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LBC 3201/00 Line Array Indoor Loudspeaker

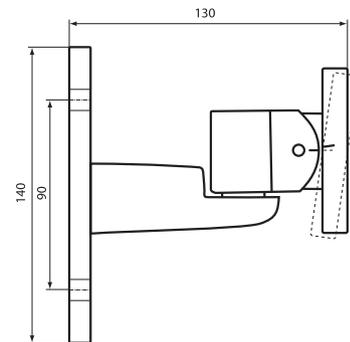


- ▶ **Extended listening area**
- ▶ **Excellent intelligibility of speech and music**
- ▶ **Uniform distribution of natural sound throughout the room**
- ▶ **Excellent directivity for use in acoustically difficult, reverberant applications**
- ▶ **Suitable for larger enclosures, such as meeting halls and places of worship**
- ▶ **Extremely slim**
- ▶ **Voice evacuation compliant as standard**
- ▶ **EN 54-24 and EN 60849 compliant**

This loudspeaker, with its excellent directivity and high power output, can handle medium and large (reverberant) indoor environments, especially the more acoustically challenging ones. It is typically used in congress venues, meeting halls and places of worship. The full frequency range of the LBC 3201/00 makes it ideal for speech as well as music reproduction. Its exceptionally narrow housing (only 8 cm wide) makes it extremely unobtrusive.

System Overview

A time and labor-saving mounting method has been developed for the LBC 3201/00. The loudspeaker comes with a chart, which shows the ideal installation height for the area that the loudspeaker has to cover. Once the appropriate height has been determined for a given area, the loudspeaker is mounted at an angle marked on the mounting bracket. This procedure is much simpler and more accurate than traditional trial and error installation methods. The LBC 3201/00 can be mounted on a wall or directly onto a floor stand LBC 1259/01 with an M10 threaded bolt without additional accessories.



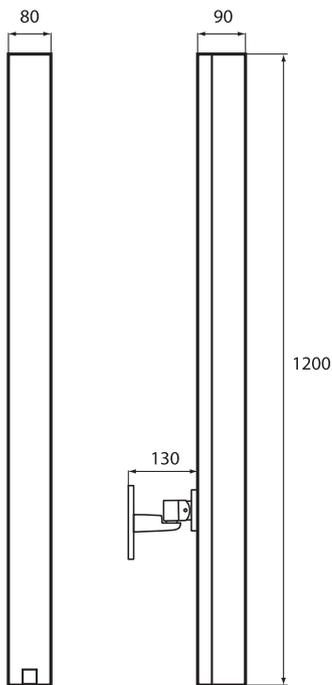
Dimensions in mm of included mounting bracket (with marked angle)



Detail mounting bracket



Mounted on optional loudspeaker stand (LBC 1259/01)



Dimensions in mm

Functions

Range of application

The LBC 3201/00 is part of the XLA 3200 (eXtended Listening Area) range of line array loudspeakers. Advanced filtering and positioning of the loudspeaker drivers* has resulted in greatly improved audio directivity. Each speaker driver produces a dedicated frequency range. The specially developed high quality drivers enable reproduction of remarkably clear, natural sound, which gives excellent intelligibility of both speech and music.

The difference between a conventional column loudspeaker and this line array is noticeable in several ways. There is uniform sound distribution throughout the whole listening area: not too loud at the front, not too quiet at the back. All relevant frequencies are present everywhere in the listening area. Greater coverage is achieved, so more people can be reached with speech and music with a higher intelligibility level. All these important features give the experience of a very natural sound quality in the whole listening area.

*patent pending

Easy installation

The advanced filtering generates larger vertical opening angles for high frequencies, so there is less narrow 'beaming' of higher tones in the vertical plane. As an example, at 4 kHz the vertical opening angle is still 22°. Having more constant vertical opening angles makes installation easier, as the positioning of the loudspeakers is less critical because they cover a wider area. An extremely wide horizontal opening angle of 132° at 4 kHz means that a single loudspeaker can provide natural sound reproduction over an extensive listening area.

Suppressed Side Lobes

All conventional column loudspeakers produce a main lobe of sound, which is directed at listeners, as well as a number of unwanted side lobes. The LBC 3201/00 has highly suppressed side lobes in the vertical plane, typically at least 10 dB suppression of the 250 Hz octave band at 90°, resulting in a much clearer, less 'colored' sound, even when close to the loudspeakers. This gives the line array superb speech intelligibility.

