



WTB4S-3P1361
W4

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	part no.
WTB4S-3P1361	1042043

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 ... 180 mm ¹⁾
Sensing range	10 mm ... 180 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	Potentiometer, 5 turns

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

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

Safety-related parameters

MTTF _D	1,180 years
DC _{avg}	0 %

Electronics

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	Light 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 fall below or exceed U_y 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.

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, 3-wire, 2 m ¹⁾
Connection detail	
Conductor size	0.14 mm ²
Cable diameter	Ø 3.4 mm
Length of cable (L)	2 m ¹⁾
Material	
Housing	Plastic, ABS
Front screen	Plastic, PMMA
Cable	Plastic, PVC
Weight	30 g

¹⁾ Do not bend below 0 °C.

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

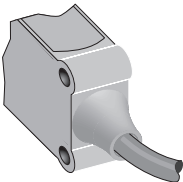
Certificates

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

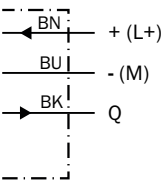
Classifications

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

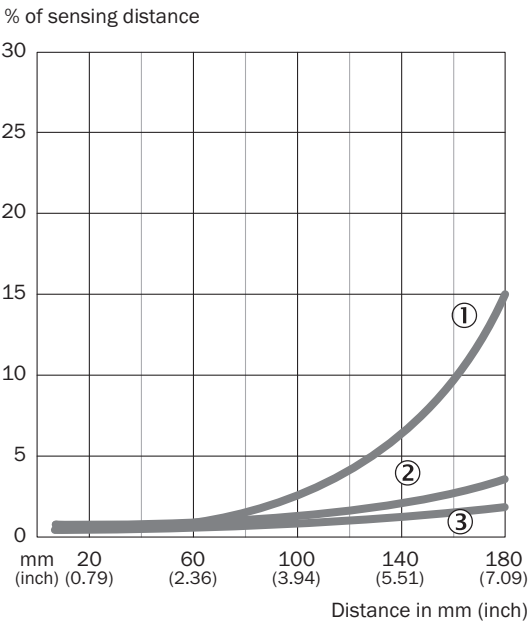
Connection type



Connection diagram Cd-043

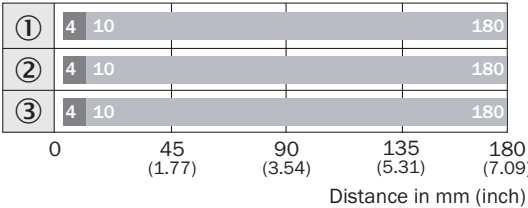


Characteristic curve WTB4S-3, 180 mm



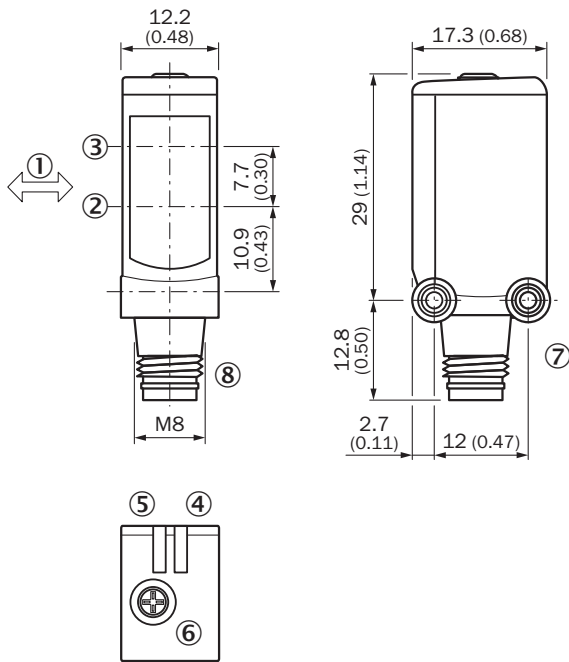
- ① Sensing range on black, 6% remission factor
- ② Sensing range on gray, 18% remission factor
- ③ Sensing range on white, 90% remission factor

Sensing range diagram WTB4S-3, 180 mm



- 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 WTB4S-3, potentiometer



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 Potentiometer
- ⑦ Threaded mounting hole M3
- ⑧ Connection

Recommended accessories

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

	Brief description	Type	part no.
Mounting systems			
	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
	Description: Plate N08 for universal clamp bracket Material: Steel, zinc diecast Details: Zinc plated steel (sheet), Zinc die cast (clamping bracket) Items supplied: Universal clamp (5322626), mounting hardware Usable for: W100, W150, W4S, W4F, W8, W9-3, W8G, W8 Laser, W8 Inox, G6, W100 Laser, W100-2, W10, G6 Inox, RAY10, W4SLG-3, W9, GR18, MultiPulse, Reflex Array, MultiLine, LUT3, KT5, KT8, KT10, CS8	BEF-KHS-N08	2051607
	Description: Plate N11N for universal clamp bracket Material: Stainless steel Details: Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp) Items supplied: Universal clamp (5322627), mounting hardware Usable for: DeltaPac, Glare, WTD20E	BEF-KHS-N11N	2071081
connectors and cables			
	Connection type head A: Male connector, M8, 3-pin, straight, A-coded Description: Unshielded Connection systems: Screw-type terminals Permitted cross-section: 0.14 mm² ... 0.5 mm²	STE-0803-G	6037322

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