Sonos-SB

Siren/Beacon

Audible/optical signal transmitter compliant with EN 54-3 and EN 54-23 for fire alarm systems, in red and white.

Wall mounting (category W) and ceiling mounting (category C) for indoor applications, also with deep base for outdoor applications.

Fig. 1 Sonos-SB

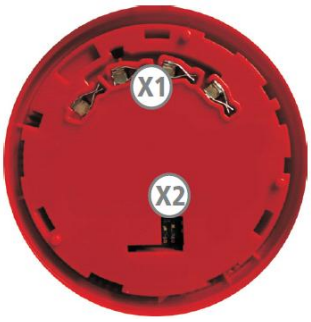
Description

The Sonos-SB audible/optical signal transmitter is compliant with EN 54-23 and serves to signal a fire alarm audibly and optically in buildings; with an additional IP65 base it can also be used outdoors.
The signal transmitter can be mounted on the wall (category W) or on the ceiling (category C). It is available in a red housing with a red light and in a white housing with a white light.

Sonos-SB features

- Housing and light colours: red and white
- 2 adjustable flashing speeds
- 6 (32) adjustable tones in 2 volume levels
- For indoor applications; with deep base also for outdoor applications
- Ceiling mounting and wall mounting versions
- Complies with EN 54-3 and EN 54-23

Interfaces



Sonos-SB audible/optical signal transmitter

IP21C base

IP65 base

Seating the signal transmitter plug connector (X1)

DIP switch setting for flashing frequency, volume and tone type (X2)

DIP	Position	Function
1-5	See below	Tone selection
6	ON	Attenuation -8 dB (A)
	OFF	Max. volume
7	ON	1 Hz
	OFF	0.5 Hz

32 different tone types can be set using DIP 1-5, of which the following are approved for use in fire alarm systems.

Tone	Description	DIP 1=ON 12345	Sound level @ 1 m/90° ±3 dB (A)
Continuous tone	970 Hz	00000	97
Alternating tone	800/970 Hz, 2 Hz	00001	98
Rising/falling tone	800-970 Hz, 1 Hz	00010	98
Alternating tone	554 Hz / 440 Hz	00101	95
Slow whoop	500-1200 HZ	00110	97
DIN 33404	1200-500 Hz, 1 Hz	01100	97

The complete table of tones can be found on page 4 of this document

Terminals (X3)/(X4)

Terminal	Designation	Function
1	♫☼	GND (-)
2	- / L-	GND (-)
3	IN+ / L+	24 V (+)
4	OUT+	24 V (+)
5	(5) / S	Screen

Planning

Planning is to be carried out in accordance with the applicable standards and directives. The Sonos-SB is connected either via an addressable loop module or a unit of the control panel. The audible and optical features can only be actuated simultaneously – they cannot be actuated separately from each other. Power can be supplied from the control panel or an external energy supply source. When it is operated on an addressable loop module, it is imperative that an external power supply is used. For each output, up to 51 (0.5 Hz) or 28 (1 Hz) Sonos-SB units can be planned, whereby the maximum line length must be taken into consideration.

Measurement value table in dB (A) at maximum volume, 1 m from point of reference compliant with EN 54-3, with DIN tone.

Transmission	Power supply	15°	45°	75°	105°	135°	165°
Horizontal	17 V	85	83	90	90	83	85
	60 V	89	86	93	93	86	89
Vertical	17 V	85	83	90	90	83	85
	60 V	89	86	93	93	86	89

When planning the number of signal transmitters, the relevant category (mounting location) and the light colour must be taken into account. The following space coverages can be achieved in accordance with EN 54-23 by means of different variants:

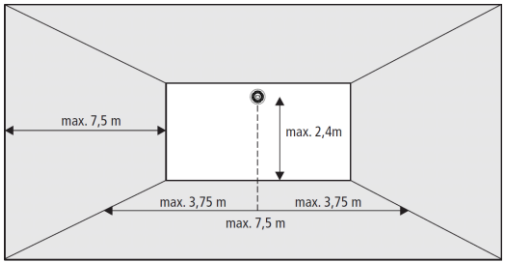
Category	Light colour	Specification	Space coverage	
W (wall)	Red	W-2.4-7.5 [1]	56 m^2	135 m^3
W (wall)	White	W-3.1-11.3 [1]	127 m^2	395 m^3
C (ceiling)	Red	C-3-8.9 [2]	62 m^2	186 m^3
		C-3-6.2 [3]	38 m^2	114 m^3
C (ceiling)	White	C-3-15 [2]	176 m^2	530 m^3
		C-3-10.6 [3]	112 m^2	337 m^3

