

ONLINE DATA SHEET
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Photoelectric sensors
W100-2, Photoelectric retro-reflective sensor

WL100-2N1439



SICK
Sensor Intelligence.

Photoelectric sensors
W100-2, Photoelectric retro-reflective sensor

Type	**> WL100-2N1439**
Part No.	**> 6052357**





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
- Long sensing ranges of up to 7.2 m on PL80A reflector

Your benefits

- Long sensing ranges of up to 7.2 m thanks to a high functional reserve
- 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

Features

Sensor/detection principle:	Photoelectric retro-reflective sensor
Dimensions (W x H x D):	11 mm x 31 mm x 20 mm
Housing design (light emission):	Rectangular
Sensing range max.:	0.01 m ... 7.2 m [1)]
Sensing range:	0.01 m ... 5.5 m [2)]
Type of light:	Visible red light
Light source:	LED [3)]
Wave length:	632 nm
Adjustment:	Potentiometer
Light spot size (distance):	Ø 280 mm (4 m)

[1)] [2)] PL80A [3)] Average service life of 100,000 h at T_A = +25 °C

Mechanics/electronics

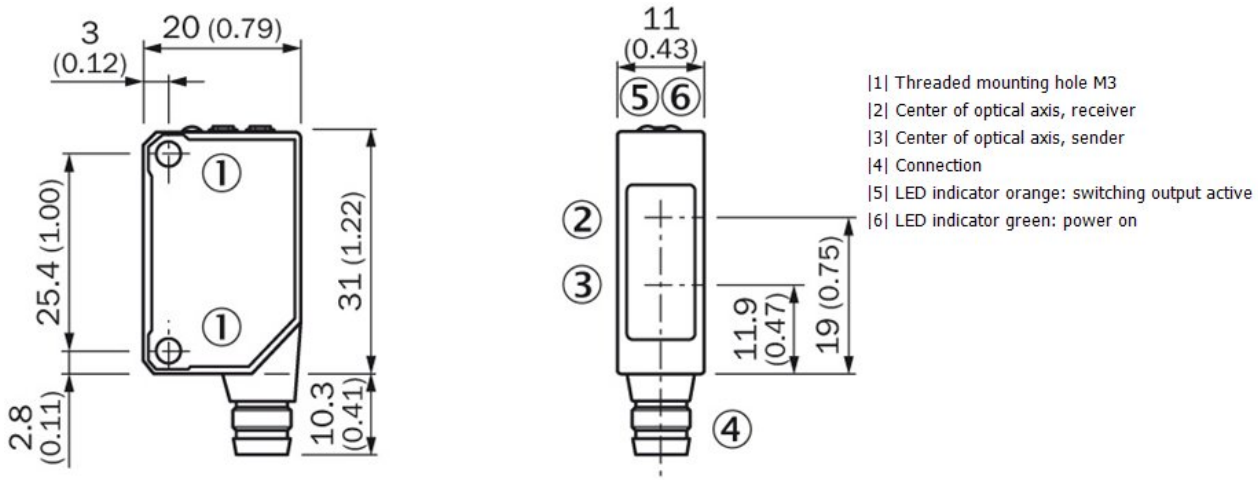
Supply voltage:	10 V DC ... 30 V DC [1)]
Ripple:	± 10 % [2)]
Current consumption:	≤ 30 mA [3)]
Output type:	NPN
Switching mode:	Light/dark switching
Switching mode selector:	Selectable via light/dark rotary switch
Output current Imax.:	100 mA
Response time:	≤ 0.5 ms [4)]

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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
Polarisation filter:	✓
Special device:	-
Optics material:	PMMA
Enclosure rating:	IP 67
Items supplied:	Mounting bracket BEF-W100-A, Reflector P250
Ambient operating temperature:	-25 °C ... +55 °C
Ambient storage temperature:	-40 °C ... +70 °C
Signal voltage NPN HIGH/LOW:	Approx. VS／< 1.8 V
Housing material:	ABS/PC/POM, Plastic

