



Photoelectric sensors
W2S-2, Photoelectric proximity sensor,
Background suppression

WTB2SC-2P3274



Model Name > [WTB2SC-2P3274](#)
Part No. > [1063646](#)



Illustration may differ

At a glance

- Sensing ranges of up to 150 mm
- Almost no black/white shift up to 60 mm
- Sensor with line-shaped light spot
- Sensor with laser-like focused light spots
- Precise background suppression that is immune to interference/crosstalk
- High-performance PinPoint 2.0 LED

Your benefits

- An ultra-compact design with the performance of large photoelectric proximity sensors offers new space-saving machine construction possibilities.
- Large variety of proximity sensors and operating concepts enable a wide range of application options
- Use in confined spaces: detection of small, flat parts thanks to high-quality background suppression and almost nonexistent black/white shift
- Remote access: models with IO-Link allow data to be easily accessed from the PLC
- High availability and long-term use in grippers thanks to flexible and rugged cable entry



Features

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.:	4 mm ... 90 mm ¹⁾
Sensing range:	10 mm ... 70 mm ²⁾
Preset sensing range:	45 mm
Type of light:	Visible red light
Light source:	PinPoint LED ³⁾
Wave length:	640 nm
Special features:	Line-shaped light spot
Adjustment:	Cable
Light spot size (distance):	2.2 mm x 9 mm (45 mm)
IO-Link functions:	Standard functions

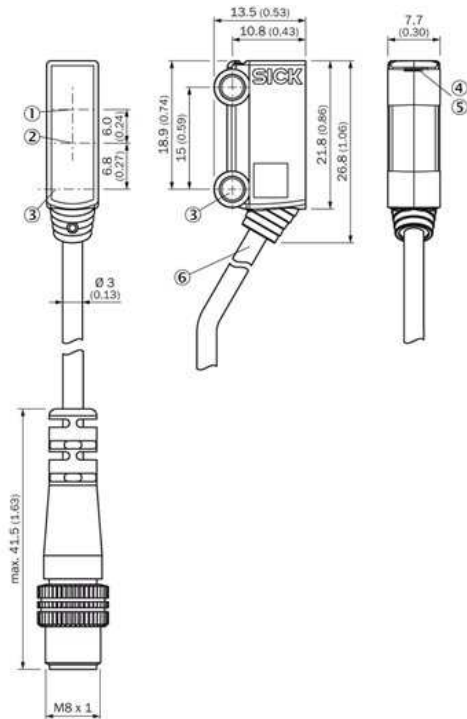
^{1) 2)} Object with 90 % reflectance (referred to standard white, DIN 5033) ³⁾ Average service life of 100,000 h at T_A = +25 °C

Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	$\leq 5 V_{pp}$ ²⁾
Power consumption:	$\leq 20 \text{ mA}$ ³⁾
Output type:	PNP ⁴⁾
Switching mode:	Light switching ⁵⁾
Switching mode selector:	Programmable
Output current I _{max.} :	$< 50 \text{ mA}$
Response time:	$< 0.5 \text{ ms}$ ⁶⁾
Switching frequency:	1,000 Hz ⁷⁾
Connection type:	Cable with connector M8, 4-pin, 200 mm ⁸⁾
Cable material:	PVC
Cable diameter:	$\varnothing 3 \text{ mm}$
Circuit protection:::	A, B, D ⁹⁾ ¹⁰⁾ ¹¹⁾
IO-Link:	✓
Optics material:	PMMA
Enclosure rating:	IP 67
Special feature:	Line-shaped light spot
Description:	IO-Link
Ambient temperature operation:	-25 °C ... +50 °C
Ambient storage temperature:	-40 °C ... +75 °C
UL File No.:	NRKH.E181493
Housing material:	ABS/PC, Plastic
Transmission rate:	COM2

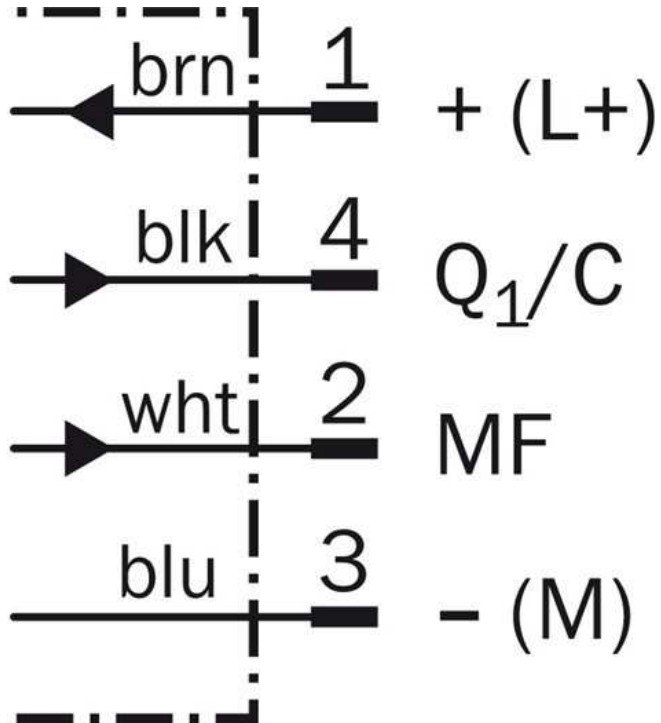
¹⁾ Limit values ²⁾ May not exceed or fall short of V_S tolerances ³⁾ Without load ⁴⁾ ⁵⁾ Parametrisable via IO-Link ⁶⁾ Signal transit time with resistive load ⁷⁾ With light/dark ratio 1:1 in switching mode. Different values possible in IO-Link mode ⁸⁾ Do not bend below 0 °C ⁹⁾ A = V_S connections reverse-polarity protected ¹⁰⁾ B = output reverse-polarity protected ¹¹⁾ D = outputs overcurrent and short-circuit protected

