



Photoelectric sensors W12-2 Laser, Photoelectric retro-reflective sensor, autocollimation

WL12L-2B530S02



Photoelectric sensors

W12-2 Laser, Photoelectric retro-reflective sensor, autocollimation

Model Name > [WL12L-2B530S02](#)
Part No. > [1018957](#)



Illustration may differ

At a glance

- Laser protection class 1 or 2
- Autocollimation optics
- Rugged sensors for industrial use
- Highly visible laser light spot for versatile detection of objects
- Rugged die-cast zinc housing with optional Teflon® coating
- Versatile mounting options due to dovetail mounting - mounting holes and oblong holes
- Highly visible status LEDs
- Adjustable sensing range and focus

Your benefits

Reliable detection of all types of objects

High immunity to optical interference ensures fewer false readings and less downtime

Highly visible laser light spot provides quick and easy setup

Highly visible status LEDs simplify commissioning and reduce installation time

Rugged metal housing (optional Teflon® coating available) requires less maintenance due to its resistance to high-pressure cleaning environments

Laser protection class 1 or 2 for eye safety

Rotatable connectors simplify installation



Features

Sensor/detection principle:	Photoelectric retro-reflective sensor, autocollimation
Dimensions (W x H x D):	15 mm x 49 mm x 41.5 mm
Housing design (light emission):	Rectangular
Sensing range max.:	0 m ... 36 m ¹⁾
Sensing range:	0 m ... 5 m ²⁾
Type of light:	Visible red light
Light source:	Laser ³⁾
Laser class:	II
Wave length:	650 nm
Adjustment:	Potentiometer
Light spot size (distance):	Ø 0.8 mm (300 mm)

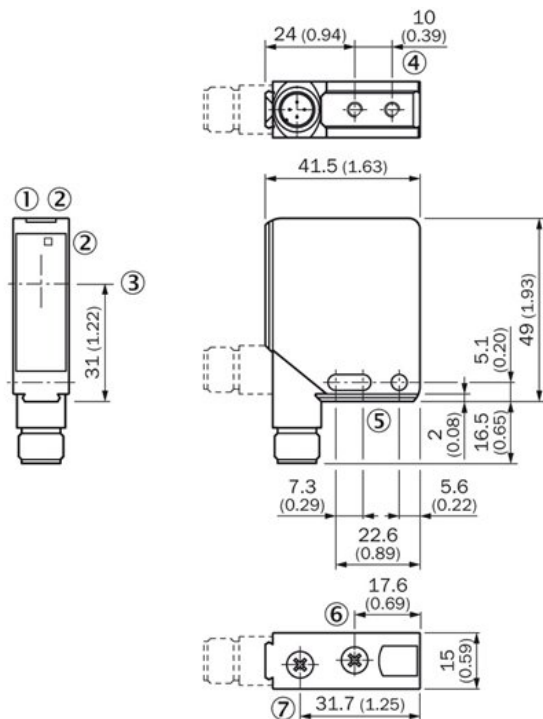
1) PL80A 2) Diamond Grade reflective tape 3) Average service life 50,000 h at $T_a = +25\text{ °C}$

Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	$\leq 5\text{ V}_{pp}$ ²⁾
Power consumption:	$\leq 55\text{ mA}$ ³⁾
Output type:	NPN, PNP
Switching mode:	Dark-switching, Light switching
Switching mode selector:	0 V or not connected, light-switching, Uv, dark-switching, Selectable via L/D control wire
Signal voltage PNP HIGH/LOW:	$U_v - < 2.9\text{ V}$, $U_v\text{ V}/0\text{ V} \leq 1.5\text{ V}$
Signal voltage NPN HIGH/LOW:	$U_v - < 2.9\text{ V}$, $U_v\text{ V}/0\text{ V} \leq 1.5\text{ V}$
Output current $I_{max.}$:	100 mA
Response time:	$\leq 200\text{ }\mu\text{s}$ ⁴⁾
Switching frequency:	2,500 Hz ⁵⁾
Connection type:	Connector M12, 5-pin
Circuit protection:::	A, C, D ⁶⁾ ⁷⁾ ⁸⁾
Protection class:	II
Weight:	130 g
Polarisation filter:	✓
Special device:	✓
Housing material:	Metal
Enclosure rating:	IP 67 IP 69K
Ambient operating temperature:	-10 °C ... 50 °C
Ambient storage temperature:	-25 °C ... 75 °C
UL File-No.:	UL No. NRKH.E181493, CDRH-Konform (0312012-00)

