



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

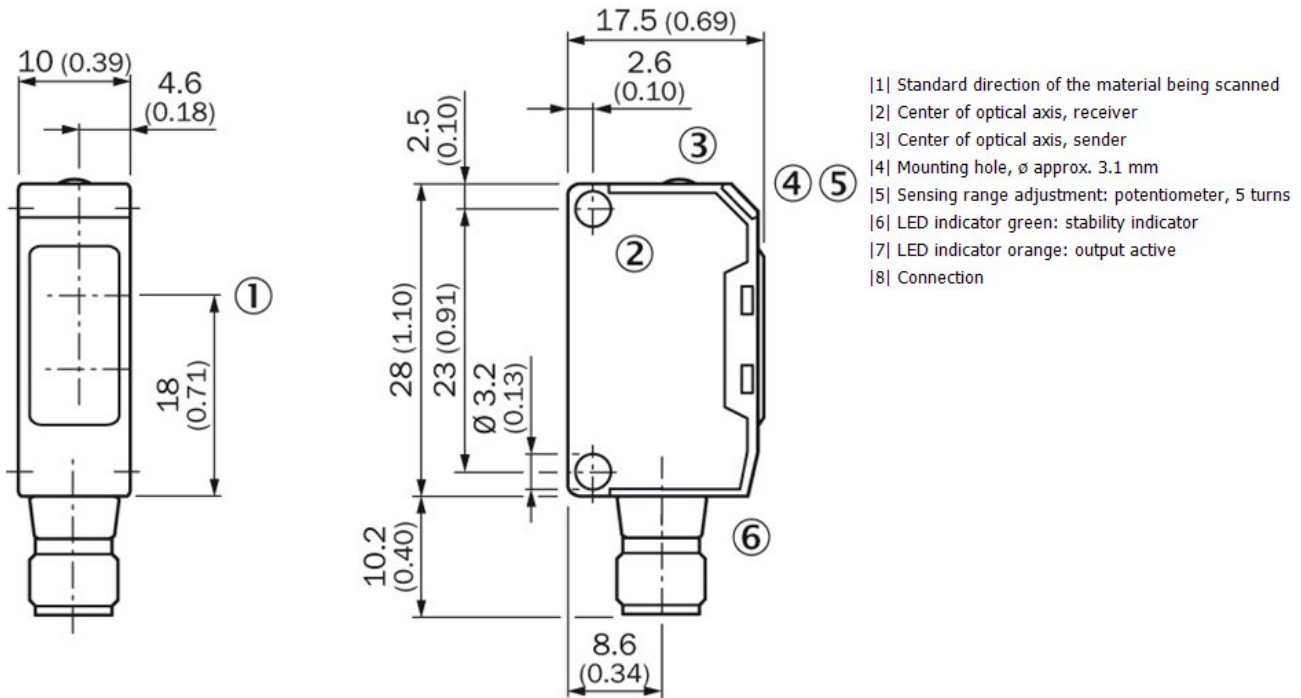
Mechanics/electronics

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

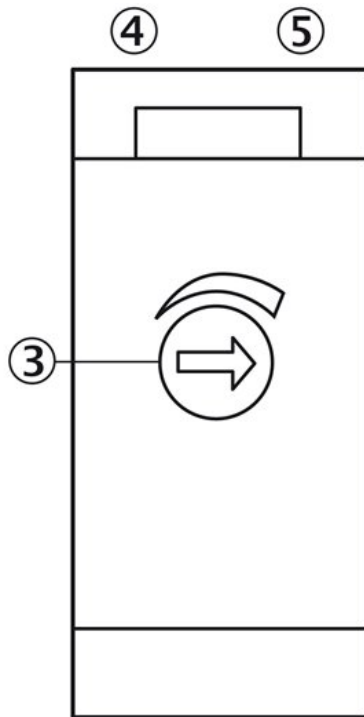
Circuit protection:::	A, B, C, D ^{8) 9) 10) 11)}
Protection class:	II
Weight:	7 g
Polarisation filter:	-
AS-Interface-Chip:	-
Enclosure rating:	IP 67
Items supplied:	BEF-W150-A mounting bracket
Ambient operating temperature:	-25 °C ... 55 °C
Ambient storage temperature:	-40 °C ... 75 °C
UL File-No.:	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



