

LS1-UC20E-1 Pendant sphere loudspeaker, 20W

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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	

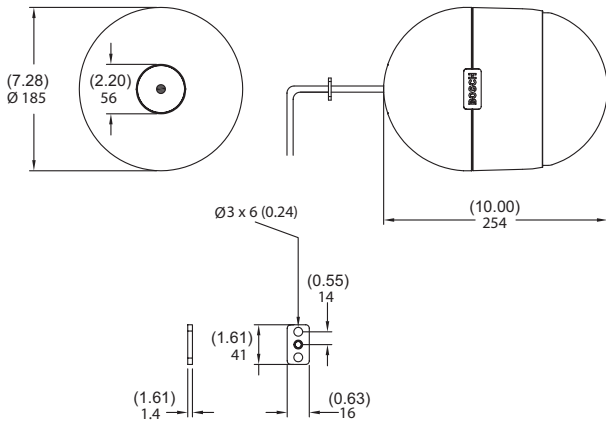
Installation/configuration notes

Mounting

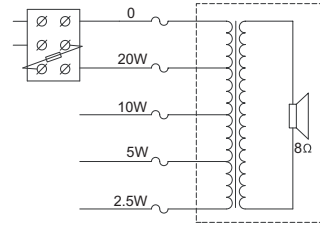
The loudspeaker is suspended from the ceiling via its five meter, five-core connecting cable, which is easy to shorten for the desired height. For optional safety, a steel safety cord can be attached.

Power Setting

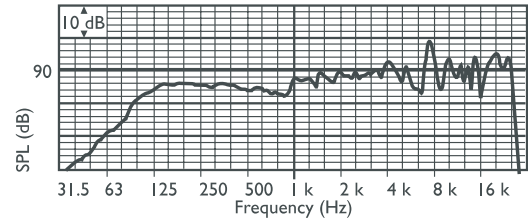
The loudspeaker is supplied with a five meter color-coded, five-core connecting cable with each color connected to a different primary tap on the 100 V matching transformer. This allows nominal full-power, half-power, quarter-power or eighth-power radiation to be selected (in 3 dB steps).



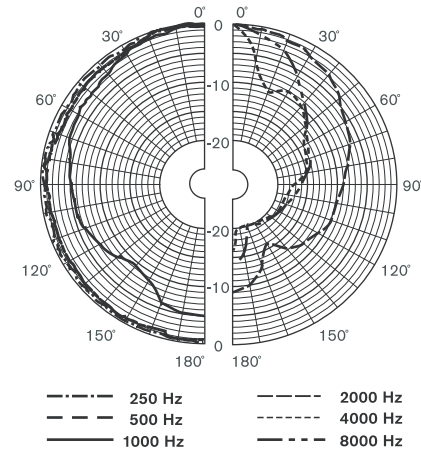
Dimensions in mm / (in)



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	

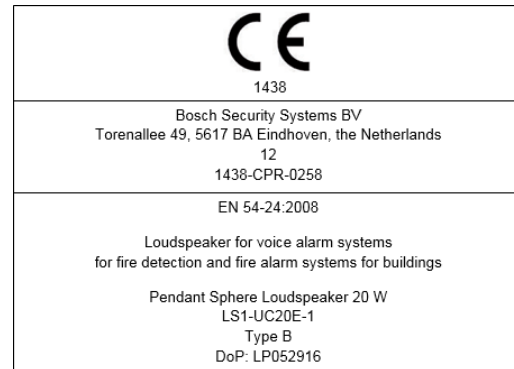
* Technical performance data acc. to IEC 60268-5

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**

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