



## Photoelectric sensors W100, Photoelectric proximity sensor, energetic

WT100-P4400



**Model Name** > [WT100-P4400](#)  
**Part No.** > [6037855](#)



*Illustration may differ*

#### At a glance

- Standard miniature housing with M3 threaded mounting holes
- Optics with standard red LED or bright light LED
- Available as a background blanking sensor or as an energetic proximity sensor
- Light/dark switching and sensitivity adjustment via rotary switch possible (depending on type)
- Wide variety of accessories available (depending on type)

#### Your benefits

- Highly visible light spot allows for quick and easy alignment
- M3 threaded mounting holes provide easy installation



#### Features

|                                  |                                           |
|----------------------------------|-------------------------------------------|
| Sensor/detection principle:      | Photoelectric proximity sensor, energetic |
| Dimensions (W x H x D):          | 11 mm x 31 mm x 20 mm                     |
| Housing design (light emission): | Rectangular                               |
| Sensing range max.:              | 0 mm ... 1,000 mm <sup>1)</sup>           |
| Sensing range:                   | 0 mm ... 750 mm                           |
| Type of light:                   | Visible red light                         |
| Light source:                    | BrightLight LED <sup>2)</sup>             |
| Wave length:                     | 645 nm                                    |
| Angle of dispersion:             | Ca. 4 °                                   |
| Focus adjustable:                | -                                         |
| Adjustment:                      | Potentiometer, 270°                       |
| Light spot size (distance):      | Ø 50 mm (750 mm)                          |

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

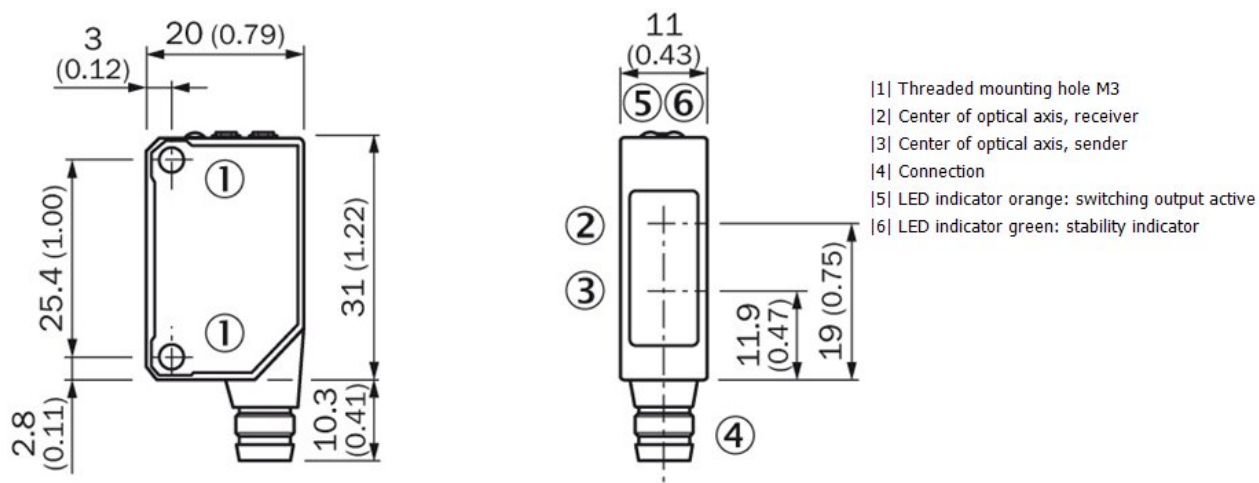
#### Mechanics/electronics

|                                    |                                   |
|------------------------------------|-----------------------------------|
| Supply voltage:                    | 10 V DC ... 30 V DC <sup>1)</sup> |
| Ripple:                            | ± 10 % <sup>2)</sup>              |
| Power consumption:                 | ≤ 30 mA <sup>3)</sup>             |
| Output type:                       | PNP, open collector               |
| Switching mode:                    | Light/dark-switching              |
| Switching mode selector:           | Manually selectable               |
| Signal voltage PNP HIGH/LOW:       | UV - 1,8 V/ca. 0 V                |
| Output current I <sub>max.</sub> : | ≤ 100 mA                          |

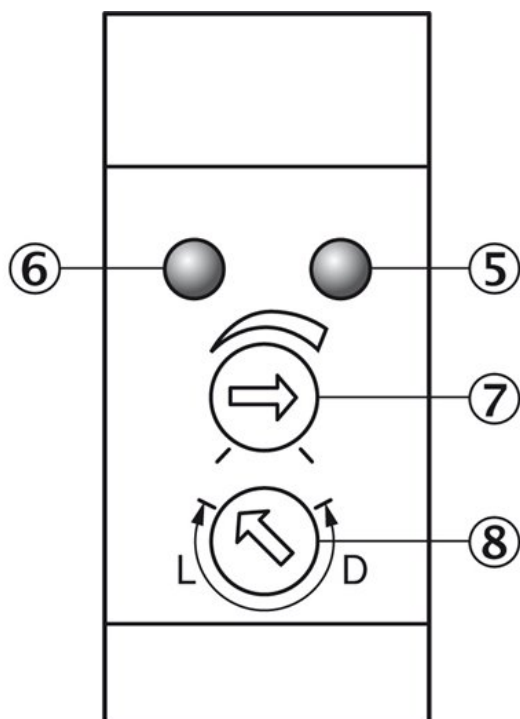
|                                |                                                   |
|--------------------------------|---------------------------------------------------|
| Response time:                 | $\leq 0.5 \text{ ms}$ <sup>4)</sup>               |
| Switching frequency:           | 1,000 Hz <sup>5)</sup>                            |
| Connection type:               | Connector M8, 4-pin                               |
| Circuit protection:::          | A, B, D <sup>6)</sup> <sup>7)</sup> <sup>8)</sup> |
| Weight:                        | 9 g                                               |
| Polarisation filter:           | -                                                 |
| Housing material:              | ABS/PC/POM, Plastic                               |
| Optics material:               | PMMA                                              |
| Enclosure rating:              | IP 67                                             |
| Ambient operating temperature: | -25 °C ... 55 °C                                  |
| Ambient storage temperature:   | -40 °C ... 70 °C                                  |

