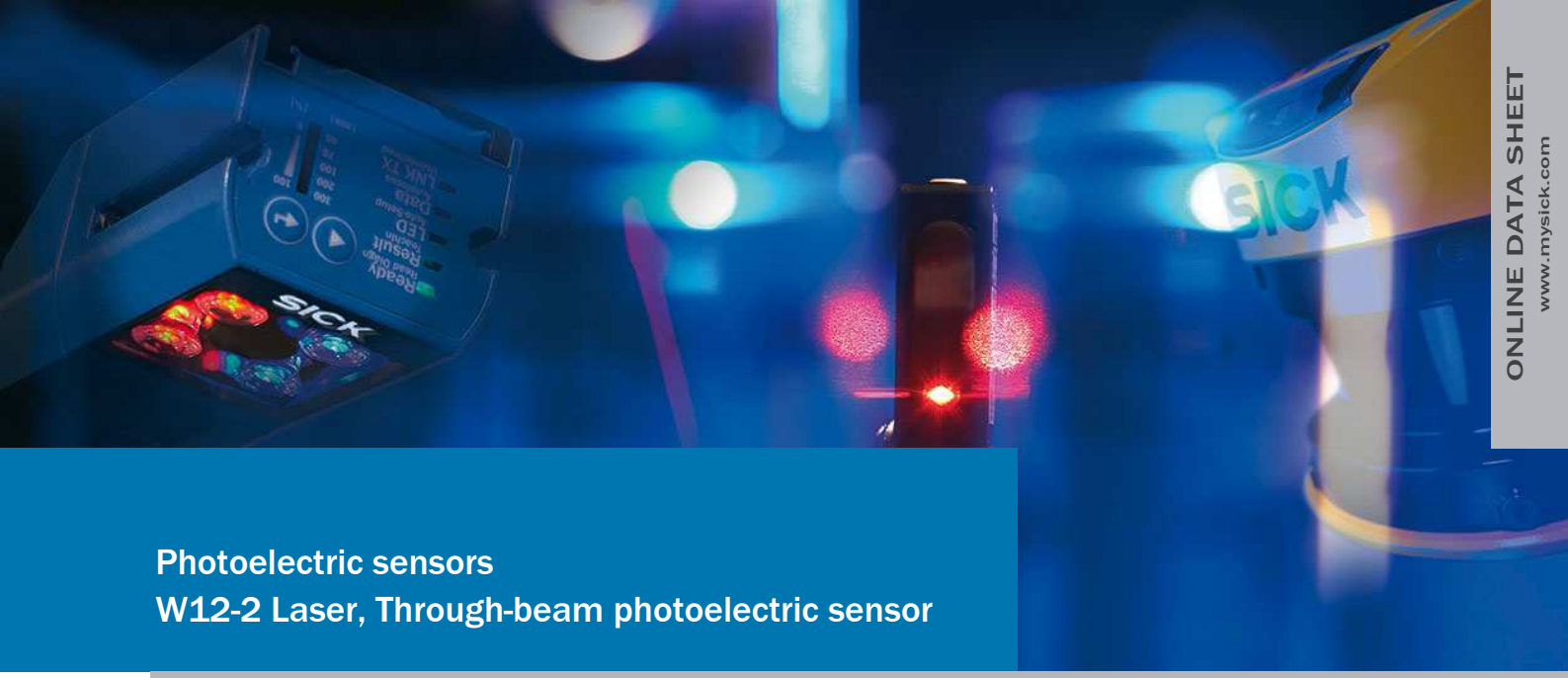


ONLINE DATA SHEET
www.mysick.com

Photoelectric sensors
W12-2 Laser, Through-beam photoelectric sensor

WS/WE12L-2P410



SICK
Sensor Intelligence.

SICK
Sensor Intelligence.

Photoelectric sensors
W12-2 Laser, Through-beam photoelectric sensor

Model Name > WS/WE12L-2P410
Part No. > 1018256



Illustration may differ

At a glance

- Laser protection class 1 or 2
- Large sensing range and high levels of operating reserve
- Rugged sensors for industrial use
- Highly visible laser light spot for varying object detection
- Rugged die-cast zinc housing with optional Teflon® coating
- Versatile mounting options due to dovetail mounting - mounting holes and oblong holes
- Highly visible status LEDs
- Adjustable sensing range

Your benefits

High immunity to optical interference provides reliable object detection, large sensing ranges and high reserve levels

Highly visible laser light spot enables quick sensor alignment, excellent switching characteristics and high-quality detection

Rugged metal housing (optional Teflon® coating available) requires less maintenance due to its resistance to high-pressure cleaning environments

Highly visible status LEDs simplify commissioning and reduce installation time

Laser protection class 1 or 2 for eye safety

Easy installation using SICK accessories

Features

Sensor/detection principle:	Through-beam photoelectric sensor
Dimensions (W x H x D):	15 mm x 49 mm x 41.5 mm
Housing design (light emission):	Rectangular
Sensing range max.:	0 m ... 10 m
Type of light:	Visible red light
Light source::	Laser [1) 2)]
Laser class:	II
Adjustment:	Potentiometer
Light spot size (distance):	Ø 1 mm (1 m)

[1)] Average service life 50,000 h at T_A = +25 °C [2)] Parallel light beam

© SICK AG. Subject to change without notice.

