



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

WL23-2S3730



Model Name > [WL23-2S3730](#)
Part No. > [1027789](#)



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 ¹⁾
Sensing range:	0.3 m ... 7 m ²⁾
Type of light:	Visible red light
Light source:	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

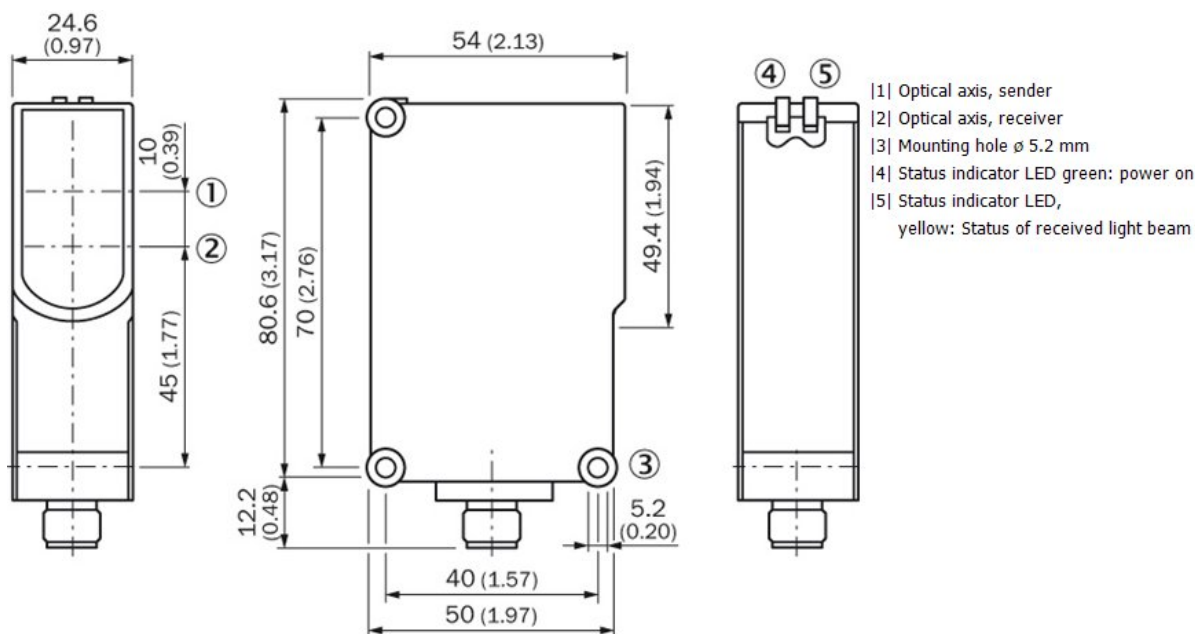
Mechanics/electronics

Supply voltage:	90 V AC ... 265 V AC ¹⁾
Power consumption:	≤ 2.5 VA
Output type:	Relay, electrically isolated ²⁾
Output function:	Change-over contacts
Switching mode:	Light switching ³⁾
Switching current (switching voltage):	0.11 A (230 V DC), 3 A (230 V AC), 3 A (24 V DC)
Response time:	≤ 10 ms

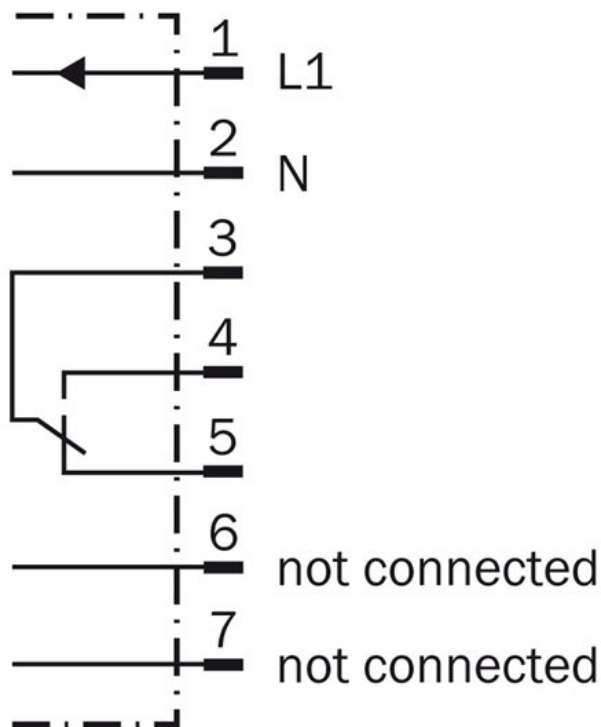
Switching frequency:	10 Hz ⁴⁾
Connection type:	Cable with cubic connector, 7-pin, 150 mm ⁵⁾
Cable material:	PVC
Circuit protection::	A, C ⁶⁾ ⁷⁾
Protection class:	II ⁸⁾
Weight:	140 g
Polarisation filter:	✓
Special device:	-
Housing material:	ABS, Plastic
Optics material:	PMMA
Enclosure rating:	IP 67
Usage category:	AC-15, DC-13, According to EN 60947-1
Ambient operating temperature:	-25 °C ... 60 °C ⁹⁾
Ambient storage temperature:	-40 °C ... 70 °C
UL File No.:	NRKH.E181493 & NRKH7.E181493