Sound Reproduction

The positioning and very high quality of the 2-inch drivers contribute significantly towards making the LBC 3201/00 a very efficient line array. With a sound pressure level of 110 dB at 1 m, and at 60 W, loud and clear sound reproduction is possible even at considerable distances from the loudspeaker.

The high-quality loudspeaker drivers used in the LBC 3201/00 give excellent, natural sound reproduction of frequencies ranging from 190 Hz to 18 kHz. Together with the constant directivity, this ensures that all important frequencies are heard in the listening area.

Emergency Compliant

The loudspeaker has a ceramic terminal block, a thermal fuse, and heat-resistant, high-temperature wiring. These ensure that, in the event of a fire, damage to the loudspeaker does not result in failure of the circuit to which it is connected. Thus, system integrity is maintained, and loudspeakers within the same loudspeaker zone in other areas can still be used to inform people of the situation.

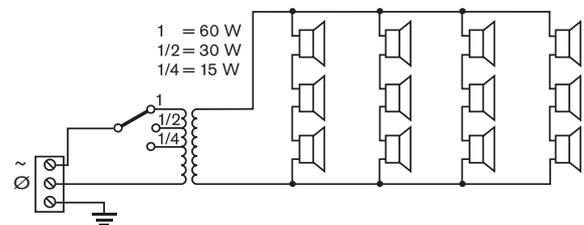
The three-way ceramic terminal block with screw connections is suitable for loop-through wiring, and is located in a compartment at the base of the loudspeaker column. There is also a switch, which allows the selection of nominal full power (60 W), half power (30 W) or quarter power (15 W). The compartment has knockout slots for accommodating cables.

Certifications and Approvals

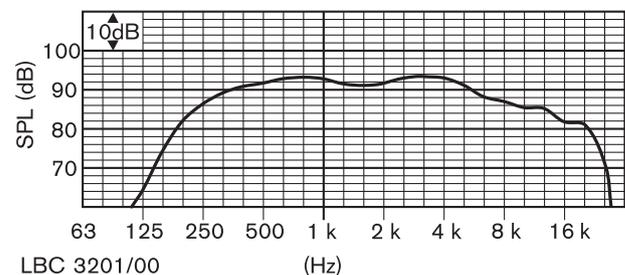
All Bosch loudspeakers are designed to withstand operation at their rated power for 100 hours in accordance with IEC 268-5 Power Handling Capacity (PHC) standards. These loudspeakers also comply with the Simulated Acoustical Feedback Exposure (SAFE) test, which demonstrates that they can withstand acoustical feedback at full 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.

Region	Certification
Europe	CE Declaration of Conformity Declaration of conformity EN50102 (IK07)
Poland	CNBOP
Safety	acc. to EN 60065 and CE
Emergency	acc. to EN 54-24 / EN 60849
Water and dust protection	acc. to IEC 60529, IP 32
Impact	acc. to EN 50102, IK 07

