

LBC 34xx/12 Horn Loudspeakers



4

Features

- ▶ High efficiency drivers
- ▶ Up to 45 W (max. power)
- ▶ Wide opening angle
- ▶ Excellent speech reproduction
- ▶ Simple power setting
- ▶ Water- and dust protected to IP 65
- ▶ Versatile mounting bracket
- ▶ Comply with international installation and safety regulations

Bosch high-efficiency horn loudspeakers provide excellent speech reproduction and sound distribution for a wide scope of outdoor applications. They are ideal for sports grounds, parks, exhibitions, factories and swimming pools.

System Overview

The LBC 3481/12 is a circular horn loudspeaker, and the LBC 3491/12 is a rectangular model. Both are 10 W, and are made from ABS.

The LBC 3492/12 is a circular, 20 W horn loudspeaker with a large horn measuring 354 mm in diameter. It is made from a combination of aluminum with ABS for optimum strength and low weight. The edge of the horn is covered with a PVC profile for protection against impact damage.

The LBC 3493/12 is a circular, 30 W horn loudspeaker with a large horn measuring 400 mm in diameter. It is made from a combination of aluminum with ABS for optimum strength and low weight. The edge of the horn is covered with PVC for protection against impact damage.

Functions

All four models are for direct connection to a 100 V line output and are finished in light grey (RAL 7035). The horns are water and dust protected.

The horn loudspeakers include a 100 V transformer with taps on the primary winding to allow different power settings. Nominal full-power, half-power or quarter-power radiation (in 3 dB steps) can easily be selected by connecting the amplifier output to the appropriate tap. A 2 m four-core cable is fitted to the horns. Each core is a different color, and is connected to one of the primary taps on the transformer.

The horn loudspeakers are supplied complete with sturdy adjustable mounting brackets, allowing the sound beam to be accurately directed.

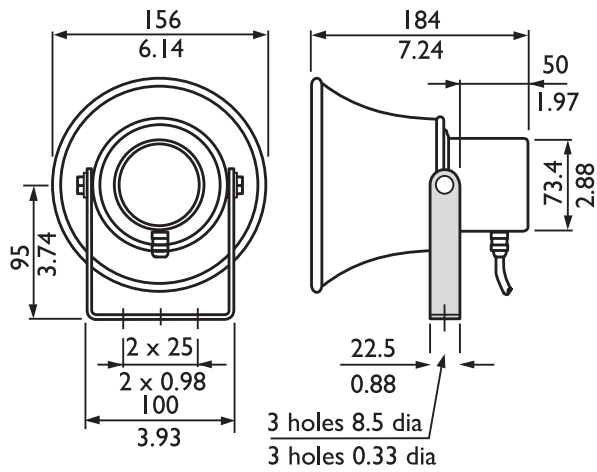
Certifications and Approvals

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.

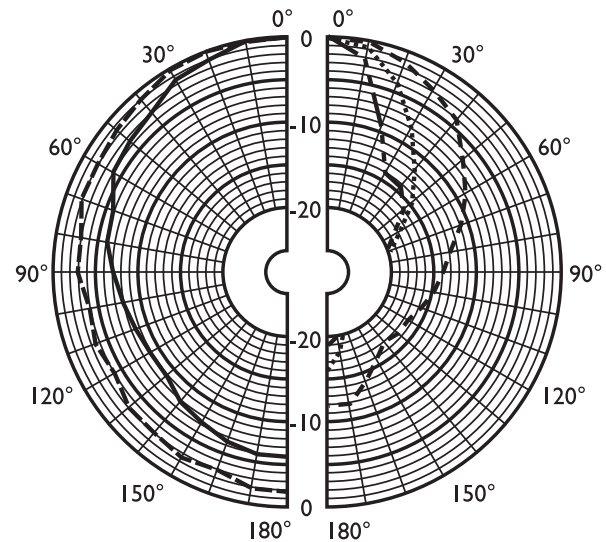
Region	Certification	
Europe	CE	Declaration of Conformity
Safety		acc. to EN 60065
Self-extinguishing		acc. to UL 94 V0
Water and dust protection		acc. to EN 60529-IP65

Installation/Configuration Notes

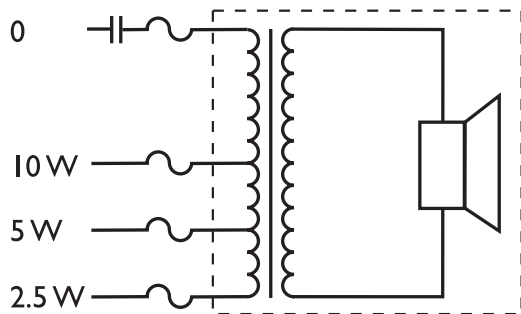
LBC 3481/12



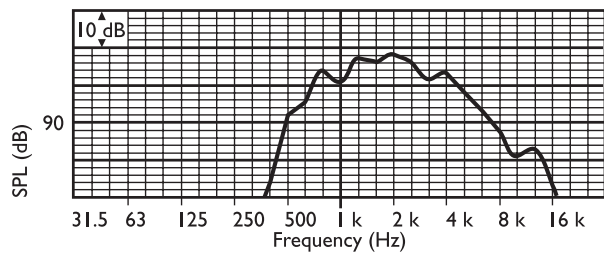
Dimensions in mm (in)



Polar diagram (measured with pink noise)



Circuit diagram

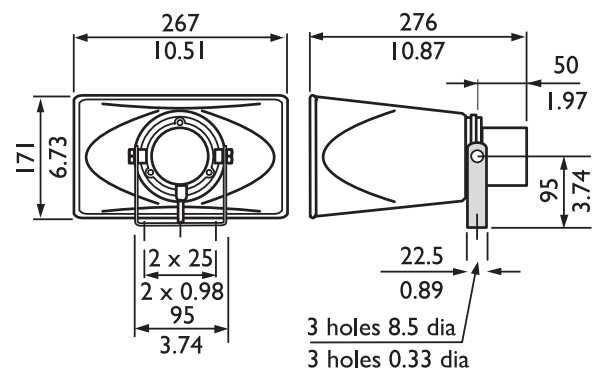


Frequency response

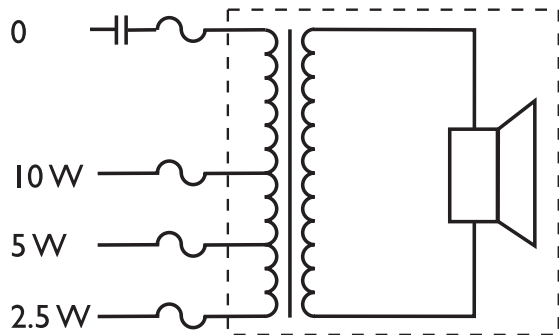
	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
SPL 1.1	-	-	94	103	105	98	86
SPL max.	-	-	104	113	115	108	96
Q-factor	-	-	1.7	3.5	7.8	25.7	52.5
Efficiency	-	-	1.82	7.08	5.13	0.31	0.01
H. angle	-	-	180	160	95	50	30
V. angle	-	-	180	160	95	50	30

Acoustical performance specified per octave

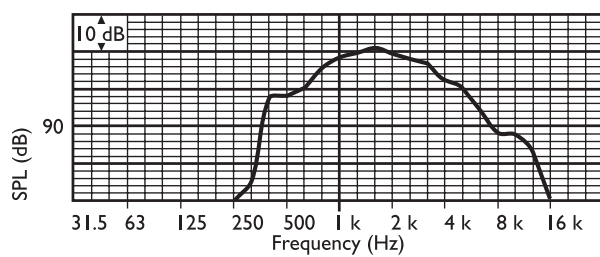
LBC 3491/12



Dimensions in mm (in)



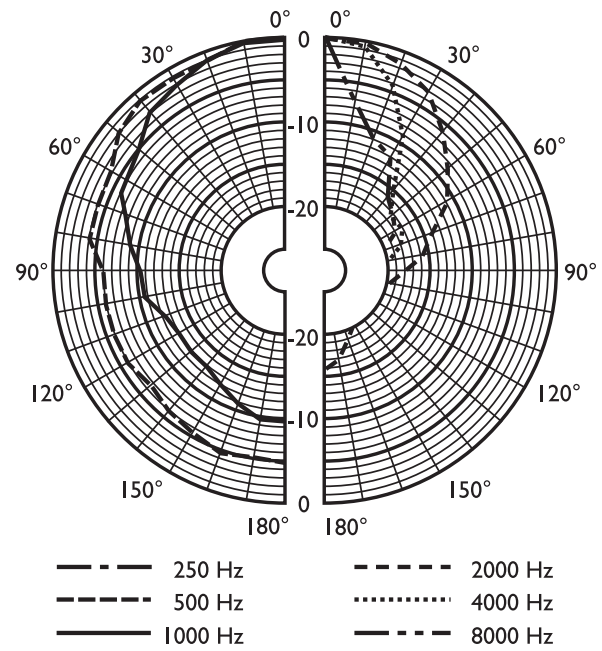
Circuit diagram



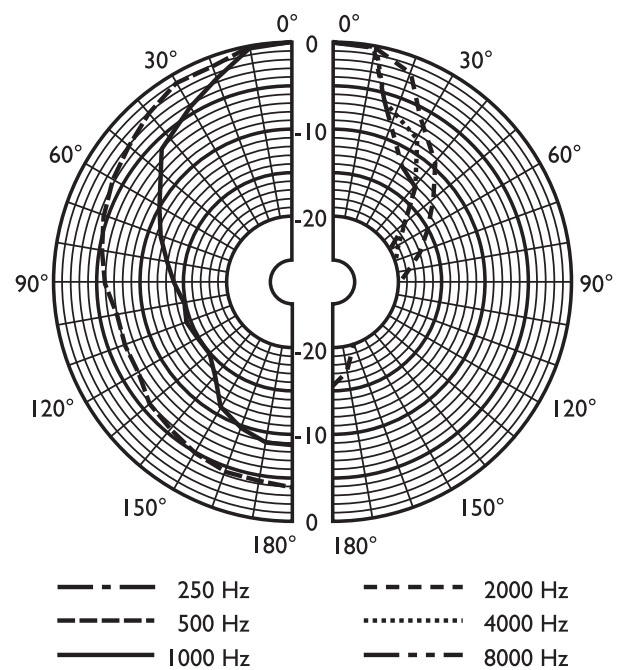
Frequency response

	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
SPL 1.1	-	-	99	108	111	106	97
SPL max.	-	-	109	118	121	116	107
Q-factor	-	-	2.7	6.5	15.8	40.7	75.9
Efficiency	-	-	3.72	12.3	10	1.23	0.08
H. angle	-	-	180	90	55	40	30
V. angle	-	-	180	130	80	45	15

Acoustical performance specified per octave

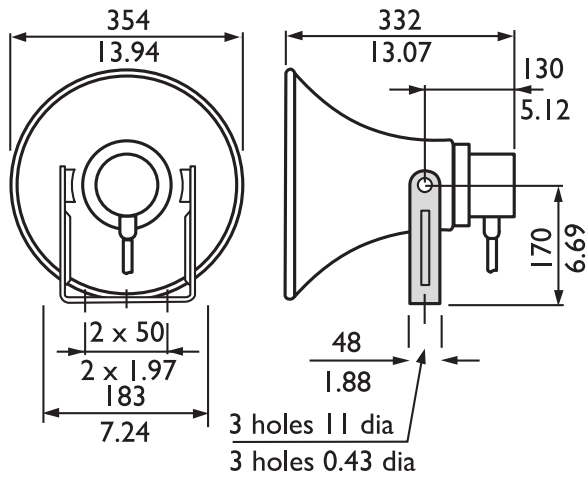


Polar diagram vertical (measured with pink noise)

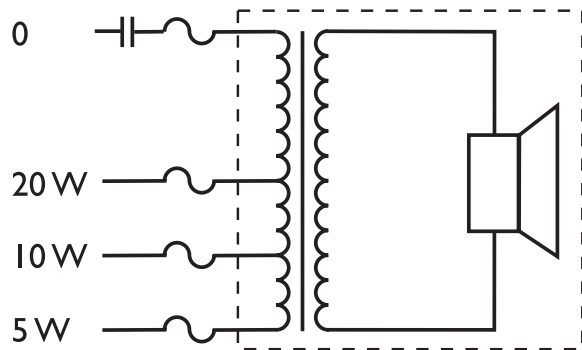


Polar diagram horizontal (measured with pink noise)