Dimensional drawing

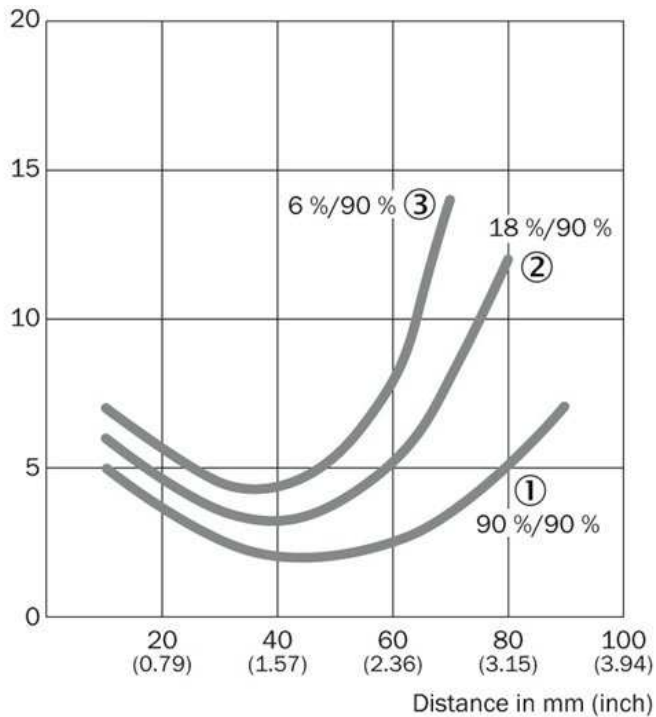


- |1| Optical axis, receiver
- |2| Optical axis, sender
- |3| Middle axis fixing hole Ø 3.2 mm
- |4| Status indicator LED green: supply voltage on
- |5| Status indicator LED,
yellow: Status of received light beam
- |6| Connection

Connection diagram



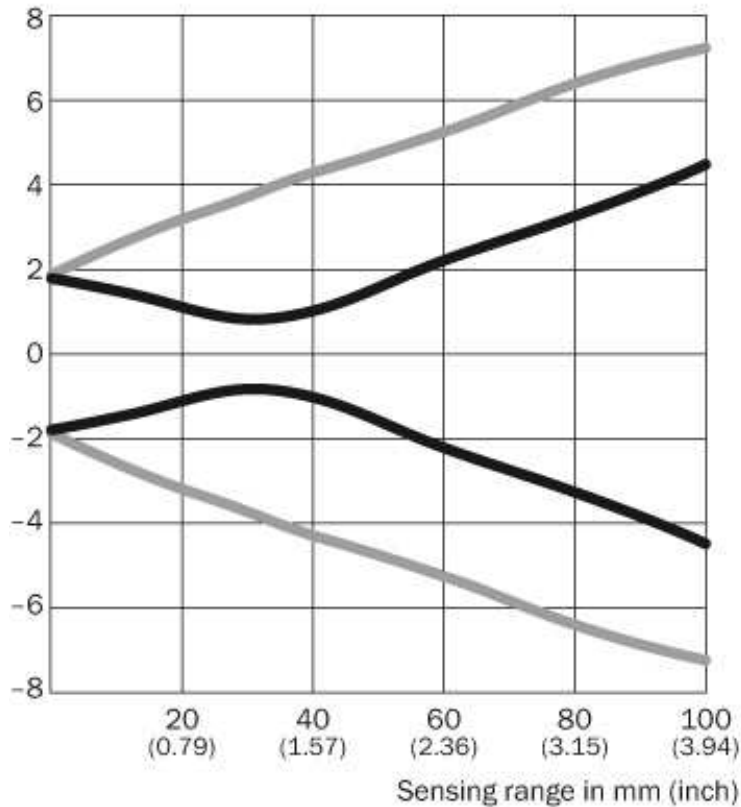
Characteristic curve



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

Light spot size

Spot diameter in mm (inch)

