

Horn loudspeaker, Ex-proof, short/long flare

LH3-UC25XS | LH3-UC25XL | LH3-UC25XS-1 | LH3-UC25XL-1



en

Installation note

1 Installation

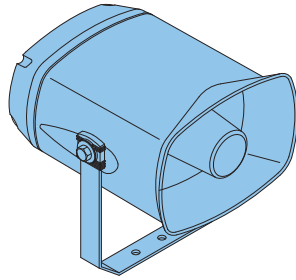


Figure 1.1

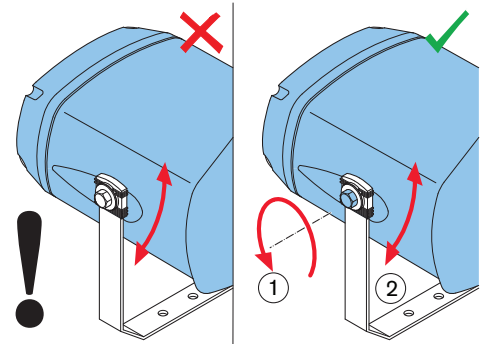


Figure 1.2

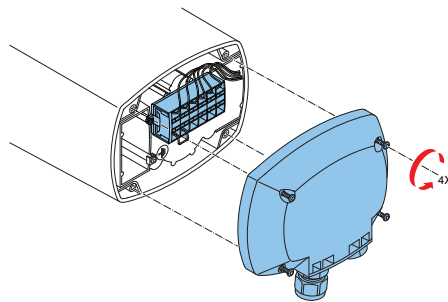


Figure 1.3

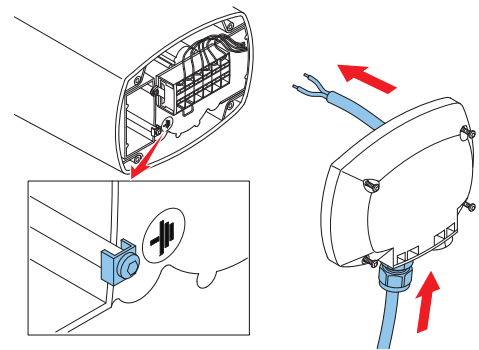


Figure 1.4

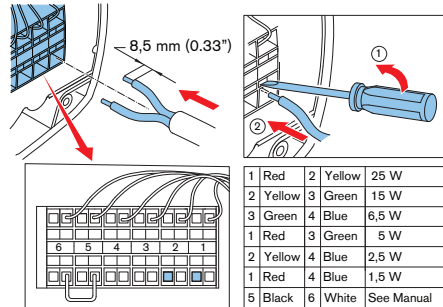


Figure 1.5

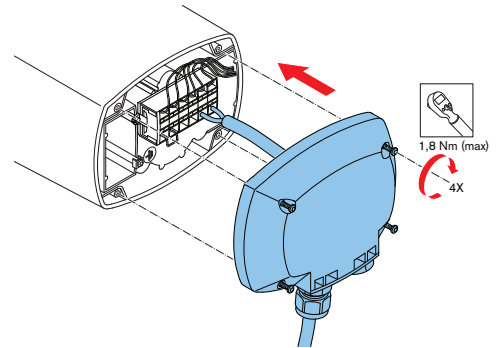


Figure 1.6

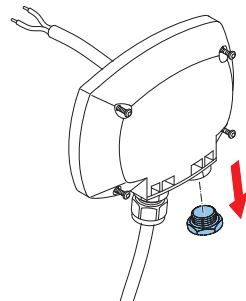


Figure 1.7

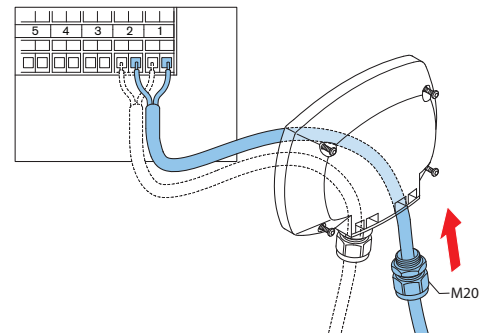


Figure 1.8

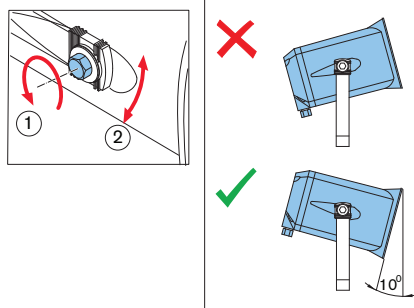


Figure 1.9

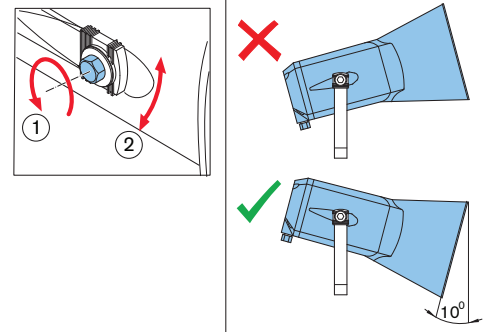


Figure 1.10

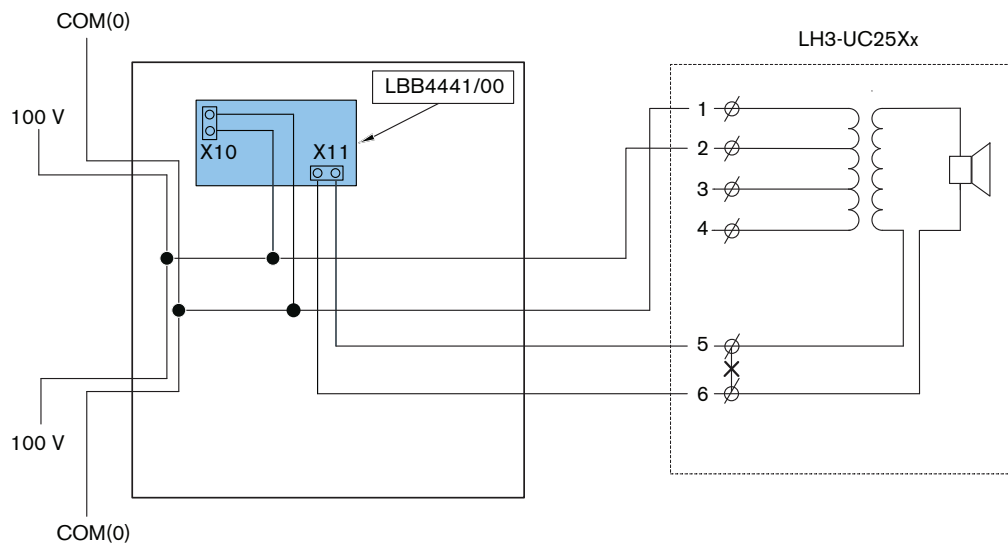


Figure 1.11

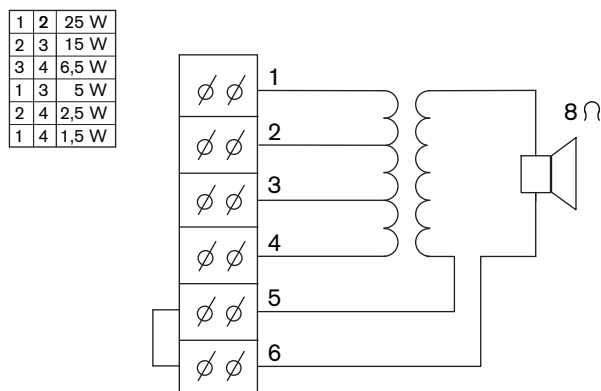


Figure 1.12: Circuit diagram

2 Technical data

LH3-UC25XS | LH3-UC25XS-1: Technical Specifications

Electrical*

	LH3-UC25XS	LH3-UC25XS-1
Rated power (PHC)	25 W	
Rated power	25 / 15 / 6.5 / 5 / 2.5 / 1.5 W	
Sound pressure level at rated power / 1 W (1 kHz, 1 m)	118 dB / 106 dB	115 dB / 104 dB
Opening angle at 1 kHz/ 4 kHz (- 6 dB)	120 / 37 degrees	105 / 35 degrees
Effective frequency range (-10 dB)	380 Hz to 8000 Hz	450 Hz to 7000 Hz
Rated voltage	100 V	
Rated impedance	400 ohm	
Electrical connection	2 x 6 pole push terminal	
Acceptable wire gauge	0.5 mm - 2.5 mm ² (AWG 20-12)	

* Technical performance data acc. to IEC 60268-5

Mechanical

Material horn	Polyamide (PA)
Material bracket	Stainless Steel (Grade 316)
Dimensions (H x W x D)	144 x 170 x 207 mm (5.66 x 6.69 x 8.15 in)