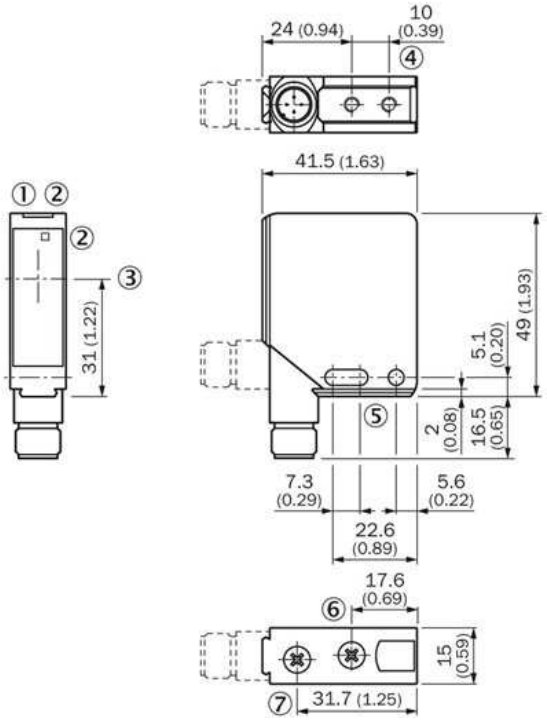
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC [1]
Ripple:	≤ 5 Vpp [2]
Power consumption, sender:	≤ 45 mA [3]
Power consumption, receiver:	≤ 15 mA [4]
Output type:	PNP
Switching mode selector:	Selectable via L/D control wire
Output current Imax.:	100 mA
Response time:	≤ 200 µs [5]
Switching frequency:	2,500 Hz [6]
Connection type:	Connector M12, 4-pin
Circuit protection:::	A, C, D [7] [8] [9]
Protection class:	II
Weight:	260 g
Housing material:	Metal
Enclosure rating:	IP 67 IP 69K
Ambient operating temperature:	-10 °C ... +50 °C
Ambient storage temperature:	-25 °C ... +75 °C
UL File No.:	NRKH.E181493 & NRKH7.E181493
Signal voltage PNP HIGH/LOW:	Uv - < 2.9 V, Uv V / 0 V ≤ 1.5 V
Signal voltage NPN HIGH/LOW:	Uv - < 2.9 V, Uv V / 0 V ≤ 1.5 V

[1] Limit values, operation in short-circuit protected network max. 8 A [2] May not exceed or fall short of V_S tolerances [3] [4] Without load [5] Signal transit time with resistive load [6] With light/dark ratio 1:1 [7] A = V_S connections reverse-polarity protected [8] C = interference suppression [9] D = outputs overcurrent and short-circuit protected

© SICK AG. Subject to change without notice.

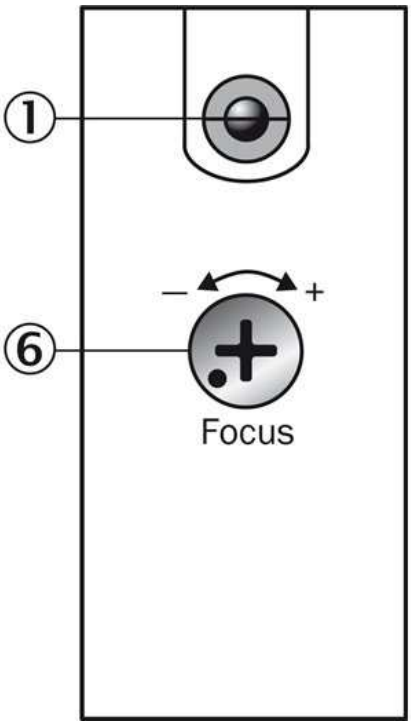
Dimensional drawing



|1| Operating indicator, green
|2| LED reception indicator, yellow
|3| Center of optical axis

