



Photoelectric sensors
W150, Through-beam photoelectric sensor

WS/WE150-N132



Model Name > [WS/WE150-N132](#)
Part No. > [6011027](#)



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 ¹⁾ |
| Sensitivity adjustment: | Potentiometer, 270° |
| Angle of dispersion: | 6° |

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

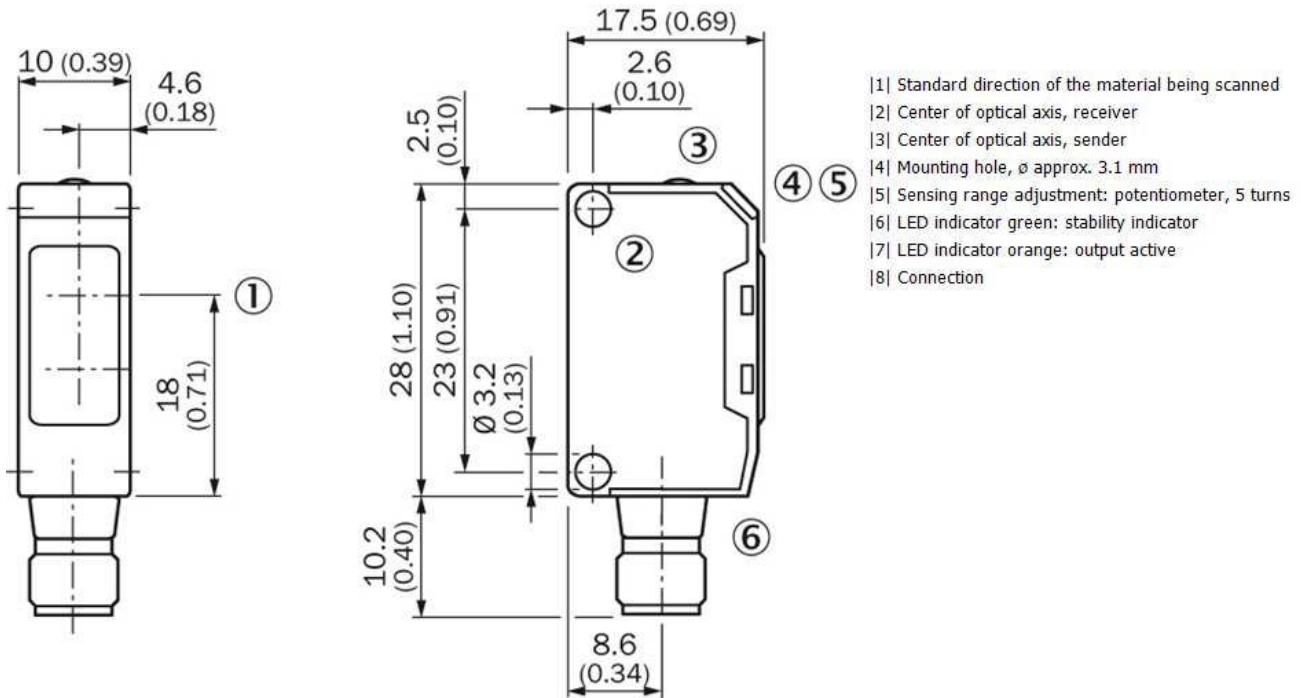
Mechanics/electronics

| | |
|------------------------------------|-----------------------------------|
| Supply voltage: | 10 V DC ... 30 V DC ¹⁾ |
| Residual ripple: | ± 10 % ²⁾ |
| Power consumption::: | 15 ³⁾ 4) 5) 20 |
| Output type: | NPN |
| Switching mode: | Light/dark switching |
| Output characteristic: | Open collector |
| Switching mode selector: | Control cable |
| Output current I _{max.} : | 100 |
| Response time: | ≤ 0.5 ms ⁶⁾ |
| Switching frequency: | 1,000 ⁷⁾ |
| Angle of reception: | 15° |
| Electrical connection: | Cable, 4-wire, 2 m ⁸⁾ |

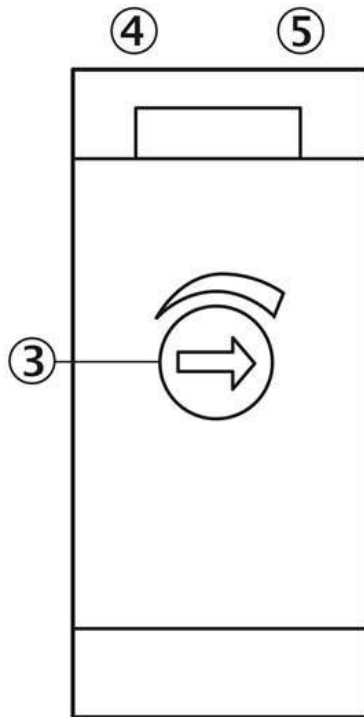
Cable material: PVC
 Conductor cross-section: 0.18 mm²
 Circuit protection::: A, B, C, D ⁹⁾ 10) 11) 12)
 Protection class: II
 Weight: 44 g
 Enclosure rating: IP 67
 Items supplied: BEF-W150-A mounting bracket
 Ambient temperature operation: -25 °C ... 55 °C
 Ambient storage temperature: -40 °C ... 75 °C
 UL File-No.: UL No. NRNT2.E128350 & cUL No. NRNT8.E128350

