



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

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 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 % reflectance (referred to 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⁾
Output function	Change-over contacts

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.

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
Usage category	AC-15, DC-13, according to EN 60947-1
Ambient operating temperature	-25 °C ... +60 °C ⁸⁾
Ambient storage temperature	-40 °C ... +70 °C
UL File No.	NRKH.E181493 & NRKH7.E181493

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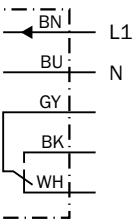
⁸⁾ UL: 0 °C ... +60 °C.

Classifications

ECI@ss 5.0	27270904
ECI@ss 5.1.4	27270904
ECI@ss 6.0	27270904
ECI@ss 6.2	27270904
ECI@ss 7.0	27270904
ECI@ss 8.0	27270904
ECI@ss 8.1	27270904
ECI@ss 9.0	27270904
ETIM 5.0	EC002719
ETIM 6.0	EC002719
UNSPSC 16.0901	39121528

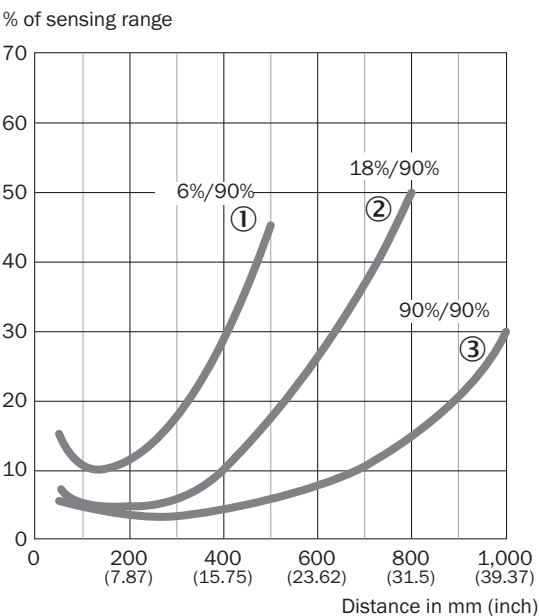
Connection diagram

Cd-161



Characteristic curve

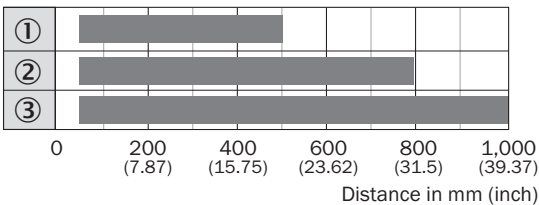
WT23-2, infrared



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

Sensing range diagram

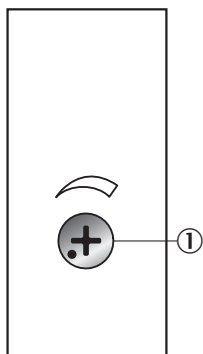
WT23-2, infrared



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

Adjustments possible

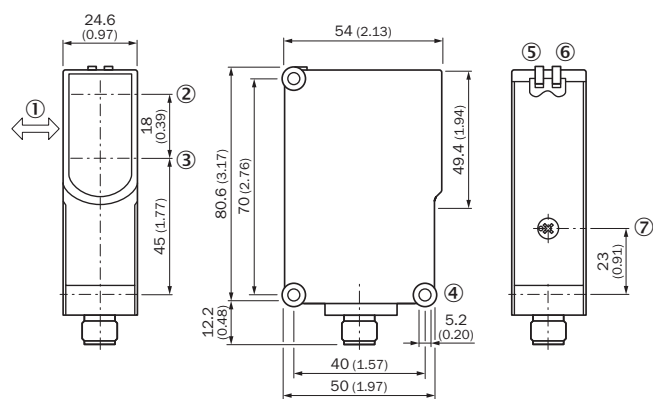
Potentiometer



- ① Sensing range adjustment: potentiometer

Dimensional drawing (Dimensions in mm (inch))

WT23-2, potentiometer



- 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.
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: male connector, M12, 5-pin, straight Cable: unshielded For field bus technology	STE-1205-G	6022083

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:

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