



WT18X-3P920

W18-3 Ex

SMALL PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
WT18X-3P920	1029901

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

Illustration may differ



Detailed technical data

Features

Sensor/ detection principle	Photoelectric proximity sensor, Background suppression
Dimensions (W x H x D)	23.6 mm x 117 mm x 49.3 mm
Housing design (light emission)	Rectangular
Sensing range max.	10 mm ... 1,000 mm ¹⁾
Sensing range	50 mm ... 1,000 mm ¹⁾
Type of light	Infrared light
Light source	LED ²⁾
Light spot size (distance)	Ø 30 mm (600 mm)
Wave length	870 nm
Adjustment	Potentiometer, 4 turns
Special applications	Explosive areas

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⁾
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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⁾ 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.

¹⁰⁾ Conformity with directives. Explosion prevention: Directive 2014/34/EX/EU.

Ripple	< 5 V _{pp} ²⁾
Power consumption	55 mA ³⁾
Switching output	PNP
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 M12 male connector, 4-pin, 0.29 m ⁶⁾
Cable material	PVC
Circuit protection	A ⁷⁾ C ⁸⁾ D ⁹⁾
Weight	+ 300 g
Housing material	Plastic, ABS
Optics material	Plastic, PMMA
Enclosure rating	IP67
ATEX marking	EX II 3G EX nA op is IIB T4 Gc X EX II 3D EX tc IIIB T135 °C Dc IP67 X According to directive 2014/34/EX/EU ¹⁰⁾
Ex area category	3D, 3G
Ambient operating temperature	-20 °C ... +50 °C
Ambient storage temperature	-40 °C ... +75 °C

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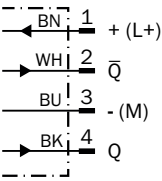
¹⁰⁾ Conformity with directives. Explosion prevention: Directive 2014/34/EX/EU.

Classifications

ECI@ss 5.0	27270904
ECI@ss 5.1.4	27270904
ECI@ss 6.0	27270904
ECI@ss 6.2	27270904
ECI@ss 7.0	27270904
ECI@ss 8.0	27270904
ECI@ss 8.1	27270904
ECI@ss 9.0	27270904
ETIM 5.0	EC002719
ETIM 6.0	EC002719
UNSPSC 16.0901	39121528

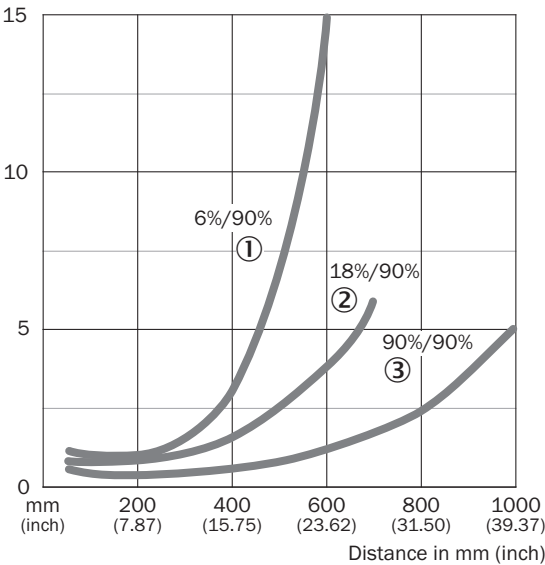
Connection diagram

Cd-083



Characteristic curve

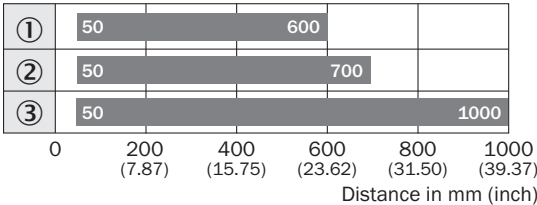
WT18-3 (Ex), infraret, 1,000 mm



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

Sensing range diagram

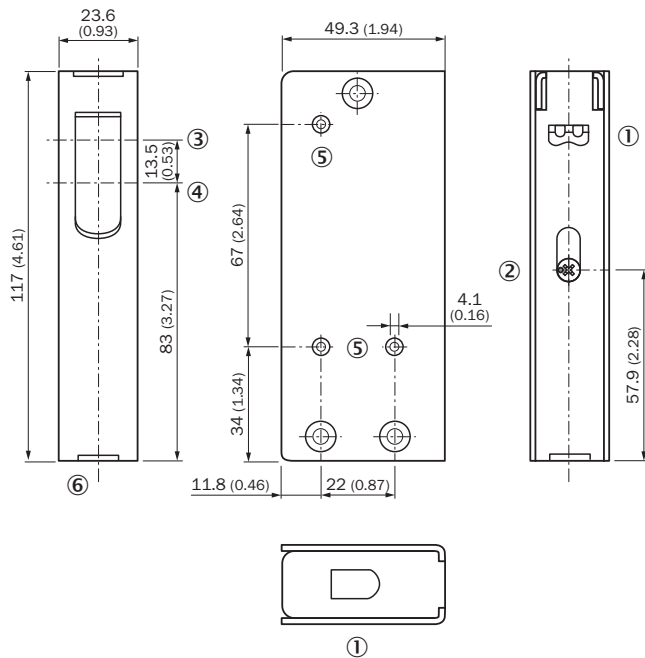
WT18-3 (Ex), infraret, 1,000 mm



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




WT18-3 Ex



- ① Indication LED
- ② Adjustment of sensing range
- ③ Center of optical axis, sender
- ④ Center of optical axis, receiver
- ⑤ Mounting hole \varnothing 4.1 mm
- ⑥ Connection

Recommended accessories

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

	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