



## Photoelectric sensors

WTR, Photoelectric proximity sensor, Background suppression

WTR1-P721S10



**Model Name** > **WTR1-P721S10**  
**Part No.** > **1017944**



*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 <sup>1)</sup>                                      |
| Time type:                       | Time delay off                                         |
| Delay time:                      | 0 ... 5 s                                              |
| Adjustment:                      | Adjustable via sensing range adjustment                |
| Light spot size (distance):      | 40 mm (900 mm)                                         |

<sup>1)</sup> Average service life of 100,000 h at T<sub>A</sub> = +25 °C

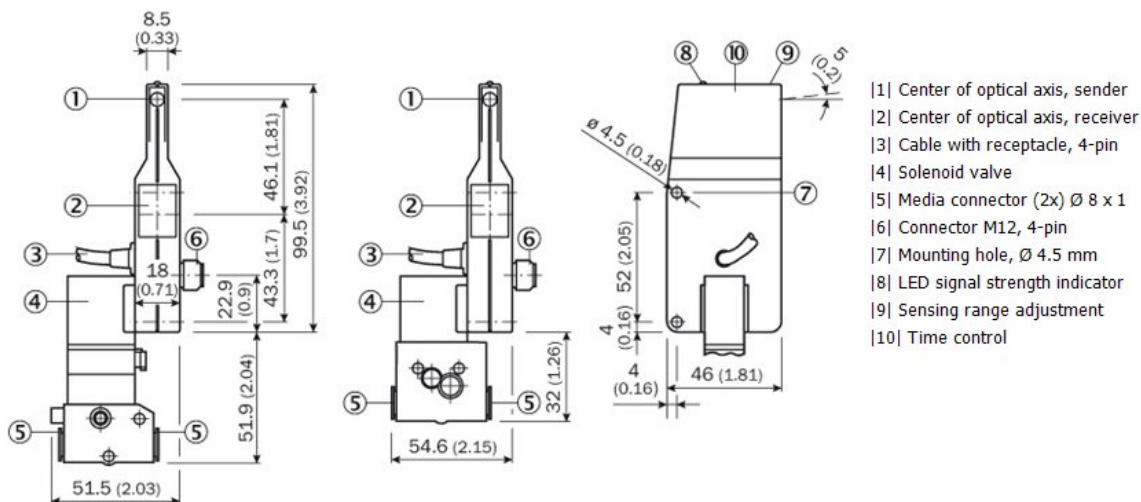
#### Mechanics/electronics

|                    |                                       |
|--------------------|---------------------------------------|
| Supply voltage:    | 21.6 V DC ... 27.6 V DC <sup>1)</sup> |
| Ripple:            | < 5 Vpp <sup>2)</sup>                 |
| Power consumption: | < 25 mA <sup>3)</sup>                 |
| Output type:       | PNP                                   |
| Switching mode:    | Dark-switching                        |

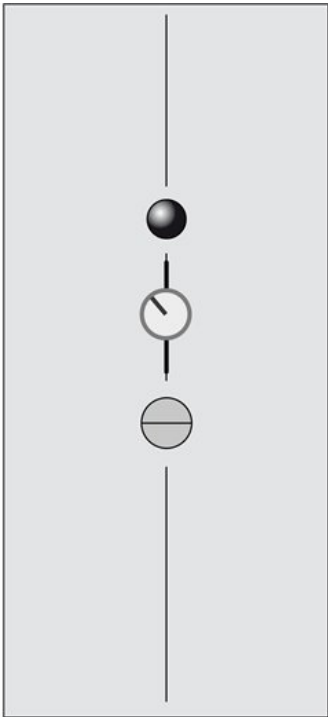
|                                |                                               |
|--------------------------------|-----------------------------------------------|
| Signal voltage PNP HIGH/LOW:   | Approx. $V_S - < 2.0 \text{ V} / 0 \text{ V}$ |
| Output current $I_{max}$ :     | $\leq 100 \text{ mA}$                         |
| Switching frequency:           | 250 Hz                                        |
| Connection type:               | Connector M12, 4-pin                          |
| Circuit protection:::          | A, C, D <sup>4) 5) 6)</sup>                   |
| Protection class:              | II <sup>7)</sup>                              |
| 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                  |

