



Photoelectric sensors
W150, Photoelectric retro-reflective sensor,
Standard optics

WL150-P430



Model Name > [WL150-P430](#)
Part No. > [6011038](#)

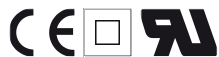


At a glance

- Standard optics
- Polfilter
- Sensing distance of up to 2.4 m
- Version for detection of transparent objects
- Sensitivity control on device via potentiometer
- Light/dark switching selectable via control wire
- Suitable for Diamond Grade reflective tape

Your benefits

- Polarizing filters prevent false readings on reflective surfaces, ensuring reliable object detection
- Reliable detection of transparent objects
- Reliable detection of objects moving at fast speeds
- Highly visible red light for easy alignment



Features

Dimensions (W x H x D):	10 mm x 28 mm x 17.5 mm
Sensing range max.:	0 m ... 2.4 m ¹⁾
Sensing range:	0.01 m ... 2 m ²⁾
Housing desig (light emission):	Cuboid
Light source:	LED ³⁾
Type of light:	visible red light
Sensitivity adjustment:	Potentiometer, 270°
Sensor/detection principle:	Photoelectric retro-reflective sensor, Standard optics

^{1) 2)} PL80A ³⁾ Average service life 100,000 h at Ta = +25 °C

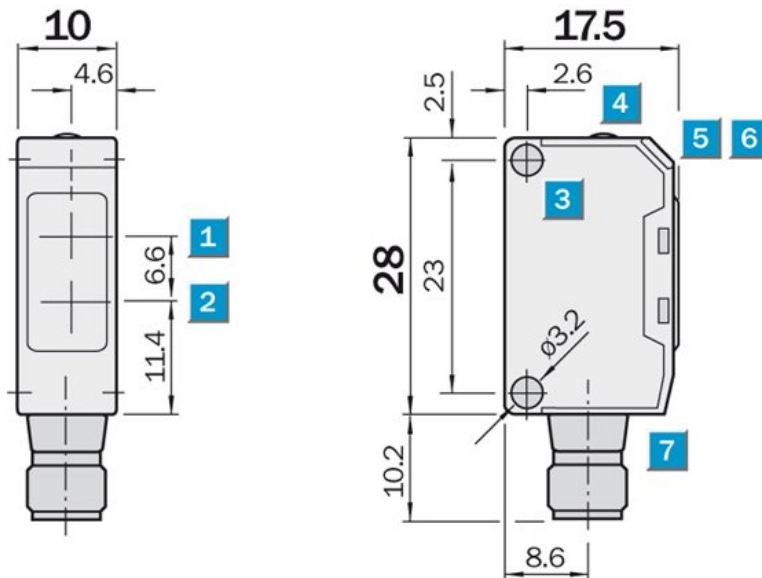
Mechanics/electronics

Enclosure rating:	IP 67
Supply voltage:	10 V DC ... 30 V DC ¹⁾
Residual ripple:	± 10 % ²⁾
Power consumption:	≤ 20 mA ³⁾
Switching output:	PNP, light/dark-switching, control cable, open collector
Output current I _{max} ..:	≤ 100 mA
Response time:	≤ 0.5 ms ⁴⁾
Switching frequency:	1,000 Hz ⁵⁾

Connection type:	Connector M8, 4-pin
Protection class:	II
Circuit protection:::	A B C 6) 7) 8) 9) D
Weight:	7 g
Housing material:	ABS
Optics material:	PMMA
Ambient temperature, operation:	-25 °C ... 55 °C
Ambient temperature, storage:	-40 °C ... 75 °C
Polarisation filter:	✓
Items supplied:	BEF-W150-A mounting bracket, Reflector PL20A
Angle of dispersion:	Ca. 6 °
AS-Interface-Chip:	-

