WT14-2P422
W14-2

SMALL PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

Ordering information

Type	Part no.
WT14-2P422	1026052

Other models and accessories ➜ www.sick.com/W14-2

Illustration may differ

Detailed technical data

Features

Sensor/ detection principle	Photoelectric proximity sensor, Background suppression
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.	20 mm ... 500 mm [1]
Sensing range	80 mm ... 500 mm [1]
Type of light	Infrared light
Light source	LED [2]
Light spot size (distance)	Ø 14 mm (300 mm)
Wave length	870 nm
Adjustment	Potentiometer, 4 turns

[1] Object with 90 % reflectance (referred to standard white, DIN 5033).

[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]
Power consumption	30 mA [3]

[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.

Switching output	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	Male connector M12, 4-pin
Circuit protection	A [6] C [7] D [8]
Weight	40 g
Housing material	Plastic, ABS
Optics material	Plastic, PMMA
Enclosure rating	IP67
Ambient operating temperature	–25 °C ... +60 °C
Ambient storage temperature	–40 °C ... +70 °C
MTTFd: mean time to dangerous failure	694 years
UL File No.	NRKH.E181493 & NRKH7.E181493

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[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.
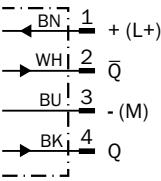
[7] C = interference suppression.

[8] D = outputs overcurrent and short-circuit protected.

Classifications

ECl@ss 5.0	27270904
ECl@ss 5.1.4	27270904
ECl@ss 6.0	27270904
ECl@ss 6.2	27270904
ECl@ss 7.0	27270904
ECl@ss 8.0	27270904
ECl@ss 8.1	27270904
ECl@ss 9.0	27270904
ETIM 5.0	EC002719
ETIM 6.0	EC002719
UNSPSC 16.0901	39121528

Connection diagram

Cd-083

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    BN   1   + (L+)
    WH   2   Q̄
    BU   3   - (M)
    BK   4   Q
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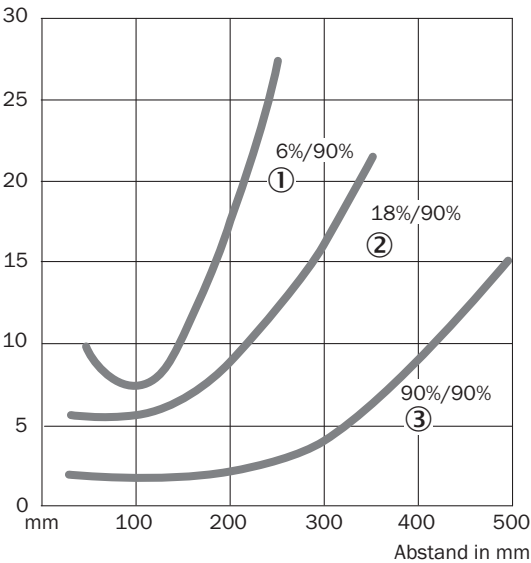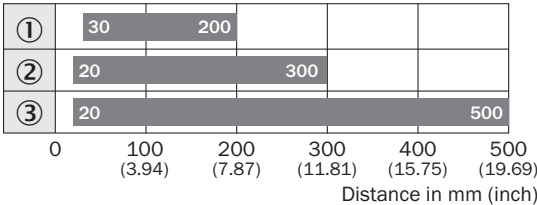## Characteristic curve

WT14-2, infrared light, 500 mm

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

Sensing range diagram
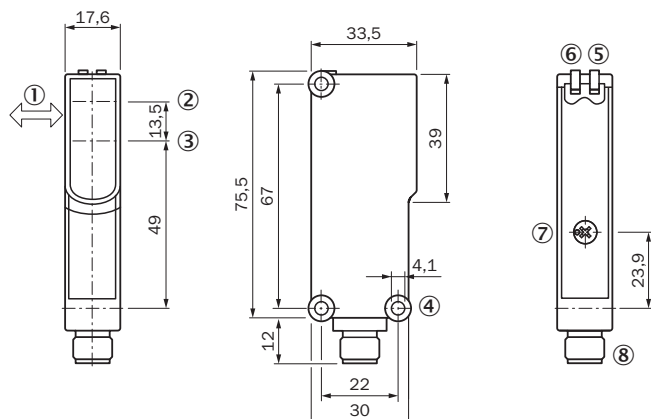
WT14-2, infrared light, 500 mm

■ Sensing range

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Dimensional drawing (Dimensions in mm (inch))

WT14-2, potentiometer

① Standard direction of the material being detected
② Center of optical axis, sender
③ Center of optical axis, receiver
④ Mounting hole ø 4.1 mm
⑤ LED indicator yellow: Status of received light beam
⑥ LED indicator green: Supply voltage active
⑦ Potentiometer
⑧ M12 male connector, 4-pin or 2 m cable

Recommended accessories

Other models and accessories ➜ www.sick.com/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 W26, W27-3 and mounting rods with diameter 12 mm, Zinc plated steel (protective housing), Zinc die cast (clamping bracket), Universal clamp BEF-KHS-KH1 (2022726), mounting hardware	BEF-SG-W27	2039601
Mounting brackets and plates			
	Mounting bracket, steel, zinc coated, mounting hardware included	BEF-WN-W14	2019084

	Brief description	Type	Part no.
	Mounting bracket with hinged arm, steel, zinc coated, mounting hardware included	BEF-WN-W18	2009317

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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.

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