



Photoelectric sensors
W23-2, Photoelectric retro-reflective sensor,
Standard optics

WL23-2P2460



Model Name > [WL23-2P2460](#)
Part No. > [1044165](#)



Illustration may differ

At a glance

- Two variants available: without sensitivity adjustment or with teach button
- Polarizing filter ensures reliable detection, even with shiny targets
- Model with PinPoint for intense, consistent red light spot
- 360° visibility of indicating LEDs

Your benefits

- Adjustability removed to prevent operator tampering and to reduce downtime
- Model with teach-in pushbutton enables quick setup
- Durable housing with reinforced mounting holes withstands harsh conditions
- 360° LEDs provide device status indication from multiple angles
- Polarizing filter ensures reliable detection, even with shiny targets
- Less downtime due to ASIC chip technology by SICK
- High level of mechanical and electronic reliability in industrial environments



Features

Sensor/detection principle:	Photoelectric retro-reflective sensor, Standard optics
Dimensions (W x H x D):	24.6 mm x 80.6 mm x 54 mm
Housing design (light emission):	Rectangular
Sensing range max.:	0.1 m ... 12 m ¹⁾
Sensing range:	0.3 m ... 9 m ²⁾
Type of light:	Visible red light
Light source:	PinPoint LED ³⁾
Wave length:	660 nm
Angle of dispersion:	1.5 °
Light spot size (distance):	Ø 45 mm (2.7 m)

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

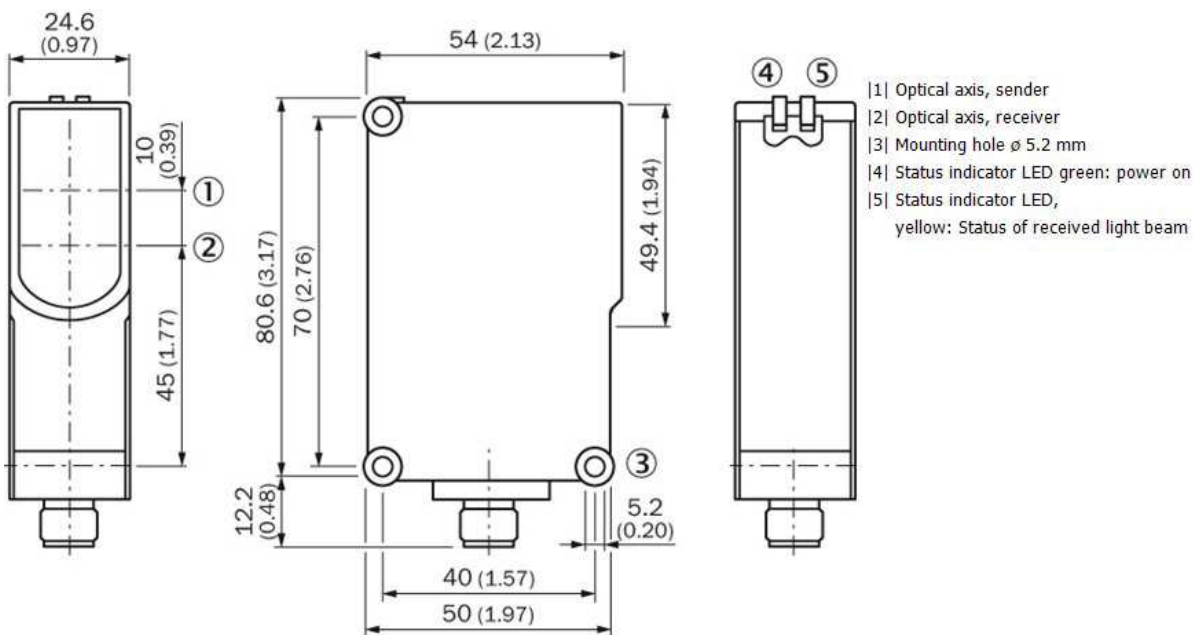
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Power consumption:	≤ 35 mA ²⁾
Output type:	PNP
Output function:	Complementary
Switching mode:	Light/dark switching
Signal voltage PNP HIGH/LOW:	Approx. VS - 2.5 V / 0 V
Output current I _{max.} :	≤ 100 mA