Weight	2.37 kg (5.22 lb)
Color	Black (RAL 9005)
Cable gland (standard supplied)	M20 Polyamide (PA)
Cable diameter	11 mm to 14 mm (0.43 in to 0.55 in)

Environmental

Operating temperature	-50 °C to +60 °C (-58 °F to +140 °F)
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Relative humidity	<95%

Certification and Approvals

	LH3-UC25XS	LH3-UC25XS-1
Safety	acc. to EN 62368-1	
Water and dust protected	acc. to EN 60529 IP 66/67	
IECEX / ATEX	IECEX DNV 21.0015X & Presafe 20 ATEX 05429X II 2G Ex db eb mb IIB+H2 T4 Gb II 2D Ex tb IIIC T105 °C Db	IECEX DNV 21.0015X & Presafe 20 ATEX 05429X II 2G Ex db eb mb IIC T4 Gb II 2D Ex tb IIIC T105°C Db
CSA	LC19A17779 Ex db eb mb IIB+H2 T4 Gb Ex tb IIIC T105 °C Db	C19A17779 Ex db eb mb IIC T4 Gb Ex tb IIIC T105 °C Db
UL	LC19A17779 Class 1 Zone 1 AEx db eb mb IIB+H2 T4 Gb Zone 21 AEx tb mb IIIC T105 °C Db	Class I Zone 1 AEx db eb mb IIC T4b Zone 21 AEx tb mb IIIC T105°C Db
CCC	Ex db eb mb IIB+H2 T4 Gb Ex db eb mb IIC T4 Gb Ex tb IIC T105 °C Db	

LH3-UC25XL | LH3-UC25XL-1: Technical Specifications**Electrical***

	LH3-UC25XL	LH3-UC25XL-1
Rated power (PHC)	25 W	
Rated power	25 / 15 / 6.5 / 5 / 2.5 / 1.5 W	
Sound pressure level at rated power / 1 W (1 kHz, 1 m)	122 dB / 109 dB	119 dB / 106 dB
Opening angle at 1 kHz/ 4 kHz (- 6 dB)	100 / 30 degrees	73 / 33 degrees
Effective frequency range (-10 dB)	380 Hz to 7000 Hz	400 Hz to 7000 Hz
Rated voltage	100 V	
Rated impedance	400 ohm	
Electrical connection	2 x 6 pole push terminal	
Acceptable wire gauge	0.5 mm - 2.5 mm ² (AWG 20-12)	

