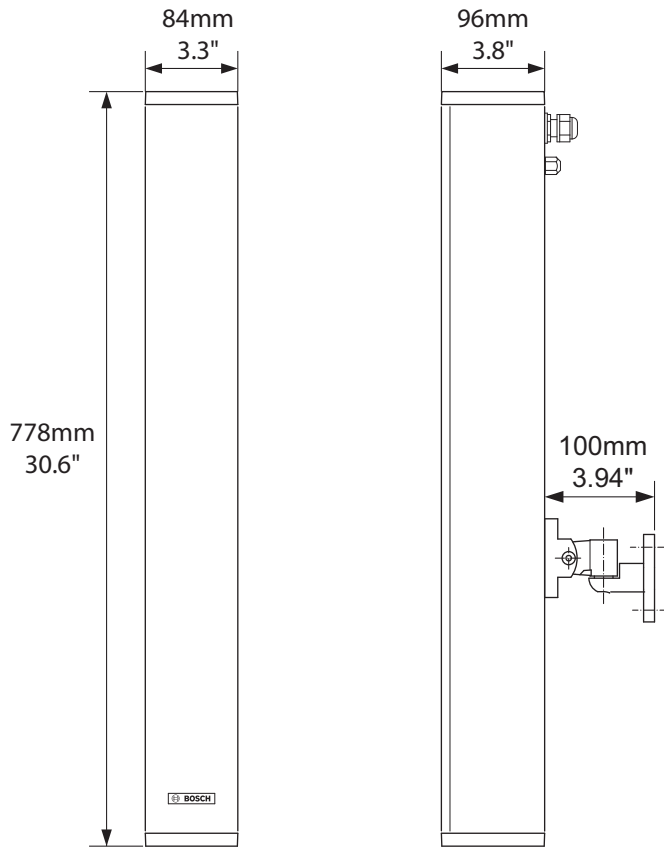


Vertical polar diagram (measured with pink noise)

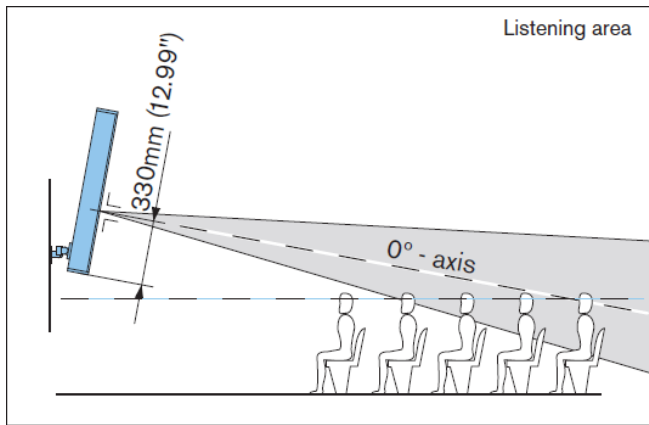
Vertical polar diagram (measured with pink noise)



