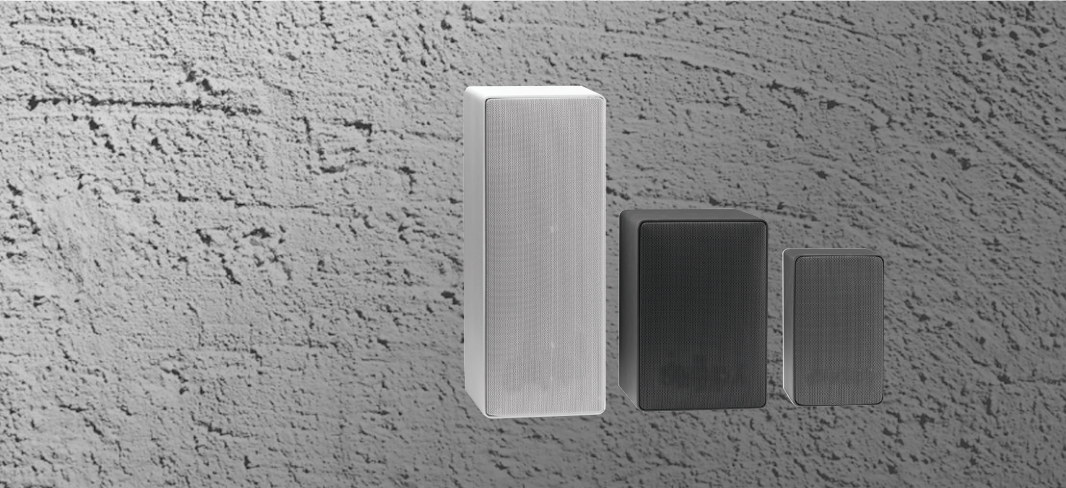


LBC 310x/1x Prosound Cabinet Speakers



Security Systems



- High-quality music and speech reproduction
- Extended frequency range
- Wide opening angle
- Simple power setting with vari-tap switch
- Compact yet robust aluminium enclosure
- Adjustable wall mounting bracket
- Ball-proof
- Water and dust protected to IP55
- Comply with international installation and safety regulations

Bosch loudspeakers offer a combination of quality, performance and innovation in public address. They are the result of over half a century's experience in professional audio, and meet virtually all sound reinforcement system requirements.

Pro-sound loudspeakers

Bosch pro-sound cabinet loudspeakers deliver professional performance from a compact, robust enclosure. They have been developed to meet the increasing demands for high quality foreground and background music in indoor and outdoor sound reinforcement applications.

Their extended frequency range, particularly at both low and high frequencies provides excellent music reproduction in shops, bars and boutiques. They are also ideal loudspeakers for monitoring, exhibition areas, presentation environments, terraces and temporary installations.

The very wide opening angle ensures even sound distribution, so fewer loudspeakers are needed to cover a given area.

Three models

The range comprises three models, offering a choice of 10, 20 or 30 W power handling capacity. The compact enclosures are made from diecast aluminium, which guarantees excellent bass response, a solid weatherproof construction and a pleasing appearance.

The LBC 3100/11 and /16 (dark grey and off-white respectively) are 10 W loudspeaker cabinets. They are fitted with two loudspeakers, a high-frequency tweeter and a low frequency woofer, coupled using appropriate LC filters.

The LBC 3101/11 and /16 (dark grey and off-white respectively) loudspeaker cabinets deliver 20 W and are similar in construction to the lower power models, but with larger loudspeakers and housed in a larger enclosure.

The LBC 3102/11 and /16 (dark grey and off-white respectively) loudspeaker cabinets deliver 30 W. They are fitted with three loudspeakers comprising two low-frequency woofers and a high-frequency tweeter, coupled with the appropriate L-C filters.

Mounting

For wall mounting the loudspeakers, a sturdy mounting bracket is provided with two lockable swivel joints to allow the sound to be easily directed. The bracket is fixed to the rear of the enclosure, and is adjustable in two perpendicular planes. For temporary installations, the 30 W enclosure may be mounted on a floorstand (LBC 1250/00) in combination with the mounting bracket and a floorstand adaptor (LBC 1251/00). These accessories are available separately.