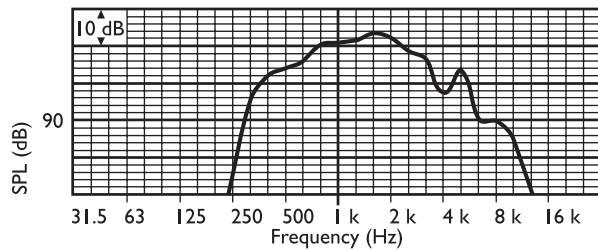
LBC 3492/12



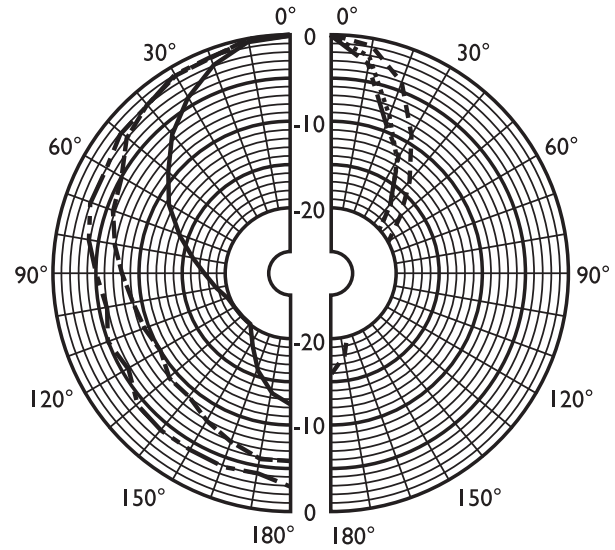
Dimensions in mm (in)



Circuit diagram



Frequency response



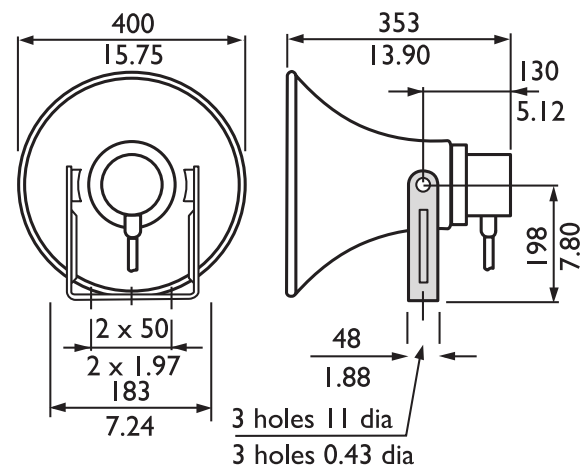
- 250 Hz
- 500 Hz
- 1000 Hz
- 2000 Hz
- 4000 Hz
- 8000 Hz

Polar diagram (measured with pink noise)

	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
SPL 1.1	-	93	105	110	112	104	90
SPL max.	-	106	118	123	125	117	103
Q-factor	-	2.2	3.5	10.7	30.9	57.5	75.9
Efficiency	-	1.15	11.22	11.75	6.46	0.55	0.02
H. angle	-	180	145	80	45	35	30
V. angle	-	180	145	80	45	35	30

Acoustical performance specified per octave

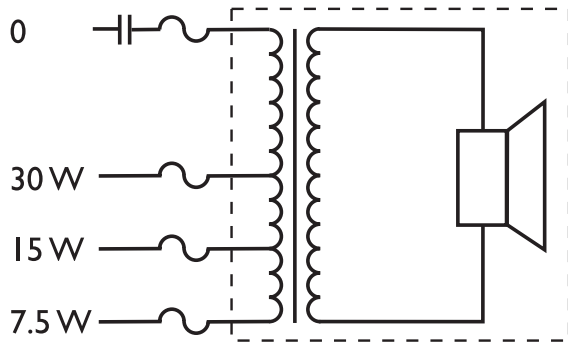
LBC 3493/12



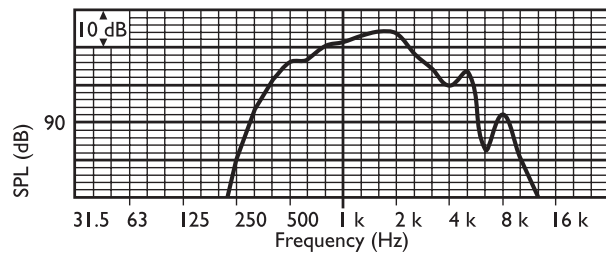
Dimensions in mm (in)

346 | Loudspeakers | Horn

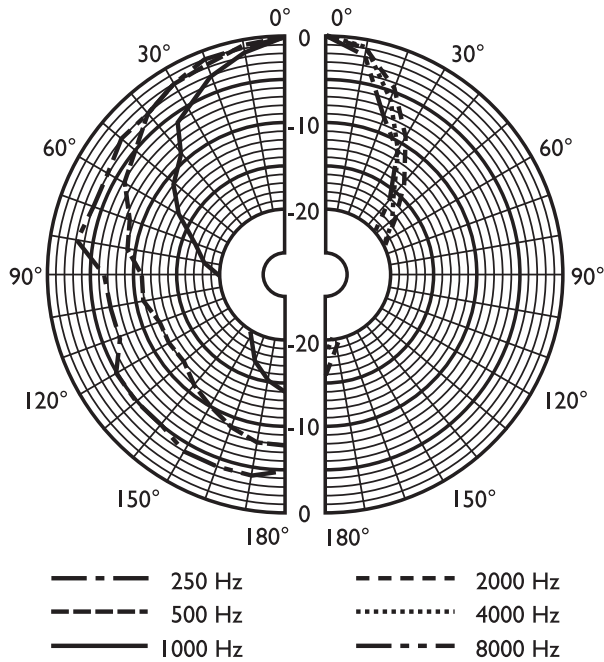
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Circuit diagram



Frequency response



Polar diagram (measured with pink noise)

	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
SPL 1.1	-	92	105	111	112	104	90
SPL max.	-	107	120	126	127	119	105
Q-factor	-	2.6	5.1	15.1	37.2	61.7	74.1
Efficiency	-	0.78	7.76	10.47	5.37	0.41	0.02

	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
H. angle	-	180	120	70	45	40	30
V. angle	-	180	120	70	45	40	30

Acoustical performance specified per octave

Ordering Information

LBC 3481/12 Horn Loudspeaker, Circular, 10 W LBC3481/12
10 W, circular

LBC 3491/12 Horn Loudspeaker, Rectangular, 10 W LBC3491/12
10 W, rectangular

LBC 3492/12 Horn Loudspeaker, Circular, 20 W LBC3492/12
20 W, circular

LBC 3493/12 Horn Loudspeaker, Circular, 30 W LBC3493/12
30 W, circular

Accessories

LBC 1256/00 EVAC Connection Adapter LBC1256/00
3-pole screw connector, 100 pieces

Technical Specifications



LBC3481/12



LBC3491/12



LBC3492/12



LBC3493/12

Electrical

Max power	15 W	15 W	30 W	45 W
Rated power (PHC)	10 / 5 / 2.5 W	10 / 5 / 2.5 W	20 / 10 / 5 W	30 / 15 / 7.5 W
Sound pressure level at rated power / 1 W (1 kHz, 1 m)	113 dB / 103 dB (SPL)	118 dB / 108 dB (SPL)	123 dB / 110 dB (SPL)	126 dB / 111 dB (SPL)
Sound pressure level at rated power / 1 W (2 kHz, 1 m)	115 dB / 105 dB (SPL)	121 dB / 111 dB (SPL)	125 dB / 112 dB (SPL)	127 dB / 112 dB (SPL)
Effective frequency range (-10 dB)	500Hz to 7kHz	480Hz to 5.5kHz	380Hz to 5.5kHz	380Hz to 5kHz
Opening angle horizontal	1 kHz / 4 kHz (-6 dB) 160° / 50°	1 kHz / 4 kHz (-6 dB) 90° / 40°	1 kHz / 4 kHz (-6 dB) 80° / 35°	1 kHz / 4 kHz (-6 dB) 70° / 40°
Opening angle vertical	160° / 50°	130° / 45°	80° / 35°	70° / 40°
Rated voltage	100 V	100 V	100 V	100 V
Rated impedance	1000 ohm	1000 ohm	500 ohm	333 ohm
Connection	2 m, 4-wire cable	2 m, 4-wire cable	2 m, 4-wire cable	2 m, 4-wire cable

Mechanical

Dimensions (L x W)	-	267 x 171 mm 10.51 x 6.73 in	-	-
Aperture (L x W)	-	-	-	-
Aperture diameter	156 mm (6.14 in)	171 x 267 mm (6.73 x 10.51 in)	354 mm (13.94 in)	400 mm (15.75 in)
Overall length	184 mm (7.24 in)	276 mm (10.87 in)	332 mm (13.07 in)	353 mm (13.90 in)
Color	Light grey (RAL 7035)	Light grey (RAL 7035)	Light grey (RAL 7035)	Light grey (RAL 7035)
Weight	1.25 kg (2.75 lb)	1.4 kg (3.08 lb)	2.65 kg (5.83 lb)	3 kg (6.6 lb)

Environmental

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

LH1-10M10E Horn Loudspeaker



4

Features

- ▶ **High efficiency driver**
- ▶ **Excellent speech reproduction**
- ▶ **Provision for inside mounting of the optional line / loudspeaker supervision board**
- ▶ **Water-and dust protected to IP 65**
- ▶ **BS 5839-8 and EN 60849 compliant**

The LH1-10M10E high-efficiency horn loudspeaker, provide excellent speech reproduction and sound distribution for a wide scope of indoor and outdoor applications. It is ideal for sports grounds, parks, exhibitions, factories and swimming pools.

The LH1-10M10E is a rectangular shaped 10 W horn loudspeaker, made from aluminum. The edge of the horn is covered with a PVC profile for protection against impact damage. The rear cover of the horn is made from self-extinguishing ABS (acc. to class UL 94 V0).

The housing color is light grey (RAL 7035), and is water and dust protected.

Functions

Voice Alarm

Voice alarm loudspeakers are specifically designed for use in buildings, where the performance of PA systems is subject to official regulations. The LH1-10M10E is designed for voice alarm systems and is compliant with British Standard BS 5839-8 and EN 60849.

Protection

The horn loudspeaker has built-in protection to ensure that in the event of a fire damage does not cause failure of the connected circuit. In this way, system integrity is maintained, ensuring loudspeakers in other areas can still be used to inform people of the situation.

Connections and Safety

The horn loudspeaker has a ceramic terminal block, thermal fuse, and heat-resistant, high-temperature wiring. Four primary taps are provided on the built-in matching transformer to allow selection of the output power.

The horn loudspeaker has a provision for internally mounting the optional line/loudspeaker supervision board.

Certifications and Approvals

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 the speakers can withstand two times their rated power for short durations. This ensures extra reliability under extreme conditions, leading to greater customer satisfaction, longer operating life, and much less chance of failure or performance deterioration.

Region	Certification
Europe	CE
Safety	acc. to EN 60065
Emergency	acc. to BS 5839-8 / EN 60849
Water and dust protection	acc. to IEC 60529, IP 65
Wind-force	acc. to NEN 6702 : 2007 + A1 : 2008, Bft 11

Installation/Configuration Notes

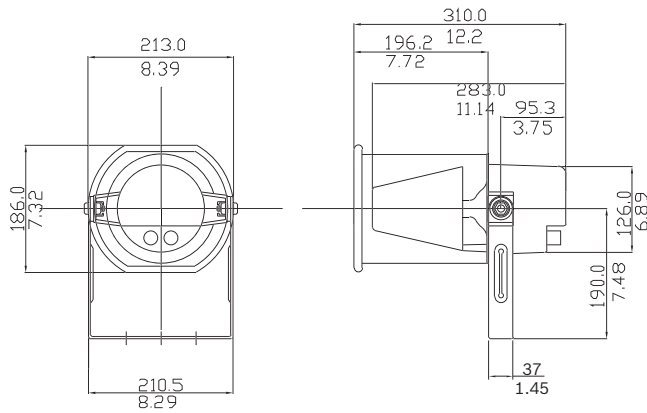
The connection cable could be fed through a cable gland (PG 13.5) in the rear cover. For loop- through connection, the rear cover is fitted with a second hole (covered as standard supplied).

Mounting

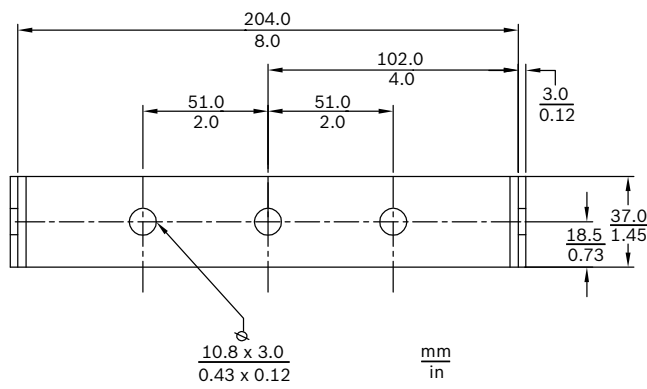
The horn loudspeaker is supplied, complete with sturdy adjustable steel U-shape bracket for mounting onto walls or ceilings, allowing the sound beam to be accurately directed.

Simple Power Setting

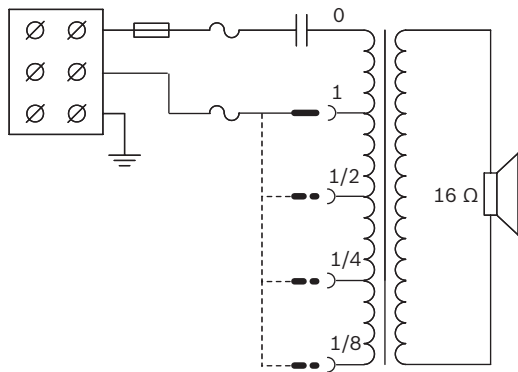
The horn has a three-way ceramic terminal block with screw connection (including earth). Four primary taps are provided on the matching transformer to allow selection of nominal full-power, half-power or quarter-power and eighth-power radiation (in 3 dB steps).



