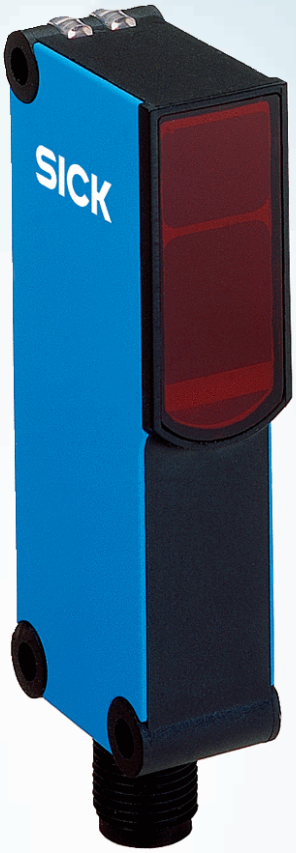
Data sheet



WT18-3N110S03

W18-3

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

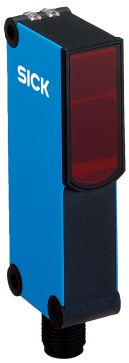


Illustration may differ

Ordering information

Type	part no.
WT18-3N110S03	1026560

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

Detailed technical data

Features

Functional principle	Photoelectric proximity sensor
Functional principle detail	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.	10 mm ... 700 mm [1]
Sensing range	50 mm ... 700 mm [1]
Type of light	Infrared light
Light source	LED [2]
Light spot size (distance)	Ø 20 mm (400 mm)
Wave length	870 nm
Adjustment	Potentiometer, 4 turns
Special features	Sensing range preset to 300 mm based on objects to be sensed with 6 % reflectivity Sensing range adjustment: potentiometer

[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 U_B	10 V DC ... 30 V DC [1]
Ripple	< 5 V_{pp} [2]
Current consumption	55 mA [3]

[1] Limit values when operated in short-circuit protected network: max. 8 A.
[2] May not fall below or exceed 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.

Switching output	NPN
Output function	Complementary
Switching mode	Light/dark switching
Output current $I_{max.}$	≤ 100 mA
Response time	< 700 µs [4]
Switching frequency	700 Hz [5]
Connection type	Cable with AMP connector, 1.2 m [6]
Cable material	Plastic, PVC
Circuit protection	A [7] C [8] D [9]
Weight	120 g
Special device	✓
Housing material	Plastic, ABS
Optics material	Plastic, PMMA
Enclosure rating	IP67
Ambient operating temperature	–40 °C ... +60 °C
Ambient temperature, storage	–40 °C ... +75 °C
UL File No.	NRKH.E181493 & NRKH7.E181493

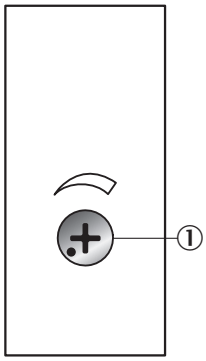
[1] Limit values when operated in short-circuit protected network: max. 8 A.
[2] May not fall below or exceed U_V tolerances.
[3] Without load.
[4] Signal transit time with resistive load.
[5] With light/dark ratio 1:1.
[6] Do not bend below 0 °C.
[7] A = V_S connections reverse-polarity protected.
[8] C = interference suppression.
[9] D = outputs overcurrent and short-circuit protected.

Classifications

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

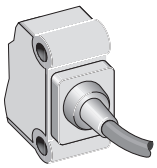
ETIM 8.0	EC002719
UNSPSC 16.0901	39121528

Adjustments Potentiometer

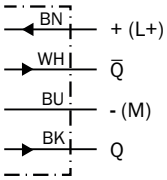


① setting of the sensing range: potentiometer, 4 revolutions

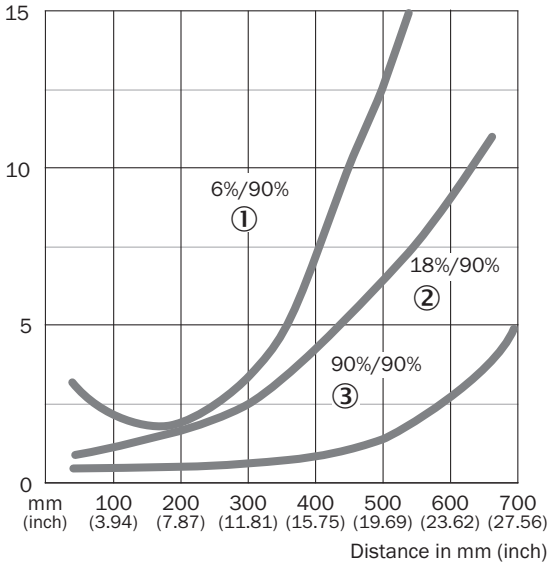
Connection type



Connection diagram Cd-094

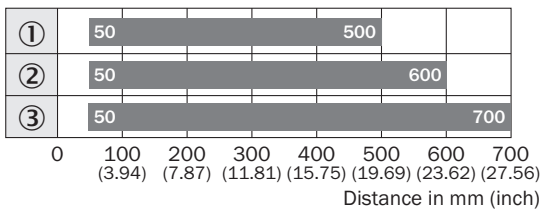


Characteristic curve WT18-3, infrared, 700 mm



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

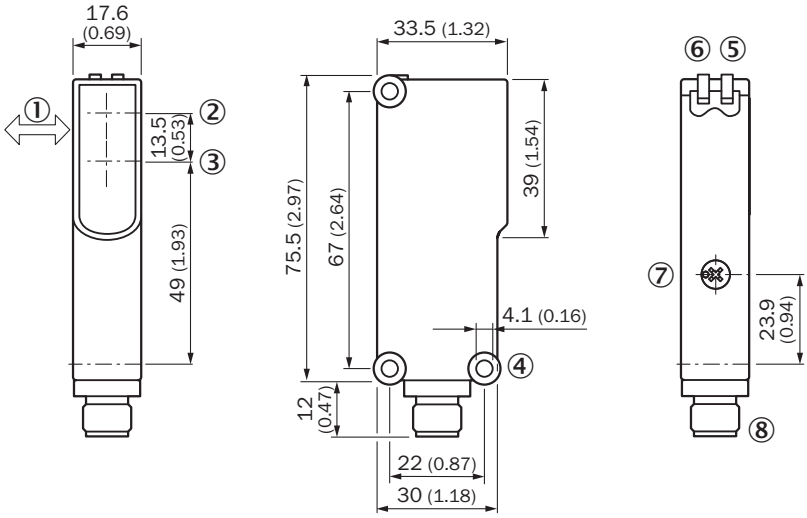
Sensing range diagram WT18-3, infrared, 700 mm



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 WT18-3, potentiometer



Dimensions in mm (inch)
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 systems			
	• **Description:** Mounting bracket with hinged arm • **Material:** Steel • **Details:** Steel, zinc coated • **Items supplied:** Mounting hardware included • **Suitable for:** W14-2, W18-3	BEF-WN-W18	2009317
	• **Description:** Mounting bracket • **Material:** Steel • **Details:** Steel, zinc coated • **Items supplied:** Mounting hardware included • **Suitable for:** W14-2, W18-3	BEF-WN-W14	2019084

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