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Photoelectric sensors
W100, Through-beam photoelectric sensor

WS/WE100-N1332

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Model Name > WS/WE100-N1332
Part No. > 6026026

Illustration may differ

At a glance

- Standard miniature housing with M3 threaded mounting holes
- Optics with standard red LED or bright light LED
- Special slotted masks and polarizing filter tip adapters available as accessories
- Light/dark switching and sensitivity adjustment via rotary switch possible

Your benefits

- Highly visible light spot simplifies alignment
- Less contamination due to high optical operating reserve
- M3 threaded mounting holes provide easy installation
- Special accessory allows optimizing the optical performance depending on the application

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, Slim
Sensing range max.:	0 m ... 15 m
Sensing range:	0 m ... 12 m
Type of light:	Visible red light
Light source:	LED [1)]
Wave length:	680 nm
Angle of dispersion:	Ca. 7.2 °
Focus adjustable:	-
Light spot size (distance):	Ø 1,500 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 switching
Output characteristic:	Open collector
Signal voltage NPN HIGH/LOW:	Approx. VS/< 1.8 V

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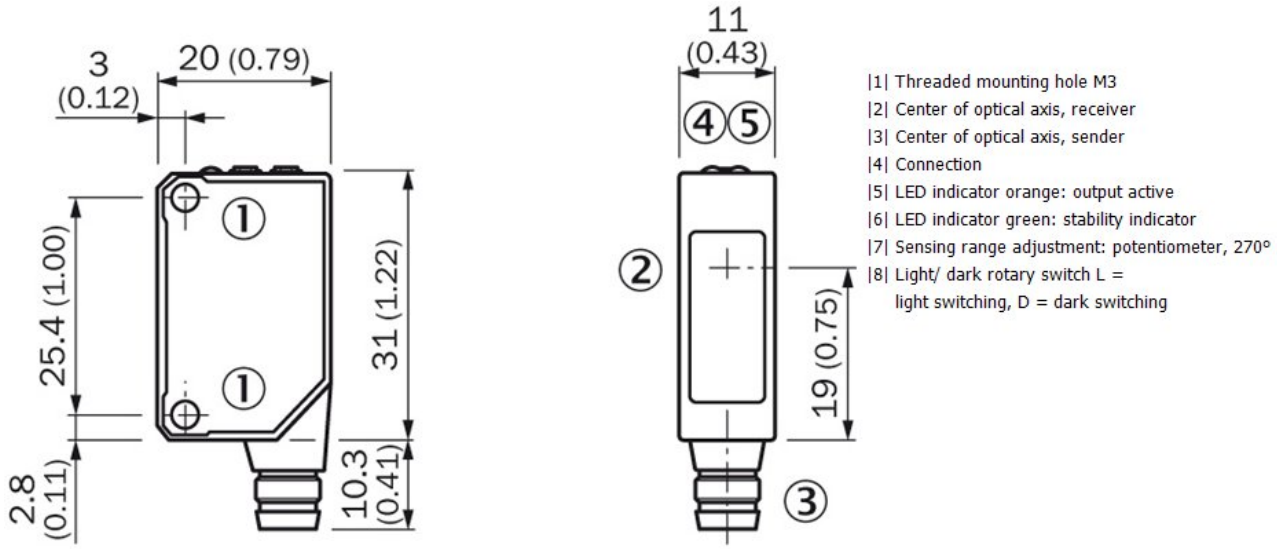
Output current Imax.:	≤ 100 mA
Response time:	≤ 0.5 ms [5]
Switching frequency:	1,000 Hz [6]
Angle of reception:	Ca. 15 °
Connection type:	Cable, 3-wire, 2 m [7]
Cable material:	PVC
Conductor cross-section:	0.18 mm²
Circuit protection:::	A, B, D [8] [9] [10]
Weight:	106 g
Polarisation filter:	-
Housing material:	ABS/PC, Plastic
Optics material:	PMMA
Enclosure rating:	IP 65
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 [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] Do not bend below 0 °C [8] A = V_S connections reverse-polarity protected [9] B = inputs and output reverse-polarity protected [10] D = outputs overcurrent and short-circuit protected

