



Photoelectric sensors  
W18-3, Photoelectric proximity sensor,  
Background suppression

WT18-3P120S06



Type > [WT18-3P120S06](#)  
Part No. > [1026631](#)



*Illustration may differ*

#### At a glance

- Sender LED with infrared light
- Precise background suppression
- Adjustable sensing distance
- Immune to ambient light
- Rugged plastic housing

#### Your benefits

- Long sensing distances due to high-performance infrared light
- Reliable object detection with high-precision background suppression due to second sender LED
- Quick and easy sensing range adjustment
- Crosstalk and ambient light immunity reduce false readings 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.:              | 10 mm ... 850 mm <sup>1)</sup>                         |
| Sensing range:                   | 50 mm ... 850 mm <sup>2)</sup>                         |
| Type of light:                   | Infrared light                                         |
| Light source:                    | LED <sup>3)</sup>                                      |
| Adjustment:                      | Potentiometer, 4 turns                                 |
| Light spot size (distance):      | Ø 30 mm (600 mm)                                       |
| Continuous threshold adaption:   | -                                                      |

<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

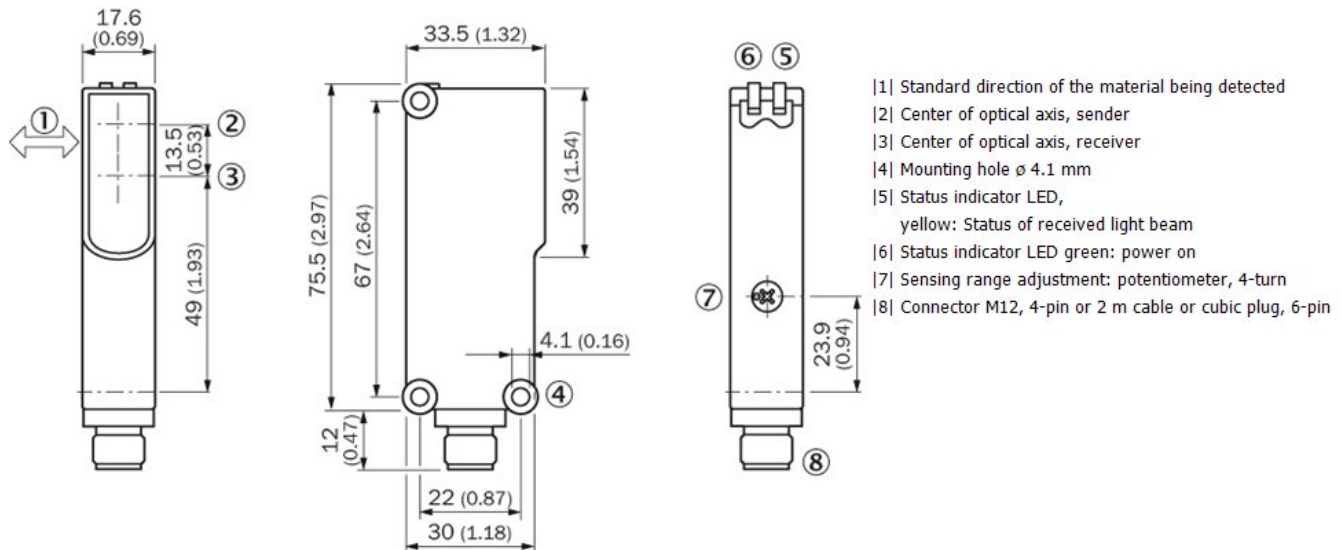
#### Mechanics/electronics

|                                   |                                   |
|-----------------------------------|-----------------------------------|
| Supply voltage:                   | 10 V DC ... 30 V DC <sup>1)</sup> |
| Ripple:                           | < 5 Vpp <sup>2)</sup>             |
| Power consumption:                | 55 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:                 | < 1,250 $\mu$ s <sup>4)</sup>    |
| Switching frequency:           | 400 Hz <sup>5)</sup>             |
| Connection type:               | Cable, 4-wire, 2 m <sup>6)</sup> |
| Cable material:                | PVC                              |
| Circuit protection:::          | A, C, D <sup>7)</sup> 8) 9)      |
| Weight:                        | 120 g                            |
| Special device:                | ✓                                |
| Housing material:              | ABS, Plastic                     |
| Optics material:               | PMMA                             |
| Enclosure rating:              | IP 67                            |
| Ambient operating temperature: | -40 °C ... +60 °C                |
| Ambient storage temperature:   | -40 °C ... +75 °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> Do not bend below 0 °C    <sup>7)</sup> A =  $V_S$  connections reverse-polarity protected    <sup>8)</sup> C = interference suppression    <sup>9)</sup> D = outputs  
 overcurrent and short-circuit protected

## Dimensional drawing

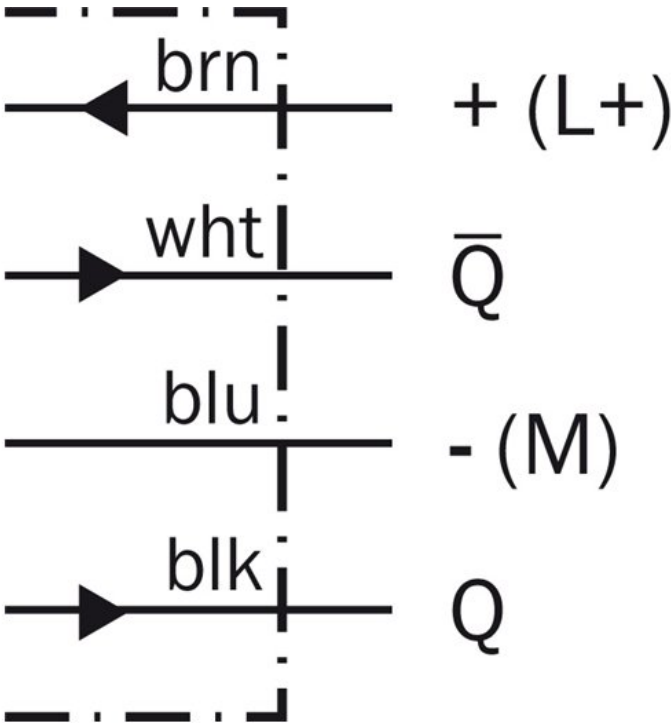


Adjustments possible



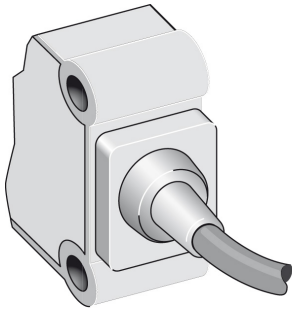
[1] Sensing range adjustment: potentiometer, 4-turn

Connection diagram



## Connection type

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