Simple power setting

All models are supplied with a builtin 100 V line transformer with taps on the primary winding for fullpower, half-power, quarter power and one-eighthpower radiation. These taps are connected to a rotary varitap switch located on a recessed panel on the rear of the enclosure to allow simple output power setting. An 8 . connection (by-passing line transformer) and an off position are also provided on the vari-tap switch. A two metre long twin-core loudspeaker cable is connected to the loudspeaker. The ends are stripped ready for use. Quality Assurance All Bosch loudspeakers are designed to withstand operating at their rated power for 100 hours in accordance with IEC 268-5 Power Handling Capacity (PHC) standards. Bosch has also developed the Simulated Acoustical Feedback Exposure (SAFE) test to demonstrate that they can withstand two times their rated power for short durations. This ensures extra reliability under extreme conditions, leading to higher customer satisfaction, longer operating life, and much less chance of failure or performance deterioration.

Safety aspects

In common with all Bosch products, care is taken to meet high safety standards. These loudspeaker cabinets comply with the relevant safety and installation regulations of EN 60065.

Parts Included

Qty	Components
1	LBC310x/1x Prosound cabinet loudspeakers
1	Wall mounting bracket

LBC 3100

Octave band (Hz)	125	250	500	1k	2k	4k	8k
SPL 1.1	78	78	79	82	85	84	82
SPL max.	88	88	89	92	95	94	92
Q-factor	1.3	1.4	1.8	2.9	4.9	4.4	5
Efficiency	0.06	0.06	0.06	0.07	0.08	0.07	0.04
H. angle	360	360	360	190	130	145	130
V. angle	360	360	360	180	100	140	110

LBC 3101

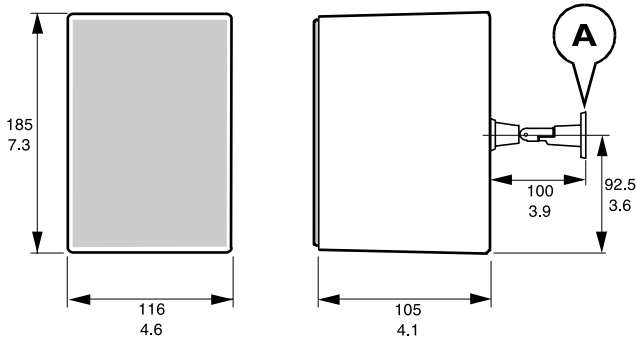
Octave band (Hz)	125	250	500	1k	2k	4k	8k
SPL 1.1	81	81	83	87	89	85	85
SPL max.	94	94	96	100	102	98	98
Q-factor	1.3	1.4	1.9	3.2	4.9	2.6	4
Efficiency	0.12	0.11	0.13	0.2	0.2	0.15	0.1
H. angle	360	360	360	180	120	150	130
V. angle	360	360	360	140	125	145	130

LBC 3102

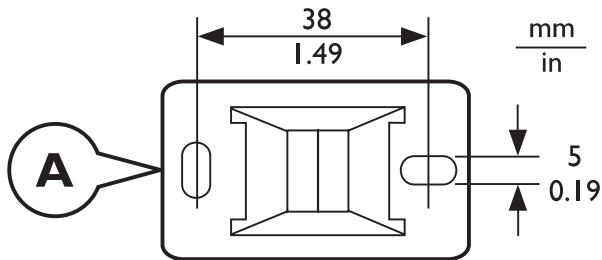
Octave band (Hz)	125	250	500	1k	2k	4k	8k
SPL 1.1	85	85	87	90	91	89	85
SPL max.	100	100	102	105	106	104	100
Q-factor	1.5	1.5	2.5	3.4	6	5	5.2
Efficiency	0.27	0.27	0.25	0.37	0.26	0.2	0.08
H. angle	360	360	360	180	100	125	120
V. angle	360	360	140	75	120	130	100

Installation/Configuration Notes

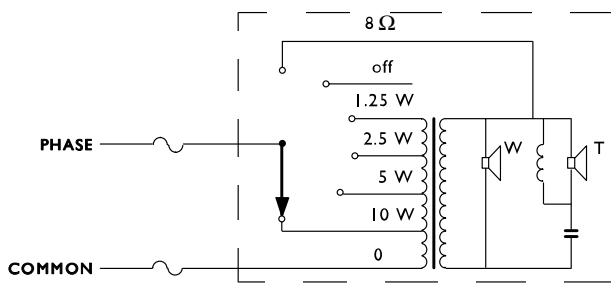
LBC 3100/11 and /16



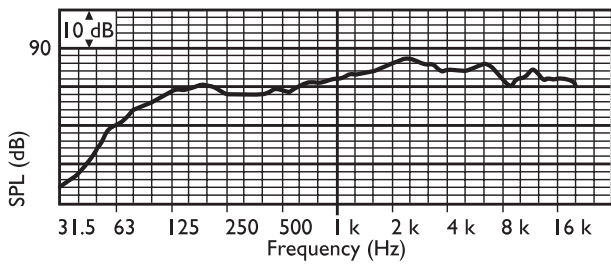
Dimensions in mm (in)



