



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

WL23-2P2430



**Model Name** > [WL23-2P2430](#)  
**Part No.** > [1027785](#)



*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 ... 10 m <sup>1)</sup>
Sensing range:	0.3 m ... 7 m <sup>2)</sup>
Type of light:	Visible red light
Light source:	LED <sup>3)</sup>
Wave length:	660 nm
Angle of dispersion:	1.5 °
Light spot size (distance):	Ø 45 mm (2.7 m)

<sup>1) 2)</sup> PL80A <sup>3)</sup> Average service life of 100,000 h at T<sub>A</sub> = +25 °C

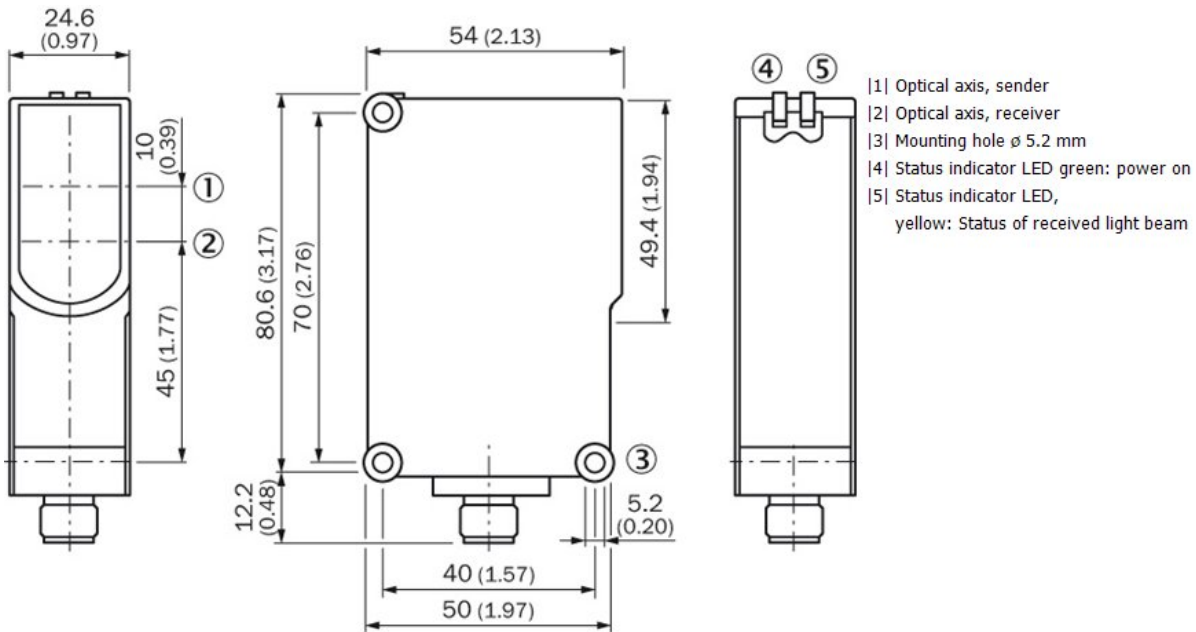
**Mechanics/electronics**

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

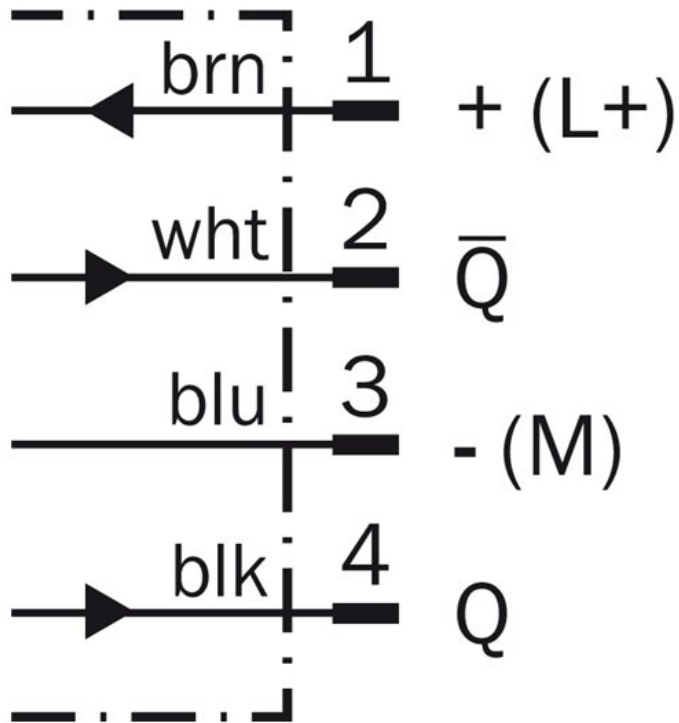
Response time:	$\leq 2.5 \text{ ms}$ <sup>3)</sup>
Switching frequency:	200 Hz <sup>4)</sup>
Connection type:	Connector M12, 4-pin
Circuit protection:::	A, C, D <sup>5) 6) 7)</sup>
Protection class:	II <sup>8)</sup>
Weight:	100 g
Polarisation filter:	✓
Special device:	-
Housing material:	ABS, Plastic
Optics material:	PMMA
Enclosure rating:	IP 67
Ambient operating temperature:	-25 °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 connections reverse-polarity protected<sup>6)</sup> C = interference suppression  
 2) Without load<sup>3)</sup> 7) D = outputs overcurrent and short-circuit protected  
 3) Signal transit time with resistive load  
 4) With light/dark ratio 1:1  
 5)  $A = V_S$   
 8) Reference voltage 50 V DC

