



Photoelectric sensors  
W23-2, Photoelectric proximity sensor, energetic

WTE23-2P2412



**Model Name** > [WTE23-2P2412](#)  
**Part No.** > [1027781](#)



*Illustration may differ*

**At a glance**

- WTE23-2 energetic photoelectric proximity with a sensing range up to 2,300 mm
- Teach-in pushbutton: teach and ready!
- IR LED for long sensing ranges
- 360° visibility of indicating LEDs

**Your benefits**

- Durable housing with reinforced mounting holes withstands harsh conditions
- Teach-in pushbutton enables quick sensing range adjustment
- 360° LEDs provide device status indication from multiple angles
- Less downtime due to ASIC chip technology by SICK
- High level of mechanical and electronic reliability in industrial environments



**Features**

Sensor/detection principle:	Photoelectric proximity sensor, energetic
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 ... 2,300 mm <sup>1)</sup>
Sensing range:	30 mm ... 2,000 mm
Type of light:	Infrared light
Light source:	LED <sup>2)</sup>
Wave length:	880 nm
Adjustment:	Teach-in: single-teach button
Light spot size (distance):	Ø 160 mm (2,000 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

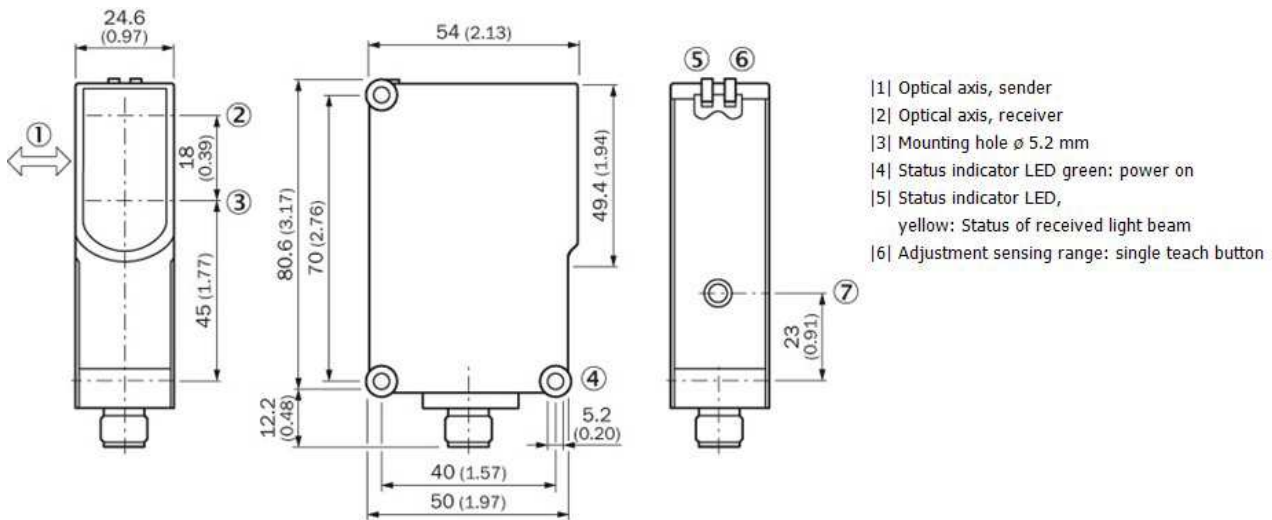
**Mechanics/electronics**

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

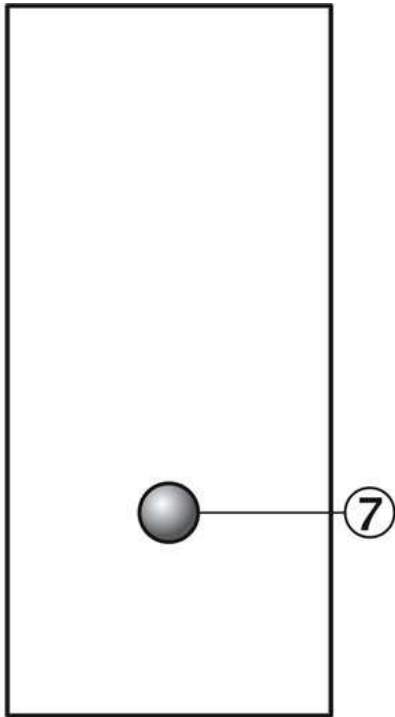
1) Limit values, operation in short-circuit protected network max. 8 A    2) Without load    3) Signal transit time with resistive load    4) With light/dark ratio 1:1    5)  $A = V_S$   
connections reverse-polarity protected    6) C = interference suppression    7) D = outputs overcurrent and short-circuit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