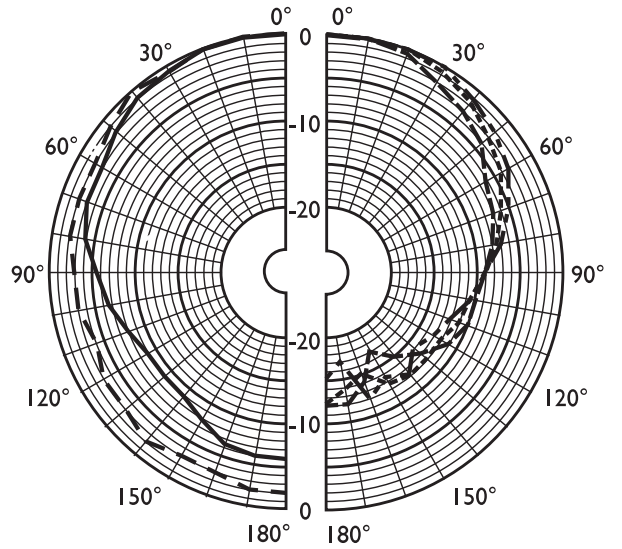
Dimensions



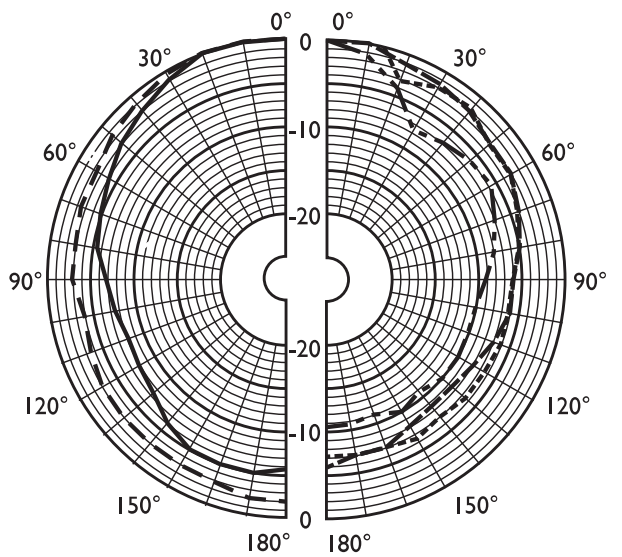
Circuit diagram



Frequency response

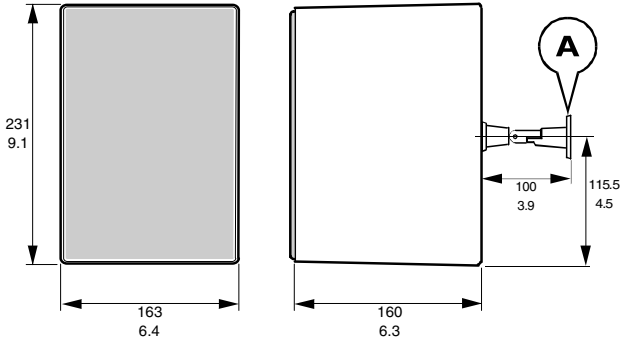


Polar diagram horizontal (measured with pink noise)

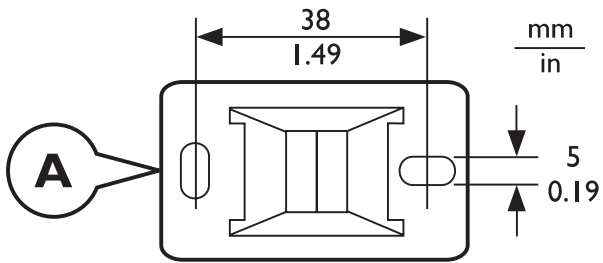


Polar diagram vertical (measured with pink noise)

