



Photoelectric sensors  
W100, Photoelectric proximity sensor, energetic

WT100-N4409



**Model Name** > [WT100-N4409](#)  
**Part No.** > [6036503](#)



*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

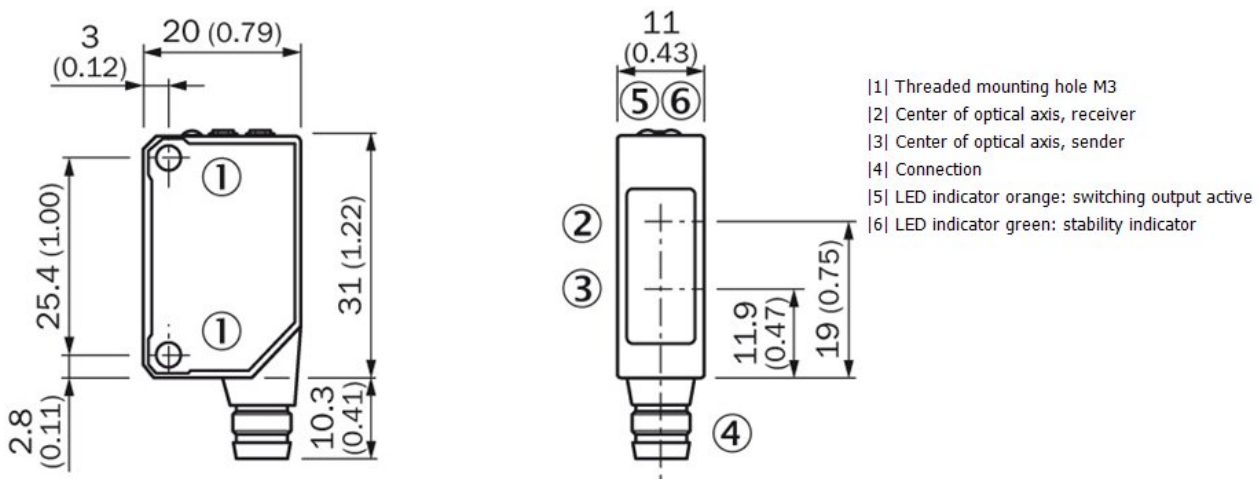
**Mechanics/electronics**

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:	NPN, open collector
Switching mode:	Light/dark-switching
Switching mode selector:	Manually selectable
Signal voltage NPN HIGH/LOW:	Approx. VS / < 1.8 V
Output current I <sub>max.</sub> :	≤ 100 mA

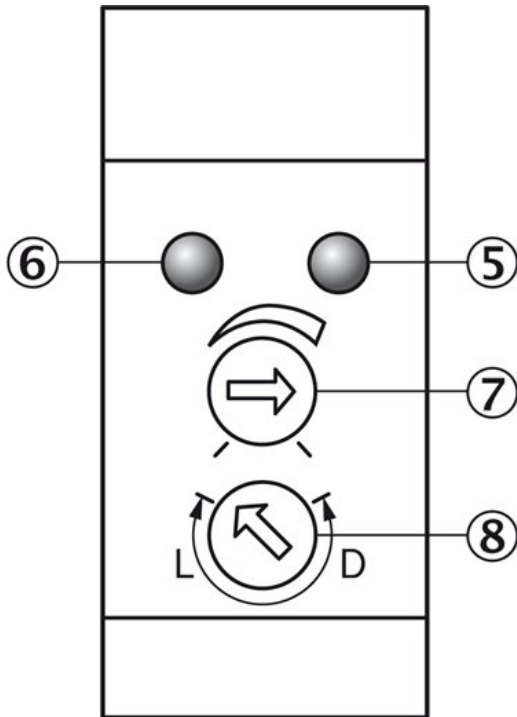
Response time:	≤ 0.5 ms <sup>4)</sup>
Switching frequency:	1,000 Hz <sup>5)</sup>
Connection type:	Connector M8, 4-pin
Circuit protection:::	A, B, D <sup>6) 7) 8)</sup>
Weight:	9 g
Polarisation filter:	-
Housing material:	ABS/PC/POM, Plastic
Optics material:	PMMA
Enclosure rating:	IP 67
Items supplied:	Stainless steel mounting bracket (1.4301/304) BEF-W100-A
Ambient operating temperature:	-25 °C ... 55 °C
Ambient storage temperature:	-40 °C ... 70 °C

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> 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

