



Photoelectric sensors
W23-2, Photoelectric proximity sensor,
Background suppression

WTB23-2P2461



Model Name > [WTB23-2P2461](#)
Part No. > [1044164](#)



Illustration may differ

At a glance

- Model with PinPoint for intense, consistent red light spot
- WTB23-2 photoelectric proximity sensor with background suppression
- Enhanced crosstalk immunity from other sensors
- 360° visibility of indicating LEDs

Your benefits

- PinPoint technology provides quick alignment with an intense visible red light spot
- Consistent light spot improves detection reliability
- Less downtime due to ASIC chip technology by SICK
- High level of mechanical and electronic reliability in industrial environments
- Durable housing with reinforced mounting holes withstands harsh conditions
- 360° LEDs provide device status indication from multiple angles



Features

Sensor/detection principle:	Photoelectric proximity sensor, Background suppression
Dimensions (W x H x D):	24.6 mm x 80.6 mm x 54 mm
Housing design (light emission):	Rectangular
Sensing range max.:	30 mm ... 1,100 mm ¹⁾
Sensing range:	100 mm ... 1,100 mm
Type of light:	Visible red light
Light source:	PinPoint LED ²⁾
Adjustment:	Potentiometer
Light spot size (distance):	Ø 12 mm (800 mm)

¹⁾ Object with 90 % reflectance (referred to standard white DIN 5033) ²⁾ Average service life of 100,000 h at T_A = +25 °C

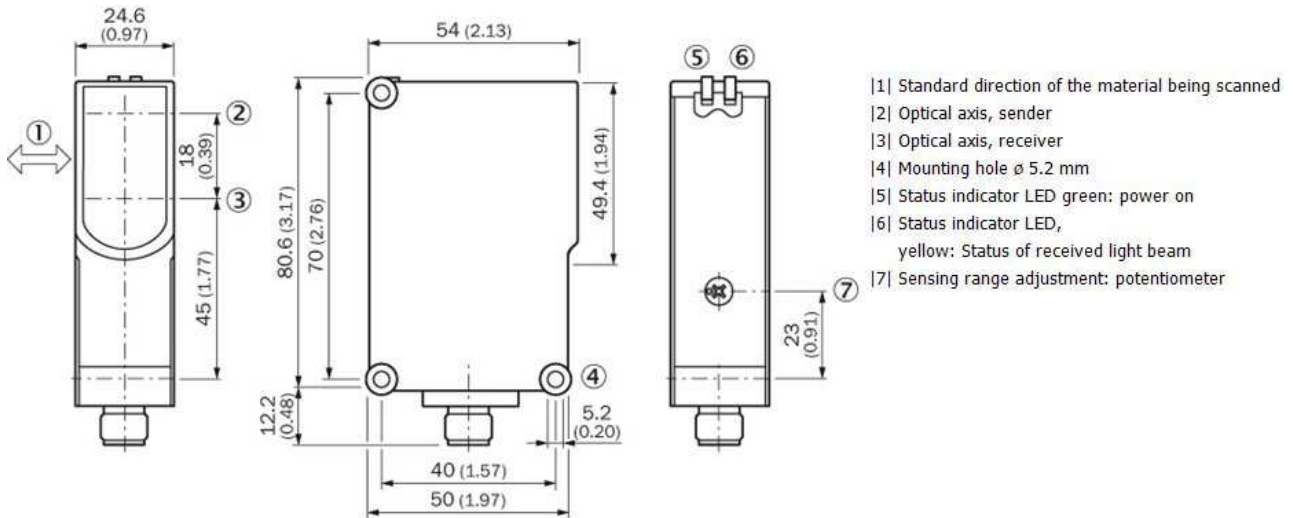
Mechanics/electronics

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:	≤ 2.5 ms ³⁾
Switching frequency:	200 Hz ⁴⁾

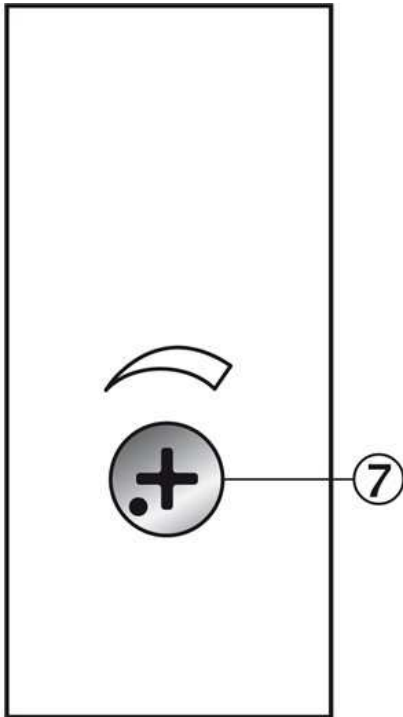
Connection type:	Connector M12, 4-pin
Circuit protection:::	A, C, D ^{5) 6) 7)}
Protection class:	II ⁸⁾
Weight:	100 g
Housing material:	ABS, Plastic
Optics material:	PMMA
Enclosure rating:	IP 67
Ambient operating temperature:	-30 °C ... 60 °C
Ambient storage temperature:	-40 °C ... 75 °C
UL File No.:	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

