



Photoelectric sensors
W150, Photoelectric proximity sensor,
Background suppression

WT150-P460S03

Model Name > [WT150-P460S03](#)
Part No. > [1022302](#)



At a glance

- Background suppression variant with up to 100 mm sensing distance
- Energetic proximity sensor with 250 mm sensing distance
- Sensing distance adjustment via potentiometer
- Light/dark switching selectable via control wire

Your benefits

- Reliable detection of objects regardless of color or surface qualities
- Precise setting of background suppression via potentiometer
- Reliable detection of fast-moving objects
- Brackets included with delivery, ensuring quick and easy installation



Features

Sensor/detection principle:	Photoelectric proximity sensor, Background suppression
Dimensions (W x H x D):	10 mm x 28 mm x 18 mm
Housing design (light emission):	Rectangular
Sensing range max.:	2 mm ... 100 mm ¹⁾
Type of light:	Visible red light
Light source:	LED ²⁾
Angle of dispersion:	Ca. 5 °
Adjustment:	Potentiometer, 5 turns

¹⁾ Object with 90 % reflectance (referred to standard white DIN 5033) ²⁾ Average service life of 100,000 h at T_A = +25 °C

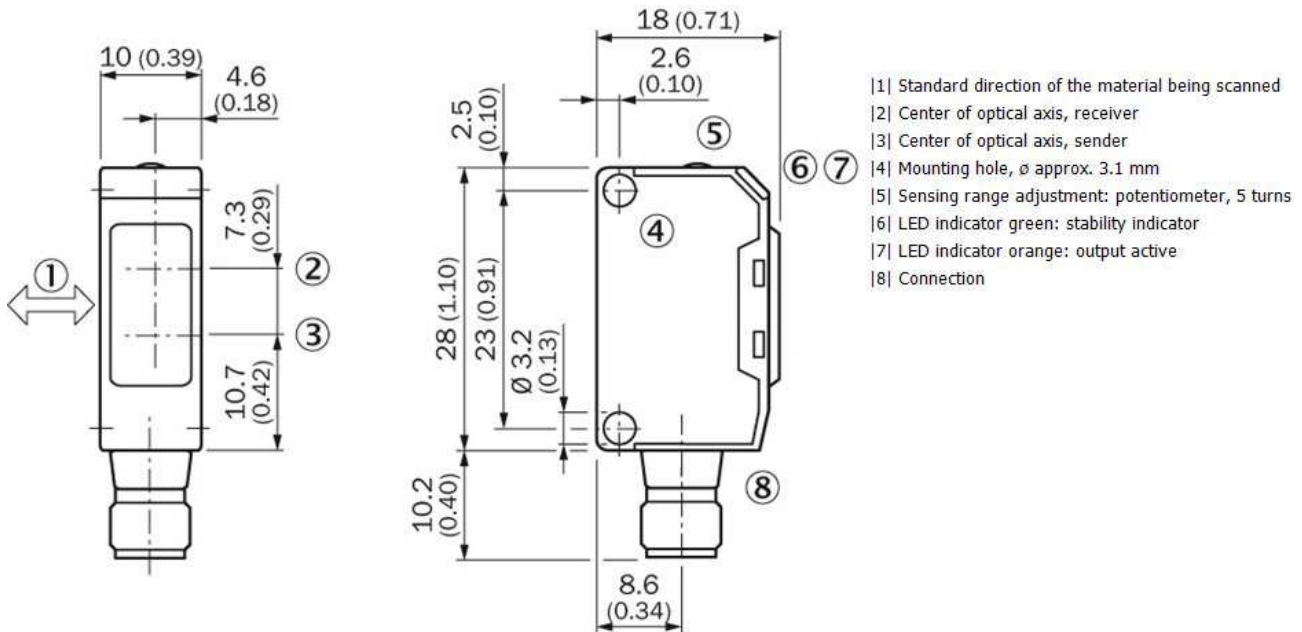
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	± 10 % ²⁾
Current consumption:	≤ 20 mA ³⁾
Output type:	PNP, open collector
Switching mode:	Light/dark switching
Switching mode selector:	Control cable
Output current I _{max.} :	≤ 100 mA
Response time:	≤ 0.5 ms ⁴⁾
Switching frequency:	1,000 Hz ⁵⁾
Connection type:	Connector M8, 4-pin
Circuit protection:::	A, B, C, D ^{6) 7) 8) 9)}
Protection class:	II

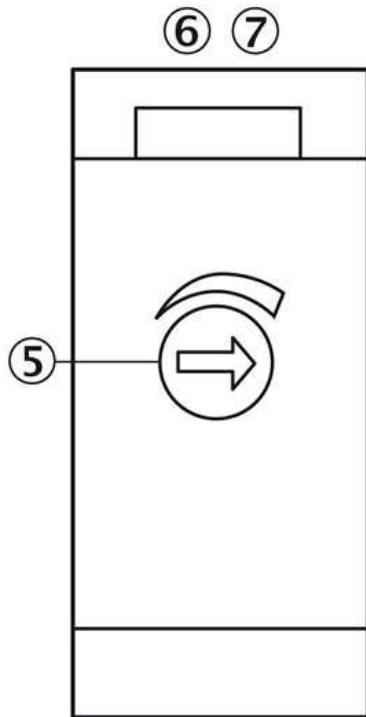
Weight: 7 g
Housing material: ABS, Plastic
Optics material: PC
Enclosure rating: IP 67
Items supplied: BEF-W150-A mounting bracket, Slotted diaphragm
Ambient operating temperature: -25 °C ... 55 °C
Ambient storage temperature: -40 °C ... 75 °C
UL File No.: NRNT2.E128350 & NRNT8.E128350

