



Photoelectric sensors
W2 Flat, Through-beam photoelectric sensor

WS/WE2F-P120S05



Model Name > [WS/WE2F-P120S05](#)
Part No. > [1059829](#)



Illustration may differ

At a glance

- Maximum sensing range of 500 mm
- Rugged housing with metal sleeves for 2 mm fixing screws included with delivery
- 0.5 ms response time
- IP 67 enclosure rating
- Red light

Your benefits

- A very fast response time offers application flexibility for efficient machines with short or fast cycle times
- Smart, optimal design fits into small spaces, providing increased application flexibility



Features

Sensor/detection principle:	Through-beam photoelectric sensor
Dimensions (W x H x D):	12 mm x 20 mm x 3.5 mm
Housing design (light emission):	Rectangular, Flat
Sensing range max.:	0 m ... 0.5 m
Sensing range:	0 m ... 0.4 m
Type of light:	Visible red light
Light source:	LED ¹⁾
Wave length:	660 nm
Focus adjustable:	-
Light spot size (distance):	Ø 10 mm (100 mm)

¹⁾ Average service life of 100,000 h at T_A = +25 °C

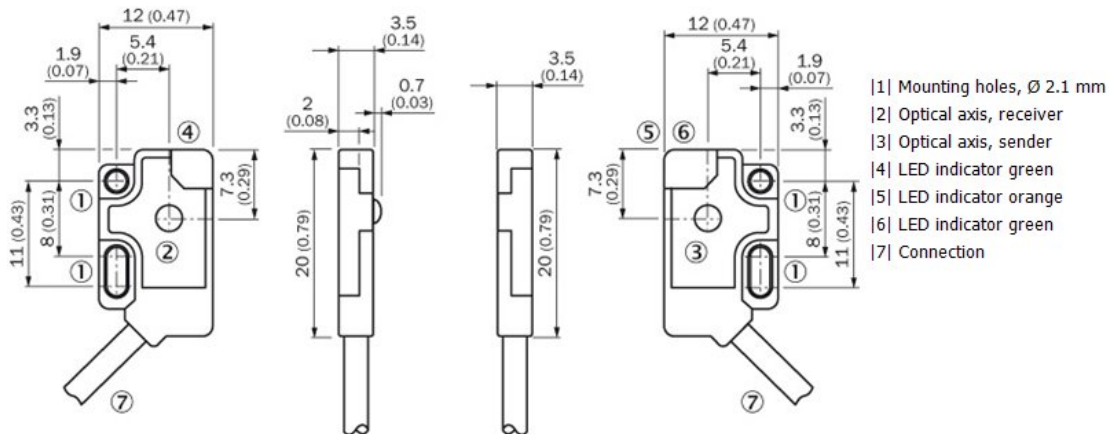
Mechanics/electronics

Supply voltage:	12 V DC ... 24 V DC ¹⁾
Ripple:	≤ 5 V _{pp} ²⁾
Output type:	PNP
Switching mode:	Light switching
Signal voltage PNP HIGH/LOW:	Approx. VS - 1.8 V / 0 V
Signal voltage NPN HIGH/LOW:	Approx. VS / < 1.8 V
Output current I _{max.} :	≤ 50 mA
Response time:	≤ 0.5 ms ³⁾
Switching frequency:	1,000 Hz ⁴⁾

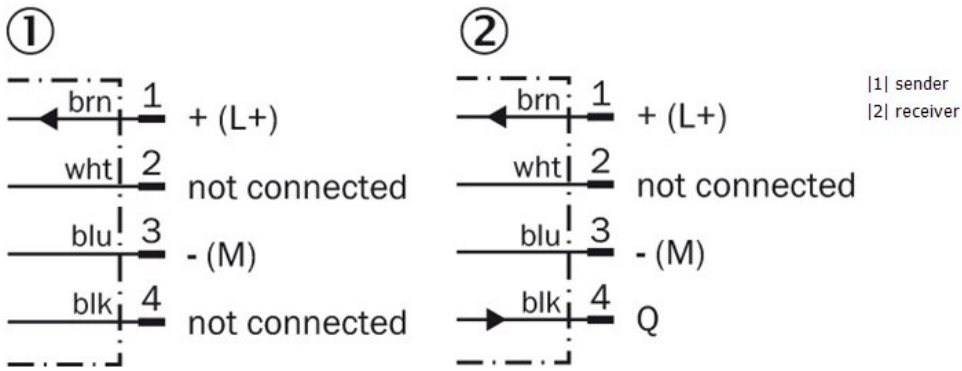
Connection type:	Cable with connector M8, 4-pin, 300 mm ⁵⁾
Cable material:	PVC
Cable diameter:	Ø 2.4 mm
Circuit protection:::	A, C, D ^{6) 7) 8)}
Weight:	20 g
Polarisation filter:	-
Reverse polarity protection:	✓
Short-circuit protection:	✓
Housing material:	Plastic, PC
Optics material:	PC
Enclosure rating:	IP 67
Ambient operating temperature:	-20 °C ... 55 °C
Ambient storage temperature:	-40 °C ... 75 °C

