

WL14-2P430

W14-2

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
WL14-2P430	1026049

Other models and accessories → www.sick.de/W14-2

Illustration may differ



Detailed technical data

Features

Sensor/detection principle	Photoelectric retro-reflective sensor, Dual lens
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.	0.15 m ... 6 m ¹⁾
Sensing range	0.15 m ... 4 m ¹⁾
Type of light	Visible red light
Light source	LED ²⁾
Light spot size (distance)	Ø 140 mm (4 m)
Angle of dispersion	Approx. 2°
Wave length	645 nm
Adjustment	None

¹⁾ PL80A.

²⁾ 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⁾ A = V_S connections reverse-polarity protected.

⁷⁾ C = interference suppression.

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

Power consumption	≤ 35 mA ³⁾
Output type	PNP
Output function	Complementary
Switching mode	Light/dark switching
Output current I_{max.}	≤ 100 mA
Response time	≤ 2.5 ms ⁴⁾
Switching frequency	200 Hz ⁵⁾
Connection type	Connector M12, 4-pin
Circuit protection	A ⁶⁾ C ⁷⁾ D ⁸⁾
Weight	40 g
Polarisation filter	✓
Housing material	ABSplastic
Optics material	PMMA
Enclosure rating	IP 67
Ambient operating temperature	-25 °C ... +60 °C
Ambient storage temperature	-40 °C ... +70 °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.

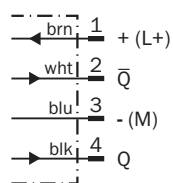
6) A = V_S connections reverse-polarity protected.

7) C = interference suppression.

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

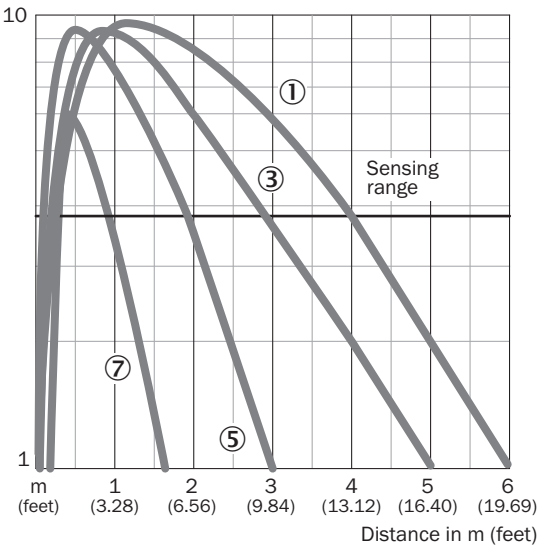
Connection diagram

Cd-083



Characteristic curve

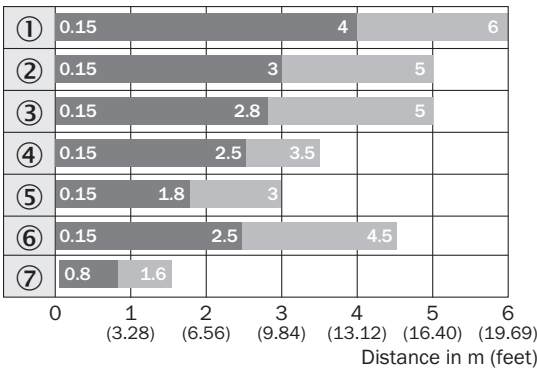
WL14-2, 6 m



- ① PL80A
- ③ PL40A
- ⑤ PL20A
- ⑦ Reflective tape Diamond Grade

Sensing range diagram

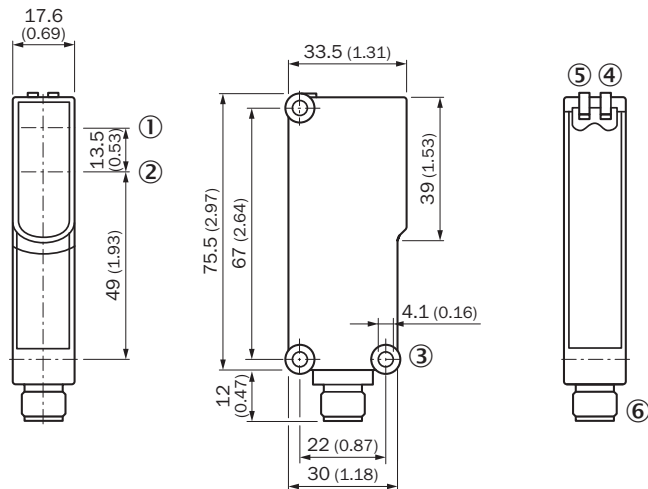
WL14-2, 6 m



- Sensing range
- Sensing range max.
- ① PL80A
- ② PL50A
- ③ PL40A
- ④ PL30A
- ⑤ PL20A
- ⑥ C110A
- ⑦ Reflective tape Diamond Grade

Dimensional drawing (Dimensions in mm (inch))

WL14-2



- ① Center of optical axis, sender
- ② Center of optical axis, receiver
- ③ Mounting hole $\varnothing$ 4.1 mm
- ④ Status indicator LED, yellow: Status of received light beam
- ⑤ Status indicator LED green: supply voltage on
- ⑥ M12 male connector, 4-pin or 2 m cable

Recommended accessories

Other models and accessories → www.sick.de/W14-2

	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), Zinc die cast (clamping bracket), Universal clamp (5322626), mounting hardware	BEF-KHS-N03	2051609
	Plate N04 for universal clamp, steel, Zinc plated steel (sheet), Zinc die cast (clamping bracket), Universal clamp (5322626), mounting hardware	BEF-KHS-N04	2051610
Device protection (mechanical)			
	Protective housing for universal clamp, Zinc plated steel (protective housing), Zinc die cast (clamping bracket), Universal clamp (new), mounting hardware	BEF-SG-W14	2058124
	Protective housing for universal clamp, Zinc plated steel (protective housing), Zinc die cast (clamping bracket), Universal clamp (5322626), mounting hardware	BEF-SG-W27	2039601
Mounting brackets and mounting plates			

	Brief description	Type	Part no.
	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
Reflectors			
	Rectangular, screw connection, 47 mm x 47 mm, PMMA/ABS, Screw-on, 2 hole mounting	P250	5304812
	Rectangular, screw connection, 38 mm x 15 mm, PMMA/ABS, Screw-on, 2 hole mounting	PL20A	1012719
	Rectangular, screw connection, 56 mm x 28 mm, PMMA/ABS, Screw-on, 2 hole mounting	PL30A	1002314
	Rectangular, screw connection, 37 mm x 56 mm, PMMA/ABS, Screw-on, 2 hole mounting	PL40A	1012720
	Rectangular, screw connection, 80 mm x 80 mm, PMMA/ABS, Screw-on, 2 hole mounting	PL80A	1003865
	Self-adhesive	REF-IRF-56	5314244
	Round, screw connection, PMMA/ABS, Center hole mounting, screw-on	C110A	5304549

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