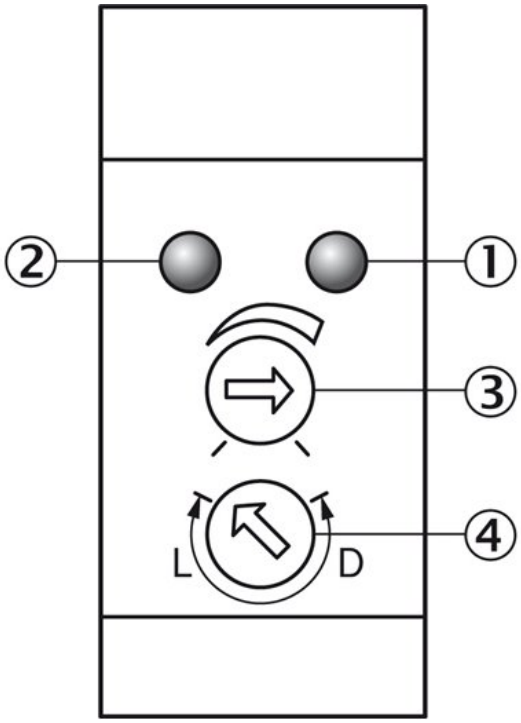
[1] Limit values [2] May not exceed or fall short of V_S tolerances [3] Without load [4] Signal transit time with resistive load [5] With light/dark ratio 1:1 [6] Do not bend below 0 °C [7] A = V_S connections reverse-polarity protected [8] B = output reverse-polarity protected [9] D = outputs overcurrent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

Dimensional drawing



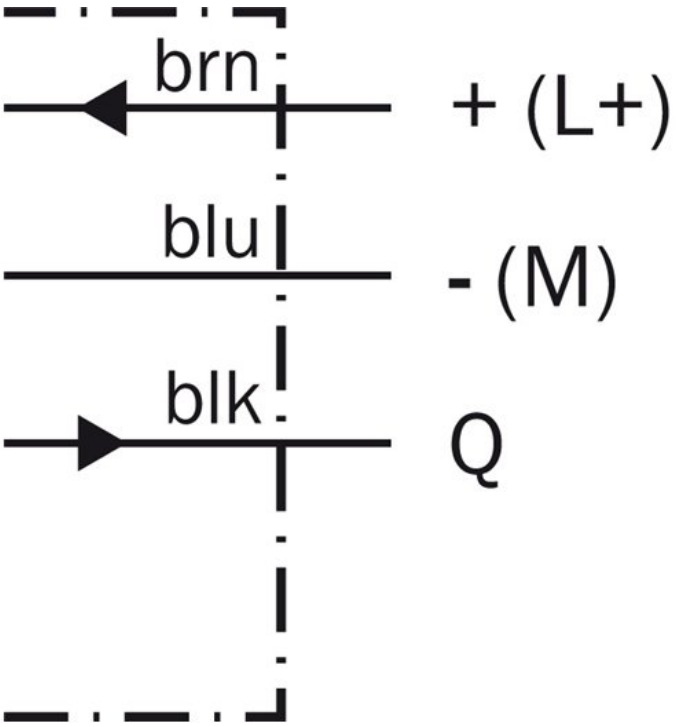
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Adjustments possible



