



Photoelectric sensors
WTR, Photoelectric proximity sensor, Background
suppression

WTR1-P421S02



Model Name > **WTR1-P421S02**
Part No. > **1015388**



Illustration may differ

At a glance

- Product variants of sensor + logic + valve in one housing are available
- Housing design suited for mounting between the rollers of roller conveyor
- Precise background suppression with adjustable sensing range from 300 mm to 900 mm
- Modular structure - with or without solenoid valve or motor actuation, with or without logic

Your benefits

- Easy installation due to all-in-one solution: sensor + logic + valve in one housing
- Unique design allows mounting under the conveyor protecting the sensor from damage, increasing product life
- Adjustable background suppression ignores background and reliably detects products without a reflector
- Stand-alone solution that consolidates cabling, and allows for modular expansion
- Easy and reliable control of product flow reduces damage and jams, therefore reducing cost



Features

Sensor/detection principle:	Photoelectric proximity sensor, Background suppression
Dimensions (W x H x D):	54.6 mm x 131.5 mm x 46 mm
Housing design (light emission):	Fitting roller spacings
Sensing range:	300 mm ... 900 mm
Type of light:	Infrared light
Light source:	LED ¹⁾
Adjustment:	Adjustable via sensing range adjustment
Light spot size (distance):	40 mm (900 mm)

¹⁾ Average service life of 100,000 h at $T_A = +25\text{ °C}$

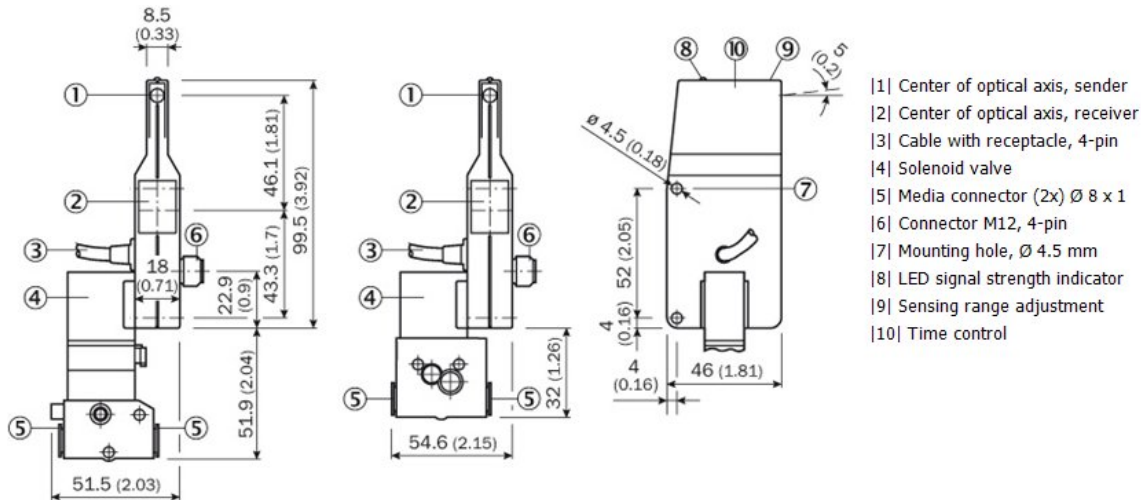
Mechanics/electronics

Supply voltage:	21.6 V DC ... 27.6 V DC ¹⁾
Ripple:	< 5 Vpp ²⁾
Power consumption:	< 25 mA ³⁾
Output type:	PNP
Switching mode:	Dark-switching
Signal voltage PNP HIGH/LOW:	Approx. VS - < 2.0 V / 0 V
Output current I _{max} :	≤ 100 mA

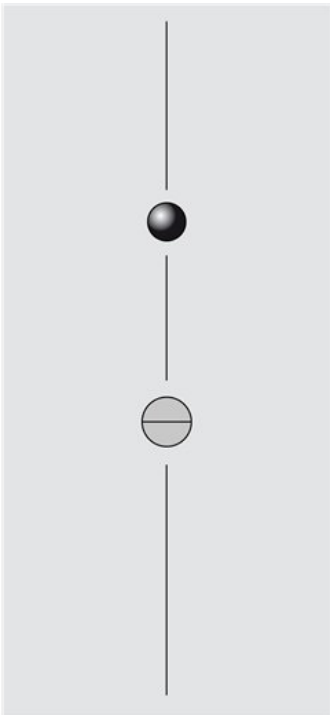
Switching frequency:	250 Hz
Connection type:	Connector M12, 4-pin
Circuit protection:::	A, C, D ^{4) 5) 6)}
Protection class:	II ⁷⁾
Weight:	175 g
Housing material:	ABS, Plastic
Enclosure rating:	IP 54
Ambient operating temperature:	-15 °C ... 50 °C
Ambient storage temperature:	-25 °C ... 75 °C
Shock/vibration:	According to IEC 68
UL File No.:	NRKH.E181493 & NRKH7.E181493