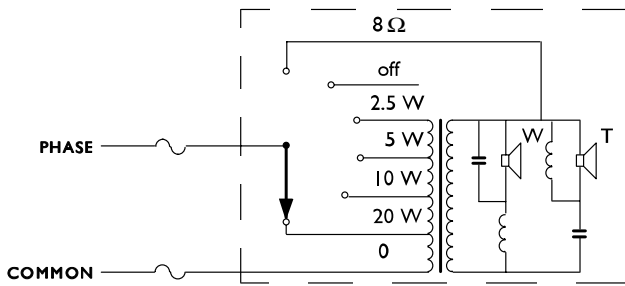
LBC 3101/11 and /16



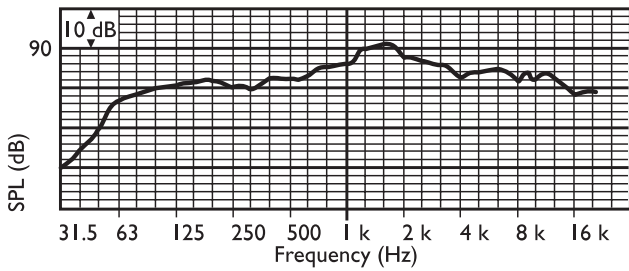
Dimensions in mm



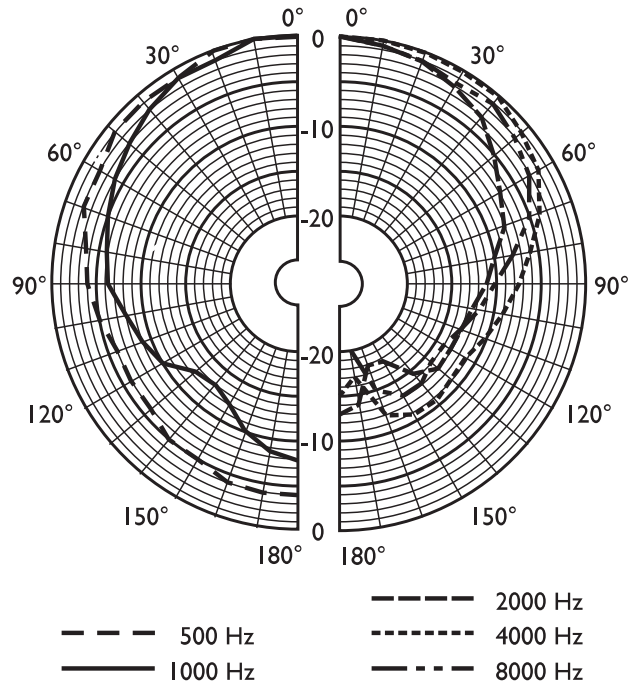
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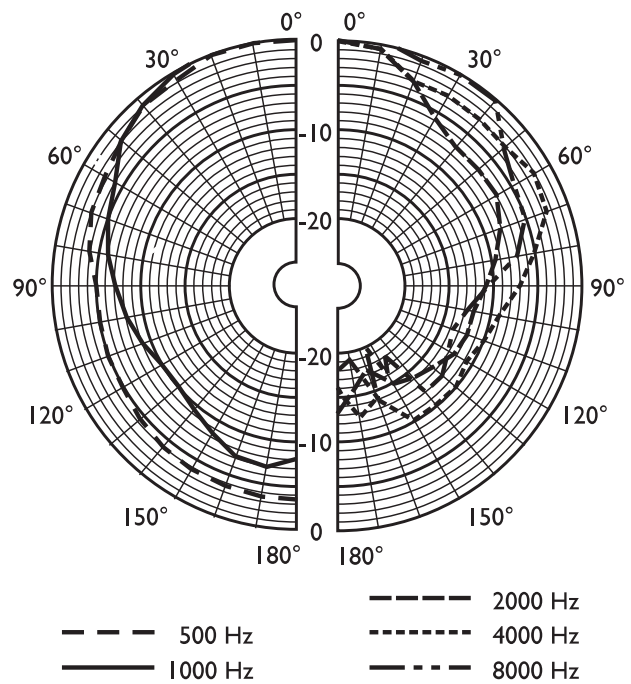
Circuit diagram



