



Photoelectric sensors
W250-2, Through-beam photoelectric sensor

WSE250-2R1531



Model Name > [WSE250-2R1531](#)
Part No. > [6044707](#)



Illustration may differ

At a glance

- Very high sensing range in compact housing
- Versions for 10 - 30 V DC or 24 - 240 V DC/ 24 – 240 V AC voltage supply in compact design
- Mounting bracket included in delivery
- Potentiometer with an easy-to-read positioning indicator for adjusting the sensing range
- Operating mode (light/dark) selectable via control wire
- Cable or rotatable M12 connector

Your benefits

- Universal AC/DC voltage variants provide high performance and increased flexibility in environments with limited space
- High performance reserve in harsh environmental conditions
- Mounting kit reduces installation time
- Operating mode (light/dark) is selectable via a control cable to reduce the number of device variants
- Mounting compatibility - DC devices and AC/DC devices available in same design



Features

Sensor/detection principle:	Through-beam photoelectric sensor
Dimensions (W x H x D):	20 mm x 60 mm x 43.9 mm
Housing design (light emission):	Rectangular
Sensing range max.:	0 m ... 50 m
Sensing range:	0 m ... 40 m
Type of light:	Visible red light
Light source:	BrightLight LED ¹⁾
Angle of dispersion:	Ca. 2 °
Adjustment:	Potentiometer, 2 turns
Light spot size (distance):	Ø 0.6 m (20 m)

¹⁾ Average service life of 100,000 h at T_A = +25 °C ²⁾ With position indicator

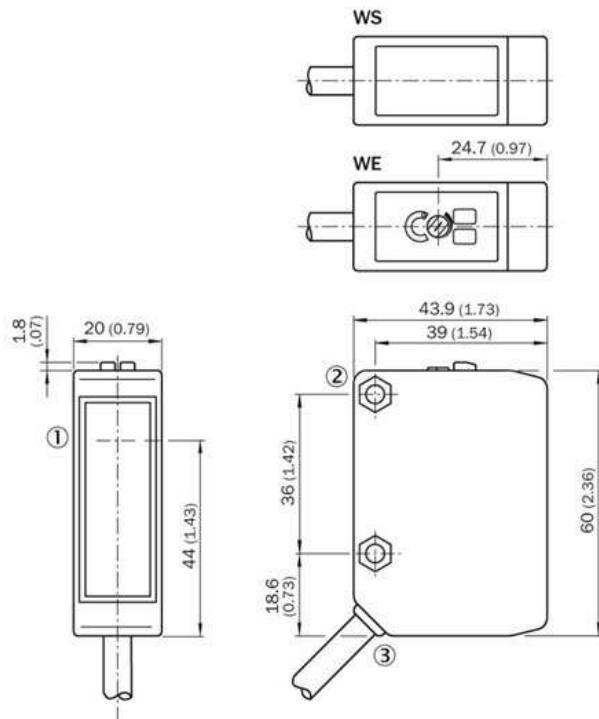
Mechanics/electronics

Supply voltage::	24 V AC/DC ... 240 V AC/DC, 24 V DC ... 240 V DC ^{1) 2)}
Power consumption, sender:	≤ 3.5 VA
Power consumption, receiver:	≤ 3.5 VA

Output type:	Relay, electrically isolated ³⁾
Output function:	Change-over contacts
Switching mode:	Light switching ⁴⁾
Switching current (switching voltage):	3 A (240 V AC), 3 A (30 V DC)
Response time:	≤ 15 ms
Switching frequency:	33 Hz ⁵⁾
Angle of reception:	20 °
Electrical connection:	Cable, 5-wire, 2 m ⁶⁾
Cable material:	PVC
Conductor cross-section:	0.76 mm ²
Cable diameter:	Ø 6.4 mm
Circuit protection:	A, C ^{7) 8)}
Protection class:	II ⁹⁾
Overvoltage category:	2
Weight:	310 g
Special device:	-
Optics material:	PMMA
Enclosure rating:	IP 67
Items supplied:	BEF-W250 mounting bracket
Usage category:	AC-15, DC-13, According to EN 60947-1
EMC:	EN 60947-5-2 ¹⁰⁾
Ambient temperature operation:	-25 °C ... +55 °C
Ambient storage temperature:	-40 °C ... +70 °C
UL File No.:	NRKH2.E300503 & NRKH8.E300503
Housing material:	ABS, Plastic

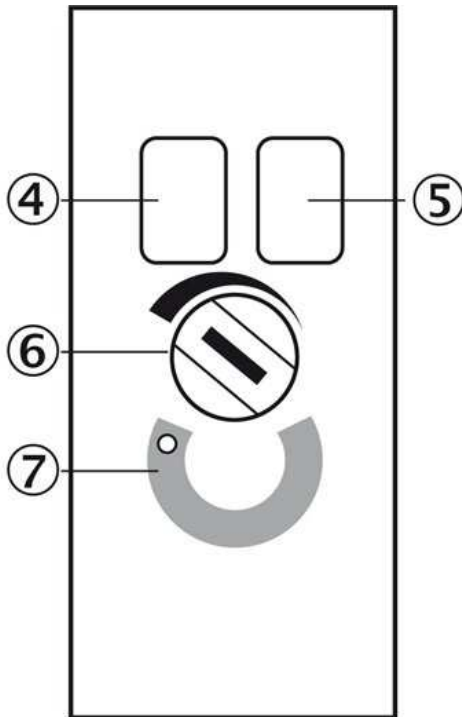
1) 2) ±10 % 3) 4) Provide suitable spark suppression for inductive or capacitive loads 5) With light/dark ratio 1:1 6) Do not bend below 0 °C 7) A = V_S connections reverse-polarity protected 8) C = interference suppression 9) Reference voltage: 250 V AC 10) The AC/DC devices meet the interference suppression requirements for industrial use (interference suppression class A). When used in residential areas it can cause interference.

