



Photoelectric sensors
WTR, Photoelectric proximity sensor, Background
suppression

WTR1-P421



Model Name > **WTR1-P421**
Part No. > **1013260**



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):	51.5 mm x 151.4 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 °C

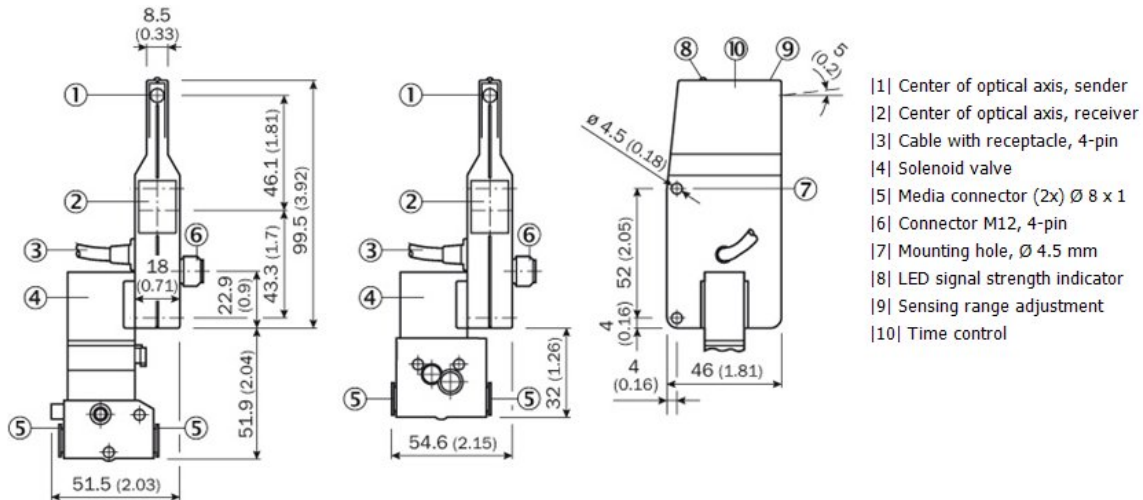
Mechanics/electronics

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

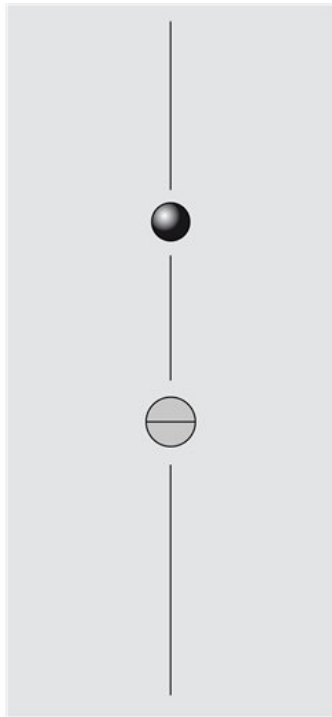
Switching frequency:	250 Hz
Connection type:	Connector M12, 4-pin
Circuit protection:::	A, C, D ^{4) 5) 6)}
Protection class:	II ⁷⁾
Weight:	175 g
Housing material:	ABS, Plastic
Enclosure rating:	IP 54
Ambient operating temperature:	-10 °C ... 55 °C
Ambient storage temperature:	-25 °C ... 75 °C
Shock/vibration:	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