Installation/Configuration Notes



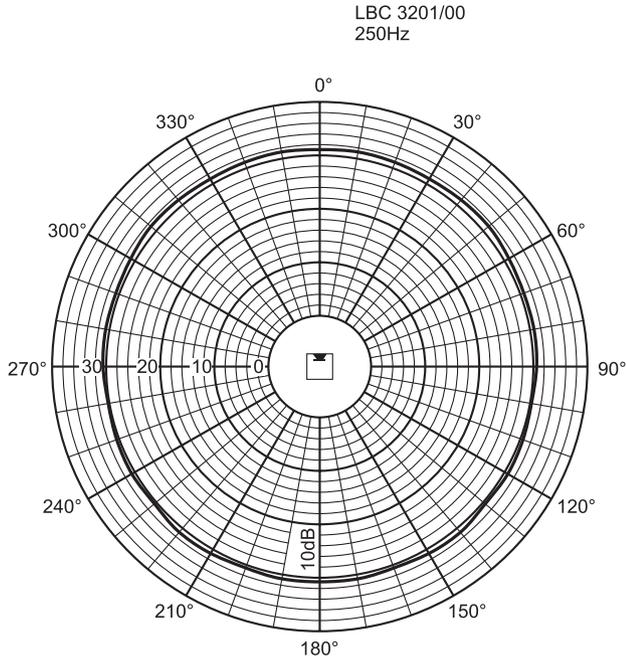
Circuit diagram



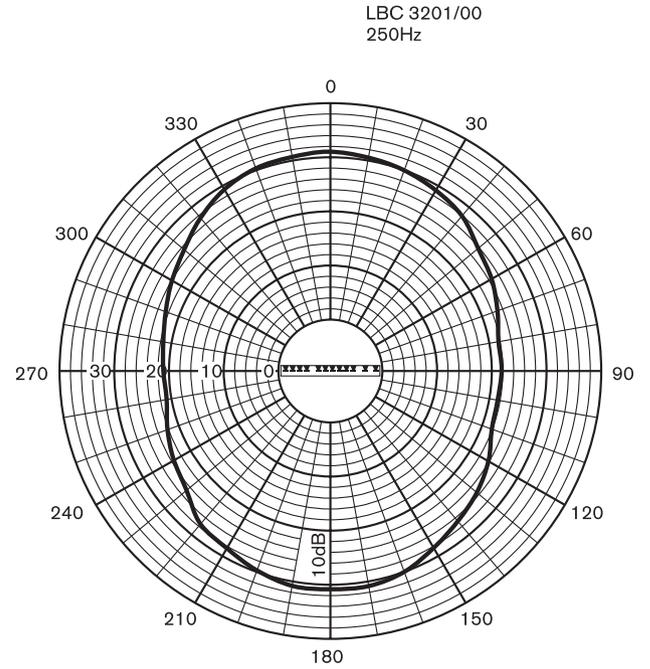
Frequency response

	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
SPL 1.1	88	92	92	91	91	86
SPL max.	106	110	110	109	109	104
Q-factor	2.2	3.2	6.5	12.6	23.4	53.3
H. angle (deg)	360	360	210	192	132	100
V. angle (deg)	107	67	50	33	22	12

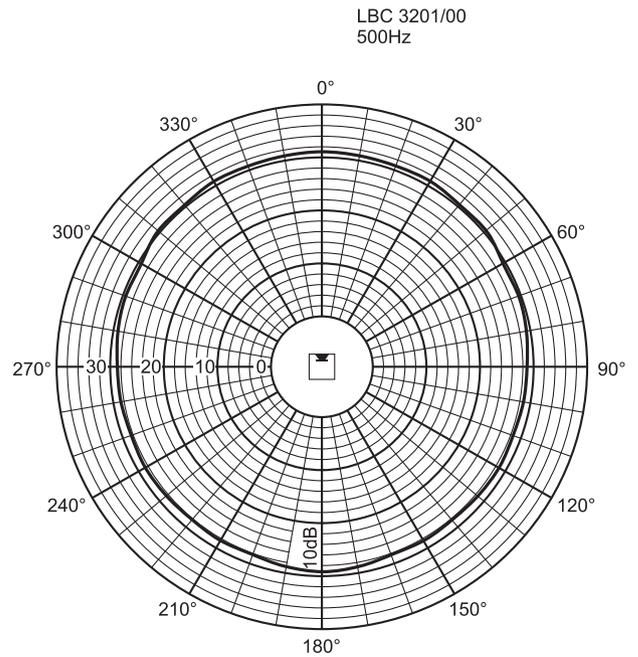
Acoustical performance specified per octave



Polar diagram (horizontal)

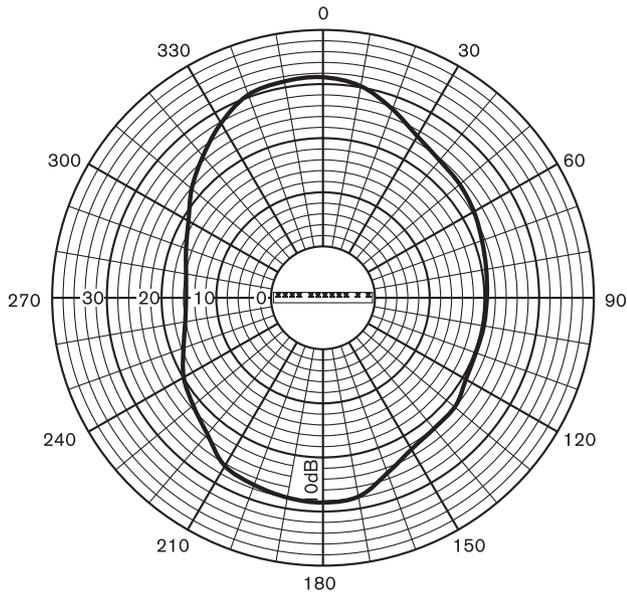


Polar diagram (vertical)