Dimensional drawing



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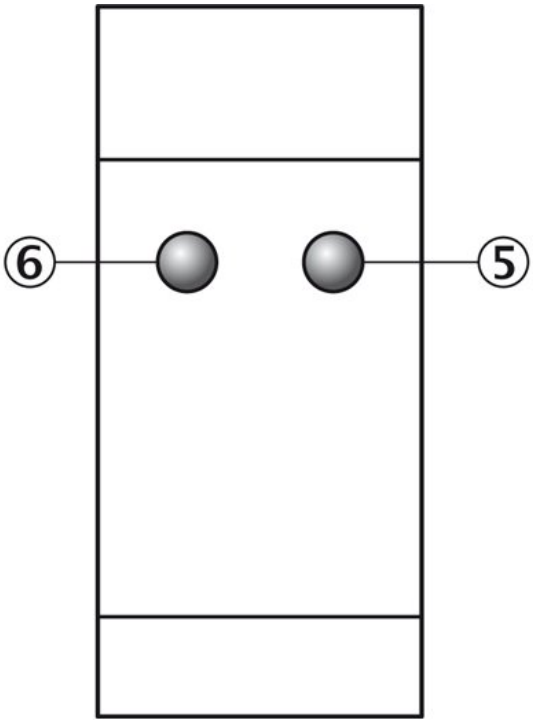
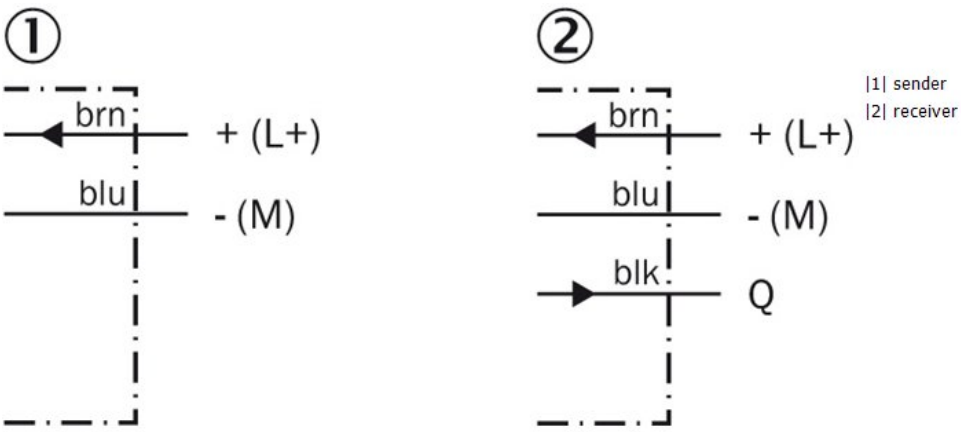
Adjustments possible



|5| Orange LED indicator : switching output active
|6| LED indicator green: stability indicator

Connection diagram



|1| sender
|2| receiver

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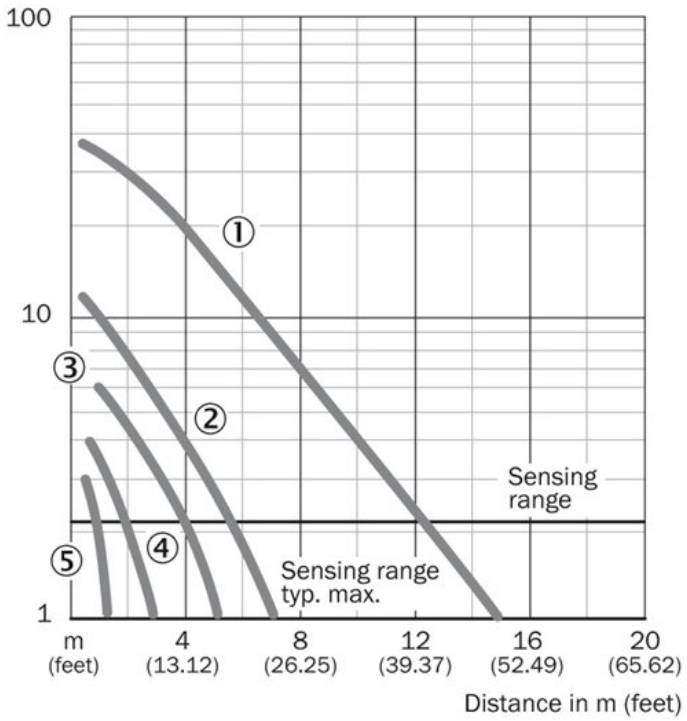
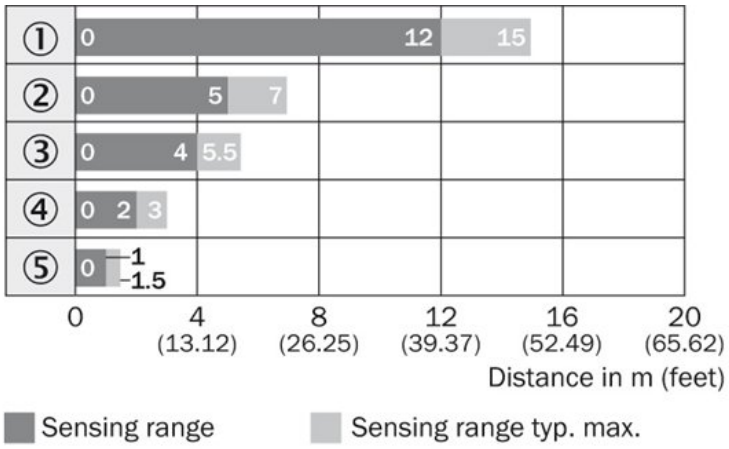
Characteristic curve



|1| Without masks
|2| With polarization filter tip adapter
|3| With slotted mask, width 2.0 mm
|4| With slotted mask, width 1.0 mm
|5| With slotted mask, width 0.5 mm

Sensing range diagram



|1| Without masks
|2| With polarization filter tip adapter
|3| With slotted mask, width 2.0 mm
|4| With slotted mask, width 1.0 mm
|5| With slotted mask, width 0.5 mm

Sensing range reduction when slotted masks are used

① Without masks/polarization filter
② With polarization filter tip adapter
③ With slotted mask, width 2.0 mm
④ With slotted mask, width 1.0 mm
⑤ With slotted mask, width 0.5 mm

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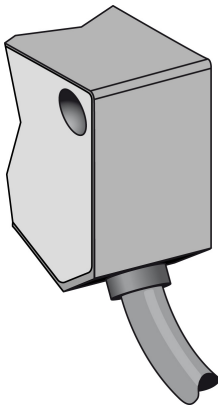
Connection type



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