<sup>1)</sup> Limit values    <sup>2)</sup> May not exceed or fall short of  $V_S$  tolerances    <sup>3)</sup> Without load, without valve    <sup>4)</sup>  $A = V_S$  connections reverse-polarity protected    <sup>5)</sup> C = interference suppression  
<sup>6)</sup> D = outputs overcurrent and short-circuit protected    <sup>7)</sup> Reference voltage 50 V DC

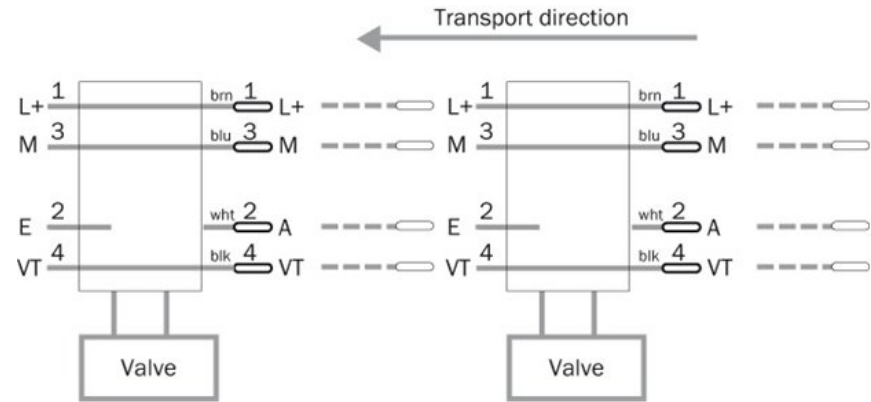
## Dimensional drawing



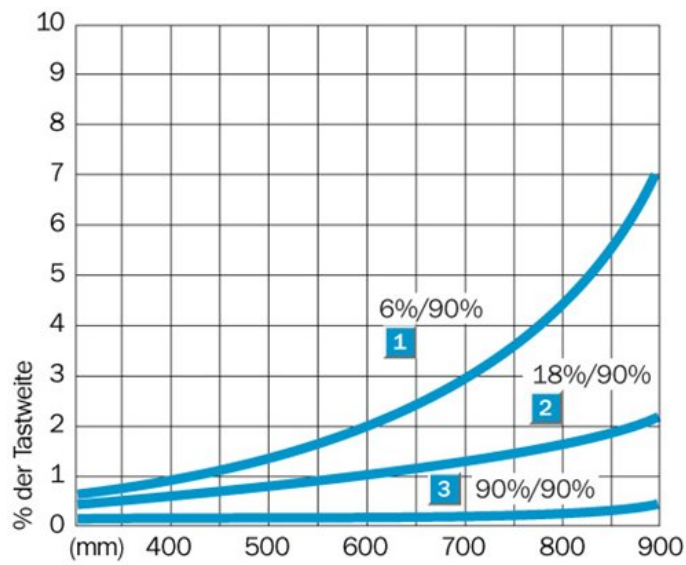
Adjustments possible



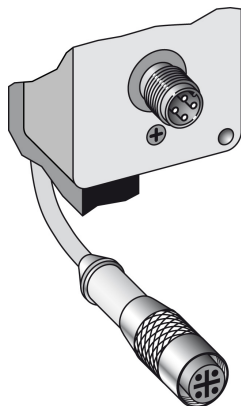
Connection diagram



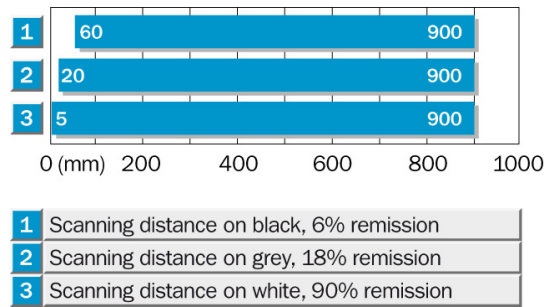
Characteristic curve



Connection type



Sensing range diagram



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