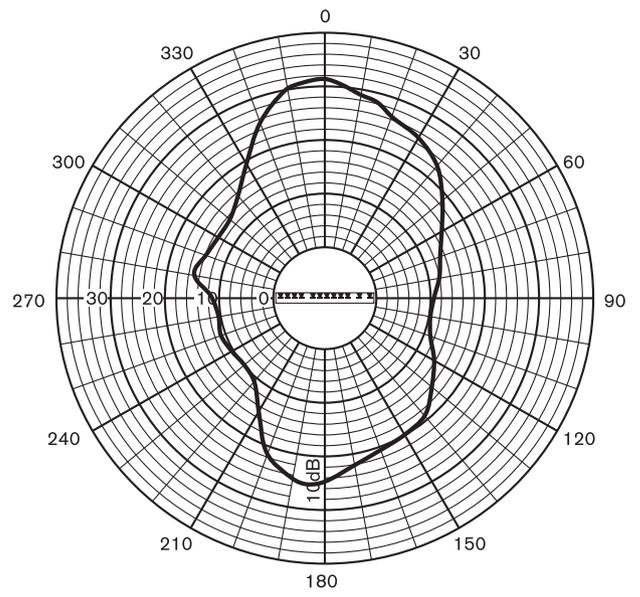
Polar diagram (horizontal)

LBC 3201/00
500Hz



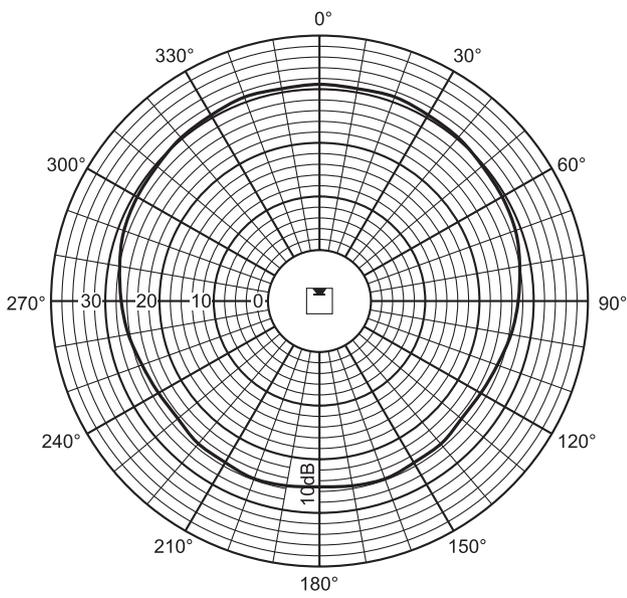
Polar diagram (vertical)

LBC 3201/00
1kHz



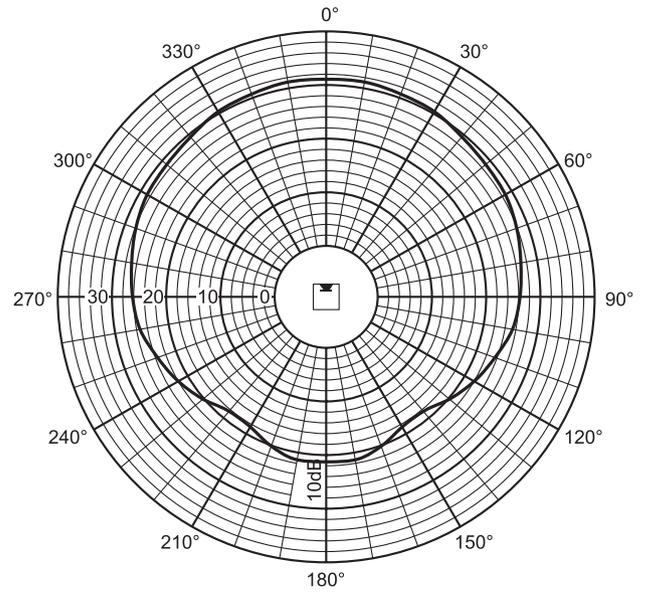
Polar diagram (vertical)

