

LS1-UC20E-1 Pendant sphere loudspeaker, 20W

www.boschsecurity.com



BOSCH

Invented for life



- ▶ Superb speech and music reproduction
- ▶ 5 m connection cable
- ▶ Provision for optional safety cord
- ▶ Water and dust protected to IP 65
- ▶ EN 54-24 certified

Sound spheres are pendant sound projectors designed to be suspended from the ceiling by their connecting cables. Their excellent sound spread makes them ideal for use in buildings with high ceilings, such as supermarkets and superstores.

The LS1-UC20E-1 is a powerful 20 W pendant sphere loudspeaker, intended for high quality speech and music reproduction. The state-of-the-art design is matched to both modern and traditional style environments. The loudspeaker is suitable for use in voice evacuation systems.

Functions

Voice Alarm Loudspeaker

Voice alarm loudspeakers are specifically designed for use in buildings where performance of systems for verbal communication announcements is governed by regulations. The LS1-UC20E-1 is designed for use in voice alarm systems and is EN 54-24 certified and compliant with BS 5839-8 and EN 60849.

The loudspeaker has built-in protection to 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. In this way, system integrity is maintained, ensuring loudspeakers in other areas can still be used to inform people of the situation. The loudspeaker is supplied with a ceramic terminal block and thermal fuse.

Superb Sound Quality

The use of a high-quality driver has resulted in a very natural sound reproduction with excellent bass response.

Certifications and approvals

All Bosch loudspeakers are designed to withstand operating at their rated power for 100 continuous 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 improved reliability under extreme conditions, leading to higher customer satisfaction, longer operating life, and lessens the chance of failure or performance deterioration.

Safety Aspects

In compliance with all Bosch products, care is taken to meet high safety standards. All ABS parts are self-extinguishing (according to UL 94 V 0). This sound projector complies with the relevant safety and installation regulations of EN 60065.

| | |
|---------------------------|--|
| Water and dust protection | according to IEC 60529, IP 65 IP44C as verified for EN54-24 by CNBOP |
| Emergency | according to EN 54-24 / BS 5839-8 / EN 60849 |

| Region | Regulatory compliance/quality marks | |
|--------|-------------------------------------|--|
| Global | DOC | Declaration of Compliancy IEC 60068-2-60 (Mixed gas corrosion test) |
| Europe | CE | |
| | CE | DOP |
| | CE | DOC (IP) |
| | CPD | |

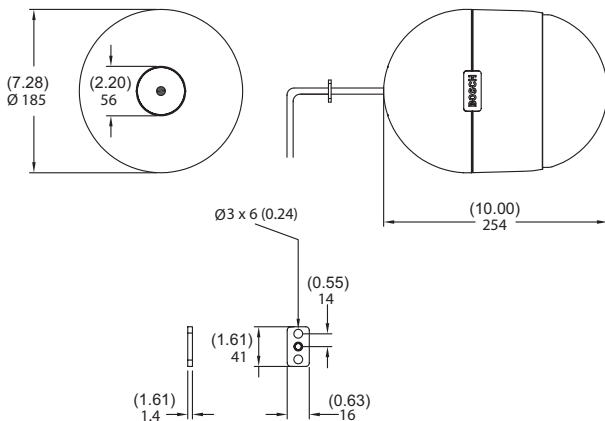
Installation/configuration notes

Mounting

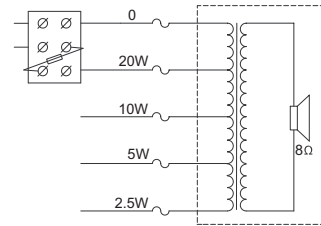
The loudspeaker is suspended from the ceiling via its five meter, five-core connecting cable, which is easy to shorten for the desired height. For optional safety, a steel safety cord can be attached.

Power Setting

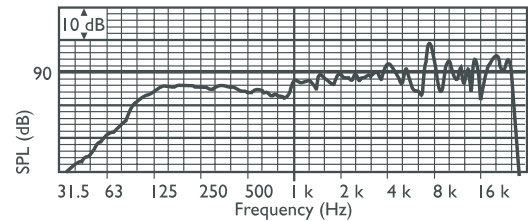
The loudspeaker is supplied with a five meter color-coded, five-core connecting cable with each color connected to a different primary tap on the 100 V matching transformer. This allows nominal full-power, half-power, quarter-power or eighth-power radiation to be selected (in 3 dB steps).