¹⁾ Limit values ²⁾ May not exceed or fall short of V_S tolerances ³⁾ Without load, without valve 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

Dimensional drawing

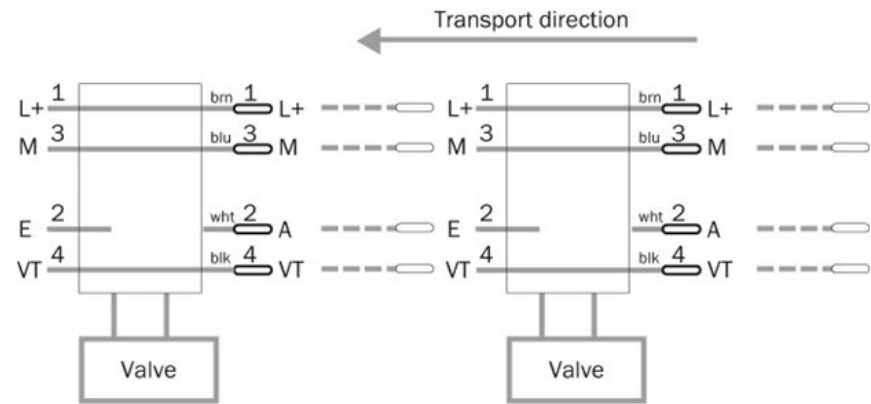


Adjustments possible

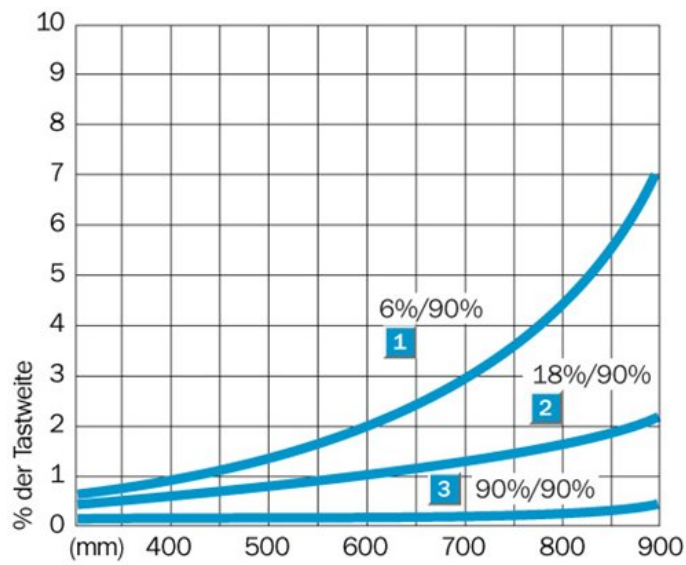


- |8| LED signal strength indicator
- |9| Sensing range adjustment

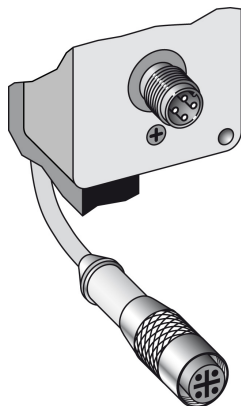
Connection diagram



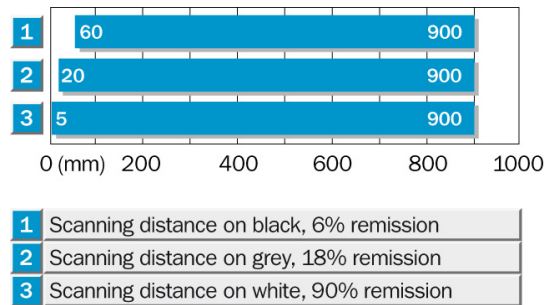
Characteristic curve



Connection type



Sensing range diagram



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