[1] W-x-y = maximum mounting height-width of a square space
[2] C-x-y = maximum height-diameter of a cylindrical space
[3] C-x-y = converted from a cylindrical to a square surface

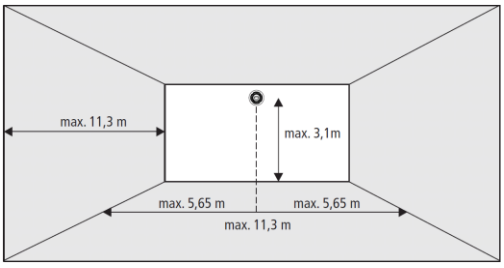
Example of number of required signal transmitters based on space size

Space size (L x W)	5 x 5 m	10 x 10 m	15 x 15 m
Wall, red light	1	4	4
Wall, white light	1	1	4
Ceiling, red light	1	4	9
Ceiling, white light	1	1	4

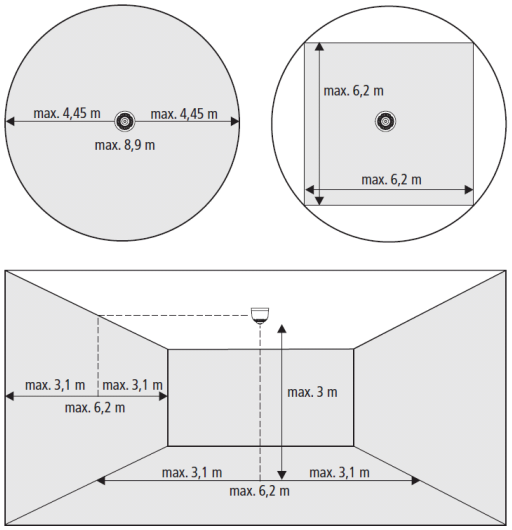
Planning: wall with red light



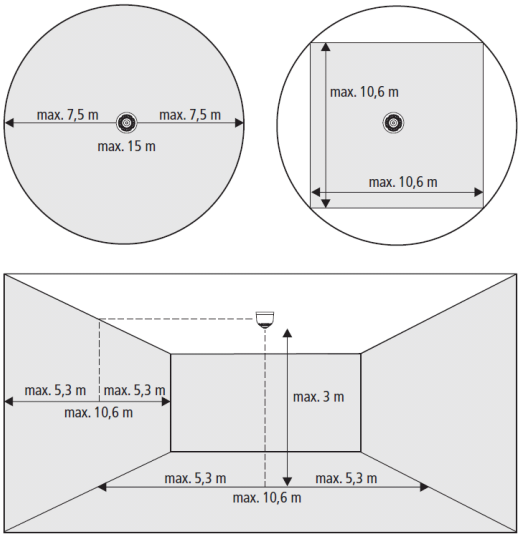
Planning: wall with white light



Planning: ceiling with red light



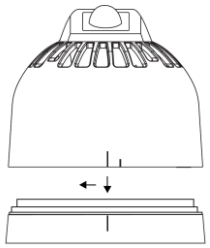
Planning: ceiling with white light



Mounting / installation

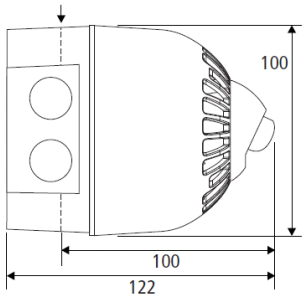
To remove the signal transmitter from the base, screw out the safety screw clockwise and remove.
Drill out the mounting holes and cable entry on the IP65 base at the indicated points. Drill mounting holes (see dimensioned drawing), insert cable, and screw the base onto the mounting surface. For the wall mounting, ensure that the marking on the base (see graphic) points downward at the centre so that the signal transmitter is correctly aligned. Connect the cable to the terminal block in the base (see wiring).

Set the DIP switch and insert the signal transmitter into base so that the two long markings face each other. Next, rotate clockwise toward the short marking and fasten the safety screw.