### Dimensional drawing



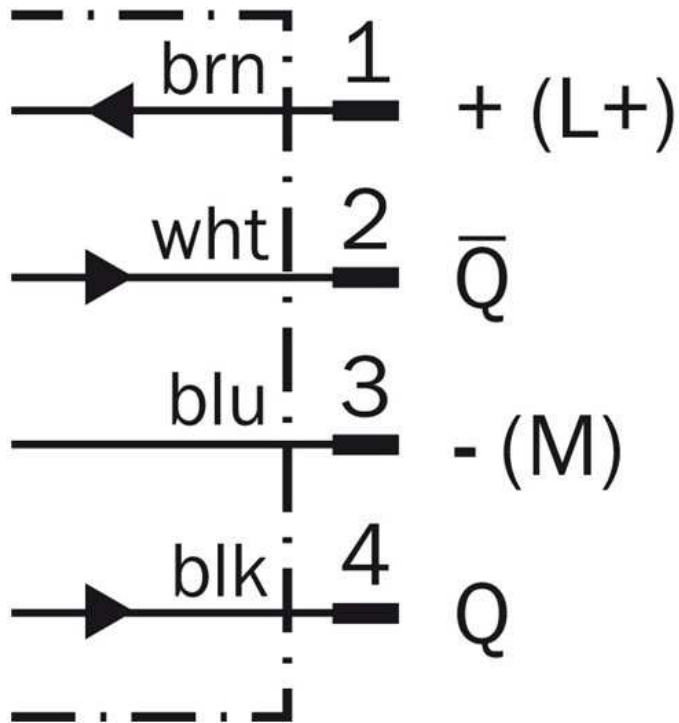
- [1] Optical axis, sender
- [2] Optical axis, receiver
- [3] Mounting hole  $\varnothing$  5.2 mm
- [4] Status indicator LED green: power on
- [5] Status indicator LED, yellow: Status of received light beam
- [6] Adjustment sensing range: single teach button

Adjustments possible

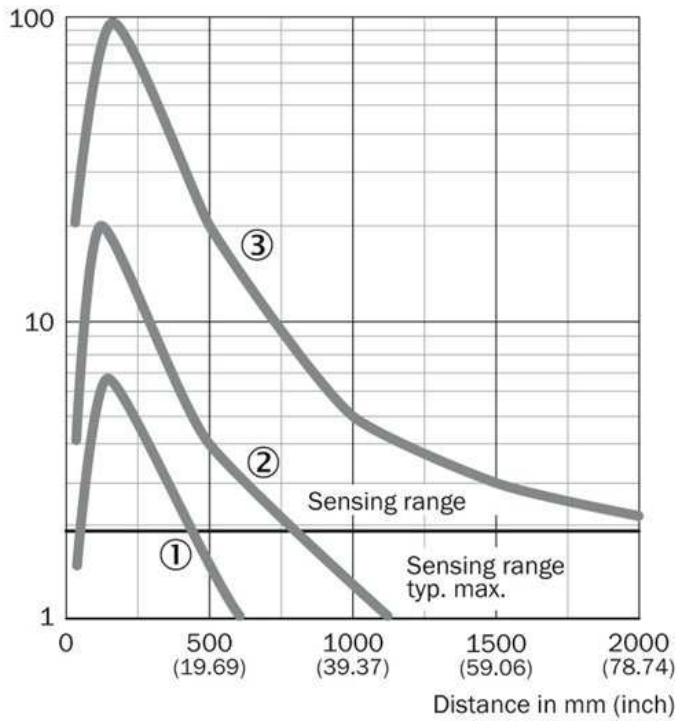


|1| Adjustment sensing range: single teach button

Connection diagram



## Characteristic curve

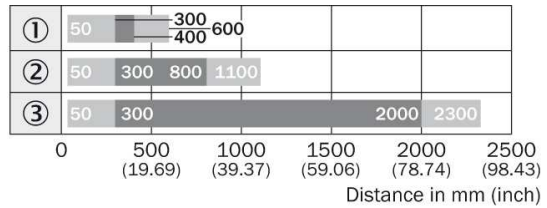


- |1| Sensing range on black, 6 % remission
- |2| Sensing range on grey, 18 % remission
- |3| Sensing range on white, 90 % remission

## Connection type



## Sensing range diagram



■ Sensing range    ■ Sensing range typ. max.

- 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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