* Technical performance data acc. to IEC 60268-5

Mechanical

Material horn	Polyamide (PA)
Material bracket	Stainless Steel (Grade 316)
Dimensions (H x W x D)	200 x 270 x 348 mm (7.87 x 10.62 x 13.70 in)
Weight	2.72 kg (5.99 lb)
Color	Black (RAL 9005)
Cable gland (standard supplied)	M20 Polyamide (PA)
Cable diameter	11 mm to 14 mm (0.43 in to 0.55 in)

Environmental

Operating temperature	-50 °C to +60 °C (-58 °F to +140 °F)
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Relative humidity	<95%

Certification and Approvals

	LH3-UC25XL	LH3-UC25XL-1
Safety	acc. to EN 62368-1	
Water and dust protected	acc. to EN 60529 IP 66/67	
IECEX / ATEX	IECEX DNV 21.0015X & Presafe 20 ATEX 05429X II 2G Ex db eb mb IIB+H2 T4 Gb II 2D Ex tb IIIC T105 °C Db	IECEX DNV 21.0015X & Presafe 20 ATEX 05429X II 2G Ex db eb mb IIC T4 Gb II 2D Ex tb IIIC T105 °C Db
CSA	LC19A17779 Ex db eb mb IIB+H2 T4 Gb Ex tb IIIC T105 °C Db	LC19A17779 Ex db eb mb IIC T4 Gb Ex tb IIIC T105 °C Db
UL	LC19A17779 Class 1 Zone 1 AEx db eb mb IIB+H2 T4 Gb Zone 21 AEx tb mb IIIC T105 °C Db	LC19A17779 Class I Zone 1 AEx db eb mb IIC T4 Zone 21 AEx tb mb IIIC T105° C Db
CCC	Ex db eb mb IIB+H2 T4 Gb Ex db eb mb IIC T4 Gb Ex tb IIC T105 °C Db	

2.1 Certification and approvals

INSTALLATION, OPERATION, MAINTENANCE AND CHECKOUT PROCEDURES FOR BOSCH-ATEX/IECEX CERTIFIED Ex-LOUDSPEAKER

1. If the Ex- loudspeaker is to be earthed use marked earth screws inside of the loudspeaker (see fig. 4).
2. Be sure that the Ex- loudspeaker is connected to the correct voltage, frequency and power stated on labels on the model.
3. The lid screws for the termination chamber should be fastened with a torque of 1.8 Nm to assure the IP-rating (see fig. 6).
4. Use only correct, ATEX/IECEX certified 'Ex eb' cable glands/blind plugs reflecting the same specifications as the rest of the loudspeaker with respect to IP rating and environmental temperature. Max M25.
5. The Ex loudspeakers should remain in position so that entering water will be drained from the sound channel (see fig. 9 and 10). Be sure that the environmental temperature is within the certified temperature range.



Caution!

Do not open the Ex loudspeaker when the speaker is energized.
Consequences

6. In general, the polyamide PA 12 housing material used in these Ex-loudspeakers, is suitable for all kinds of different climatic conditions, including heavy marine environments. Use suitable cleaning materials. Make sure the loudspeaker does not come into contact with foreign elements, such as chemicals, soaps, acids and dust.
7. Special conditions for Safe Use: the loudspeaker should only be installed in areas where there is a low risk of impact. When the bracket of the loudspeaker is mounted onto the construction, the bracket must be connected to earth potential through the construction.

INMETRO

Condições específicas de utilização segura:

O altofalante deve somente ser instalado em áreas onde há baixo risco de impacto.

Quando o suporte do altofalante é montado sobre a construção, o suporte deve ser conectado ao terra através da construção.

Marcação de advertência:

