



Photoelectric sensors
W100-2, Through-beam photoelectric sensor

WS/WE100-2N3439



Type > [WS/WE100-2N3439](#)
Part No. > [6052364](#)



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
- Special slotted diaphragms and polarization filters available
- Long sensing ranges of up to 33 m

Your benefits

- Long sensing ranges and safe usage 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
- Special accessories mean that the optical characteristics can be further enhanced depending on the application
- Highly reliable and durable despite optical interference and mechanical loads



Features

Sensor/detection principle:	Through-beam photoelectric sensor
Dimensions (W x H x D):	11 mm x 31 mm x 20 mm
Housing design (light emission):	Rectangular
Sensing range max.:	0 m ... 33 m
Sensing range:	0 m ... 20 m
Type of light:	Visible red light
Light source:	LED ¹⁾
Wave length:	632 nm
Adjustment:	Potentiometer, 270°
Light spot size (distance):	Ø 850 mm (12 m)

¹⁾ Average service life of 100,000 h at T_A = +25 °C

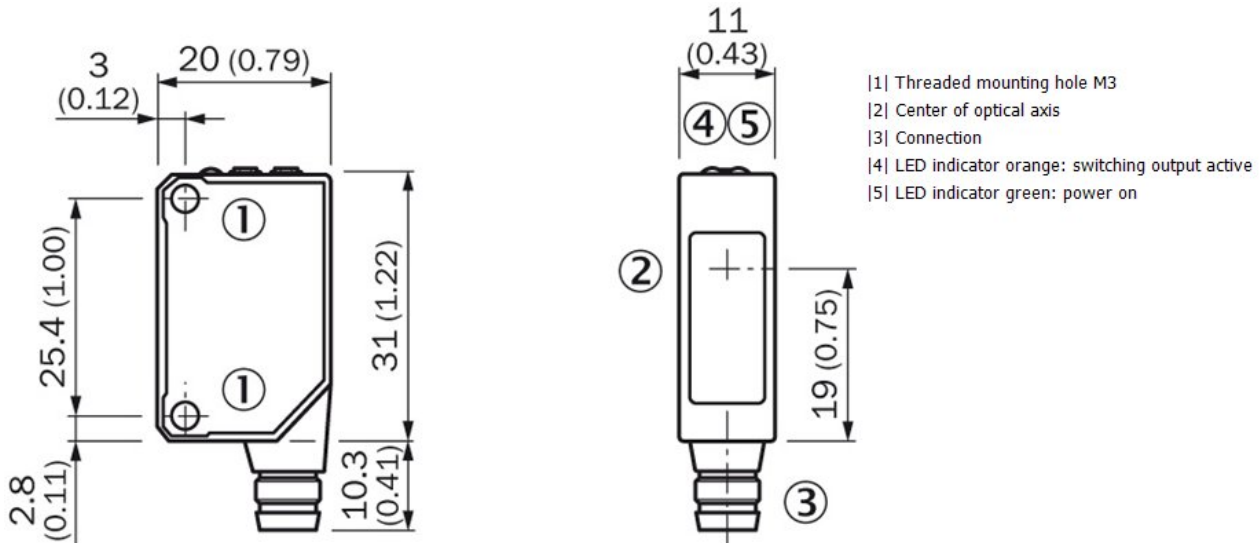
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	± 10 % ²⁾
Power consumption, sender:	≤ 15 mA ³⁾
Power consumption, receiver:	≤ 20 mA ⁴⁾
Output type:	NPN

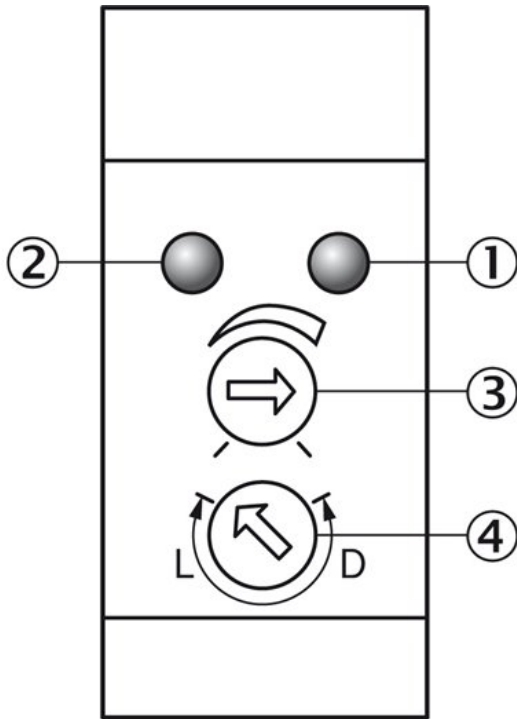
Switching mode:	Light/dark switching
Switching mode selector:	Selectable via light/dark rotary switch
Output current I _{max} ..:	100 mA
Response time:	≤ 0.5 ms ⁵⁾
Switching frequency:	1,000 Hz ⁶⁾
Connection type:	Connector M8, 3-pin
Circuit protection:::	A, B, D ^{7) 8) 9)}
Protection class:	III
Special 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 NPN HIGH/LOW:	Approx. V _S / < 1.8 V
Housing material:	ABS/PC/POM, Plastic