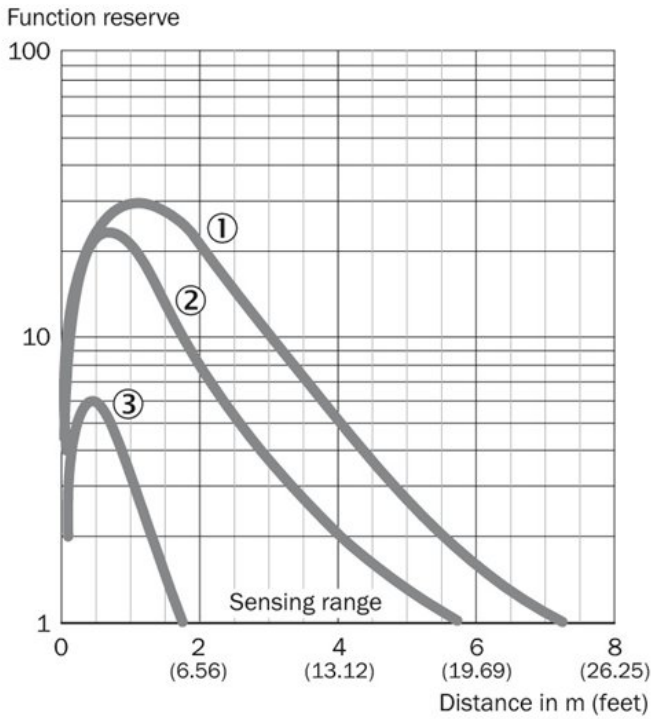
|1| LED indicator orange: switching output active
|2| LED indicator green: power on
|3| Sensing range adjustment: potentiometer
|4| Light/ dark rotary switch: L =
light switching, D = dark switching

Connection diagram



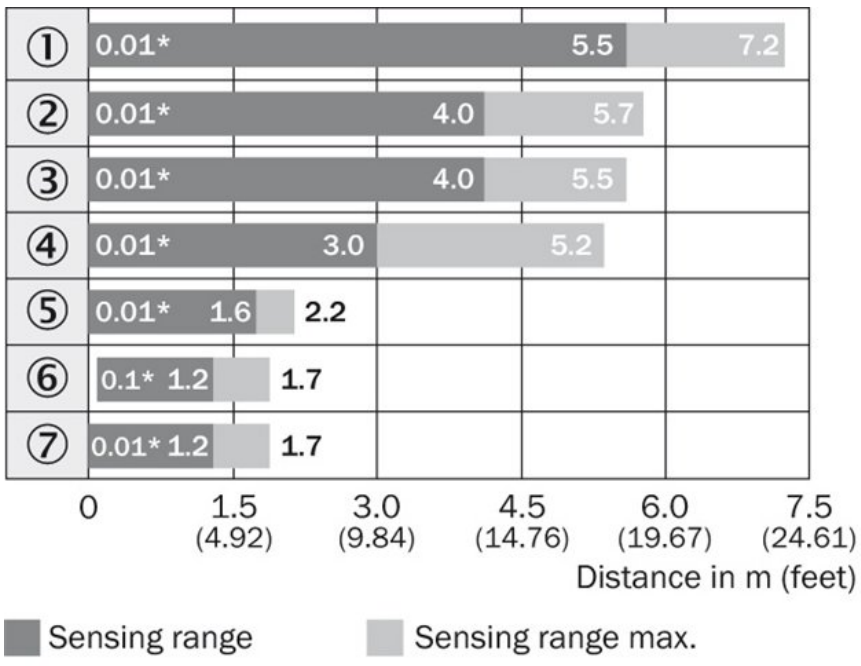
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Characteristic curve



|1| PL80A
|2| P250
|3| Reflective tape Diamond Grade
(100 mm x 100 mm/3.94 inch x 3.94 inch)

Sensing range diagram

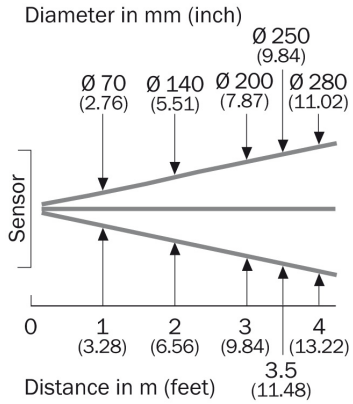


|1| PL80A
|2| P250
|3| PL50A, PL40A
|4| PL30A, PL31A
|5| PL20A
|6| Reflective tape Diamond Grade
|7| P45

*Close-up range at maximum sensitivity

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Light spot size



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