



Photoelectric sensors  
W150, Through-beam photoelectric sensor

WS/WE150-S01



**Model Name** > [WS/WE150-S01](#)  
**Part No.** > [1018548](#)



*Illustration may differ*

**At a glance**

- Sensing distance of up to 4.4 m
- Sensitivity control on device via potentiometer
- Light/dark switching selectable via control wire

**Your benefits**

- Reliable detection of the smallest of objects
- Reliable detection of fast-moving objects
- Highly visible red light for easy alignment



**Features**

Sensor/detection principle:	Through-beam photoelectric sensor
Dimensions (W x H x D):	10 mm x 28 mm x 17.5 mm
Housing design (light emission):	Rectangular
Sensing range max.:	0 m ... 4.4 m
Sensing range:	0 m ... 4 m
Type of light:	Visible red light
Light source:	LED <sup>1)</sup>
Sensitivity adjustment:	Potentiometer, 270°
Angle of dispersion:	6°
Special features:	Leads and end cap yellow

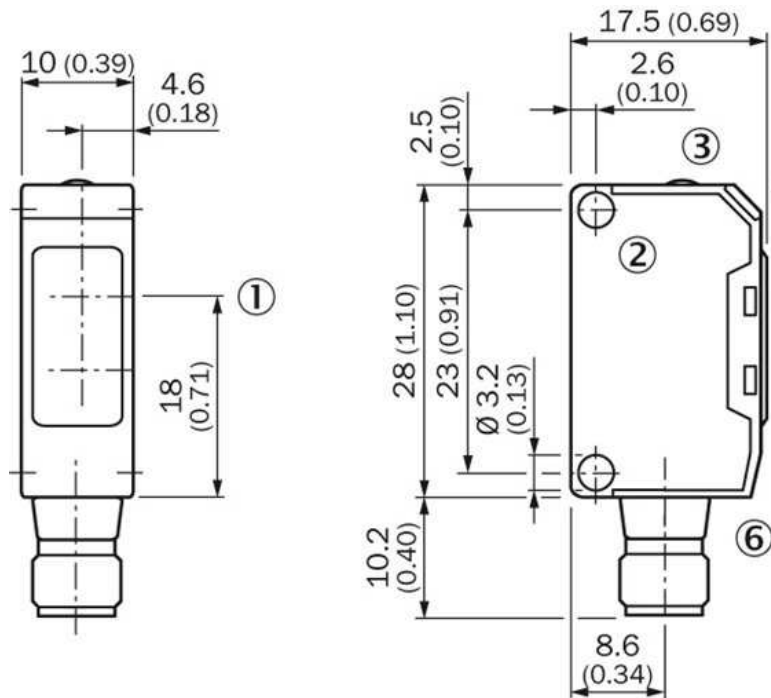
<sup>1)</sup> Average service life of 100,000 h at T<sub>A</sub> = +25 °C

**Mechanics/electronics**

Supply voltage:	10 V DC ... 30 V DC <sup>1)</sup>
Ripple:	± 10 % <sup>2)</sup>
Current consumption:::	15 <sup>3)</sup> 4) 5) 20
Angle of reception:	15°
Connection type::	Cable, 4-wire, 5 m <sup>6)</sup> 7)
Protection class:	II
Enclosure rating:	IP 67
Items supplied:	BEF-W150-A mounting bracket
Ambient operating temperature:	-25 °C ... 55 °C
Ambient storage temperature:	-40 °C ... 75 °C

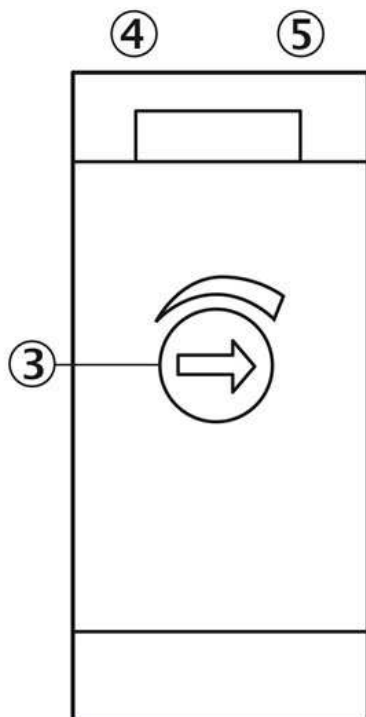
1) Limit values 2) May not exceed or fall short of  $V_S$  tolerances 3) 6) Sender 4) 7) Receiver 5) Without load

