



WTB2S-2N3060S19

W2S-2

MINIATURE PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
WTB2S-2N3060S19	1078050

Other models and accessories → www.sick.com/W2S-2

Illustration may differ



Detailed technical data

Features

Device type	Photoelectric sensors
Sensor/ detection principle	Photoelectric proximity sensor, Background suppression
Dimensions (W x H x D)	7.7 mm x 21.8 mm x 13.5 mm
Housing design (light emission)	Rectangular
Sensing range max.	3 mm ... 130 mm ¹⁾
Sensing range	5 mm ... 90 mm ²⁾
Background suppression typ. from	70 mm
Type of light	Visible red light
Light source	PinPoint LED ³⁾
Light spot size (distance)	Ø 4.5 mm (40 mm)
Wave length	640 nm
Adjustment	None
Special applications	Detecting small objects

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

²⁾ Object with 6 % reflectance (referred to standard black, DIN 5033).

³⁾ 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⁾
Current consumption	20 mA ³⁾
Switching output	NPN
Switching mode	Light switching
Output current I_{max}	≤ 50 mA
Response time	< 0.5 ms ⁴⁾
Switching frequency	1,000 Hz ⁵⁾
Connection type	Cable with special male connector, 4-pin, 500 mm ⁶⁾
Cable material	PVC
Cable diameter	Ø 3 mm
Circuit protection	A ⁷⁾ B ⁸⁾ D ⁹⁾
Housing material	Plastic, ABS/PC
Optics material	Plastic, PMMA
Enclosure rating	IP67
Ambient operating temperature	-25 °C ... +50 °C
Ambient temperature, storage	-40 °C ... +75 °C
UL File No.	NRKH.E181493

- 1) Limit values.
- 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) Do not bend below 0 °C.
- 7) A = V_S connections reverse-polarity protected.
- 8) B = output reverse-polarity protected.
- 9) D = outputs overcurrent and short-circuit protected.

Safety-related parameters

MTTF_D	1,705 years
DC_{avg}	0 %

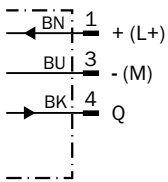
Classifications

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

ECI@ss 10.0	27270904
ECI@ss 11.0	27270904
ETIM 5.0	EC002719
ETIM 6.0	EC002719
ETIM 7.0	EC002719
ETIM 8.0	EC002719
UNSPSC 16.0901	39121528

Connection diagram

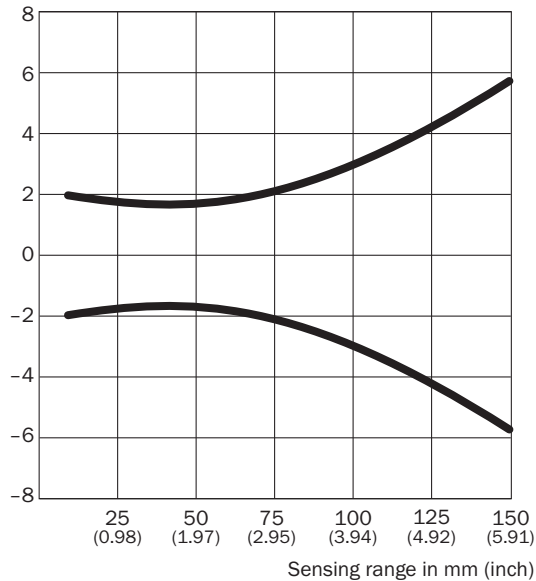
Cd-045



Light spot size

WTB2S-2, 150 mm

Spot diameter in mm (inch)

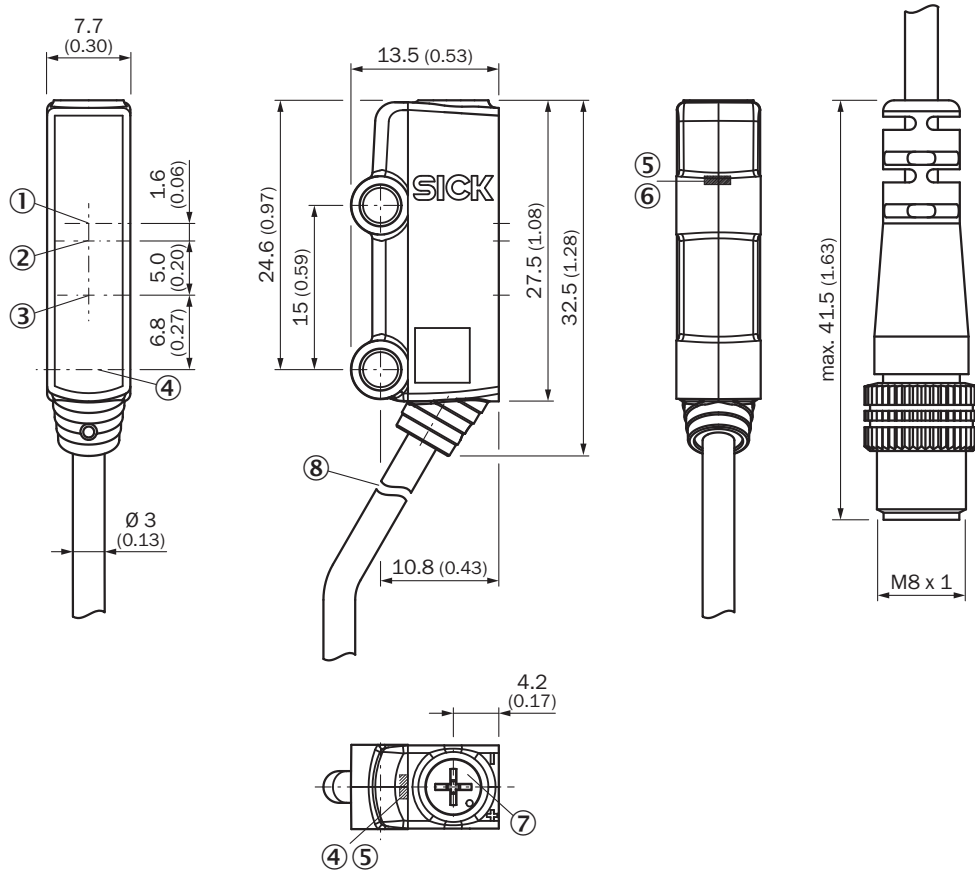


Dimensions in mm (inch)

Sensing range	Spot diameter
10 (0.39)	4.0 (0.16)
20 (0.79)	3.7 (0.15)
40 (1.57)	3.4 (0.13)
80 (3.15)	4.4 (0.17)
120 (4.72)	8.0 (0.31)
150 (5.91)	11.5 (0.45)

Dimensional drawing (Dimensions in mm (inch))

WTB2S-2, 150 mm



- ① Optical axis, receiver (sensing range min.)
- ② Optical axis, receiver (sensing range max.)
- ③ Optical axis, sender
- ④ Fixing hole \varnothing 3.2 mm
- ⑤ LED indicator green: Supply voltage active
- ⑥ LED indicator yellow: Status of received light beam
- ⑦ Sensing range adjustment: potentiometer, 3 turns
- ⑧ Connection

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:

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