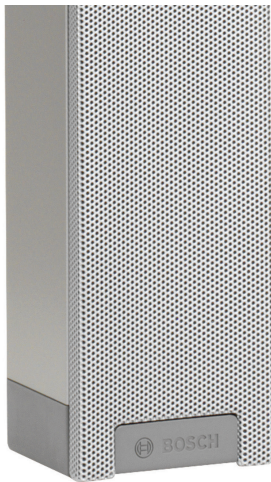


LBC 3201/00 Line Array Indoor Loudspeaker

www.boschsecurity.com



BOSCH
Invented for life

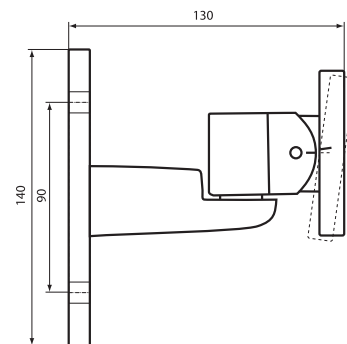


- ▶ Extended listening area
- ▶ Excellent intelligibility of speech and music
- ▶ Uniform distribution of natural sound throughout the room
- ▶ Excellent directivity for use in acoustically difficult, reverberant applications
- ▶ EN 54-24 certified

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

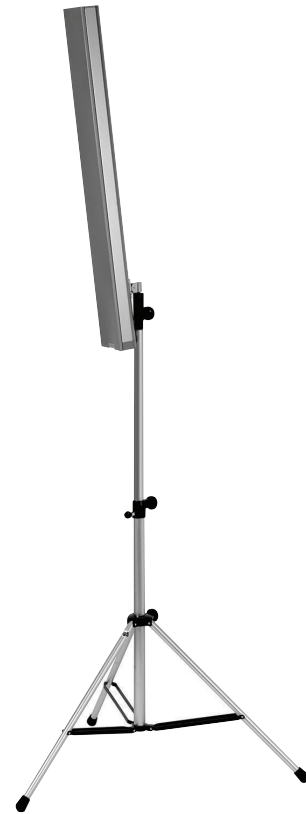
A time and labor-saving mounting method has been developed for the LBC 3201/00. The loudspeaker comes with a chart, which shows the ideal installation height for the area that the loudspeaker has to cover. Once the appropriate height has been determined for a given area, the loudspeaker is mounted at 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.



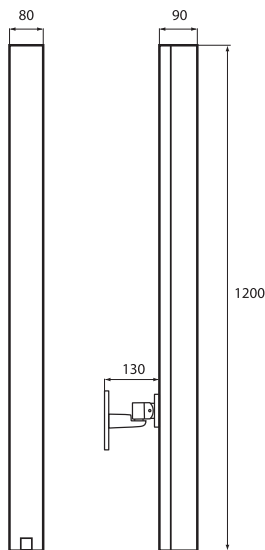
Dimensions in mm of included mounting bracket (with marked angle)



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.

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

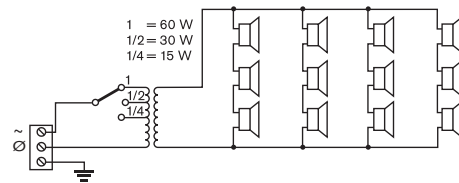
All Bosch loudspeakers are designed to withstand operation at their rated power for 100 hours in accordance with IEC 268-5 Power Handling Capacity

(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.

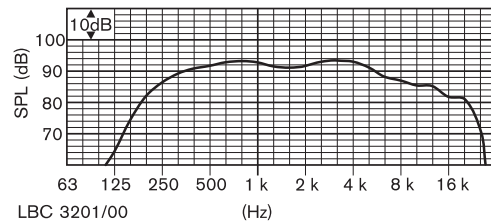
| | |
|---------------------------|---|
| Safety | acc. to EN 60065 and CE |
| Emergency | acc. to EN 54-24 / BS 5839-8 / EN 60849 |
| Water and dust protection | acc. to IEC 60529, IP 32 |
| Impact | acc. to EN 50102, IK 07 |

| Region | Certification |
|--------|---------------|
| Europe | CE |
| | CPD |
| Poland | CNBOP |

