

WS/WE18-3P630
W18-3

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ

Ordering information

Type	part no.
WS/WE18-3P630	1075293

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

Detailed technical data

Features

Functional 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
Focus	1.5°
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 U_B	10 V DC ... 30 V DC ¹⁾
Ripple	< 5 V _{pp} ²⁾
Power consumption, sender	< 45 mA ³⁾
Power consumption, receiver	< 35 mA ³⁾
Switching output	PNP
Switching mode	Light/dark switching

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

²⁾ May not fall below or exceed 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.

Output current I_{\max}	≤ 100 mA
Response time	< 500 μs ⁴⁾
Switching frequency	1,000 Hz ⁵⁾
Angle of reception	2°
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
Test input sender off	TE to 0 V
Ambient operating temperature	-40 °C ... +60 °C
Ambient temperature, storage	-40 °C ... +75 °C
UL File No.	NRKH.E181493 & NRKH7.E181493
Part number of individual components	2031005 WS18-3D630 2031006 WE18-3P630

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

2) May not fall below or exceed U_y 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.

Safety-related parameters

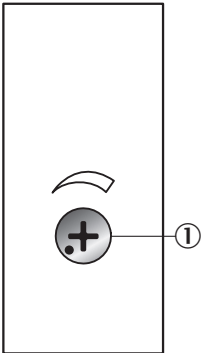
MTTF_D	857 years
DC_{avg}	0 %

Classifications

ECLASS 5.0	27270901
ECLASS 5.1.4	27270901
ECLASS 6.0	27270901
ECLASS 6.2	27270901
ECLASS 7.0	27270901
ECLASS 8.0	27270901
ECLASS 8.1	27270901
ECLASS 9.0	27270901
ECLASS 10.0	27270901
ECLASS 11.0	27270901
ECLASS 12.0	27270901
ETIM 5.0	EC002716
ETIM 6.0	EC002716
ETIM 7.0	EC002716

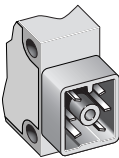
ETIM 8.0	EC002716
UNSPSC 16.0901	39121528

Adjustments Potentiometer

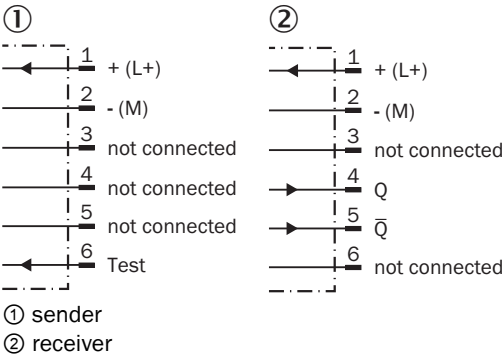


① setting of the sensing range: potentiometer, 4 revolutions

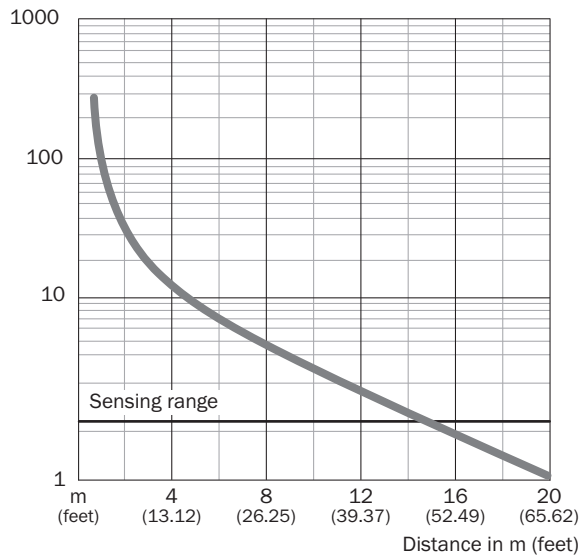
Connection type



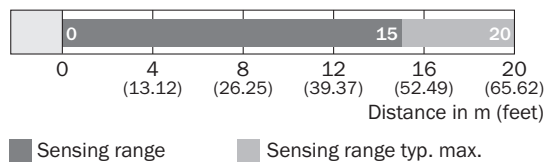
Connection diagram Cd-075



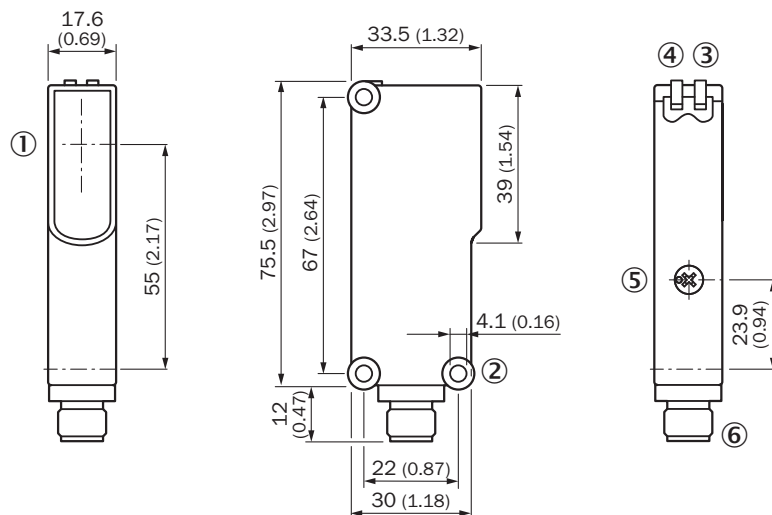
Characteristic curve



Sensing range diagram



Dimensional drawing





Dimensions in mm (inch)

- ① Center of optical axis
- ② Mounting hole \varnothing 4.1 mm
- ③ LED indicator yellow: Status of received light beam
- ④ LED indicator green: Supply voltage active

- ⑤ Sensitivity control, potentiometer 270° on WE
- ⑥ 4-pin M12 male connector or 2 m cable or 6-pin cubic connector

Recommended accessories

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

	Brief description	Type	part no.
Mounting systems			
	<ul style="list-style-type: none">• Description: Mounting bracket with hinged arm• Material: Steel• Details: Steel, zinc coated• Items supplied: Mounting hardware included• Suitable for: W14-2, W18-3	BEF-WN-W18	2009317
	<ul style="list-style-type: none">• Description: Mounting bracket• Material: Steel• Details: Steel, zinc coated• Items supplied: Mounting hardware included• Suitable for: W14-2, W18-3	BEF-WN-W14	2019084

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