

WL18-3P630S04

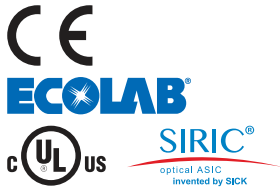
W18-3

SMALL PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	Part no.
WL18-3P630S04	1041928

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

Detailed technical data

Features

Functional principle	Photoelectric retro-reflective sensor
Functional principle detail	Autocollimation
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 ... 7 m ¹⁾
Sensing range	0 m ... 5 m ¹⁾
Focus	1.8°
Type of light	Visible red light
Light source	LED ²⁾
Light spot size (distance)	Ø 40 mm (2 m)
Angle of dispersion	1.8°
Wave length	645 nm
Adjustment	Potentiometer, 1 turn
Special features	Heightened vibration resistance

¹⁾ Reflector PL80A.

²⁾ Average service life: 100,000 h at T_J = +25 °C.

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC ¹⁾
Ripple	< 5 V _{pp} ²⁾
Current consumption	40 mA ³⁾
Switching output	PNP
Switching mode	Light/dark switching
Output current I_{max}	≤ 100 mA
Response time	< 500 μs ⁴⁾
Switching frequency	1,000 Hz ⁵⁾
Connection type	Cubic connector, 6-pin
Circuit protection	A ⁶⁾ C ⁷⁾ D ⁸⁾
Weight	70 g
Polarisation filter	✓
Housing material	Plastic, ABS
Optics material	Plastic, PMMA
Enclosure rating	IP65
Test input sender off	TE to 0 V
Test input	✓
Ambient operating temperature	-40 °C ... +60 °C
Ambient temperature, storage	-40 °C ... +75 °C
UL File No.	NRKH.E181493 & NRKH7.E181493

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⁾ A = V_S connections reverse-polarity protected.

⁷⁾ C = interference suppression.

⁸⁾ D = outputs overcurrent and short-circuit protected.

Safety-related parameters

MTTF_D	1,759 years
DC_{avg}	0 %

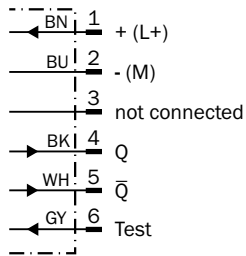
Classifications

eCl@ss 5.0	27270902
eCl@ss 5.1.4	27270902
eCl@ss 6.0	27270902
eCl@ss 6.2	27270902
eCl@ss 7.0	27270902
eCl@ss 8.0	27270902
eCl@ss 8.1	27270902

eCl@ss 9.0	27270902
eCl@ss 10.0	27270902
eCl@ss 11.0	27270902
eCl@ss 12.0	27270902
ETIM 5.0	EC002717
ETIM 6.0	EC002717
ETIM 7.0	EC002717
ETIM 8.0	EC002717
UNSPSC 16.0901	39121528

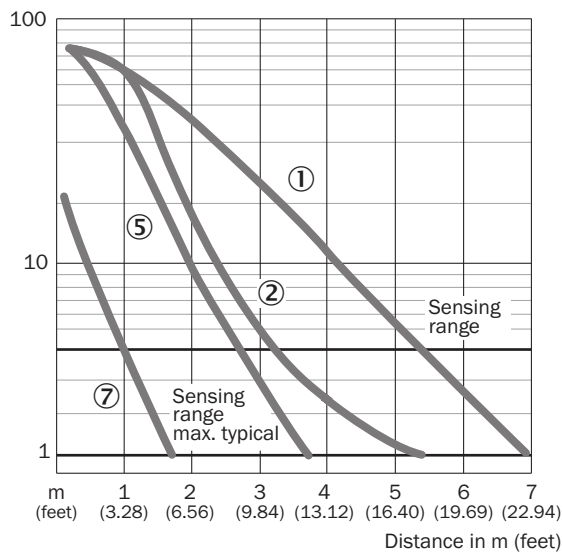
Connection diagram

Cd-178



Characteristic curve

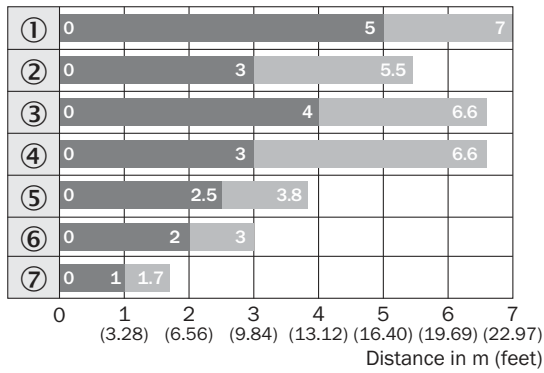
WL18-3, WL18-3 Ex



- ① Reflector PL80A
- ② Reflector C110A
- ③ Reflector PL30A
- ④ Reflective tape Diamond Grade

Sensing range diagram

WL18-3, WL18-3 Ex

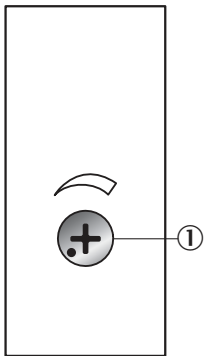


■ Sensing range ■ Sensing range max.

- ① Reflector PL80A
- ② Reflector C110A
- ③ Reflector PL50A
- ④ Reflector PL40A
- ⑤ Reflector PL30A
- ⑥ Reflector PL20A
- ⑦ Reflective tape Diamond Grade

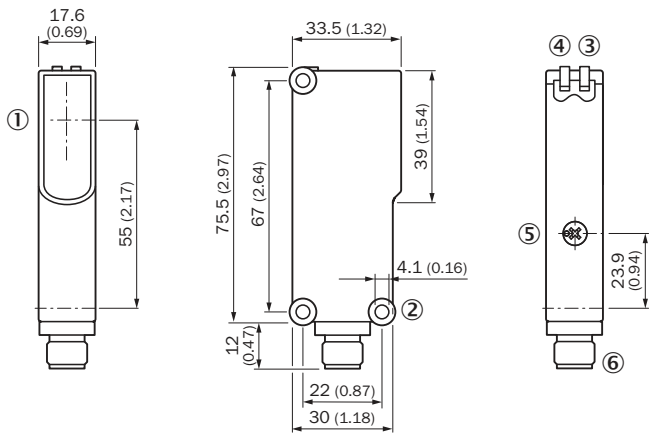
Adjustments

Potentiometer



- ① Setting of the sensing range: potentiometer, 4 revolutions



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 brackets and plates			
	Universal mounting bracket for reflectors, steel, zinc coated	BEF-WN-REFX	2064574
Reflectors			
	Rectangular, screw connection, 84 mm x 84 mm, PMMA/ABS, Screw-on, 2 hole mounting	PL80A	1003865

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For us, that is “Sensor Intelligence.”

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