Installation/configuration notes



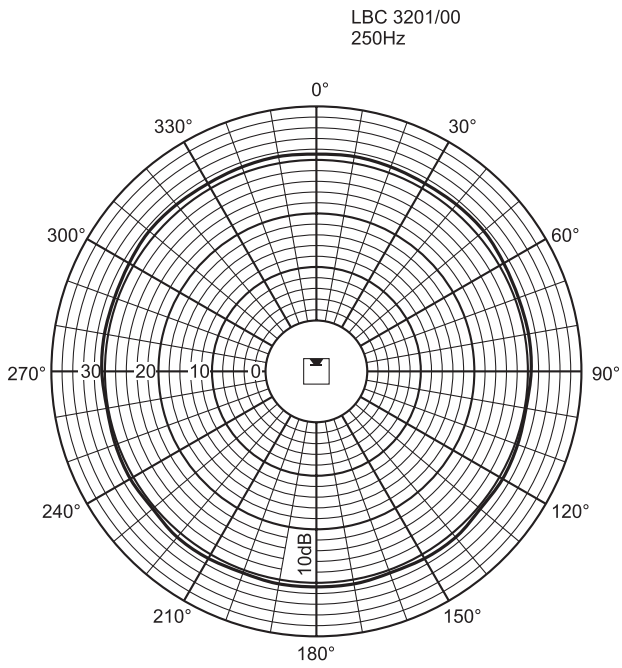
Circuit diagram



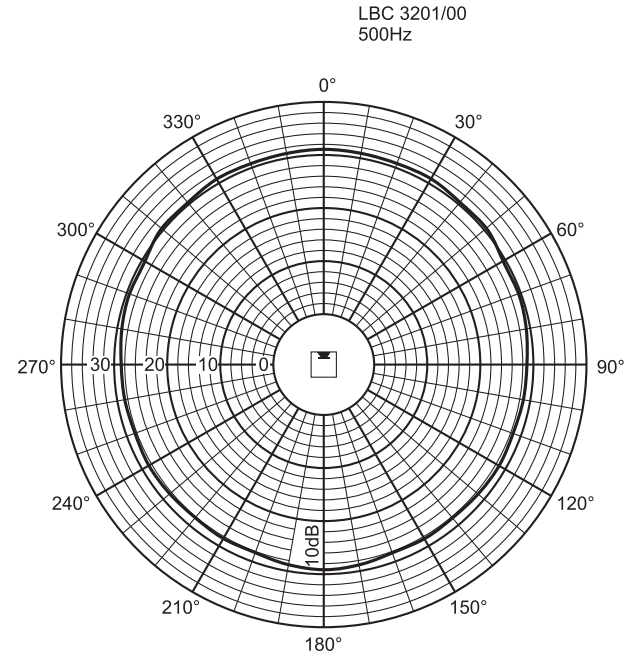
Frequency response

| | 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 |

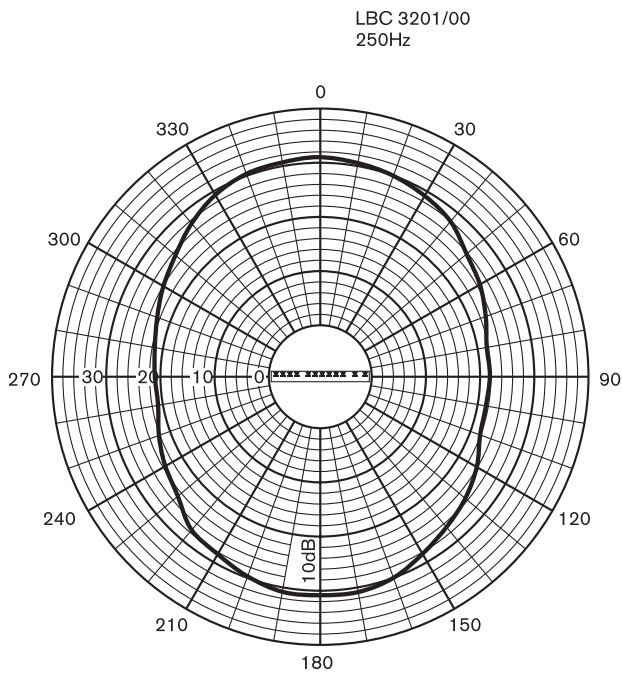
Acoustical performance specified per octave