ATENÇÃO – NÃO ABRA QUANDO ENERGIZADO

2.2 Additional technical data

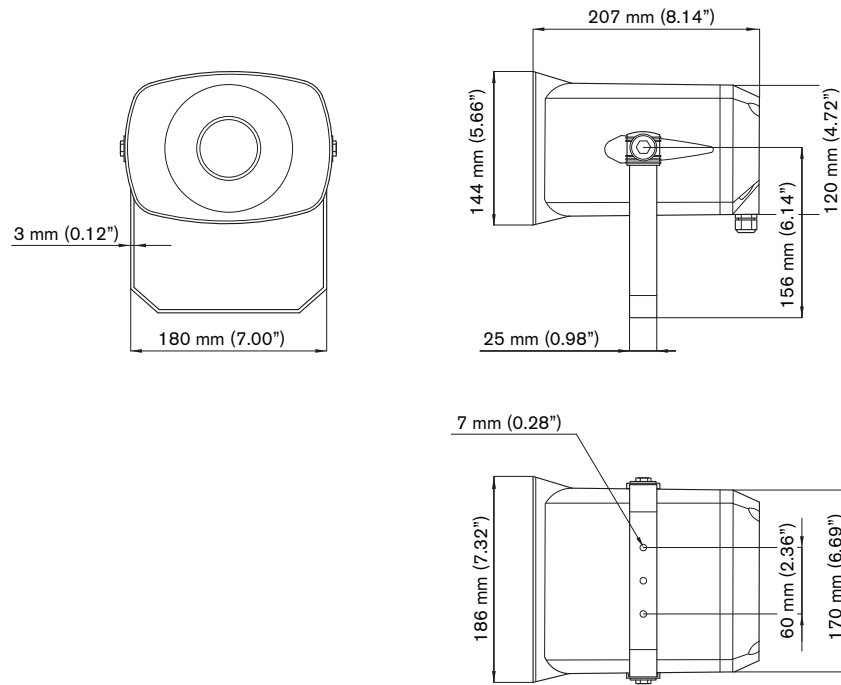


Figure 2.1: LH3-UC25XS | LH3-UC25XS-1

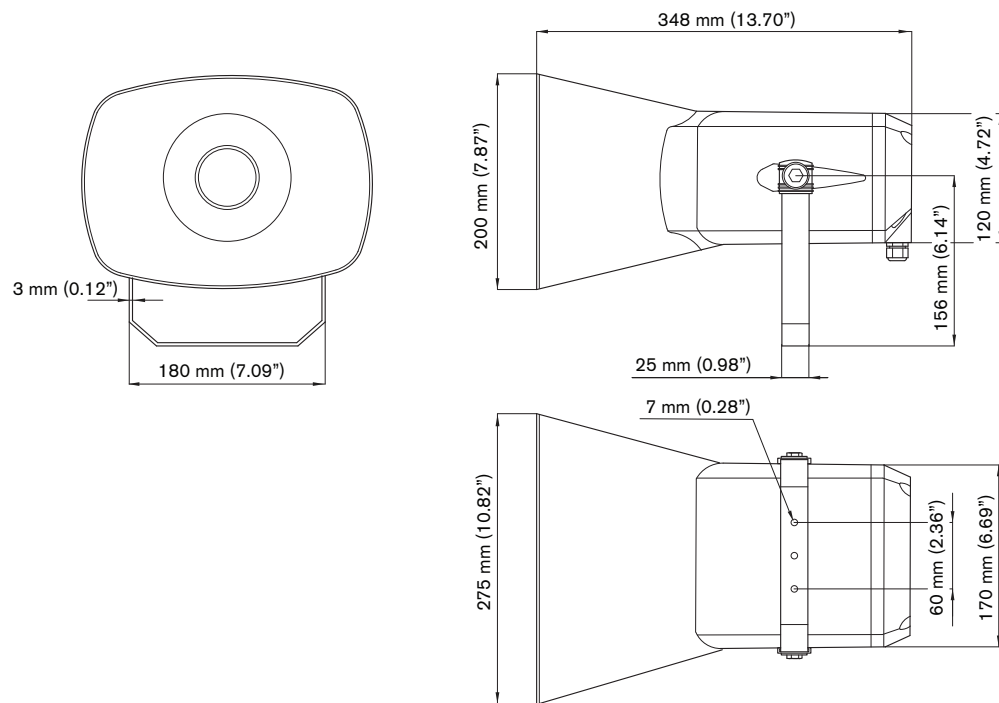
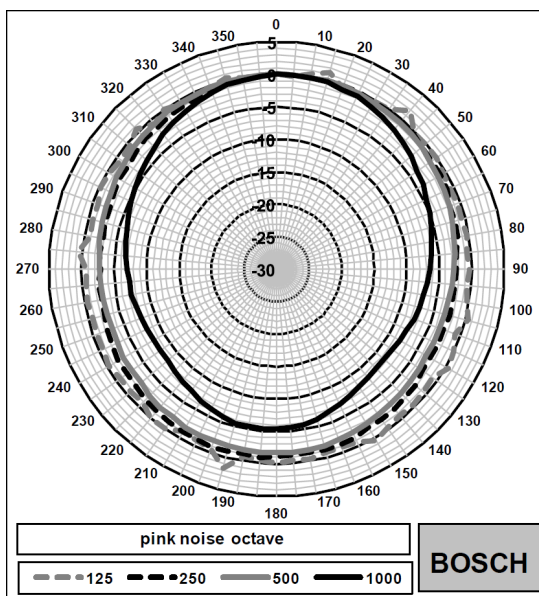
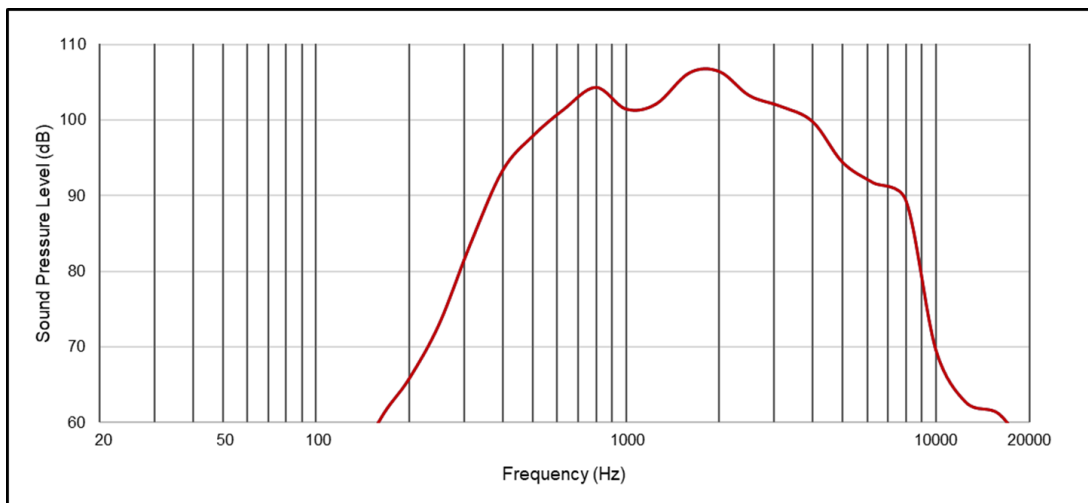
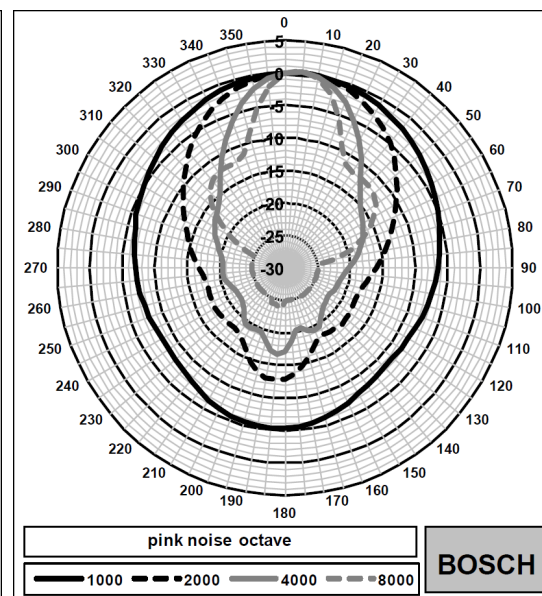