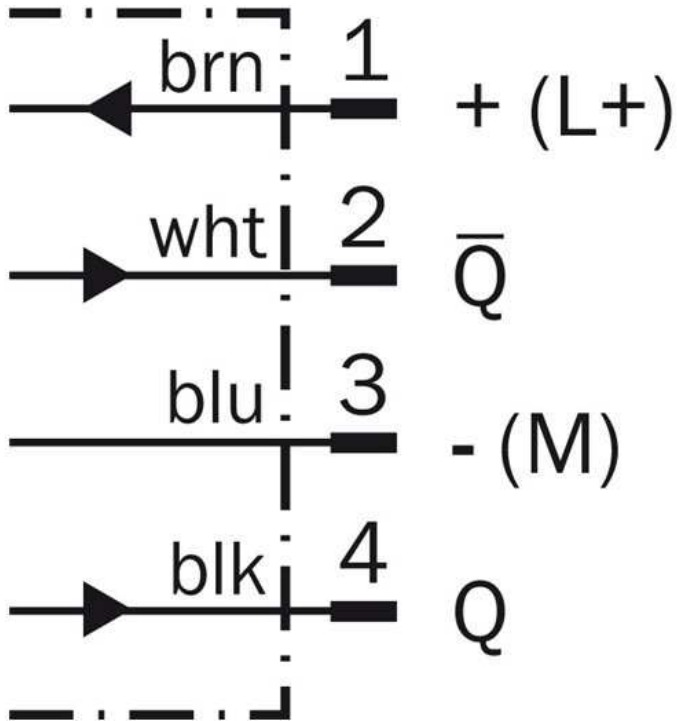


Adjustments possible

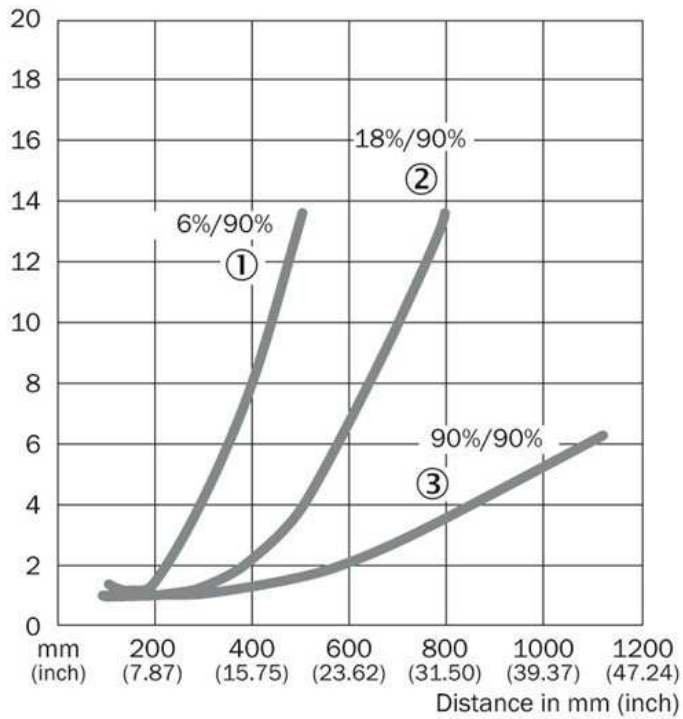


[1] Sensing range adjustment: potentiometer

Connection diagram



Characteristic curve

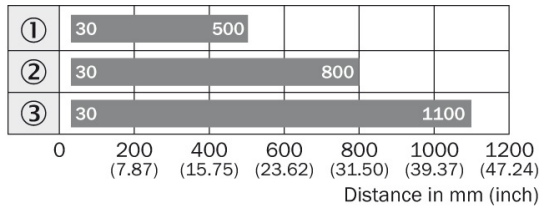


- |1| Sensing range on black, 6 % remission
- |2| Sensing range on grey, 18 % remission
- |3| Sensing range on white, 90 % remission

Connection type



Sensing range diagram



■ Sensing range

- ① Sensing range on black, 6 % remission
- ② Sensing range on gray, 18 % remission
- ③ Sensing range on white, 90 % remission

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