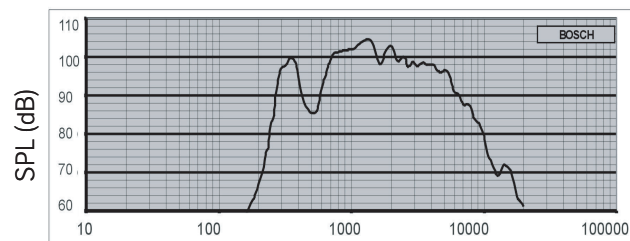
Dimensions in mm (in)



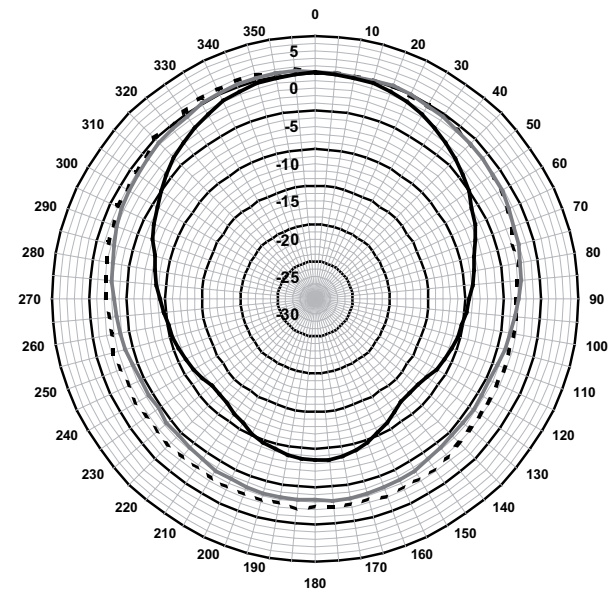
Mounting bracket. Dimensions in mm (in)



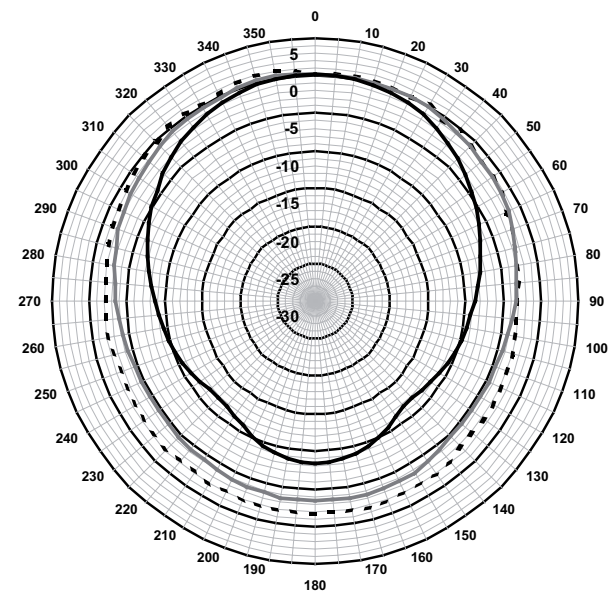
Circuit diagram



Frequency response



--- 250 — 500 — 1000

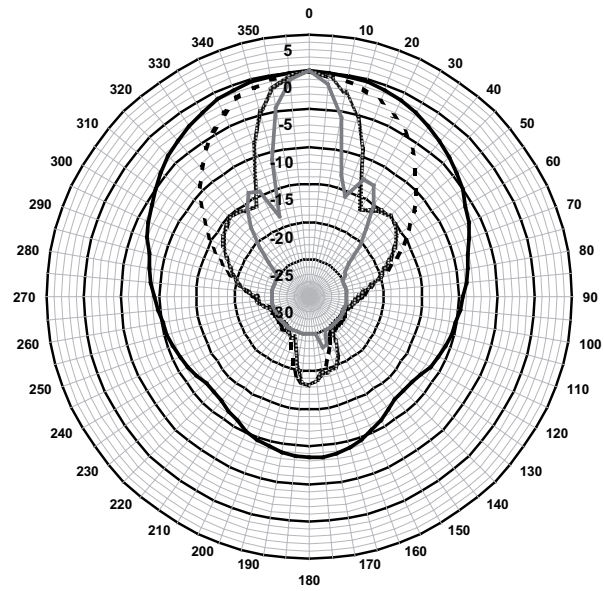


--- 250 — 500 — 1000

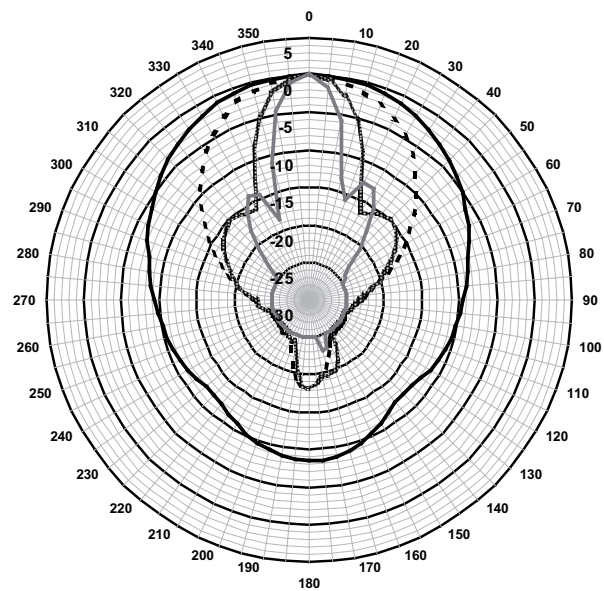
Polar diagrams (Horizontal and Vertical, measured with pink noise)

350 | Loudspeakers | Horn

4



— 1000 - - - 2000 4000 - · - · 8000



— 1000 - - - 2000 4000 - · - · 8000

Polar diagrams (Horizontal and Vertical, measured with pink noise)

Octave band sensitivity *

	Octave SPL 1W/1m	Total octave SPL 1W/1m	Total octave SPL Pmax/1m
125 Hz	55.1	-	-
250 Hz	93.1	-	-
500 Hz	93.9	-	-
1000 Hz	102.0	-	-
2000 Hz	100.1	-	-
4000 Hz	97.2	-	-

8000 Hz	87.4	-	-
A-weighted	-	95.8	105.7
Lin-weighted	-	95.6	104.6

Octave band opening angles

	Horizontal	Vertical
125 Hz	-	-
250 Hz	360	360
500 Hz	360	360
1000 Hz	120	125
2000 Hz	72	76
4000 Hz	35	36
8000 Hz	22	24

Acoustical performance specified per octave

* (all measurements are done with a pink noise signal; the values are in dB SPL)

Parts Included

- 1 LH1-10M10E Horn Loudspeaker
- 1 PG 13.5 cable gland (fitted)

Technical Specifications

Electrical*

Maximum power	15 W
Rated power (PHC)	10 W
Power tapping	10 / 5 / 2.5 / 1.25 W
Sound pressure level at 10 W / 1 W (1 kHz, 1 m)	112 / 102 dB (SPL)
Effective frequency range (-10 dB)	280 Hz to 5800 Hz
Opening angle at 1 kHz / 4 kHz (-6 dB)	
Horizontal	120° / 35°
Vertical	125° / 35°
Rated input voltage	100 V
Rated impedance	1000 ohm
Connector	Screw terminal block

* Technical performance data acc. to IEC 60268-5

Mechanical

Dimensions (W x D)	(213 x 186) x 310 mm (8.39 x 7.32) x 12.2 in
Weight	3.6 kg (7.93 lb)
Color	Light grey (RAL 7035)
Material (horn / rear cover)	Aluminum / ABS
Cable diameter	6 mm to 12 mm (0.24 in to 0.47 in)

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

LH1-10M10E Horn Loudspeaker 10 W, made from aluminum.	LH1-10M10E
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LBC 3482/00 Horn Loudspeaker

4



Features

- ▶ **High efficiency driver**
- ▶ **Excellent speech reproduction**
- ▶ **Provision for inside mounting of the optional line/loudspeaker supervision board**
- ▶ **Water-and dust protected to IP 65**
- ▶ **EN 54-24 certified**
- ▶ **BS 5839-8 and EN 60849 compliant**

Bosch high-efficiency horn loudspeakers provide excellent speech reproduction and sound distribution for a wide scope of outdoor applications. They are ideal for sports grounds, parks, exhibitions, factories and swimming pools.

The LBC 3482/00 is a circular 25 W horn loudspeaker, measuring 355 mm (14 in) in diameter. They are made from aluminum. The edges of the horns are covered with a PVC profile for protection against impact damage. They are light grey (RAL 7035), and are water and dust protected.

Voice alarm loudspeaker

The LBC 3482/00 is designed for use in voice alarm systems and is compliant with emergency standards.

The horn 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 horn loudspeaker has a ceramic terminal block, thermal fuse and heat resistant, high-temperature wiring.

They have provision for inside mounting the optional line/loudspeaker supervision boards.

Functions

The rear cover on the horn is made from self-extinguishing ABS (acc. to class UL 94 V0). The connection cable is fed out through a cable gland (PG 13.5) in rear cover. For loop through connection, the rear cover is fitted with a second hole (covered as standard supplied).

These integrated horns are also available as separate horn and driver, allowing installing any combination of horn and driver. See order information for the type numbers.

Certifications and Approvals

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 operation life, and much less chance of failure or performance deterioration.

Region	Certification
Europe	CE
Poland	CNBOP
Safety	acc. to EN 60065
Water and dust protection	acc. to IEC 60529, IP 65
Emergency	acc. to EN 54-24 / BS 5839-8 / EN 60849
Wind-force	acc. to NEN 6702: 2007 + A1: 2008, Bft11

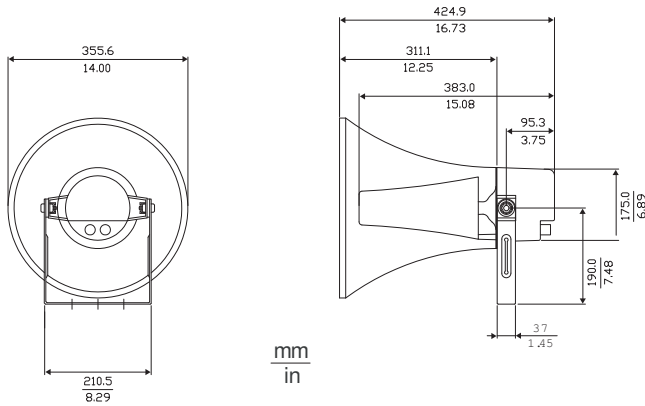
Installation/Configuration Notes

Simple Power Setting

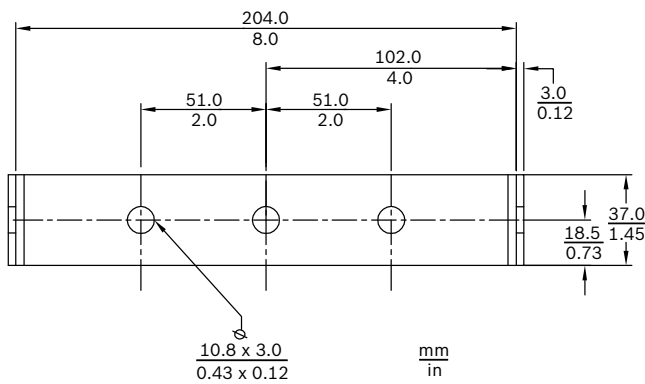
The horn has a three-way terminal block with screw connection (including earth). Three primary taps are provided on the matching transformer to allow selection of nominal full-power, half-power or quarter-power radiation (in 3 dB steps).

Mounting

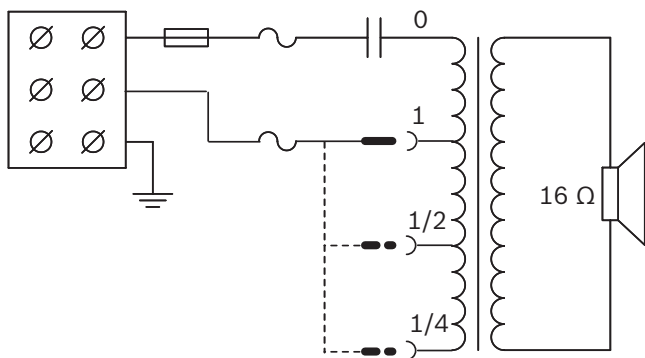
The horn loudspeakers are supplied, complete with sturdy adjustable steel mounting brackets, allowing the sound beam to be accurately directed.



