



WTB4SC-3P3232S10

W4

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Ordering information

Type	part no.
WTB4SC-3P3232S10	1079436

Other models and accessories → www.sick.com/W4

Illustration may differ



Detailed technical data

Features

Functional principle	Photoelectric proximity sensor
Functional principle detail	Background suppression
Sensing range max.	4 mm ... 280 mm ¹⁾
Sensing range	10 mm ... 150 mm ¹⁾
Emitted beam	
Light source	PinPoint LED ²⁾
Type of light	Visible red light
Light spot size (distance)	Ø 6.5 mm (150 mm)
Key LED figures	
Wave length	650 nm
Adjustment	IO-Link, Single teach-in button
Special features	Sensing range: preset 104 mm

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

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

Communication interface

IO-Link	✓
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Electronics

Supply voltage U_B	10 V DC ... 30 V DC ¹⁾
Ripple	$< 5 \text{ V}_{\text{pp}}$ ²⁾
Current consumption	30 mA ³⁾
Protection class	III
Digital output	
Type	PNP ⁴⁾
Switching mode	Light/dark switching
Output current $I_{\text{max.}}$	$\leq 100 \text{ mA}$
Repeatability (response time)	130 μs ⁵⁾
Switching frequency	1,000 Hz
Circuit protection	
A ⁶⁾	
B ⁷⁾	
C ⁸⁾	
D ⁹⁾	
Response time Q/ on Pin 2	280 μs ... 410 μs ¹⁰⁾
Switching frequency Q/ to pin 2	1,000 Hz ¹¹⁾

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

²⁾ May not fall below or exceed U_V tolerances.

³⁾ Without load.

⁴⁾ Pin 4: This switching output must not be connected to another output.

⁵⁾ Valid for Q \ on Pin2, if configured with software.

⁶⁾ A = V_S connections reverse-polarity protected.

⁷⁾ B = inputs and output reverse-polarity protected.

⁸⁾ C = interference suppression.

⁹⁾ D = outputs overcurrent and short-circuit protected.

¹⁰⁾ Signal transit time with resistive load.

¹¹⁾ With light / dark ratio 1:1, valid for Q \ on Pin2, if configured with software.

Mechanics

Housing	Rectangular
Design detail	Slim
Dimensions (W x H x D)	12.2 mm x 41.8 mm x 17.3 mm
Connection	Cable with M8 male connector, 4-pin
Connection detail	
Conductor size	0.14 mm ²
Cable diameter	$\emptyset 3.4 \text{ mm}$
Length of cable (L)	100 mm
Material	
Housing	Plastic, ABS
Front screen	Plastic, PMMA
Cable	Plastic, PVC
Weight	20 g

Ambient data

Enclosure rating	IP67
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	IP66
Ambient operating temperature	-40 °C ... +60 °C
Ambient temperature, storage	-40 °C ... +75 °C
UL File No.	NRKH.E181493 & NRKH7.E181493

Smart Task

Switching frequency	SIO Direct: 1000 Hz SIO Logic: 900 Hz IOL: 700 Hz
Response time	1) 2)
Repeatability	SIO Direct: 130 µs ³⁾ SIO Logic: 130 µs ¹⁾ IOL: 310 µs ²⁾

¹⁾ SIO Logic: Sensor operation in standard I/O mode without IO-Link communication. Sensor-internal logic or timing parameters plus Automation Functions used.

²⁾ IOL: Sensor operation with full IO-Link communication and usage of logic, timing and Automation Function parameters.

³⁾ SIO Direct: sensor operation in standard I/O mode without IO-Link communication and without using internal sensor logic or time parameters (set to "direct"/"deactivated").

Certificates

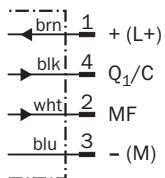
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China-RoHS	✓
ECOLAB certificate	✓
cULus certificate	✓
IO-Link	✓
Photobiological safety (DIN EN 62471) certificate	✓

Classifications

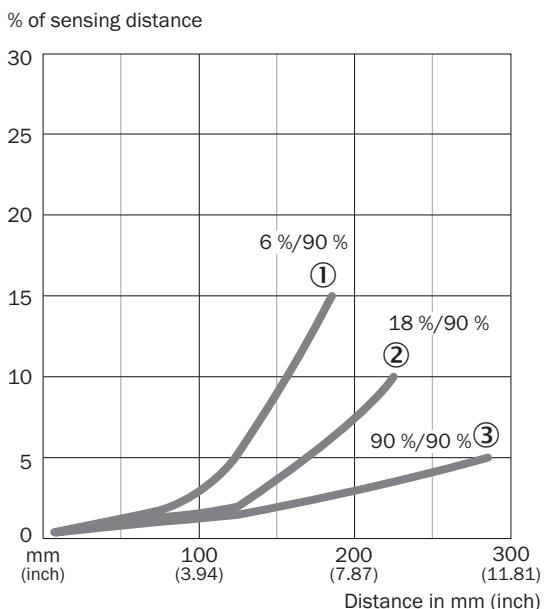
ECLASS 5.0	27270904
ECLASS 5.1.4	27270904
ECLASS 6.0	27270904
ECLASS 6.2	27270904
ECLASS 7.0	27270904
ECLASS 8.0	27270904
ECLASS 8.1	27270904
ECLASS 9.0	27270904
ECLASS 10.0	27270904
ECLASS 11.0	27270904
ECLASS 12.0	27270903
ETIM 5.0	EC002719
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ETIM 8.0	EC002719
UNSPSC 16.0901	39121528

