



## Photoelectric sensors W100, Photoelectric proximity sensor, energetic

WT100-P1402



**Model Name** > [WT100-P1402](#)  
**Part No.** > [6037853](#)



*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

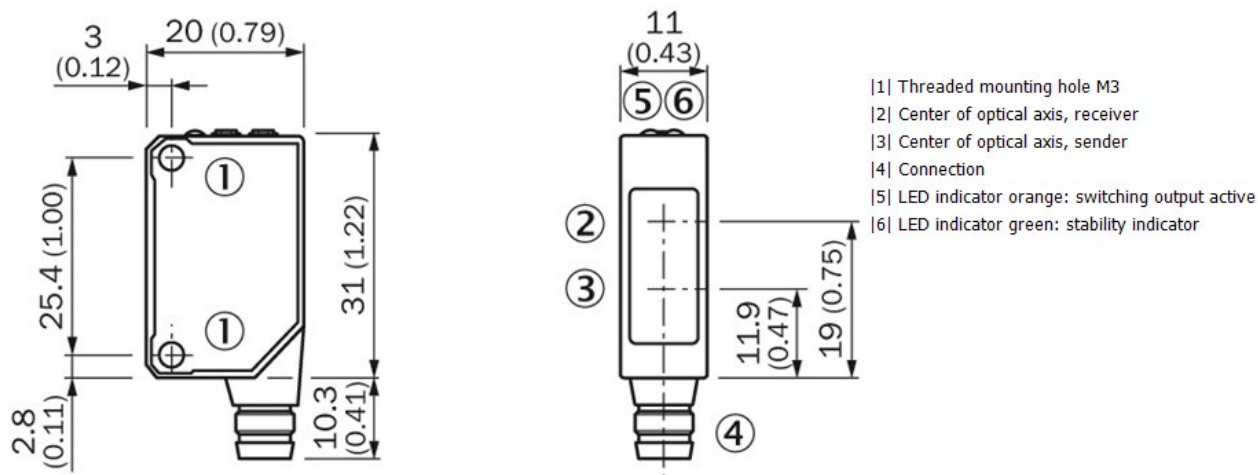
#### Mechanics/electronics

|                                    |                                   |
|------------------------------------|-----------------------------------|
| 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:               | Cable, 3-wire, 2 m <sup>6)</sup>                  |
| Cable material:                | PVC                                               |
| Conductor cross-section:       | 0.18 mm <sup>2</sup>                              |
| Circuit protection:::          | A, B, D <sup>7)</sup> <sup>8)</sup> <sup>9)</sup> |
| Weight:                        | 53 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> Do not bend below 0 °C <sup>7)</sup> A =  $V_S$  connections reverse-polarity protected <sup>8)</sup> B = inputs and output reverse-polarity protected <sup>9)</sup> D = outputs overcurrent and short-circuit protected

## Dimensional drawing

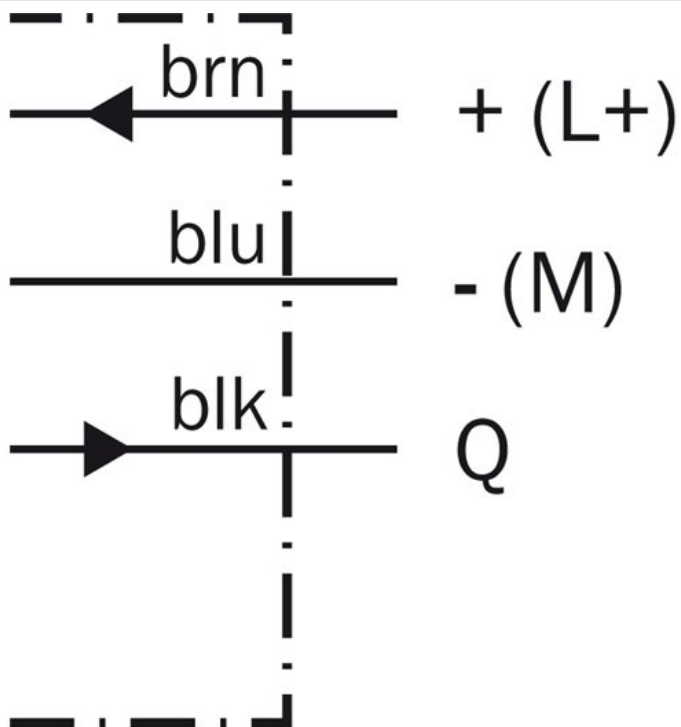


## Adjustments possible

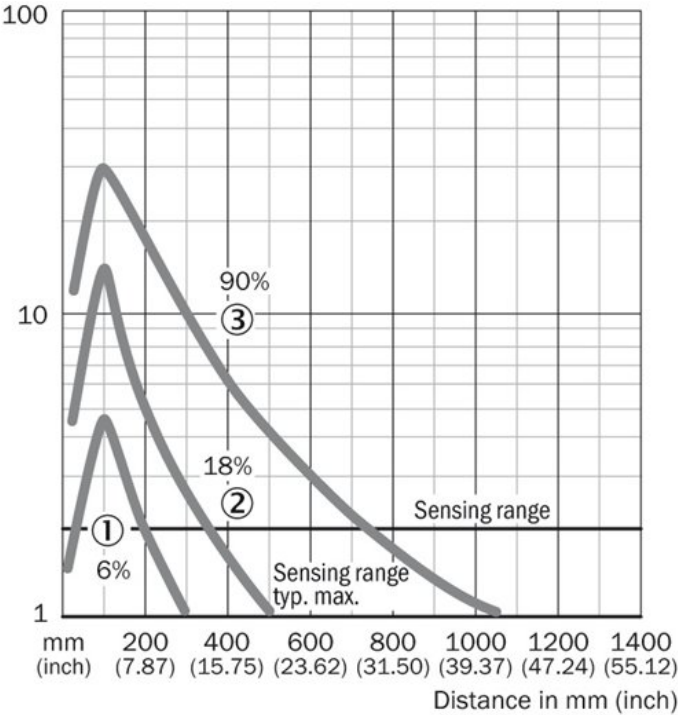


- |5| LED indicator orange: switching output active
- |6| LED indicator green- power on
- |7| Sensing range adjustment: potentiometer, 270°
- |8| Light/ dark rotary switch L =  
light switching, D = dark switching

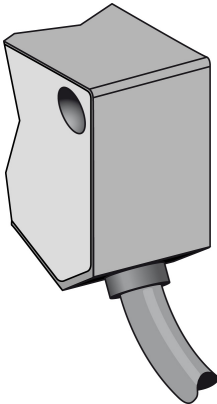
## Connection diagram



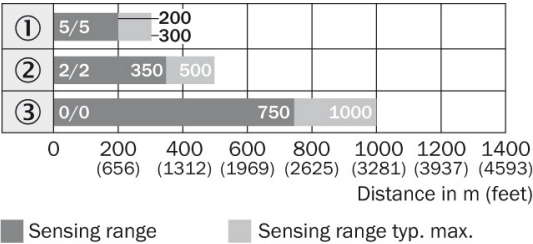
Characteristic curve



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

#### **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](http://www.sick.com)