|5| Mounting hole, Ø 4.2 mm
|6| Focal adjustment
|7| Sensitivity adjustment

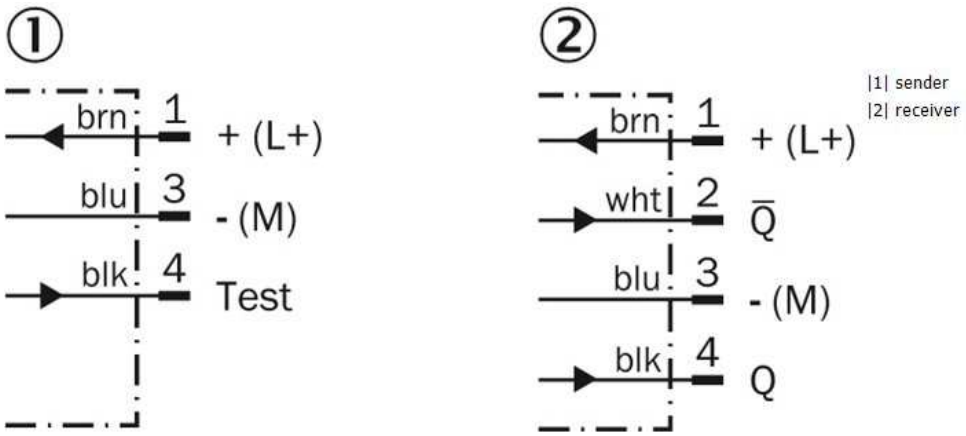
Adjustments possible



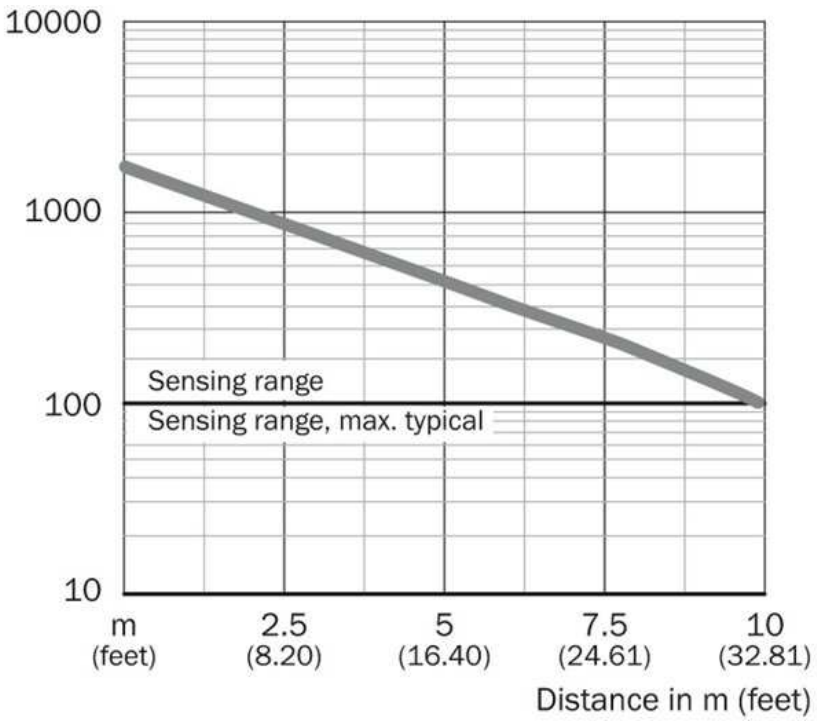
|1| Operating indicator (WS above only)
|6| Focal adjustment (WS)

© SICK AG. Subject to change without notice.

Connection diagram

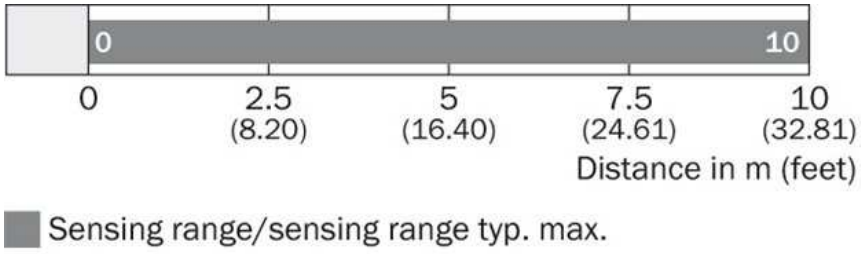


Characteristic curve

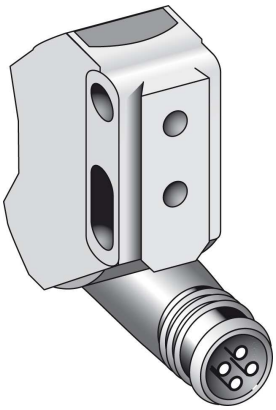


© SICK AG. Subject to change without notice.

Sensing range diagram



Connection type



© SICK AG. Subject to change without notice.

A4 4c int43

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**

SICK
Sensor Intelligence.