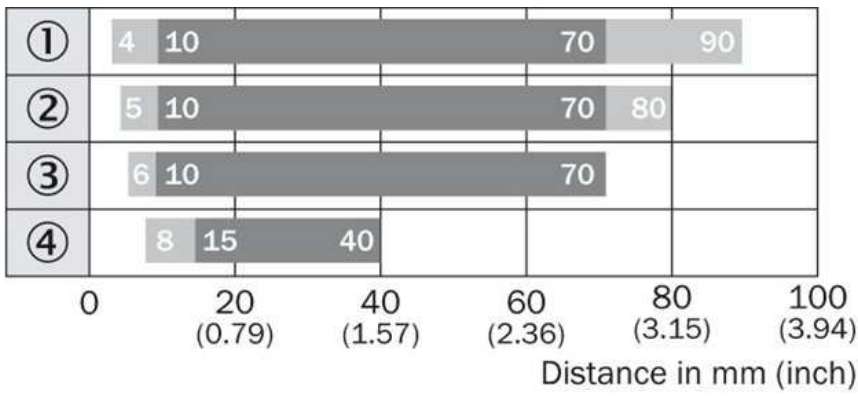


Dimensions in mm (inch)

Sensing range	Spot diameter	
	Vertical	Horizontal
0 (0.00)	3.5 (0.14)	3.8 (0.15)
10 (0.39)	3.0 (0.12)	5.2 (0.20)
20 (0.79)	3.3 (0.13)	6.4 (0.25)
30 (1.18)	1.8 (0.07)	7.4 (0.29)
40 (1.57)	2.0 (0.08)	8.6 (0.34)
60 (2.36)	4.4 (0.17)	10.5 (0.41)
80 (3.15)	6.5 (0.26)	12.8 (0.50)
100 (3.94)	9.0 (0.35)	14.5 (0.57)

Vertical
 Horizontal

Sensing range diagram



- |1| Sensing range on white, 90 % remission
- |2| Sensing range on gray, 18 % remission
- |3| Sensing range on black, 6 % remission
- |4| Sensing range on ultrablack, 1 % remission

■ Sensing range ■ Sensing range max.

Australia

Phone +61 3 9457 0600
1800 33 48 02 – tollfree
E-Mail sales@sick.com.au

Belgium/Luxembourg

Phone +32 (0)2 466 55 66
E-Mail info@sick.be

Brasil

Phone +55 11 3215-4900
E-Mail marketing@sick.com.br

Canada

Phone +1 905 771 14 44
E-Mail information@sick.com

Česká republika

Phone +420 2 57 91 18 50
E-Mail sick@sick.cz

China

Phone +86 4000 121 000
E-Mail info.china@sick.net.cn
Phone +852-2153 6300
E-Mail ghk@sick.com.hk

Danmark

Phone +45 45 82 64 00
E-Mail sick@sick.dk

Deutschland

Phone +49 211 5301-301
E-Mail info@sick.de

España

Phone +34 93 480 31 00
E-Mail info@sick.es

France

Phone +33 1 64 62 35 00
E-Mail info@sick.fr

Great Britain

Phone +44 (0)1727 831121
E-Mail info@sick.co.uk

India

Phone +91-22-4033 8333
E-Mail info@sick-india.com

Israel

Phone +972-4-6881000
E-Mail info@sick-sensors.com

Italia

Phone +39 02 27 43 41
E-Mail info@sick.it

Japan

Phone +81 (0)3 5309 2112
E-Mail support@sick.jp

Magyarország

Phone +36 1 371 2680
E-Mail office@sick.hu

Nederland

Phone +31 (0)30 229 25 44
E-Mail info@sick.nl

Norge

Phone +47 67 81 50 00
E-Mail sick@sick.no

Österreich

Phone +43 (0)22 36 62 28 8-0
E-Mail office@sick.at

Polska

Phone +48 22 837 40 50
E-Mail info@sick.pl

România

Phone +40 356 171 120
E-Mail office@sick.ro

Russia

Phone +7-495-775-05-30
E-Mail info@sick.ru

Schweiz

Phone +41 41 619 29 39
E-Mail contact@sick.ch

Singapore

Phone +65 6744 3732
E-Mail sales.gsg@sick.com

Slovenija

Phone +386 (0)1-47 69 990
E-Mail office@sick.si

South Africa

Phone +27 11 472 3733
E-Mail info@sickautomation.co.za

South Korea

Phone +82 2 786 6321/4
E-Mail info@sickkorea.net

Suomi

Phone +358-9-25 15 800
E-Mail sick@sick.fi

Sverige

Phone +46 10 110 10 00
E-Mail info@sick.se

Taiwan

Phone +886 2 2375-6288
E-Mail sales@sick.com.tw

Türkiye

Phone +90 (216) 528 50 00
E-Mail info@sick.com.tr

United Arab Emirates

Phone +971 (0) 4 88 65 878
E-Mail info@sick.ae

USA/México

Phone +1(952) 941-6780
1 (800) 325-7425 – tollfree
E-Mail info@sickusa.com

More representatives and agencies
at www.sick.com