W2
®
light and sound for safety

CATALOGUE
PRODUCT

▶ FIRE ALARM DEVICES

▶ BURGLAR ALARM DEVICES

▶ AUTOMATICS

ALL OUR PRODUCTS HAVE

3 YEAR WARRANTY

Contents

▶ ABOUT THE COMPANY

W2 has over 20 years of experience in the business of fire prevention solutions. Our main business is manufacturing of alarm signaling devices and fireproof installation boxes for installation in fire alarm systems. These products are accompanied by documents issued by CNBOP-PIB Scientific and Research Centre for Fire Protection – National Research Institute (Certificates, Certificates of Approval, National Technical Assessment) confirming compliance with all relevant legal requirements as well as their high effectiveness and reliability. The company also manufactures alarm signaling devices, beacon towers and columns, installation hardware and accessories for automation, intrusion detection or telecommunications systems. The high quality and innovativeness of the products offered by W2 were recognised at the Poznań International Fair (MTP) in 2014, 2016 and 2018 when the company's alarm signaling devices were awarded Gold Medals. During SECUREX 2016 and 2018 fairs, the W2 booth additionally received the Acanthus Aureus distinction which is awarded to the best booths in terms of architecture and graphical design. The ISO 9001:2015 certificate held by our company is also a confirmation of the high effectiveness and quality of the manufactured products. Continued growth resulted in moving the company's operation to new headquarters in 2019, which includes an office building and a production building.

Prizes and awards from the
Poznań International Fair

W2 headquarters and its location on the map of Poland

W2 Poland Ltd.
Ceramiczna 1A street
86-005 Kruszyn Krajeński

Service activities

Since 2015, W2 is also engaged in service activities. The laboratory is equipped with modern measuring equipment and instrumentation. The services we offer include:

- · EMC tests,
- · climate chamber tests,
- · engineering tests,
- · optical parameter measurements,
- · assembly of prototype devices.

Detailed information about service activities can be found on the web page dedicated to W2 laboratory: **www.w2.bydgoszcz.pl**

▶ GLOSSARY OF TERMS AND ABBREVIATIONS

CNBOP-PIB
Scientific and Research Centre for Fire Protection National Research Institute

Coverage volume category
„C" – ceiling mounted devices
„W" – wall mounted devices
„O" – open class devices

Degree of protection provided by enclosures (IP code)
System for marking the degree of protection provided by enclosures against access of hazardous parts, penetration of foreign solids, ingress of water and a system for providing additional information related to such protection

Coverage volume
Volume within which the required illumination is achieved ($\geq$0,4 lm/m2 (lux))

A-weighted sound pressure level
Sound pressure level, expressed in dB(A) which is 20 times the logarithm to base ten of the ratio of the A-weighted sound pressure to the reference pressure of 20µPa at 1kHz

Fire alarm sounder
Sound generating device intended to signal an audible warning of fire between a fire detection and fire alarm system and the occupants of a building

Voice sounder
The voice sounder is an acoustic fire alarm device that contains all the necessary components for the production and broadcasting of recorded voice messages and an alarm signal in accordance with the timing contained in the EN 54-3 standard

Visual alarm device (VAD)
A device that generates flashing light in order to inform building users about the occurrence of fire conditions

Device type
Type A – intended for use inside buildings
Type B – intended for outdoor use

FAS
Fire alarm system

SSWiN
Burglary and assault signaling systems

WSD-1
Audible signal switch

HOW TO READ IP CODE?

First characteristic digit: The degree of protection against access to hazardous parts and against the ingress of solid foreign bodies		Second characteristic digit: Degree of protection against ingress of water	
IP0X	No protection	IPX0	No protection
IP1X	Protection against ingress of foreign bodies with a diameter of ≥ 50 mm Protection against access to hazardous parts with the back of the hand	IPX1	Protection against the ingress of dripping water
IP2X	Protection against ingress of foreign bodies with a diameter of ≥ 12.5 mm Protection against access to hazardous parts with a finger	IPX2	Protection against the ingress of dripping water (when tilted up to 15 °)
IP3X	Protection against ingress of foreign bodies with a diameter of ≥ 2.5 mm Protection against access to hazardous parts with a tool	IPX3	Protection against ingress of sprayed water
IP4X	Protection against ingress of foreign bodies with a diameter of ≥ 1.0 mm Protection against access to hazardous parts by wire	IPX4	Splash water protection
IP5X	Protection against dust Protection against access to hazardous parts by wire	IPX5	Protection against the ingress of jet water
IP6X	Dustproof Protection against access to hazardous parts by wire	IPX6	Protection against the ingress of strong water jets
		IPX7	Protection against water ingress for short-term immersion
		IPX8	Protection against water ingress when continuously submerged
		IPX9	Protection against flooding with a powerful stream of pressurized water

Additional letter (optional)
A - protection against access to hazardous parts with the back of the hand
B - protection against access to dangerous parts with the top of the finger
C - protection against access to dangerous parts with the top of the tool
D - protection against access to hazardous parts by wire

Supplementary letter (optional)
H - supplementary information for high voltage apparatus
M - supplementary traffic information during water tests
S - supplementary information at a standstill during water tests
W - supplemental information on climatic conditions

▶ APPROXIMATE DROPS IN SOUND LEVEL WITH INCREASING DISTANCE FROM THE SOUND SOURCE

sound level dB (A)

1	2	3	5	10	20	30	50	100	200	300	500	1000
120	114	110	106	100	94	90	86	80	74	70	66	60
118	112	108	104	98	92	88	84	78	72	68	64	58
116	110	106	102	96	90	86	82	76	70	66	62	56
114	108	104	100	94	88	84	80	74	68	64	60	54
112	106	102	98	92	86	82	78	72	66	62	58	52
110	104	100	96	90	84	80	76	70	64	60	56	50
108	102	98	94	88	82	78	74	68	62	58	54	48
106	100	96	92	86	80	76	72	66	60	56	52	46
104	98	94	90	84	78	74	70	64	58	54	50	44
102	96	92	88	82	76	72	68	62	56	52	48	42
100	94	90	86	80	74	70	66	60	54	50	46	40
98	92	88	84	78	72	68	64	58	52	48	44	38
96	90	86	82	76	70	66	62	56	50	46	42	
94	88	84	80	74	68	64	60	54	48	44	40	
92	86	82	78	72	66	62	58	52	46	42	38	
90	84	80	76	70	64	60	56	50	44	40		
85	79	75	71	65	59	55	51	45	39			
80	74	70	66	54	50	46	40					
75	69	65	61	55	49	45	41					
70	64	60	56	50	44	40	36					
65	59	55	51	45	39	35						

distance from the sound source (m)

▶ ICONOGRAPHICS

For ease of use, you can find iconographs next to the products that show the most important parameters and features of a given product. Below is a description of each item:

Device

- Sounder with VAD

- Sounder

- Voice sounder with VAD

- Voice sounder

- VAD

Device Type

🏠	- Type A - intended for use inside buildings
🏠	- Type B - intended for outdoor use

Standards

EN 54-3	- Meets the requirements of EN 54-3
EN 54-23	- Meets the requirements of EN 54-23

Supply voltage

12V DC	- Nominal supply voltage 12 V DC
24V DC	- Nominal supply voltage 24 V DC
230V AC	- Nominal supply voltage 230 V AC

Others

IP	- Degree protection (IP code)
110dB	- Sound level at 1 m (example 110 dB)
VOL	- Step volume control
VOL	- Smooth volume control
LED	- Light source - LED diodes
SYNCHRO	- Synchronization function
M12	- Equipped with an industrial M12 connector
E90	- Class of maintaining electrical functions E90 (according to DIN 4102-12:1998)

IK07 - Degree protection (IK code)

0,5 ÷1,3 Hz - Flash frequency selection

3 m - 12 m - Optical shape selection

x16 - Sound patterns

FIRE ALARM DEVICES

SOUNDER
SA-K5

DOCUMENTS ISSUED BY CNBOP-PIB:
- CERTIFICATE CPR
- CERTIFICATE OF APPROVAL

🔊	24V DC	EN 54-3	🔊 100dB	x4	IP33	🏠

Technical data:

Type	sounder
Supply voltage	16-32,5 V DC
Current consumption in off state	0 mA
Current consumption in on state	<50 mA*
Power consumption in on state	<1,2 W*
Sound output	>100 dB*
Flash frequency	not applicable
Flash time	not applicable
Time between flashes	not applicable
Device category	not applicable
Device type	type A
Working temperature	-10°C ÷ +55°C
IP protection degree	IP33
IK protection degree	not applicable
Conductor cross-section	2,5 mm^2
Dimensions	ø115x62 mm
Weight	~181 g

*for Uz=24 V DC, fire service signal

Product description:

- SA-K5 device is destined for acoustic signalling in indoor fire alarm systems.

- This alarm device is intended for indoor applications in accordance with signal possibilities presented below.

- 4 sounds patterns.

- SA-K5 cooperates with WSD-1 audible signal switch.

Connectiom diagram:

MUTE (WHEN WSD-1 CONNECTED)
GROUND
SUPPLY VOLTAGE 16-32,5 V DC

Jumper settings:	
A	Ambulance signal
P	Police signal
S	Fire service signal
M	ISO 8201

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SOUNDER
SA-K6

DOCUMENTS ISSUED BY CNBOP-PIB:
- CERTIFICATE CPR
- CERTIFICATE OF APPROVAL

🔊	24V DC	EN 54-3	🔊 100dB	⫴ x4	IP21C	🏠

Technical data:

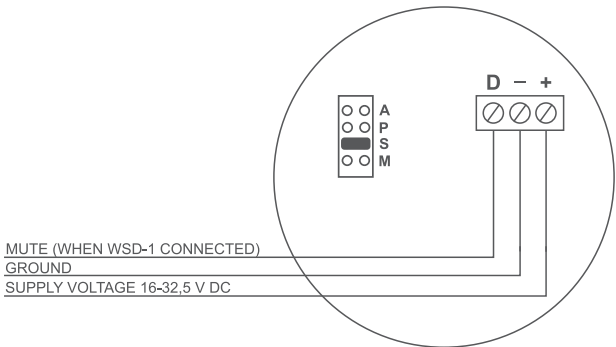| Type	sounder
Supply voltage	16-32,5 V DC
Current consumption in off state	0 mA
Current consumption in on state	<50 mA*
Power consumption in on state	<1,2 W*
Sound output	>100 dB*
Flash frequency	~1,5 Hz
Flash time	~333 ms
Time between flashes	~333 ms
Device category	not applicable
Device type	type A
Working temperature	-10°C ÷ +55°C
IP protection degree	IP21C
IK protection degree	not applicable
Conductor cross-section	2,5 mm²
Dimensions	ø115x70 mm
Weight	~184 g

*for Uz=24 V DC, fire service signal

Product description:

- SA-K6 device is destined for acoustic signalling with optical - point signalling (flashing LED diode).

- This alarm device is intended for indoor applications in accordance with signal possibilities presented below.

- 4 sounds patterns.

- SA-K6 cooperates with WSD-1 audible signal switch.

Connectiom diagram:

D − +

A
P
S
M

MUTE (WHEN WSD-1 CONNECTED)
GROUND
SUPPLY VOLTAGE 16-32,5 V DC

Jumper settings:	
A	Ambulance signal
P	Police signal
S	Fire service signal
M	ISO 8201

SOUNDER
SA-K7

DOCUMENTS ISSUED BY CNBOP-PIB:
- CERTIFICATE CPR
- CERTIFICATE OF APPROVAL

🔊	24V DC	EN 54-3	🔊 100dB	⠿⠿ x4	🛡 IP21C	🏠

Technical data:

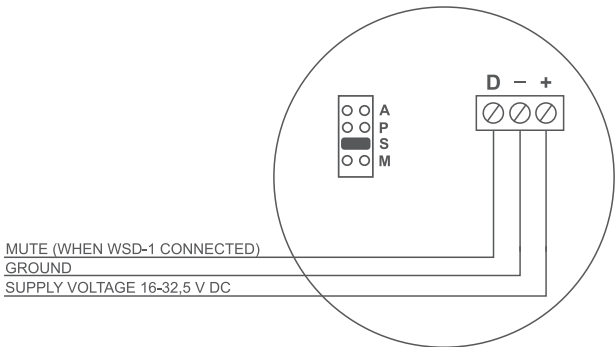|	
Type	sounder
Supply voltage	16-32,5 V DC
Current consumption in off state	0 mA
Current consumption in on state	<50 mA*
Power consumption in on state	<1,2 W*
Sound output	>100 dB*
Flash frequency	~1,5 Hz
Flash time	~333 ms
Time between flashes	~333 ms
Device category	not applicable
Device type	type A
Working temperature	-10°C ÷ +55°C
IP protection degree	IP21C
IK protection degree	not applicable
Conductor cross-section	2,5 mm^2
Dimensions	ø115x76 mm
Weight	~189 g

*for Uz=24 V DC, fire service signal

Product description:

- SA-K6 device is destined for acoustic signalling with optical signalling lamp (set of LED diodes).

- This ounder is intended for indoor applications in accordance with signal possibilities presented below.

- 4 sounds patterns.

- SA-K7 cooperates with WSD-1 audible signal switch.

Connectiom diagram:

D − +

A
P
S
M

MUTE (WHEN WSD-1 CONNECTED)
GROUND
SUPPLY VOLTAGE 16-32,5 V DC

Jumper settings:	
A	Ambulance signal
P	Police signal
S	Fire service signal
M	ISO 8201

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SOUNDER
SA-P8

DOCUMENTS ISSUED BY CNBOP-PIB:
- CERTIFICATE CPR
- CERTIFICATE OF APPROVAL

◁))	24V DC	EN 54-3	◁)) 100dB	▯▮▯ x16	VOL	SYNCHRO	IP33	IK07

Technical data:

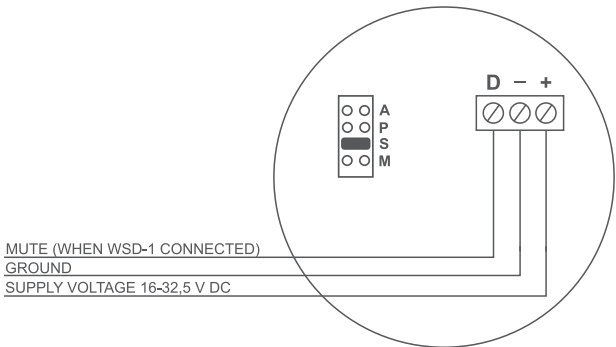| Type	sounder
Supply voltage	16-32,5 V DC
Current consumption in off state	0 mA
Current consumption in on state	<40 mA*
Power consumption in on state	<0,96 W*
Sound output	>100 dB*
Flash frequency	not applicable
Flash time	not applicable
Time between flashes	not applicable
Device category	not applicable
Device type	type A
Working temperature	-10°C ÷ +55°C
IP protection degree	IP33
IK protection degree	IK07
Conductor cross-section	2,5 mm^2
Dimensions	ø114x88 mm
Weight	~235 g

*for default settings (supply voltage Uz=24V DC, fire service signal, potentiometer maximum, optional gradual volume increasing – ON)

Product description:

- Alarm signal sequence in accordance with EN 54-3:2001+A1:2002+A2:2006.

- High sound level of generated alarm signal.

- 16 sound patterns to choose.

- Gradual volume increasing option.

- Built-in potentiometer to control sound level.

- Reinforced housing IK07.

- Inrush current limiter.

- Synchronization option.

- Also possible to synchronize with: SA-K5N, SA-K7N, SAOZ-Pk2 , SAO-P8 (acoustic part).

- Cooperates with: PIP-1AN, PIP-3AN, OM-1, OZ-50-3, WSD-1.