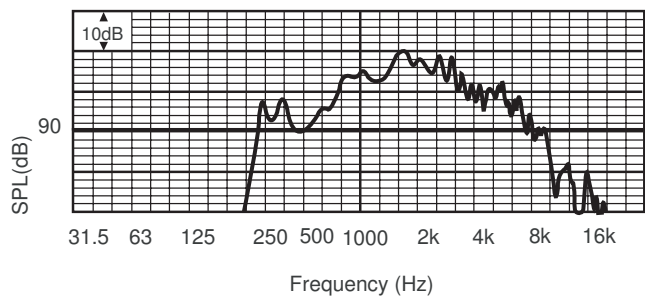
Dimensions in mm (in)



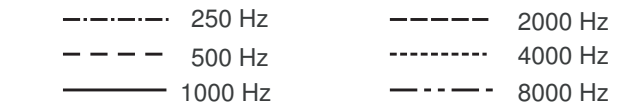
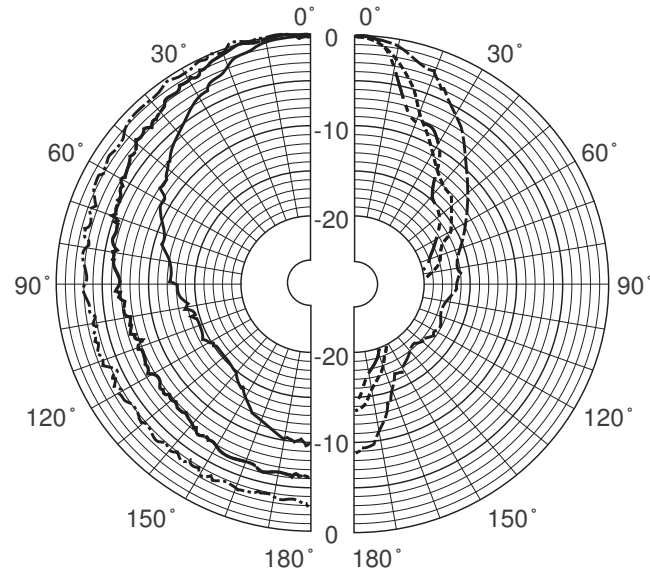
Bracket dimensions



Circuit diagram



Frequency response



Polar diagram (measured in pink noise)

Octave band sensitivity*

	Octave SPL 1W/1m	Total octave SPL 1W/1m	Total octave SPL Pmax/1m
125 Hz	60.1	-	-
250 Hz	86.6	-	-
500 Hz	100.2	-	-
1000 Hz	106.9	-	-
2000 Hz	104.1	-	-
4000 Hz	99.4	-	-
8000 Hz	87.8	-	-
A-weighted	-	100.1	113.0
Lin-weighted	-	99.8	111.8

Octave band opening angles

	Horizontal	Vertical
125 Hz	-	-
250 Hz	360	360
500 Hz	120	120
1000 Hz	75	75
2000 Hz	43	43
4000 Hz	25	25
8000 Hz	22	22

Acoustical performance specified per octave

* (all measurements are done with a pink noise signal; the values are in dB SPL)

354 | Loudspeakers | Horn**Parts Included****Quantity Component**

1	LBC 3482/00 Horn Loudspeaker
1	PG 13.5 cable gland (fitted)

Technical Specifications**Electrical***

Maximum power	37.5 W
Rated power	25 / 12.5 / 6.25 W
Sound pressure level at 25 W / 1 W (1 kHz, 1 m)	121 dB / 107 dB (SPL)
Effective frequency range (-10 dB)	550 Hz to 5 kHz
Opening angle at 1 kHz/4 kHz (-6 dB)	70° / 25°
Rated voltage	100 V
Rated impedance	400 ohm
Connector	Screw terminal block

* Technical performance data acc. to IEC 60268-5

Mechanical

Dimensions (L x Dmax)	425 x 355 mm (16.7 x 14 in)
Weight	3.6 kg (8 lb)
Color	Light grey (RAL 7035)
Cable diameter	6 mm to 12 mm (0.24 in to 0.47 in)

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 3482/00 Horn Loudspeaker 25 W, aluminum, circular	LBC3482/00
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Accessories

LBC 3478/00 Horn, 14" without Driver aluminum, suitable for use with driver units LBC 3472/00, LBC 3473/00, and LBC 3474/00	LBC 3478/00
LBC 3479/00 Horn, 20" without Driver aluminum, suitable for use with driver units LBC 3472/00, LBC 3473/00, and LBC 3474/00	LBC 3479/00
LBC 3472/00 Driver Unit 25 W, 100 V	LBC 3472/00
LBC 3473/00 Driver Unit 35 W, 100 V	LBC 3473/00

LBC 3483/00 Horn Loudspeaker



Features

- ▶ **High efficiency driver**
- ▶ **Excellent speech reproduction**
- ▶ **Provision for inside mounting of the optional line/loudspeaker supervision board**
- ▶ **Water-and dust protected to IP 65**
- ▶ **EN 54-24 certified**
- ▶ **BS 5839-8 and EN 60849 compliant**

Bosch high-efficiency horn loudspeakers provide excellent speech reproduction and sound distribution for a wide scope of outdoor applications. They are ideal for sports grounds, parks, exhibitions, factories and swimming pools.

The LBC 3483/00 is a circular, 35 W horn loudspeaker, measuring 490 mm (19.6 in) in diameter. They are made from aluminum. The edges of the horns are covered with a PVC profile for protection against impact damage. They are light grey (RAL 7035), and are water and dust protected.

Voice alarm loudspeaker

The LBC 3483/00 is designed for use in voice alarm systems and is compliant with emergency standards.

The horn 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 Horn loudspeaker has a ceramic terminal block, thermal fuse and heat resistant, high-temperature wiring.

They have provision for inside mounting the optional line/loudspeaker supervision boards.

Functions

The rear cover on the horn is made from self-extinguishing ABS (acc. to class UL 94 V0). The connection cable is fed out through a cable gland (PG 13.5) in rear cover. For loop through connection, the rear cover is fitted with a second hole (covered as standard supplied).

These integrated horns are also available as separate horn and driver, allowing installing any combination of horn and driver. See order information for the type numbers.

Certifications and Approvals

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 operation life, and much less chance of failure or performance deterioration.

Region	Certification
Europe	CE
Poland	CNBOP
Safety	acc. to EN 60065
Water and dust protection	acc. to IEC 60529, IP 65
Emergency	acc. to EN 54-24 / BS 5839-8 / EN 60849
Wind-force	acc. to NEN 6702: 2007 + A1: 2008, Bft11

Installation/Configuration Notes

Simple Power Setting

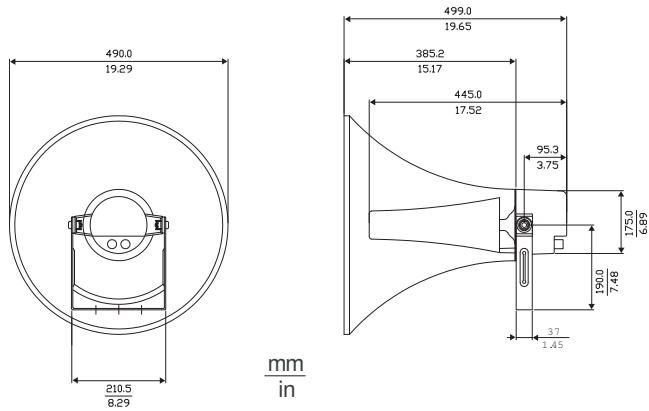
The horn has a three-way terminal block with screw connection (including earth). Three primary taps are provided on the matching transformer to allow selection of nominal full-power, half-power or quarter-power radiation (in 3 dB steps).

Mounting

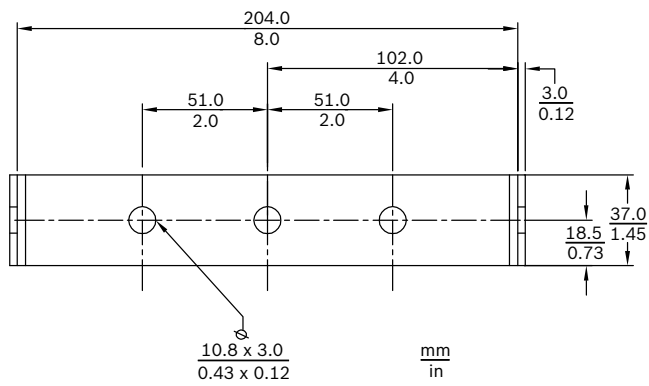
The horn loudspeakers are supplied complete with sturdy adjustable steel mounting brackets, allowing the sound beam to be accurately directed.

356 | Loudspeakers | Horn

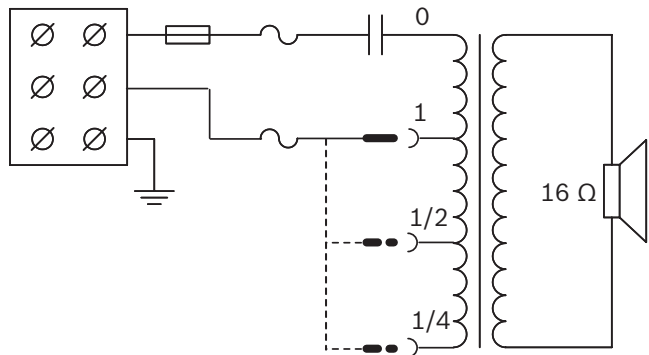
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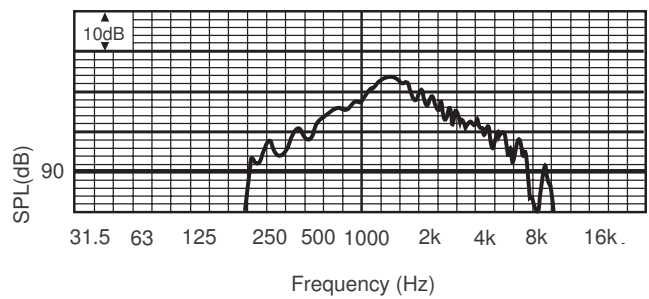
Dimensions in mm (in)



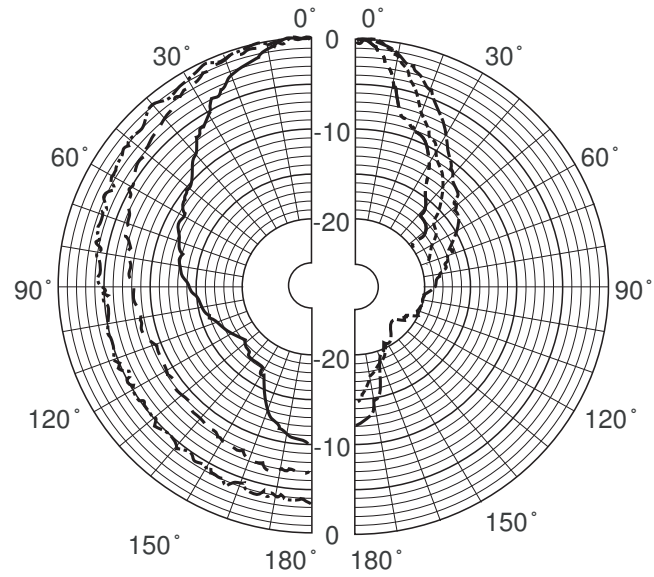
Bracket dimensions



Circuit diagram



Frequency response



Polar diagram (measured in pink noise)

Octave band sensitivity*

	Octave SPL 1W/1m	Total octave SPL 1W/1m	Total octave SPL Pmax/1m
125 Hz	74.0	-	-
250 Hz	91.7	-	-
500 Hz	102.5	-	-
1000 Hz	111.3	-	-
2000 Hz	106.5	-	-
4000 Hz	99.9	-	-
8000 Hz	92.6	-	-
A-weighted	-	103.5	117.1
Lin-weighted	-	103.4	115.6

Octave band opening angles

	Horizontal	Vertical
125 Hz	-	-
250 Hz	179	179
500 Hz	93	93
1000 Hz	55	55
2000 Hz	37	37
4000 Hz	26	26
8000 Hz	15	15

Acoustical performance specified per octave

* (all measurements are done with a pink noise signal; the values are in dB SPL)

Parts Included**Quantity Component**

1	LBC 3483/00 Horn Loudspeaker
1	PG 13.5 cable gland (fitted)

Technical Specifications**Electrical***

Maximum power	52.5 W
Rated power	35 / 17.5 / 8.75 W
Sound pressure level at 35 W / 1 W (1 kHz, 1 m)	127 dB / 112 dB (SPL)
Effective frequency range (-10 dB)	380 Hz to 5 kHz
Opening angle at 1 kHz/4 kHz (-6 dB)	50° / 25°
Rated voltage	100 V
Rated impedance	286 ohm
Connector	Screw terminal block

* Technical performance data acc. to IEC 60268-5

Mechanical

Dimensions (L x Dmax)	499 x 490 mm (20 x 19.6 in)
Weight	4.5 kg (9.9 lb)
Color	Light grey (RAL 7035)
Cable diameter	6 mm to 12 mm (0.24 in to 0.47 in)

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 3483/00 Horn Loudspeaker 35 W, aluminum, circular	LBC3483/00
Accessories	
LBC 3472/00 Driver Unit 25 W, 100 V	LBC 3472/00
LBC 3473/00 Driver Unit 35 W, 100 V	LBC 3473/00
LBC 3478/00 Horn, 14" without Driver aluminum, suitable for use with driver units LBC 3472/00, LBC 3473/00, and LBC 3474/00	LBC 3478/00
LBC 3479/00 Horn, 20" without Driver aluminum, suitable for use with driver units LBC 3472/00, LBC 3473/00, and LBC 3474/00	LBC 3479/00

LBC 3484/00 Horn Loudspeaker

4



Features

- ▶ **High efficiency driver**
- ▶ **Excellent speech reproduction**
- ▶ **Provision for inside mounting of the optional line/loudspeaker supervision board**
- ▶ **Water-and dust protected to IP 65**
- ▶ **BS 5839-8 and EN 60849 compliant**

Bosch high-efficiency horn loudspeakers provide excellent speech reproduction and sound distribution for a wide scope of outdoor applications. They are ideal for sports grounds, parks, exhibitions, factories and swimming pools.