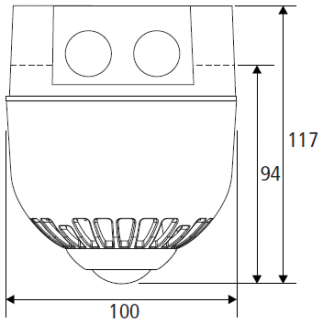


Dimensioned drawing (mm)

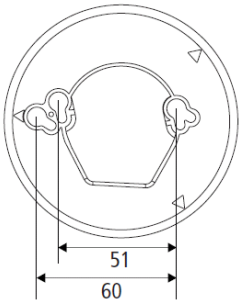
IP21C base



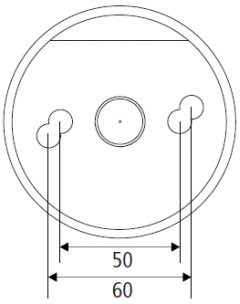
Wall variant



Ceiling variant



IP21C base



IP65 base

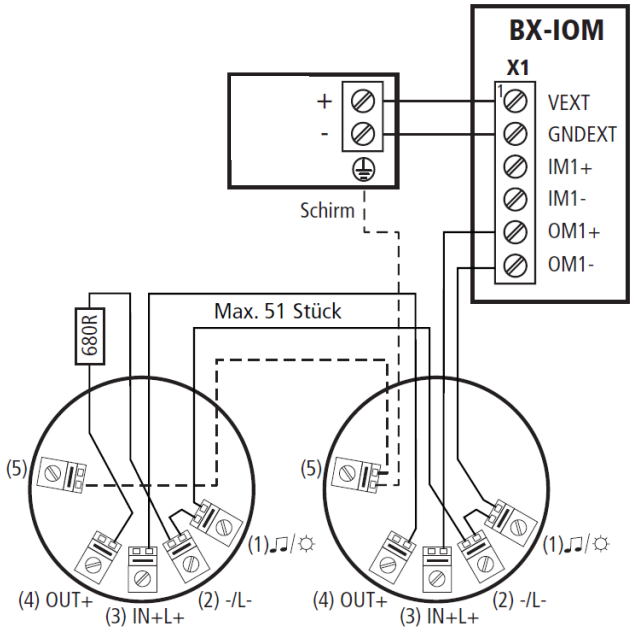
Connection

Connection of monitored signal transmitters (primary lines) for cable type 2 x 2 x 0.8 mm.

Number of signal transmitters	Maximum line length[1] (m) 0.5 Hz	1 Hz	Total power consumption[2] (A) 0.5 Hz	1 Hz
1	798	570	0.050	0.070
2	532	347	0.075	0.115
3	399	249	0.100	0.160
4	319	195	0.125	0.205
5	266	160	0.150	0.250
6	228	135	0.175	0.295
7	199	117	0.200	0.340
8	177	104	0.250	0.385
9	160	93	0.300	0.430
10	145	84	0.350	0.475

[1] Including the line length to the external power supply
[2] Including EOL resistor (680 Ohm)

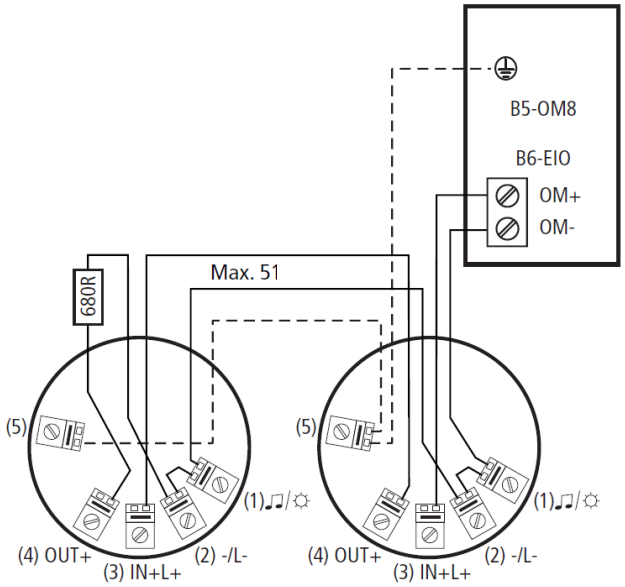
Via BX-IOM module



Last signal transmitter

First and all further ones Signal transmitters

Via B5-OM8 board (SecuriFire 3000), B6-EIO unit (SecuriFire 2000)

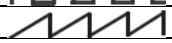
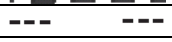
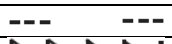
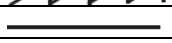
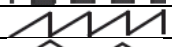
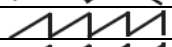
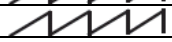
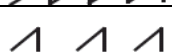
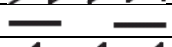


