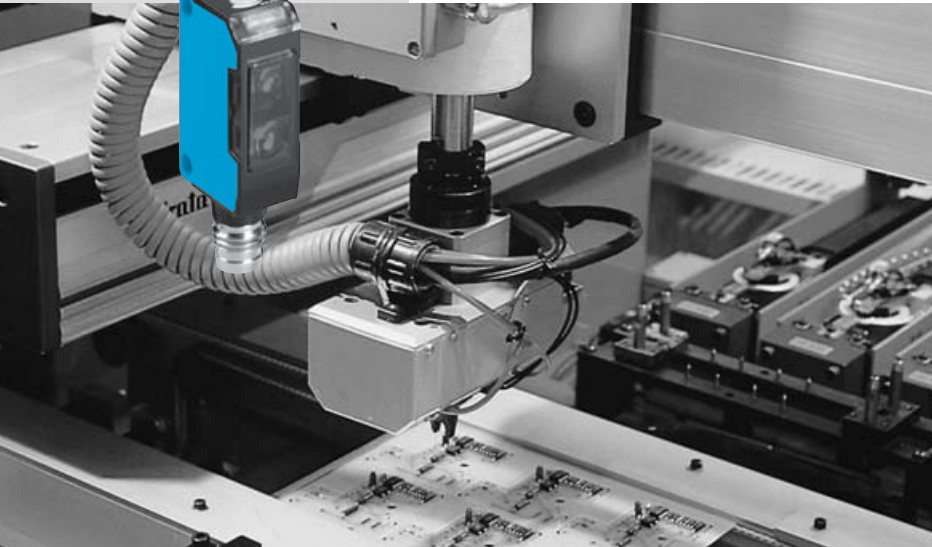


W150: Miniature photoelectric switch series with completely integrated electronics

	Photoelectric proximity switch BGS
	Photoelectric proximity switch energ.
	Photoelectric reflex switch



	Through-beam photoelectric switch
--	-----------------------------------

The W150 optics systems and their ranges:

- WS/WE150 through-beam photoelectric switch: 4.4 m, slotted masks as accessory.
- WL150 photoelectric reflex switch: 2.4 m (PL80A), with polarizing filter.
- WL150 photoelectric reflex switch with increased sensitivity: 0.7 m, especially for detecting transparent objects such as glass and film.
- WT150 photoelectric proximity switch, energetic: scanning distance = 250 mm (90% reflectance), for standard scanning jobs. With background suppression: scanning distance = 100 mm, adjustable; for reliable operation even with otherwise interfering background influences.

The W150 photoelectric switches provide the system data and features of standard photoelectric switches without restrictions. The high scanning ranges are a special focal point. W150 devices are always the right choice when little space is available for equipment mounting.

Consequently, they are especially successful in the typical application fields:

- Electronic components and printed circuit production,
- Packaging and graphic arts industries,
- Assembly and handling technologies,
- Special mechanical engineering tasks.

All electrical and mechanical values fulfill the standard for adjustable potentiometers, IP 67, $V_S = 10 \dots 30$ V DC, PNP or NPN switching output, M8 plug or cable. The visible red light of the transmission LED simplifies handling additionally.

Stocked, Distributed, and Supported by

SENSORS
INCORPORATED

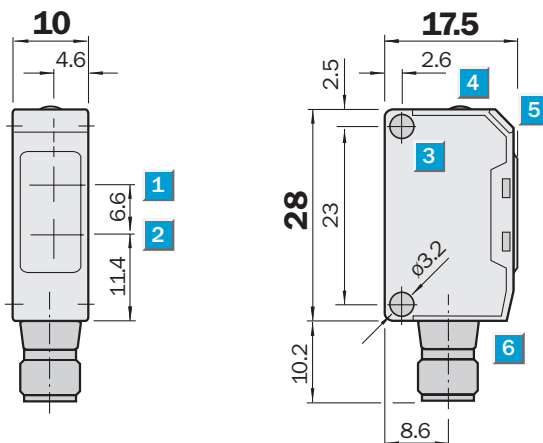
507 Kelsey Street • Delano, MN 55328
Phone 763-972-1040 Fax 763-972-1041
Toll Free 888-920-0939
Sensorsincorporated.com

Scanning range
0.01 ... 0.7 m

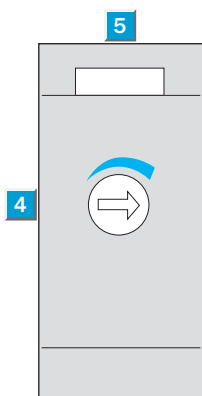
Photoelectric reflex switch

- Ideal for detecting glass, transparent film or small parts
- Detection reliability: attenuation min. 20 %; transmission change min. 15 %
- Adjustable sensitivity

