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Product data sheet



WTB4S-3P2204VS02

W4

MINIATURE PHOTOELECTRIC SENSORS

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Sensor Intelligence.

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WTB4S-3P2204VS02 | W4

MINIATURE PHOTOELECTRIC SENSORS



Illustration may differ

Ordering information

Type	Part no.
WTB4S-3P2204VS02	1047652

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

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 2.5 mm (100 mm)
Key LED figures	
Wave length	650 nm
Adjustment	Cable, Single teach-in button [3]
Special features	Light spot diameter of 2.5 mm in 150 mm distance Reduced sensing range of 280 mm
Special applications	Hygienic and washdown zones
Housing design	Washdown

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

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

[3] External teach-in: pulse > 2 s with voltage Uv with PNP and M with NPN.

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Electrical data

Supply voltage U_B	10 V DC ... 30 V DC [1]
Ripple	< 5 V_{pp} [2]
Current consumption	30 mA [3]
Protection class	III
Digital output	
Type	PNP
Switching mode	Light switching
Output current $I_{max.}$	≤ 100 mA
Response time	< 0.5 ms [4]
Switching frequency	1,000 Hz [5]
Circuit protection	A [6] B [7] C [8]

[1] Limit values, reverse-polarity protected, operation 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] B = inputs and output reverse-polarity protected.
[8] C = interference suppression.

Mechanical data

Housing	Rectangular
Design detail	Slim
Dimensions (W x H x D)	15.25 mm x 44.9 mm x 22.2 mm
Connection	Male connector M8, 4-pin [1]
Material	
Housing	Stainless steel, Stainless steel V4A (1.4404, 316L)
Front screen	Plastic, PMMA
Weight	40 g

[1] Max. tightening torque: 0.6 Nm.

Ambient data

Enclosure rating	IP66 IP67 IP68 IP69K [1]
Ambient operating temperature	–30 °C ... +70 °C [2] –30 °C ... +60 °C
Ambient temperature, storage	–30 °C ... +75 °C
UL File No.	NRKH.E181493 & NRKH7.E181493

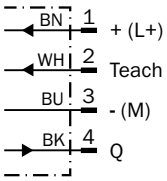
[1] Only in case of correctly mounted IP69K connecting cable.
[2] At UV ≤ 24 V and IA < 30 mA.

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
ETIM 6.0	EC002719
ETIM 7.0	EC002719
ETIM 8.0	EC002719
UNSPSC 16.0901	39121528

Connection diagram

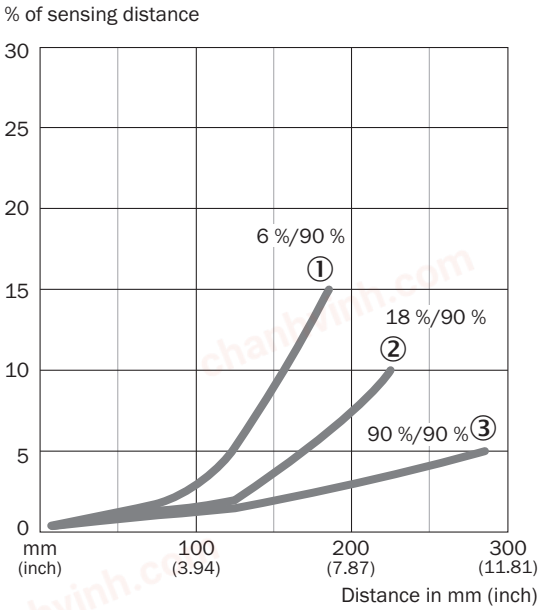
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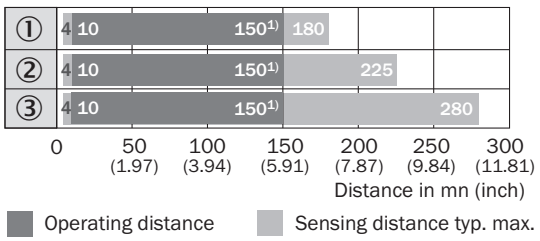
Characteristic curve