The LBC 3484/00 is a circular 50 W horn loudspeaker, measuring 490 mm (19.6 in) in diameter. They are made from aluminum. The edges of the horns are covered with a PVC profile for protection against impact damage. They are light grey (RAL 7035), and are water and dust protected.

Voice alarm loudspeaker

The LBC 3484/00 is designed for use in voice alarm systems and is compliant with emergency standards.

The Horn 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 Horn loudspeaker has a ceramic terminal block, thermal fuse and heat resistant, high-temperature wiring.

They have provision for inside mounting the optional line/loudspeaker supervision boards.

Functions

The rear cover on the horn is made from self-extinguishing ABS (acc. to class UL 94 V0). The connection cable is fed out through a cable gland (PG 13.5) in rear cover. For loop through connection, the rear cover is fitted with a second hole (covered as standard supplied).

These integrated horns are also available as separate horn and driver, allowing installing any combination of horn and driver. See order information for the type numbers.

Certifications and Approvals

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 operation life, and much less chance of failure or performance deterioration.

Region	Certification
Europe	CE
Safety	acc. to EN 60065
Water and dust protection	acc. to IEC 60529, IP 65
Emergency	acc. to BS 5839-8 / EN 60849
Wind-force	acc. to NEN 6702: 2007 + A1: 2008, Bft11

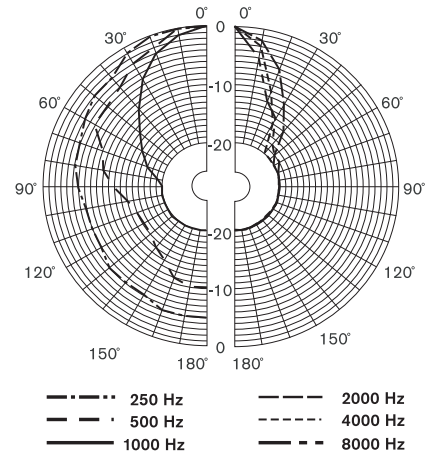
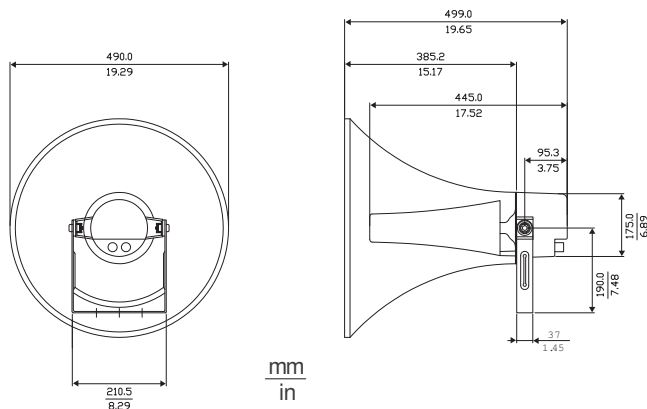
Installation/Configuration Notes

Simple Power Setting

The horn has a three-way terminal block with screw connection (including earth). Three primary taps are provided on the matching transformer to allow selection of nominal full-power, half-power or quarter-power radiation (in 3 dB steps).

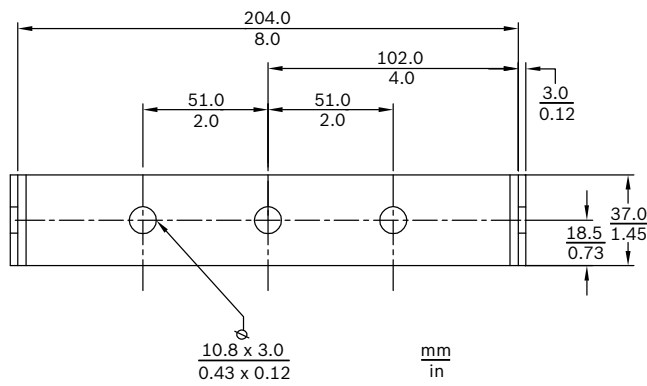
Mounting

The horn loudspeakers are supplied complete with sturdy adjustable steel mounting brackets, allowing the sound beam to be accurately directed.



Dimensions in mm (in)

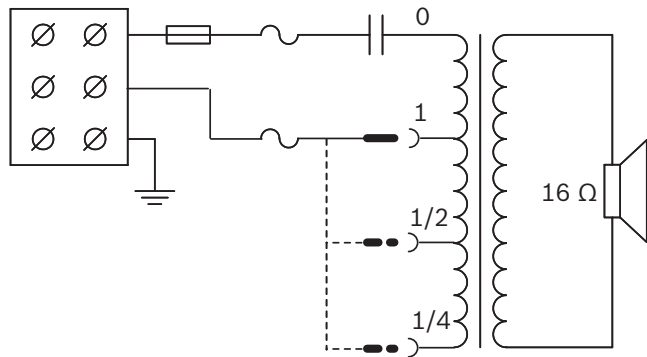
Polar diagram (measured in pink noise)



Octave band sensitivity*

	Octave SPL 1W/1m	Total octave SPL 1W/1m	Total octave SPL Pmax/1m
125 Hz	84.3	-	-
250 Hz	99.0	-	-
500 Hz	105.2	-	-
1000 Hz	111.0	-	-
2000 Hz	106.2	-	-
4000 Hz	99.2	-	-
8000 Hz	91.2	-	-
A-weighted	-	103.3	117.7
Lin-weighted	-	103.5	116.3

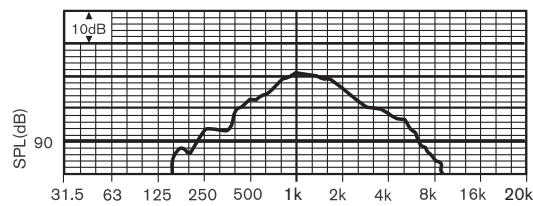
Bracket dimensions in mm (in)



Octave band opening angles

	Horizontal	Vertical
125 Hz	-	-
250 Hz	179	179
500 Hz	93	93
1000 Hz	55	55
2000 Hz	37	37
4000 Hz	26	26
8000 Hz	15	15

Circuit diagram



Acoustical performance specified per octave

* (all measurements are done with a pink noise signal; the values are in dB SPL)

Parts Included

Quantity	Components
1	LBC 3484/00 Horn Loudspeaker
1	PG 13.5 cable gland (fitted)

360 | Loudspeakers | Horn**Technical Specifications****Electrical***

Maximum power	75 W
Rated power	50 / 25 / 12.5 W
Sound pressure level at 50 W / 1 W (1 kHz, 1 m)	127 dB / 110 dB (SPL)
Effective frequency range (-10 dB)	350 Hz to 4 kHz
Opening angle at 1 kHz/4 kHz (-6 dB)	60° / 28°
Rated voltage	100 V
Rated impedance	200 ohm
Connector	Screw terminal block

Mechanical

Dimensions (L x Dmax)	499 x 490 mm (20 x 19.6 in)
Weight	6 kg (13.22 lb)
Color	Light grey (RAL 7035)
Cable diameter	6 mm to 12 mm (0.24 in to 0.47 in)

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 3484/00 Horn Loudspeaker 50 W, aluminum, circular	LBC3484/00
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Accessories

LBC 3472/00 Driver Unit 25 W, 100 V	LBC 3472/00
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LBC 3473/00 Driver Unit 35 W, 100 V	LBC 3473/00
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LBC 3478/00 Horn, 14" without Driver aluminum, suitable for use with driver units LBC 3472/00, LBC 3473/00, and LBC 3474/00	LBC 3478/00
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LBC 3479/00 Horn, 20" without Driver aluminum, suitable for use with driver units LBC 3472/00, LBC 3473/00, and LBC 3474/00	LBC 3479/00
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LBC 340x/16 Horn Loudspeakers



Features

- ▶ Excellent acoustic properties
- ▶ Choice of driver units
- ▶ Water and dust protected to IP 65
- ▶ Versatile mounting bracket
- ▶ UV light resistant
- ▶ Self-extinguishing to UL 94 V0
- ▶ Provision for inside mounting of the optional line/loudspeaker supervision board

The Bosch professional horn loudspeaker system allows a range of different driver units to be installed into the various horns. The system includes four horns, three circular types with aperture diameters of 255, 380 and 510 mm and a rectangular model with an opening measuring 390 x 235 mm.

Functions

The drivers (ordered separately) are mounted inside the horn, and the connection cable is fed out through a cable gland in the cover plate. This makes the loudspeaker horn/driver unit splash-waterproof, and therefore ideal for outdoor sound reinforcement applications. Three driver units are available, a 15 W, 30 W and a 50 W type for 100 V lines only. See separate datasheet.

In the construction of the horns, maximum use has been made of standard parts in a modular concept. The screw thread for securing the driver units is a standard 1 3/8-inch thread (1 3/8" - 18 UNEF-2A). The shape of the cover plate gives the horns a distinctive and easily recognizable style.

The cover plates have provision on their inside face for mounting the optional line/loudspeaker supervision board (and for mounting the emergency Connection Adapter).

There is also an extra knock-out hole to enable loop-through cabling (if loop-through is used, an extra optional cable gland PG 13.5 must be fitted).

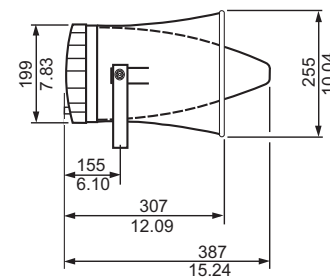
They are made from flame-retardant, high-impact plastic combining strength with low weight. This rugged material is resistant to ultraviolet light, aggressive environments and most industrial chemicals. The horns (incl. brackets) are finished in light grey. The sturdy steel mounting bracket (ST 37-2 DIN 1652) allows easy mounting and directing of the horn.

4

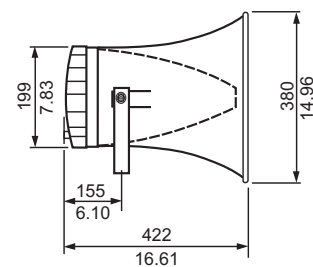
Certifications and Approvals

Water and dust protection	acc. to IEC 60529, IP 65 (all models)
Self-extinguishing	acc. to UL 94 V0

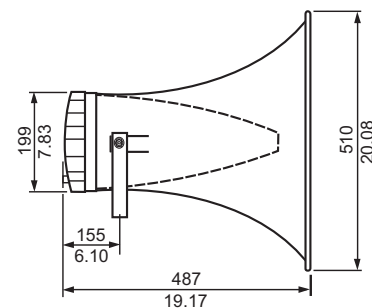
Installation/Configuration Notes



LBC 3403/16 Dimensions in mm (in)

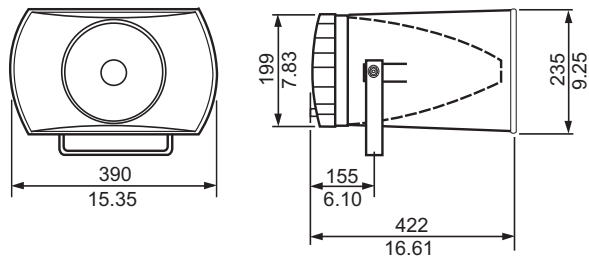


LBC 3404/16 Dimensions in mm (in)

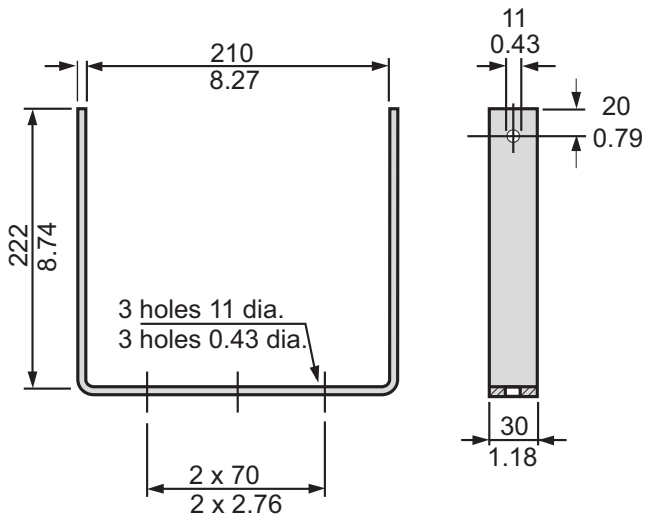


LBC 3405/16 Dimensions in mm (in)

362 | Loudspeakers | Horn



LBC 3406/16 Dimensions in mm (in)



All models mounting bracket dimensions in mm (in)