¹⁾ Limit values ^{2) 3)} Provide suitable spark suppression for inductive or capacitive loads ⁴⁾ With light/dark ratio 1:1 ⁵⁾ Do not bend below 0 °C ⁶⁾ A = V_S connections reverse-polarity protected ⁷⁾ C = interference suppression ⁸⁾ Reference voltage 250 V AC ⁹⁾ UL: 0 °C ... +60 °C

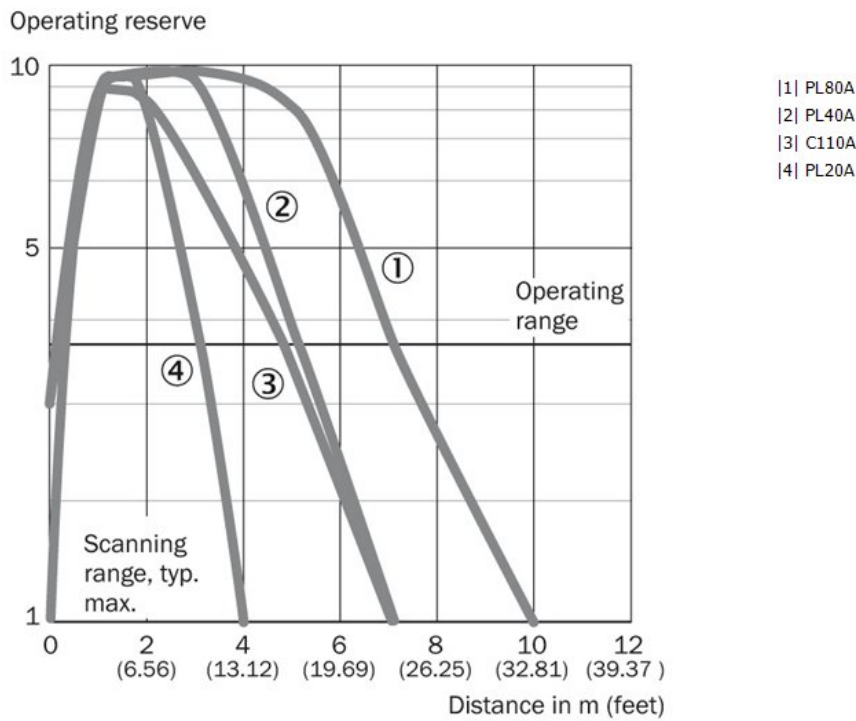
Dimensional drawing



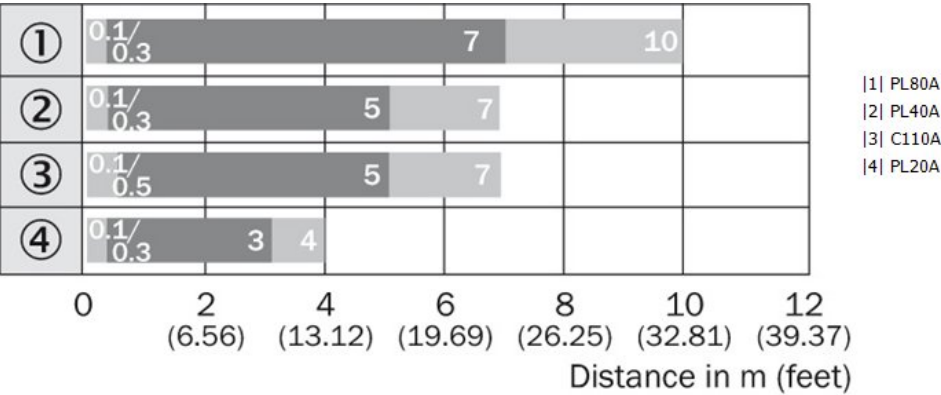
Connection diagram



Characteristic curve

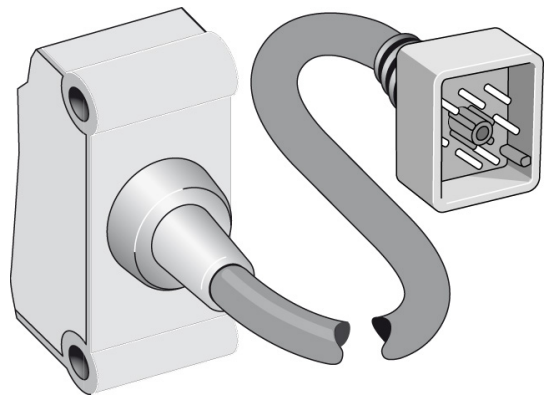


Sensing range diagram



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

Connection type



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