



WT23-2S1521

W23-2

COMPACT PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	Part no.
WT23-2S1521	1027780

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

Detailed technical data

Features

Functional principle	Photoelectric proximity sensor
Functional principle detail	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 ¹⁾
Sensing range	100 mm ... 1,000 mm
Type of light	Infrared light
Light source	LED ²⁾
Light spot size (distance)	Ø 50 mm (800 mm)
Wave length	880 nm
Adjustment	Potentiometer

¹⁾ Object with 90% remission (based on standard white, DIN 5033).

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

Mechanics/electronics

Supply voltage	90 V AC ... 265 V AC ¹⁾
Power consumption	≤ 2.5 VA
Switching output	Relay, electrically isolated ²⁾

¹⁾ Limit values.

²⁾ Provide suitable spark suppression for inductive or capacitive loads.

³⁾ With light/dark ratio 1:1.

⁴⁾ Do not bend below 0 °C.

⁵⁾ A = V_S connections reverse-polarity protected.

⁶⁾ C = interference suppression.

⁷⁾ Reference voltage: 250 V AC.

⁸⁾ UL: 0 °C ... +60 °C.

Output function	Change-over contacts
Switching mode	Light switching ²⁾
Switching current (switching voltage)	3 A (230 V AC) 0.11 A (230 V DC) 3 A (24 V DC)
Response time	≤ 10 ms
Switching frequency	10 Hz ³⁾
Connection type	Cable, 5-wire, 2 m ⁴⁾
Cable material	PVC
Circuit protection	A ⁵⁾ C ⁶⁾
Protection class	II ⁷⁾
Weight	200 g
Housing material	Plastic, ABS
Optics material	Plastic, PMMA
Enclosure rating	IP67
Ambient operating temperature	-25 °C ... +60 °C ⁸⁾
Ambient temperature, storage	-40 °C ... +70 °C
UL File No.	NRKH.E181493 & NRKH7.E181493

1) Limit values.

2) Provide suitable spark suppression for inductive or capacitive loads.

3) With light/dark ratio 1:1.

4) Do not bend below 0 °C.

5) A = V_S connections reverse-polarity protected.

6) C = interference suppression.

7) Reference voltage: 250 V AC.

8) UL: 0 °C ... +60 °C.

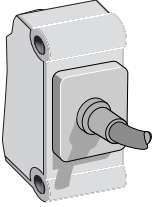
Classifications

eCl@ss 5.0	27270904
eCl@ss 5.1.4	27270904
eCl@ss 6.0	27270904
eCl@ss 6.2	27270904
eCl@ss 7.0	27270904
eCl@ss 8.0	27270904
eCl@ss 8.1	27270904
eCl@ss 9.0	27270904
eCl@ss 10.0	27270904
eCl@ss 11.0	27270904
eCl@ss 12.0	27270903
ETIM 5.0	EC002719
ETIM 6.0	EC002719
ETIM 7.0	EC002719
ETIM 8.0	EC002719

UNSPSC 16.0901

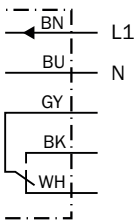
39121528

Connection type



Connection diagram

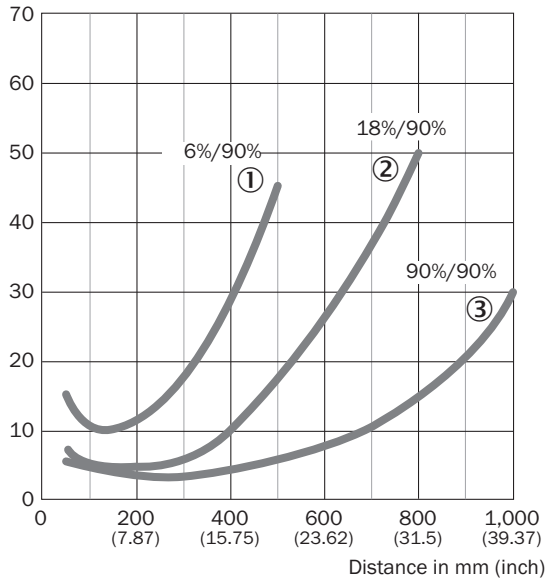
Cd-161



Characteristic curve

WT23-2, infrared

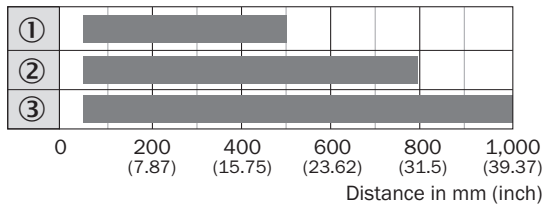
% of sensing range



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

Sensing range diagram

WT23-2, infrared

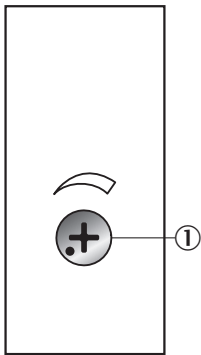


■ Sensing range

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

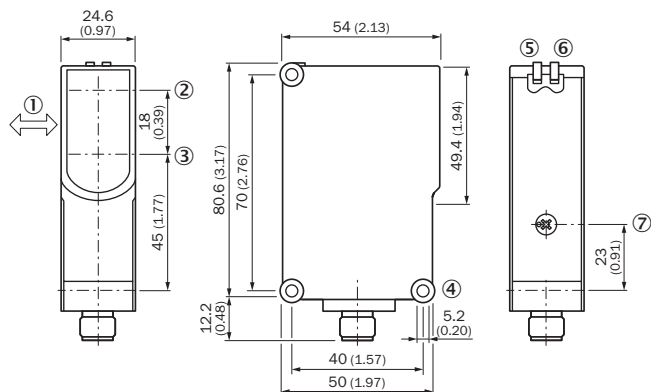
Adjustments

Potentiometer



- ① Sensing range adjustment: potentiometer


Dimensional drawing (Dimensions in mm (inch))



- ① Standard direction of the material being detected
- ② Optical axis, sender
- ③ Optical axis, receiver
- ④ Mounting hole \varnothing 5.2 mm
- ⑤ LED indicator green: Supply voltage active
- ⑥ LED indicator yellow: Status of received light beam
- ⑦ Sensing range adjustment: potentiometer

Recommended accessories

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

	Brief description	Type	Part no.
Plug connectors and cables			
	Head A: male connector, M12, 5-pin, straight Cable: unshielded For field bus technology	STE-1205-G	6022083

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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.

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For us, that is “Sensor Intelligence.”

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