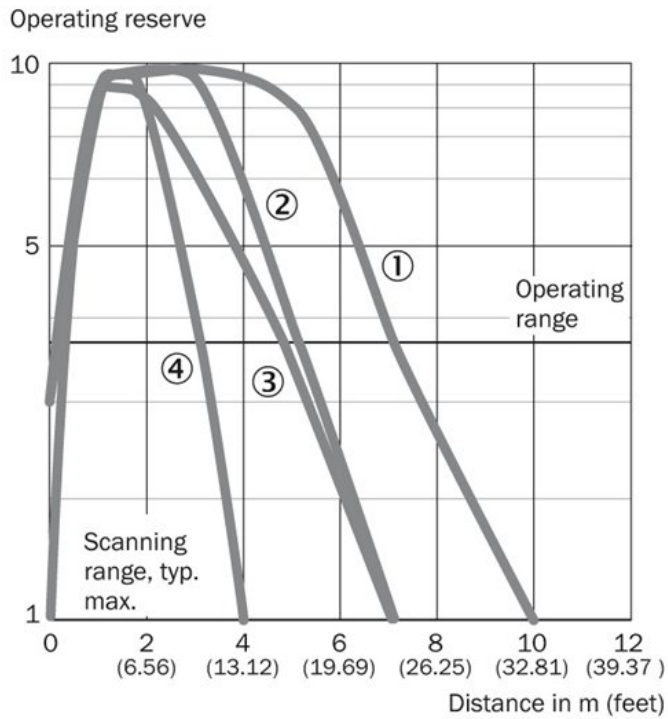
### Dimensional drawing



Connection diagram

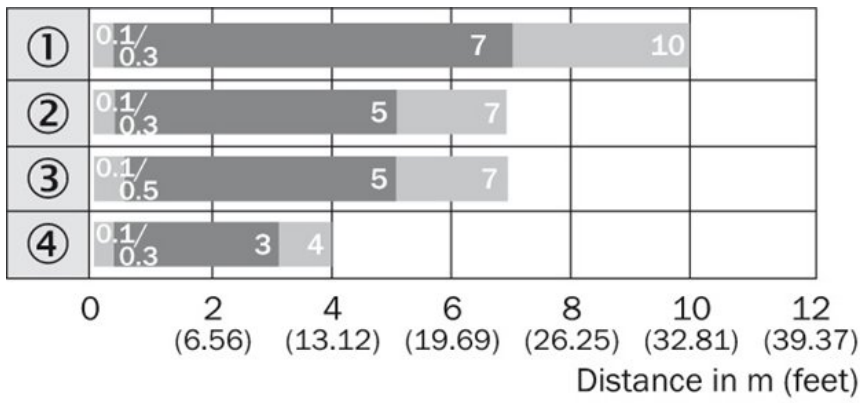


Characteristic curve



- |1| PL80A
- |2| PL40A
- |3| C110A
- |4| PL20A

**Sensing range diagram**

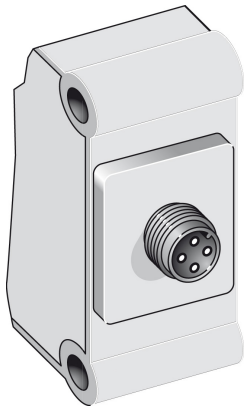


- |1| PL80A
- |2| PL40A
- |3| C110A
- |4| PL20A

■ Operating range            ■ Scanning range typ. max.

- ① Reflector type PL80A
- ② Reflector type PL40A
- ③ Reflector type C110
- ④ Reflector type PL20A

**Connection type**



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