



WTR1-P421

ZoneControl

MULTITASK PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

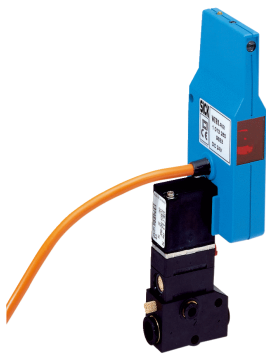


Illustration may differ



Ordering information

Type	Part no.
WTR1-P421	1013260

Other models and accessories → www.sick.com/ZoneControl

Detailed technical data

Features

Actuator	Pneumatic, valve on board
Max. number of sensors	Approx. 30 ¹⁾
Logical principle of operation	Single accumulation, single release, block (slug) release
Sensor/ detection principle	Photoelectric proximity sensor, Background suppression
Dimensions (W x H x D)	51.5 mm x 151.4 mm x 46 mm
Sensing range max.	300 mm ... 900 mm
Sensing range	300 mm ... 900 mm
Type of light	Infrared light
Light source	LED ²⁾
Light spot size (distance)	Ø 40 mm (900 mm)
Adjustment	Potentiometer
Special applications	ZoneControl

¹⁾ Maximum per individual incoming power supply at 27.6 V DC.

²⁾ Average service life: 100,000 h at T_J = +25 °C.

Mechanics/electronics

Supply voltage	21.6 V DC ... 27.6 V DC ¹⁾
Ripple	< 5 V _{pp} ²⁾

¹⁾ Limit values.

²⁾ May not exceed or fall below U_v tolerances.

³⁾ Without load and valve deenergized.

⁴⁾ A = V_S connections reverse-polarity protected.

⁵⁾ C = interference suppression.

⁶⁾ D = outputs overcurrent and short-circuit protected.

⁷⁾ Reference voltage: 50 V DC.

⁸⁾ Other valve types available on request.

⁹⁾ P - A.

¹⁰⁾ In combination with cylinders with small air volume we recommend tests.

Power consumption	25 mA ³⁾
Switching output	PNP
Switching mode	Dark switching
Signal voltage PNP HIGH/LOW	Approx. UV - < 2.0 V/0 V
Output current I_{max.}	≤ 100 mA
Switching frequency	250 Hz
Connection type	Male connector M12, 4-pin
Connection type for daisy chain	Cable with female connector, M12, 4-pin, 1.2 m
Circuit protection	A ⁴⁾ C ⁵⁾ D ⁶⁾
Protection class	II ⁷⁾
Weight	175 g
Housing material	Plastic, ABS
Enclosure rating	IP54
Shock and vibration resistance	According to IEC 68
Ambient operating temperature	-10 °C ... +55 °C
Ambient storage temperature	-25 °C ... +75 °C
UL File No.	NRKH.E181493 & NRKH7.E181493
Medium for valves	Compressed air or neutral gases filtered, non-lubricated or lubricated
Design solenoid valve	3/2-way valve ⁸⁾
Mode of operation solenoid valve	Air to Brake (NO)
Connection type solenoid valve	Compressed air 2 x 8 mm diameter, output line 4 mm diameter
Coil ratings	24 V DC 1 W
Air flow rate	Approx. 20 NI/min ⁹⁾
Ventilation capacity	Approx. 130 NI/min
Operating pressure range	2 bar ... 8 bar ¹⁰⁾

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Pneumatic

Coil ratings	24 V DC 1 W
Medium for valves	Compressed air or neutral gases filtered, non-lubricated or lubricated

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²⁾ P - A.

³⁾ In combination with cylinders with small air volume we recommend tests.

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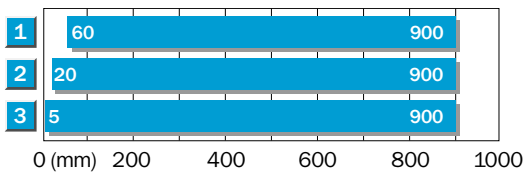
²⁾ P - A.

³⁾ In combination with cylinders with small air volume we recommend tests.

Classifications

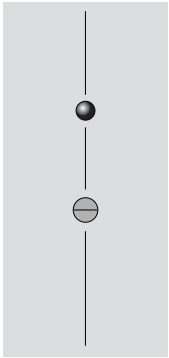
ECl@ss 5.0	27270904
ECl@ss 5.1.4	27270904
ECl@ss 6.0	27270904
ECl@ss 6.2	27270904
ECl@ss 7.0	27270904
ECl@ss 8.0	27270904
ECl@ss 8.1	27270904
ECl@ss 9.0	27270904
ETIM 5.0	EC002719
ETIM 6.0	EC002719
UNSPSC 16.0901	39121528

Sensing range diagram



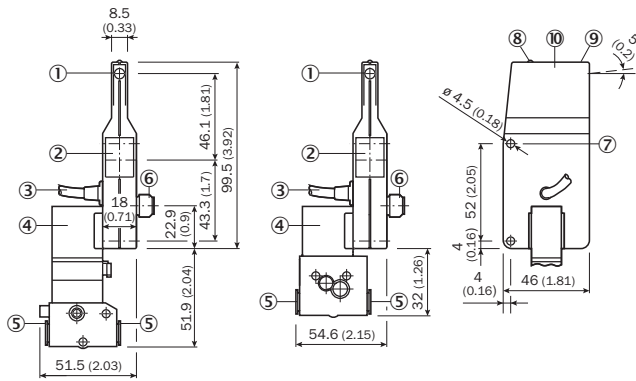
- 1** Scanning distance on black, 6% remission
- 2** Scanning distance on grey, 18% remission
- 3** Scanning distance on white, 90% remission

Adjustments possible



- ⑧ LED signal strength indicator
- ⑨ Adjustment of sensing range


Dimensional drawing (Dimensions in mm (inch))






- ① Center of optical axis, sender
- ② Center of optical axis, receiver
- ③ Cable with receptacle, 4-pin
- ④ Solenoid valve
- ⑤ Media connector x2 Ø 8 x 1
- ⑥ Male connector M12, 4-pin
- ⑦ Mounting hole, Ø 4.5 mm
- ⑧ LED signal strength indicator
- ⑨ Adjustment of sensing range
- ⑩ Time control

Recommended accessories

Other models and accessories → www.sick.com/ZoneControl

	Brief description	Type	Part no.
Mounting brackets and plates			
	Mounting bracket, steel, zinc coated, mounting hardware included	BEF-WK-WTR	2051786

	Brief description	Type	Part no.
		BEF-WN-IR	2074621
Plug connectors and cables			
	Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YF2A14-050VB3XLEAX	2096235
	Head A: male connector, M12, 4-pin, straight Head B: - Cable: unshielded	STE-1204-G	6009932

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com