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

Dimensional drawing



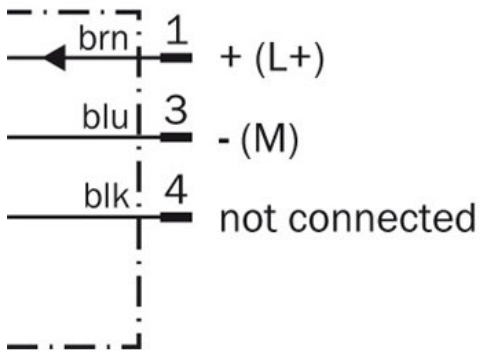
Adjustments possible



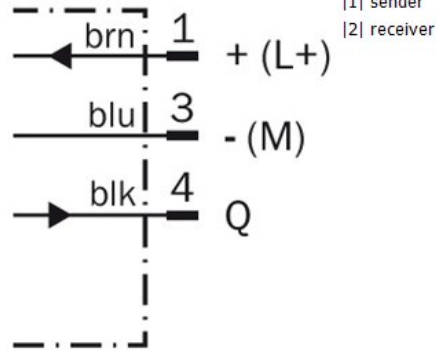
- |1| LED indicator orange: switching output active
- |2| LED indicator green: power on
- |3| Sensing range adjustment: potentiometer
- |4| Light/ dark rotary switch: L = light switching, D = dark switching

Connection diagram

①

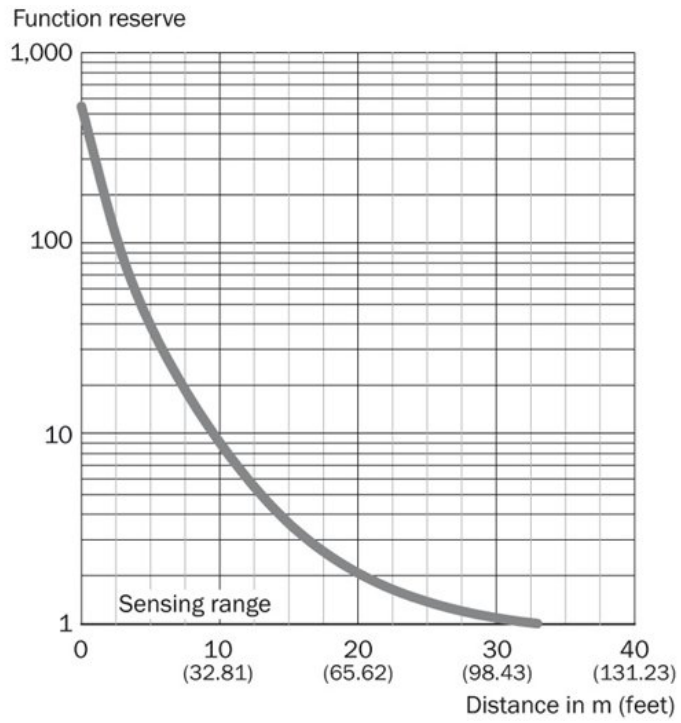


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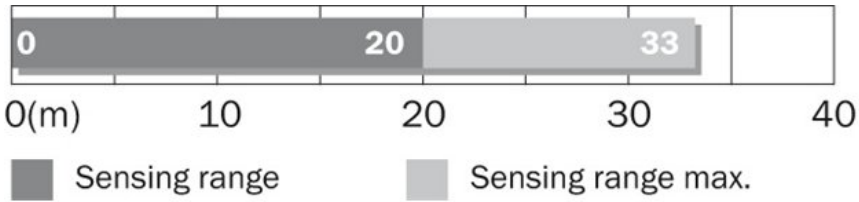


- |1| sender
- |2| receiver

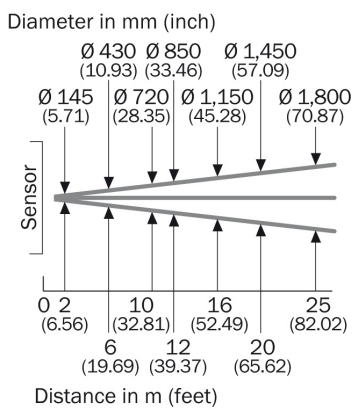
Characteristic curve



Sensing range diagram



Light spot size



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