1) Limit values 2) May not exceed or fall short of V_S tolerances 3) Sender 4) Receiver 5) Without load 6) Signal transit time with resistive load 7) With light/dark ratio
 1:1 8) Do not bend below 0 °C 9) A = V_S connections reverse-polarity protected 10) B = inputs and output reverse-polarity protected 11) C = interference suppression 12) D = outputs overcurrent and short-circuit protected

Dimensional drawing



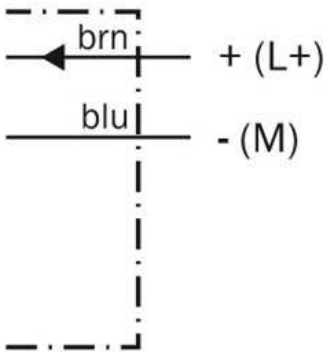
Adjustments possible



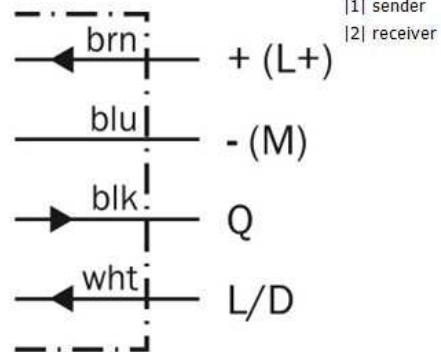
- |3| Sensitivity adjustment 270° (only WE)
- |4| LED indicator green: stability indicator (only WE)
- |5| LED indicator orange: output active (only WE)

Connection diagram

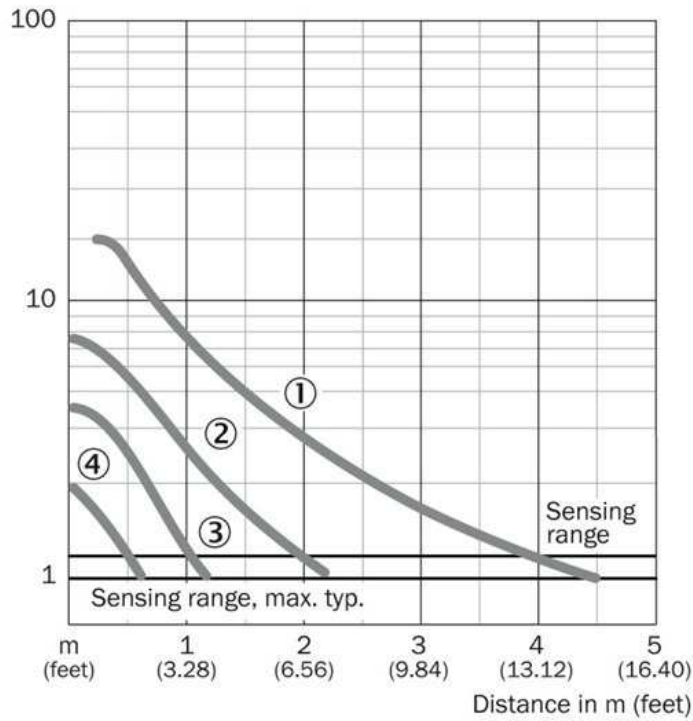
①



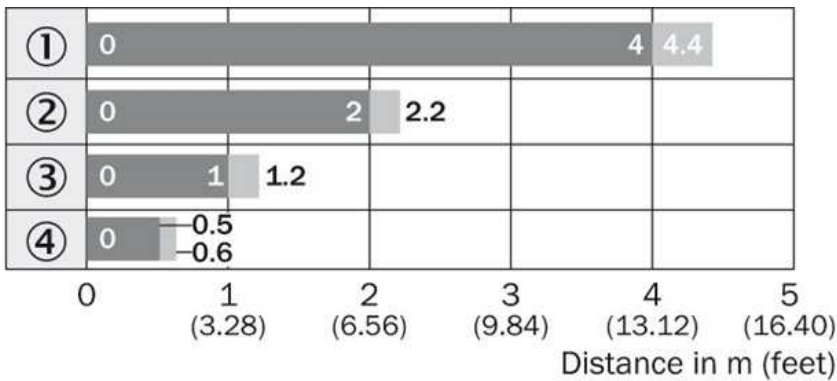
②



Characteristic curve



Sensing range diagram

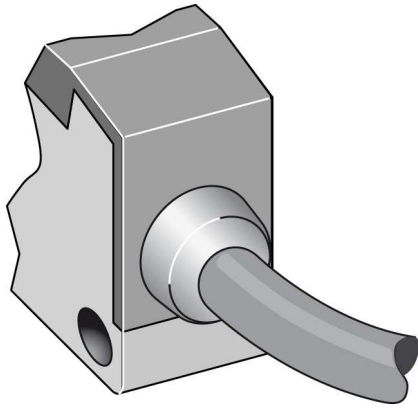


■ Sensing range ■ Sensing range typ. max.

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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