WTB4S-3, sensing range 280 mm



Sensing range diagram

WTB4S-3, sensing range 280 mm

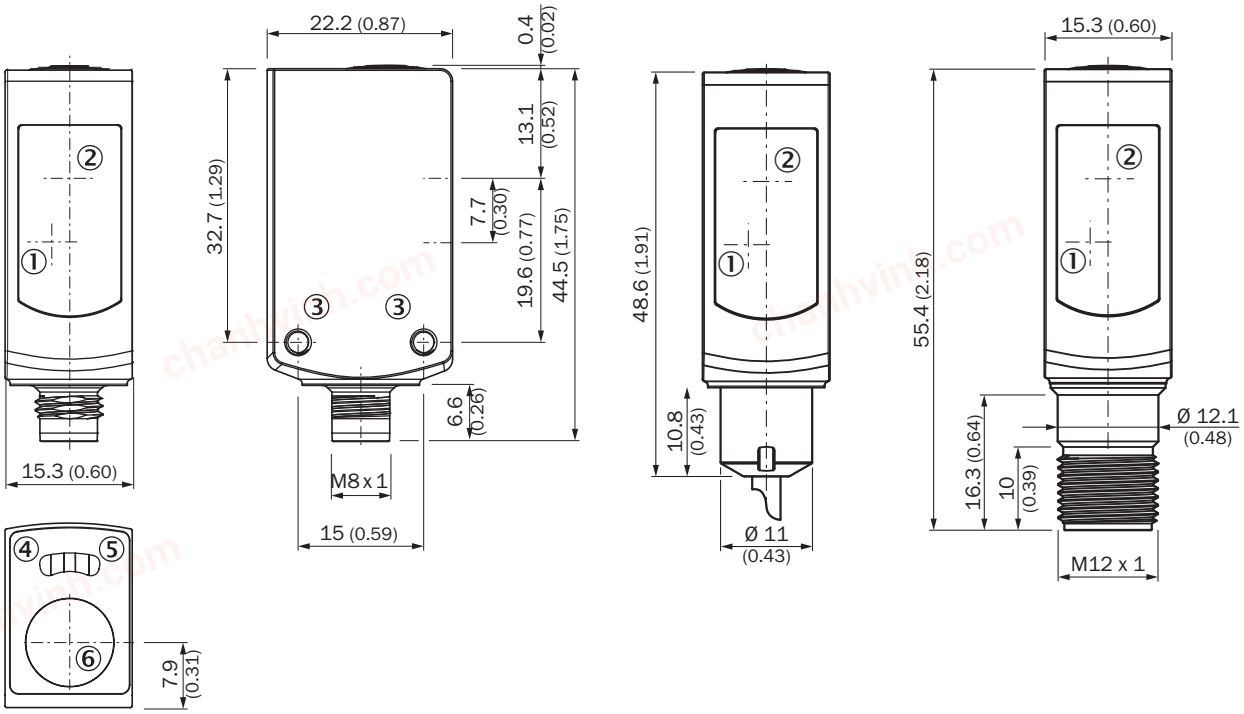


① Sensing distance on black, 6 % remission
② Sensing distance on grey, 18 % remission
③ Sensing distance on whitw, 90 % remission

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

Dimensional drawing (Dimensions in mm (inch))

WTB4S-3V, WTF4S-3V, Single teach-in button



① Center of optical axis, receiver
② Center of optical axis, sender
③ Threaded mounting hole M3
④ LED indicator yellow: Status of received light beam
⑤ LED indicator green: Supply voltage active
⑥ Teach-in button

Recommended accessories

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

	Brief description	Type	Part no.
Mounting brackets and plates			
	Mounting bracket for floor mounting, Stainless steel 1.4571, mounting hardware included	BEF-W4-B	2051630
Plug connectors and cables			
	• **Connection type head A:** Female connector, M8, 4-pin, straight • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 5 m, 4-wire, PVC • **Description:** Sensor/actuator cable, unshielded • **Connection systems:** Flying leads • **Note:** This product is generally resistant to chemical cleaning agents (see ECOLAB). Please do not use cleaning agents of any other Kind., Not resistant against lactic acid & hydrogen peroxide (H2O2) • **Application:** Hygienic and washdown zones	DOL-0804-G05MNI	6059194

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