Frequency response

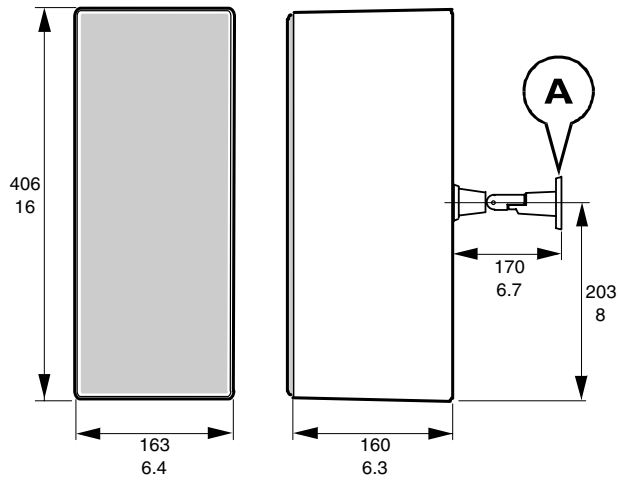


Polar diagram horizontal (measured with pink noise)

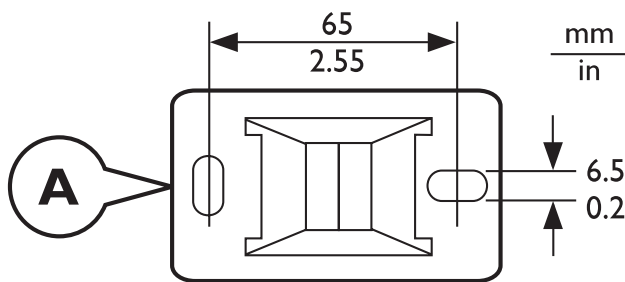


Polar diagram vertical (measured with pink noise)