<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> B = inputs and output reverse-polarity protected    <sup>8)</sup> D = outputs overcurrent and short-circuit protected

## Dimensional drawing

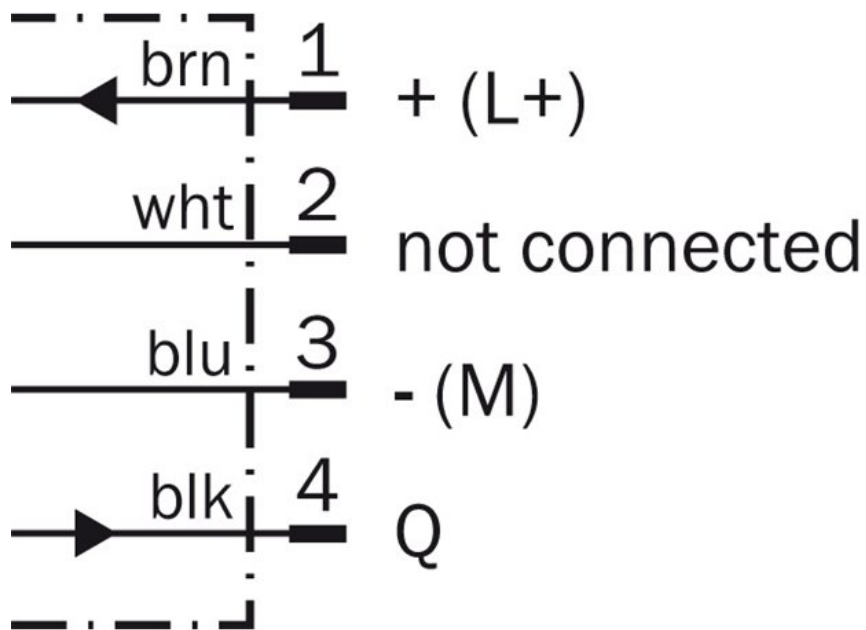


## Adjustments possible

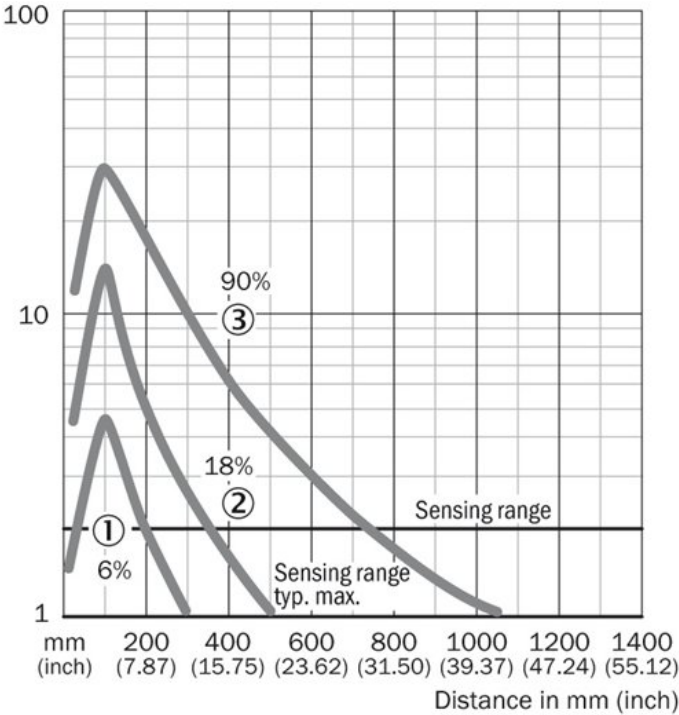


- [5] LED indicator orange: switching output active
- [6] LED indicator green- power on
- [7] Sensing range adjustment: potentiometer, 270°
- [8] Light/ dark rotary switch L =  
light switching, D = dark switching

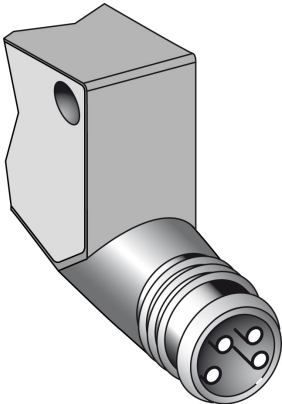
## Connection diagram



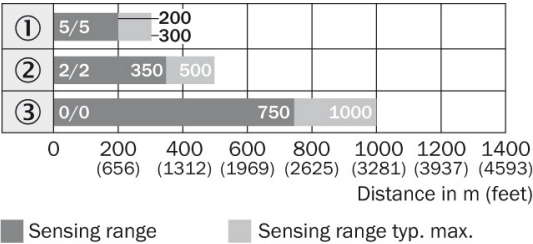
Characteristic curve



Connection type



Sensing range diagram



- 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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