LBC 3201/00
1kHz



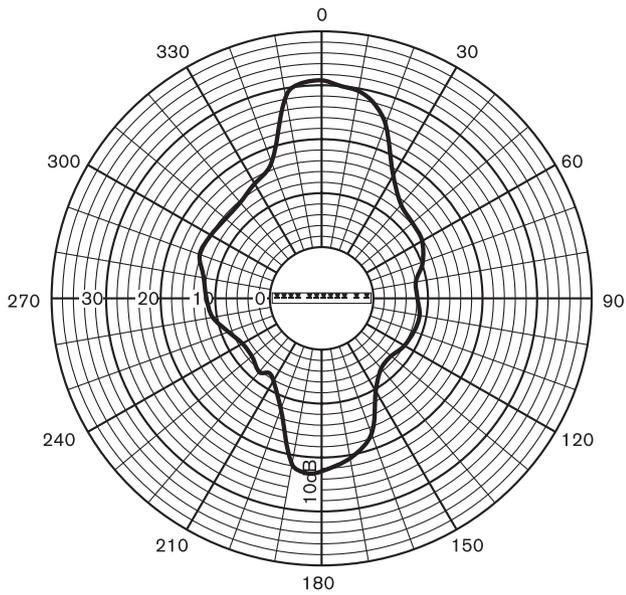
Polar diagram (horizontal)

LBC 3201/00
2kHz



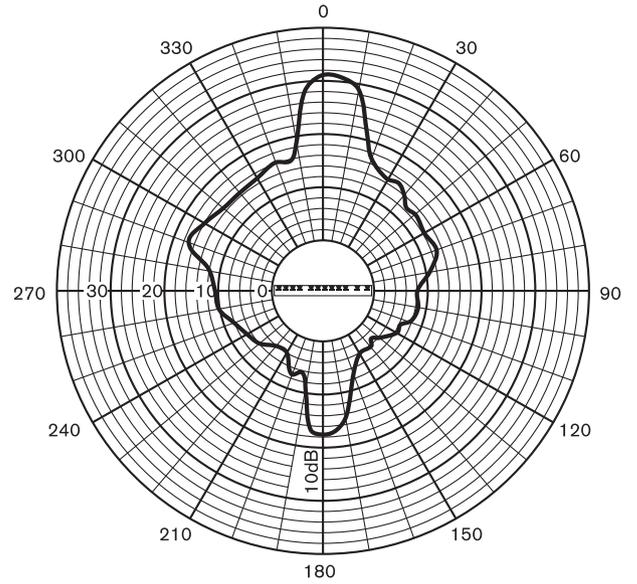
Polar diagram (horizontal)

LBC 3201/00
2kHz



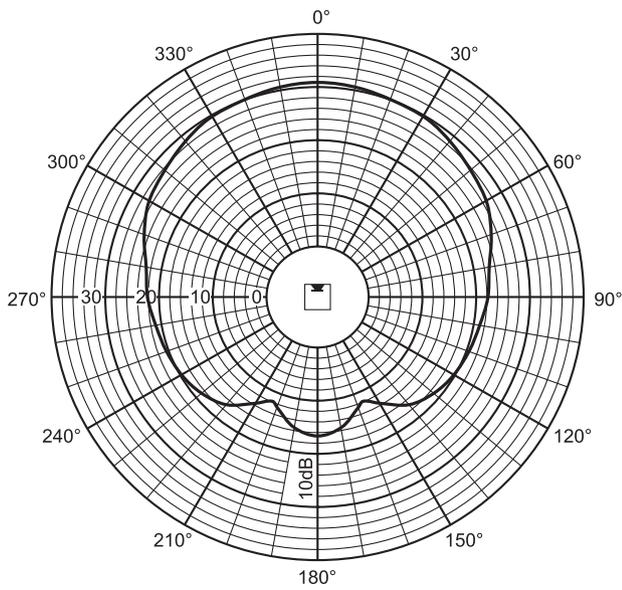
Polar diagram (vertical)