1) ± 10 % ²⁾ May not exceed or fall short of V_S 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

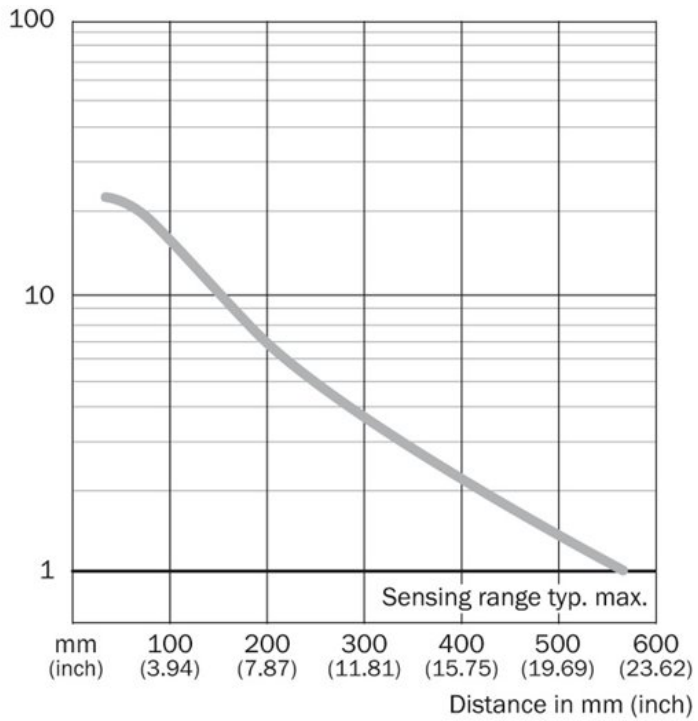
Dimensional drawing



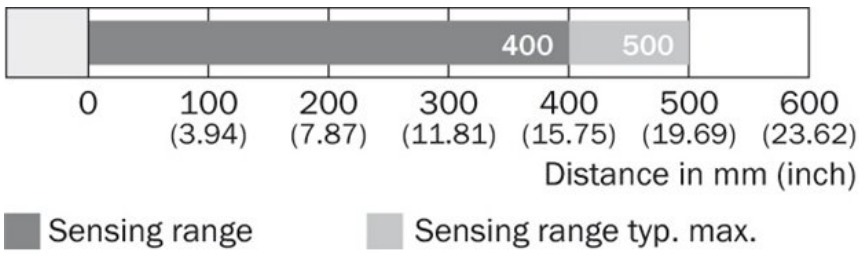
Connection diagram



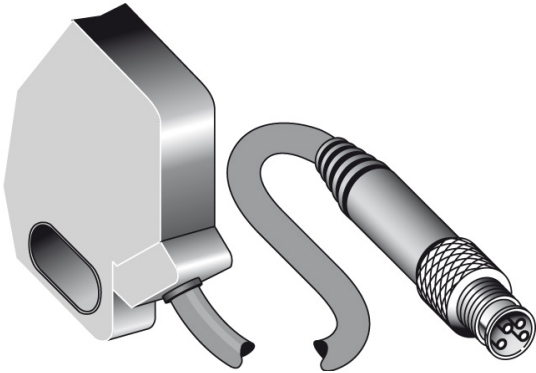
Characteristic curve



Sensing range diagram



Connection type



Australia

Phone +61 3 9457 0600
1800 334 802 – 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 sac@sick.com.br

Canada

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

Ceská 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 kundenservice@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 +972-4-6801000
E-Mail info@sick-sensors.com

Italia

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

Japan

Phone +81 (0)3 3358 1341
E-Mail support@sick.jp

Magyarország

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

Nederlands

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

Norge

Phone +47 67 81 50 00
E-Mail austefjord@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 admin@sicksgp.com.sg

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 8865 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