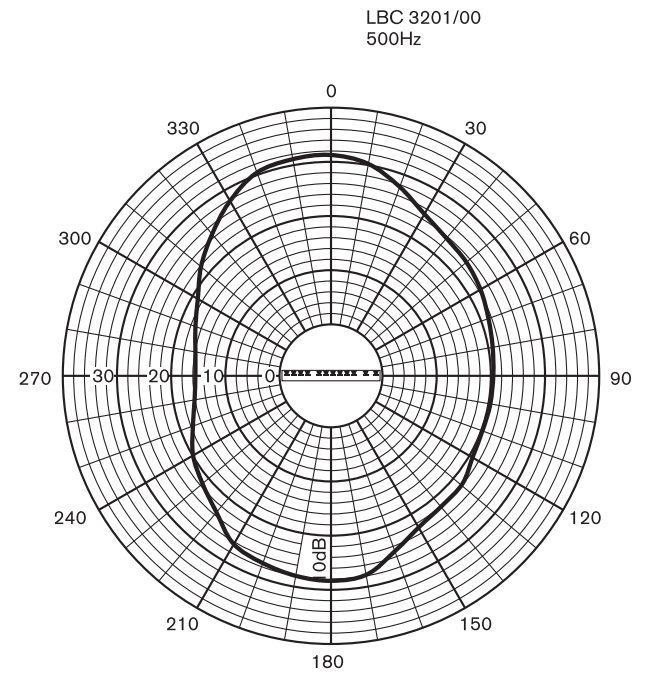
Polar diagram (horizontal)



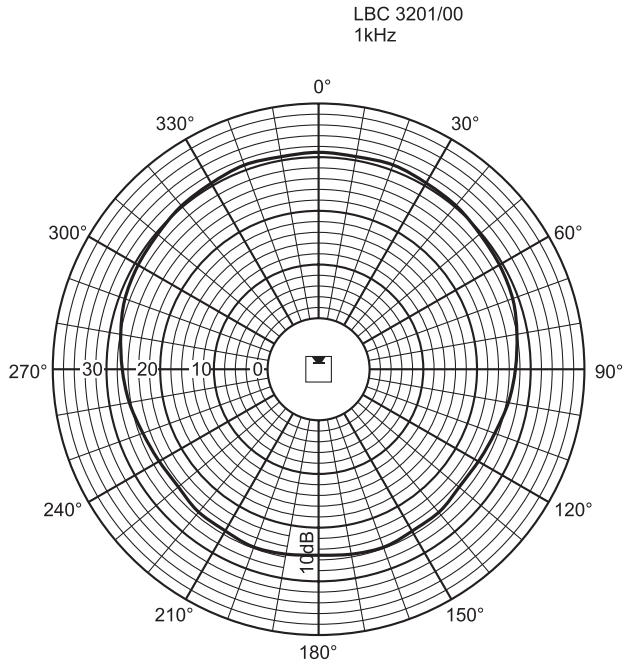
Polar diagram (horizontal)



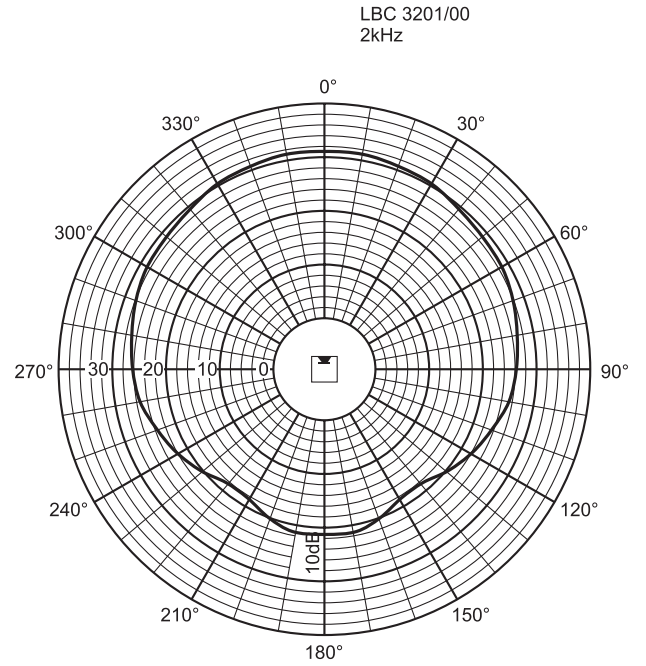
Polar diagram (vertical)



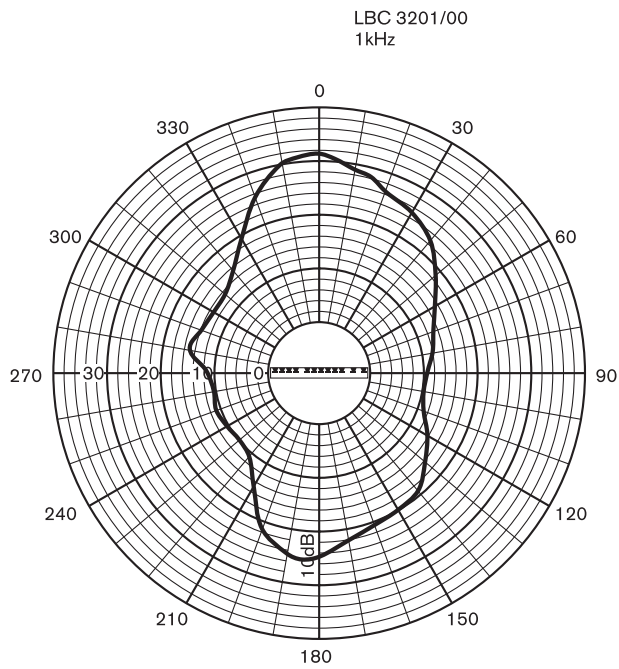
Polar diagram (vertical)