LBC 3201/00
4kHz



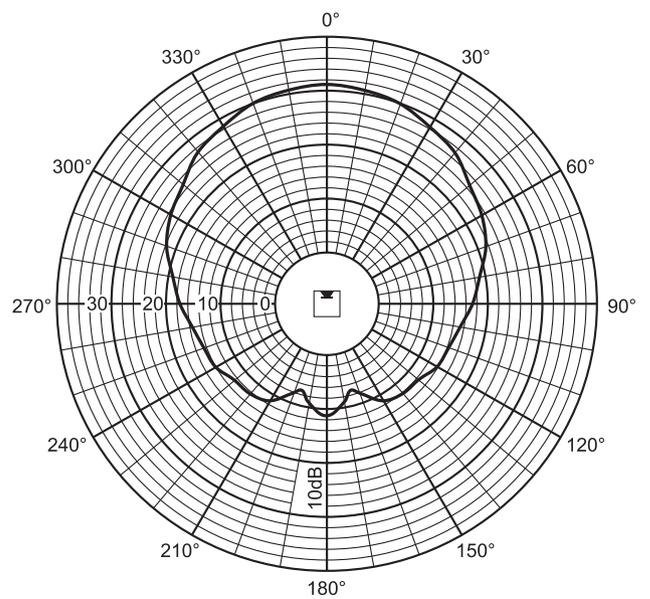
Polar diagram (vertical)

LBC 3201/00
4kHz

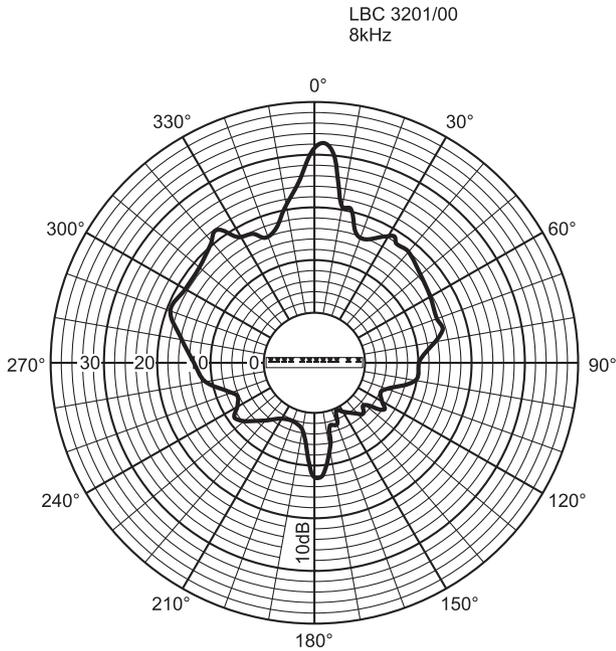


Polar diagram (horizontal)

LBC 3201/00
8kHz



Polar diagram (horizontal)



Polar diagram (vertical)

Parts Included

Quantity	Components
1	LBC 3201/00 Line Array Loudspeaker
1	Wall mounting bracket
1	Attachment piece
1	Installation chart

Technical Specifications

Electrical*

Maximum power	90 W
Rated power	60 / 30 / 15 W
Sound pressure level at 60 W / 1 W (1 kHz, 1 m)	110 dB / 92 dB (SPL)
Effective frequency range (-10 dB)	190 Hz to 18 kHz
Opening angle	1 kHz / 4 kHz (-6 dB)
horizontal	210° / 132°
vertical	50° / 22°
Rated input voltage	100 V
Rated impedance	167 ohm
Connector	Screw terminal block

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

Mechanical

Dimensions (H x W x D)	1200 x 80 x 90 mm (47.24 x 3.15 x 3.54 in)
Weight	6,4 kg (14,1 lb)
Color	Light gray (matches RAL 9022)

Environmental

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

Ordering Information

LBC 3201/00 Line Array Indoor Loudspeaker	LBC3201/00
for medium and large (reverberant) indoor environments, 60 W	

Accessories

LBC 1259/00 Universal Floorstand	LBC1259/00
Lightweight aluminum construction, foldable, M10 x 12 reducer flange.	
LBC 1259/01 Universal Floorstand	LBC1259/01
Lightweight aluminum construction, foldable, M10 x 12 reducer flange.	

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