Varieties:

Varieties	Description
SA-P8/C	sounder in red housing
SA-P8/B	sounder in white housing

Connection diagram:
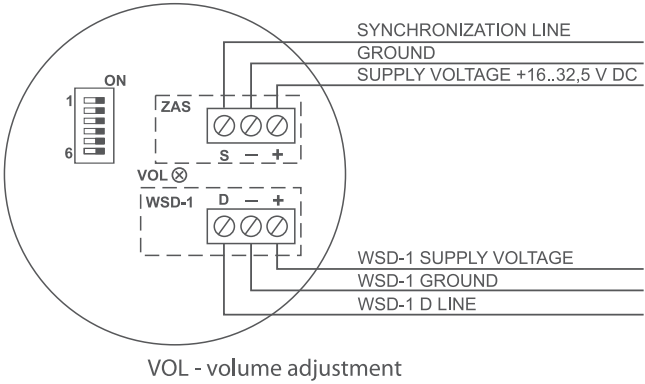
VOL - volume adjustment

Microswitch	Mark	Function
1	M/S	Operating mode selection MASTER (ON)/ SLAVE (OFF)
2	S0	Sound pattern selection
3	S1	Sound pattern selection
4	S2	Sound pattern selection
5	S3	Sound pattern selection
6	VR	Optional gradual volume increasing (ON)

Synchronization scheme example:
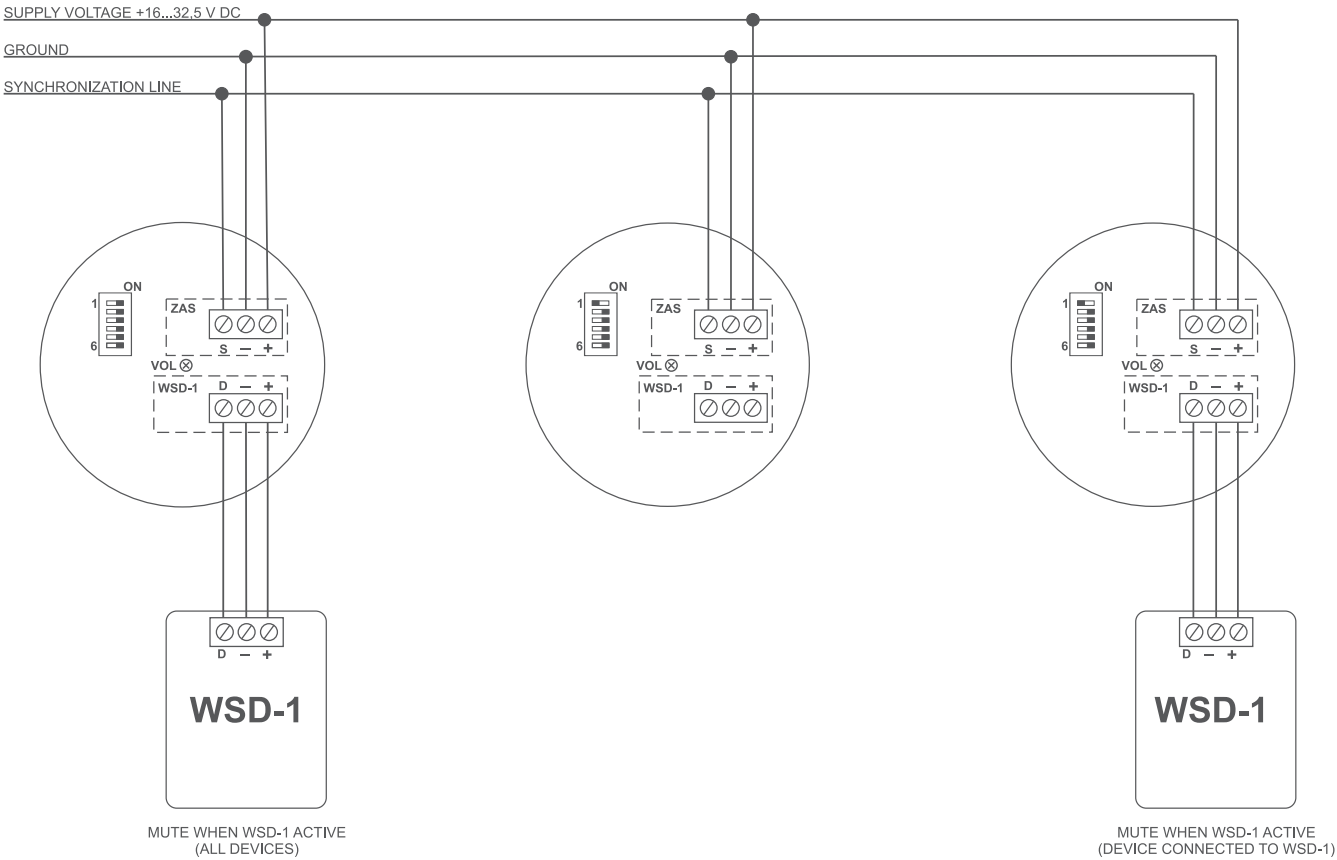
SUPPLY VOLTAGE +16...32,5 V DC

GROUND

SYNCHRONIZATION LINE

WSD-1

MUTE WHEN WSD-1 ACTIVE
(ALL DEVICES)

WSD-1

MUTE WHEN WSD-1 ACTIVE
(DEVICE CONNECTED TO WSD-1)

▶ BEACON
SO-Pd11

w2 ®

| 24V DC | LED | IP53D |

▶ Technical data:

Type	beacon
Supply voltage	16..32,5 V DC
Current consumption in the off state	0 mA
Current cosumption at 24 V DC	<60 mA
Ingress Protection	IP53D
Weight	~150 g
Dimensions	ø115x63 mm
Cooperating products	PIP-3AN, OZ-40-2

▶ Product description:

- The beacon SO-Pd11 is destined for optical signalling by the set of LED diodes in fire alarm systems.

- The SO-Pd11 device is intended for indoor applications.

- 3 different flash frequencies.

- Possibility to turn on continuous lighting.

▶ Connection diagram:
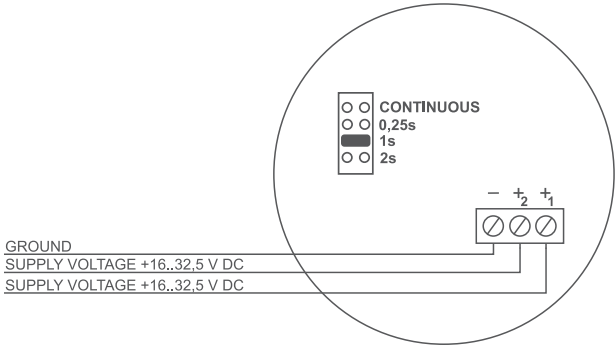
CONTINUOUS
0,25s
1s
2s

− +₂ +₁

GROUND
SUPPLY VOLTAGE +16..32,5 V DC
SUPPLY VOLTAGE +16..32,5 V DC

Jumper settings:	
CONTINUOUS	continuous light
0,25s	flash frequency 4Hz
1s	flash frequency 1Hz
2s	flash frequency 0.5Hz

BEACON
SO-Pd12

🚨	24V DC	LED	IP53D	🏠

Technical data:

Type	beacon
Supply voltage	16..32,5 V DC
Current consumption in the off state	0 mA
Current cosumption at 24 V DC	<150 mA
Ingress Protection	IP53D
Weight	~170 g
Dimensions	ø115x95 mm
Cooperating products	PIP-3AN

Product description:

- The SO-Pd12 optical alarm device is destined for optical signalling by the set of LED diodes in fire alarm systems.

- The device is intended for indoor applications.

- 15 various visual effects.

- Continuous lighting as optional.

Connection diagram:

GROUND
SUPPLY VOLTAGE +16..32,5 V DC
SUPPLY VOLTAGE +16..32,5 V DC

Table of optical signalling possible settings

NO	Description	1234
1	Continuous lighting	1111
2	Intermittent signalling (1s interval)	1110
3	Intermittent signalling (0.5s interval)	1101
4	Intermittent signalling (0.25s interval)	1100
5	Flash signalling (stroboscope)	1011
6	Rotating signalling	1010
7	Intermittent rotating signalling	1001
8	Complementary rotating signalling	1000
9	Cross signalling	0111
10	Sequence signalling (3x intermittent signalling + 4x rotating signalling)	0110
11	Sequence signalling (5 x rotating signalling + flash signalling)	0101
12	Increasing signalling	0100
13	Increasing and decreasing signalling	0011
14	Flash and increasing signalling	0010
15	Pseudo-random signalling	0001
16	Demonstration program	0000

VISUAL ALARM DEVICE (VAD)
SO-P8

DOCUMENTS ISSUED BY CNBOP-PIB:
- CPR CERTIFICATE
- CERTIFICATE OF APPROVAL (valid for SO-P8/CC variety)

| 24V DC | EN 54-23 | LED | 3 m - 12 m | 0,5 ÷1,3 Hz | SYNCHRO | IP54 | IK07 | |
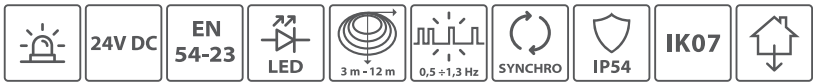
Technical data:

Type	visual alarm device
Supply voltage	16-32,5 V DC
Current consumption in off state	0 mA
Current consumption in on state	<30 mA*
Power consumption in on state	<0,72 W*
Sound output	not applicable
Flash frequency	0,5 Hz*
Flash time	~150 ms*
Time between flashes	~1850 ms*
Device category	O
Device type	type B
Working temperature	-25°C ÷ +70°C
IP protection degree	IP54
IK protection degree	IK07
Conductor cross-section	2,5 mm^2
Dimensions	ø114x70 mm
Weight	~230 g

*for default settings (supply voltage Uz=24 V DC, optical shape 3m, flash frequency 0,5 Hz, delay time 0 s)

Product description:

- Optical part in accordance with EN 54-23:2010.

- Possibility to choose 1 of 4 optical shapes (3m, 6m, 9m, 12m).

- Possibility to choose 1 of 4 flash frequencies (0,5 Hz, 0,93 Hz, 1,12 Hz, 1,3 Hz).

- Optional „wave mode" (activates each subsequent device with a delay from 0 to 0.7 s in steps of 0.1 s relative to first device). This mode goes beyond EN 54-23:2010 and can be activated only in the network of devices.

- Reinforced housing IK07.

- Inrush current limiter.

- Synchronization option.

- Also possible to synchronize with: SA-K7N, SAOZ-Pk2, SAO-P8 (optical part).

- Cooperates with: PIP-1AN, PIP-3AN, OM-2, OZ-50-2.

Varieties:

Varieties	Description
SO-P8/CC	VAD in red housing, red light
SO-P8/CB	VAD in red housing, white light
SO-P8/CM	VAD in red housing, alternating red and white light
SO-P8/BC	VAD in white housing, red light
SO-P8/BB	VAD in white housing, white light
SO-P8/BM	VAD in white housing, alternating red and white light

Connection diagram:

SYNCHRONIZATION LINE
GROUND
SUPPLY VOLTAGE +16..32,5 V DC
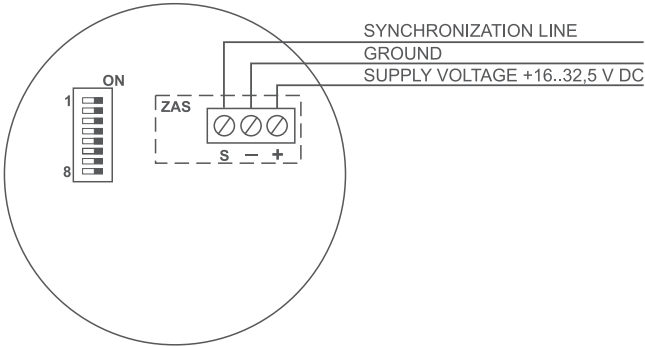
Microswitch	Mark	Function
1	M/S	Operating mode selection MASTER (ON)/ SLAVE (OFF)
2	D0	Delay time selection
3	D1	Delay time selection
4	D2	Delay time selection
5	F0	Flash frequency selection
6	F1	Flash frequency selection
7	L0	Optical shape selection
8	L1	Optical shape selection

Synchronization scheme example:

SUPPLY VOLTAGE +16...32,5 V DC
GROUND
SYNCHRONIZATION LINE
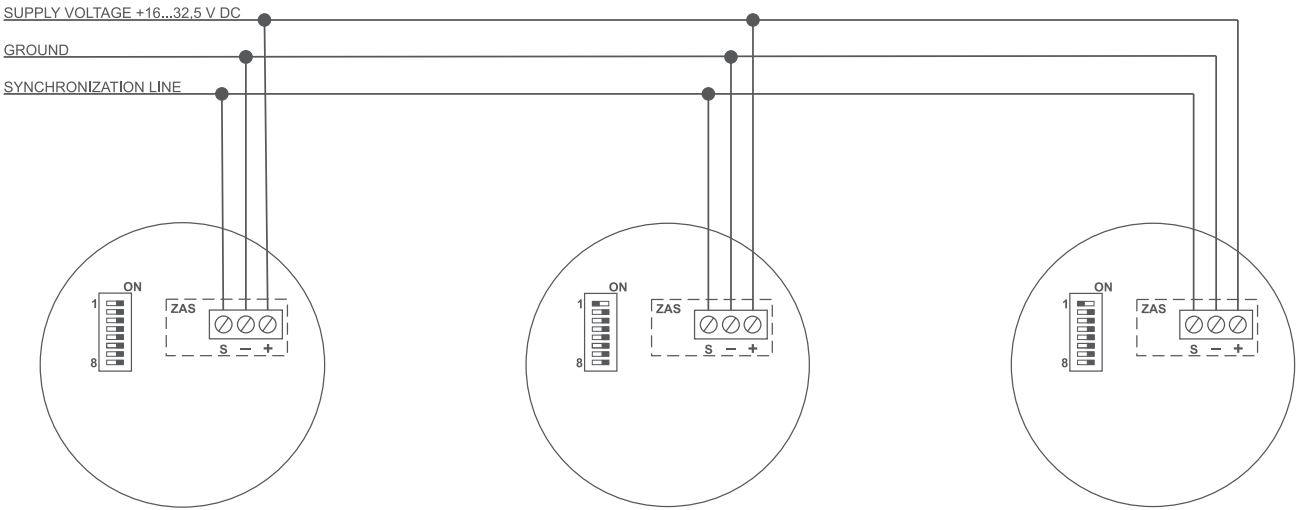
SOUNDER WITH
VISUAL ALARM DEVICE (VAD)
SAO-P8

DOCUMENTS ISSUED BY CNBOP-PIB:
- CPR CERTIFICATE
- CERTIFICATE OF APPROVAL (valid for SAO-P8/CC variety)

| 24V DC | EN 54-3 | EN 54-23 | 100dB | x16 | VOL | LED | 3 m - 12 m | SYNCHRO | IP33 | IK07 | |

Technical data:

Type	sounder with VAD
Supply voltage	16-32,5 V DC
Current consumption in off state	0 mA
Current consumption in on state	<94 mA*
Power consumption in on state	<2,26 W*
Sound output	>100 dB*
Flash frequency	0,5 Hz
Flash time	~150 ms
Time between flashes	~1850 ms
Device category	O
Device type	type A
Working temperature	-10℃ ÷ +55℃
IP protection degree	IP33
IK protection degree	IK07
Conductor cross-section	2,5 mm^2
Dimensions	ø114x100 mm
Weight	~275 g

*for default settings (supply voltage Uz=24 V DC,
fire service signal, potentiometer maximum, optional gradual
volume increasing – ON, optical shape 3m)

Product description:

- Alarm signal sequence in accordance with EN 54-3:2001+A1:2002+A2:2006.

- Optical part in accordance with EN 54-23:2010.

- High sound level of generated alarm signal.

- 16 sound patterns to choose.

- Gradual volume increasing option.

- Built-in potentiometer to control sound level.

- Possibility to choose 1 of 4 optical shapes (3m, 6m, 9m, 12m).

- Reinforced housing IK07.

- Inrush current limiter.

- Synchronization option (acoustic and optical part).

- Also possible to synchronize with:
  SA-P8 and SA-K5N (acoustic part),
  SO-P8 (optical part),
  SA-K7N and SAOZ-Pk2 (acoustic and optical part).

- Cooperates with: PIP-1AN, PIP-3AN, OM-1, OZ-50-3, WSD-1.