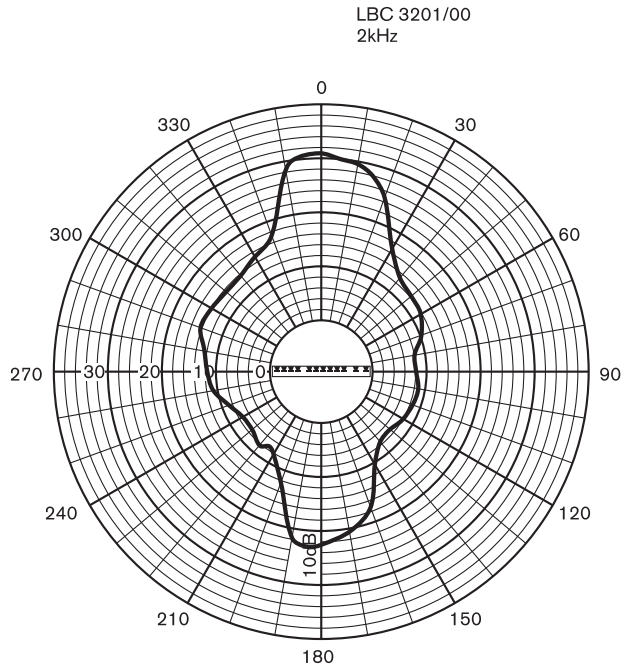
Polar diagram (horizontal)



Polar diagram (horizontal)

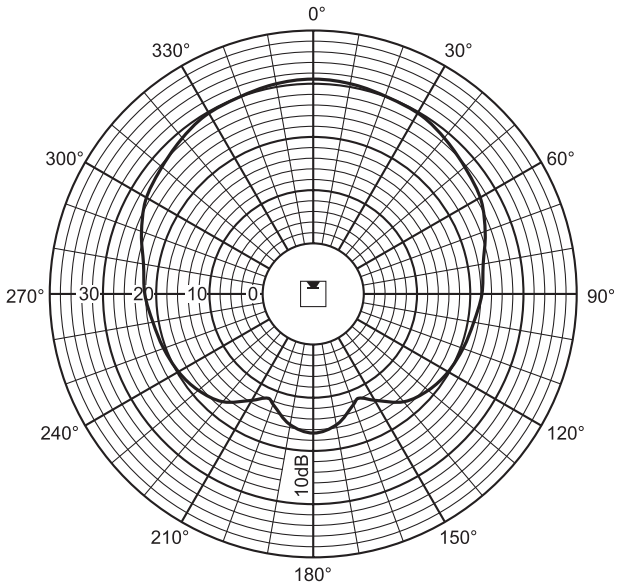


Polar diagram (vertical)



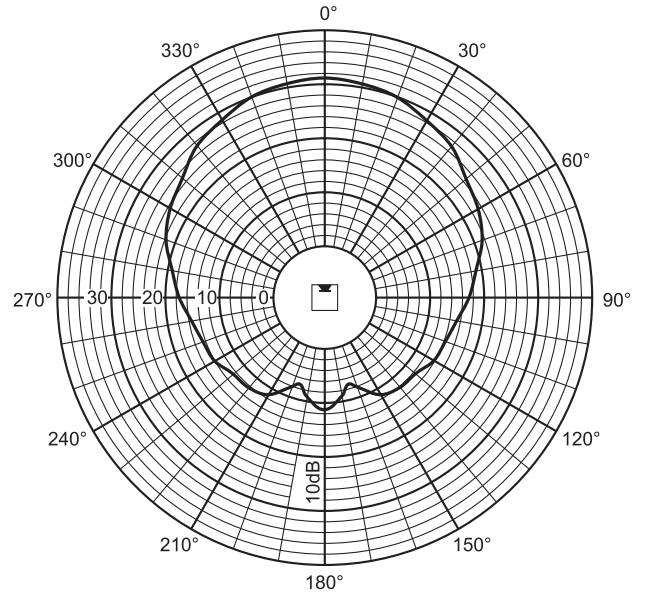
Polar diagram (vertical)

