WTB4S-3F3160S12

W4

MINIATURE PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

Ordering information

Type	Part no.
WTB4S-3F3160S12	1062834

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.	100 mm [1]
Sensing range	15 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	Fix
Special features	Fixed sensing range

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

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

Electrical data

Supply voltage U_B	10 V DC … 30 V DC [1]
Ripple	< 5 V_{pp} [2]
Current consumption	20 mA [3]
Protection class	III
Digital output	
Type	PNP
Switching mode	Dark switching
Output current $I_{max.}$	≤ 100 mA
Response time	< 0.5 ms [4]
Switching frequency	1,000 Hz [5]
Circuit protection	A [6]
	C [7]
	D [8]

[1] Limit values.

[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] C = interference suppression.

[8] D = outputs overcurrent and short-circuit protected.

Mechanical data

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 connector M8, 3-pin
Connection detail	
Conductor size	0.14 mm²
Cable diameter	Ø 3.4 mm
Length of cable (L)	100 mm
Material	
Housing	Plastic, ABS
Front screen	Plastic, PMMA
Cable	PVC
Weight	30 g

Ambient data

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

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 type
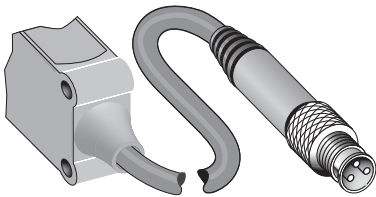
Connection diagram

Cd-045

BN 1 + (L+)
BU 3 - (M)
BK 4 Q
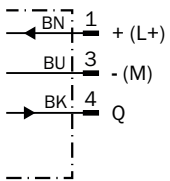
Characteristic curve

WTB4S-3, 180 mm
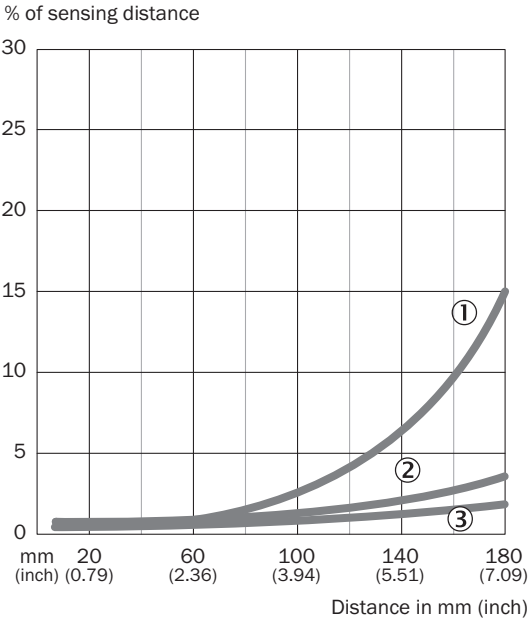
% of sensing distance

Distance in mm (inch)
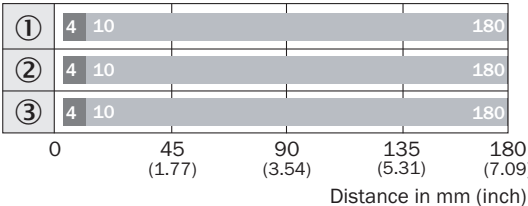
① Sensing range on black, 6% remission factor
② Sensing range on gray, 18% remission factor
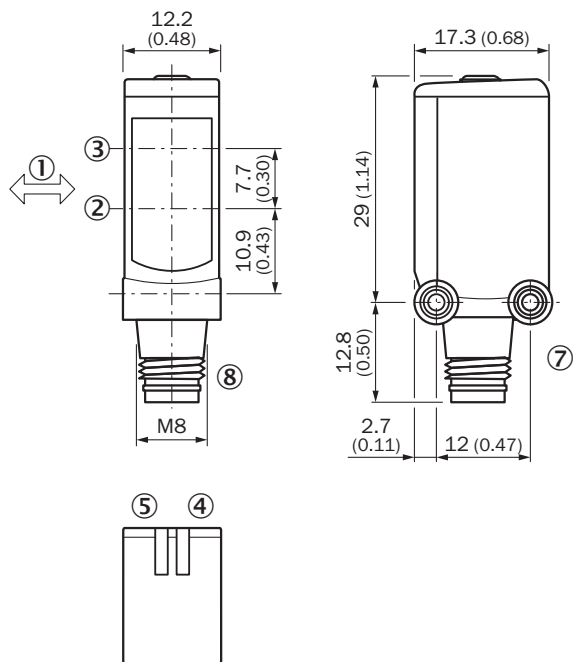③ Sensing range on white, 90% remission factor

Sensing range diagram

WTB4S-3, 180 mm

Distance in mm (inch)

■ Sensing range max.   ■ Sensing range

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

Dimensional drawing (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
⑦ Threaded mounting hole M3
⑧ Connection

Recommended accessories

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

	Brief description	Type	Part no.
Mounting brackets and plates			
	Mounting bracket for wall mounting, Stainless steel 1.4571, mounting hardware included	BEF-W4-A	2051628
Plug connectors and cables			
	• **Connection type head A:** Male connector, M8, 3-pin, straight • **Description:** Unshielded • **Connection systems:** Screw-type terminals • **Permitted cross-section:** 0.14 mm² ... 0.5 mm²	STE-0803-G	6037322
Others			
	• **Connection type head A:** Female connector, M8, 3-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 5 m, 3-wire, PVC • **Description:** Sensor/actuator cable, unshielded • **Application:** Zones with chemicals	YF8U13-050VA1XLEAX	2095884

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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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