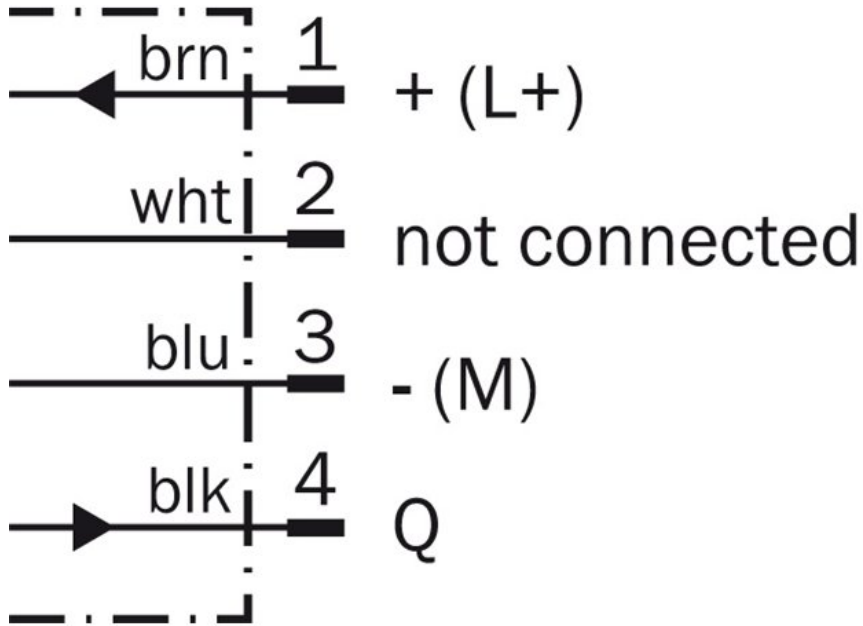


## Adjustments possible

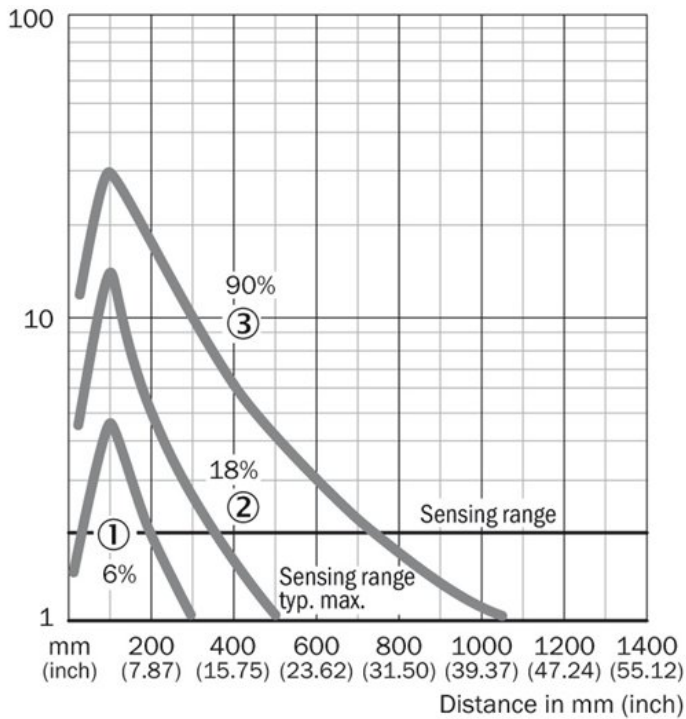


- |5| LED indicator orange: switching output active
- |6| LED indicator green- power on
- |7| Sensing range adjustment: potentiometer, 270°
- |8| Light/ dark rotary switch L = light switching, D = dark switching

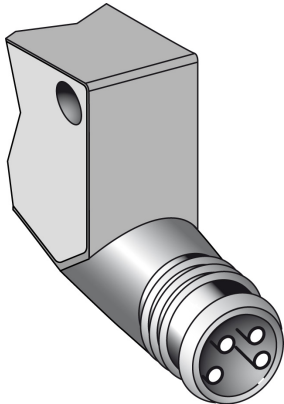
## Connection diagram



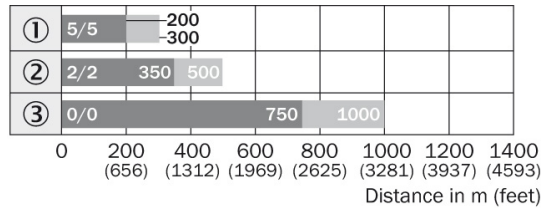
## Characteristic curve



## Connection type



## Sensing range diagram



■ 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

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