Figure 2.2: LH3-UC25XL | LH3-UC25XL-1

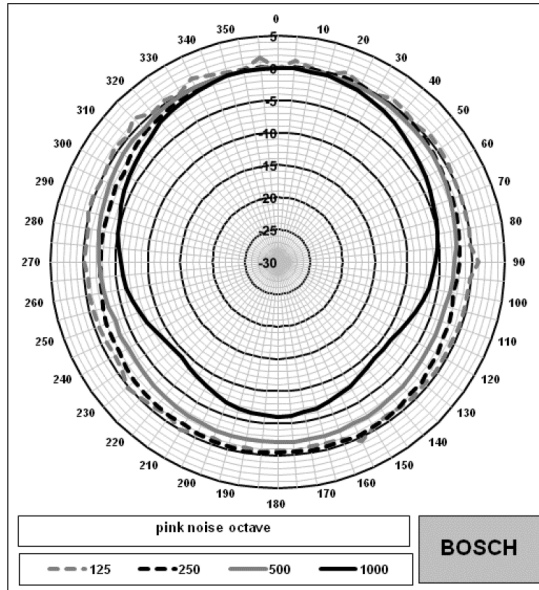
LH3-UC25XS



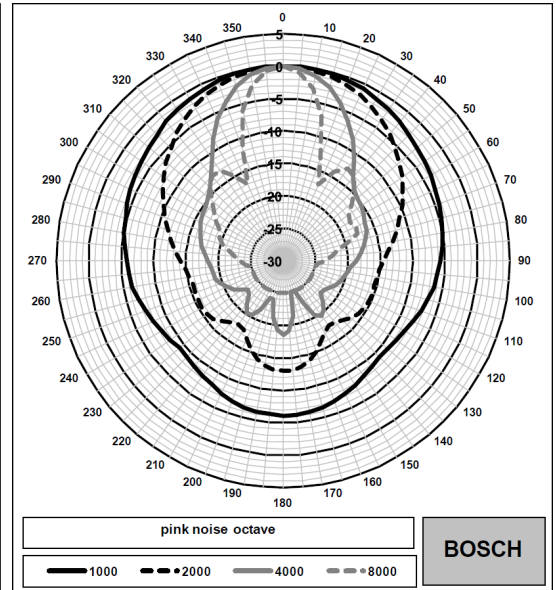
Horizontal polar diagram (low frequency)



Horizontal polar diagram (high frequency)

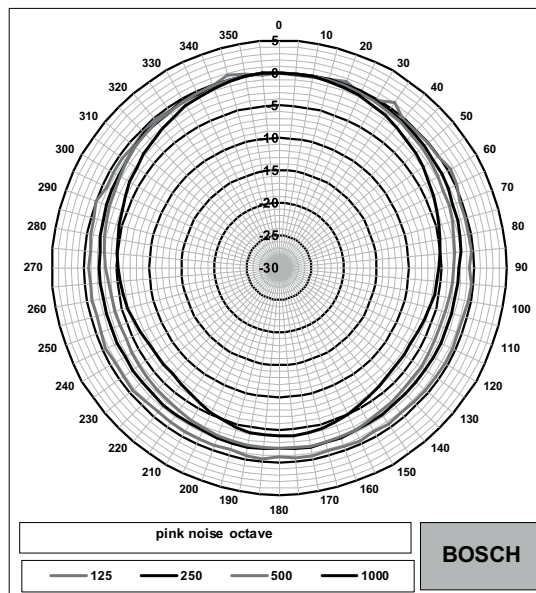
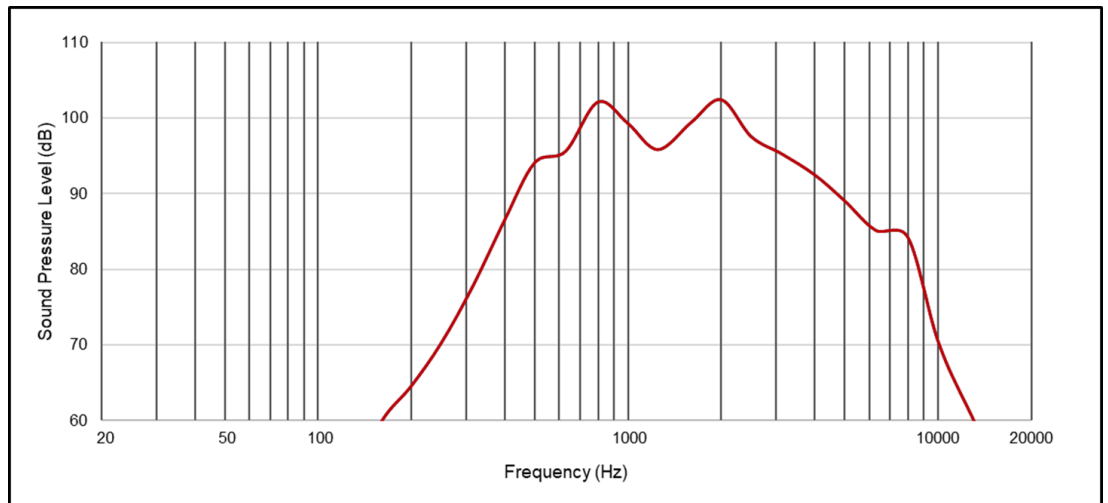


