Product data sheet

WT2S-P131

W2

MINIATURE PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

Illustration may differ

Ordering information

Type	Part no.
WT2S-P131	1022661

Other models and accessories → www.sick.com/W2

Detailed technical data

Features

Functional principle	Photoelectric proximity sensor
Functional principle detail	Background suppression
Dimensions (W x H x D)	7.6 mm x 25.1 mm x 12.5 mm
Housing design (light emission)	Rectangular
Sensing range max.	1 mm ... 30 mm [1]
Sensing range	1 mm ... 30 mm [1]
Focus	15 mm
Type of light	Visible red light
Light source	PinPoint LED [2]
Light spot size (distance)	Ø 1.5 mm (15 mm)
Wave length	660 nm
Adjustment	None

[1] Object with 90% remission (based on standard white, DIN 5033).
[2] Average service life: 75,000 h at TU = +25 °C.

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC [1]
Ripple	< 5 V_{pp} [2]
Switching output	PNP
Switching mode	Light switching
Output current $I_{max.}$	≤ 50 mA
Response time	< 0.6 ms [3]
Switching frequency	800 Hz [4]
Connection type	Cable, 3-wire, 2 m [5]
Cable material	PVC
Cable diameter	Ø 2.4 mm
Circuit protection	A [6] C [7] D [8]
Weight	18 g
Reverse polarity protection	✓
Short-circuit protection	✓
Housing material	Plastic, ABS
Optics material	Plastic, PMMA
Enclosure rating	IP67 IP69K
Ambient operating temperature	–20 °C ... +50 °C
Ambient temperature, storage	–40 °C ... +75 °C

[1] Limit values.
[2] May not exceed or fall below U_V tolerances.
[3] Signal transit time with resistive load.
[4] With light/dark ratio 1:1.
[5] Do not bend below 0 °C.
[6] A = V_S connections reverse-polarity protected.
[7] C = interference suppression.
[8] D = outputs overcurrent and short-circuit protected.

Safety-related parameters

$MTTF_D$	1,495 years
DC_{avg}	0 %

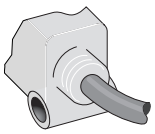
Classifications

eCl@ss 5.0	27270903
eCl@ss 5.1.4	27270903
eCl@ss 6.0	27270903
eCl@ss 6.2	27270903
eCl@ss 7.0	27270903
eCl@ss 8.0	27270903
eCl@ss 8.1	27270903
eCl@ss 9.0	27270903

eCl@ss 10.0	27270904
eCl@ss 11.0	27270904
eCl@ss 12.0	27270903
ETIM 5.0	EC001821
ETIM 6.0	EC001821
ETIM 7.0	EC002719
ETIM 8.0	EC002719
UNSPSC 16.0901	39121528

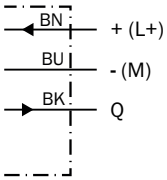
Connection type

Wx2S-x1xx



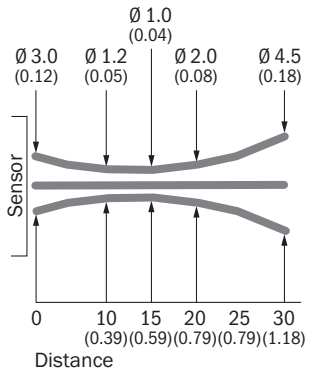
Connection diagram

Cd-043



Light spot size

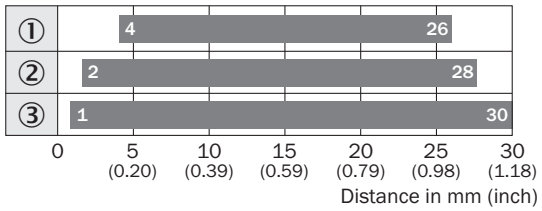
WT2S, 30 mm



All dimensions in mm (inch)

Sensing range diagram

WT2S, 30 mm

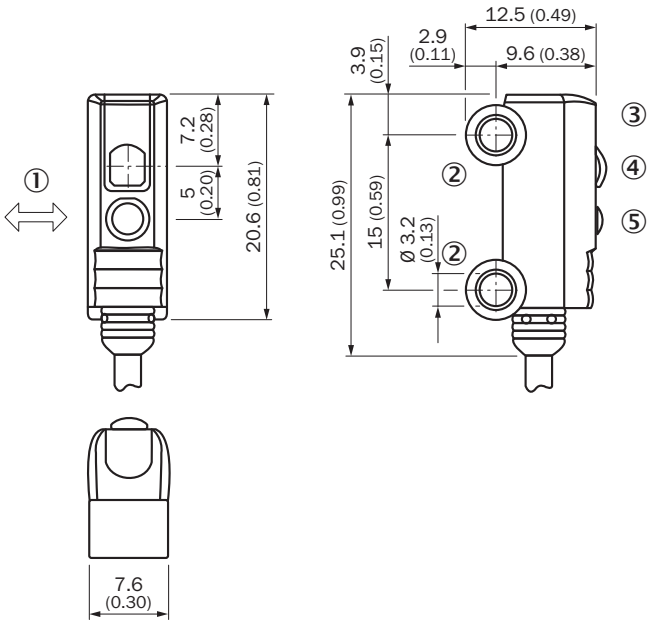


Sensing range

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

Dimensional drawing (Dimensions in mm (inch))

WT2S, background suppression



① Standard direction of the material being detected
② Mounting hole, ø approx. 3.1 mm
③ Receive indicator
④ Optical axis, receiver
⑤ Optical axis, sender

Recommended accessories

Other models and accessories ➜ www.sick.com/W2

	Brief description	Type	Part no.
Plug connectors and cables			
	Head A: male connector, M8, 3-pin, straight Cable: unshielded	STE-0803-G	6037322

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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.

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.”

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