Ordering Information

LBC 3403/16 Horn, Circular, 10" without Driver diameter = 255 mm (10.04 in)	LBC3403/16
LBC 3404/16 Horn, Circular, 15" without Driver diameter = 380 mm (14.96 in)	LBC3404/16
LBC 3405/16 Horn, Circular, 20" without Driver diameter = 510 mm (20.08 in)	LBC3405/16
LBC 3406/16 Horn, Rectangular, 9 x 15" without Driver diameter = 235 x 390 mm (9.25 x 15.35 in)	LBC3406/16

Accessories

LBC 1256/00 EVAC Connection Adapter 3-pole screw connector, 100 pieces	LBC1256/00
LBN 9000/00 Driver Unit, 15 W 100 V, 22.5 / 15 W max / rated power (PHC)	LBN9000/00
LBN 9001/00 Driver Unit, 30 W 100 V, 45 / 30 W max / rated power (PHC)	LBN9001/00
LBN 9003/00 Driver Unit, 50 W 100 V, 75 / 50 W max / rated power (PHC)	LBN9003/00

LBC 340x/16 Horn Loudspeakers



LBC3403/16



LBC3404/16



LBC3405/16



LBC3406/16

Electrical

Sound pressure level at
rated power/1 W
(1 kHz, 1 m) with driver:
LBN 9000/00
LBN 9001/00
LBN 9003/00

121 / 109 dB (SPL)	124 / 112 dB (SPL)	125 / 113 dB (SPL)	122 / 110 dB (SPL)
125 / 110 dB (SPL)	128 / 113 dB (SPL)	129 / 114 dB (SPL)	127 / 112 dB (SPL)
127 / 110 dB (SPL)	130 / 113 dB (SPL)	132 / 115 dB (SPL)	129 / 112 dB (SPL)

Eff. frequency range
(-10 dB) with driver:
LBN 9000/00
LBN 9001/00
LBN 9003/00

400 Hz to 7 kHz	400 Hz to 9 kHz	400 Hz to 9 kHz	350 Hz to 6.5 kHz
350 Hz to 6 kHz	300 Hz to 8.5 kHz	300 Hz to 8 kHz	300 Hz to 8 kHz
380 Hz to 10 kHz	350 Hz to 10 kHz	350 Hz to 9 kHz	380 Hz to 10 kHz

Opening angle
at 1 kHz/4 kHz (-6 dB)

90° / 30°	70° / 25°	60° / 35°	100° / 35° horizontal 65° / 30° vertical
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Mechanical

Dimensions (L x D)

387 x 255 mm (15.25 x 10.47 in)	422 x 380 mm (16.63 x 14.97 in)	487 x 510 mm (19.19 x 20.09 in)	422 x (390 x 235) mm (16.63 x (15.37 x 9.26) in)
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Weight (without driver)

2.94 kg (6.48 lb)	3.34 kg (7.36 lb)	3.54 kg (7.80 lb)	3.14 kg (6.92 lb)
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Color

light grey (RAL 7035)	light grey (RAL 7035)	light grey (RAL 7035)	light grey (RAL 7035)
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Cable diameter

6 to 10.5 mm (0.24 to 0.41 in)	6 to 10.5 mm (0.24 to 0.41 in)	6 to 10.5 mm (0.24 to 0.41 in)	6 to 10.5 mm (0.24 to 0.41 in)
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Environmental

Operating temperature

-25° to +55°C (-13° to 131°F)	-25° to +55°C (-13° to 131°F)	-25° to +55°C (-13° to 131°F)	-25° to +55°C (-13° to 131°F)
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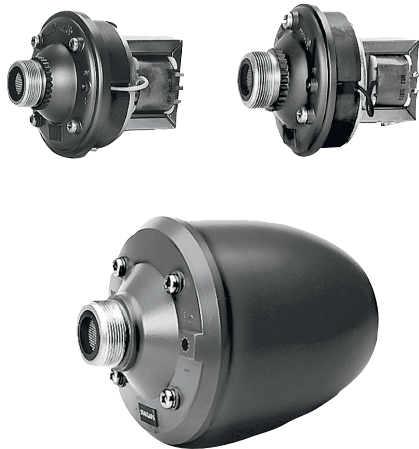
Storage temperature

-40 to +70 °C (-40 to +158 °F)	-40 to +70 °C (-40 to +158 °F)	-40 to +70 °C (-40 to +158 °F)	-40 to +70 °C (-40 to +158 °F)
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Relative humidity

<95%	<95%	<95%	<95%
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LBN 900x/00 Driver Units



4

Features

- ▶ **High efficiency**
- ▶ **15 W, 30 W and 50 W versions**
- ▶ **1 3/8" screw thread**
- ▶ **Simple power setting**
- ▶ **Complies with international installation and safety regulations**

The Bosch professional horn loudspeaker system comprises a range of three high-efficiency driver units that can be installed into one of the compatible circular and rectangular horns (supplied separately without drivers).

A standard 1 3/8" screw thread is used for mounting the drivers into horns. All models are treated against corrosion.

System Overview

The LBN 9000/00 is a 15 W driver unit and the LBN 9001/00 is a 30 W driver unit. Connections to 100 V lines are made using push-on spade terminals.

The LBN 9003/00 is a more powerful 50 W model. Connections to 100 V lines are made using screw terminals.

Functions

All driver units include a matching transformer to allow power tapping. See circuit diagram overleaf. This feature also allows impedance matching for different amplifier types.

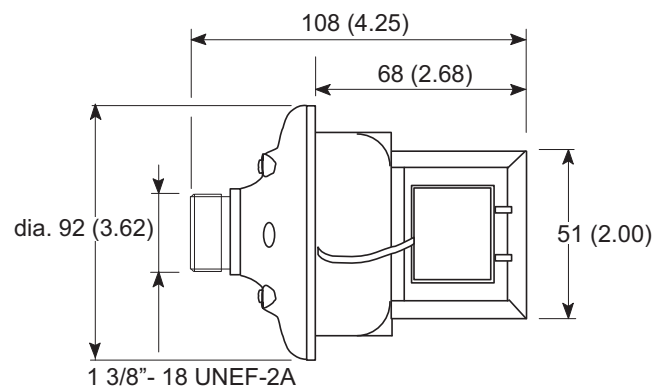
A range of horns is available for these driver units to allow tailor-made solutions for a variety of sound reinforcement applications. Three circular types (LBC 3403, LBC 3404 and LBC 3405 with diameters of 255, 380 and 510 mm respectively) and one rectangular type (LBC 3406, measuring 380 x 235 mm) are available. They are made from flame-retardant, high-impact plastic for high strength and low weight, and are finished in light grey. A sturdy steel mounted bracket is also supplied. See separate datasheet.

Certifications and Approvals

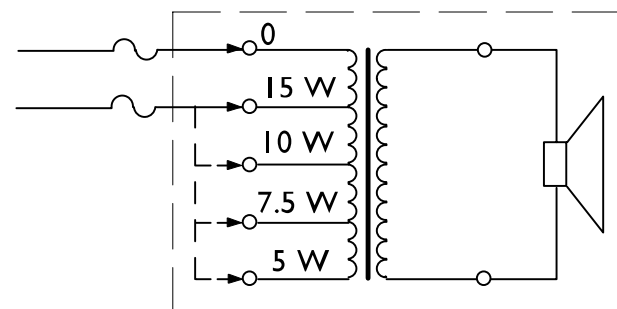
All Bosch loudspeakers are designed to withstand operating at their rated power for 100 hours in accordance with IEC 268-5 Power Handling Capacity (PHC) standards. Bosch has also developed the Simulated Acoustical Feedback Exposure (SAFE) test to demonstrate that they can withstand two times their rated 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.

Installation/Configuration Notes

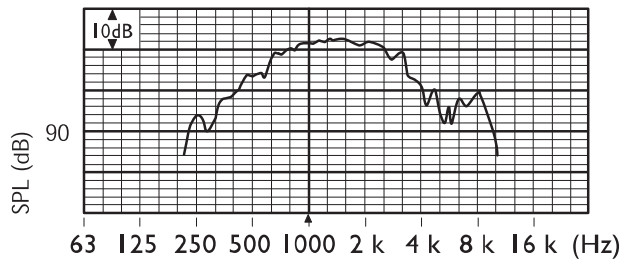
LBN 9000/00



Dimensions in mm (in)

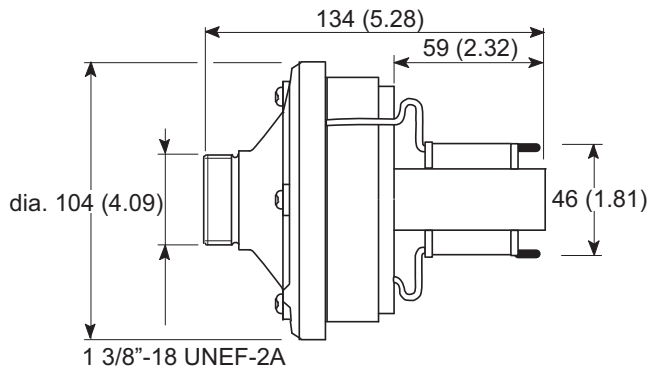


Circuit diagram

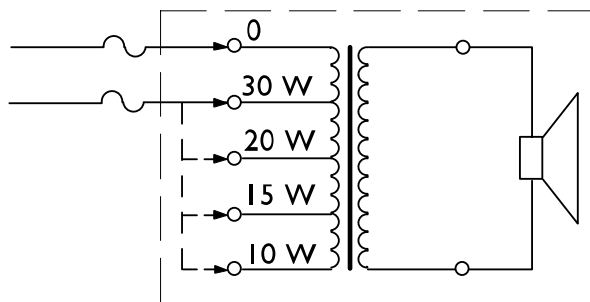


Frequency response

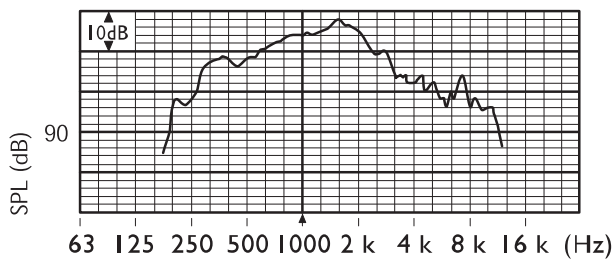
LBN 9001/00



Dimensions in mm (in)

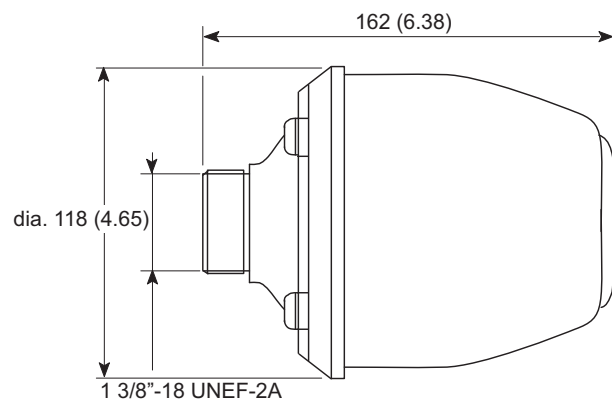


Circuit diagram

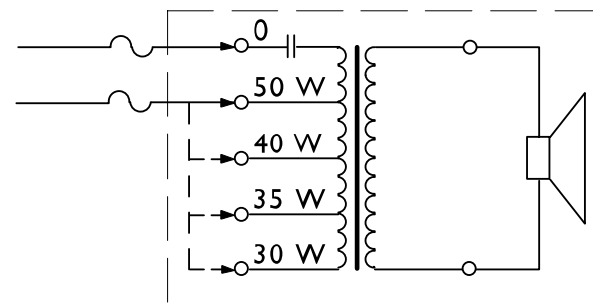


Frequency response

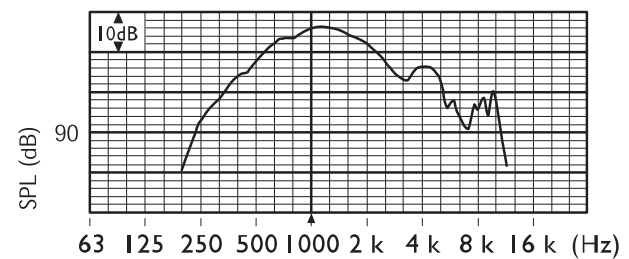
LBN 9003/00



Dimensions in mm (in)



Circuit diagram



Frequency response

366 | Loudspeakers | Horn

Ordering Information

LBN 9000/00 Driver Unit, 15 W	LBN9000/00
100 V, 22.5 / 15 W max / rated power (PHC)	

LBN 9001/00 Driver Unit, 30 W	LBN9001/00
100 V, 45 / 30 W max / rated power (PHC)	

LBN 9003/00 Driver Unit, 50 W	LBN9003/00
100 V, 75 / 50 W max / rated power (PHC)	

Accessories

LBC 3403/16 Horn, Circular, 10" without Driver	LBC3403/16
diameter = 255 mm (10.04 in)	

LBC 3404/16 Horn, Circular, 15" without Driver	LBC3404/16
diameter = 380 mm (14.96 in)	

