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Product data sheet



WTB4S-3P1232V

W4

MINIATURE PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

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WTB4S-3P1232V | W4

MINIATURE PHOTOELECTRIC SENSORS



Illustration may differ

Ordering information

Type	Part no.
WTB4S-3P1232V	1052411

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 ... 120 mm [1]
Sensing range	10 mm ... 120 mm [1]
Emitted beam	
Light source	PinPoint LED [2]
Type of light	Visible red light
Light spot size (distance)	Ø 2.5 mm (50 mm)
Key LED figures	
Wave length	650 nm
Adjustment	Single teach-in button
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.

Safety-related parameters

$MTTF_D$	1,186 years
DC_{avg}	0 %
T_M (mission time)	20 years

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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/dark 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 49.2 mm x 22.2 mm
Connection	Cable, 4-wire, 5 m [1]
Connection detail	
Conductor size	0.14 mm²
Length of cable (L)	5 m [1]
Material	
Housing	Stainless steel, Stainless steel V4A (1.4404, 316L)
Front screen	Plastic, PMMA
Cable	PVC
Weight	125 g

[1] Do not bend below 0 °C.

Ambient data

Enclosure rating	IP66 IP67 IP68 IP69K
Ambient operating temperature	–30 °C ... +70 °C [1] –30 °C ... +60 °C

[1] At UV ≤ 24 V and IA < 30 mA.

Ambient temperature, storage	–30 °C ... +75 °C
UL File No.	NRKH.E181493 & NRKH7.E181493

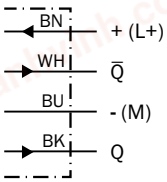
[1] At UV ≤ 24 V and IA < 30 mA.

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

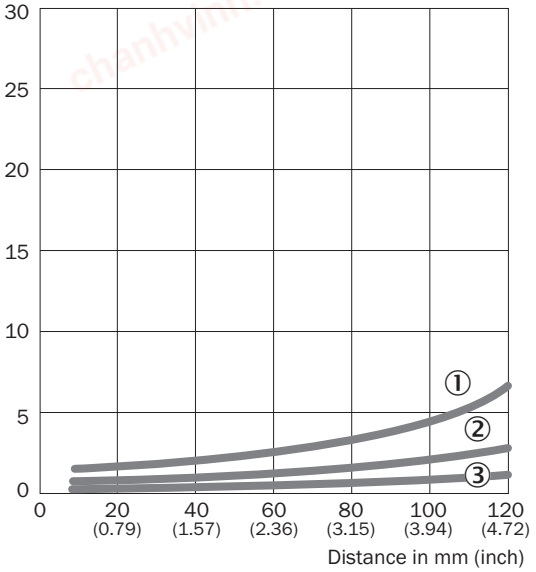
Cd-094



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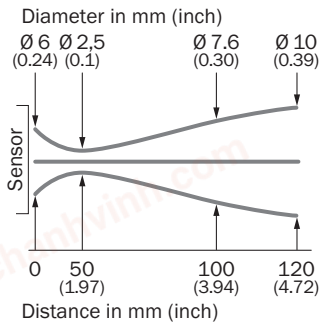
Characteristic curve

WTB4S-3, 120 mm



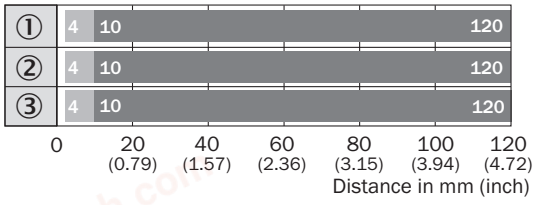
① Sensing range on black, 6% remission factor
② Sensing range on gray, 18% remission factor
③ Sensing range on white, 90% remission factor

Light spot size



Sensing range diagram

WTB4S-3, 120 mm



Sensing range
Sensing range max.

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

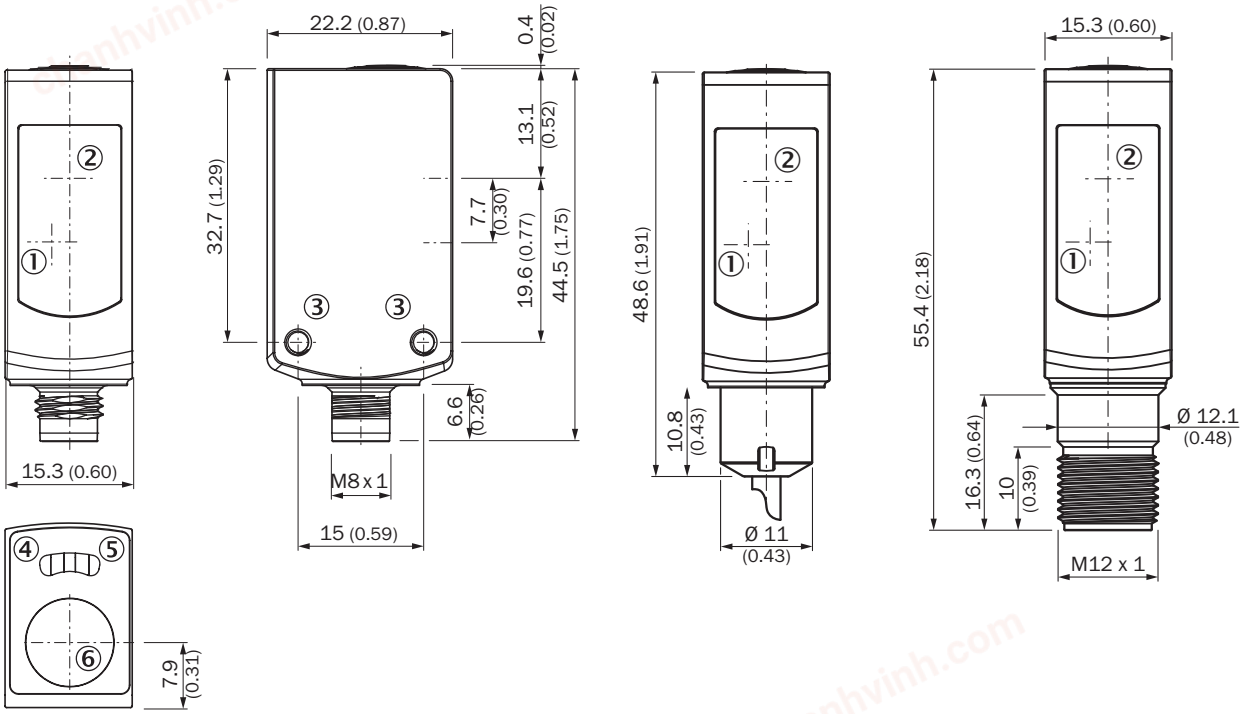
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Dimensional drawing (Dimensions in mm (inch))

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:** Male connector, M8, 4-pin, straight • **Description:** Unshielded • **Connection systems:** Screw-type terminals • **Permitted cross-section:** 0.14 mm² ... 0.5 mm²	STE-0804-G	6037323

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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.

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."

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