

WT18-3N610

W18-3

SMALL PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	Part no.
WT18-3N610	1025894

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

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

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

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC ¹⁾
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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⁾ A = V_S connections reverse-polarity protected.

⁷⁾ C = interference suppression.

⁸⁾ D = outputs overcurrent and short-circuit protected.

Ripple	< 5 V _{pp} ²⁾
Current consumption	55 mA ³⁾
Switching output	NPN
Switching mode	Light/dark switching
Output current I_{max}	≤ 100 mA
Response time	< 700 μs ⁴⁾
Switching frequency	700 Hz ⁵⁾
Connection type	Cubic connector, 6-pin
Circuit protection	A ⁶⁾ C ⁷⁾ D ⁸⁾
Weight	70 g
Housing material	Plastic, ABS
Optics material	Plastic, PMMA
Enclosure rating	IP65
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 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.

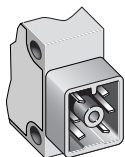
Classifications

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
eCl@ss 12.0	27270903
ETIM 5.0	EC002719
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UNSPSC 16.0901

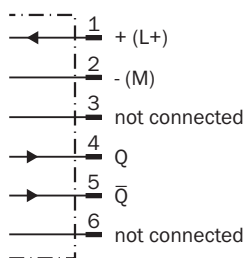
39121528

Connection type



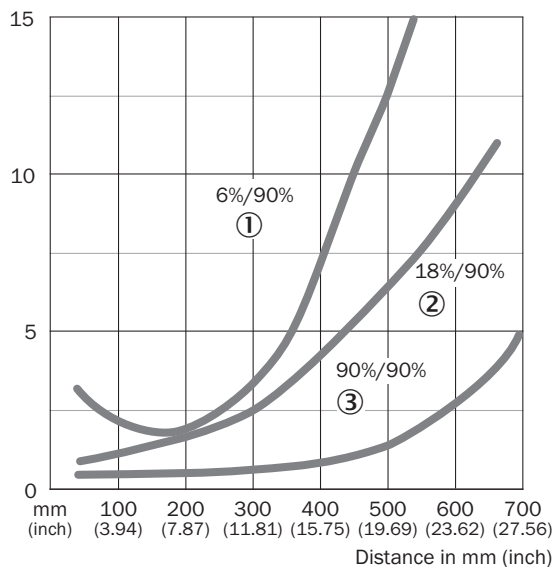
Connection diagram

Cd-176



Characteristic curve

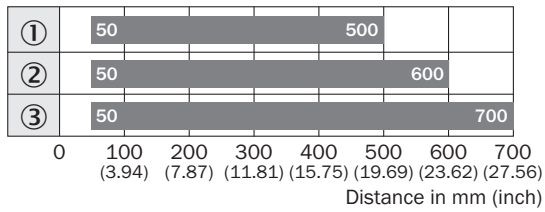
WT18-3, infrared, 700 mm



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

Sensing range diagram

WT18-3, infrared, 700 mm

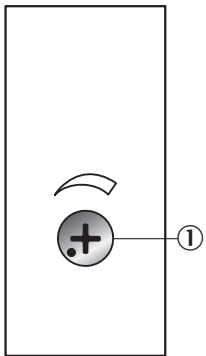


■ Sensing range

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

Adjustments

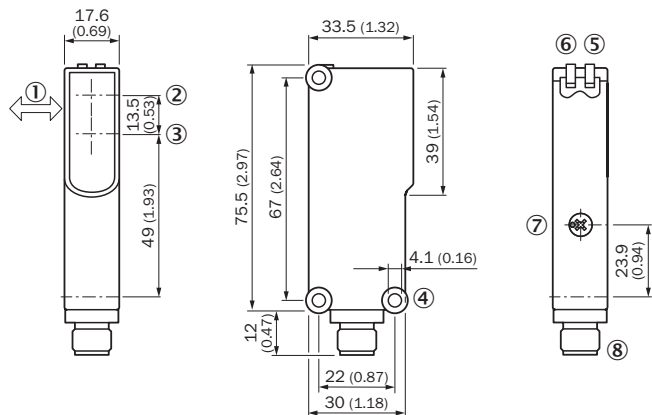
Potentiometer



- ① Setting of the sensing range: potentiometer, 4 revolutions

Dimensional drawing (Dimensions in mm (inch))

WT18-3, potentiometer



- ① Standard direction of the material being detected
- ② Center of optical axis, sender
- ③ Center of optical axis, receiver
- ④ Mounting hole \varnothing 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

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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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