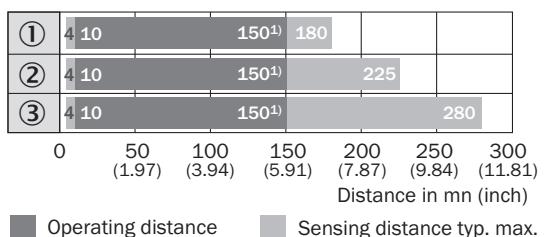
Connection diagram Cd-273



Characteristic curve WTB4S-3, sensing range 280 mm



Sensing range diagram WTB4S-3, sensing range 280 mm



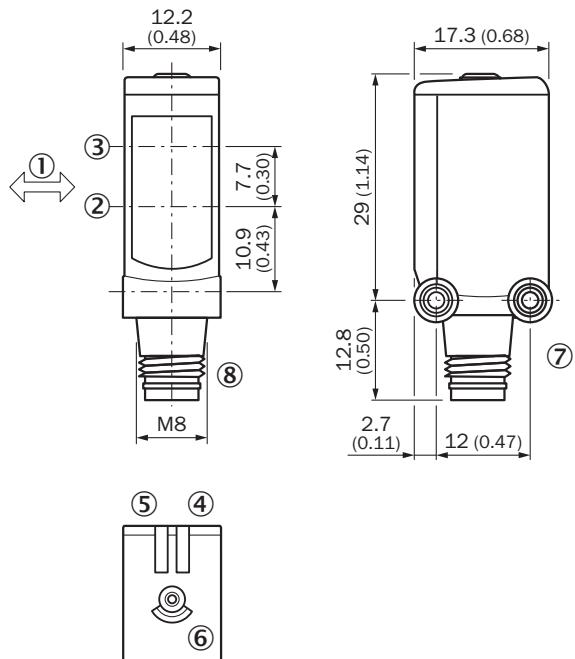
① Sensing distance on black, 6 % remission

② Sensing distance on grey, 18 % remission

③ Sensing distance on white, 90 % remission

¹⁾ Due to the focus of the light spot at 100 mm (3.94 inch)

Dimensional drawing WTB4S-3, Single teach-in button



Dimensions in mm (inch)

- ① Standard direction of the material being detected
- ② optical axis, receiver
- ③ optical axis, sender
- ④ LED indicator green: Supply voltage active
- ⑤ LED indicator yellow: Status of received light beam
- ⑥ Teach-in button
- ⑦ Threaded mounting hole M3
- ⑧ Connection

Recommended accessories

Other models and accessories → www.sick.com/W4

	Brief description	Type	part no.
Mounting systems			
	<ul style="list-style-type: none"> • Description: Mounting bracket for wall mounting • Material: Stainless steel • Details: Stainless steel 1.4571 • Items supplied: Mounting hardware included • Suitable for: W4S, W4F, W4S 	BEF-W4-A	2051628

	Brief description	Type	part no.
connectors and cables			
	<ul style="list-style-type: none">Connection type head A: Male connector, M12, 4-pin, A-codedConnection type head B: Female connector, M8, 4-pin, A-codedConnection type head C: Female connector, M8, 4-pin, A-codedCable: 0.11 m, PVCDescription: Unshielded	SYL-8204-G0M11-X2	6055012
	<ul style="list-style-type: none">Connection type head A: Female connector, M8, 4-pin, straight, A-codedConnection type head B: Flying leadsSignal type: Sensor/actuator cableCable: 5 m, 4-wire, PVCDescription: Sensor/actuator cable, unshieldedApplication: Zones with chemicals, Uncontaminated zones	YF8U14-050VA3XLEAX	2095889
	<ul style="list-style-type: none">Connection type head A: Female connector, M8, 4-pin, straight, A-codedConnection type head B: Male connector, M12, 4-pin, straight, A-codedSignal type: Sensor/actuator cableCable: 5 m, 4-wire, PVCDescription: Sensor/actuator cable, unshieldedApplication: Zones with chemicals, Uncontaminated zones	YF8U14-050VA3M2A14	2096609

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