Varieties:

Varieties	Description
SAO-P8/CC	sounder with VAD in red housing, red light
SAO-P8/CB	sounder with VAD in red housing, white light
SAO-P8/CM	sounder with VAD in red housing, alternating red and white light
SAO-P8/BC	sounder with VAD in white housing, red light
SAO-P8/BB	sounder with VAD in white housing, white light
SAO-P8/BM	sounder with VAD in white housing, alternating red and white light
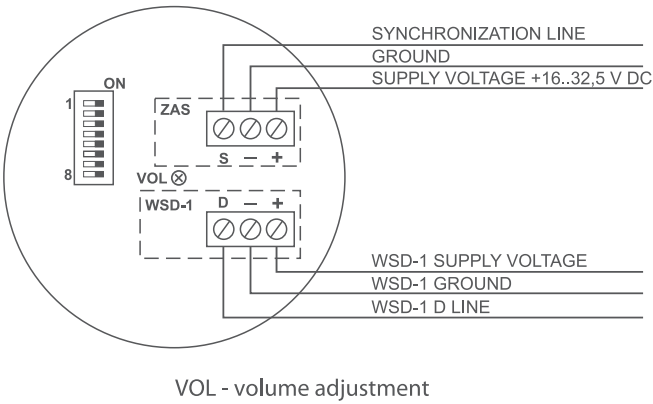
Connection diagram:

VOL - volume adjustment

Microswitch	Mark	Function
1	M/S	Operating mode selection MASTER (ON)/ SLAVE (OFF)
2	S0	Sound pattern selection
3	S1	Sound pattern selection
4	S2	Sound pattern selection
5	S3	Sound pattern selection
6	VR	Optional gradual volume increasing (ON)
7	L0	Optical shape selection
8	L1	Optical shape selection

Synchronization scheme example:

SUPPLY VOLTAGE +16...32,5 V DC
GROUND
SYNCHRONIZATION LINE

WSD-1

MUTE WHEN WSD-1 ACTIVE
(ALL DEVICES)

WSD-1

MUTE WHEN WSD-1 ACTIVE
(DEVICE CONNECTED TO WSD-1)
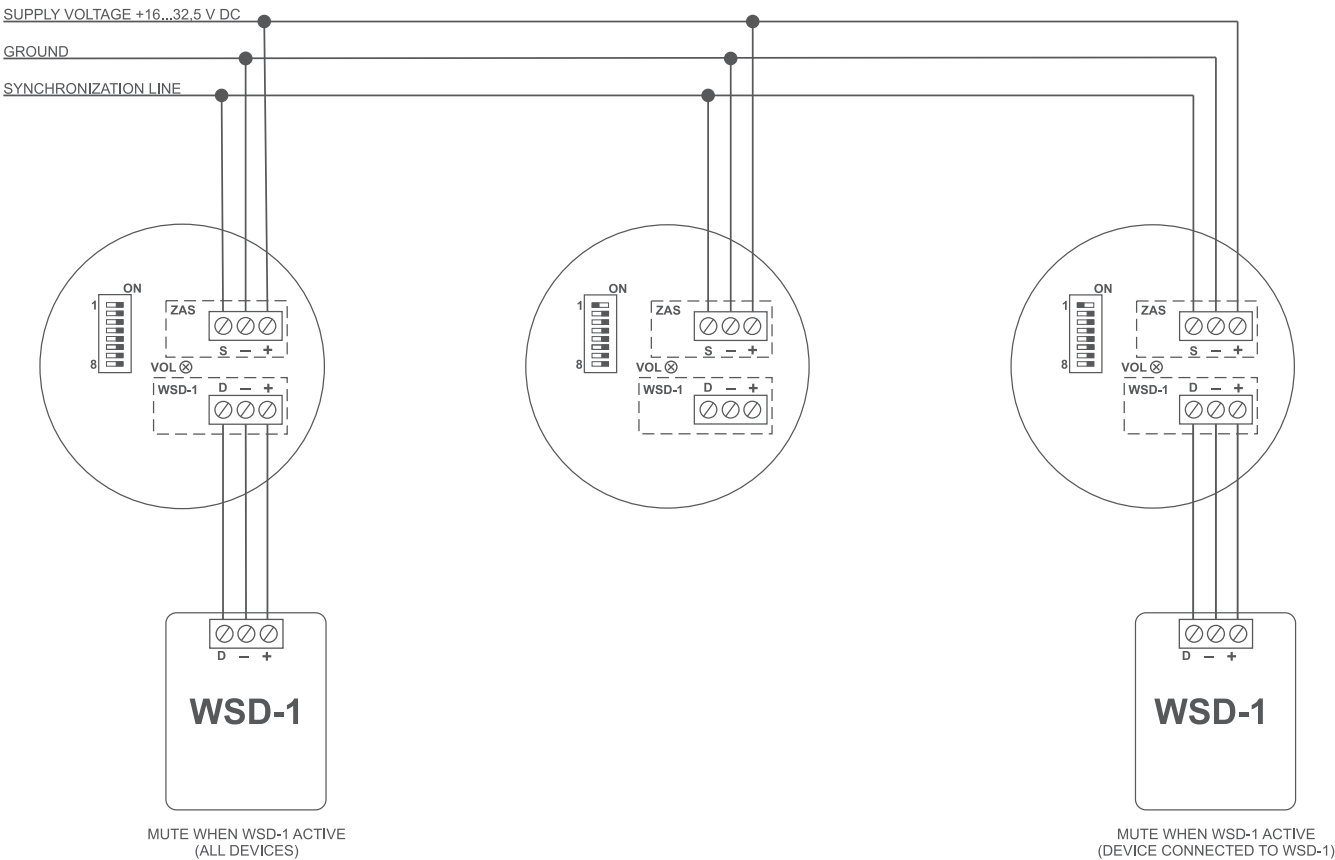
SOUNDER WITH
VISUAL ALARM DEVICE (VAD)
SAOZ-Pk2

DOCUMENTS ISSUED BY CNBOP-PIB:
- CPR CERTIFICATE
- CERTIFICATE OF APPROVAL

| 24V DC | EN 54-3 | EN 54-23 | 110dB | x4 | VOL | LED | SYNCHRO | IP33C | |

▶ Technical data:

Type	sounder with VAD
Supply voltage	16-32,5 V DC
Current consumption in off state	0 mA
Current consumption in on state	<100 mA*
Power consumption in on state	<2,4 W*
Sound output	>110 dB*
Flash frequency	0,56 Hz
Flash time	~190 ms
Time between flashes	~1610 ms
Device category	O
Device type	type B
Working temperature	-25°C ÷ +70°C
IP protection degree	IP33C
IK protection degree	not applicable
Conductor cross-section	1,5 mm^2
Dimensions	312x295x95 mm
Weight	~960 g

*for Uz=24 V DC, fire service signal

▶ Product description:

- Intended for indoor and outdoor fire alarm systems.
- Device meets requirements of EN 54-3:2001+ A1:2002+A2:2006, EN 54-23:2010 standards.
- Color of light - red (also available varieties with white light or red and white light alternately).
- Sound source: piezoceramic transducers.
- LEDs light source.
- 4 alarm sound patterns to choose from.
- Synchronization option (the acoustic and optical parts are being synchronized with use of additional line).
- There is possible to synchronize device with SA-K5N, SA-P8 (acoustic part), SO-P8 (optical part), SA-K7N, SAO-P8 (acoustic and optical part).
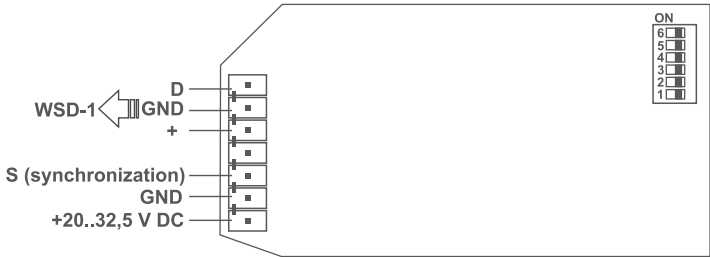- Sound output at 1 m >110 dB.
- Reduced volume mode (stepwise volume control approx. 6 dB).
- Reduced coverage area mode.
- Low current consumption <100 mA (reduced coverage area and reduced volume mode <50 mA).
- Lamp off delay option.
- Cooperate with WSD-1 audible signal switch.

▶ Connection diagram:

WSD-1
D
GND
+
S (synchronization)
GND
+20..32,5 V DC

ON
6 5 4 3 2 1

No	Name	Function
1	M/S	Operating mode selection MASTER (ON)/ SLAVE (OFF)
2	S0	Sound pattern selection
3	S1	Sound pattern selection
4	VOL	Full volume / reduced volume mode (OFF - full volume)
5	LP	Reduced coverage area (OFF - full coverage area)
6	LD	Lamp off delay (ON)

VOICE SOUNDER
SG-Pgw3

DOCUMENTS ISSUED BY CNBOP-PIB:
- CERTIFICATE CPR
- CERTIFICATE OF APPROVAL

🧑)))	24V DC	EN 54-3	90dB	x18	VOL	SYNCHRO	IP31C

Technical data:

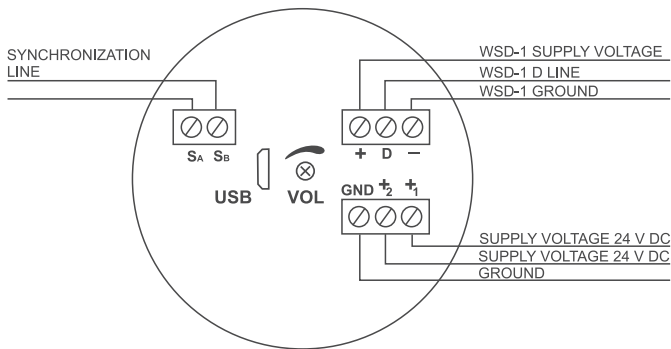| Type	voice sounder
Supply voltage	20-32,5 V DC
Current consumption in off state	0 mA
Current consumption in on state	<220 mA*
Power consumption in on state	<5,28 W*
Sound output	>90 dB*
Flash frequency	not applicable
Flash time	not applicable
Time between flashes	not applicable
Device category	not applicable
Device type	type A
Working temperature	-10°C ÷ +55°C
IP protection degree	IP31C
IK protection degree	not applicable
Conductor cross-section	2,5 mm^2
Dimensions	ø115x78 mm
Weight	~325 g

*for default settings (supply voltage Uz=24 V DC,
 fire service signal, potentiometer maximum)

Product description:

- Alarm signal sequence in accordance with
  EN 54-3:2001+A1:2002+A2:2006.
- Easy message programming (as in a mass storage
  device).
- *.mp3 message compatibility.
- High message sound quality.
- 18 alarm sound patterns to choose from.
- Auto-addressing in a network (no need to program
  signalling devices as master/slave).
- Synchronisation of signalling devices in a network.
- Automatic dissemination of messages to all
  signalling devices in a network.
- Self-diagnostics and acoustic signalling.
- Undervoltage-lockout (to test line continuity).
- Compatible with WSD-1 switch.
- High volume of alarm signal.
- Built-in potentiometer to control sound level.

Connection diagram:

SYNCHRONIZATION LINE

WSD-1 SUPPLY VOLTAGE
WSD-1 D LINE
WSD-1 GROUND

S$_A$ S$_B$

USB   VOL   GND +$_2$ +$_1$

SUPPLY VOLTAGE 24 V DC
SUPPLY VOLTAGE 24 V DC
GROUND

VOL - volume adjustment, USB - communication port

Providing the supplay voltage to: input +1 will play message K1.mp3, input +2 will play message K2.mp3, inputs +1 and +2 at the same time will play message K3.mp3

VOICE SOUNDER WITH VISUAL ALARM DEVICE (VAD)
SGO-PGW

DOCUMENTS ISSUED BY CNBOP-PIB:
- CERTIFICATE CPR
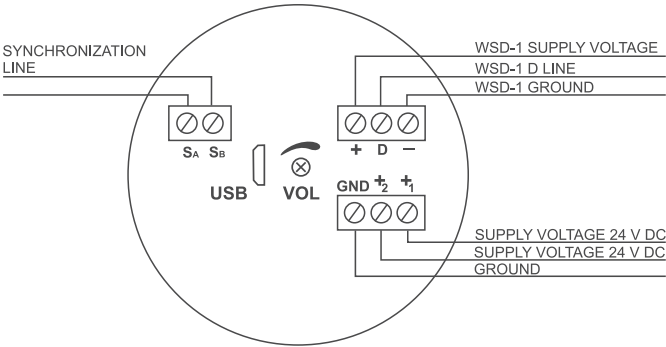- CERTIFICATE OF APPROVAL (valid for SGO-PgwA, SGO-PgwB varieties)

| 24V DC | EN 54-3 | EN 54-23 | 90dB | x18 | VOL | LED | SYNCHRO | IP31C | |

Technical data:

Type	voice sounder with VAD
Supply voltage	20-32,5 V DC
Current consumption in off state	0 mA
Current consumption in on state	<300 mA*
Power consumption in on state	<7,2 W*
Sound output	>90 dB*
Flash frequency	0,5 Hz
Flash time	~190 ms
Time between flashes	~1800 ms
Device category	O
Device type	type A
Working temperature	-10℃ ÷ +55℃
IP protection degree	IP31C
IK protection degree	not applicable
Conductor cross-section	2,5 mm^2
Dimensions	ø115x82 mm
Weight	~350 g

*for default settings (supply voltage Uz=24 V DC,
 fire service signal, potentiometer maximum)

Product description:

- Alarm signal sequence in accordance with EN 54-3:2001+A1:2002+A2:2006.
- Optical part in accordance with EN 54-23:2010.
- Easy message programming (as in a mass storage device).
- *.mp3 message compatibility.
- High message sound quality.
- 18 alarm sound patterns to choose from.
- Auto-addressing in a network (no need to program signalling devices as master/slave).
- Synchronisation of signalling devices in a network (acoustic and optical part).
- Automatic dissemination of messages to all signalling devices in a network.
- Self-diagnostics and acoustic signalling.
- Undervoltage-lockout (to test line continuity).
- Compatible with WSD-1 switch.
- High volume of alarm signal.
- Built-in potentiometer to control sound level.
- 4 varieties.

Connection diagram:

SYNCHRONIZATION LINE

WSD-1 SUPPLY VOLTAGE
WSD-1 D LINE
WSD-1 GROUND

S_A S_B

USB VOL

+ D −

GND +₂ +₁

SUPPLY VOLTAGE 24 V DC
SUPPLY VOLTAGE 24 V DC
GROUND

VOL - volume adjustment, USB - communication port

Varieties	Description
SGO-PgwA	Red light, lens positioned centrally
SGO-PgwB	Red light, lens positioned offset to the edge of the housing
SGO-PgwA/śb	White light, lens positioned centrally
SGO-PgwB/śb	White light, lens positioned offset to the edge of the housing

Providing the supplay voltage to: input +1 will play message K1.mp3, input +2 will play message K2.mp3, inputs +1 and +2 at the same time will play message K3.mp3

VOICE SOUNDER WITH VISUAL ALARM DEVICE (VAD)
SGO-Pgz3

DOCUMENTS ISSUED BY CNBOP-PIB:
- CERTIFICATE CPR
- CERTIFICATE OF APPROVAL (valid for SGO-Pgz3 variety)

	24V DC	EN 54-3	EN 54-23	100dB	x18	VOL	LED	SYNCHRO	IP33C	

Technical data:

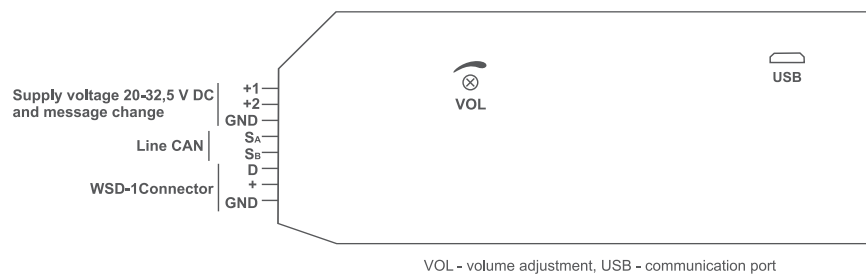| Type	voice sounder with VAD
Supply voltage	20-32,5 V DC
Current consumption in off state	0 mA
Current consumption in on state	<1100 mA*
Power consumption in on state	<26,4 W*
Sound output	>100 dB*
Flash frequency	0,5 Hz
Flash time	~190 ms
Time between flashes	~1800 ms
Device category	O
Device type	type B
Working temperature	-25°C ÷ +70°C
IP protection degree	IP33C
IK protection degree	not applicable
Conductor cross-section	1,5 mm^2
Dimensions	312x295x95 mm
Weight	~1402 g

*for Uz=24 V DC, Po=20Wrms, f=1 kHz

Product description:

- Alarm signal sequence in accordance with EN 54-3:2001+A1:2002+A2:2006.
- Optical part in accordance with EN 54-23:2010.
- Easy message programming (as in a mass storage device.
- *.mp3 message compatibility.
- High message sound quality.
- 18 alarm sound patterns to choose from.
- Auto-addressing in a network (no need to program signalling devices as master/slave).
- Synchronization of signalling devices in a network (acoustic and optical part).
- Automatic disemination of messages to all signalling devices in a network.
- Self-diagnostics and acoustic signalling.
- Optical signalling of errors when copying messages.
- Undervoltage-lockout (to test line continuity).
- Compatible with WSD-1 switch.
- High volume of alarm signal.
- Class D audio amplifier.
- Inrush current limiter.
- Built-in potentiometer to control sound level.
- 3 varieties.