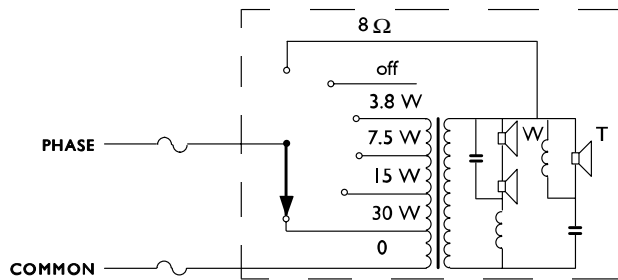
LBC 3102/11 and /16



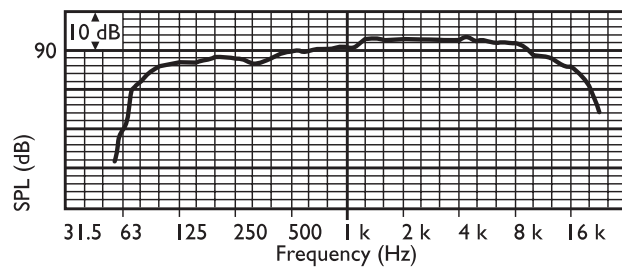
Dimensions in mm



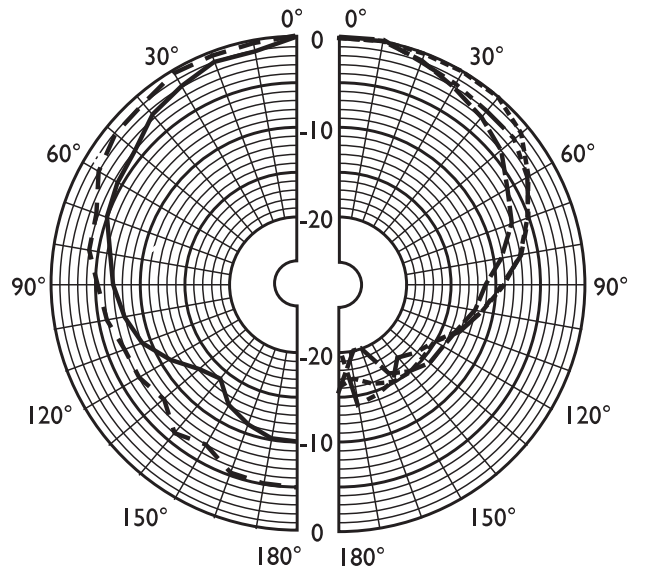
Dimensions



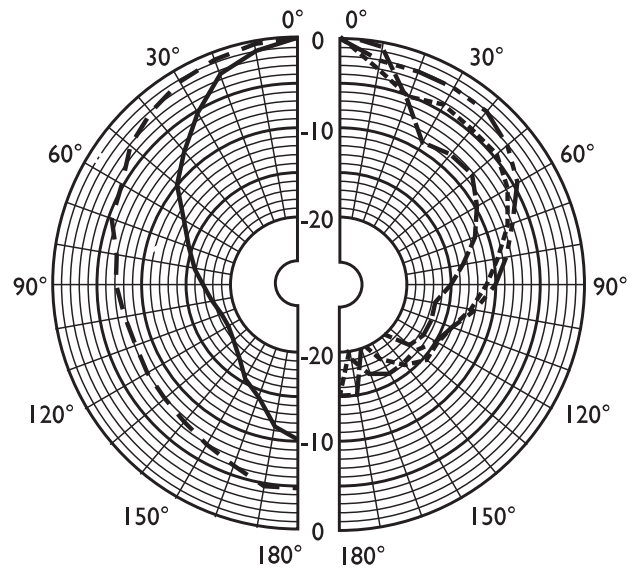
Circuit diagram



Frequency response



Polar diagram horizontal (measured with pink noise)



Polar diagram vertical (measured with pink noise)

LBC 310x/1x					
	LBC 3100/11		LBC 3100/16		LBC 3101/11
Max. power	15 W		15 W		35 W
Rated power (PHC)	10W (10-5-2.5-1.25 W)		10W (10-5-2.5-1.25 W)		20 W (20-10-5-2.5 W)
Sound pressure at rated power / 1 W (at 1 kHz, 1 m)	92 dB/82 dB (SPL)		92 dB/82 dB (SPL)		100 dB/87 dB (SPL)
Effective freq. (-10dB)	80Hz - 20kHz		80Hz - 20kHz		75Hz - 20kHz
Opening angle (at 1 kHz/4 kHz, -6 dB)					
horizontal	190° / 145°		190° / 145°		180° / 150°
vertical	180° / 140°		180° / 140°		140° / 145°
Rated Volt.	100V / 8.9V		100V / 8.9V		100V / 12.6V
Rated impedance	1000/8 Ω		1000/8 Ω		500/8 Ω
Speaker size	1"/4"		1"/4"		1"/5"
Magnet weight	3.6 oz / 8 oz		3.6 oz / 8 oz		5.3 oz / 13.3 oz
Ambient temp range	-25/+55°C (-13/131 °F)		-25/+55°C (-13/131 °F)		-25/+55°C (-13/131 °F)
Connection					
cable	2-wire		2-wire		2-wire
length	2 m (78.7 in)		2 m (78.7 in)		2 m (78.7 in)
Dimensions (mm)	185x116x105		185x116x105		231x163x160
(in)	7.3x4.6x4.1		7.3x4.6x4.1		9.1x6.4x6.3
Colour	RAL 7043		RAL 9010		RAL7043
Weight	2.3 kg (5 lb)		2.3 kg (5 lb)		4.5 kg (9.9 lb)

LBC 310x/1x					
	LBC 3101/16		LBC 3102/16		LBC 3102/11
Max. power	35 W		45 W		45 W
Rated power (PHC)	20 W (20-10-5-2.5 W)		30W(30-15-7.5-3.7W)		30W(30-15-7.5-3.7W)
Sound pressure at rated power / 1 W (at 1 kHz, 1 m)	100 dB/87 dB (SPL)		105 dB/90 dB (SPL)		105 dB/90 dB (SPL)
Effective freq. (-10dB)	75Hz - 20kHz		70Hz - 20kHz		70Hz - 20kHz
Opening angle (at 1 kHz/4 kHz, -6 dB)					
horizontal	180° / 150°		180° / 125°		180° / 125°
vertical	140° / 145°		75° / 130°		75° / 130°
Rated Volt.	100V / 12.6V		100V / 15.5V		100V / 15.5V
Rated impedance	500/8 Ω		333/8 Ω		333/8 Ω
Speaker size	1"/5"		1"/5"		1"/5"
Magnet weight	5.3 oz / 13.3 oz		5.3 oz / 10 oz		5.3 oz / 10 oz
Ambient temp range	-25/+55°C (-13/131 °F)		-25/+55°C (-13/131 °F)		-25/+55°C (-13/131 °F)
Connection					
cable	2-wire		2-wire		2-wire
length	2 m (78.7 in)		2 m (78.7 in)		2 m (78.7 in)
Dimensions (mm)	231x163x160		406x163x160		406x163x160
(in)	9.1x6.4x6.3		16 x 6.4 x 6.3		16 x 6.4 x 6.3
Colour	RAL9010		RAL 7043		RAL 9010
Weight	4.5 kg (9.9 lb)		7 kg (15.4 lb)		7 kg (15.4 lb)