



Photoelectric sensors W150, Through-beam photoelectric sensor

WS/WE150-P430



Model Name > [WS/WE150-P430](#)
Part No. > [6011032](#)



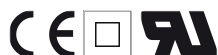
Illustration may differ

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⁾
Ripple:	± 10 % ²⁾
Power consumption:::	≤ 15 mA ³⁾ 4) 5) ≤ 20 mA
Output type:	PNP
Switching mode:	Light/dark-switching
Output characteristic:	Open collector
Switching mode selector:	Control cable
Output current I _{max} .:	≤ 100 mA
Response time:	≤ 0.5 ms ⁶⁾
Switching frequency:	1,000 Hz ⁷⁾
Angle of reception:	15 °
Connection type:	Connector M8, 4-pin

Circuit protection::::

A, B, C, D^{8) 9) 10) 11)}

Protection class:

II

Weight:

7 g

Polarisation filter:

-

AS-Interface-Chip:

-

Enclosure rating:

IP 67

Items supplied:

BEF-W150-A mounting bracket

Ambient operating temperature:

-25 °C ... 55 °C

Ambient storage temperature:

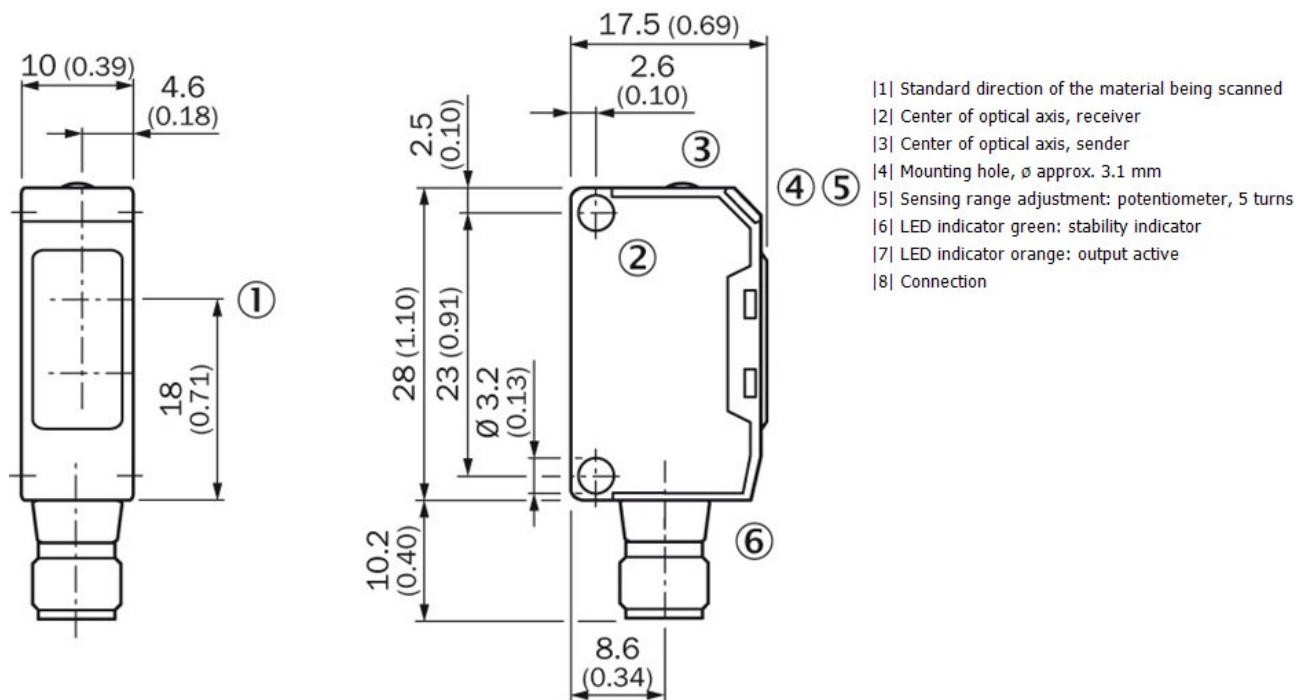
-40 °C ... 75 °C

UL File-No.:

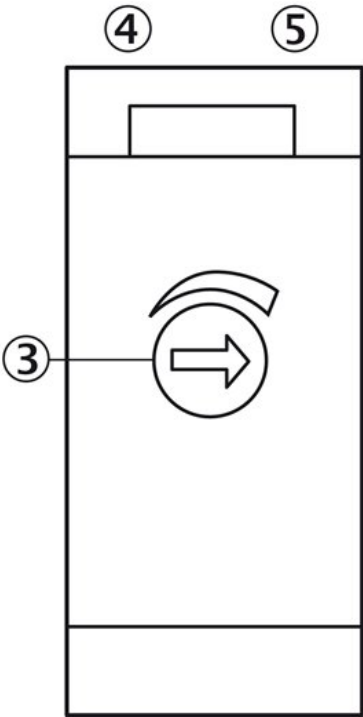
UL No. NRNT2.E128350 & cUL No. NRNT8.E128350