LBC 3201/00
4kHz



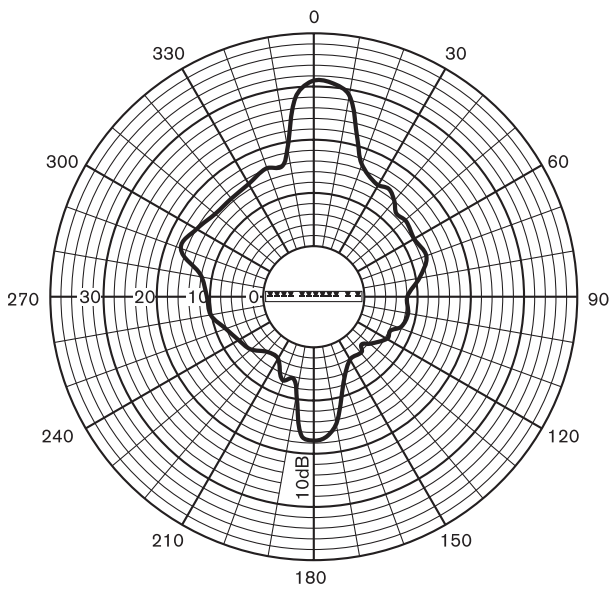
Polar diagram (horizontal)

LBC 3201/00
8kHz



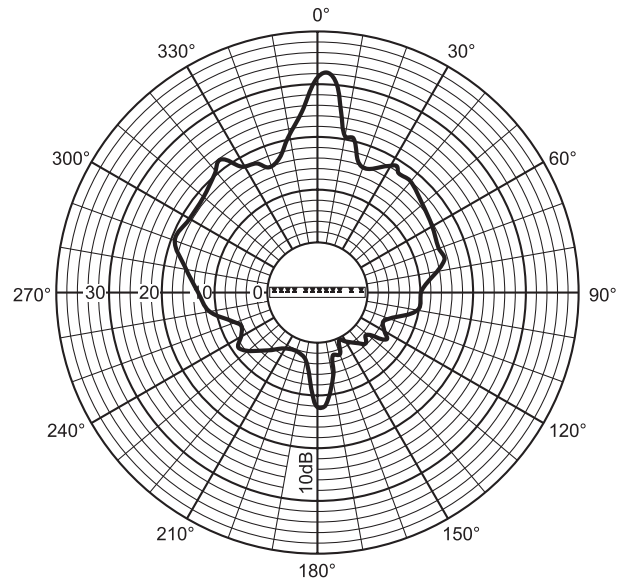
Polar diagram (horizontal)

LBC 3201/00
4kHz



Polar diagram (vertical)

LBC 3201/00
8kHz



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% |



1438

Bosch Security Systems BV
Torenallee 49, 5617BA Eindhoven, The Netherlands
10
1438-CPD-0254

EN 54-24:2008

Loudspeaker for voice alarm systems
for fire detection and fire alarm systems for buildings

Line Array 60W
LBC 3201/00
Type A

Ordering information

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

Accessories

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

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

Represented by:

Americas:

Bosch Security Systems, Inc.
12000 Portland Avenue South
Burnsville MN 55337, USA
Phone: +1-800-392-3497
Fax: +1-800-955-6831
audiosupport@us.bosch.com
www.boschsecurity.com

Europe, Middle East, Africa:

Bosch Security Systems B.V.
P.O. Box 80002
5617 BA Eindhoven, The Netherlands
Phone: + 31 40 2577 284
Fax: +31 40 2577 330
emea.securitysystems@bosch.com
www.boschsecurity.com

Asia-Pacific:

Robert Bosch (SEA) Pte Ltd, Security
Systems
11 Bishan Street 21
Singapore 573943
Phone: +65 6571 2808
Fax: +65 6571 2699
apr.securitysystems@bosch.com
www.boschsecurity.asia

China:

Bosch (Shanghai) Security Systems Ltd.
201 Building, No. 333 Fuquan Road
North IBP
Changning District, Shanghai
200335 China
Phone +86 21 22181111
Fax: +86 21 22182398
www.boschsecurity.com.cn

America Latina:

Robert Bosch Ltda Security Systems Division
Via Anhanguera, Km 98
CEP 13065-900
Campinas, Sao Paulo, Brazil
Phone: +55 19 2103 2860
Fax: +55 19 2103 2862
al.securitysystems@bosch.com
www.boschsecurity.com