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

Dimensional drawing

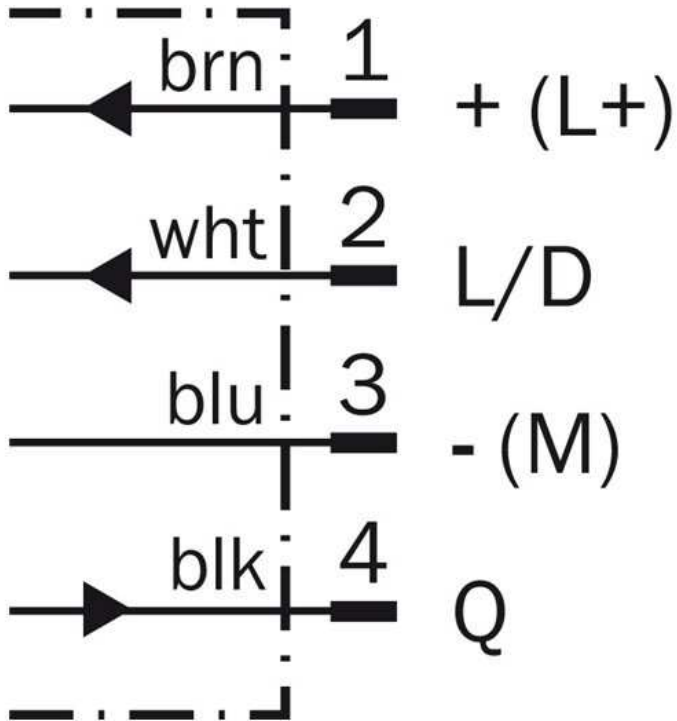


Adjustments possible

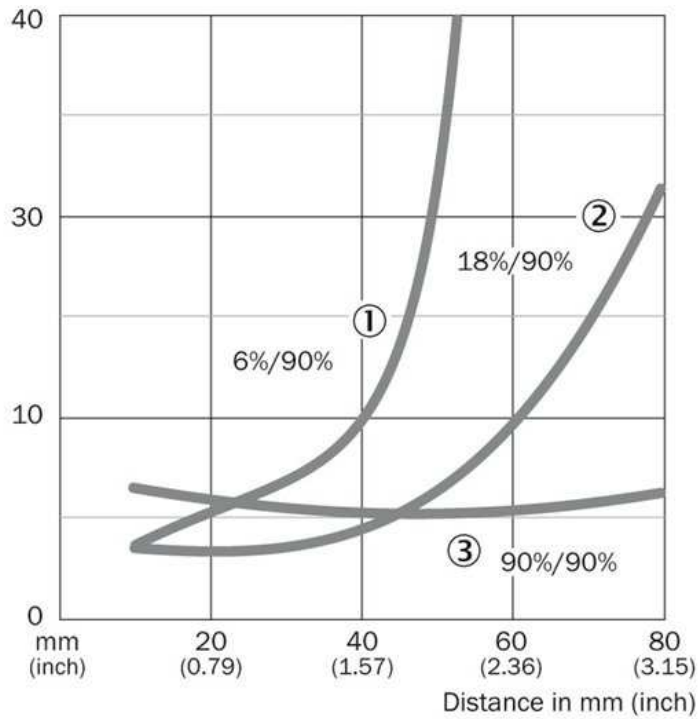


- |5| Sensing range adjustment: potentiometer, 5 turns
- |6| LED indicator green: stability indicator
- |7| LED indicator orange: output active

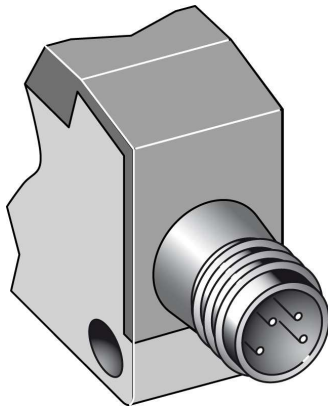
Connection diagram



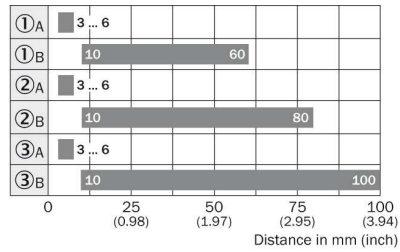
Characteristic curve



Connection type



Sensing range diagram



■ Sensing range

① Sensing range on black ¹²⁾/white background

② Sensing range on grey ¹²⁾/white background

③ Sensing range on white ¹²⁾/white background

A Sensing range control set to MIN

B Sensing range control set to MAX

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