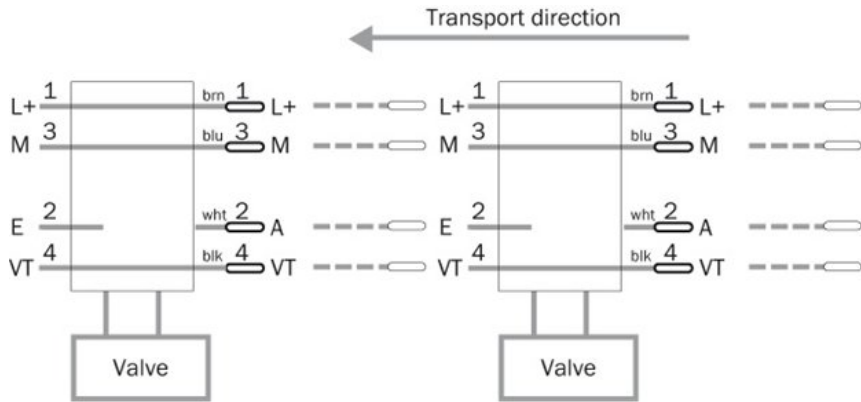


Adjustments possible

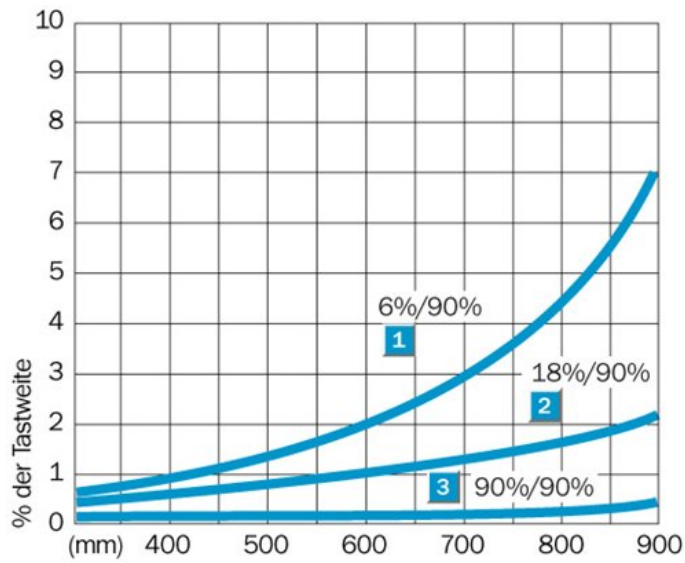


- |8| LED signal strength indicator
- |9| Sensing range adjustment

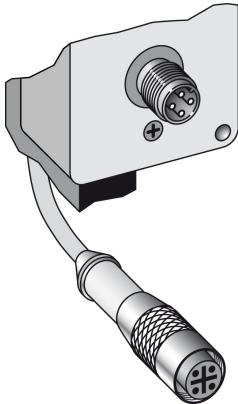
Connection diagram



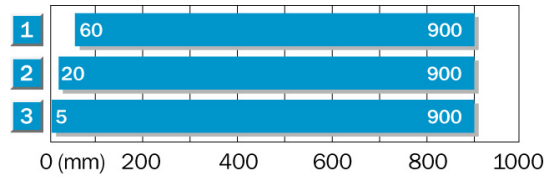
Characteristic curve



Connection type



Sensing range diagram



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

Australia

Phone +61 3 9457 0600
1800 334 802 – tollfree
E-Mail sales@sick.com.au

Belgium/Luxembourg

Phone +32 (0)2 466 55 66
E-Mail info@sick.be

Brasil

Phone +55 11 3215-4900
E-Mail sac@sick.com.br

Canada

Phone +1 905 771 14 44
E-Mail information@sick.com

Ceská Republika

Phone +420 2 57 91 18 50
E-Mail sick@sick.cz

China

Phone +86 4000 121 000
E-Mail info.china@sick.net.cn
Phone +852-2153 6300
E-Mail ghk@sick.com.hk

Danmark

Phone +45 45 82 64 00
E-Mail sick@sick.dk

Deutschland

Phone +49 211 5301-301
E-Mail kundenservice@sick.de

España

Phone +34 93 480 31 00
E-Mail info@sick.es

France

Phone +33 1 64 62 35 00
E-Mail info@sick.fr

Great Britain

Phone +44 (0)1727 831121
E-Mail info@sick.co.uk

India

Phone +91-22-4033 8333
E-Mail info@sick-india.com

Israel

Phone +972-4-6801000
E-Mail info@sick-sensors.com

Italia

Phone +39 02 27 43 41
E-Mail info@sick.it

Japan

Phone +81 (0)3 3358 1341
E-Mail support@sick.jp

Magyarország

Phone +36 1 371 2680
E-Mail office@sick.hu

Nederlands

Phone +31 (0)30 229 25 44
E-Mail info@sick.nl

Norge

Phone +47 67 81 50 00
E-Mail austefjord@sick.no

Österreich

Phone +43 (0)22 36 62 28 8-0
E-Mail office@sick.at

Polska

Phone +48 22 837 40 50
E-Mail info@sick.pl

România

Phone +40 356 171 120
E-Mail office@sick.ro

Russia

Phone +7-495-775-05-30
E-Mail info@sick.ru

Schweiz

Phone +41 41 619 29 39
E-Mail contact@sick.ch

Singapore

Phone +65 6744 3732
E-Mail admin@sicksgp.com.sg

Slovenija

Phone +386 (0)1-47 69 990
E-Mail office@sick.si

South Africa

Phone +27 11 472 3733
E-Mail info@sickautomation.co.za

South Korea

Phone +82 2 786 6321/4
E-Mail info@sickkorea.net

Suomi

Phone +358-9-25 15 800
E-Mail sick@sick.fi

Sverige

Phone +46 10 110 10 00
E-Mail info@sick.se

Taiwan

Phone +886-2-2375-6288
E-Mail sales@sick.com.tw

Türkiye

Phone +90 (216) 528 50 00
E-Mail info@sick.com.tr

United Arab Emirates

Phone +971 (0) 4 8865 878
E-Mail info@sick.ae

USA/México

Phone +1(952) 941-6780
1 800-325-7425 – tollfree
E-Mail info@sickusa.com

More representatives and agencies
at www.sick.com