### Dimensional drawing



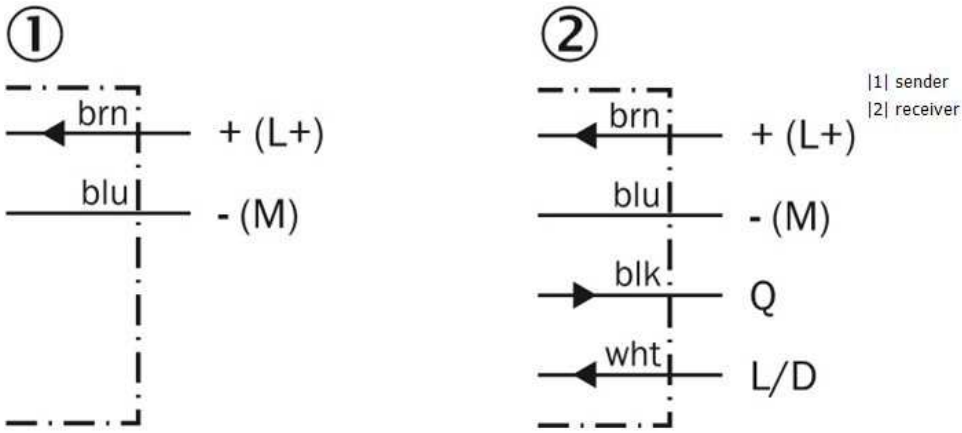
- |1| Standard direction of the material being scanned
- |2| Center of optical axis, receiver
- |3| Center of optical axis, sender
- |4| Mounting hole,  $\varnothing$  approx. 3.1 mm
- |5| Sensing range adjustment: potentiometer, 5 turns
- |6| LED indicator green: stability indicator
- |7| LED indicator orange: output active
- |8| Connection

### Adjustments possible

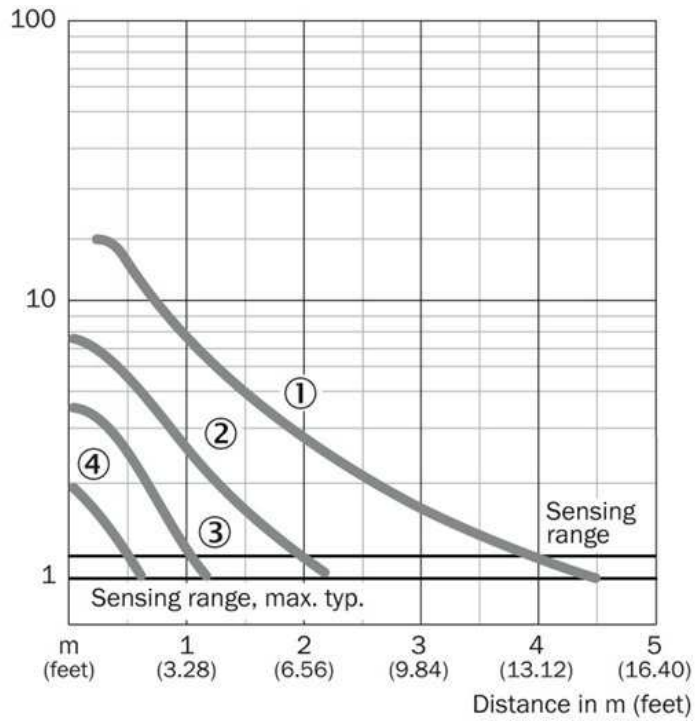


- |3| Sensitivity adjustment 270° (only WE)
- |4| LED indicator green: stability indicator (only WE)
- |5| LED indicator orange: output active (only WE)

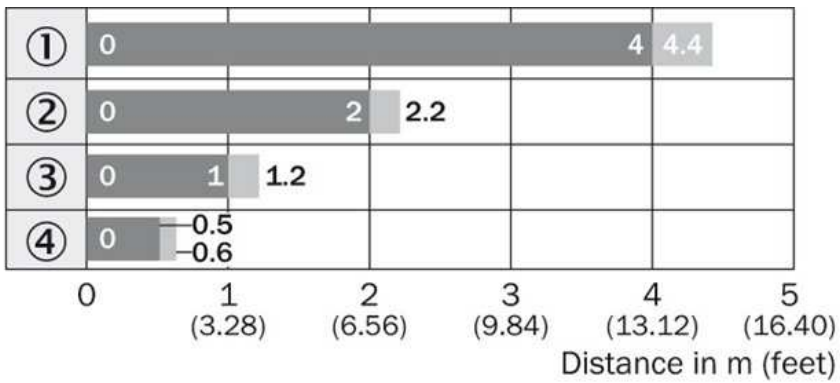
Connection diagram



Characteristic curve



## Sensing range diagram

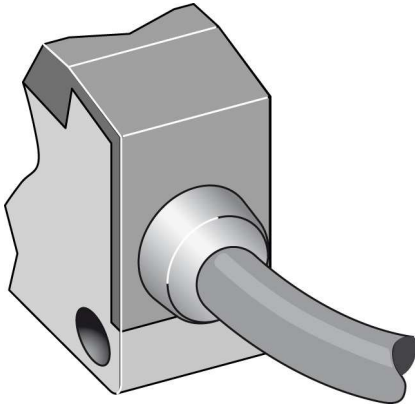


■ Sensing range                      ■ Sensing range typ. max.

### Reduction in sensing range with slotted masks

- ① Without slotted mask
- ② Mask aperture width 2.0 mm
- ③ Mask aperture width 1.0 mm
- ④ Mask aperture width 0.5 mm

### Connection type



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