

ONLINE DATA SHEET
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Photoelectric sensors
W100-2, Photoelectric proximity sensor, Background blanking

WT100-2P1419



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W100-2, Photoelectric proximity sensor, Background blanking

Type > WT100-2P1419
Part No. > 6052378





Illustration may differ

At a glance

- Standard miniature housing with integrated M3 threaded mounting holes
- Bright emitted light spot and clearly visible indicator LEDs
- Light/dark switching and sensitivity adjustment possible
- Effective background blanking

Your benefits

- Straightforward alignment thanks to bright light spot and clearly visible indicator LEDs
- Compatibility with a number of common mounting systems due to standard housing with 1-inch hole spacing and integrated M3 threaded mounting hole
- Highly reliable and durable despite optical interference and mechanical loads
- Precise detection, irrespective of reflective objects and backgrounds

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 [1]
Sensing range:	10 mm ... 100 mm [2]
Type of light:	Visible red light
Light source:	LED [3]
Wave length:	632 nm
Adjustment:	Potentiometer
Light spot size (distance):	Ø 8 mm (90 mm)

[1] [2] Object with 90 % reflectance (referred to standard white, DIN 5033) [3] Average service life of 100,000 h at T_A = +25 °C

Mechanics/electronics

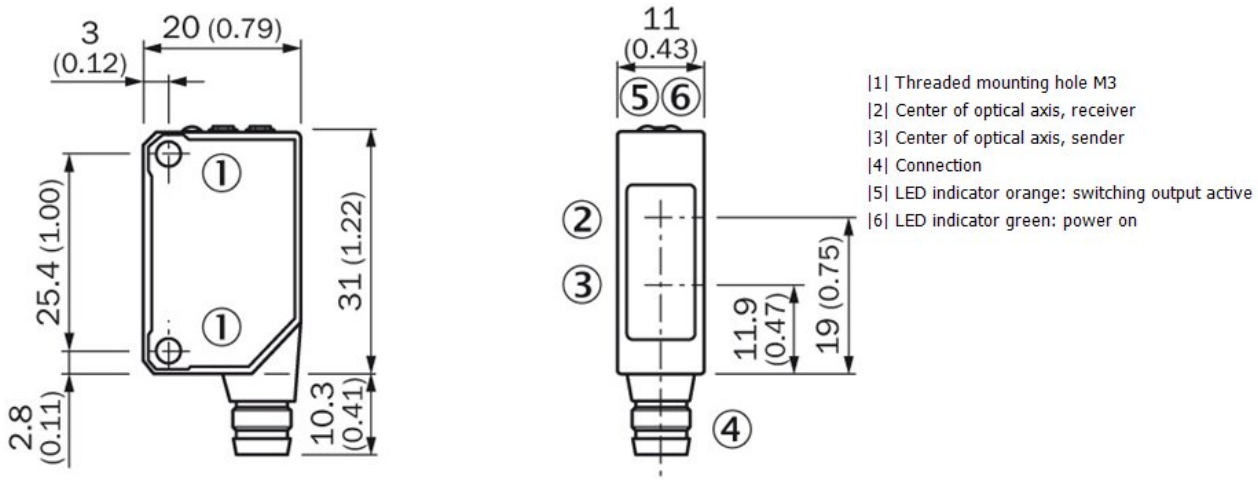
Supply voltage:	10 V DC ... 30 V DC [1]
Ripple:	± 10 % [2]
Current consumption:	≤ 30 mA [3]
Output type:	PNP
Switching mode:	Light/dark switching
Switching mode selector:	Selectable via light/dark rotary switch
Output current Imax.:	100 mA

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Response time:	≤ 0.5 ms [4]
Switching frequency:	1,000 Hz [5]
Connection type:	Cable, 3-wire, 2 m [6]
Cable material:	PVC
Conductor cross-section:	0.18 mm²
Circuit protection:::	A, B, D [7] [8] [9]
Protection class:	III
Special device:	-
Optics material:	PMMA
Enclosure rating:	IP 67
Items supplied:	Mounting bracket BEF-W100-A
Ambient operating temperature:	-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

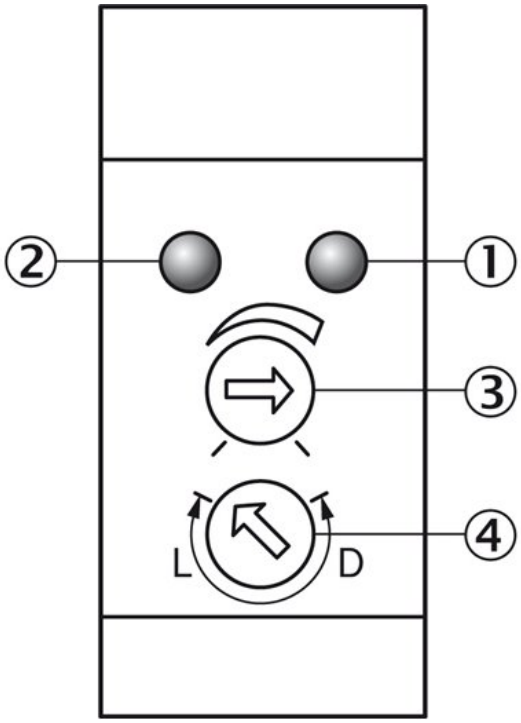
[1] Limit values [2] May not exceed or fall short of V_S tolerances [3] Without load [4] Signal transit time with resistive load [5] With light/dark ratio 1:1 [6] Do not bend below 0 °C [7] A = V_S connections reverse-polarity protected [8] B = output reverse-polarity protected [9] D = outputs overcurrent and short-circuit protected

