



Photoelectric sensors  
W14-2, Photoelectric proximity sensor,  
Background suppression

WT14-2P432S18



**Model Name** > **WT14-2P432S18**  
**Part No.** > **1057507**



*Illustration may differ*

#### At a glance

- PinPoint LED with small, highly visible, precise light spot
- Background suppression
- Sensing range can be set via potentiometer
- High immunity to ambient light
- Rugged plastic housing

#### Your benefits

- Highly visible PinPoint red light provides simple alignment and fast installation
- Long sensing ranges due to PinPoint technology
- Reliable object detection with background suppression
- Quick and easy sensing range adjustment due to 4-speed potentiometer
- Crosstalk and ambient light immunity reduces false trips and downtime
- High availability in the field



#### Features

|                                  |                                                        |
|----------------------------------|--------------------------------------------------------|
| Sensor/detection principle:      | Photoelectric proximity sensor, Background suppression |
| Dimensions (W x H x D):          | 17.6 mm x 75.5 mm x 33.5 mm                            |
| Housing design (light emission): | Rectangular                                            |
| Sensing range max.:              | 20 mm ... 1,000 mm <sup>1)</sup>                       |
| Sensing range:                   | 50 mm ... 1,000 mm <sup>2)</sup>                       |
| Type of light:                   | Visible red light                                      |
| Light source:                    | PinPoint LED <sup>3)</sup>                             |
| Wave length:                     | 637 nm                                                 |
| Adjustment:                      | Potentiometer, 4-turn                                  |
| Light spot size (distance):      | Ø 7 mm (300 mm)                                        |

<sup>1) 2)</sup> Object with 90 % reflectance (referred to standard white DIN 5033) <sup>3)</sup> Average service life of 100,000 h at T<sub>A</sub> = +25 °C

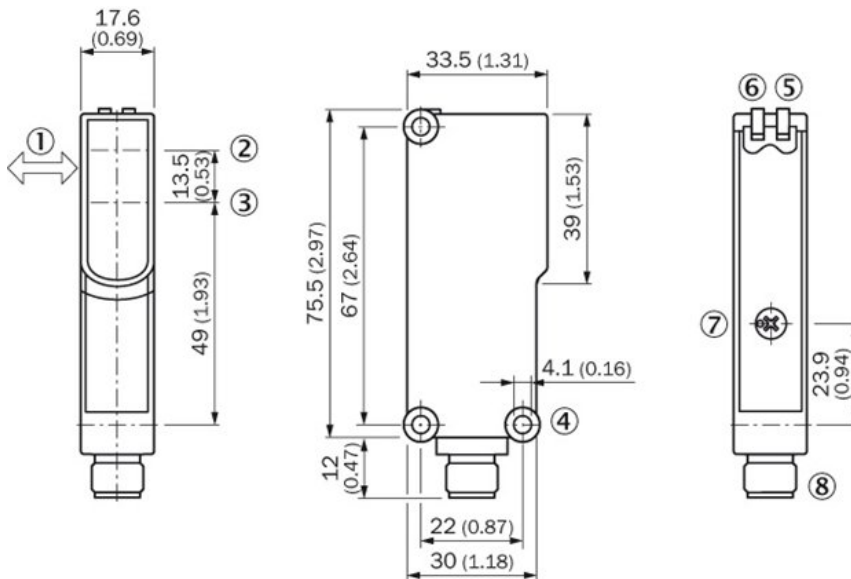
#### Mechanics/electronics

|                                   |                                   |
|-----------------------------------|-----------------------------------|
| Supply voltage:                   | 10 V DC ... 30 V DC <sup>1)</sup> |
| Ripple:                           | 5 Vpp <sup>2)</sup>               |
| Power consumption:                | ≤ 25 mA <sup>3)</sup>             |
| Output type:                      | PNP                               |
| Output function:                  | Complementary                     |
| Switching mode:                   | Light/dark-switching              |
| Output current I <sub>max</sub> : | ≤ 100 mA                          |

