



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

WT23-2P2421



**Model Name** > [WT23-2P2421](#)  
**Part No.** > [1027778](#)



*Illustration may differ*

**At a glance**

- WT23-2 photoelectric proximity sensor Background suppression
- Resistant to crosstalk from other devices
- 360° visibility of indicating LEDs
- IR or red light

**Your benefits**

- Durable housing with reinforced mounting holes withstands harsh conditions
- 360° LEDs provide device status indication from multiple angles
- Less downtime due to ASIC (application-specific integrated circuit) chip technology by SICK
- High level of mechanical and electronic reliability in industrial environments



**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.:	50 mm ... 1,000 mm <sup>1)</sup>
Sensing range:	100 mm ... 1,000 mm
Type of light:	Infrared light
Light source:	LED <sup>2)</sup>
Wave length:	880 nm
Adjustment:	Potentiometer
Light spot size (distance):	Ø 50 mm (800 mm)

<sup>1)</sup> Object with 90 % reflectance (referred to standard white DIN 5033) <sup>2)</sup> Average service life of 100,000 h at T<sub>A</sub> = +25 °C

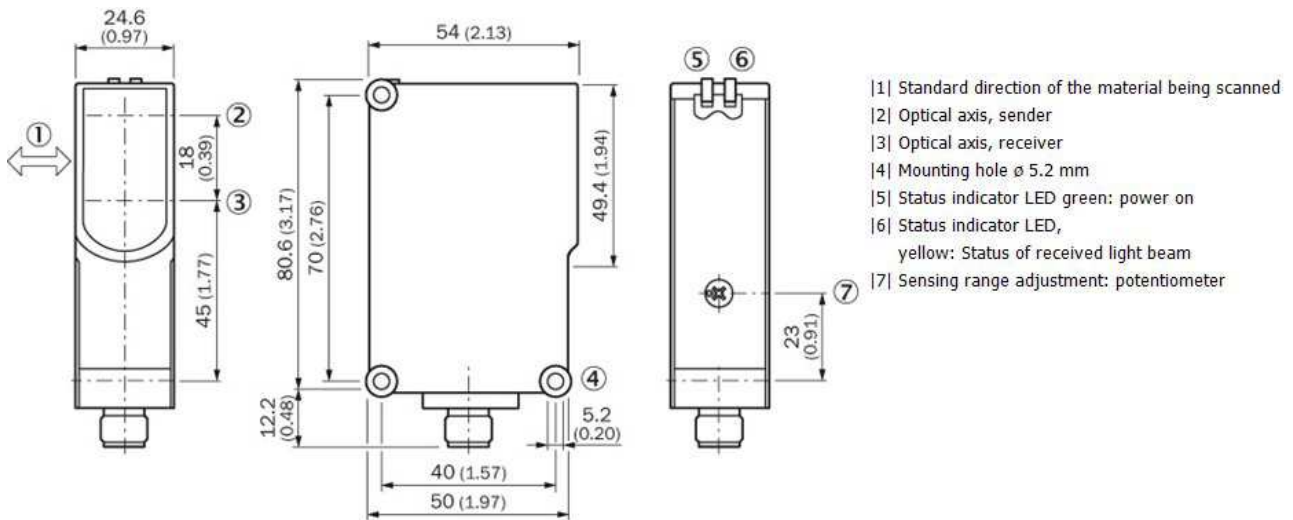
**Mechanics/electronics**

Supply voltage:	10 V DC ... 30 V DC <sup>1)</sup>
Power consumption:	≤ 35 mA <sup>2)</sup>
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 <sub>max.</sub> :	≤ 100 mA
Response time:	≤ 2.5 ms <sup>3)</sup>
Switching frequency:	200 Hz <sup>4)</sup>

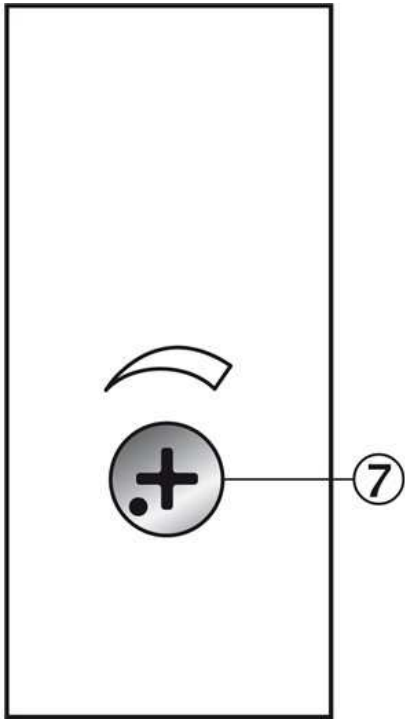
Connection type:	Connector M12, 4-pin
Circuit protection:::	A, C, D <sup>5) 6) 7)</sup>
Protection class:	II <sup>8)</sup>
Weight:	100 g
Housing material:	ABS, Plastic
Optics material:	PMMA
Enclosure rating:	IP 67
Ambient operating temperature:	-25 °C ... 60 °C
Ambient storage temperature:	-40 °C ... 70 °C
UL File No.:	NRKH.E181493 & NRKH7.E181493