Vertical polar diagram (low frequency)

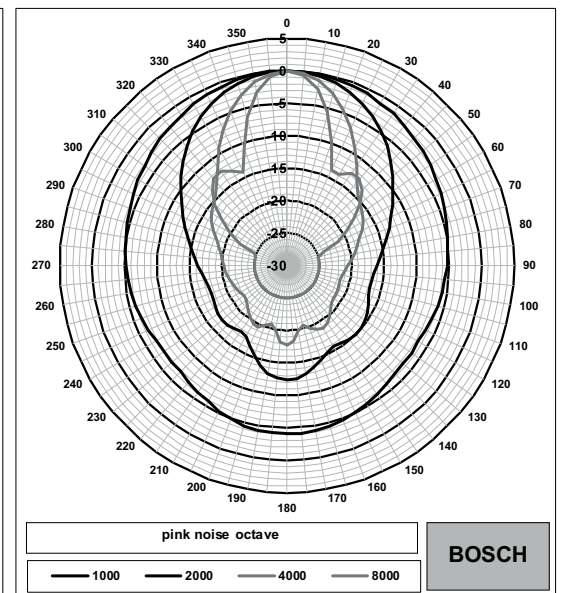


Vertical polar diagram (high frequency)

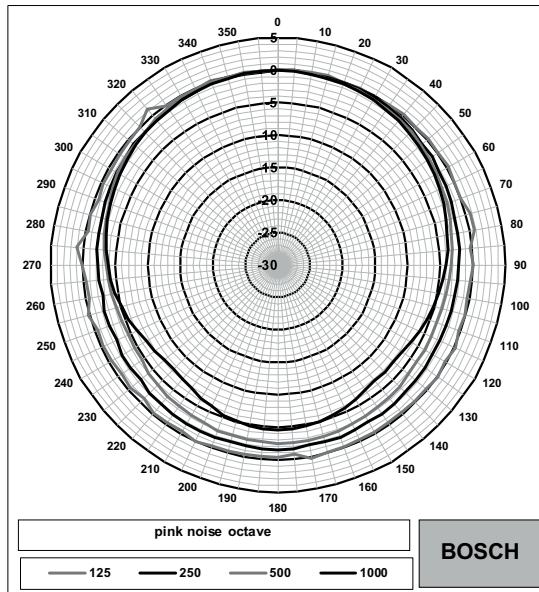
LH3-UC25XS-1



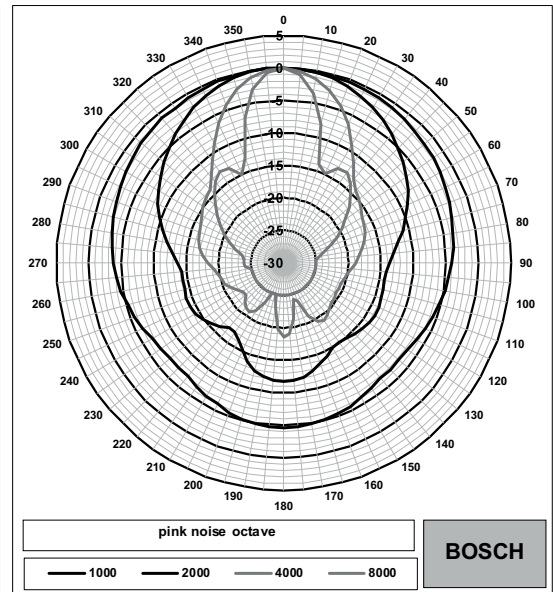
Horizontal polar diagram (low frequency)



Horizontal polar diagram (high frequency)

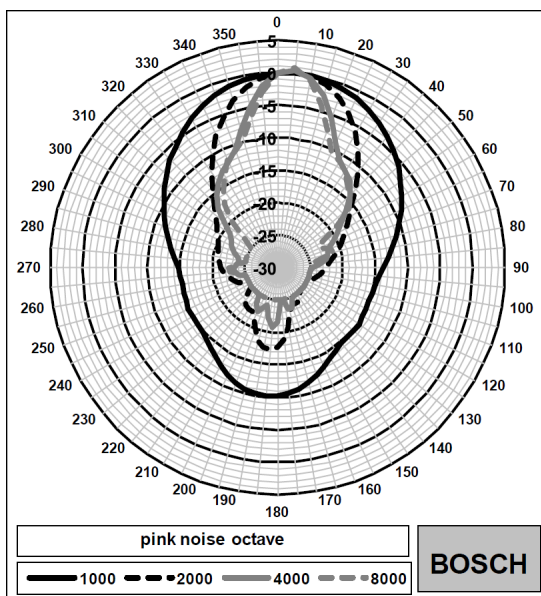
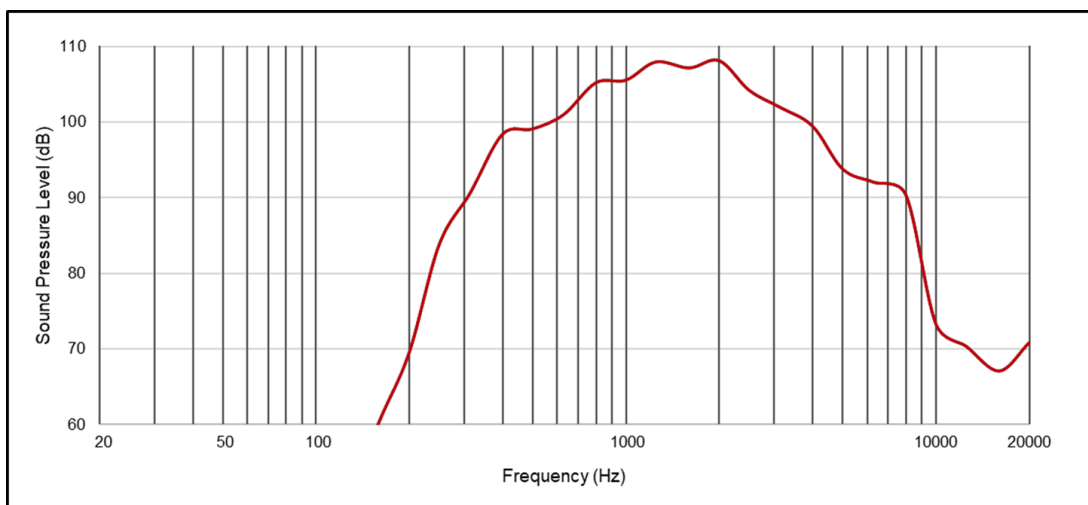