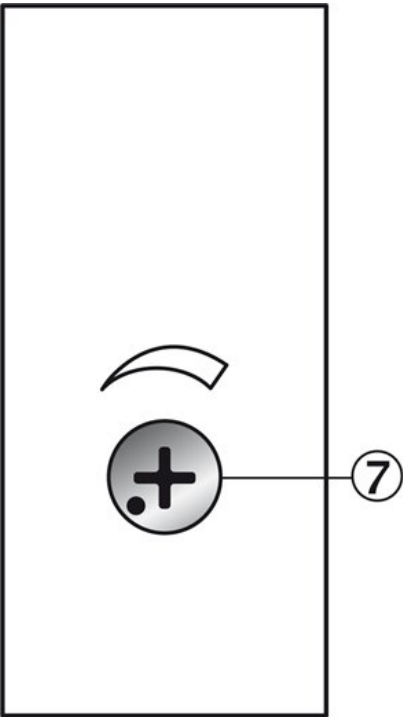
|                                |                                                   |
|--------------------------------|---------------------------------------------------|
| Response time:                 | $\leq 2.5 \text{ ms}$ <sup>4)</sup>               |
| Switching frequency:           | 200 Hz <sup>5)</sup>                              |
| Connection type:               | Connector M12, 4-pin                              |
| Circuit protection:::          | A, C, D <sup>6)</sup> <sup>7)</sup> <sup>8)</sup> |
| Weight:                        | 40 g                                              |
| Special device:                | ✓                                                 |
| Housing material:              | ABS, Plastic                                      |
| Optics material:               | PMMA                                              |
| Enclosure rating:              | IP 67                                             |
| Special features:              | Insensitivity to high frequency ambient light     |
| Ambient operating temperature: | -30 °C ... 60 °C                                  |
| Ambient storage temperature:   | -40 °C ... 70 °C                                  |
| UL File No.:                   | NRKH.E181493 & NRKH7.E181493                      |

<sup>1)</sup> Limit values, operation in short-circuit protected network max. 8 A    <sup>2)</sup> May not exceed or fall short of  $V_S$  tolerances    <sup>3)</sup> Without load    <sup>4)</sup> Signal transit time with resistive load  
<sup>5)</sup> With light/dark ratio 1:1    <sup>6)</sup> A =  $V_S$  connections reverse-polarity protected    <sup>7)</sup> C = interference suppression    <sup>8)</sup> D = outputs overcurrent and short-circuit protected

## Dimensional drawing

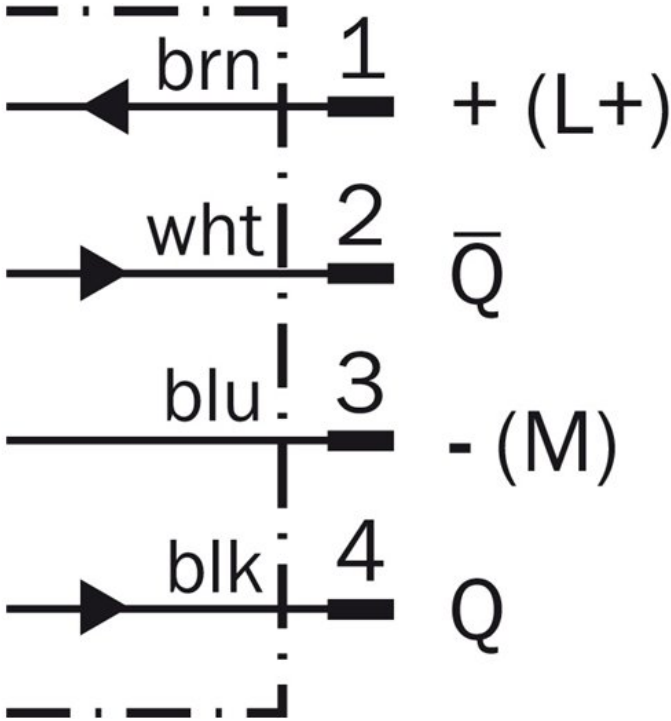


Adjustments possible

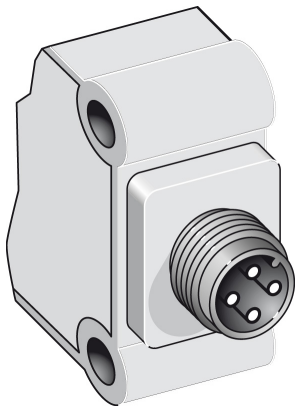


[7] Sensing range adjustment: potentiometer, 4-turn

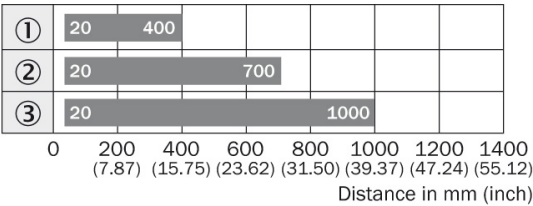
Connection diagram



Connection type



Sensing range diagram



■ Sensing range

- ① Sensing range on black, 6 % remission
- ② Sensing range on gray, 18 % remission
- ③ Sensing range on white, 90 % remission

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