

# WT18-3P120S20

W18-3

**SMALL PHOTOELECTRIC SENSORS** 





## Ordering information

Туре	Part no.
WT18-3P120S20	1040547

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

Illustration may differ



#### 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 850 mm <sup>1)</sup>
Sensing range	50 mm 850 mm <sup>2)</sup>
Type of light	Infrared light
Light source	LED <sup>3)</sup>
Light spot size (distance)	Ø 15 mm (400 mm)
Wave length	870 nm
Adjustment	Potentiometer, 4 turns
Special features	With special optics

 $<sup>^{1)}</sup>$  Object with 6 % remission.

 $<sup>^{2)}</sup>$  Object with 90% remission (based on standard white, DIN 5033).

 $<sup>^{3)}</sup>$  Average service life: 100,000 h at TU = +25 °C.

#### Mechanics/electronics

Supply voltage	10 V DC 30 V DC <sup>1)</sup>
Ripple	< 5 V <sub>pp</sub> <sup>2)</sup>
Current consumption	55 mA <sup>3)</sup>
Switching output	PNP
Output function	Complementary
Switching mode	Light/dark switching
Output current I <sub>max.</sub>	≤ 100 mA
Response time	< 2,500 µs <sup>4)</sup>
Switching frequency	200 Hz <sup>5)</sup>
Connection type	Cable, 4-wire, 2 m <sup>6)</sup>
Cable material	PVC
Circuit protection	A <sup>7)</sup> C <sup>8)</sup> D <sup>9)</sup>
Weight	120 g
Special device	<b>√</b>
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

 $<sup>^{1)}</sup>$  Limit values when operated in short-circuit protected network: max. 8 A.

#### 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

 $<sup>^{2)}</sup>$  May not exceed or fall below  $U_{\nu}$  tolerances.

<sup>3)</sup> Without load.

<sup>&</sup>lt;sup>4)</sup> Signal transit time with resistive load.

<sup>5)</sup> With light/dark ratio 1:1. 6) Do not bend below 0 °C.

 $<sup>^{7)}</sup>$  A = V<sub>S</sub> connections reverse-polarity protected.

 $<sup>^{8)}</sup>$  C = interference suppression.

<sup>9)</sup> D = outputs overcurrent and short-circuit protected.

# WT18-3P120S20 | W18-3

## SMALL PHOTOELECTRIC SENSORS

eCl@ss 12.0	27270903
ETIM 5.0	EC002719
ETIM 6.0	EC002719
ETIM 7.0	EC002719
ETIM 8.0	EC002719
UNSPSC 16.0901	39121528

## Connection type

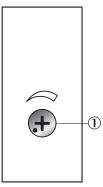


## Connection diagram

Cd-094

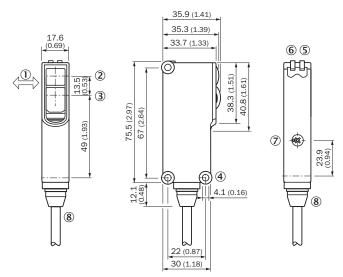
## Adjustments

Potentiometer



① Setting of the sensing range: potentiometer, 4 revolutions

#### Dimensional drawing (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
- Setting of the sensing range: potentiometer, 4 revolutions
- ® Cable with M12 male connector

#### Recommended accessories

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

	Brief description	Туре	Part no.
Plug connecto	rs and cables		
	Head A: male connector, M12, 4-pin, straight 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

