



Photoelectric sensors
W11-2, Photoelectric retro-reflective sensor,
Standard optics

WL11-2P2440



Type > [WL11-2P2440](#)
Part No. > [1041389](#)



Illustration may differ

At a glance

- Retro-reflective with standard lens principle
- Rugged housing for industrial use
- PinPoint LED technology with highly visible light spot
- Space-saving plastic housing in chemically, thermally or mechanically resistant designs
- Dovetail mounting - standard mounting holes and oblong holes
- Highly visible 360° status LEDs
- Optional sensing range adjustment via teach-in pushbutton
- Operating distance up to 10 m

Your benefits

- Custom ASIC provides reliable object detection
- High immunity to optical interference reduces false readings and downtime
- PinPoint LED technology provides a bright, small and precise light spot that enables quick and easy sensor alignment
- Precise switching characteristics ensure high performance even in changing application conditions
- Rugged housing design withstands harsh environments, reducing downtime and maintenance effort
- Highly visible 360° status LEDs provide quick and easy setup without additional personnel or costly training
- Easy installation using SICK accessories



Features

Sensor/detection principle:	Photoelectric retro-reflective sensor, Dual lens
Dimensions (W x H x D):	15.6 mm x 48.5 mm x 42 mm
Housing design (light emission):	Rectangular
Sensing range max.:	0.15 m ... 10 m ¹⁾
Sensing range:	0.15 m ... 8 m ²⁾
Type of light:	Visible red light
Light source:	LED ³⁾
Wave length:	640 nm
Angle of dispersion:	Ca. 2.2 °
Light spot size (distance):	Ø 50 mm (3 m)

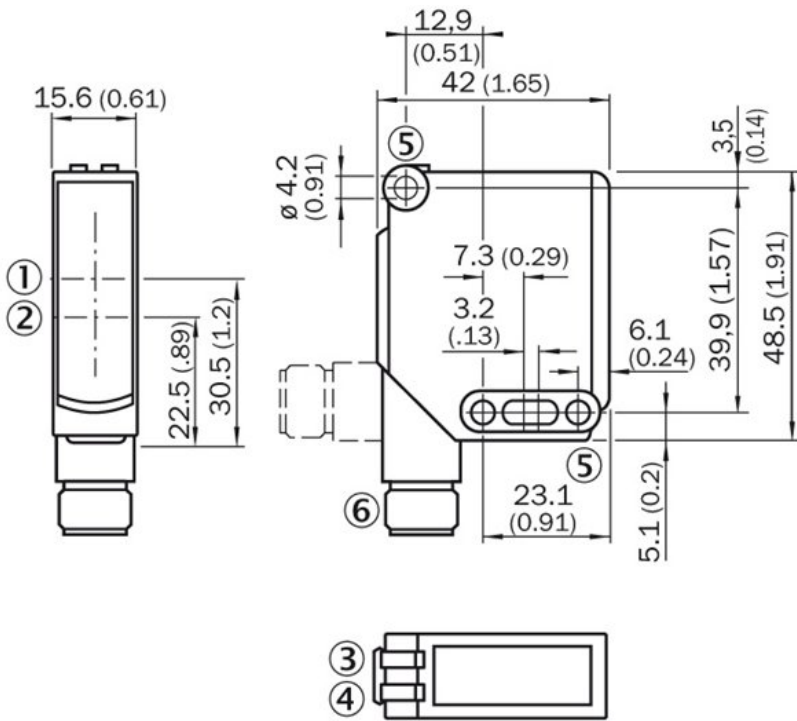
^{1) 2)} PL80A ³⁾ Average service life of 100,000 h at T_A = +25 °C

Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	$\leq 5 \text{ Vpp}$ ²⁾
Power consumption:	$\leq 30 \text{ mA}$ ³⁾
Output type:	PNP
Output function:	Complementary
Switching mode:	Light/dark switching
Output current I _{max.} :	100 mA
Response time:	$\leq 2.5 \text{ ms}$ ⁴⁾
Switching frequency:	$\pm 200 \text{ Hz}$ ⁵⁾
Connection type:	M12, 4-pin male connector
Circuit protection:::	A, C, D ^{6) 7) 8)}
Protection class:	II ⁹⁾
Weight:	120 g
Polarisation filter:	-
Special device:	-
Optics material:	PMMA
Enclosure rating:	IP 66 IP 67 IP 69K
Ambient operating temperature:	-30 °C ... +60 °C
Ambient storage temperature:	-40 °C ... +75 °C
UL File No.:	NRKH.E181493 & NRKH7.E181493
Signal voltage PNP HIGH/LOW:	U _v - 2.5 V / approx. 0 V
Housing material:	ABS, Plastic