1) Limit values, operation in short-circuit protected network max. 8 A    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

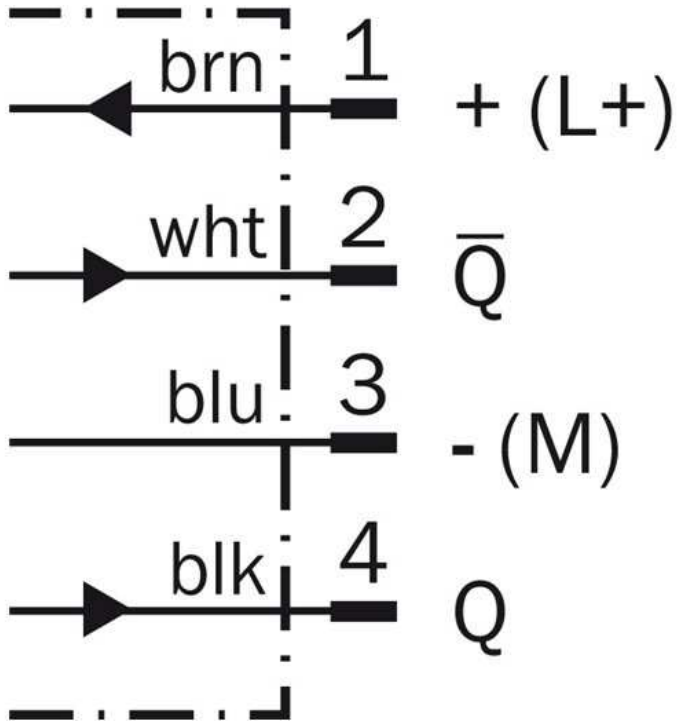


Adjustments possible

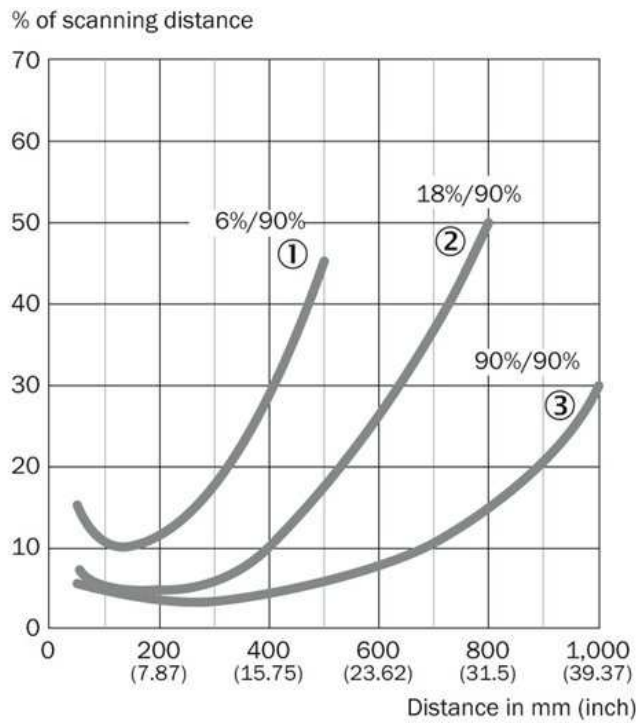


[1] Sensing range adjustment: potentiometer

Connection diagram



## Characteristic curve

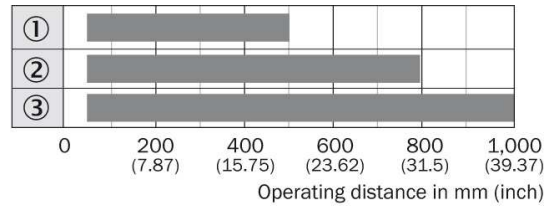


- |1| Sensing range on black, 6 % remission
- |2| Sensing range on grey, 18 % remission
- |3| Sensing range on white, 90 % remission

## Connection type



## Sensing range diagram



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

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