Vertical polar diagram (low frequency)

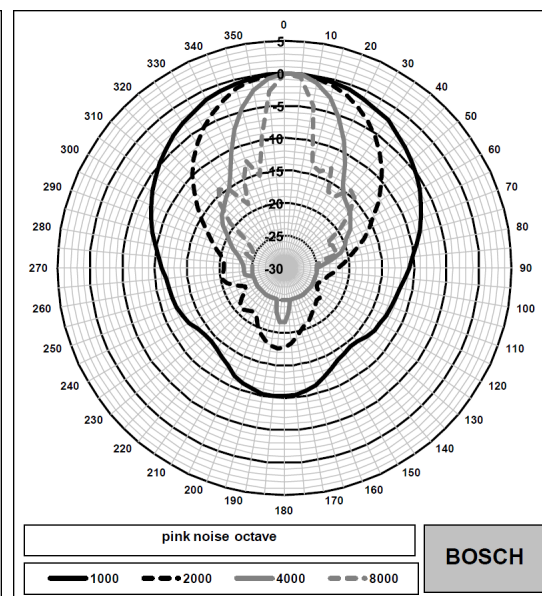


Vertical polar diagram (high frequency)

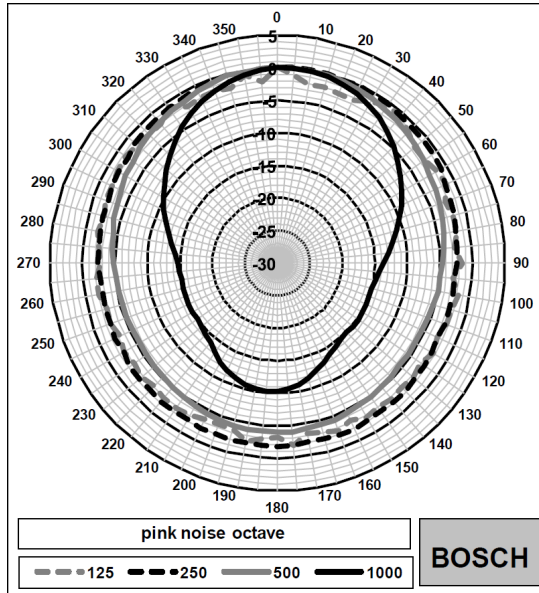
LH3-UC25XL



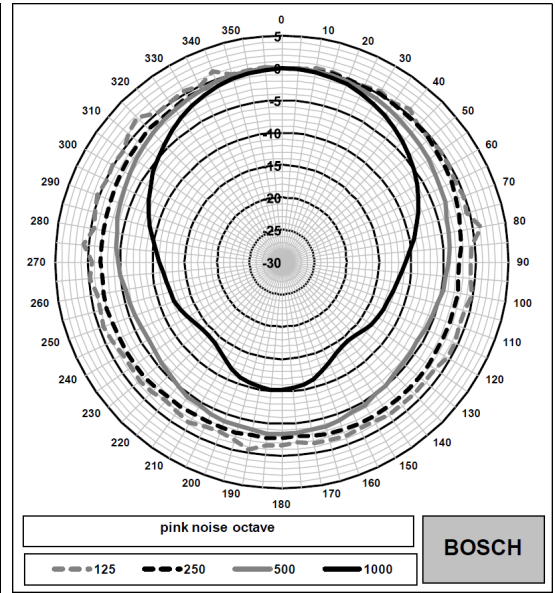
Horizontal polar diagram (low frequency)



Horizontal polar diagram (high frequency)

