



WTE23-2P2412

W23-2

COMPACT PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	Part no.
WTE23-2P2412	1027781

Other models and accessories → www.sick.com/W23-2

Detailed technical data

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 ¹⁾
Sensing range	30 mm ... 2,000 mm
Type of light	Infrared light
Light source	LED ²⁾
Light spot size (distance)	Ø 160 mm (2,000 mm)
Wave length	880 nm
Adjustment	Single teach-in button

¹⁾ Object with 90 % reflectance (referred to standard white, DIN 5033).

²⁾ Average service life: 100,000 h at T_U = +25 °C.

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC ¹⁾
Ripple	≤ 5 V _{pp} ²⁾
Power consumption	35 mA ³⁾

¹⁾ Limit values when operated in short-circuit protected network: max. 8 A.

²⁾ May not exceed or fall below U_V tolerances.

³⁾ Without load.

⁴⁾ Signal transit time with resistive load.

⁵⁾ With light/dark ratio 1:1.

⁶⁾ A = V_S connections reverse-polarity protected.

⁷⁾ C = interference suppression.

⁸⁾ D = outputs overcurrent and short-circuit protected.

⁹⁾ Reference voltage: 50 V DC.

Switching output	PNP
Output function	Complementary
Switching mode	Light/dark switching
Signal voltage PNP HIGH/LOW	Approx. $V_S - 2.5 \text{ V} / 0 \text{ V}$
Output current I_{\max}	$\leq 100 \text{ mA}$
Response time	$\leq 2.5 \text{ ms}^{4)}$
Switching frequency	$200 \text{ Hz}^{5)}$
Connection type	Male connector M12, 4-pin
Circuit protection	A ⁶⁾ C ⁷⁾ D ⁸⁾
Protection class	II ⁹⁾
Weight	+ 100 g
Housing material	Plastic, ABS
Optics material	Plastic, PMMA
Enclosure rating	IP67
Ambient operating temperature	$-25 \text{ °C} \dots +60 \text{ °C}$
Ambient storage temperature	$-40 \text{ °C} \dots +70 \text{ °C}$
UL File No.	NRKH.E181493 & NRKH7.E181493

1) Limit values when operated in short-circuit protected network: max. 8 A.

2) May not exceed or fall below U_V tolerances.

3) Without load.

4) Signal transit time with resistive load.

5) With light/dark ratio 1:1.

6) A = V_S connections reverse-polarity protected.

7) C = interference suppression.

8) D = outputs overcurrent and short-circuit protected.

9) Reference voltage: 50 V DC.

Safety-related parameters

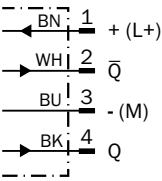
MTTF_D	1,062 years
DC_{avg}	0%

Classifications

ECI@ss 5.0	27270903
ECI@ss 5.1.4	27270903
ECI@ss 6.0	27270903
ECI@ss 6.2	27270903
ECI@ss 7.0	27270903
ECI@ss 8.0	27270903
ECI@ss 8.1	27270903
ECI@ss 9.0	27270903
ETIM 5.0	EC001821
ETIM 6.0	EC001821
UNSPSC 16.0901	39121528

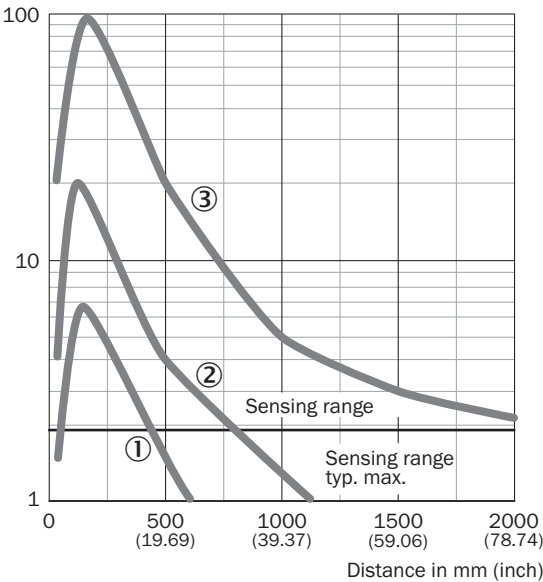
Connection diagram

Cd-083



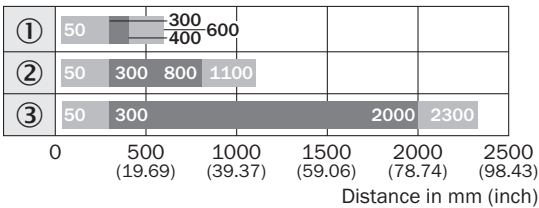
Characteristic curve

WT23-2, energetic



Sensing range diagram

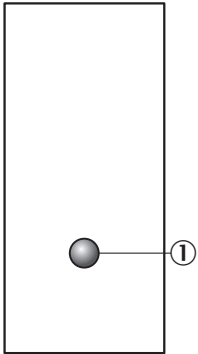
WT23-2, energetic



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

Adjustments possible

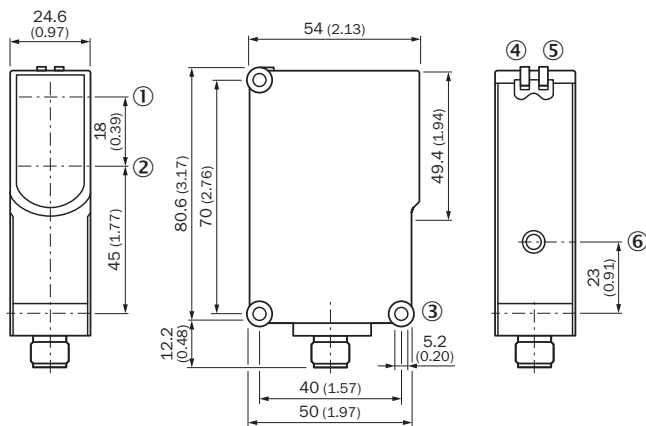
Single teach-in button



① Adjustment sensing range: single teach-in button

Dimensional drawing (Dimensions in mm (inch))

WTE23-2, Single teach-in button





- ① Optical axis, sender
- ② Optical axis, receiver
- ③ Mounting hole \varnothing 5.2 mm
- ④ LED indicator green: Supply voltage active
- ⑤ LED indicator yellow: Status of received light beam
- ⑥ Adjustment sensing range: single teach-in button

Recommended accessories

Other models and accessories → www.sick.com/W23-2

	Brief description	Type	Part no.
Mounting brackets and plates			
	Mounting bracket, steel, zinc coated, mounting hardware included	BEF-WN-W23	2019085

	Brief description	Type	Part no.
Plug connectors and cables			
	Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YF2A14-050VB3XLEAX	2096235
	Head A: male connector, M12, 4-pin, straight Head B: - Cable: unshielded	STE-1204-G	6009932

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com