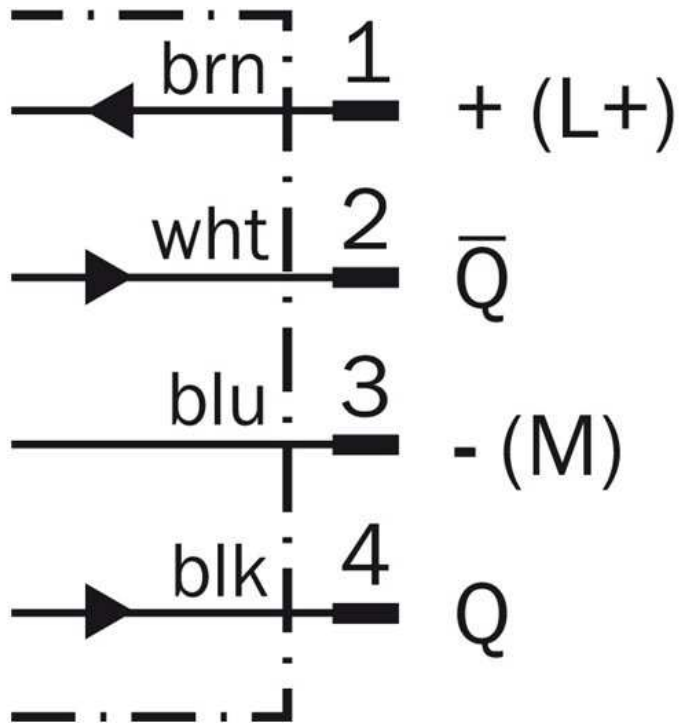
Response time:	$\leq 2.5 \text{ ms}$ ³⁾
Switching frequency:	200 Hz ⁴⁾
Connection type:	Connector M12, 4-pin
Circuit protection:::	A, C, D ^{5) 6) 7)}
Protection class:	II ⁸⁾
Weight:	100 g
Polarisation filter:	✓
Housing material:	ABS, Plastic
Optics material:	PMMA
Enclosure rating:	IP 67
Ambient operating temperature:	-30 °C ... 60 °C
Ambient storage temperature:	-40 °C ... 70 °C
UL File No.:	NRKH.E181493 & NRKH7.E181493

1) Limit values, operation in short-circuit protected network max. 8 A ²⁾ Without load ³⁾ Signal transit time with resistive load ⁴⁾ With light/dark ratio 1:1 ⁵⁾ $A = V_S$
connections reverse-polarity protected ⁶⁾ C = interference suppression ⁷⁾ D = outputs overcurrent and short-circuit protected ⁸⁾ Reference voltage 50 V DC

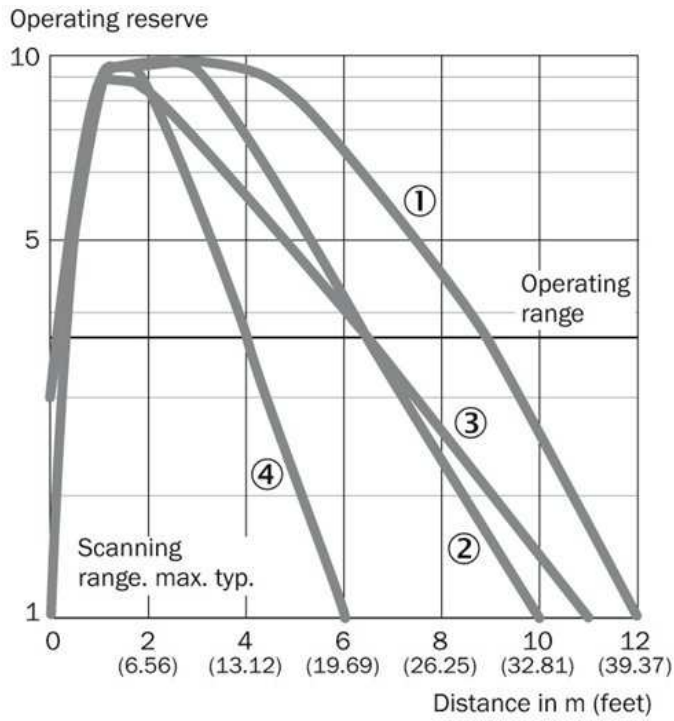
Dimensional drawing



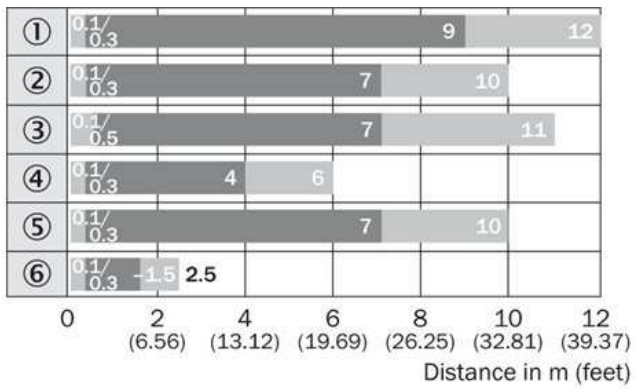
Connection diagram



Characteristic curve



Sensing range diagram



■ Operating range ■ Scanning range max. typ.

- ① Reflector type PL80A
- ② Reflector type PL40A
- ③ Reflektor type C110
- ④ Reflector type PL20A
- ⑤ Reflector type P250
- ⑥ Reflective tape Diamond Grade

- |1| PL80A
- |2| PL40A
- |3| C110A
- |4| PL20A
- |5| P250
- |6| Reflective tape Diamond Grade

Connection type



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