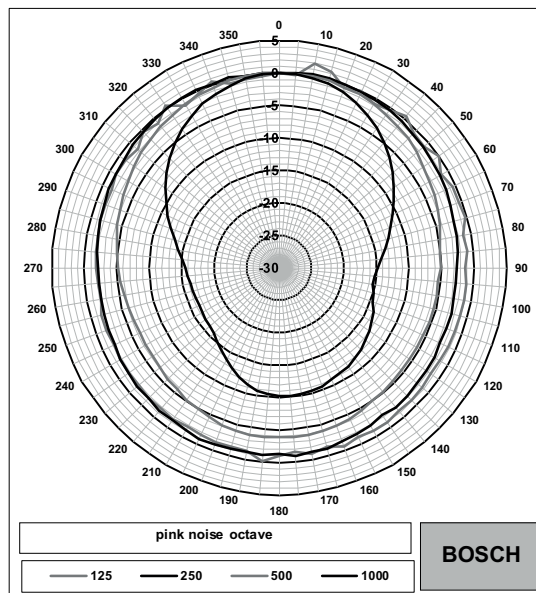
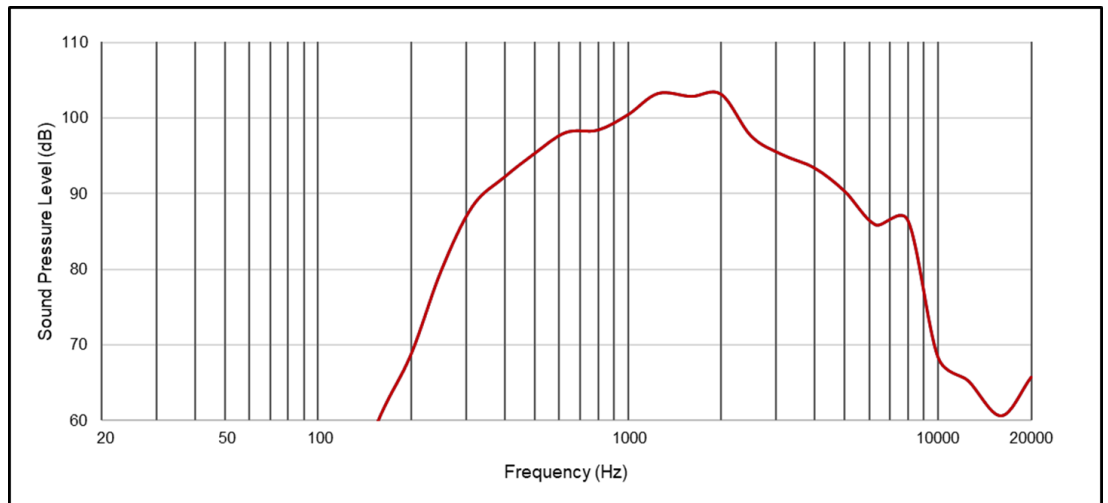


Vertical polar diagram (low frequency)

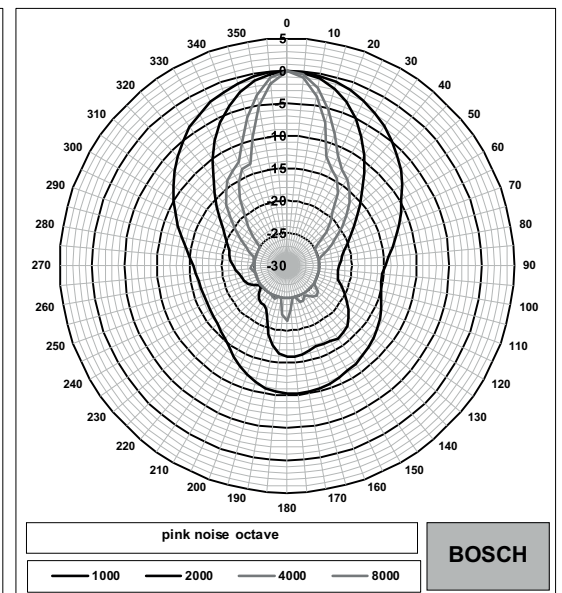


Vertical polar diagram (high frequency)

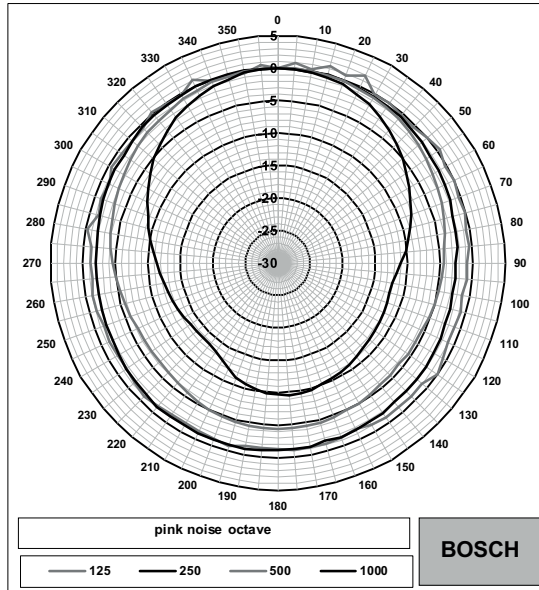
LH3-UC25XL-1



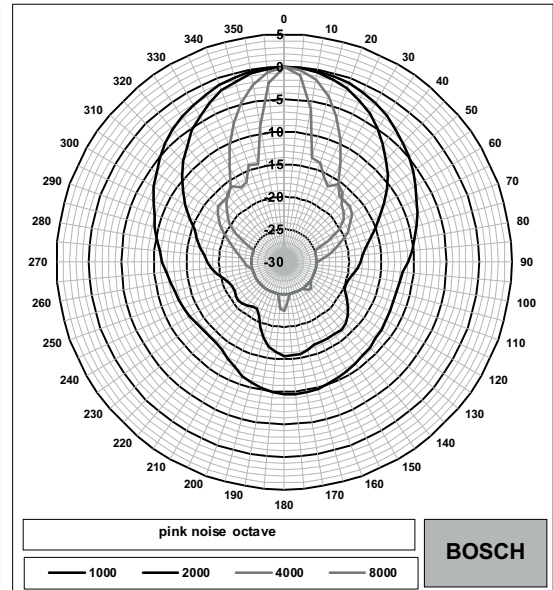
Horizontal polar diagram (low frequency)



Horizontal polar diagram (high frequency)



Vertical polar diagram (low frequency)



Vertical polar diagram (high frequency)

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