Last signal transmitter

First and all further signal transmitters

First edition: 25.07.2015 Bet

Table of tones

Tone	Description	DIP, 1=ON 12345
	970 Hz	00000
	800 Hz/970 Hz @ 2 Hz	00001
	800 Hz – 970 Hz @ 1 Hz	00010
	970 Hz 1s OFF/1s ON	00011
	970 Hz, 0.5s/630 Hz, 0.5s	00100
	554 Hz, 0.1s/440Hz, 0.4s (AFNOR NF S 32 001)	00101
	500 – 1200 Hz, 3.5s/0.5s OFF (NEN 2575:2000 Dutch Slow Whoop)	00110
	420 Hz 0.6s ON/0.6s OFF (Australia AS1670 Alert tone)	00111
	1000 – 2500 Hz, 0.5s/0.5s OFF x 3/1.5s OFF (AS1670 Evacuation)	01000
	550 Hz/440 Hz @ 0.5 Hz	01001
	970 Hz, 0.5s ON/0.5s OFF x 3/ 1.5s OFF (ISO 8201)	01010
	2850 Hz, 0.5s ON/0.5s OFF x 3/1.5s OFF (ISO 8201)	01011
	1200 Hz – 500 Hz @ 1 Hz (DIN 33 404)	01100
	400 Hz	01101
	550 Hz, 0.7s/1000 Hz, 0.33s	01110
	1500 Hz – 2700 Hz @ 3 Hz	01111
	750 Hz	10000
	2400 Hz	10001
	660 Hz	10010
	660 Hz 1.8s ON/1.8s OFF	10011
	660 Hz 0.15s ON/0.15s OFF	10100
	510 Hz, 0.25s/610 Hz, 0.25s	10101
	800/1000 Hz 0.5s each (1 Hz)	10110
	250 Hz – 1200 Hz @ 12 Hz	10111
	500 Hz – 1200 Hz @ 0.33 Hz	11000
	2400 Hz – 2900 Hz @ 9 Hz	11001
	2400 Hz – 2900 Hz @ 3 Hz	11010
	500 – 1200 Hz, 0.5s/0.5s OFF x 3/1.5s OFF (AS1670 Evacuation)	11011
	800 Hz – 970 Hz @ 9 Hz	11100
	800 Hz – 970 Hz @ 3 Hz	11101
	800 Hz, 0.25s ON/1s OFF	11110
	500 Hz – 1200 Hz, 3.75s/0.25s OFF (AS2220)	11111

Article numbers / spare parts

Short designation	art. no. CH no.	Art. no.
Sonos-SB audible/optical signal transmitter wall housing, red light, flat base		30-6300009-01-01
Sonos-SB audible/optical signal transmitter wall housing, red light, deep base		30-6300009-02-01
Sonos-SB audible/optical signal transmitter wall housing, white light, flat base		30-6300009-03-01
Sonos-SB audible/optical signal transmitter wall housing, white light, deep base		30-6300009-04-01
Sonos-SB audible/optical signal transmitter ceiling housing, red light, flat base		30-6300010-01-01
Sonos-SB audible/optical signal transmitter ceiling housing, red light, deep base		30-6300010-02-01
Sonos-SB audible/optical signal transmitter ceiling housing, white light, flat base		30-6300010-03-01
Sonos-SB audible/optical signal transmitter ceiling housing, white light, deep base		30-6300010-04-01

Technical data

Operating voltage		17 to 60	VDC
Power consumption typically 24 V	@ 0.5 Hz	25	mA
	@ 1 Hz	45	mA
Switch-on current	Category W	520 mA for 3.6 µs	
	Category C	510 mA for 3.6 µs	
Flashing frequency		0.5 or 1	Hz
Light colour		red or white	
Sound level, DIN tone, typically 24 V		97	dB (A)
Attenuation		8	dB (A)
Protection type	Flat base	IP21C	
	Deep base	IP65	
Permitted ambient temperature		-10 to +55	°C
Dimensions (D x H)	Wall, flat base	100 x 100	mm
	Wall, deep base	100 x 122	mm
	Ceiling, flat base	100 x 94	mm
	Ceiling, deep base	100 x 117	mm
Housing		Polycarbonate	
Connection		Screw terminals, max. 2.5	mm^2
Cable entry	Flat base	Rear side	
	Deep base	Rear side and lateral M20	
Weight	Flat base	220	g
	Deep base	270	g
VdS approval		G214108, G214106	
Declaration of performance (DoP)	Wall, red light	0832-CPR-F0149	
	Wall, white light	0832-CPR-F0010	
	Ceiling, red light	0832-CPR-F0147	
	Ceiling, white light	0832-CPR-F0008	

First edition: 27.07.2015 Bet