Varieties:

Varieties	Description
SGO-Pgz3	outdoor voice sounder with VAD generating red light, lamp shade in red
SGO-Pgz3/śb	outdoor voice sounder with VAD generating white light, lamp shade in white
SGO-Pgz3/śbcz	outdoor voice sounder with VAD generating alternating red and white light, lamp shade in white

Connection diagram:

Supply voltage 20-32,5 V DC and message change — +1, +2, GND
Line CAN — S$_A$, S$_B$
WSD-1Connector — D, +, GND

VOL - volume adjustment, USB - communication port

Providing the supplay voltage to: input +1 will play message K1.mp3, input +2 will play message K2.mp3, inputs +1 and +2 at the same time will play message K3.mp3

Synchronization scheme example:

26
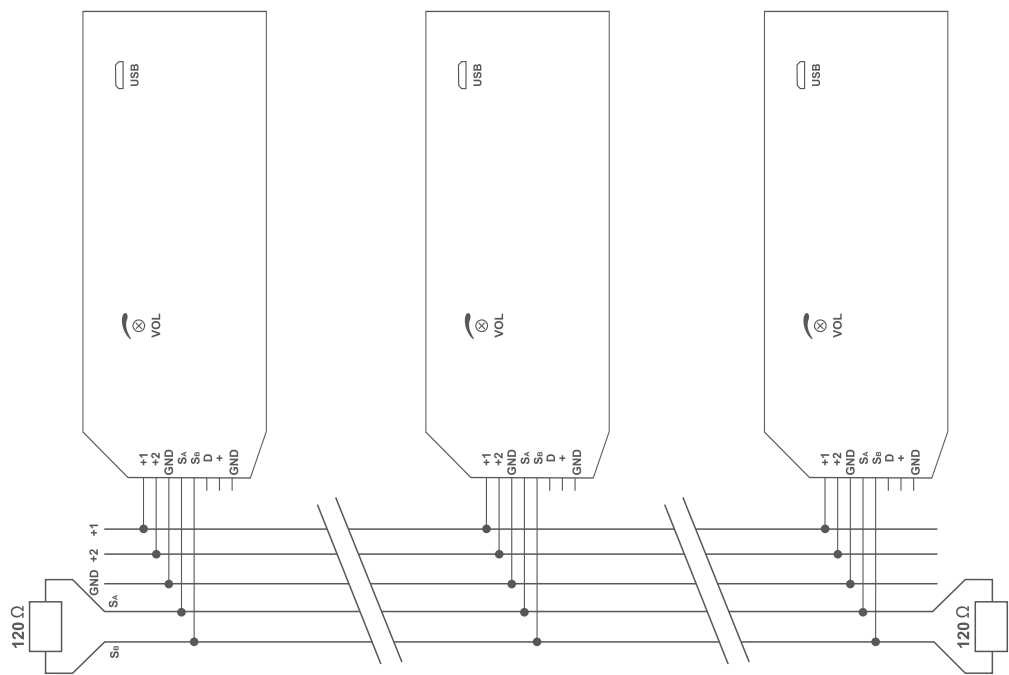
INSTALLATION BOXES FOR FAS

CABLE DISTRIBUTION JUNCTION BOX
PIP-1AN

DOCUMENTS ISSUED BY CNBOP-PIB:
- THE NATIONAL CERTIFICATE OF CONSTANCY OF PERFORMANCE
- NATIONAL TECHNICAL ASSESSMENT

| E90 | IP20 | 🏠 |

Technical data:

Supply voltage	max. 400 V AC
Current range	0,375 A Distribution max. 16 A
External diameter of a cable	max. ø19 mm
Max. conductor cross-section	max. 4 mm^2
Ingress protection	IP20
Dimensions	108x28 mm
Dimensions - conduits included	123x115x28 mm
Weight	~255 g
Cooperating products	SA-K series, SA-P8, SAO-P8, SO-P8

Product description:

- Cable distribution junction boxes PIP-1AN are intended for use in fire alarm systems.

- PIP-1AN cable distribution junction boxes have E90 electrical function maintenance class.

- Designed for connecting the alarm devices, for example the series SA-K and other types of alarm devices and speakers in wired broadcasting systems, smoke dampers etc.

- They are characterised by straight - through and angled (90°) suspension of the signalling line.

- The purpose of the cable distribution junction boxes is to ensure continuity of signal in the signal line.

- PIP-1AN is also available in the version with no fuse, which in its construction and connecting capacity is identical with the PIP-1AN/0,375A box.
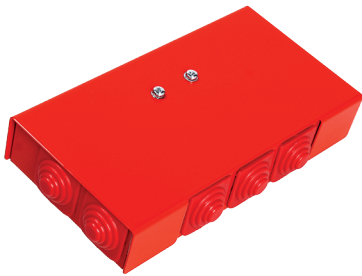
Connection diagram:

Versions	Electric diagram	Box inside
PIP-1AN/0,375A	(+) ○———○ (+) FUSE (-) ○ (-) ○———○ (+) (-)	
PIP-1AN/Distribution	(+) ○———○ (+) (-) ○ (-) ○ (+) ○ (-)	

CABLE DISTRIBUTION JUNCTION BOX
PIP-2AN and its varieties

DOCUMENTS ISSUED BY CNBOP-PIB:
- THE NATIONAL CERTIFICATE OF CONSTANCY OF PERFORMANCE
- NATIONAL TECHNICAL ASSESSMENT

| E90 | IP20 | 🏠 |

▶ Technical data:

PIP-2AN/0,375A
PIP-2AN/Distribution/4mm²

Supply voltage	max. 400 V AC
Current range	0,375 A Distribution max. 16 A
External diameter of cable	max. ø19 mm
Max conductor cross-section	max. 4 mm²
Ingress protection	IP20
Dimensions	156x80x30 mm
Dimensions - conduits included	166x88x30 mm
Weight	~335 g - PIP-2AN/0,375A ~331 g - PIP-2AN/Distribution /4mm²

PIP-2AN/Junction/9x6mm²
PIP-2AN/Distribution/3conductors/6mm²

Supply voltage	max. 400 V AC
Current range	Junction max. 41 A Distribution max. 16 A
External diameter of cable	max. ø25 mm
Max conductor cross-section	max. 6 mm²
Ingress protection	IP20
Dimensions	209x114x36 mm
Dimensions - conduits included	225x125x36 mm
Weight	~600 g - PIP-2AN/Junction /9x6mm² ~655 g - PIP-AN/Distribution /3conductors/6mm²

▶ Product description:

- Cable distribution junction boxes PIP-2AN are intended for use in fire alarm systems.

- PIP-2AN cable distribution junction boxes have E90 electrical function maintenance class.

- They are designed for connecting the alarm devices, such as the series SA-K and other types of alarm devices and speakers in wired broadcasting systems, smoke dampers etc.

- They are characterised by a straight-through or angled (90°) suspension of the signalling line (depending of the box version).

- The purpose of the cable distribution junction boxes is to ensurecontinuity of signal in the signal line.

PIP-2AN/Junction/6x4mm²
PIP-2AN/Junction/9x4mm²
PIP-2N/Distribution/3conductors/4mm²

Supply voltage	max. 400 V AC
Current range	Junction max. 32 A Distribution max. 16 A
External diameter of cable	max. ø19 mm
Max conductor cross-section	max. 4 mm²
Ingress protection	IP20
Dimensions	187x98x30 mm
Dimensions - conduits included	197x103x30 mm
Weight	~406g - PIP-2AN/Junction /6x4mm² ~434g - PIP-2AN/Junction /9x4mm² ~457g - PIP-2AN/Distribution /3conductors/4mm²

▶ **Connection diagram:**

Versions	Electric diagram	Box inside
PIP-2AN/0,375A	(-) + (-) + (-) + FUSE	
PIP-2AN/Distribution/4mm²	(-) + (-) + (-) +	
PIP-2AN/Junction/6x4mm²	1' 2' 3' 4' 5' 6' / 1 2 3 4 5 6	
PIP-2AN/Junction/9x4mm²	1' 2' 3' 4' 5' 6' 7' 8' 9' / 1 2 3 4 5 6 7 8 9	
PIP-2AN/Junction/9x6mm²	1' 2' 3' 4' 5' 6' 7' 8' 9' / 1 2 3 4 5 6 7 8 9	
PIP-2AN/Distribution/3conductors/4mm²	1 2 3 1 2 3 1 2 3	
PIP-2AN/Distribution/3conductors/6mm²	1 2 3 1 2 3 1 2 3	

CABLE DISTRIBUTION JUNCTION BOX
PIP-3AN

W2

DOCUMENTS ISSUED BY CNBOP-PIB:
- THE NATIONAL CERTIFICATE OF CONSTANCY OF PERFORMANCE
- NATIONAL TECHNICAL ASSESSMENT

E90 | IP20

Technical data:

Supply voltage	max. 400 V AC
Current range	0,75 A 1,25 A Distribution max. 16 A
External diameter of a cable	max. ø19 mm
Max. conductor cross-section	max. 4 mm^2
Ingress protection	IP20
Dimensions	121x28 mm
Dimensions - conduits included	137x124x28 mm
Weight	~350 g (PIP-3AN/0,75A) ~355 g (PIP-3AN/1,25A) ~355 g (PIP-3AN/Distribution)
Cooperating products	SG-Pgw3, SO-Pd11, SO-Pd12 SAOZ-Pk2, SA-P8, SAO-P8, SO-P8, SGO-Pgw, SGO-Pgz3

Product description:

- PIP-3AN cable distribution junction boxes are applied in fire alarm systems.

- PIP-3AN cable distribution junction boxes have E90 electrical function maintenance class.

- PIP-3AN boxes are destined for connecting the alarm devices such as SAOZ-Pk2 and other types of alarm devices and speakers in wired broadcasting systems, smoke dampers etc.

- The PIP-3AN cable distribution junction box has a characteristic suspension straight - through and angular (90°) transfer leading of signalling line.

- The purpose of the cable distribution junction boxes is to ensure continuity of signal in the signal line.

- The box PIP-3AN consists of two PIP-1AN circuits.

Connection diagram:

Versions	Electric diagram	Box inside
PIP-3AN/0,75A		
PIP-3AN/1,25A		
PIP-3AN/Distribution		

CABLE DISTRIBUTION JUNCTION BOX
PIP-5A

DOCUMENTS ISSUED BY CNBOP-PIB:
- THE NATIONAL CERTIFICATE OF CONSTANCY OF PERFORMANCE
- NATIONAL TECHNICAL ASSESSMENT

| E90 | IP20 | 🏠 |

Technical data:

Supply voltage	max. 400 V AC
Current range	max. 16 A
External diameter of a cable	max. ø16 mm
Max. conductor cross-section	max. 4 mm^2
Ingress protection	IP20
Dimensions	174x91x47 mm
Weight	~625 g

Product description:

- PIP-5A junction box is a distribution junction box featuring E60, E90 electrical function maintenance class.

- The PIP-5A enables branching of 5-core leads having 4 mm^2 maximum cross-sectional area.

- The main intended use of the juntion box is connecting supply and synchronising leads for actuators of smoke flaps.

- Its structure enables in practice connection of arbitrary number of actuators. The only limitation is cross-sectional area of supply cord and current-carrying capacity, of max 16 A.

Connection diagram:

Version	Electric diagram	Box inside
PIP-5A	Connection diagram1 Connection diagram 2 	

CABLE JUNCTION BOX
PIP-7A

DOCUMENTS ISSUED BY CNBOP-PIB:
- THE NATIONAL CERTIFICATE OF CONSTANCY OF PERFORMANCE
- NATIONAL TECHNICAL ASSESSMENT

E90 | IP20

Technical data:

Supply voltage	max. 400 V AC
Current range	max. 32 A
External diameter of cable	max. ø19 mm
Max conductor cross-section	max. 4 mm^2
Ingress protection	IP20
Dimensions	275x114x30 mm
Dimensions - conduits included	286x114x30 mm
Weight	~760 g

Product description:

- PIP-7A junction box has E90 electrical function maintenance class.

- PIP-7A cable junction boxes are intended for applications in fire alarm systems.

- PIP-7A cable junction boxes are designed to connect cables in fire alarm installations.

Connection diagram:

Version	Electric diagram	Box inside
PIP-7A		
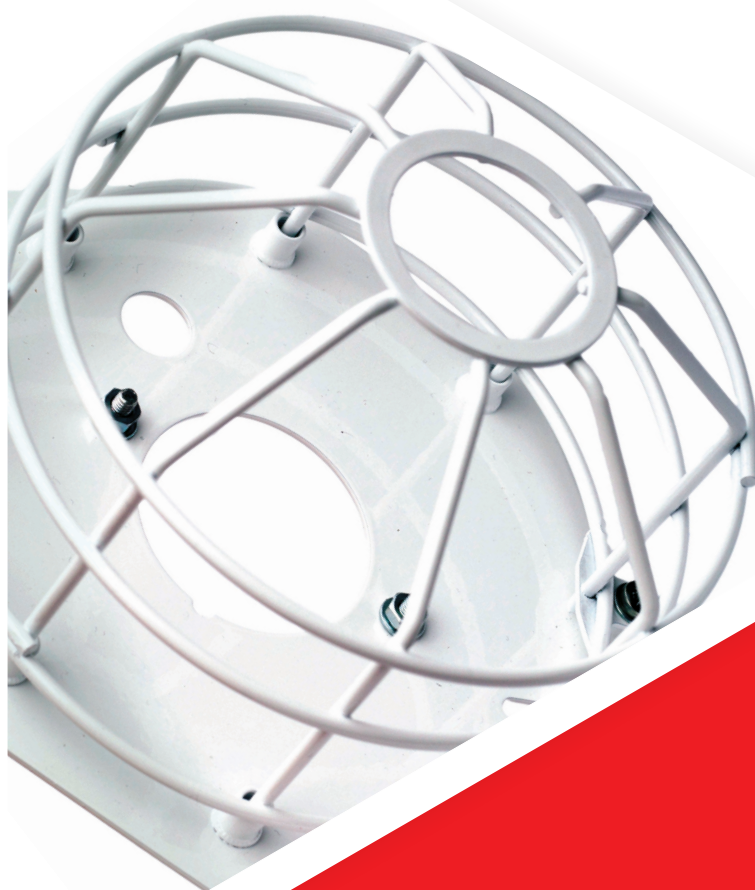
ACCESSORIES

MOUNTING SLEEVE
OM-1, OM-2

Technical data:

Weight	~250 g
Dimensions	ø155 mm
Diameter of the mounting hole	ø133 mm
Diameter of the steel cord clamp	ø10 mm

Product description:

- Mounting Sleeves OM-1, OM-2 are used to mount the alarm devices manufactured by the W2 company in suspended ceilings, coffered ceiling, and in plasterboarded spaces.

- Thanks to the use of such a sleeve, the user is able to "mask" parts of the signalling device, so that only the signalgiving optical, acoustic and acoustic-optical part of it remains visible.

- The use of mounting sleeves is very useful in premises where the aesthetic aspect is particularly valuable (such as hotels, museums, classrooms).

- The OM-1 sleeve allows for mounting of any alarm device manufactured by W2.

- The OM-2 sleeve is intended for mounting only the external VAD of the SO-P8 series.

► COVER
OZ-40, OZ-40-2
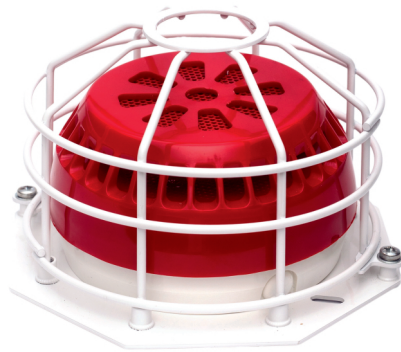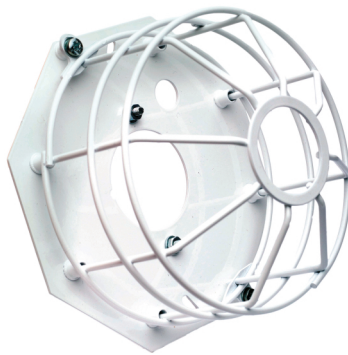
► Technical data:

Weight	OZ-40: ~300 g
	OZ-40-2: ~330 g
Dimensions	OZ-40: ø150x70 mm
	OZ-40-2: ø150x90 mm

► Product description:

- The cover is destined to protect signalling devices made by W2, fire detectors or other devices which fit the cover shape.

- The cover provide protection against mechanic damages.

- The cover can be applied in e.g. sports halls, cellars, attics, etc.

COVERS
SERIES OZ-50

W2®

▶ **Technical data:**

| Weight	OZ-50-1: ~ 280 g OZ-50-2: ~ 285 g OZ-50-3: ~ 285 g
Dimensions	OZ-50-1: Ø 150×68 mm OZ-50-2: Ø 150×80 mm OZ-50-3: Ø 150×108 mm

▶ **Product description:**

- The OZ-50 covers are intended to protect signalling devices with optical part manufactured by W2, detectors or other devices that match the shape of cover.

- 3 versions: OZ-50-1, OZ-50-2, OZ-50-3.

- Protection against mechanical damages.

- Product can be applied in e.g. sports halls, cellars, attics etc.

▶ **Version:**

Version	Dedicated for
OZ-50-1	devices that match the shape of cover
OZ-50-2	SO-P8
OZ-50-3	SA-P8, SAO-P8

▶ **Dimensions:**

OZ-50-1   OZ-50-2   OZ-50-3
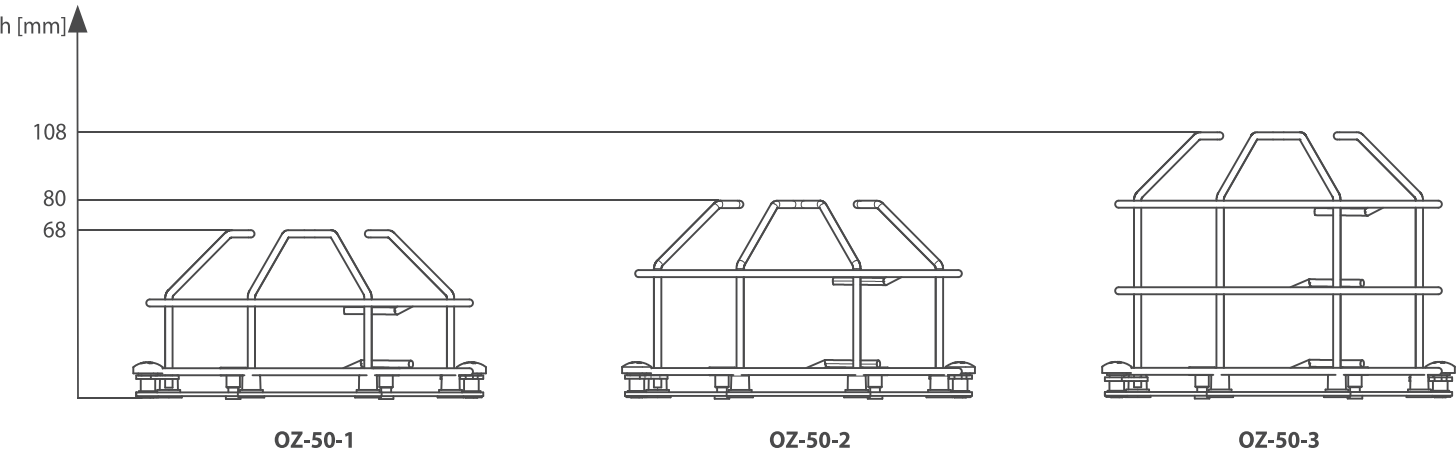
AUDIBLE SIGNAL SWITCH
WSD-1

IP40

Technical data:

Supply voltage	16..32,5 V DC
Current consumption in the off-state	0 mA
Current cosumption at 24 V DC	~15 mA
Ingress Protection	IP40
Dimensions	80x65x50 mm
Cooperating products	SA-K5, SA-K6, SA-K7, SA-P8, SAO-P8, SAOZ-Pk2, SG-Pgw3, SGO-Pgw, SGO-Pgz3

Product description:

- The WSD-1 audible signal switch is destined for collaboration with the alarm devices type SA-K5, SA-K6, SA-K7, SA-P8, SAOZ-Pk2, SG-Pgw3, SGO-Pgw, SGO-Pgz3.