LBC 3405/16 Horn, Circular, 20" without Driver	LBC3405/16
diameter = 510 mm (20.08 in)	

LBC 3406/16 Horn, Rectangular, 9 x 15" without Driver	LBC3406/16
diameter = 235 x 390 mm (9.25 x 15.35 in)	

LBN 900x/00 Driver Units



LBN9000/00



LBN9001/00



LBN9003/00

Electrical			
Max. power	22.5 W	45 W	75 W
Rated power (PHC)	15 / 10 / 7.5 / 5 W	30 / 20 / 15 / 10 W	50 / 40 / 35 / 30 W
Sound pressure level at rated power / 1 W (1 kHz, 1 m)*	125 / 113 dB (SPL)	129 / 114 dB (SPL)	131 / 114 dB (SPL)
Effective frequency range (-10 dB)*	400 Hz to 9 kHz	300 Hz to 8 kHz	400 Hz to 5 kHz
Rated voltage	100 V	100 V	100 V
Rated impedance	670 ohm	330 ohm	200 ohm
Voice coil impedance	8 ohm	16 ohm	16 ohm
Mechanical			
Dimensions (L x Dmax)	108 x 92 mm (4.25 x 3.62 in)	134 x 104 mm (5.28 x 4.09 in)	162 x 118 mm (6.38 x 4.65 in)
Weight (without horn)	1.3 kg (2.9 lb)	2.1 kg (4.6 lb)	3.2 kg (7.0 lb)
Screw thread	exterior thread, 1 3/8" 18 turns per inch	exterior thread, 1 3/8" 18 turns per inch	exterior thread, 1 3/8" 18 turns per inch
Environmental			
Operating temperature	-25 to +55 °C (-13 °F to +131 °F)	-25 to +55 °C (-13 °F to +131 °F)	-25 to +55 °C (-13 °F to +131 °F)
Storage temperature	-40 to +70 °C (-40 °F to +158 °F)	-40 to +70 °C (-40 °F to +158 °F)	-40 to +70 °C (-40 °F to +158 °F)
Relative humidity	<95%	<95%	<95%

* Measured with horn type LBC 3405

LBC 3428/00 Horn Loudspeaker

4



Features

- ▶ Suitable for marine and industrial applications
- ▶ Glass reinforced polyester with strong, fire-retardant qualities
- ▶ Reduced maintenance costs
- ▶ Corrosion and chemical resistant
- ▶ Water-and dust-protected to class IP 66 and IP 67
- ▶ Complies with international installation and safety regulations

The Bosch LBC 3428/00 Horn Loudspeaker is specifically designed for excellent sound reproduction in marine applications and other industrial environments. It is rugged, water- and dust-protected, and resistant to the corrosive effects of seawater and most industrial atmospheres. Suitable for both stationary and mobile systems, its strength and good acoustic performance also makes it ideal for general commercial and industrial applications.

Functions

The Horn Loudspeaker is made from a UV-stable, glass-reinforced polyester (GRP). This strong, fire-resistant and corrosion-resistant material is very reliable and reduces maintenance costs. GRP is also chemical resistant and thermally stable, making it ideal for even the harshest environments. The horns are weather-proof, and incorporate stainless steel mounting brackets with cover screws to increase corrosion resistance. They are fitted with dual 20 mm gland entries (one gland is supplied as standard) to facilitate loop-through connection.

Certifications and Approvals

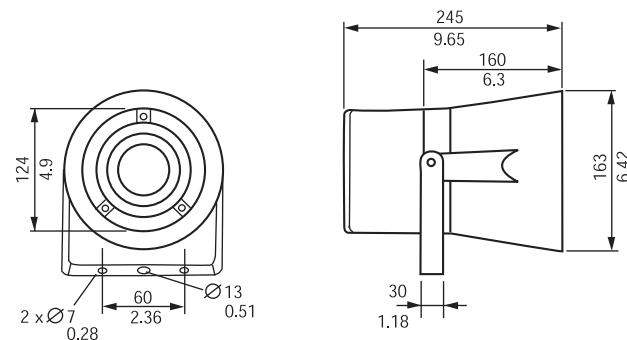
All Bosch loudspeakers are designed to withstand operating at their rated power for 100 continuous hours in accordance with IEC 268-5 Power Handling Capacity (PHC) standards. Bosch has also developed the Simulated Acoustical Feedback Exposure (SAFE) test to demonstrate that they can withstand two times 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.

Region	Certification
Europe	CE
Safety	acc. to EN 60065
Water and dust protection	acc. to IEC 60529, IP 66 and IP 67

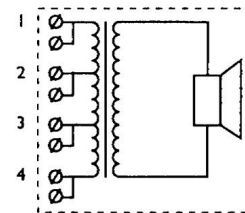
Installation/Configuration Notes

The Horn Loudspeaker includes a built-in transformer with taps on the primary winding for different power settings.

The Horn Loudspeaker is supplied with a sturdy mounting bracket allowing the sound beam to be accurately directed. The bracket has a ratchet facility to ensure it remains correctly positioned.



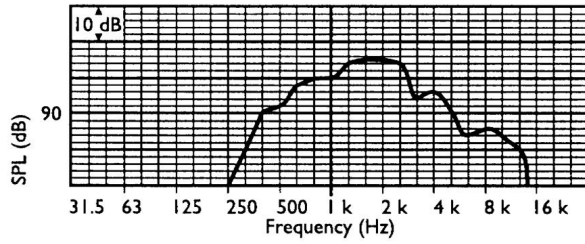
Dimensions in mm (in)



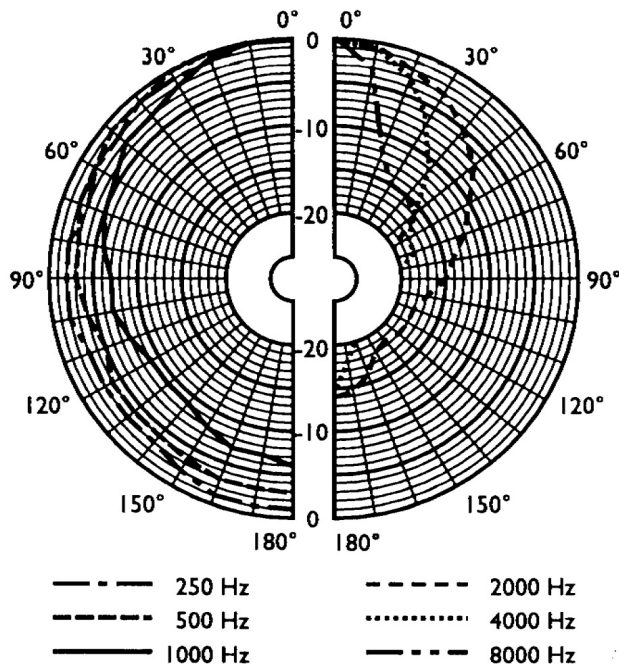
Transformer tapplings		Power
Common	Phase	15 W
1	2	15.0
2	3	7.5
3	4	5.0
1	3	4.0

Transformer tapings	Power
2 4	2.0
1 4	0.8

Circuit diagram



Frequency response



Polar diagram (measured with pink noise)

	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
SPL 1.1	-	79	96	102	105	98	87
SPL max.	-	91	108	114	117	110	99
Q-factor	-	1.5	1.9	3.2	6.8	15.8	51.3
Efficiency	-	0.07	2.7	6.2	5.9	0.5	0.1
H. angle	-	360	360	160	90	55	25
V. angle	-	360	360	160	90	55	25

Acoustical performance specified per octave

Parts Included

Quantity	Component
1	LBC 3428/00 Horn Loudspeaker
1	Cable gland

Technical Specifications

Electrical*

Maximum power	22.5 W
Rated power	15 / 7.5 / 5 / 4 / 2 / 0.8 W
Sound pressure level at 15 W / 1 W (1 kHz, 1 m)	114 dB / 102 dB (SPL)
Effective frequency range (-10 dB)	380 Hz to 5.5 kHz
Opening angle at 1 kHz/4 kHz (-6 dB)	160° / 55°
Rated voltage	100 V
Rated impedance	667 ohm
Connector	Screw terminal block

* Technical performance data acc. to IEC 60268-5

Mechanical

Dimensions (L x Dmax)	245 x 163 mm (9.6 x 6.4 in)
Weight	2.6 kg (5.72 lb)
Color	Light grey (RAL 7035)
Cable diameter	8 mm to 12 mm (0.31 in to 0.47 in)

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 3428/00 Horn Loudspeaker for harsh environments, circular, 15 W	LBC3428/00
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Accessories

LBC 1256/00 EVAC Connection Adapter 3-pole screw connector, 100 pieces	LBC1256/00
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LBC 343x/00 Horn Loudspeakers



4

Features

- ▶ **ATEX approved**
- ▶ **CENELEC compliant**
- ▶ **BASEEFA certified**
- ▶ **Glass reinforced polyester with strong, fire retardant properties**
- ▶ **Reduced maintenance costs**
- ▶ **Corrosion and chemical resistance**
- ▶ **Water- and dust protected to class IP 66 and IP 67**
- ▶ **Complies with international installation and safety regulations**

The Bosch LBC 3437/00 and LBC 3438/00 Horn Loudspeakers are specifically designed and approved for installations where explosive gas-air mixtures are likely to be present. They are suitable for use in all gas groups including hydrogen.

System Overview

The LBC 3437/00 has a power rating of 15 W, the LBC 3438/00 has 25 W.

Functions

The flame paths, flare and body of both loudspeakers are constructed from a UV stable glass reinforced polyester (GRP). This strong, fire and corrosion resistant material offers greater reliability and reduced maintenance costs. GRP is also chemical resistant and thermally stable, making it ideal for even the harshest environments. The

horns are weather proof, and incorporate stainless steel mounting brackets and captive cover screws, and a stainless steel sinter, to increase their resistance to corrosion. They are supplied with an EExdIIC gland as standard.

Certifications and Approvals

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.

Self-Extinguishing	acc. to class UL 94 V1
Water and dust protection	acc. to EN 60529, IP 66 and IP 67
ATEX	Ex II 2 GD
BASEEFA *	EExd II C T5, zones 1 and 2 (LBC 3437/00) EExd II C T4, zones 1 and 2 (LBC 3438/00) Cert. No. BAS00ATEX2097X
CENELEC **	EN 50014 EN 50018

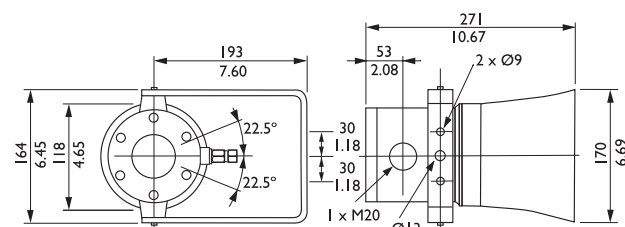
* BASEEFA = British Approved Service for Electrical Equipment in Flammable Atmospheres

** CENELEC = European Committee for Electrotechnical Standardization

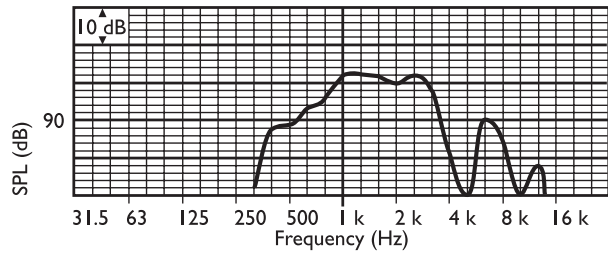
Installation/Configuration Notes

The horn loudspeakers include a built-in transformer with taps on the primary winding for different power settings.

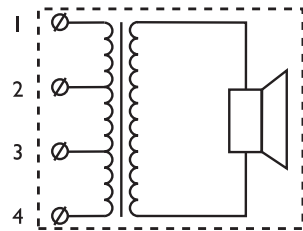
The horn loudspeakers are supplied with a sturdy mounting bracket allowing the sound beam to be accurately directed. The bracket has a ratchet facility to ensure it stays correctly positioned.



