



WS/WE18-3N130

W18-3

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	Part no.
WS/WE18-3N130	1025925

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

Detailed technical data

Features

Sensor/detection principle	Through-beam photoelectric sensor
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.	0 m ... 20 m
Type of light	Visible red light
Light source	LED ¹⁾
Light spot size (distance)	Ø 450 mm (15 m)
Angle of dispersion	1.5°
Wave length	645 nm
Adjustment	Potentiometer, 1 turn

¹⁾ Average service life: 100,000 h at T_U = +25 °C.

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC ¹⁾
Ripple	< 5 V _{pp} ²⁾

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.

Power consumption, sender	< 45 mA ³⁾
Power consumption, receiver	< 35 mA ³⁾
Output type	NPN
Output function	Complementary
Switching mode	Light/dark switching
Output current I_{max.}	100 mA
Response time	< 500 µs ⁴⁾
Switching frequency	1,000 Hz ⁵⁾
Angle of reception	2°
Connection type	Cable, 4-wire, 2 m ⁶⁾
Cable material	PVC
Circuit protection	A ⁷⁾ C ⁸⁾ D ⁹⁾
Weight	120 g
Housing material	ABSplastic
Optics material	PMMA
Enclosure rating	IP 67
Test input sender off	TE to 0 V
Ambient operating temperature	-40 °C ... +60 °C
Ambient storage temperature	-40 °C ... +75 °C
UL File No.	NRKH.E181493 & NRKH7.E181493
Part number of individual components	Sender, WS18-3D130, 2030985, Receiver, WE18-3N130, 2031004

1) Limit values when operated in short-circuit protected network: max. 8 A.

2) May not exceed or fall below U_y 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.

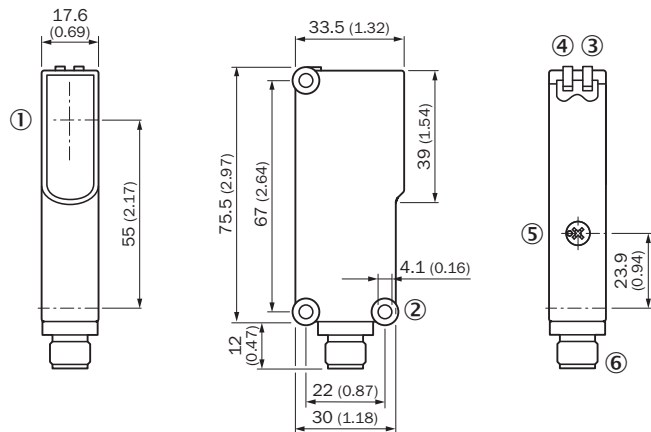
7) A = V_S connections reverse-polarity protected.

8) C = interference suppression.

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

Dimensional drawing (Dimensions in mm (inch))

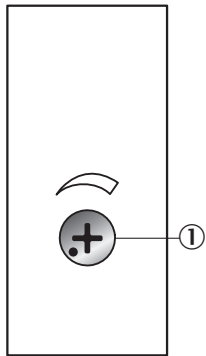
WL18-3, WS/WE18-3



- ① Center of optical axis
- ② Mounting hole $\varnothing$ 4.1 mm
- ③ Status indicator LED, yellow: Status of received light beam
- ④ Status indicator LED green: supply voltage on
- ⑤ Sensitivity control; Potentiometer 270° on WE
- ⑥ Connector M12, 4-pin or 2 m cable or cubic plug, 6-pin

Adjustments possible

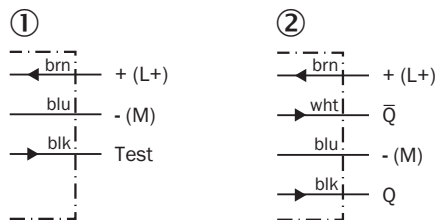
Potentiometer



- ① Sensing range adjustment: potentiometer, 4-turn

Connection diagram

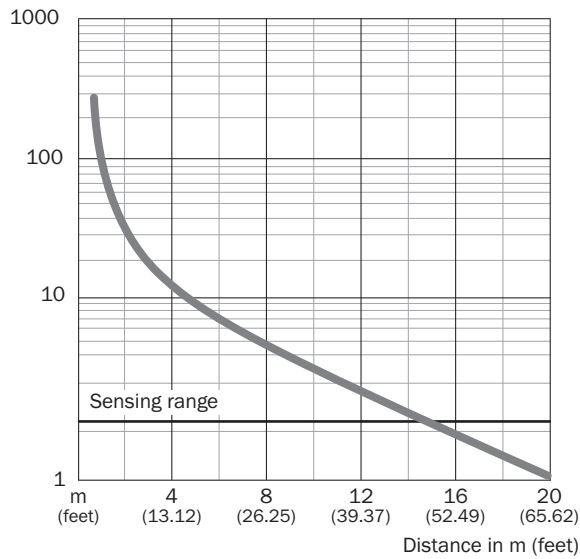
Cd-074



- ① Sender
- ② Receiver

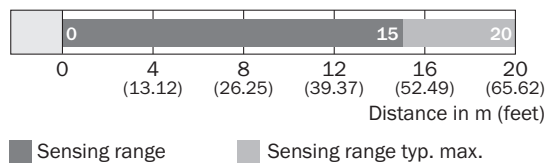
Characteristic curve

WS/WE18-3



Sensing range diagram

WS/WE18-3



Recommended accessories

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

	Brief description	Type	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
	Plate N03 for universal clamp bracket, zinc coated, Zinc plated steel (sheet), Diecast zinc (clamp), Universal clamp (5322626), mounting hardware	BEF-KHS-N03	2051609
	Plate N04 for universal clamp bracket, steel, Zinc plated steel (sheet), Diecast zinc (clamp), Universal clamp (5322626), mounting hardware	BEF-KHS-N04	2051610
Device protection (mechanical)			

	Brief description	Type	Part no.
	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 (5322626), mounting hardware	BEF-SG-W27	2039601
Mounting brackets and mounting plates			
	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

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