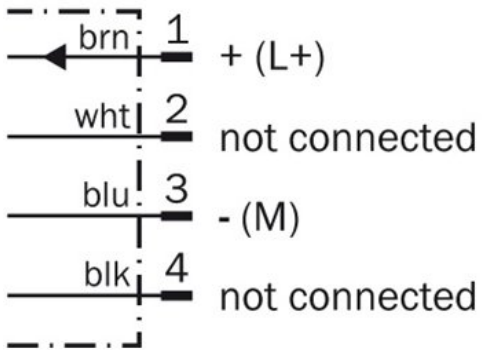
Adjustments possible



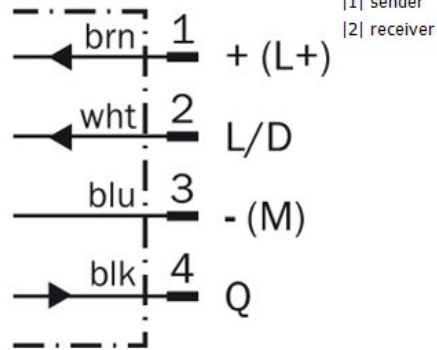
- [3] Sensitivity adjustment 270° (only WE)
- [4] LED indicator green: stability indicator (only WE)
- [5] LED indicator orange: output active (only WE)

Connection diagram

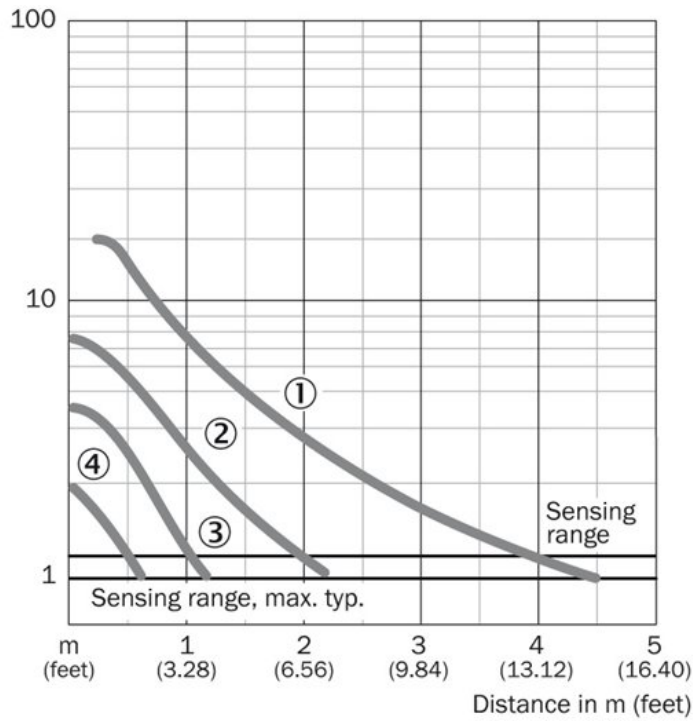
①



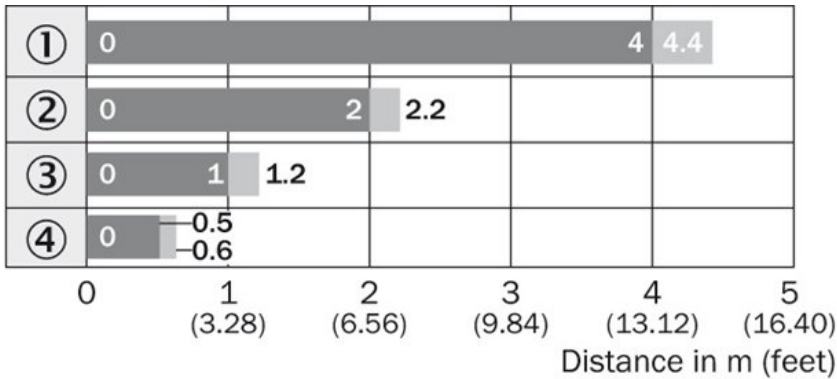
②



Characteristic curve



Sensing range diagram

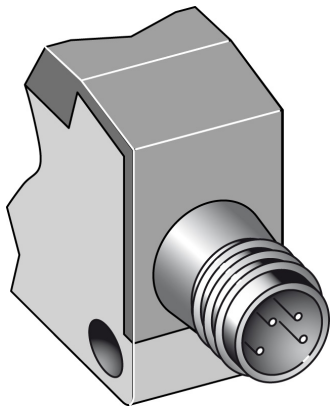


■ Sensing range ■ Sensing range typ. max.

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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