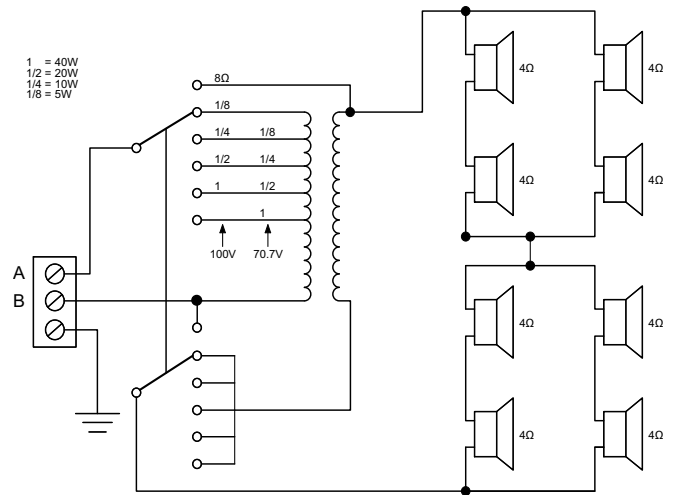
**LA1-UM40E-1**



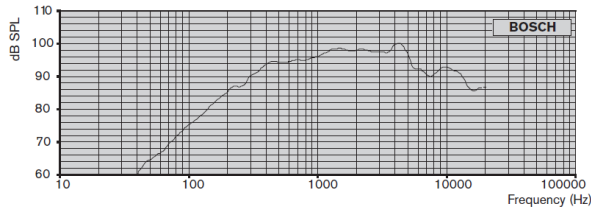
**Dimensions**



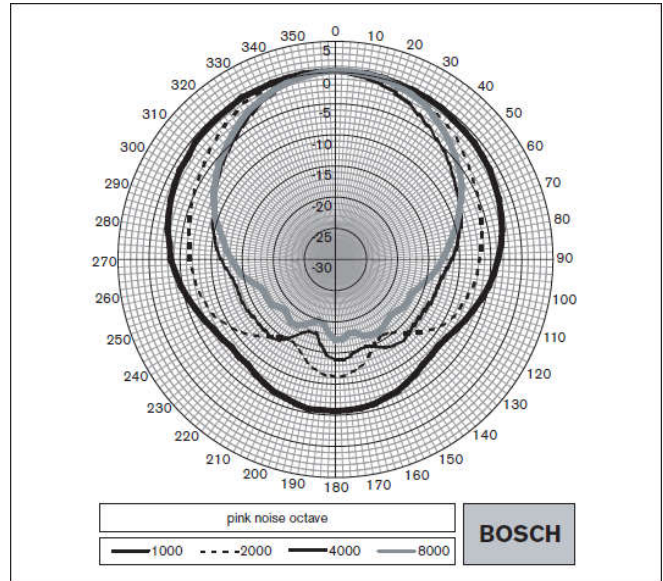
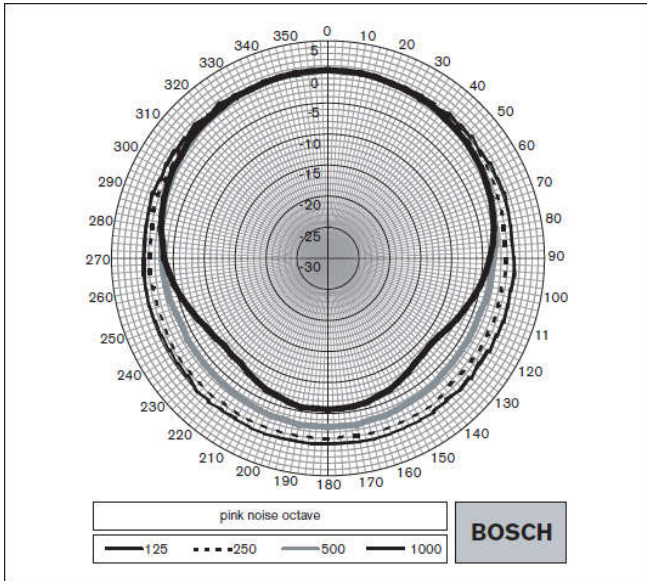
**Listening area**



**Circuit diagram**

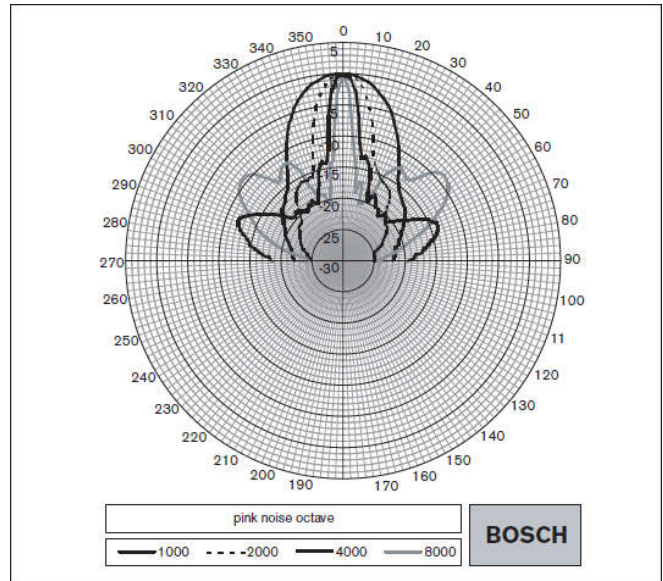
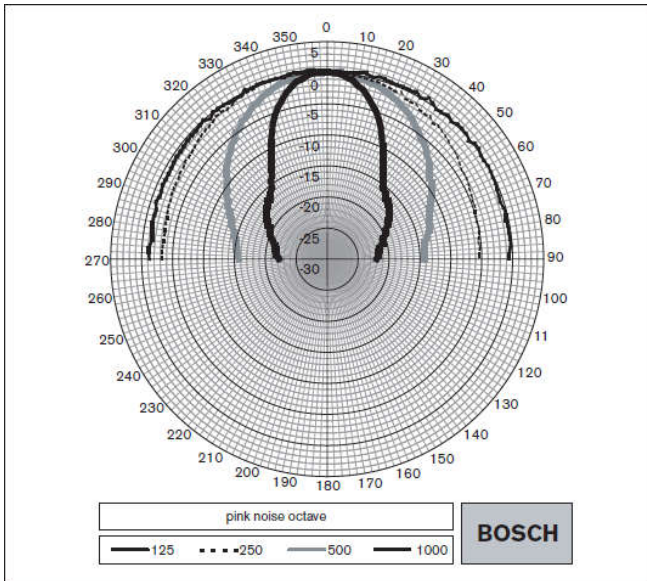


Frequency response



Horizontal polar diagram (measured with pink noise)

Horizontal polar diagram (measured with pink noise)



Vertical polar diagram (measured with pink noise)

Vertical polar diagram (measured with pink noise)



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