



Photoelectric sensors  
W100, Photoelectric proximity sensor,  
Background blanking

WT100-P1412



**Model Name** > **WT100-P1412**  
**Part No.** > **6026110**



*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

**Product will be phased out and can be ordered until 31.12.2015.**



**Features**

Sensor/detection principle:	Photoelectric proximity sensor, Background blanking
Dimensions (W x H x D):	11 mm x 31 mm x 20 mm
Housing design (light emission):	Rectangular
Sensing range max.:	4 mm ... 140 mm <sup>1)</sup>
Sensing range:	10 mm ... 100 mm
Type of light:	Visible red light
Light source:	LED <sup>2)</sup>
Wave length:	680 nm
Focus adjustable:	-
Adjustment:	Potentiometer, 270 °
Light spot size (distance):	Ø 8 mm (90 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

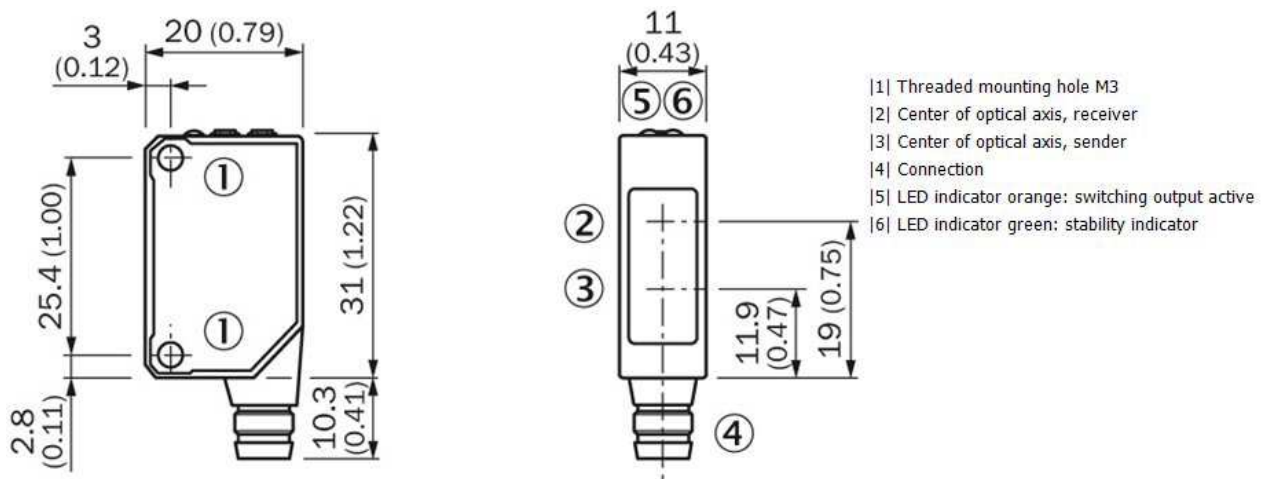
**Mechanics/electronics**

Supply voltage:	10 V DC ... 30 V DC <sup>1)</sup>
Residual 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
Output current I <sub>max.</sub> :	≤ 100 mA
Response time:	≤ 0.5 ms <sup>4)</sup>

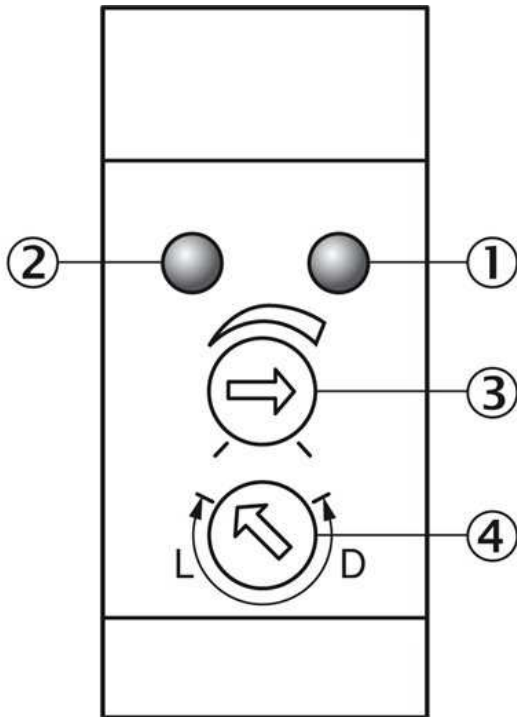
Switching frequency:	1,000 Hz <sup>5)</sup>
Electrical connection:	Cable, 3-wire, 2 m <sup>6)</sup>
Cable material:	PVC
Conductor cross-section:	0.18 mm <sup>2</sup>
Circuit protection:::	A, B, D <sup>7)</sup> <sup>8)</sup> <sup>9)</sup>
Weight:	53 g
Polarisation filter:	-
Special device:	-
Optics material:	PMMA
Enclosure rating:	IP 65
Ambient temperature operation:	-25 °C ... +55 °C
Ambient storage temperature:	-40 °C ... +70 °C
Signal voltage PNP HIGH/LOW:	UV - 1,8 V/ca. 0 V
Housing material:	ABS/PC/POM, Plastic