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) A = V_S connections reverse-polarity protected 9) B = inputs and output reverse-polarity protected 10) C = interference suppression 11) D = outputs overcurrent and short-circuit protected

Dimensional drawing



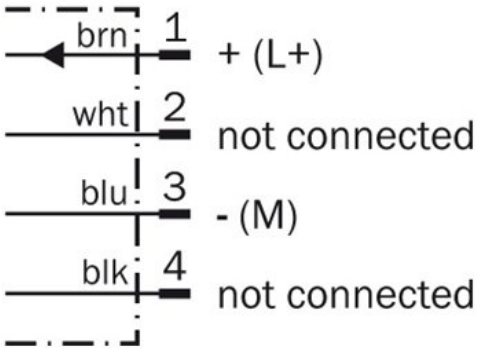
Adjustments possible



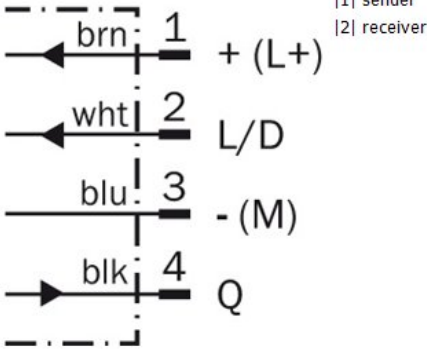
- |3| Sensitivity adjustment 270° (only WE)
- |4| LED indicator green: stability indicator (only WE)
- |5| LED indicator orange: output active (only WE)

Connection diagram

①

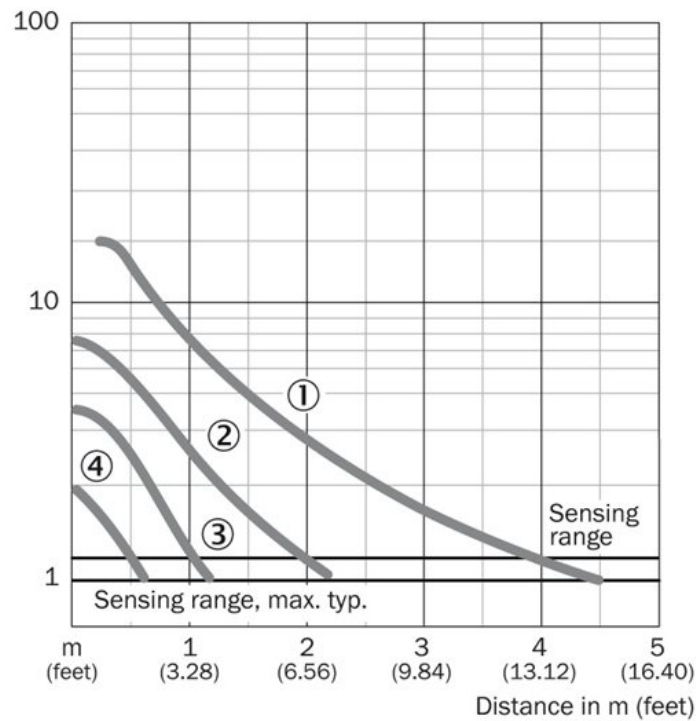


②

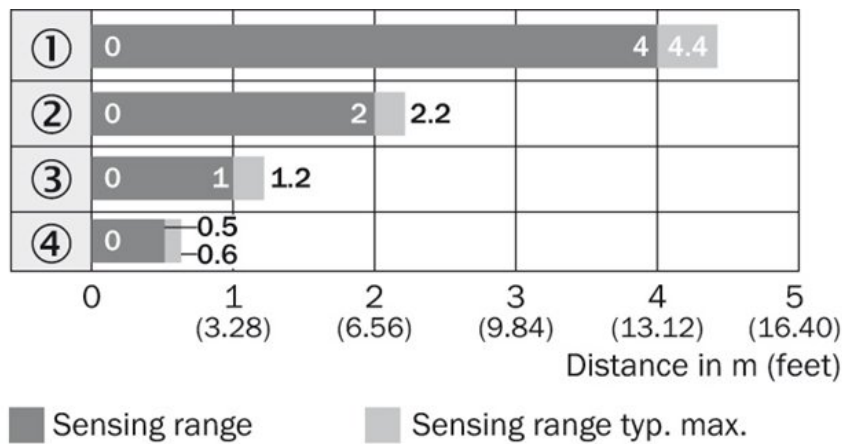


- |1| sender
- |2| receiver

Characteristic curve



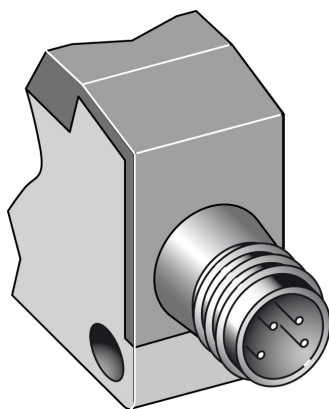
Sensing range diagram



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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