Dimensional drawing



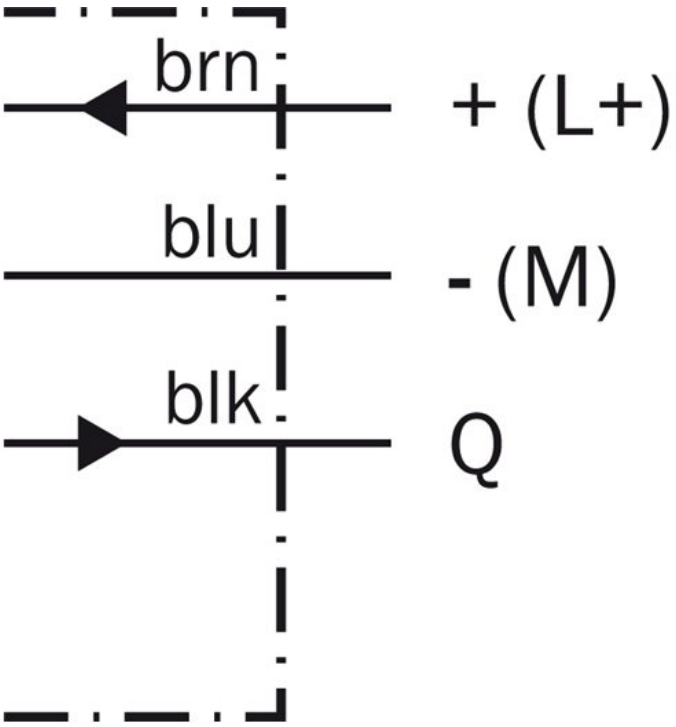
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Adjustments possible



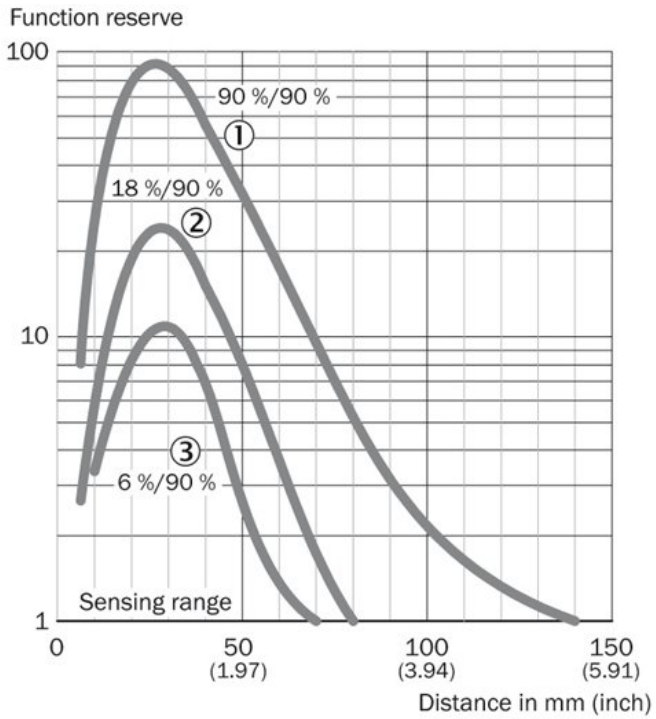
|1| LED indicator orange: switching output active
|2| LED indicator green: power on
|3| Sensing range adjustment: potentiometer
|4| Light/ dark rotary switch: L =
light switching, D = dark switching

Connection diagram



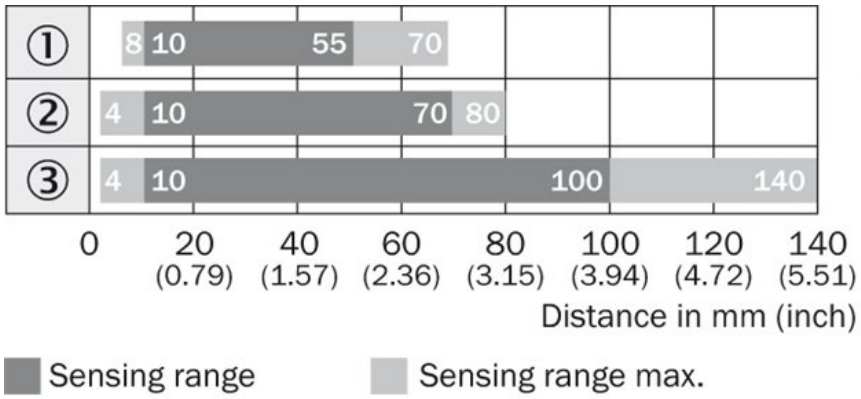
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Characteristic curve



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

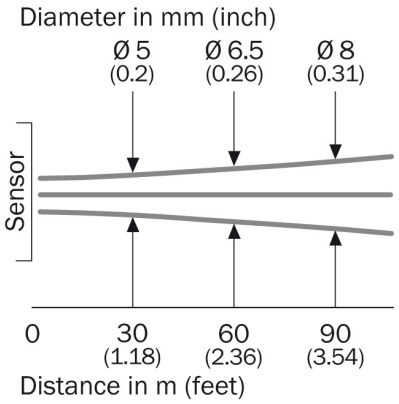
Sensing range diagram



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

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Light spot size



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