1) 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

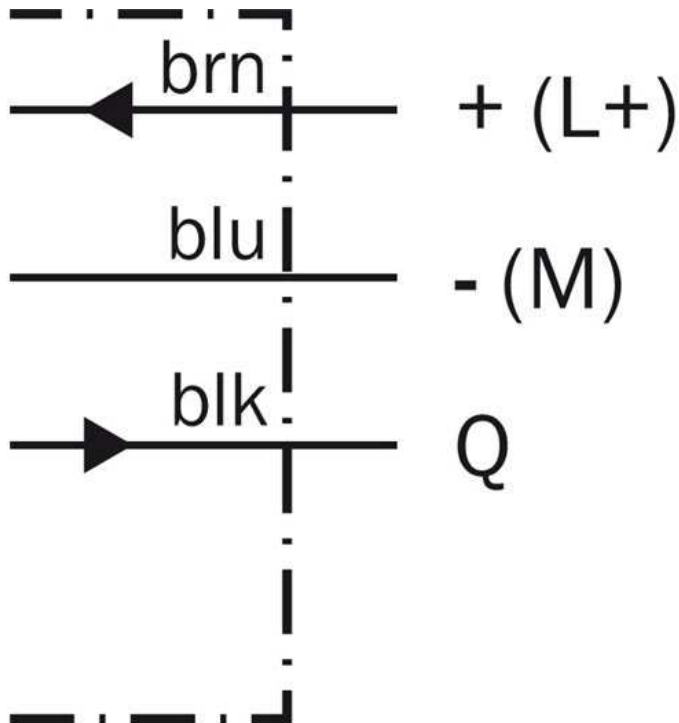


## Adjustments possible

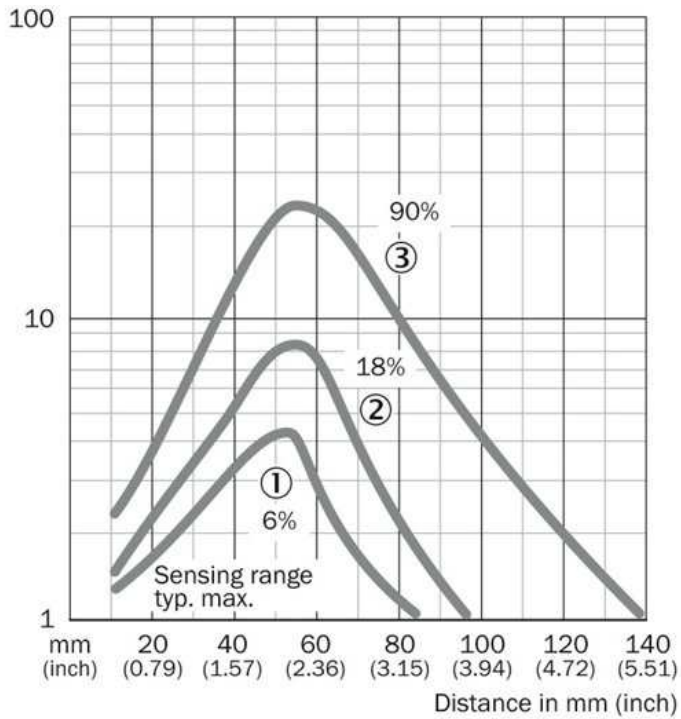


- |1| LED indicator orange: switching output active
- |2| LED indicator green: power on
- |3| Sensing range adjustment: potentiometer
- |4| Light/ dark rotary switch: L = light switching, D = dark switching

## Connection diagram

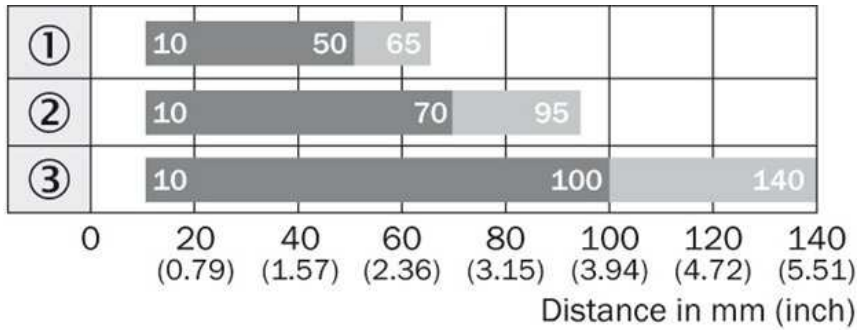


## Characteristic curve



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

## Sensing range diagram



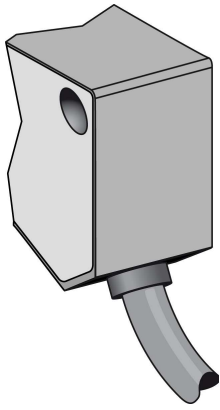
- |1| Sensing range on black, 6 % remission
- |2| Sensing range on gray, 18 % remission
- |3| Sensing range on white, 90 % remission

■ Sensing range      ■ Sensing range typ. max.

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

Connection type

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