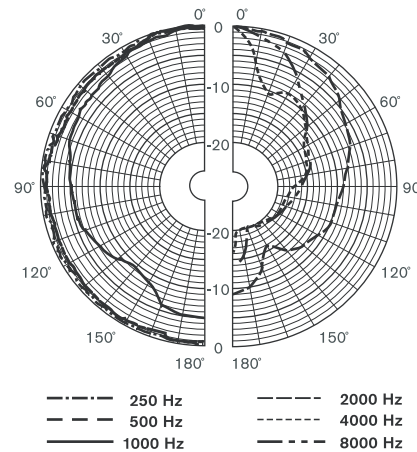
Dimensions in mm / (in)



Circuit diagram



Frequency response



Polar diagram (measured with pink noise)

Octave band sensitivity*

| | Octave SPL 1W/1m | Total octave SPL 1W/1m | Total octave SPL Pmax/1m |
|--------------|---------------------|------------------------------|--------------------------------|
| 125 Hz | 84.1 | - | - |
| 250 Hz | 84.7 | - | - |
| 500 Hz | 84.3 | - | - |
| 1000 Hz | 85.3 | - | - |
| 2000 Hz | 88.3 | - | - |
| 4000 Hz | 90.7 | - | - |
| 8000 Hz | 90.7 | - | - |
| A-weighted | - | 87.4 | 99.3 |
| Lin-weighted | - | 89.4 | 101.0 |

Octave band opening angles

| | Horizontal | Vertical |
|---------|------------|----------|
| 125 Hz | 360 | 360 |
| 250 Hz | 360 | 360 |
| 500 Hz | 360 | 360 |
| 1000 Hz | 220 | 220 |
| 2000 Hz | 122 | 122 |
| 4000 Hz | 65 | 65 |
| 8000 Hz | 37 | 37 |

Acoustical performance specified per octave * (all measurements are done with a pink noise signal; the values are in dBSPL).

Parts included

| Quantity | Component |
|----------|--|
| 1 | LS1-UC20E-1 Pendant Sphere Loudspeaker |
| 1 | Cable clamp |

Technical specifications

Electrical*

| | | |
|--|-----------------------|----------|
| Rated power | 20 / 10 / 5 / 2.5 W | |
| Sound pressure level at 20 W / 1 W (1kHz, 1 m) | 99 dB / 86 dB (SPL) | |
| Sound pressure level at 20 W / 1 W (1kHz, 4 m) | 91 dB / 78 dB (SPL) | |
| Opening angle at 1 kHz / 4 kHz (-6 dB) | 220° / 65° | |
| Effective frequency range (-10 dB) | 80 Hz to 20 kHz | |
| Rated voltage | | 100 V |
| Rated impedance | 20 W | 500 Ohm |
| | 10 W | 1000 Ohm |
| | 5 W | 2000 Ohm |
| | 2.5 W | 4000 Ohm |
| Connector | 3-pole screw terminal | |

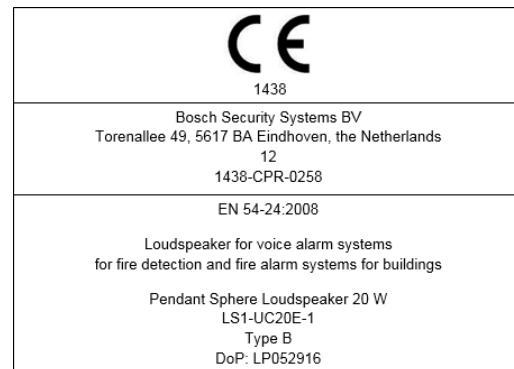
* Technical performance data acc. to IEC 60268-5

Mechanical

| | |
|--------------------|----------------------------|
| Dimensions (D x L) | 185 x 254 mm (7.3 x 10 in) |
| Weight | 3 kg (6.6 lb) |
| Color | White (RAL 9010) |
| Material | ABS |

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% |



CE-label

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

Ordering information

LS1-UC20E-1 Pendant sphere loudspeaker, 20W

Pendant sphere loudspeaker, 20 W, white ABS enclosure with metal grille, fixed 5 m, 5-core connection cable and cable suspension clamp, EN54-24 certified, white RAL 9010. Order number **LS1-UC20E-1**

Represented by:

Europe, Middle East, Africa:
Bosch Security Systems B.V.
P.O. Box 80002
5600 JB Eindhoven, The Netherlands
Phone: + 31 40 2577 284
emea.securitysystems@bosch.com
emea.boschsecurity.com

Germany:
Bosch Sicherheitssysteme GmbH
Robert-Bosch-Ring 5
85630 Grasbrunn
Germany
www.boschsecurity.com

North America:
Bosch Security Systems, Inc.
130 Perinton Parkway
Fairport, New York, 14450, USA
Phone: +1 800 289 0096
Fax: +1 585 223 9180
onlinehelp@us.bosch.com
www.boschsecurity.us

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