

# WT18-3P230

W18-3

PHOTOELECTRIC SENSORS

**SICK**  
Sensor Intelligence.



### Ordering information

Model name	Part no.
WT18-3P230	1026559

Other models and accessories → [www.sick.de/W18-3](http://www.sick.de/W18-3)

Illustration may differ



### Detailed technical data

#### Features

<b>Sensor/detection principle</b>	Photoelectric proximity sensor, Background suppression
<b>Dimensions (W x H x D)</b>	17.6 mm x 75.5 mm x 33.5 mm
<b>Housing design (light emission)</b>	Rectangular
<b>Sensing range max.</b>	10 mm ... 600 mm <sup>1)</sup>
<b>Sensing range</b>	50 mm ... 600 mm <sup>1)</sup>
<b>Type of light</b>	Visible red light
<b>Light source</b>	LED <sup>2)</sup>
<b>Light spot size (distance)</b>	Ø 15 mm, 300 mm
<b>Wave length</b>	675 nm
<b>Adjustment</b>	Potentiometer, 4 turns

<sup>1)</sup> Object with 90 % reflectance (referred to standard white, DIN 5033)

<sup>2)</sup> Average service life of 100,000 h at T<sub>A</sub> = +25 °C.

#### Mechanics/electronics

<b>Supply voltage</b>	10 V DC ... 30 V DC <sup>1)</sup>
<b>Ripple</b>	< 5 V <sub>pp</sub> <sup>2)</sup>
<b>Power consumption</b>	40 mA <sup>3)</sup>

<sup>1)</sup> Limit values, operation in short-circuit protected network max. 8 A.

<sup>2)</sup> May not exceed or fall short of V<sub>S</sub> tolerances.

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

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

<sup>5)</sup> With light/dark ratio 1:1.

<sup>6)</sup> 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.

<b>Output type</b>	PNP
<b>Output function</b>	Complementary
<b>Switching mode</b>	Light/dark switching
<b>Output current <math>I_{\max}</math></b>	100 mA
<b>Response time</b>	< 700 $\mu\text{s}$ <sup>4)</sup>
<b>Switching frequency</b>	700 Hz <sup>5)</sup>
<b>Connection type</b>	Cable, 4-wire, 5 m <sup>6)</sup>
<b>Cable material</b>	PVC
<b>Circuit protection</b>	A <sup>7)</sup> C <sup>8)</sup> D <sup>9)</sup>
<b>Weight</b>	260 g
<b>Housing material</b>	ABSplastic
<b>Optics material</b>	PMMA
<b>Enclosure rating</b>	IP 67
<b>Ambient operating temperature</b>	-40 °C ... +60 °C
<b>Ambient storage temperature</b>	-40 °C ... +75 °C
<b>UL File No.</b>	NRKH.E181493 & NRKH7.E181493

<sup>1)</sup> Limit values, operation in short-circuit protected network max. 8 A.

<sup>2)</sup> May not exceed or fall short of  $V_S$  tolerances.

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

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

<sup>5)</sup> With light/dark ratio 1:1.

<sup>6)</sup> Do not bend below 0 °C.

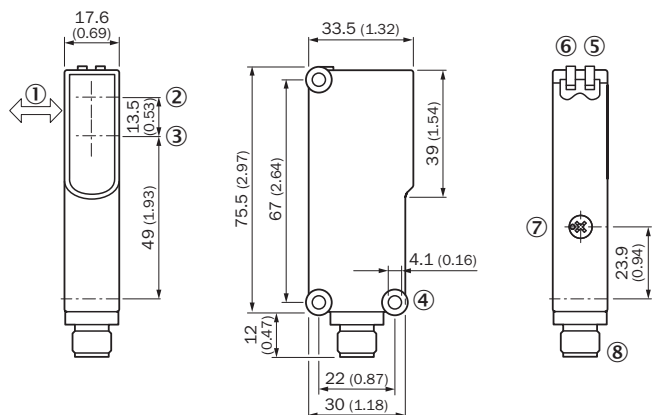
<sup>7)</sup> A =  $V_S$  connections reverse-polarity protected.

