

WS-Ad signal tower



Product description


The WS-Ad signal tower is a signalling device designed for using in automatics systems, which function is to generate optical or acoustic and optical signals. Similarly, as in case of signal towers KS-Ad, this product is designed first of all for the industrial automatics sector, to signalize the machine operation state. As opposed from signal towers (columns) of the KS-Ad series, signal towers WS-Ad haven't got the built-in control mechanism. They are the system more simple in use, whose operation has to be watched over by the user.

The signal tower is produced in a few versions, dependent on the client's applications. Individual versions differ with the number of tower segments (the number of colours) as well as the presence of sound module.

CAUTION!:

In case of giving the incorrect combination of control signals the device does not make an automatic correction (e.g. switching on the warning signal of red and green colours simultaneously).

In the device basis there are two terminal strips. The strip of orange colour is designed for connecting the supply voltage as well as conductors controlling the optical signal generation. Depending on the product version, the strip is made up of the different number of paths. The strip of white colour is designed for connecting conductors controlling the acoustic signal generation.



Control options

The optical signal generation is done through the control conductor connected to gnd with a colour. Depending on the product version, the user has from 2 to 5 colours at his disposal, with a sound module. The conductor colour is ascribed to the colour of generated signal (e.g. the conductor connected to gnd of the blue colour causes the optical signal generation of blue colour). The optical signal is generated as long as the conductor controlling the colour becomes connected to gnd.

Version with a sound module:

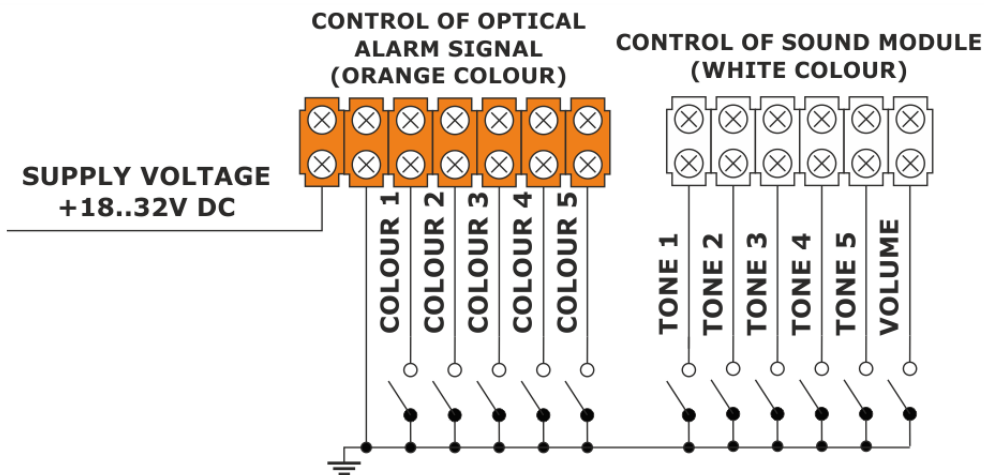
In case of a version with the built-in sound module, the user receives different audible signals through connecting to gnd of appropriate conductors. Similarly, as in case of optical signal, the acoustic signal lasts as long as the control input becomes connected to gnd.

In the sound module there was used the priority mechanism, it means that if the user connects to gnd a few conductors controlling the sound, there will be generated the tone corresponding with the event of higher priority. Moreover, the sound module enables operation with two values of sound volume. The operation selection is done through the conductor VOL (conductor of black colour) connected to gnd or leaving it not connected. In case, when the conductor is not connected, the tower generates the sound of the volume > 95dB, after the conductor is connected to gnd, the sound volume is decreased to the value >75dB.

Technical data

Supply voltage	18 - 32V DC
Current consumption at 24V DC	In the standby mode 0mA 10mA version with a sound module
Optical module (single colour)	<90mA
Sound module	25-75mA @ 24V DC (depending on the signal type)
Sound output at 1m, (dependent on the acoustic signal model)	Operation in the full volume mode Min >88dB Max >99dB Operation in the lower volume mode Min >69dB Max >82dB
Type of operation environment	Designed for using inside
Casing	Plastic ABS, PC
Range of working temperatures	-25 °C ÷ 55 °C
Pollution degree	3
Ingress protection	For the version with a sound module IP 54 For the version without a sound module IP 65
Max. conductor cross-section	2.5mm ²

Connection diagram



Signal 1 - Increased frequency from 400Hz to 1300Hz during 1s

Signal 2 - Frequency 2850Hz, serially 60ms of sound, 120ms of silence

Signal 3 - Constant sound 300Hz

Signal 4 - Serially sections of 0.5s with the frequency of 800Hz, 700Hz

Signal 5 - Frequency 3kHz, 3 bundles of pulses with the time duration of 32ms each one (sound and silence of 16ms) separated with the silence of 0.5s, and then 1.5s of silence