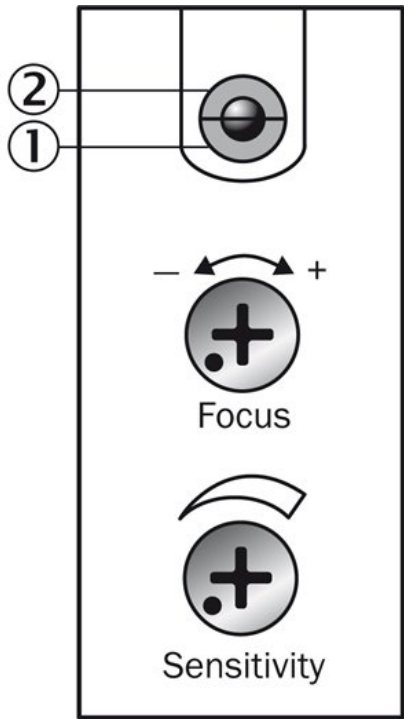
1) Limit values 2) May not exceed or fall short of V_{S8} 3) Without load 4) Signal transit time with resistive load 5) With light/dark ratio 1:1 6) A = V_S connections reverse-polarity protected 7) C = interference suppression 8) D = outputs overcurrent and short-circuit protected

Dimensional drawing



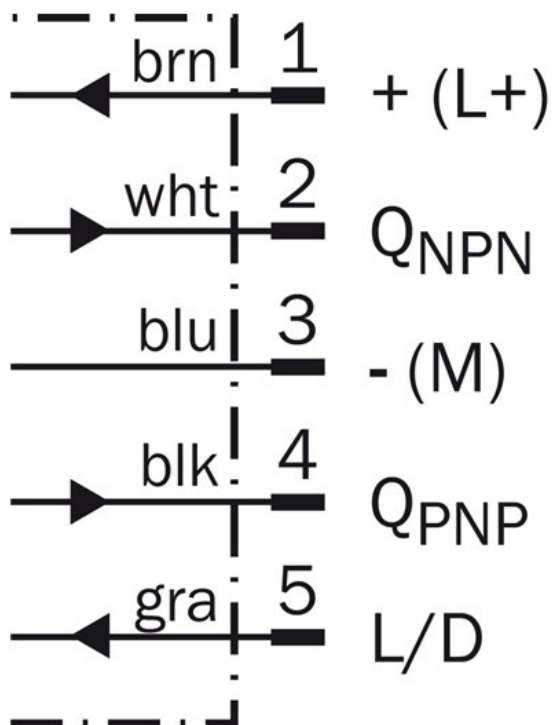
- |1| Operating indicator, green
- |2| LED reception indicator, yellow
- |3| Center of optical axis
- |5| Mounting hole, Ø 4.2 mm
- |6| Focal adjustment
- |7| Sensitivity adjustment

Adjustments possible

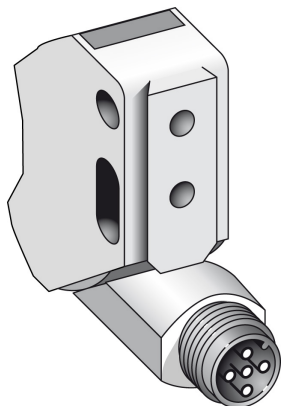


- |1| Operating indicator, green
- |2| LED reception indicator, yellow
- |6| Focal adjustment
- |7| Sensitivity adjustment

Connection diagram



Connection type



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