- The switch turns off an acoustic signal coming from the above mentioned alarm devices but lives an optical signal.

- In SA-K, SG-Pgw3, SGO-Pgw, SGO-Pgz3 devices type - an application of one WSD-1 switch allows for turning off only one alarm device.

- In SA-P8, SAO-P8, SAOZ-Pk2 devices type - an application of one WSD-1 switch allows for turning off only one alarm device (WSD-1 in connection with "slave" device) or turnig off devices network (WSD-1 in connection with "master" device).

- The WSD-1 audible signal switch is applied in fire alarm systems to make evacuation action easier.

Connection diagram:

MUTE (WHEN WSD-1 CONNECTED)
GROUND
SUPPLY VOLTAGE 16-32,5 V DC
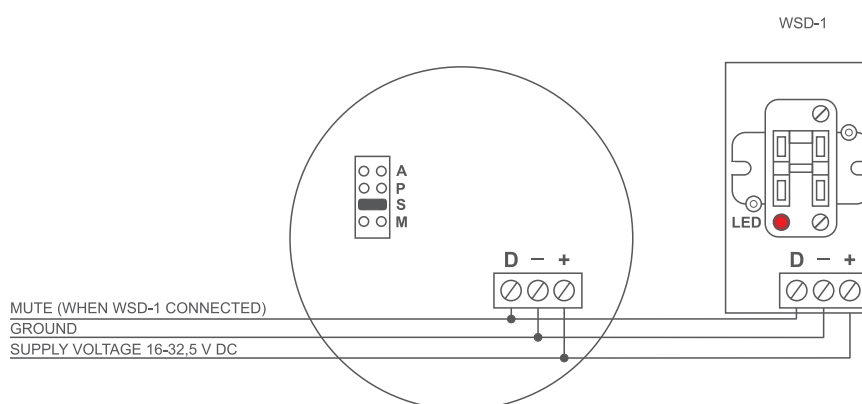
USB CABLE
FOR ALARM DEVICES

Technical data:

Plug type	-	USB type A – micro USB type B
Lenght	m	1
Braid material	-	textile
Weight	g	~26

Product description:

- USB type A – micro USB type B cable designed
  for alarm devices:
  SG-Pgw3
  SGO-Pgw
  SGO-Pgz3
  SG-Wgw2
  SG-Wgw2 IP65

- Cable length 1 meter, textile braid material.

ALARM DEVICES
FOR BURGLARY AND ASSAULT
SIGNALING SYSTEMS

VOICE SOUNDER
SG-Wgw2

(person)	12V DC	24V DC	90dB	x33	VOL	SYNCHRO	IP31C	(house)

Technical data:

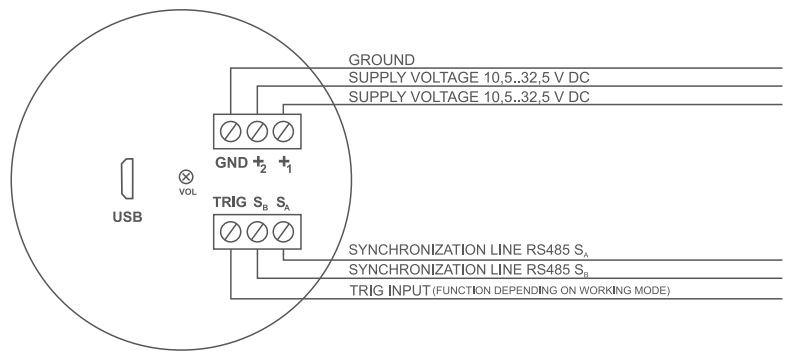| Type	voice sounder
Supply voltage	10,5-32,5 V DC
Current consumption in off state	<60 mA**
Current consumption in on state	<240 mA*
Power consumption in on state	<5,76 W*
Sound output at 1m	>90 dB*
Flash frequency	not applicable
Flash time	not applicable
Time between flashes	not applicable
Device category	not applicable
Device type	indoor
Working temperature	-10°C ÷ +55°C
Ingress protection (IP code)	IP31C
Mechanical resistance (IK code)	not applicable
Max. cross section	2,5 mm^2
Dimensions	ø114x76 mm
Weight	~335 g

*for Uz=24 V DC, f=1 kHz sinus
**for Uz=8 V DC
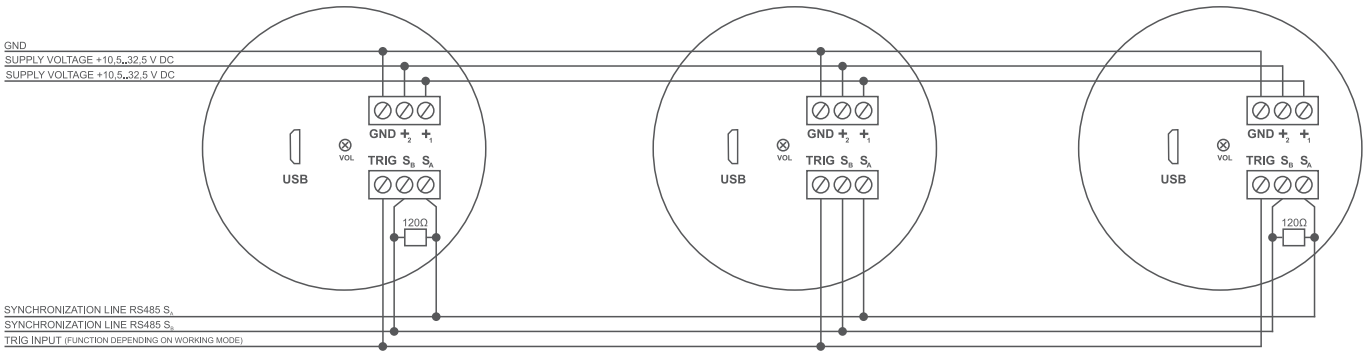
Product description:

- Wide range of supply voltage 10,5-32,5 V.
- Simple addressing of alarm sequences.
- 5 different working modes.
- Ability to play own voice messages and sounds.
- Plays *.wav and *.mp3 files.
- 4MB built-in memory.
- Adjustable volume (potentiometer).
- Backwards compatible with SG-Wgw, SG-Wgw IP65 (*.bw2 files).
- Comes also in solid housing SG-Wgw2 IP65.
- Synchronization option (RS-485).
- Cooperates with: OZ-40-2, MA-01, OM-1.

Connection scheme:

GROUND
SUPPLY VOLTAGE 10,5..32,5 V DC
SUPPLY VOLTAGE 10,5..32,5 V DC

GND +$_2$ +$_1$

USB   VOL   TRIG S$_B$ S$_A$

SYNCHRONIZATION LINE RS485 S$_A$
SYNCHRONIZATION LINE RS485 S$_B$
TRIG INPUT (FUNCTION DEPENDING ON WORKING MODE)

VOL - volume control potentiometer
USB – communication port

Synchronization example:

GND
SUPPLY VOLTAGE +10,5..32,5 V DC
SUPPLY VOLTAGE +10,5..32,5 V DC

USB   VOL   GND $+_2$ $+_1$ TRIG S_B S_A 120Ω

USB   VOL   GND $+_2$ $+_1$ TRIG S_B S_A

USB   VOL   GND $+_2$ $+_1$ TRIG S_B S_A 120Ω

SYNCHRONIZATION LINE RS485 S_A
SYNCHRONIZATION LINE RS485 S_B
TRIG INPUT (FUNCTION DEPENDING ON WORKING MODE)

BEACON
SO-Wd11

☀	12V DC	LED	IP53D	🏠

Technical data:

Type	beacon
Supply voltage	12 V DC
Current consumption in the off state	0 mA
Current consumption at 12 V DC	<35 mA
Ingress protection	IP53D
Weight	~150 g
Dimensions	ø115x63 mm

Product description:

- The SO-Wd11 beacon is destined for optical signalling by the set of LED diodes in burglar alarm systems.

- The SO-Wd11 beacon is intended for indoor applications.

- Selection one of three different flashing frequencies.

- Continuous lighting option.

- Red or orange colour of the shade.

Connection diagram:
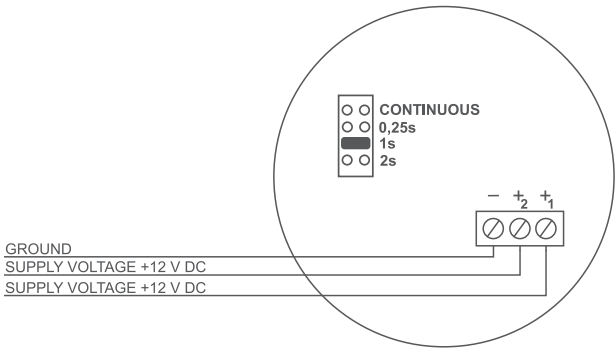
CONTINUOUS
0,25s
1s
2s

− +₂ +₁

GROUND
SUPPLY VOLTAGE +12 V DC
SUPPLY VOLTAGE +12 V DC

Jumper settings:	
CONTINUOUS	continuous light
0,25s	flash frequency 4 Hz
1s	flash frequency 1 Hz
2s	flash frequency 0.5 Hz

BEACON
SO-Wd12

☼	12V DC	LED	IP53D	⌂

Type	beacon
Supply voltage	12 V DC
Current consumption in the off state	0 mA
Current consumption at 12 V DC	<150 mA
Ingress protection	IP53D
Weight	~170 g
Dimensions	ø115x95 mm

▶ Product description:

- The SO-Wd12 beacon is destined for optical signalling by the set of LED diodes in burglar alarm systems.

- The device is intended for indoor applications.

- 15 various visual effects.

- Continuous lighting as optional.

- The shade of the SO-Wd12 alarm device is available in the red or orange colour.
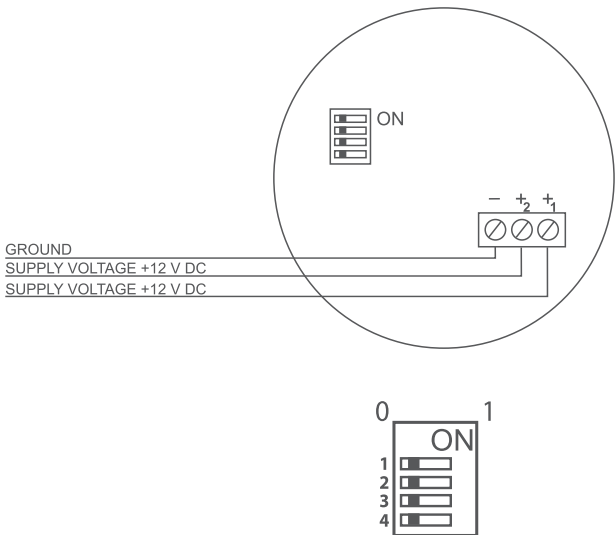
▶ Connection diagram:

ON

$-$ $+_2$ $+_1$

GROUND
SUPPLY VOLTAGE +12 V DC
SUPPLY VOLTAGE +12 V DC

0   1
ON
1
2
3
4

Table of optical signalling possible settings

NO	Description	1234
1	Continuous lighting	1111
2	Intermittent signalling (1s interval)	1110
3	Intermittent signalling (0.5s interval)	1101
4	Intermittent signalling (0.25s interval)	1100
5	Flash signalling (stroboscope)	1011
6	Rotating signalling	1010
7	Intermittent rotating signalling	1001
8	Complementary rotating signalling	1000
9	Cross signalling	0111
10	Sequence signalling (3x intermittent signalling + 4x rotating signalling)	0110
11	Sequence signalling (5 x rotating signalling + flash signalling)	0101
12	Increasing signalling	0100
13	Increasing and decreasing signalling	0011
14	Flash and increasing signalling	0010
15	Pseudo-random signalling	0001
16	Demonstration program	0000

ALARM DEVICES
FOR AUTOMATICS

ACOUSTIC ALARM DEVICE
SA-A1

🔊	24V DC	🔊 99dB	ⅲⅲⅲ x5	VOL	IP54	🏠

▶ **Technical data:**

Type	acoustic
Supply voltage	18..32 V DC
Current consumption at supply voltage 24 V DC	full volume mode <110 mA reduced volume mode <25 mA
Sound output at 1m (depending on the type of acoustic signal model)	full Min >88 dB volume mode: Max >99 dB reduced Min >69 dB volume mode: Max >82 dB
Range of working temperatures	-10°C ÷ +55°C
Contamination degree	3
Ingress protection	IP54
Max. conductor cross-section	2,5 mm^2
Housing	plastic
Housing color	black
Assembly method	staight or angle mount
Weight	~260 g

▶ **Product description:**

- Dedicated for applications in industrial automation systems.

- Five sound patterns.

- Two-stage adjustment of sound volume.

- Easy control.

- Compact enclosure.

▶ **Connection diagram:**

VOL
S1
S2
S3
S4
S5
—
SUPPLY VOLTAGE + 18..32 V DC
+
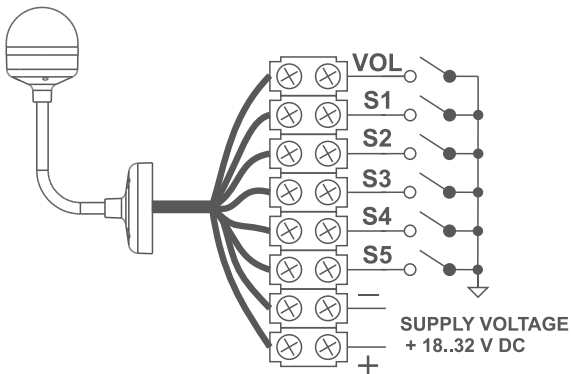
Control input	Acoustic signal
S1	Increased frequency from 2400 Hz to 2850 Hz during 0,14 s
S2	Frequency 2850 Hz: serially 60 ms of sound, 120 ms of silence
S3	Continuous sound with fixed frequency 300 Hz
S4	Serially sections of 0,5 s with the frequency of 800 Hz, 700 Hz
S5	Frequency 3000 Hz, 3 bundles of pulses with thetime duration of 32 ms each one (sound and silence of 16 ms) separated with the silence of 0,5 s and then 1,5 s of silence

BEACON
SO-Ad1

☀	24V DC	LED	IP65	🏠

Technical data:

Type	beacon
Supply voltage	16..30 V DC
Current consumption at 24 V DC	<100 mA
Working temperature range	-10℃ ÷ +55℃
The color of the emitted light	orange / red
Max. conductor cross-section	2,5 mm^2
Housing	plastic
Housing color	black
Ingress Protection	IP65
Assembly method	staight or angle mount
Type of work environment	outside / inside buildings
Weight	~170g

Product description:

- Dedicated for: gate automation, signalling of the machine operation state.

- Three types of visual signals: continuous, irregular frequency pulse, and rotary.

Available product versions:

Version	Description
SO-Ad1_cz_k_125/c SO-Ad1_cz_k_125/p SO-Ad1_cz_p_125/c SO-Ad1_cz_p_125/p	**cz** - black housing color **p** - straight mounting **k** - angular mounting **125** - lenght of fastening element [mm] **/c** - red light **/p** - orange light

Connection diagram:

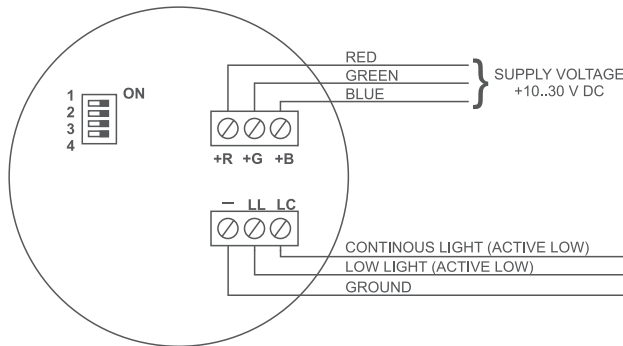| Connecting the yellow conductor	Optical signal generated by the signalling device
Unconnected	The signalling device operates as a „light bulb". Connecting supply voltage switches the fixed light on, disconnecting switches the signalling device off.
+24 V DC	Optical signal of irregular light (irregular frequency increases the signal visibility).
Supply ground	Rotating optical signal.

