WTB4-3P3161

W4-3

MINIATURE PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

Illustration may differ

Ordering information

Type	Part no.
WTB4-3P3161	1028097

Other models and accessories ➜ www.sick.com/W4-3

Detailed technical data

Features

Device type	Photoelectric sensors
Dimensions (W x H x D)	16 mm x 39.5 mm x 12 mm
Housing design (light emission)	Rectangular
Sensing range max.	4 mm ... 150 mm [1]
Sensing range	15 mm ... 150 mm [1]
Type of light	Visible red light
Light source	PinPoint LED [2]
Light spot size (distance)	Ø 7 mm (50 mm)
Wave length	650 nm
Adjustment	Potentiometer, 5 turns
Special applications	Detecting small objects

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

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

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC [1]
Ripple	< 5 V_{pp} [2]
Current consumption	20 mA [3]
Switching output	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]
Protection class	III
Weight	30 g
Housing material	Plastic, ABS
Optics material	Plastic, PMMA
Enclosure rating	IP67 IP66
Ambient operating temperature	–40 °C ... +60 °C
Ambient temperature, storage	–40 °C ... +75 °C

[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.

Safety-related parameters

MTTF$_D$	1,166 years
DC$_{avg}$	0 %

Classifications

ECl@ss 5.0	27270904
ECl@ss 5.1.4	27270904
ECl@ss 6.0	27270904
ECl@ss 6.2	27270904
ECl@ss 7.0	27270904
ECl@ss 8.0	27270904
ECl@ss 8.1	27270904
ECl@ss 9.0	27270904
ECl@ss 10.0	27270904
ECl@ss 11.0	27270904
ETIM 5.0	EC002719

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

Connection type
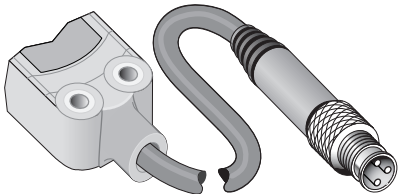
Connection diagram

Cd-045

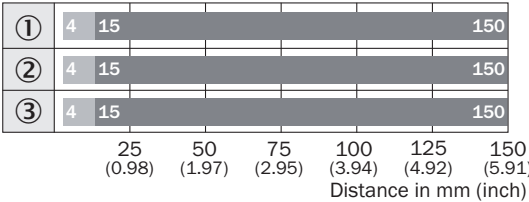|		
BN	1	+ (L+)
BU	3	- (M)
BK	4	Q
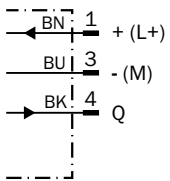
Characteristic curve

WTB4-3
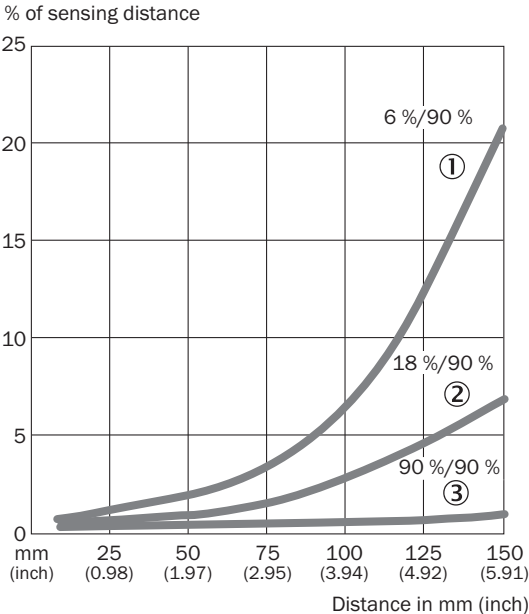
% of sensing distance

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

Sensing range diagram
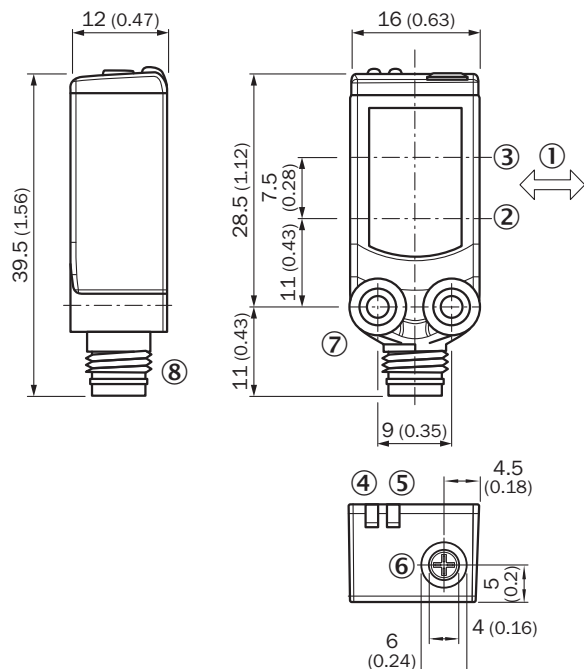
WTB4-3

■ Sensing range max.   ■ Sensing range

① Sensing range on black, 6% remission
② Sensing range on gray, 18 % remission
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Dimensional drawing (Dimensions in mm (inch))

WTx4-3, potentiometer

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

Recommended accessories

Plug connectors and cables

Connecting cables

Field-attachable connectors

Other models and accessories ➜ www.sick.com/W4-3

Brief description	Type	Part no.
• **Connection type head A:** Female connector, M8, 3-pin, straight, A-coded • **Connection type head B:** Flying leads • **Authorizations:** UL • **Signal type:** Sensor/actuator cable • **Cable:** 5 m, 3-wire, PVC • **Description:** Sensor/actuator cable, unshielded • **Application:** Zones with chemicals	YF8U13-050VA1XLEAX	2095884
Brief description	**Type**	**Part no.**
• **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

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."

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