<sup>8)</sup> C = interference suppression.

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

### Dimensional drawing (Dimensions in mm (inch))

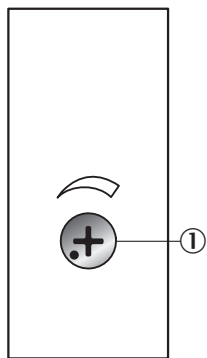
WT18-3, potentiometer



- 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 Status indicator LED, yellow: Status of received light beam
- ⑥ Status indicator LED green: supply voltage on
- ⑦ Sensing range adjustment: potentiometer, 4-turn
- ⑧ Connector M12, 4-pin or 2 m cable or cubic plug, 6-pin

### Adjustments possible

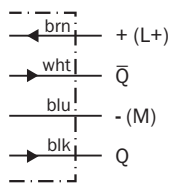
Potentiometer



- ① Sensing range adjustment: potentiometer, 4-turn

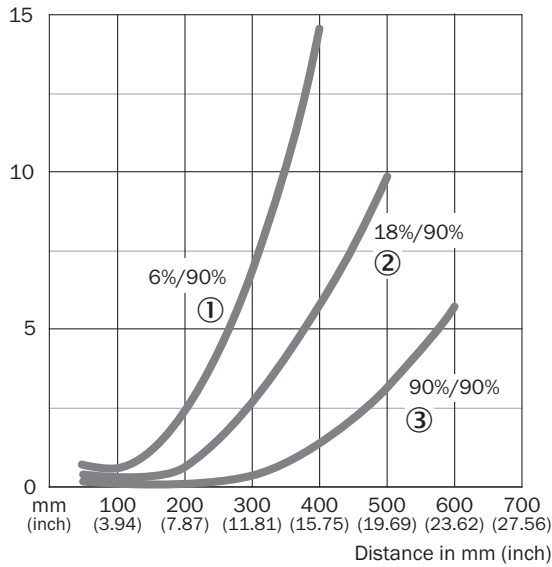
### Connection diagram

Cd-094



## Characteristic curve

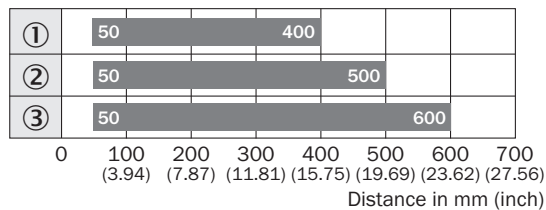
WT18-3, red light



- 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, red light














■ Sensing range

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

## Recommended accessories

Other models and accessories → [www.sick.de/W18-3](http://www.sick.de/W18-3)

	Brief description	Model name	Part no.
Universal bar clamp systems			
	Universal bar clamp for mounting bars with 12 mm diameter, Zinc diecast, without mounting plate and screws	BEF-KHS-KH3	5322626

	<b>Brief description</b>	<b>Model name</b>	<b>Part no.</b>
	Plate N03 for universal clamp bracket, zinc coated, Zinc plated steel (sheet), Diecast zinc (clamp), Universal clamp, mounting hardware	BEF-KHS-N03	2051609
	Plate N04 for universal clamp bracket, steel, Zinc plated steel (sheet), Diecast zinc (clamp), Universal clamp, mounting hardware	BEF-KHS-N04	2051610
<b>Device protection (mechanical)</b>			
	Protective housing for universal clamp, Zinc plated steel (protective housing), Diecast zinc (clamp), Universal clamp (new), mounting hardware	BEF-SG-W14	2058124
	Protective housing for universal clamp, Zinc plated steel (protective housing), Diecast zinc (clamp), Universal clamp, mounting hardware	BEF-SG-W27	2039601
<b>Mounting brackets and mounting plates</b>			
	Mounting bracket, steel, zinc coated, mounting hardware included	BEF-WN-W14	2019084
	Mounting bracket with hinged arm, steel, zinc coated, mounting hardware included	BEF-WN-W18	2009317
<b>Plug connectors and cables</b>			
	Head A: female connector, M12, 4-pin, straight Head B: - Cable: unshielded	DOS-1204-G	6007302
	Head A: female connector, M12, 4-pin, angled Head B: - Cable: unshielded	DOS-1204-W	6007303
	Head A: male connector, M12, 4-pin, straight Head B: - Cable: unshielded	STE-1204-G	6009932
	Head A: male connector, M12, 4-pin, angled Head B: - Cable: unshielded	STE-1204-W	6022084