47

BEACON
SO-Ad2

12V DC	24V DC	LED	IP54	

Technical data:

Type	beacon
Supply voltage	10..30 V DC
Current consumption at 24 V DC	<220 mA
Power consumption at 24 V DC	<5,28 W
Working temperature rrange	-10°C ÷ +55°C
Ingress Protection	IP54
Flash duty cycle	25% or 50%
Flash frequency	0,5 - 10 Hz
Housing	plastic
Housing color	white
Dimensions	ø115x90 mm
Weight	~190 g

Product description:

- Visual signal of one of seven colours.

- Continuous or pulse visual signal.

- Full or reduced brightness of the visual signal.

- Easy control.

- Wide range of supply voltage: 10..30V DC.

Connection diagram:

RED
GREEN
BLUE
} SUPPLY VOLTAGE +10..30 V DC

ON
1
2
3
4

+R +G +B

— LL LC

CONTINOUS LIGHT (ACTIVE LOW)
LOW LIGHT (ACTIVE LOW)
GROUND

Microswitch position:

1 – change the duty cycle of optical signal
(25% - ON, 50% - OFF)
2 (D0) – change frequency of pulsed light
3 (D1) – change frequency of pulsed light
4 (D2) – change frequency of pulsed light

BEACON
SO-Ad3

| 24V DC | LED | IP54 | |

Technical data:

Type	beacon
Supply voltage	18..32 V DC
Current consumption in off state	<10 mA
Current consumption at 24 V DC	<80 mA
Power consumption at 24 V DC	1,92 W
Working temperature range	-10°C ÷ 55°C
Light colour	red, orange, green
Max. cross section	2,5 mm^2
Housing colour	black
Ingress protection	IP54
Housing	plastic
Mounting	pillar, wall
Working environment	outdoor/indoor
Dimensions	330x260x180 mm
Weight	~1200 g

Product description:

- Multi-purpose alarm for outdoor use.

- Compact design – possibility of generating optical
  signals in one of 3 colours.

- Simple control of the optical signal generation.

- UV resistant enclosure.

- Wall or pole mounting.

- Optionally available with an ultrasound distance
  sensor and control system, e.g. for loading
  bay parking.

Connection diagram:

| RED COLOUR |
| ORANGE COLOUR |
| GREEN COLOUR |
| +18..32 V DC |
| GROUND |
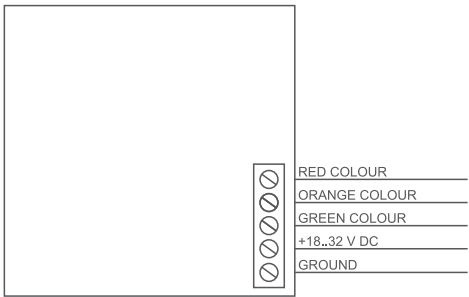
ACOUSTIC-OPTICAL SIGNALING DEVICE
SAO-Wd2

12V DC	90dB	LED	IP21C	

Technical data:

Type	acoustic-optical
Supply voltage	10..18 V DC
Current consumption at 12 V DC	<150 mA
Power consumption at 12 V DC	<1,8 W
Working temperature range	-10°C ÷ +55°C
Sound output at 1m	>90 dB
Light colour	orange
Number of flashes [s^{-1}]	~ 1 Hz
Flash time	~ 0,45 s
Max cross section	2,5 mm^2
Housing	plastic
Housing colour	white base, white body, orange shade
Ingress protection	IP21C
Mounting	wall/ceiling
Working environment	indoors
Dimensions	ø115x76 mm
Weight	~190 g

Product description:

- The alarm generates acoustic and optical signals.

- Orange optical signal.

- Alarm signal generated after connecting power supply.

- Compact design.

Connection diagram:

SUPPLY VOLTAGE + 12 V DC
GROUND
GROUND
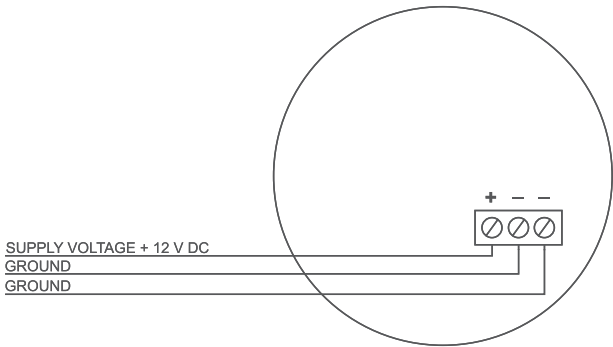
ACOUSTIC-OPTICAL SIGNALING DEVICE
SAO-Wd3

Technical data:

Type	acoustic-optical
Supply voltage	10..30 V DC
Current consumption in off state	0 mA
Current consumption at 24 V DC	<100 mA
Power consumption at 24 V DC	<2,4 W
Working temperature range	-10°C ÷ 55°C
Sound output at 1m	>80 dB
Lilght colour	red, yellow, green
Number of flashes [s^{-1}]	~ 1 Hz
Flash time	~ 0,5 s
Max. cross section	2,5 mm^2
Housing	plastic
Housing colour	white
Ingress protection	IP54
Mounting	wall/ceiling
Working environment	indoors
Dimensions	ø115x120 mm
Weight	~270 g

Product description:

- The alarm generates acoustic and optical signals.

- Possibility of generating red, green or yellow optical signals.

- Acoustic signal integrated with optical signal.

- Simple control of the alarm signal generation.

- Wide range of supply voltages (10..30 V DC).

- Energy efficient due to the application of a power LED and piezo transducer with high efficiency.
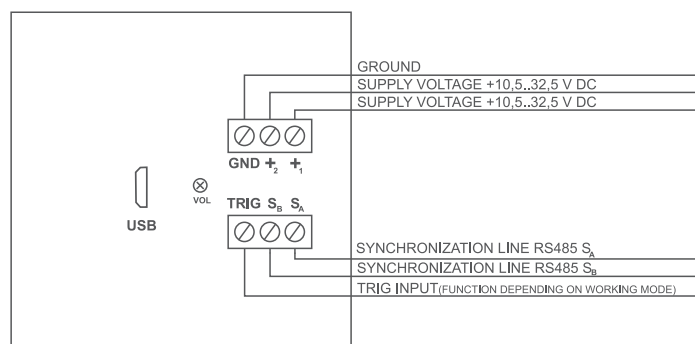
- Compact design.

Connection diagram:

RED
GREEN   } SUPPLY VOLTAGE
YELLOW   10..30V DC

+R +G +Y

─ MT LC

CONTINOUS LIGHT (ACTIVE LOW)
MUTE (ACTIVE LOW)
GROUND
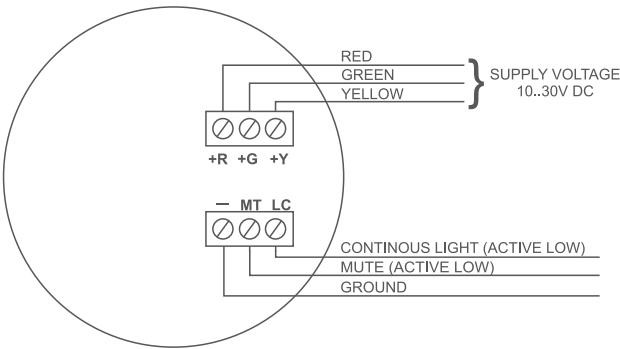
VOICE SOUNDER
SG-Wgw2 IP65

12V DC	24V DC	90dB	x33	VOL	SYNCHRO	IP65	IK07	

Technical data:

Type	voice sounder
Supply voltage	10,5-32,5 V DC
Current consumption in off state	<60 mA**
Current consumption in on state	<260 mA*
Power consumption in on state	<6,24 W*
Sound output at 1m	>90 dB*
Flash frequency	not applicable
Flash time	not applicable
Time between flashes	not applicable
Device category	not applicable
Device type	indoor
Working temperature	-10°C ÷ +55°C
Ingress protection (IP code)	IP65
Mechanical resistance (IK code)	IK07
Max. cross section	2,5 mm^2
Dimensions	ø114x122x73 mm
Weight	~655 g

*for Uz=24 V DC, f=1 kHz sinus
**for Uz=8 V DC

Product description:

- Wide range of supply voltage 10,5-32,5 V.
- Simple addressing of alarm sequences.
- 5 different working modes.
- Ability to play own voice messages and sounds.
- Plays *.wav and *.mp3 files.
- 4MB built-in memory.
- Adjustable volume (potentiometer).
- Backwards compatible with SG-Wgw, SG-Wgw IP65 (*.bw2 files).
- Robust housing with durability mechanical IK07.
- Synchronization option (RS-485).
- Cooperates with: MA-01.

Connection scheme:

GROUND
SUPPLY VOLTAGE +10,5..32,5 V DC
SUPPLY VOLTAGE +10,5..32,5 V DC

SYNCHRONIZATION LINE RS485 S$_A$
SYNCHRONIZATION LINE RS485 S$_B$
TRIG INPUT(FUNCTION DEPENDING ON WORKING MODE)

VOL - volume control potentiometer
USB – communication port

Synchronization example:

GROUND
SUPPLY VOLTAGE +10,5..32,5 V DC
SUPPLY VOLTAGE +10,5..32,5 V DC

GND +₂ +₁
USB
VOL
TRIG S_B S_A
120Ω

GND +₂ +₁
USB
VOL
TRIG S_B S_A

GND +₂ +₁
USB
VOL
TRIG S_B S_A
120Ω

SYNCHRONIZATION LINE RS485 S_A
SYNCHRONIZATION LINE RS485 S_B
TRIG INPUT (FUNCTION DEPENDING ON WORKING MODE)
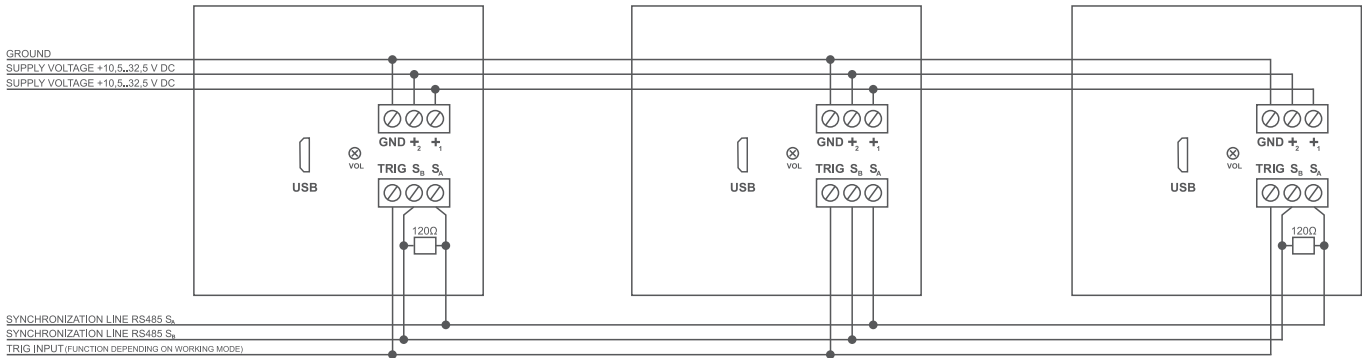
COLUMNS AND
SIGNAL TOWERS

SIGNAL COLUMN
KS-Ad

24V DC	95dB	x5	VOL	LED	IP65	

Technical data:

Supply voltage	20...30 V DC
Current consumption at 24V DC In the standby mode Optical module Acoustic module	 <40 mA <30 mA/colour 50-250 mA (depending on the type of acoustic signal)
Ingress Protection	version with sound module IP54 version without sound module IP65
Weight (5 colours + acoustic module)	~600 g
Sound output at 1m (depending on the type of audible signal), for the voltage of 24 V DC	min >85 dB max >95 dB
Range of working temperatures	-10°C ÷ +55°C
Voltage range in inputs COLOUR1...COLOUR5	0...10 V DC
Max. wire cross-section	2,5 mm²
Housing	plastic
Housing colour	black
Assembly method	staight or angle mount
Working environment	indoor

Product description:

- Five different visual signals.

- Five different acoustic signals.

- Four-stage adjustment of sound volume.

- Analogue, resistor- or transformer-based volume control.

- Volt-free control

- Digital control.

- Auto-test of signal column circuits.

- Sound lock function.

- Robust design; change of colour not supported.

- Mounting type - straight or angular.

- Custom-made version may be provided upon request (e.g. with all colours set to red).

Connection diagram:

Description of inputs:

KOLOR1...KOLOR5 – controlling input for the colour
TEST – test input (giving the ground introduces the tower into the testing mode),
BLOK – input of acoustic signal lockout (when connected to gnd, acoustic signal is locked out),
VCC – supply voltage input +20..30 V DC,
GND – double input of supply voltage ground.
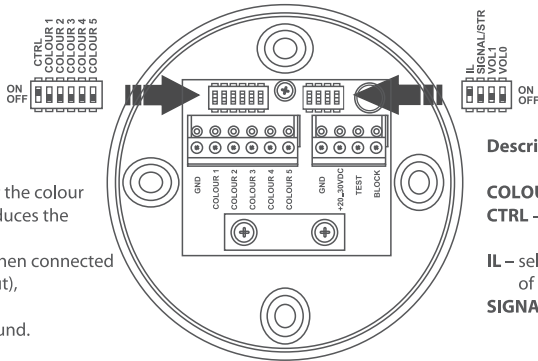
Description of microswitches:

COLOUR 1...COLOUR 5 – selection of the input configuration,
CTRL – selection of the controlling type for inputs: analogue, volt-free or digital,
IL – selection of the option "Irregular light" – the option of irregular light,
SIGNAL/STR – selection of sound type for the red light, additional optical signal (version without an acoustic module),
VOL1 – selection of volume degree (four-level control),
VOL0 – selection of volume degree (four-level control).
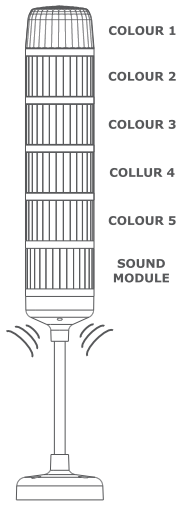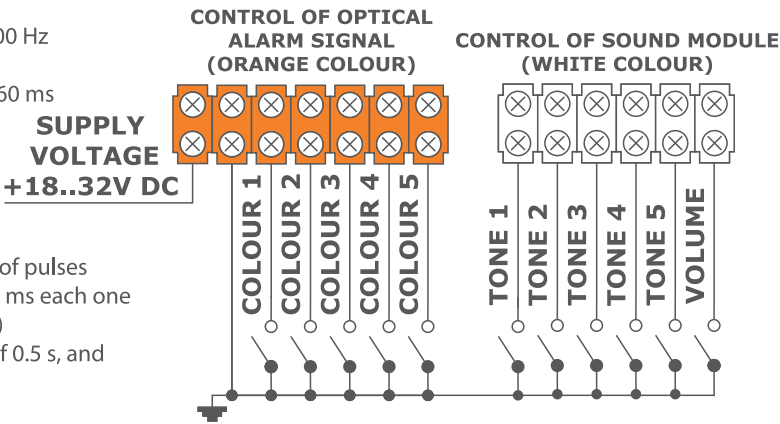
SIGNAL TOWER
WS-Ad

24V DC	99dB	x5	VOL	LED	IP65	

Technical data:

Supply voltage	18..32 V DC
Current consumption at 24V DC Optical module (single colour) Sound module	0 mA in the standby mode 10 mA ver. with a sound mod. <90 mA 25 ÷ 110 mA (depending on the signal type)

Sound output at 1m, (dependent on the acoustic signal model)	operation in the full volume mode: Min >88 dB
	                    Max >99 dB
	operation in the reduced vol. mode: Min >69 dB
	                    Max >82 dB

Range of working temperatures	-10°C ÷ +55°C
Pollution degree	3
Ingress protection	for the version with a sound module IP54 for the version without a sound module IP65
Max. conductor cross-section	2,5 mm^2
Housing	plastic
Weight (5 colours+acoustic module)	~570 g

Product description:

- Five different visual signals.

- Five different acoustic signals.

- Two-stage adjustment of sound volume.

- Volt-free control.

- Robust design; change of colour not supported.

- Mounting type - straight or angular.

- Custom-made version may be provided upon request (e.g. with all colours set to red).