Dimensional drawing



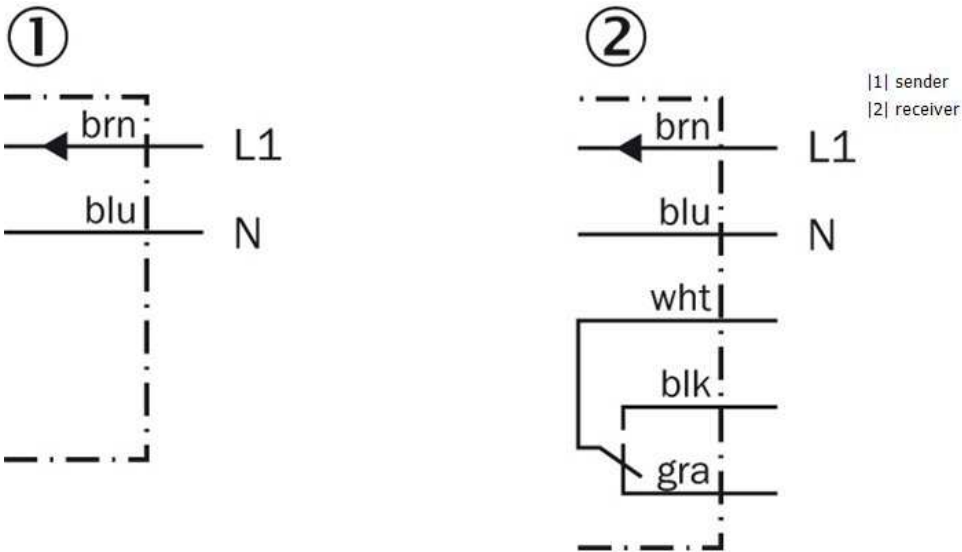
- |1| Center of the optical axis,
sender (WS 250), receiver (WE 250)
- |2| Mounting hole \varnothing 4.2 mm,
for M4 hexagon nut on both sides
- |3| Connection cable

Adjustments possible

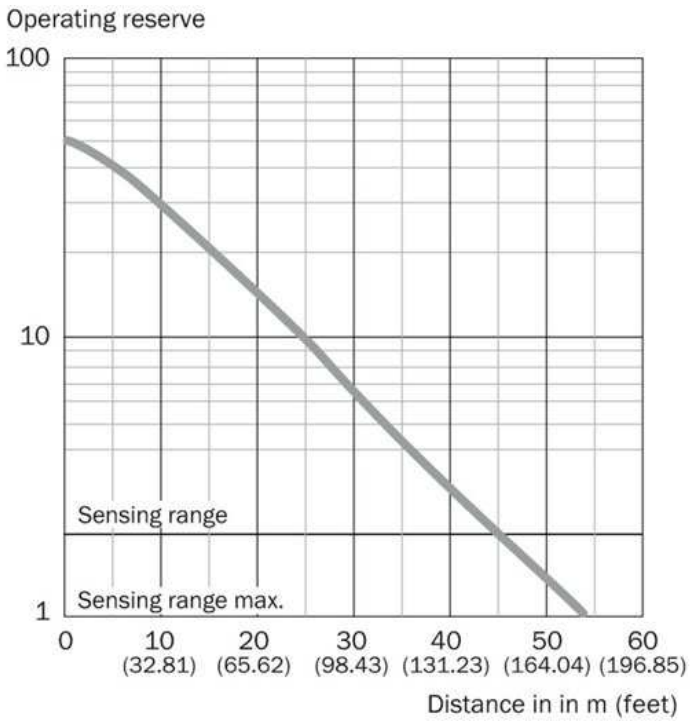


- |4| LED indicator green: Stability indicator
- |5| Status indicator LED,
yellow: Status of received light beam
- |6| Sensitivity adjustment: poti
- |7| Position indicator for sensitivity setting (270°)

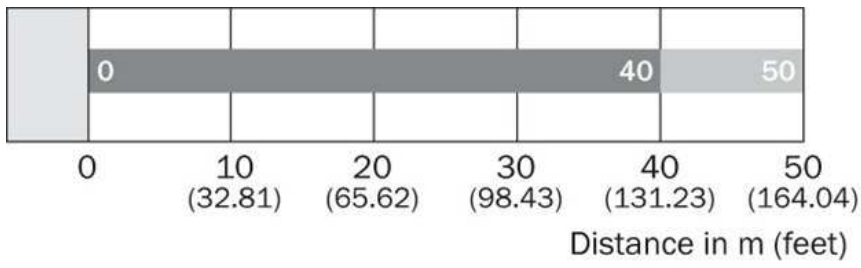
Connection diagram



Characteristic curve



Sensing range diagram



■ Sensing range ■ Sensing range max.

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