WTV2S-2P3285S45

W2

MINIATURE PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

WTV2S-2P3285S45 | W2

MINIATURE PHOTOELECTRIC SENSORS

Ordering information

Type	Part no.
WTV2S-2P3285S45	1094671

Included in delivery: SCREW SET W2S/G2S (1)

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

Illustration may differ

Detailed technical data

Features

Functional principle	Photoelectric proximity sensor
Functional principle detail	Background suppression, V-optics
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.	1 mm … 36 mm [1]
Sensing range	4 mm … 30 mm [1]
Type of light	Visible blue light
Light source	LED [2]
Light spot size (distance)	2 mm x 3 mm (10 mm)
Wave length	445 nm
Adjustment	Cable (Teach-in)
Special applications	Detecting small objects, Detecting uneven, shiny objects, Detecting objects wrapped in film, Detecting transparent objects
Special features	V-optics Preset 14 mm on black

[1] Object with 90% remission (based on standard white, DIN 5033).

[2] Average service life: 100,000 h at T_U = +25 °C.

Mechanics/electronics

Supply voltage U_B	10 V DC ... 30 V DC [1]
Ripple	< 5 V_{pp} [2]
Current consumption	20 mA [3]
Switching output	PNP
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 M8 male connector, 4-pin, 2 m [6]
Cable material	Plastic, PVC
Conductor cross section	0.09 mm²
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

[1] Limit values.

[2] May not fall below or exceed 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.
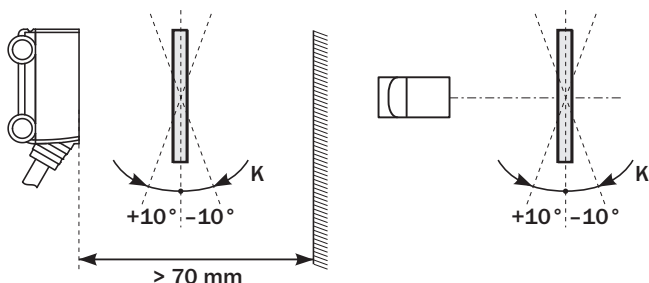
Classifications

ECLASS 5.0	27270904
ECLASS 5.1.4	27270904
ECLASS 6.0	27270904
ECLASS 6.2	27270904
ECLASS 7.0	27270904
ECLASS 8.0	27270904
ECLASS 8.1	27270904
ECLASS 9.0	27270904
ECLASS 10.0	27270904
ECLASS 11.0	27270904
ECLASS 12.0	27270903
ETIM 5.0	EC002719

WTV2S-2P3285S45 | W2

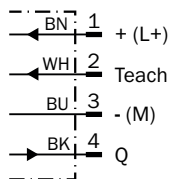|	
ETIM 6.0	EC002719
ETIM 7.0	EC002719
ETIM 8.0	EC002719
UNSPSC 16.0901	39121528

Installation note

When detecting highly transparent objects, a distance of > 70 mm to the background should be maintained!
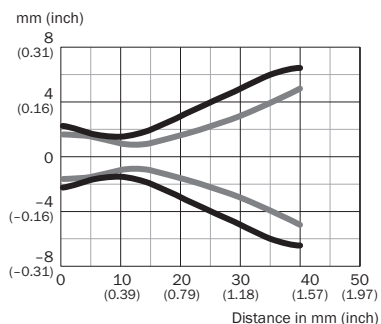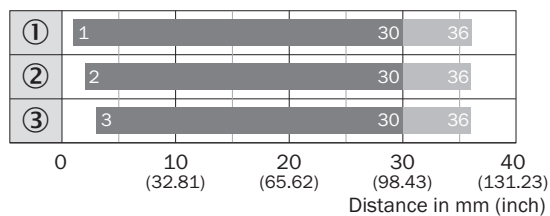
Maximum tilt angle

K
+10° −10°
> 70 mm

K
+10° −10°

Connection diagram

Cd-092

BN	1	+ (L+)
WH	2	Teach
BU	3	- (M)
BK	4	Q

Light spot size

mm (inch)
8 (0.31)
4 (0.16)
0
−4 (−0.16)
−8 (−0.31)

0   10 (0.39)   20 (0.79)   30 (1.18)   40 (1.57)   50 (1.97)

Distance in mm (inch)

Dimensions in mm (inch)

Sensing range	Spot diameter
10 (0.39)	2 x 3 (0.08 x 0.12)
20 (0.79)	3.5 x 6 (0.14 x 0.24)
30 (1.18)	6 x 10 (0.24 x 0.39)
40 (1.57)	9 x 13 (0.35 x 0.51)

Sensing range diagram

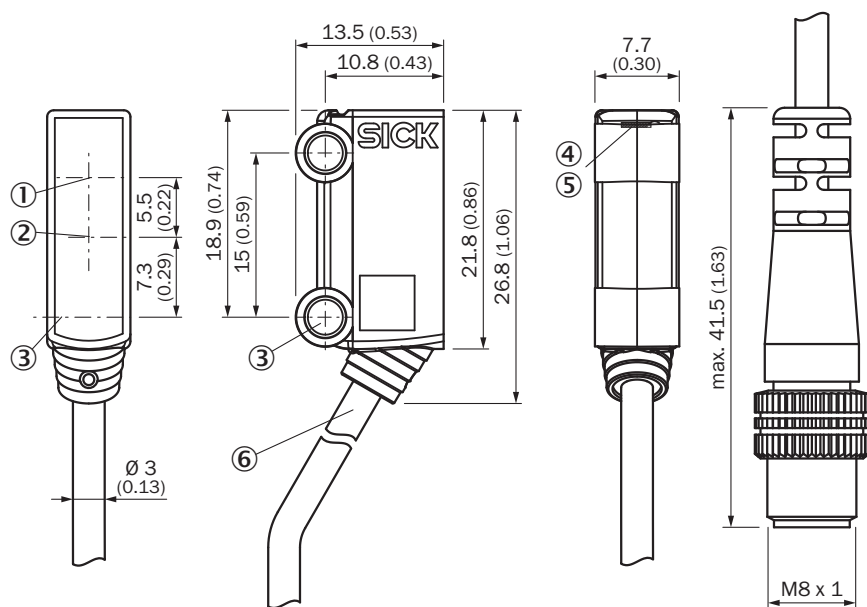|	
①	1 ... 30 ... 36
②	2 ... 30 ... 36
③	3 ... 30 ... 36

0   10 (32.81)   20 (65.62)   30 (98.43)   40 (131.23)

Distance in mm (inch)

■ Sensing range   ■ Sensing range max. typ.

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

Dimensional drawing (Dimensions in mm (inch))

WTB2S-2, 18 mm, 36 mm, WTV2S-2

① Optical axis, receiver
② Optical axis, sender
③ Mounting hole, Ø 3.2 mm
④ LED indicator green: Supply voltage active
⑤ LED indicator yellow: Status of received light beam
⑥ Connection

Recommended accessories

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

	Brief description	Type	Part no.
Others			
	• **Connection type head A:** Female connector, M8, 4-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 5 m, 4-wire, PVC • **Description:** Sensor/actuator cable, unshielded • **Application:** Zones with chemicals	YF8U14-050VA3XLEAX	2095889
	• **Connection type head A:** Male connector, M8, 4-pin, straight, A-coded • **Description:** Unshielded • **Connection systems:** Screw-type terminals • **Permitted cross-section:** 0.14 mm² ... 0.5 mm²	STE-0804-G	6037323

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:

Contacts and other locations –**www.sick.com**

SICK AG | Waldkirch | Germany | www.sick.com

SICK
Sensor Intelligence.