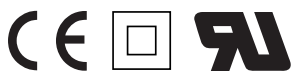
Dimensional drawing



Adjustments possible

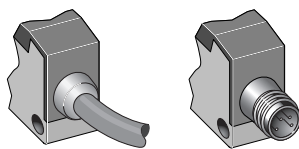


- 1 Centre of optical axis, receiver
- 2 Centre of optical axis, transmitter
- 3 Mounting hole \varnothing 3.2 mm
- 4 Sensitivity adjustment 270°
- 5 LED indicator orange: output active
- 6 Connector

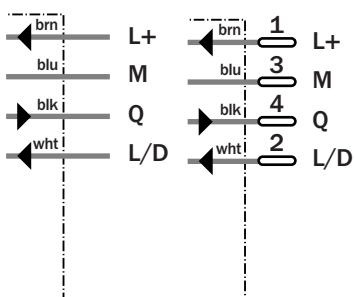


Connection type

WL150-N122	WL150-N420
WL150-P122	WL150-P420



4 x 0.18 mm² M8, 4-pin



Accessories

Connector, M8, 4-pin
Mounting systems
Reflectors

Technical specifications		WL150-	N122	N420	P122	P420						
Detection of transparent objects	✓											
Attenuation along light beam	≥ 20 %											
Attenuation difference along light beam	≥ 15 %											
Attenuation difference of object	≥ 7.5 %											
Scanning range typ. max.	0.01 ... 0.7 m											
Scanning range, recommended	0.01 ... 0.6 m											
Relating to	Reflector PL80A											
Sensitivity adjustment	Potentiometer, 270°											
Light source, light type	LED, red light ¹⁾											
Light spot diameter	Approx. 40 mm at 0.3 m distance											
Angle of dispersion	Ca. 7.5 °											
Supply voltage V_s	DC 10 ... 30 V ²⁾											
Ripple	± 10 % ³⁾											
Power consumption	≤30 mA ⁴⁾											
Switching outputs	NPN: open collector: Q											
	PNP: open collector: Q											
Switching mode	Light-/dark-switching via L/D control cable +V _s = light-switching 0 V = dark-switching ⁵⁾											
Output current I _a max	100 mA											
Response time	≤0.5 ms ⁶⁾											
Switching frequency	1,000 Hz ⁷⁾											
Connection type	Cable, PVC, 2 m ⁸⁾											
	Connector, M8, 4-pin											
VDE protection class	□ ⁹⁾											
Circuit protection	V _s connections reverse-polarity protected / In-/outputs short-circuit protected / Interference suppression / Outputs overcurrent and short-circuit protected											
Enclosure rating	IP 67											
Ambient temperature operation	-25 °C ... +55 °C											
Ambient temperature storage	-40 °C ... +75 °C											
Weight	Ca. 44 g											
	Ca. 7 g											
Housing material	ABS, PC											
Included with delivery	Mounting bracket BEF-W150-A and reflector PL20A											

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 wire must be connected

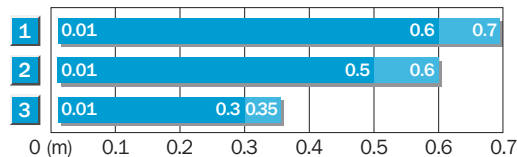
⁶⁾ Signal transit time with resistive load

⁷⁾ With light/dark ratio 1:1

⁸⁾ Do not bend below 0 °C

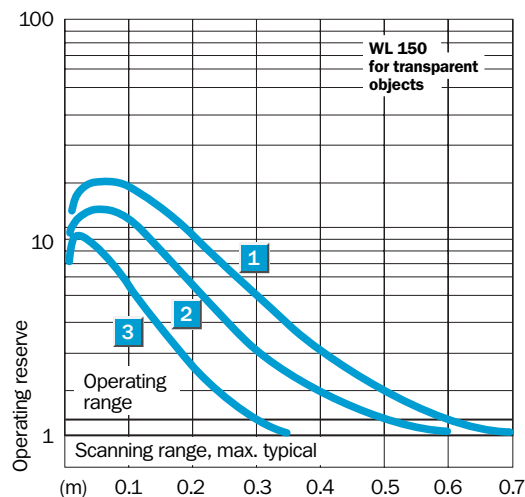
⁹⁾ Reference voltage 50 V DC

Scanning range and operating reserve



■ Operating range ■ Scanning range, max. typical

Reflector type	Operating range
1 PL 80 A	0.01 ... 0.6 m
2 P 250	0.01 ... 0.5 m
3 PL 20 A	0.01 ... 0.3 m



Ordering information

Type	Part Number
WL150-N122	6 020 683
WL150-N420	6 020 685
WL150-P122	6 020 686
WL150-P420	6 020 688