Connection diagram:

Signal 1 - Increased frequency from 400 Hz to 1300 Hz during 1 s
Signal 2 - Frequency 2850 Hz, serially 60 ms of sound, 120 ms of silence
Signal 3 - Constant sound 300 Hz
Signal 4 - Serially sections of 0.5 s with the frequency of 800 Hz, 700 Hz
Signal 5 - Frequency 3 kHz, 3 bundles of pulses with the time duration of 32 ms each one (sound and silence of 16 ms) separated with the silence of 0.5 s, and then 1.5 s of silence
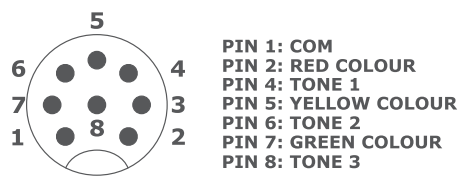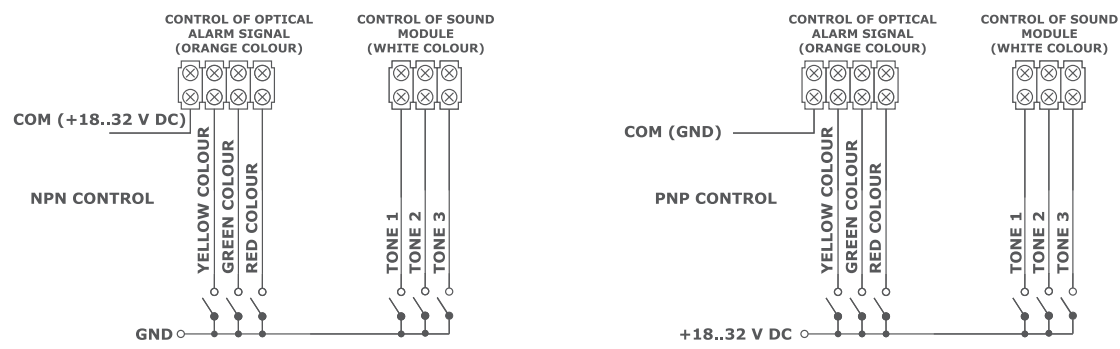
CONTROL OF OPTICAL ALARM SIGNAL (ORANGE COLOUR)

CONTROL OF SOUND MODULE (WHITE COLOUR)

SUPPLY VOLTAGE +18..32V DC

COLOUR 1
COLOUR 2
COLOUR 3
COLOUR 4
COLOUR 5

TONE 1
TONE 2
TONE 3
TONE 4
TONE 5
VOLUME

COLOUR 1
COLOUR 2
COLOUR 3
COLLUR 4
COLOUR 5
SOUND MODULE

SIGNAL TOWER
TS-Ad

24V DC	99dB	x3	LED	IP65	M12	

Technical data:

	TS-Ad	TS-Ad/sound
Type	signaling tower	
Model	optical	acoustic-optical
Supply voltage	18..32 V DC	
Current consumption in off state	0 mA	
Current consumption at 24 V DC	green: 100 mA yellow: 85 mA red: 85 mA	green: 100 mA yellow: 85 mA red: 85 mA siren 1: 50 mA siren 2: 40 mA siren 3: 170 mA
Power consumption at 24 V DC	green: 2,4 W yellow: 2,04 W red: 2,04 W	green: 2,4 W yellow: 2,04 W red: 2,04 W siren 1: 1,2 W siren 2: 0,96 W siren 3: 4,08 W
Working temperature range	-10°C ÷ 55°C	
Sound output at 1m	-	min >88 dB max >99 dB
Light colour	depends on choice of shades, available RG, RYG	
Dimensions	depends on type of product	
Weight	<400 g mount kKO <450 g moun pKO	<420 g mount kKO <470 g mount pKO
Max. cross section	2,5 mm^2	

Product description:

- Universal control over the alarm signal generation – both PNP and NPN.

- Compact design – possibility of generating up to 3 optical signals.

- Optional sound module.

- Unique design of the optical system enables light diffusion over the entire surface area of the light shade.

- Optional acid-resistant steel mount.

- Optional M12 industrial connector.

- Compatibility with control panels.

Housing	plastic	
Housing colour	black, shades in colours RG or RYG	
Ingress protection	IP65	IP54, IP23 (mouting: kKO, pKO)
Mounting	straight or angled mount	
Working environment	indoors	

Connection diagram:

CONTROL OF OPTICAL ALARM SIGNAL (ORANGE COLOUR)

CONTROL OF SOUND MODULE (WHITE COLOUR)

COM (+18..32 V DC)

NPN CONTROL

YELLOW COLOUR
GREEN COLOUR
RED COLOUR

TONE 1
TONE 2
TONE 3

GND

CONTROL OF OPTICAL ALARM SIGNAL (ORANGE COLOUR)

CONTROL OF SOUND MODULE (WHITE COLOUR)

COM (GND)

PNP CONTROL

YELLOW COLOUR
GREEN COLOUR
RED COLOUR

TONE 1
TONE 2
TONE 3

+18..32 V DC

PIN 1: COM
PIN 2: RED COLOUR
PIN 4: TONE 1
PIN 5: YELLOW COLOUR
PIN 6: TONE 2
PIN 7: GREEN COLOUR
PIN 8: TONE 3

SIGNAL TOWER
WS-Ad 230V

230V AC	99dB	x5	VOL	LED	IP65	

Technical data:

	WS-Ad230V	WS-Ad230V/sound
Type	signaling tower	
Model	optical	optical-acoustic
Voltage range on input	80..230 V AC	
Current consumption in off state	5 mA	10 mA
Current consumption in on state Optical module Acoustic module	5 mA +20 mA +10..40 mA	
Power consumption in on state Optical module Acoustic module	1 W +4,6 W + 2÷9 W	
Working temperature range	-10℃ ÷ 55℃	
Sound output at 1m	-	Reduced output min >69 dB max >82 dB Full output min >88 dB max >99 dB
Light colour	depends on choice of shades (available RYGBW)	
Max. cross section	2,5 mm^2	
Housing	plastic	
Housing colour	white or black, shades in RYGBW	
Ingress protection	IP65	IP54
Degree of polution	3	
Mounting	straight or angled mount	
Working environment	indoors	
Dimensions	depends on product type	
Weight	depends on product type	

Product description:

- Direct control by power grid voltage.

- Available options for generating 1 to 5 different optical signals.

- Unique design of the optical system enables light diffusion over the entire surface area of the light shade.

- Optional sound module.

- Possible control with different phases of the control voltage.

- Two-step sound intensity control.

- Unlimited configurations of the number of segments and their colours (selected during the order).

- Reliability and energy efficiency (only 6 W per optical segment).

Connection diagram:

230V AC		VOL -10dB	BLOCK	COLOUR 1	COLOUR 2	COLOUR 3	COLOUR 4	COLOUR 5
L	N	NC	L	L	L	L	L	L

* NC - Not connected
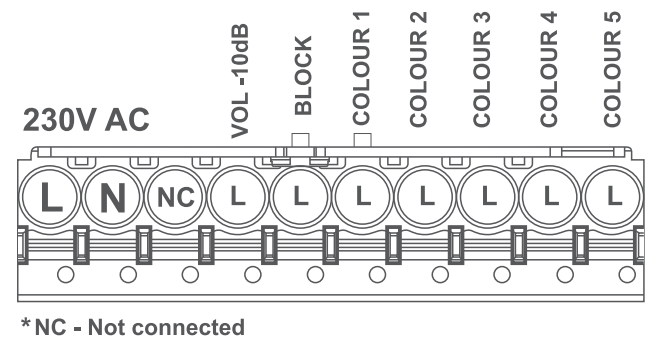
AUTOMATION MODULES

AUTOMATION MODULE
MA-01

24V DC | IP20

Power supply	20..30 V DC
Current consumption at 24V DC	Inactive outputs <5 mA Active outputs <10 mA
Inputs number	6
Outputs number	6
Ingress protection	IP20
Working temperature range	-10°C ÷ +55°C
Max. conductor cross-section	2,5 mm^2
Dimensions	45x75x45 mm
Weight	~90 g

► Product description:

- Dedicating for industrial automatic control system, modernisation of old machines and control work of signalling devices SG-Wgw2 and SO-Ad2.

- Control of visual signals generated by the SO-Ad2 signalling device in response to a change of input status is possible.

- Control of messages generated by the SG-Wgw2 (SG-Wgw2 IP65) signalling device in response to a change of input status is possible.

- Six control inputs (volt-free contact).

- Ergonomic enclosure compatible with DIN rail.

► Connection diagram:
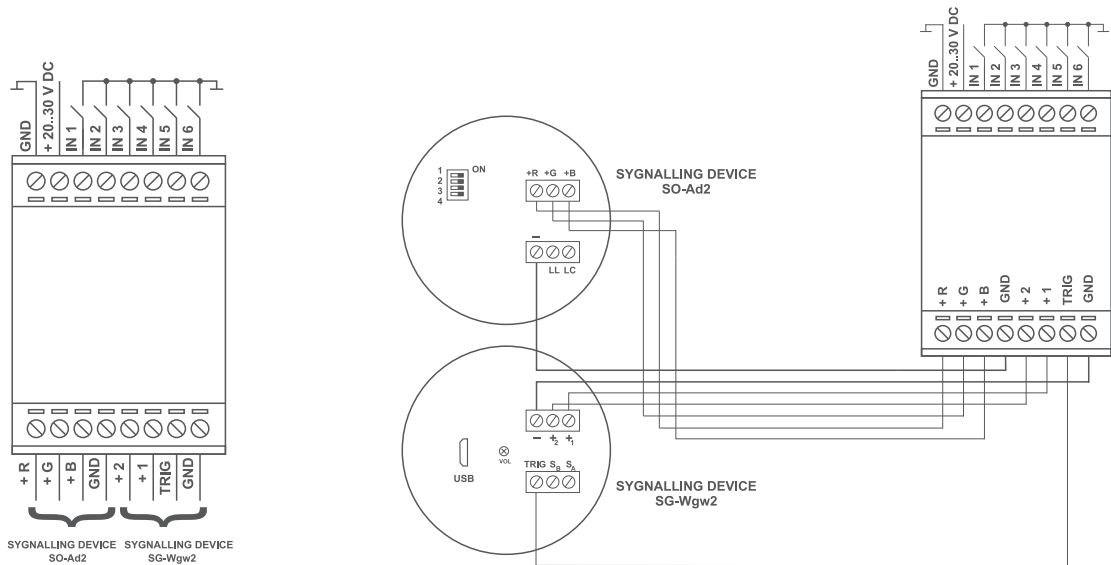
AUTOMATION MODULE
MA-02

24V DC | IP20

Technical data:

Power supply	20..30 V DC
Current consumption at 24 V DC	Inactive outputs <25 mA Active outputs <60 mA
Bound rate	2,4 kbps – 115,2 kbps
Address range	0-31
Transmision protocol	Modbus RTU
Outputs number	11
Outputs type	Transistor OC (separated from control circuits)
Ingress protection	IP20
Working temperature range	-10°C ÷ +55°C
Max. cross-section	2,5 mm^2
Dimensions	45x75x45 mm
Weight	~125 g

Product description:

- Control of signal towers of the WS-Ad series.

- MODBUS RTU protocol support.

- Up to 247 modules on one bus.

- 2.4 kbps to 115.2 kbps transmission rate support.

- Galvanically separated RS-485 interface.

- Control of eleven OC-type outputs.

- Ergonomic enclosure compatible with DIN rail.

- Easy address on the bus and baud rate with microswitch.

- Supply voltage: 20..30 V DC.

Connection diagram:
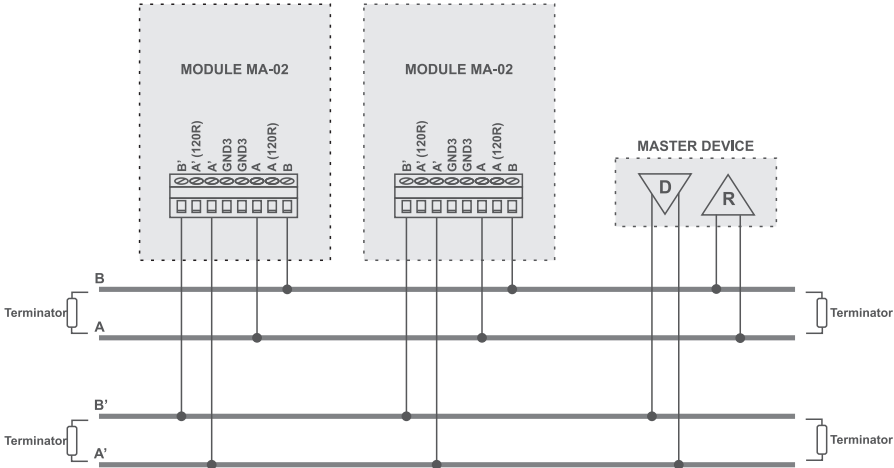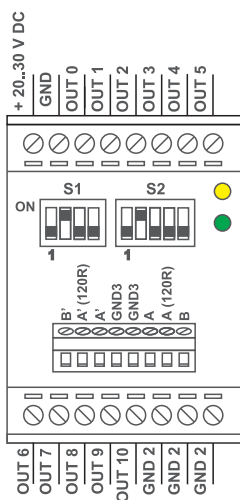
AUTOMATION MODULE
MA-03

24V DC | IP20

▶ **Technical data:**

Power supply	20..30 V DC
Current consumption at 24 V DC	Inactive outputs <25 mA Active outputs <60 mA
Input type	0÷10 V DC, 0÷20 mA
Resolution of display data (voltage mode)	0,1 V
Resolution of display data (current mode)	0,1 mA
Accuracy	±10 mV, ±0,05 mA
Outputs number	10
Outputs type	Transistor OC (separated from control circuits)
Sampling frequency of the input signal	2,9 kHz
Refresh rate on the display data	45 Hz
Ingress protection	IP20
Working temperature range	-10℃ ÷ +55℃
Max. cross-section	2,5 mm^2
Dimensions	50x75x45 mm
Weight	~125 g

▶ **Product description:**

- Control of signal towers of the WS-Ad series.

- Compatible with transducers with 0–10 V DC voltage outputs.

- Compatible with transducers with 0–20 mA or 4–20 mA current loop outputs.

- Preview of current signal value at the module input.

- Easy programming of module parameters.

- Signalling of overrun input signal range.

- Signalling of current loop damage.

- User friendly interface.

- Control of ten OC-type outputs.

- Supply voltage: 20..30 V DC.

▶ **Connection diagram:**

63
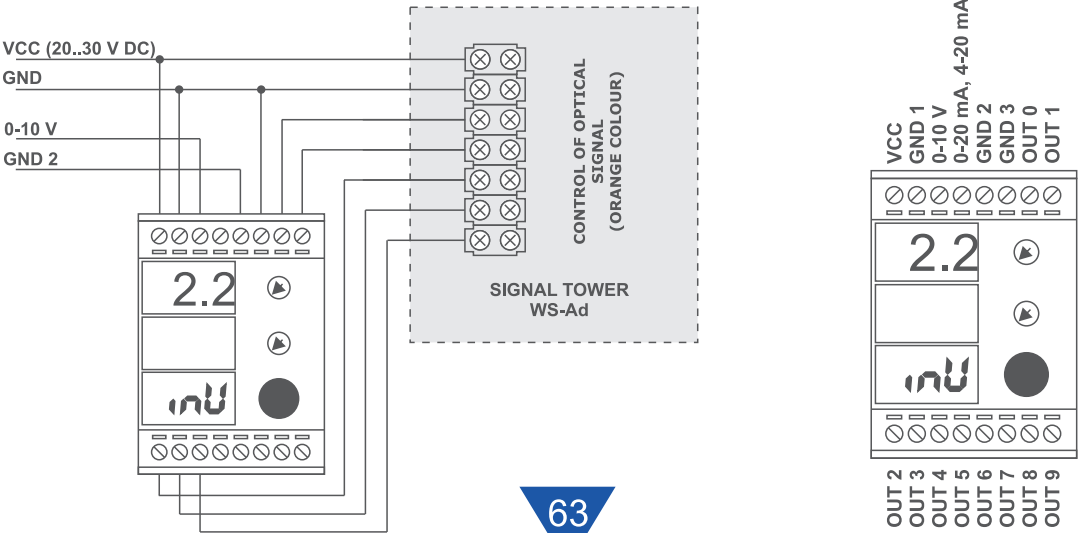
THE EXTERNAL PARKING SYSTEM
ZSP-01

Technical data:

	CONTROL BOX	ULTRASONIC DISTANCE SENSOR
Supply voltage	24 V DC	3-5,5 V DC
Curent consumption in on state	<15 mA	~3,4 mA
Refresh rate	10 Hz	10 Hz
Distance measurement range	-	0,3-2,75 m
Working temperature range	-10℃ ÷ +55℃	-10℃ ÷ +55℃
Ingress protection	IP65	IP67
Max. cross section	2,5 mm^2	-
Dimensions	162x104x55 mm	65,1x43,8 mm
Weight	~350 g	~60 g

Product description:

- Dedicated to use in parking/docking systems.

- It consists of control box and ultrasonic distance sensor.

- It allows detecting objects in range 0,3-2,75m.

- It allows controlling two signalling devices (outdoor and indoor) according to user settings.

- Sealed wire extractions through glands.

- Possible to work with W2 products: outdoor optical signalling device SO-Ad3 and WS-Ad, TS-Ad, KS-Ad series.

- Possible to work with products from other manufacturers (PLC, other signalling or executive devices).

