



Photoelectric sensors
W4S-3, Through-beam photoelectric sensor

WSE4SC-3P2230



Model Name > [WSE4SC-3P2230](#)
Part No. > [1067767](#)



Illustration may differ

At a glance

- Sensing range from 0 - 5 m
- PinPoint LED technology for highly visible, brilliant light spot
- Rugged plastic housing with M3 metal inserts
- Flexible sensor settings, monitoring, extended diagnostics, and visualization thanks to IO-Link
- Programmable functions as debouncing and time-measurement are included

Your benefits

- The PinPoint LED's sharply defined, intense light spot makes alignment quick and easy
- Rugged mounting system with M3 threaded metal inserts reduces maintenance costs due to a long service life
- IO-Link provides easy data access from the PLC
- Quick and easy configuration
- Quick and easy integration using function blocks
- Easy device replacement and identification



Features

Sensor/detection principle:	Through-beam photoelectric sensor
Dimensions (W x H x D):	12.2 mm x 41.8 mm x 17.3 mm
Housing design (light emission):	Rectangular
Sensing range max.:	0 m ... 5 m
Sensing range:	0 m ... 4.5 m
Type of light:	Visible red light
Light source:	PinPoint LED ¹⁾
Wave length:	650 nm
Light spot size (distance):	Ø 50 mm (2 m)
IO-Link functions:	Standard functions
Gen. Response Time:::	IOL: 700 µs ³⁾ 1000 µs, SIO Direct: 300 µs ... 450 µs, SIO Logic: 700 µs ... 850 µs ⁴⁾
Gen. max. Switching Frequency:::	IOL: 900 Hz, SIO Direct: 1.000 Hz, SIO Logic: 1.000 Hz ^{5) 6) 7)}
Gen. Repeatability:::	IOL: 300 µs, SIO Direct: 150 µs, SIO Logic: 150 µs ^{8) 9) 10)}

¹⁾ Average service life of 100,000 h at T_A = +25 °C ^{2) 5) 8)} SIO Direct: Sensor operation in standard I/O mode without IO-Link communication and without usage of sensor-internal logic or timing parameters. ^{3) 6) 9)} SIO Logic: Sensor operation in standard I/O mode without IO-Link communication. Sensor-internal logic or timing parameters plus Automation Functions used. ^{4) 7) 10)} IOL: Sensor operation with full IO-Link communication and usage of logic, timing and Automation Function parameters.

Mechanics/electronics

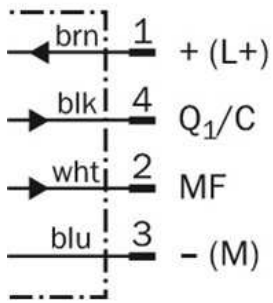
Supply voltage:	10 V DC ... 30 V DC ¹⁾
Residual ripple:	< 5 Vpp ²⁾
Power consumption::	≤ 20 mA ^{3) 4)}
Output type:	PNP
Switching mode:	Light/dark switching
Output current I _{max} ::	≤ 100 mA
Electrical connection:	Connector M8, 4-pin
Circuit protection:::	A, B, C, D ^{5) 6) 7) 8)}
Protection class:	III
Weight:	40 g
IO-Link:	✓
Optics material:	PMMA
Enclosure rating:	IP 67 IP 66
Test input sender off:	TE to 0 V
Description:	IO-Link, COM2, 2.3 ms, SIO Mode
Ambient operating temperature:	-40 °C ... +60 °C
Ambient storage temperature:	-40 °C ... +75 °C
UL File No.:	NRKH.E181493 & NRKH7.E181493
Housing material:	ABS, Plastic
Response time Q/ on Pin 2::	300 μs ... 450 μs ^{9) 10)}
Switching frequency Q \ on Pin2:	1,000 Hz
Repeatability Q/ on Pin 2::	150 μs
IO-Link version:	1.0

With light/dark ratio 1:1, valid for Q \ on Pin2, if configured with software; Valid for Q \ on Pin2, if configured with software;

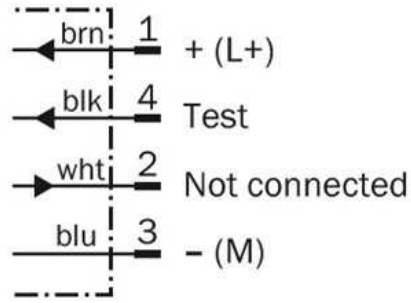
¹⁾ Limit values, operation in short-circuit protected network max. 8 A ²⁾ May not exceed or fall short of V_S tolerances ³⁾ Sender ⁴⁾ Receiver ⁵⁾ A = V_S connections
reverse-polarity protected ⁶⁾ B = inputs and output reverse-polarity protected ⁷⁾ C = interference suppression ⁸⁾ D = outputs overcurrent and short-circuit protected ⁹⁾
Signal transit time with resistive load ¹⁰⁾ Valid for Q \ on Pin2, if configured with software

Connection diagram

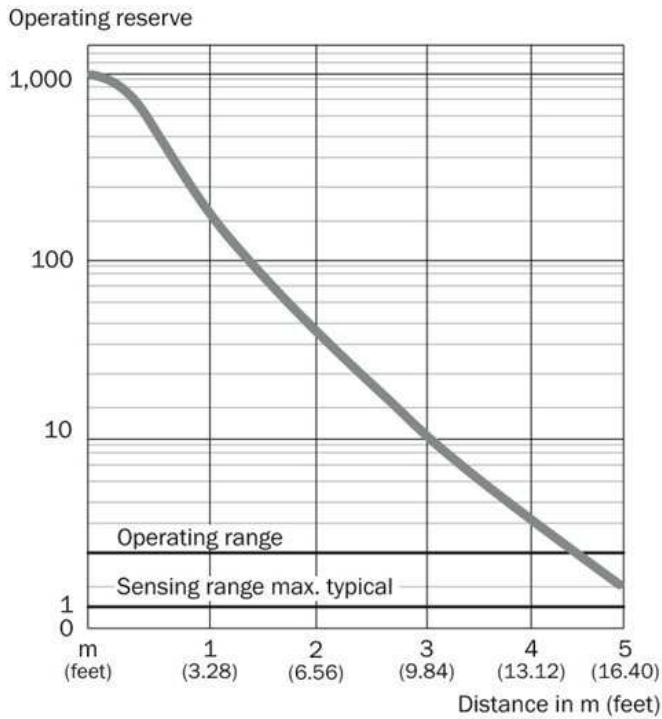
①



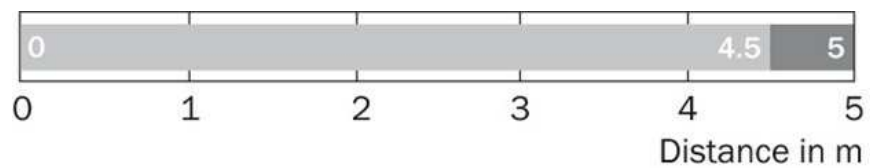
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Characteristic curve

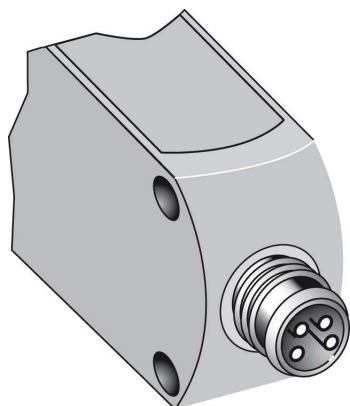


Sensing range diagram



■ Sensing range typ. max ■ Sensing range

Connection type



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