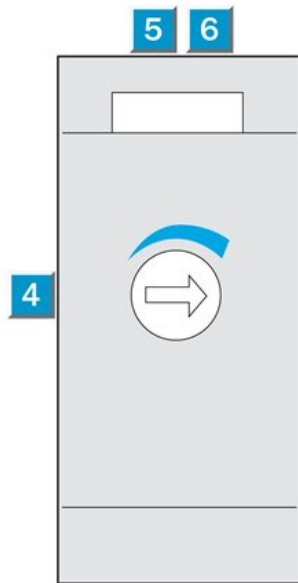
¹⁾ Limit values ²⁾ May not exceed or fall short of V_S ³⁾ Without load ⁴⁾ Signal transit time with resistive load ⁵⁾ With light/dark ratio 1:1 ⁶⁾ A = V_S connections reverse-polarity protected
⁷⁾ B = inputs and output reverse-polarity protected ⁸⁾ C = interference suppression ⁹⁾ D = outputs overcurrent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

Dimensional drawing



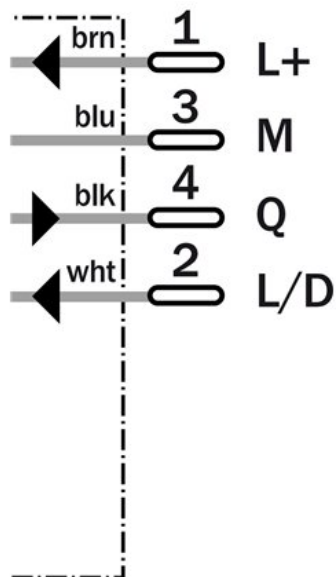
- [1] Standard direction of the material being scanned
- [2] Center of optical axis, receiver
- [3] Center of optical axis, sender
- [4] Mounting hole, Ø 3.2 mm
- [5] Scanning distance adjustment (5 turns)
- [6] LED indicator green: stability indicator
- [7] LED indicator orange: output active
- [8] Connection

Einstell-Möglichkeiten

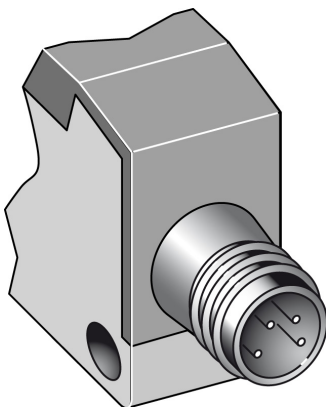


- |5| Scanning distance adjustment (5 turns)
- |6| LED indicator green: stability indicator
- |7| LED indicator orange: output active

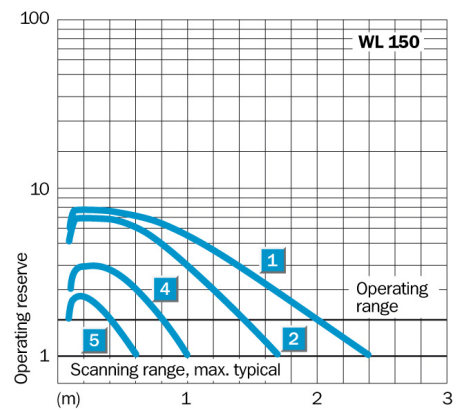
Connection diagram



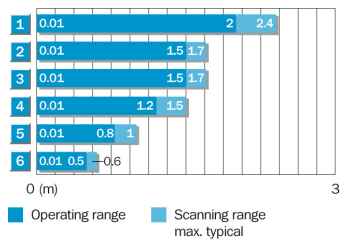
Connection type



Characteristic curve



Sensing range diagram



Reflector type	Operating range
1 PL 80 A	0.01 ... 2 m
2 P 250	0.01 ... 1.5 m
3 PL 50 A or PL 40 A	0.01 ... 1.5 m
4 PL 30 A or PL 31 A	0.01 ... 1.2 m
5 PL 20 A	0.01 ... 0.8 m
6 Reflect. tape «Diamond Grade»	0.01 ... 0.5 m

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