

WS/WE 150

Through Beam Sensors



0...14.4 ft (0...4.4 m)
sensing range



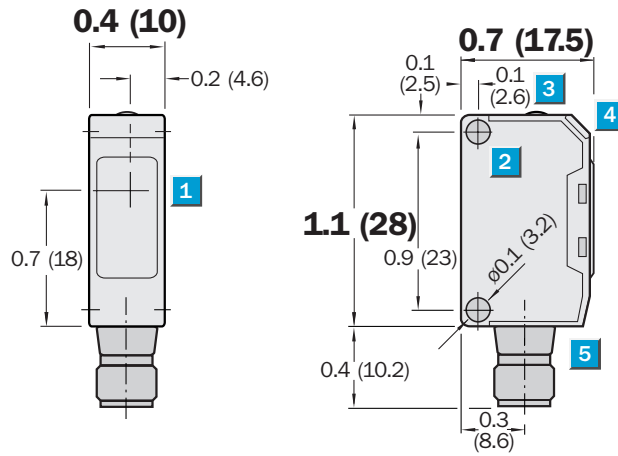
Highlights

- Rugged plastic housing
- Sensitivity adjustment
- Signal strength indicator
- Red light for easy alignment
- Cable or M8 quick disconnect versions
- Easy mounting with included bracket
- Optional slotted masks available

WS/WE 150

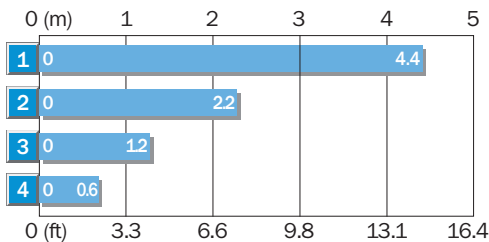
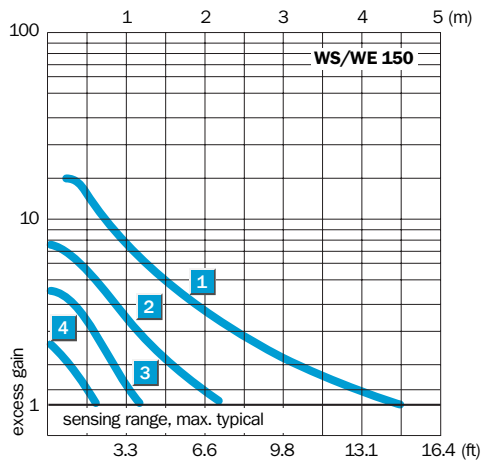


Dimensional Drawing



dimensions in inches (mm)

Excess Gain

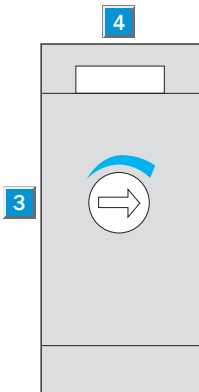


Reduction in Sensing Range With Slotted Masks

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

Adjustments

All types



- 1 Center of optical axis, sender (WS)
Center of optical axis, receiver (WE)
- 2 Mounting holes \varnothing 3.2 mm
- 3 Sensitivity adjustment 270° (WE only)
- 4 LED indicator, red (WE only)
- 5 M8 plug or cable

Order Information

Type	Part no. ¹¹⁾
WS/WE 150-P132	6 011 030
WS/WE 150-P430	6 011 032
WS/WE 150-N132	6 011 027
WS/WE 150-N430	6 011 029

Accessories

	page
Cables and connectors	908
Mounting brackets Type A*	919
Slotted masks	951

* included with delivery

Technical Data		WS/WE 150-	P132	P430	N132	N430				
Sensing range	0...14.4 ft (0...4.4 m)									
Operating range with mask,										
Aperture width 0.08 in (2.0 mm)	6.6 ft (2.0 m)									
Aperture width 0.04 in (1.0 mm)	3.3 ft (1.0 m)									
Aperture width 0.02 in (0.5 mm)	1.6 ft (0.5 m)									
Sensitivity, adjustable	Potentiometer, 270°									
Light source¹⁾, light type	LED, red light									
Light spot diameter	Approx. 15.7 in at 13.1 ft (400 mm at 4 mm)									
Angle of divergence	Approx. 6°									
Angle of reception	Approx. 15°									
Supply voltage V_A	10...30 V DC ²⁾									
Ripple ³⁾	± 10%									
Current consumption ⁴⁾ sender	≤ 15 mA									
receiver	≤ 20 mA									
Switching outputs	PNP, open collector: Q									
	NPN, open collector: Q									
Max. output current I _A	100 mA									
Operation mode ⁵⁾	Light/dark switching via control wire									
	+ V _S = light switching									
	0 V = dark switching									
Response time ⁶⁾	≤ 0.5 ms									
Max. switching frequency ⁷⁾	1000 Hz									
Connection types	Cable, PVC, 2 m ⁸⁾									
	Sender WS, 2 x 0.18 mm ² , Ø 3.5 mm									
	Receiver WE, 4 x 0.18 mm ² , Ø 3.5 mm									
	Plug, M8 4-pin									
VDE protection class⁹⁾	<input type="checkbox"/>									
Circuit protection¹⁰⁾										
sender	A, B									
receiver	A, B, C, D									
Enclosure rating	IP 67/NEMA 6									
Ambient temperature T_A	Operation -13...131°F (-25...55°C)									
	Storage -40...158°F (-40...70°C)									
Approximate weight	Sender: 1.6 oz (44 g), receiver: 1.6 oz (44 g)									
	Sender: 0.3 oz (7 g), receiver: 0.3 oz (7 g)									
Housing material	Glass fiber reinforced ABS									

- 1) Average service life 100,000 h at T_A = 25°C
- 2) Limit values
- 3) May not exceed or fall short of V_S tolerances
- 4) Without load

- 5) Control cable open:
NPN: light-switching
PNP: dark-switching
- 6) Signal transit time with resistive load
- 7) With light/dark ratio 1:1
- 8) Do not bend below 0°C

- 9) Reference voltage 50 V DC
- 10) A = V_S connections reverse-polarity protected
B = Inputs and outputs reverse-polarity protected
C = Interference impulse suppression

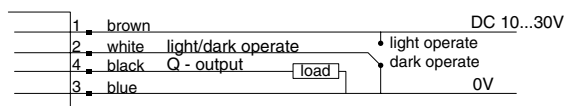
- D = Outputs overcurrent and short-circuit protected
- 11) Part no. includes both sender and receiver

Connection Diagram

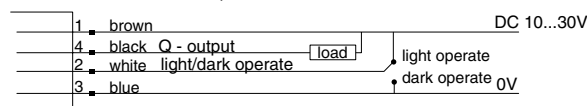
Sender



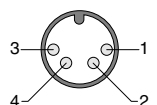
Receiver, PNP Models



Receiver, NPN Models



M8 Connector



wire colors refer to standard cable, not included with quick disconnect models