Dimensions in mm (in)

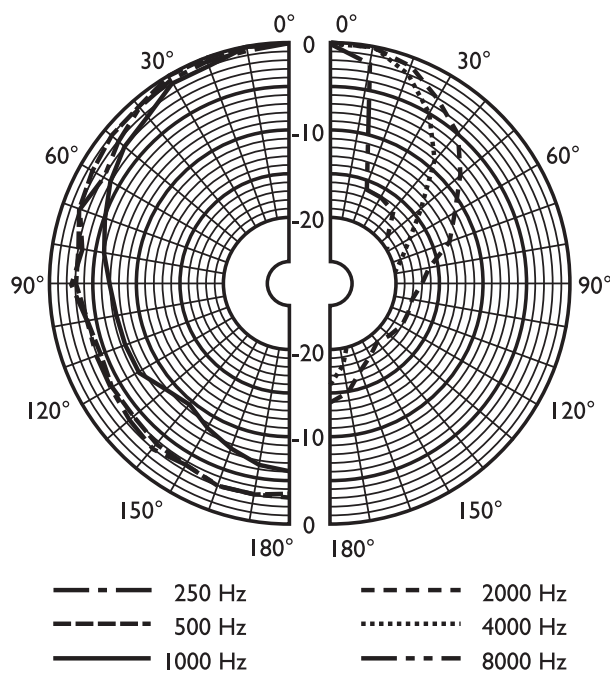


Frequency response



Transformer tapings		Rated power	
Common	Phase	15 W	25 W
1	2	15.0	25.0
2	3	7.5	12.5
3	4	5.0	6.0
1	3	4.0	4.0
2	4	2.0	2.0
1	4	0.8	1.0

Circuit diagram



Polar diagram (measured with pink noise)

Parts Included

Quantity	Component
1	LBC 343x/00 Horn Loudspeaker
1	EExd II C gland

Technical Specifications

Electrical*

Product	LBC 3437/00	LBC 3438/00
Maximum power	22.5 W	37.5 W
Rated power	15/7.5/5/4/2/0.8 W	25/12.5/6/4/2/1 W
SPL at RP / 1 W (1 kHz, 1 m)	112 / 100 dB (SPL)	114 / 100 dB (SPL)
Effective frequency range (-10 dB)	420 Hz to 3.5 kHz	420 Hz to 3.5 kHz
Opening angle at 1 kHz / 4 kHz (-6 dB)	160° / 60°	160° / 60°
Rated voltage	100 V	100 V
Rated impedance	667 ohm	400 ohm
Connector	Screw terminal	Screw terminal

* Technical performance data acc. to IEC 60268-5

Mechanical

Dimensions (L x D max)	271 x 170 mm (10.7 x 6.7 in)	271 x 170 mm (10.7 x 6.7 in)
Weight	5 kg (11 lbs)	5 kg (11 lbs)
Color	Natural black	Natural black
Cable diameter	7.5 mm to 11.9 mm (0.3 in to 0.5 in)	7.5 mm to 11.9 mm (0.3 in to 0.5 in)

Environmental

Operating temperature	-20 °C to +55 °C (-4 °F to +131 °F)	-20 °C to +50 °C (-4 °F to +122 °F)
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)	-40 °C to +70 °C (-40 °F to +158 °F)
Relative humidity	<95%	<95%

Ordering Information

LBC 3437/00 Horn Loudspeaker 15 W, flameproof	LBC3437/00
LBC 3438/00 Horn Loudspeaker 25 W, flameproof	LBC3438/00

LH1-UC30E Music Horn Loudspeaker

4



Features

- ▶ **Excellent speech and music reproduction**
- ▶ **Two-way system**
- ▶ **Wide opening angle**
- ▶ **Attractive ABS housing**
- ▶ **Provisions for internal mounting of the optional line / loudspeaker supervision board**
- ▶ **EN 54-24, BS 5839-8 and EN 60849 compliant**

The Bosch LH1-UC30E Music Horn Loudspeaker features a two-way system, resulting in an extended frequency range and high sensitivity which makes it ideal for high quality speech and music reproduction.

Functions

The rectangular horn features a unique combination of a re-entrant horn with two transducers, one for low- and the other for high frequencies, resulting in breathtaking sound clarity.

The horn is weather protected and can be used in areas with high humidity. It is therefore suitable for outdoor applications such as sport grounds, sports stadiums, leisure parks, exhibition areas and passenger terminals, as well as for indoor public address.

The ABS horn loudspeaker and aluminum bracket are finished in light grey (RAL 7035).

The LH1-UC30E is designed for use in voice alarm systems and compliant with emergency standards.

The horn 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 horn loudspeaker has ceramic terminal blocks, thermal fuse and heat resistant high temperature wiring.

It has provision for internal mounting of the optional line / loudspeaker supervision boards.

Certifications and Approvals

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.

Region	Certification
Europe	CE
Safety	acc. to EN 60065
Emergency	acc. to EN 54-24 / BS 5839-8 / EN 60849
Self-extinguishing ABS	acc. to UL 94 V 0
Water and dust protection	acc. to IEC 60529, IP 65
Wind-force	acc. to NEN 6702 + A1, Bft 11

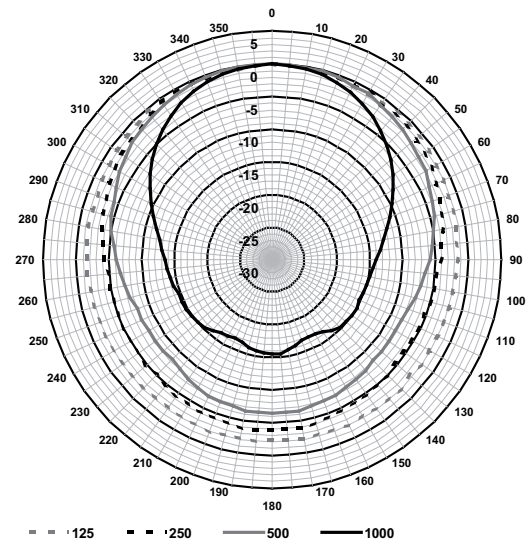
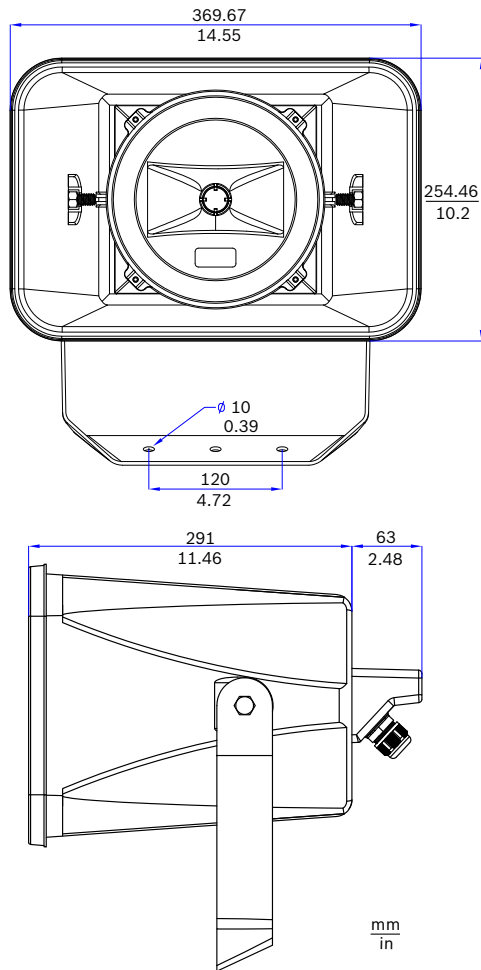
Installation/Configuration Notes

The horn loudspeaker includes a transformer for both 70 V and 100 V with taps on the primary winding for different power settings.

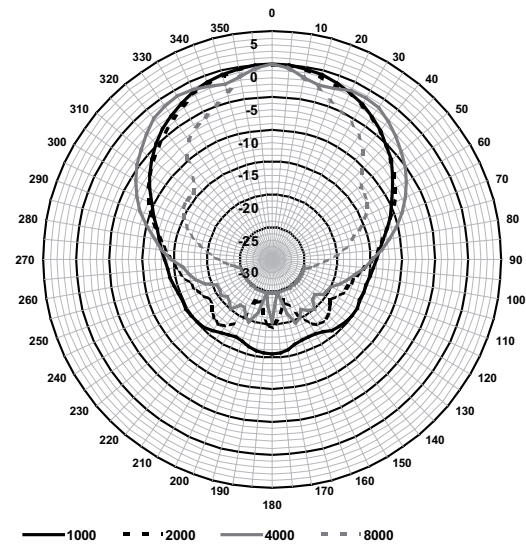
Nominal full-power, half-power, quarter-power or eight-power radiation (i.e. in 3 dB steps) can easily be selected by connecting to the appropriate tap.

The connection cable is fed out through an ABS cable gland (PG13.5) in the rear cover. For loop through connection, the rear cover is fitted with a second hole (covered as standard supplied)

In the rear cover, an provision for inside mounting of the optional line/ loudspeaker supervision board is available.

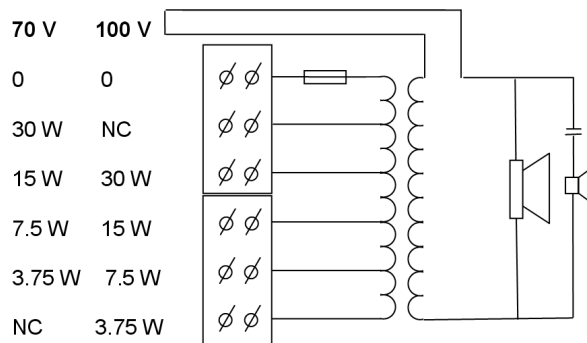


Vertical polar diagram (pink noise octave, normalized at 0° axis)

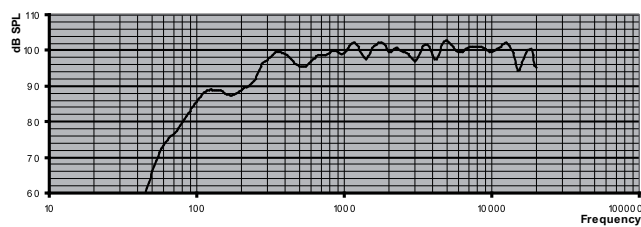


Vertical polar diagram (pink noise octave, normalized at 0° axis)

Dimensions



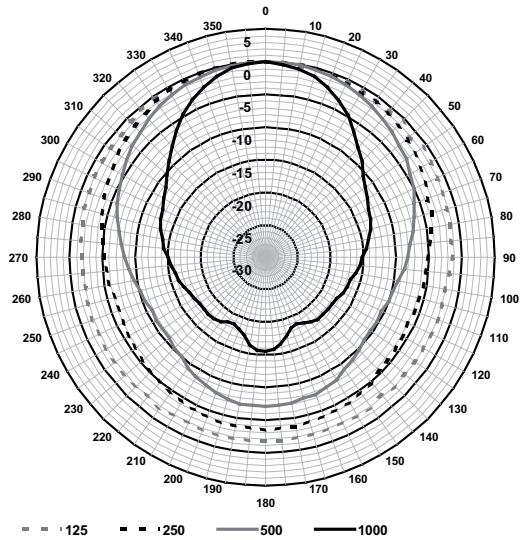
Circuit diagram



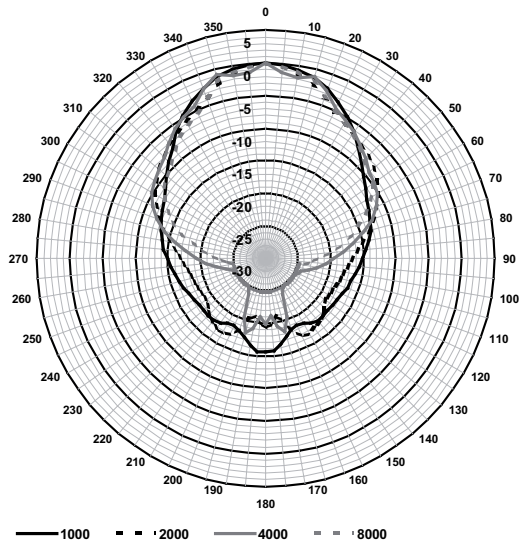
Frequency response

374 | Loudspeakers | Horn

4



Horizontal polar diagram (pink noise octave, normalized at 0° axis)



Horizontal polar diagram (pink noise octave, normalized at 0° axis)

Octave band sensitivity*

	Octave SPL 1W/1m	Total octave SPL 1W/1m	Total octave SPL Pmax/1m
125 Hz	87.8	-	-
250 Hz	95.5	-	-
500 Hz	97.6	-	-
1000 Hz	100.1	-	-
2000 Hz	100.4	-	-
4000 Hz	100.4	-	-
8000 Hz	100.2	-	-
A-weighted	-	97.1	110.6
Lin-weighted	-	97.8	111.7

Octave band opening angles

	Horizontal	Vertical
125 Hz	360	360
250 Hz	360	360
500 Hz	141	180
1000 Hz	68	98
2000 Hz	60	96
4000 Hz	68	118
8000 Hz	54	55

Acoustical performance specified per octave

* (all measurements are done with a pink noise signal; the values are in dB SPL).

Parts Included

- 1 LH1-UC30E
- 1 PG13.5 cable gland (fitted)

Technical Specifications

Electrical*

Maximum power	45 W
Rated power (PHC)	30 W
Power tapping	30 / 15 / 7.5 / 3.75 W
Sound pressure level at rated power / 1 W (1 kHz, 1 m)	115 / 100 dB (SPL)
Effective frequency range (-10 dB)	212 Hz to 20 kHz
Opening angle at 1 kHz / 4 kHz (-6 dB)	
Horizontal	68° / 68°
Vertical	98° / 118°
Rated input voltage	70 / 100 V
Rated impedance	167 / 333 ohm
Connector	6-pole screw terminal

* Technical performance data acc. to IEC 60268-5

Mechanical

Dimensions (H x W x D)	255 x 370 x 354 mm (10.04 x 14.56 x 13.93 in)
Weight	5.5 kg (12.45 lb)
Color	Light grey (RAL 7035)
Material (horn / bracket)	ABS / Aluminum
Cable diameter	6 mm to 12 mm (0.24 in to 0.47 in)

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

LH1-UC30E Music Horn Loudspeaker
30 W

LH1-UC30E