WTF18-3V910
W18-3

SMALL PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

WTF18-3V910 | W18-3
SMALL PHOTOELECTRIC SENSORS

Illustration may differ

Ordering information

Type	Part no.
WTF18-3V910	1025906

Other models and accessories ➜ www.sick.com/W18-3

Detailed technical data

Features

Sensor/ detection principle	Photoelectric proximity sensor, Background suppression
Dimensions (W x H x D)	17.6 mm x 75.5 mm x 33.5 mm
Housing design (light emission)	Rectangular
Sensing range max.	300 mm ... 800 mm [1]
Sensing range	50 mm ... 700 mm [1]
Type of light	Infrared light
Light source	LED [2]
Light spot size (distance)	Ø 15 mm (300 mm)
Wave length	870 nm
Adjustment	Potentiometer, 4 turns
Alarm output	✓

[1] Object with 90 % reflectance (referred to 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]
Power consumption	55 mA [3]
Switching output	PNP
Switching mode	Dark switching
Output current $I_{max.}$	100 mA
Response time	< 700 µs [4]
Switching frequency	700 Hz [5]
Connection type	Cable with M12 male connector, 4-pin, 0.29 m [6]
Cable material	PVC
Circuit protection	A [7] C [8] D [9]
Weight	70 g
Housing material	Plastic, ABS
Optics material	Plastic, PMMA
Enclosure rating	IP67
Ambient operating temperature	–40 °C ... +60 °C
Ambient storage temperature	–40 °C ... +75 °C
UL File No.	NRKH.E181493 & NRKH7.E181493

[1] Limit values when operated 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] Do not bend below 0 °C.

[7] A = V_S connections reverse-polarity protected.
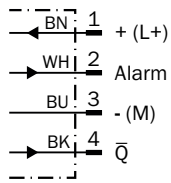
[8] C = interference suppression.

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

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
ETIM 5.0	EC002719
ETIM 6.0	EC002719
UNSPSC 16.0901	39121528

Connection diagram

Cd-110

BN	1	+ (L+)
WH	2	Alarm
BU	3	- (M)
BK	4	$\overline{Q}$

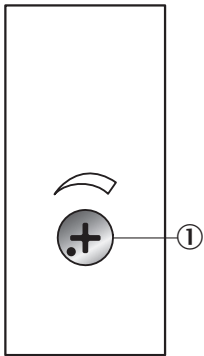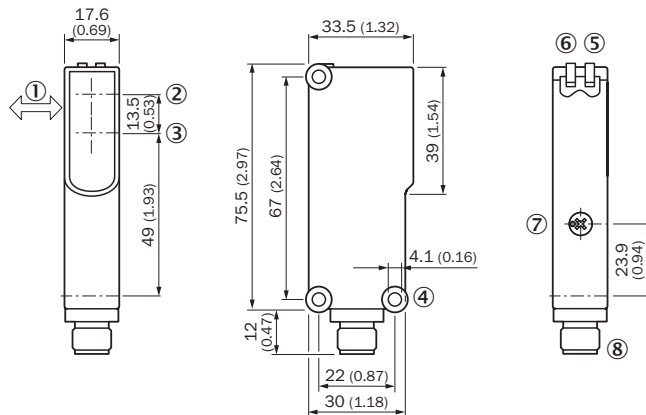## Adjustments possible

Potentiometer

① Setting of the sensing range: potentiometer, 4 revolutions

Dimensional drawing (Dimensions in mm (inch))

WT18-3, potentiometer

17.6 (0.69)
13.5 (0.53)
49 (1.93)
33.5 (1.32)
39 (1.54)
75.5 (2.97)
67 (2.64)
4.1 (0.16)
12 (0.47)
22 (0.87)
30 (1.18)
23.9 (0.94)

① Standard direction of the material being detected
② Center of optical axis, sender
③ Center of optical axis, receiver
④ Mounting hole ø 4.1 mm
⑤ LED indicator yellow: Status of received light beam
⑥ LED indicator green: Supply voltage active
⑦ Setting of the sensing range: potentiometer, 4 revolutions
⑧ 4-pin M12 male connector or 2 m cable or 6-pin cubic connector

Recommended accessories

Other models and accessories ➜ www.sick.com/W18-3

Brief description	Type	Part no.
Mounting brackets and plates		
Mounting bracket with hinged arm, steel, zinc coated, mounting hardware included	BEF-WN-W18	2009317
Plug connectors and cables		
Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YF2A14-050VB3XLEAX	2096235
Head A: male connector, M12, 4-pin, straight Head B: - Cable: unshielded	STE-1204-G	6009932

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**

SICK
Sensor Intelligence.