Example of ZSP-01 application:

Green light   Yellow light   Red light

Lower detection limit
Upper detection limit
Max reach of the sensor
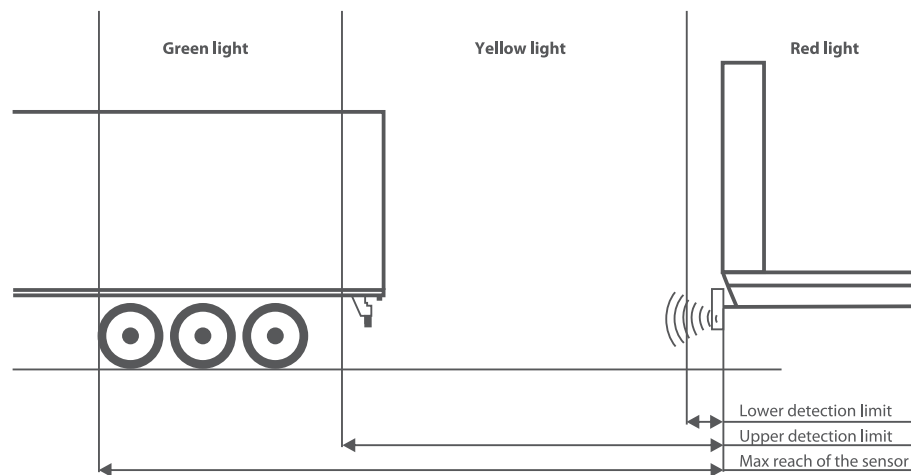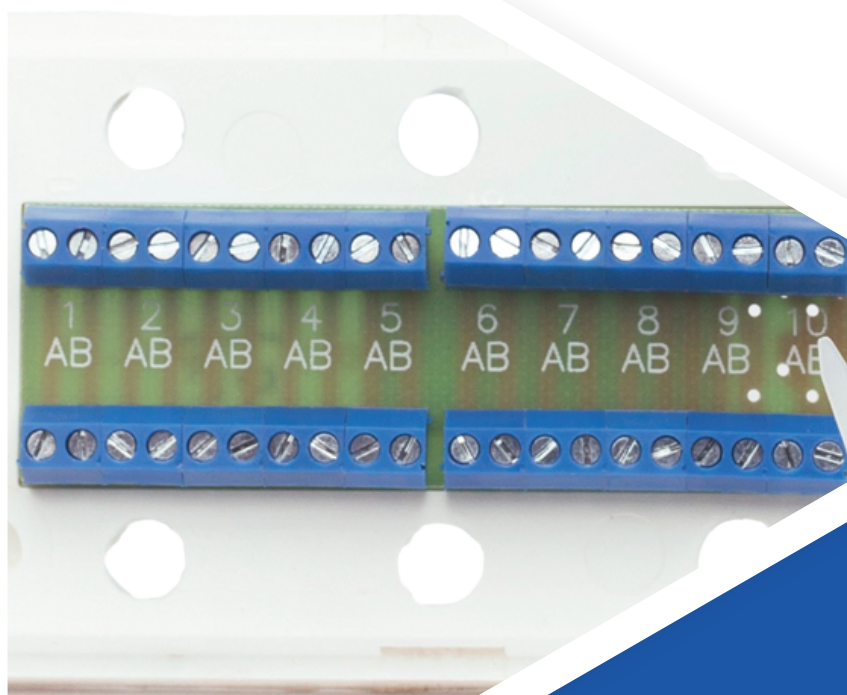
CABLE JUNCTION BOXES FOR TELECOMUNICATION SYSTEMS

CABLE
JUNCTION BOX
PI-T7
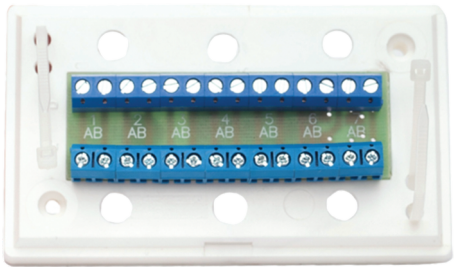
External cable diameter	max. ø 7 mm
Conductor cross-section	max. 2,5 mm^2
Number of conductors	7 pairs
Ingress protection	IP40D
Dimensions	104x60x29 mm
Weight	~64 g

▶ **Product description:**

- Destined to be used in telecommunication systems.

- 7 pairs of terminal blocks.

- A conductor (a cable) can run from the bottom of the box (through special openings).

- Allows for crossing and connecting conductors.

- Housing made of plastic.

► CABLE JUNCTION BOX
PI-T10
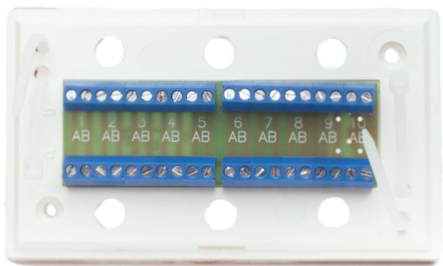
► Techmical data:

External cable diameter	max. ø 7 mm
Conductor cross-section	max. 0,75 mm^2
Number of conductors	10 pairs
Ingress protection	IP40D
Dimensions	104x60x29 mm
Weight	~64 g

► Product description:

- Destined to be used in telecommunication systems.

- 10 pairs of terminal blocks.

- A conductor (a cable) can run from the bottom of the box (through special openings).

- Allows for crossing and connecting conductors.

- Housing made of plastic.

CABLE
JUNCTION BOX
PI-T150

Techmical data:

External cable diameter	max. ø 10 mm
Conductor cross-section	max. 2,5 mm^2
Number of conductors	150 pairs
Ingress protection	IP30C
Dimensions	630x280x45 mm
Weight	~4800 g

Product description:

- Destined to be used in telecommunication systems.

- 150 pairs of terminal blocks.

- Rubber grommets for inserting and leading cables out of the box.

- Metal housing powder coated in white.

- Possibility to remove the door during installation.

- Door equipped with a lock.

- Includes a tab to describe the connections made.

- Allows for crossing and connecting conductors.

UNIVERSAL CABLE JUNCTION BOX
PU-T18
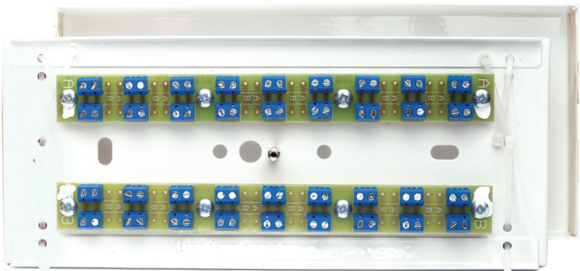
▶ **Techmical data:**

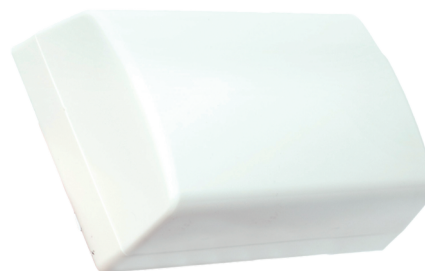|	
External cable diameter	max. ø 14 mm
Conductor cross-section	max. 2,5 mm^2
Number of conductors	18 pairs
Ingress protection	IP30C
Dimensions	235x103x32 mm
Weight	~635 g

▶ **Product description:**

- Destined to be used in telecommunication systems.

- 18 pairs of terminal blocks.

- Allows for crossing and connecting conductors.

- Rubber grommets for inserting and leading cables out of the box.

- Metal housing powder coated in white.

UNIVERSAL CABLE JUNCTION BOX
PU-T20
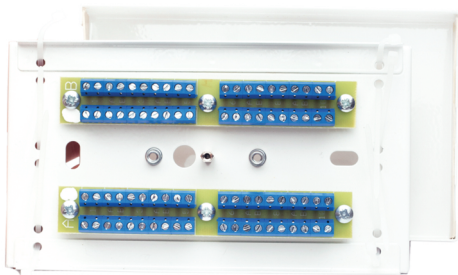
Techmical data:

External cable diameter	max. ø 14 mm
Conductor cross-section	max. 2,5 mm^2
Number of conductors	20 pairs
Ingress protection	IP30C
Dimensions	176x103x32 mm
Weight	~510 g

Product description:

- Destined to be used in telecommunication systems.

- 20 pairs of terminal blocks.

- Allows for crossing and connecting conductors.

- Rubber grommets for inserting and leading cables out of the box.

- Metal housing powder coated in white.

UNIVERSAL CABLE JUNCTION BOX
PU-T30
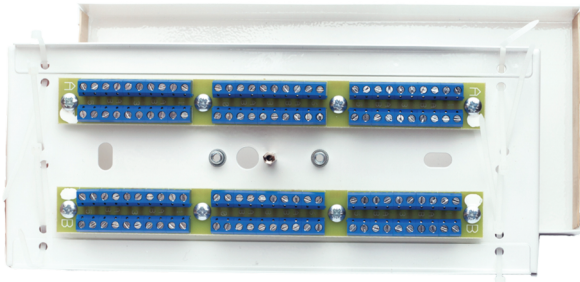
▶ Techmical data:

External cable diameter	max. ø 14 mm
Conductor cross-section	max. 2,5 mm^2
Number of conductors	30 pairs
Ingress protection	IP30C
Dimensions	176x103x32 mm
Weight	~686 g

▶ Product description:

- Destined to be used in telecommunication systems.

- 30 pairs of terminal blocks.

- Allows for crossing and connecting conductors.

- Rubber grommets for inserting and leading cables out of the box.

- Metal housing powder coated in white.

CABLE JUNCTION BOXES FOR BURGLAR ALARM SYSTEMS

CABLE JUNCTION BOX
PI-W6

Techmical data:

External cable diameter	max. ø 7 mm
Conductor cross-section	max. 2,5 mm^2
Number of conductors	7 pairs (one pair as anti-sabotage set)
Ingress protection	IP40D
Dimensions	104x60x29 mm
Weight	~67 g

Product description:

- Destined to be used in burglar alarm systems.

- 6 pairs of terminal blocks.

- In the seventh pair of blocks one of the blocks was replaced with an anti-sabotage set.

- A conductor (a cable) can run from the bottom of the box (through special openings).

- Allows for crossing and connecting conductors.

- Housing made of plastic.

CABLE
JUNCTION BOX
PI-W9
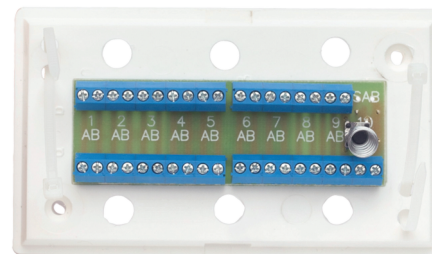
▶ **Techmical data:**

External cable diameter	max. ø 7 mm
Conductor cross-section	max. 0,75 mm^2
Number of conductors	10 pairs (one pair as anti-sabotage set)
Ingress protection	IP40D
Dimensions	104x60x29 mm
Weight	~64 g

▶ **Product description:**

- Destined to be used in burglar alarm systems.

- 10 pairs of terminal blocks.

- In the tenth pair of blocks one of the blocks was replaced with an anti-sabotage set.

- A conductor (a cable) can run from the bottom of the box (through special openings).

- Allows for crossing and connecting conductors.

- Housing made of plastic.

UNIVERSAL CABLE JUNCTION BOX
PU-W18
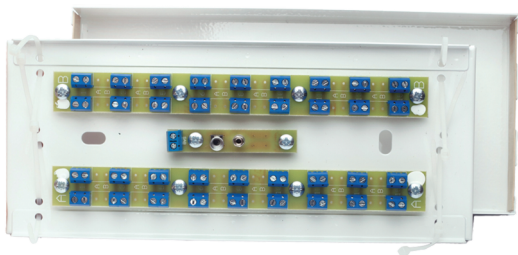
▶ **Techmical data:**

External cable diameter	max. ø 14 mm
Conductor cross-section	max. 2,5 mm^2
Number of conductors	18 pairs
Ingress protection	IP30C
Dimensions	235x103x32 mm
Weight	~641 g

▶ **Product description:**

- Destined to be used in burglar alarm systems.

- 18 pairs of terminal blocks.

- Allows for crossing and connecting conductors.

- Rubber grommets for inserting and leading cables out of the box.

- Metal housing powder coated in white.

UNIVERSAL CABLE JUNCTION BOX
PU-W30
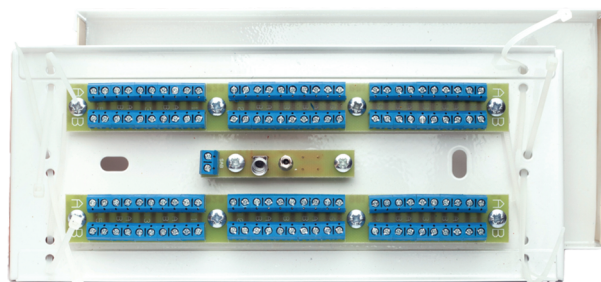
► Techmical data:

External cable diameter	max. ø 14 mm
Conductor cross-section	max. 2,5 mm^2
Number of conductors	30 pairs
Ingress protection	IP30C
Dimensions	235x103x32 mm
Weight	~689 g

► Product description:

- Destined to be used in burglar alarm systems.

- 30 pairs of terminal blocks.

- Allows for crossing and connecting conductors.

- Rubber grommets for inserting and leading cables out of the box.

- Metal housing powder coated in white.

► COMPARISION
SA-K5N with SA-P8

Parameter	SA-K5N	SA-P8
Supply voltage	16-32,5 V DC	16-32,5 V DC
Current consumption in on state	<20 mA	<40 mA*
Sound output	>100 dB	>100 dB*
Device type	Type A (indoor)	Type A (indoor)
Working temperature	-10°C ÷ +55°C	-10°C ÷ +55°C
IP protection degree	IP33	IP33
IK protection degree	-	IK07

Main features	- 4 sound patterns
	- Synchronization option
	- Gradual volume increasing
	  option (VR)
	- Built-in potentiometer
		- 16 sound patterns
		- Synchronization option
		- Gradual volume increasing
		  option (VR)
		- Built-in potentiometer
		- Inrush current limiter

Cooperates with	OZ-40-2, OM-1, WSD-1, PIP-1AN, PIP-3AN	OZ-50-3, OM-1, WSD-1, PIP-1AN, PIP-3AN

*for default settings (supply voltage Uz=24V DC, fire service signal, potentiometer maximum, optional gradual volume increasing – ON), minimum achievable current consumption <11 mA

► COMPARISION
SA-K7N with SAO-P8

Parameter	SA-K7N	SAO-P8
Supply voltage	16-32,5 V DC	16-32,5 V DC
Current consumption in on state	75-110 mA (version dependent)	<94 mA*
Sound output	>100 dB	>100 dB*
Device type	Type A (indoor)	Type A (indoor)
Working temperature	-10°C ÷ +55°C	-10°C ÷ +55°C
IP protection degree	IP33	IP33
IK protection degree	-	IK07

Main features	- 16 sound patterns
	- Synchronization option
	- Gradual volume increasing
	  option (VR)
	- Built-in potentiometer
	- Device category O
		- 16 sound patterns
		- Synchronization option
		- Gradual volume increasing
		  option (VR)
		- Built-in potentiometer
		- Device category O
		- Inrush current limiter
		- Possibility to choose 1 of 4 optical
		  shapes (3m, 6m, 9m, 12m) using
		  a microswitch (in one device)
		- New 12m photometric solid
		  providing up to 70% larger
		  coverage area radius
		- 6 available varieties: white or red
		  housing, white or red or white and
		  red light alternately light

Cooperates with	OZ-50-3, OM-1, WSD-1, PIP-1AN, PIP-3AN	OZ-50-3, OM-1, WSD-1, PIP-1AN, PIP-3AN

*for default settings (supply voltage Uz=24V DC, fire service signal, potentiometer maximum, optional gradual volume increasing – ON, optical shape 3m), minimum achievable current consumption <39 m

COMPARISION
SO-Pd13 with SO-P8

Parameter	SO-Pd13	SO-P8
Supply voltage	16-32,5 V DC	16-32,5 V DC
Current consumption in on state	38-85 mA (version dependent)	<30 mA*
Sound output	Not applicable	Not applicable
Device type	Type A (indoor)	Type B (outdoor)
Working temperature	-10°C ÷ +55°C	-25°C ÷ +70°C
IP protection degree	IP54	IP54
IK protection degree	-	IK07
Cooperates with	- Synchronization option (only within SO-Pd13/x/s) - Device category O - Wave mode	- Synchronization option (also with SA-K7N, SAOZ-Pk2, SAO-P8) - Device category O - Wave mode - Inrush current limiter - Possibility to choose 1 of 4 optical shapes (3m, 6m, 9m, 12m) using a microswitch (in one device) - New 12m photometric solid providing up to 70% larger coverage area radius - Possibility to choose 1 of 4 flash frequencies (0,5 Hz, 0,93 Hz, 1,12 Hz, 1,3 Hz) using a microswitch (in one device) - 6 available varieties: white or red housing, white or red or white and red light alternately light
Współpracujące produkty	OZ-50-2, OZ-50-1, OM-2, FS-1, PIP-1AN	OZ-50-2, OM-2, PIP-1AN, PIP-3AN

*for default settings (supply voltage Uz=24 V DC, optical shape 3m, flash frequency 0,5 Hz, delay time 0 s),
  minimum achievable current consumption <25 mA

POŻAR

light and sound for safety

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