**Australia**

Phone +61 3 9457 0600  
1800 33 48 02 - tollfree  
E-Mail sales@sick.com.au

**Belgium/Luxembourg**

Phone +32 (0)2 466 55 66  
E-Mail info@sick.be

**Brasil**

Phone +55 11 3215-4900  
E-Mail marketing@sick.com.br

**Canada**

Phone +1 905 771 14 44  
E-Mail information@sick.com

**Česká republika**

Phone +420 2 57 91 18 50  
E-Mail sick@sick.cz

**China**

Phone +86 4000 121 000  
E-Mail info.china@sick.net.cn  
Phone +852-2153 6300  
E-Mail ghk@sick.com.hk

**Danmark**

Phone +45 45 82 64 00  
E-Mail sick@sick.dk

**Deutschland**

Phone +49 211 5301-301  
E-Mail info@sick.de

**España**

Phone +34 93 480 31 00  
E-Mail info@sick.es

**France**

Phone +33 1 64 62 35 00  
E-Mail info@sick.fr

**Great Britain**

Phone +44 (0)1727 831121  
E-Mail info@sick.co.uk

**India**

Phone +91-22-4033 8333  
E-Mail info@sick-india.com

**Israel**

Phone +972-4-6801000  
E-Mail info@sick-sensors.com

**Italia**

Phone +39 02 27 43 41  
E-Mail info@sick.it

**Japan**

Phone +81 (0)3 5309 2112  
E-Mail support@sick.jp

**Magyarország**

Phone +36 1 371 2680  
E-Mail office@sick.hu

**Nederland**

Phone +31 (0)30 229 25 44  
E-Mail info@sick.nl

**Norge**

Phone +47 67 81 50 00  
E-Mail sick@sick.no

**Österreich**

Phone +43 (0)22 36 62 28 8-0  
E-Mail office@sick.at

**Polska**

Phone +48 22 837 40 50  
E-Mail info@sick.pl

**România**

Phone +40 356 171 120  
E-Mail office@sick.ro

**Russia**

Phone +7-495-775-05-30  
E-Mail info@sick.ru

**Schweiz**

Phone +41 41 619 29 39  
E-Mail contact@sick.ch

**Singapore**

Phone +65 6744 3732  
E-Mail sales.gsg@sick.com

**Slovenija**

Phone +386 (0)1-47 69 990  
E-Mail office@sick.si

**South Africa**

Phone +27 11 472 3733  
E-Mail info@sickautomation.co.za

**South Korea**

Phone +82 2 786 6321/4  
E-Mail info@sickkorea.net

**Suomi**

Phone +358-9-25 15 800  
E-Mail sick@sick.fi

**Sverige**

Phone +46 10 110 10 00  
E-Mail info@sick.se

**Taiwan**

Phone +886-2-2375-6288  
E-Mail sales@sick.com.tw

**Türkiye**

Phone +90 (216) 528 50 00  
E-Mail info@sick.com.tr

**United Arab Emirates**

Phone +971 (0) 4 8865 878  
E-Mail info@sick.ae

**USA/México**

Phone +1(952) 941-6780  
1 800-325-7425 - tollfree  
E-Mail info@sickusa.com

More representatives and agencies  
at [www.sick.com](http://www.sick.com)