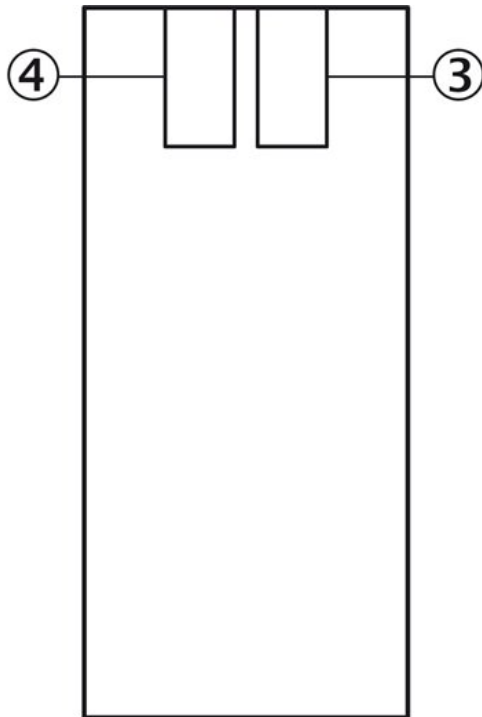
¹⁾ Limit values, operation in short-circuit protected network max. 8 A ²⁾ May not exceed or fall short of V_S tolerances ³⁾ Without load ⁴⁾ Signal transit time with resistive load ⁵⁾ With light/dark ratio 1:1 ⁶⁾ A = V_S connections reverse-polarity protected ⁷⁾ C = interference suppression ⁸⁾ D = outputs overcurrent and short-circuit protected ⁹⁾ Reference voltage DC 50 V

Dimensional drawing



- |1| Optical axis, sender
- |2| Optical axis, receiver
- |3| Status indicator LED green: power on
- |4| Status indicator LED,
yellow: Status of received light beam
- |5| Mounting hole \varnothing 4.2 mm
- |6| M12 connector, 4-pin or cable

Adjustments possible

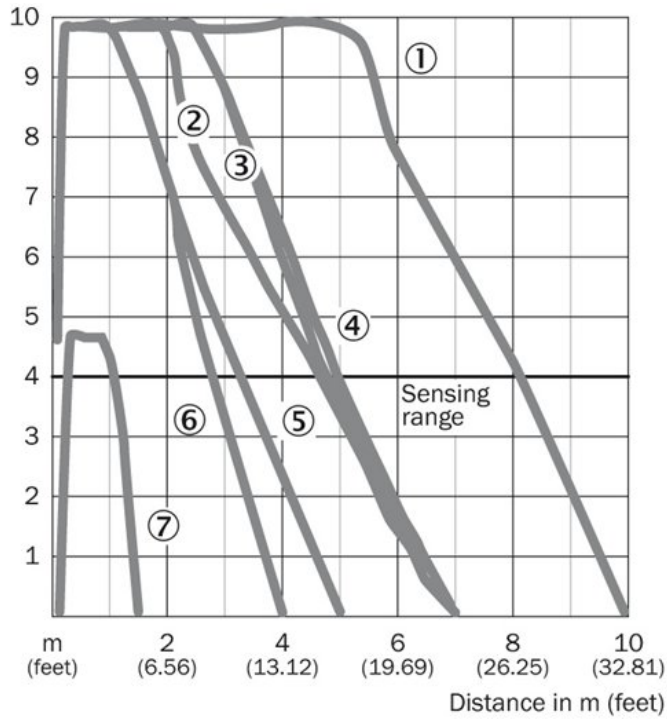


- |3| Status indicator LED green: power on
- |4| Status indicator LED,
yellow: Status of received light beam

Connection diagram

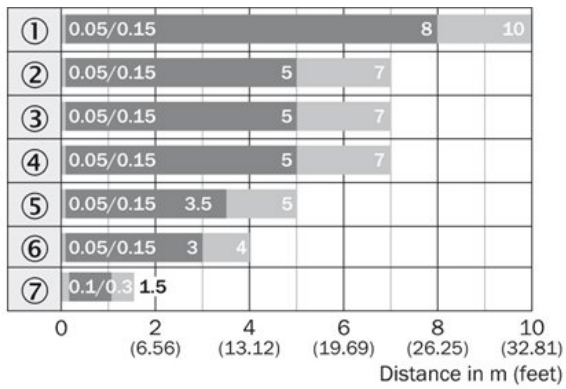


Characteristic curve



- [1] PL80A
- [2] C110A
- [3] PL50A
- [4] PL40A
- [5] PL30A
- [6] PL20A
- [7] Reflective tape Diamond Grade

Sensing range diagram

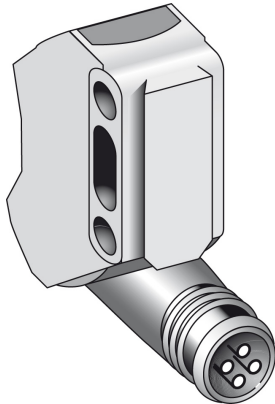


- |1| PL80A
- |2| C110A
- |3| PL50A
- |4| PL40A
- |5| PL30A
- |6| PL20A
- |7| Reflective tape Diamond Grade

Reflector type

- ① PL80A
- ② C110A
- ③ PL50A
- ④ PL40A
- ⑤ PL30A
- ⑥ PL20A
- ⑦ Reflective tape
Diamond Grade

Connection type



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