



Photoelectric sensors
W250-2, Through-beam photoelectric sensor

WSE250-2P1131



Model Name > [WSE250-2P1131](#)
Part No. > [6044703](#)



Illustration may differ

At a glance

- Very high sensing range in compact housing
- Versions for 10 - 30 V DC or 24 - 240 V DC/ 24 – 240 V AC voltage supply in compact design
- Mounting bracket included in delivery
- Potentiometer with an easy-to-read positioning indicator for adjusting the sensing range
- Operating mode (light/dark) selectable via control wire
- Cable or rotatable M12 connector

Your benefits

- Universal AC/DC voltage variants provide high performance and increased flexibility in environments with limited space
- High performance reserve in harsh environmental conditions
- Mounting kit reduces installation time
- Operating mode (light/dark) is selectable via a control cable to reduce the number of device variants
- Mounting compatibility - DC devices and AC/DC devices available in same design



Features

Sensor/detection principle:	Through-beam photoelectric sensor
Dimensions (W x H x D):	20 mm x 65 mm x 43.9 mm
Housing design (light emission):	Rectangular
Sensing range max.:	0 m ... 50 m
Sensing range:	0 m ... 40 m
Type of light:	Visible red light
Light source:	BrightLight LED ¹⁾
Angle of dispersion:	Ca. 2 °
Adjustment:	Potentiometer, 2 turns
Light spot size (distance):	Ø 0.6 m (20 m)

¹⁾ Average service life of 100,000 h at T_A = +25 °C ²⁾ With position indicator

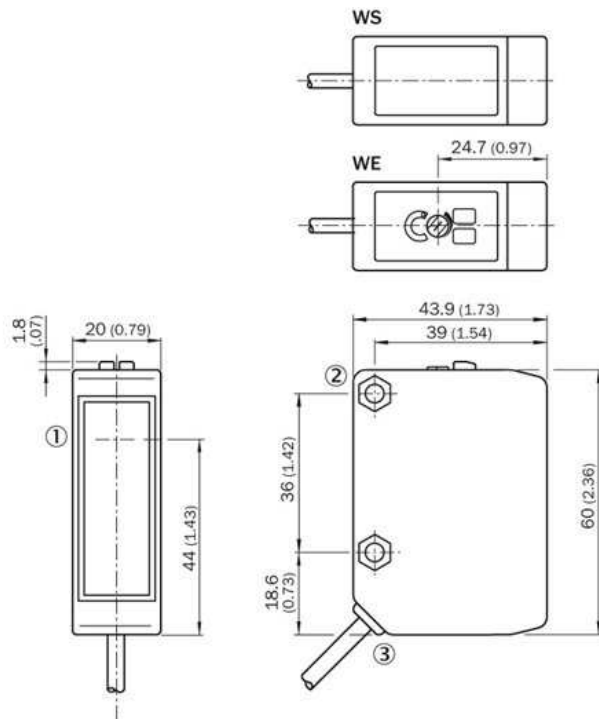
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Residual ripple:	≤ 5 V _{pp} ²⁾
Power consumption, sender:	20 mA ³⁾

Power consumption, receiver:	20 mA ⁴⁾
Output type:	PNP, open collector
Switching mode:	Light/dark switching
Switching mode selector:	Selectable via L/D control wire
Output current I _{max} :	≤ 100 mA
Response time:	≤ 0.5 ms ⁵⁾
Switching frequency:	1,000 Hz ⁶⁾
Angle of reception:	20 °
Electrical connection:	Cable, 4-wire, 2 m ⁷⁾
Cable material:	PVC
Conductor cross-section:	0.18 mm ²
Cable diameter:	Ø 3.8 mm
Circuit protection:::	A, B, C, D ^{8) 9) 10) 11)}
Protection class:	III
Weight:	300 g
Special device:	-
Optics material:	PMMA
Enclosure rating:	IP 67
Items supplied:	BEF-W250 mounting bracket
EMC:	EN 60947-5-2 ¹²⁾
Ambient temperature operation:	-25 °C ... +55 °C
Ambient storage temperature:	-40 °C ... +70 °C
UL File No.:	NRKH2.E300503 & NRKH8.E300503
Housing material:	ABS, Plastic

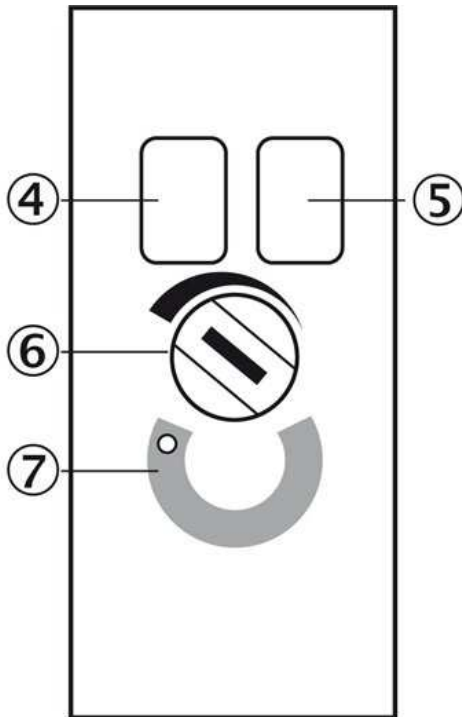
¹⁾ Limit values, operation in short-circuit protected network max. 8 A ²⁾ May not exceed or fall short of V_S tolerances ^{3) 4)} Without load ⁵⁾ Signal transit time with resistive load ⁶⁾ With light/dark ratio 1:1 ⁷⁾ Do not bend below 0 °C ⁸⁾ A = V_S connections reverse-polarity protected ⁹⁾ B = inputs and output reverse-polarity protected ¹⁰⁾ C = interference suppression ¹¹⁾ D = outputs overcurrent and short-circuit protected ¹²⁾ The AC/DC devices meet the interference suppression requirements for industrial use (interference suppression class A). When used in residential areas it can cause interference.

Dimensional drawing



- |1| Center of the optical axis, sender (WS 250), receiver (WE 250)
- |2| Mounting hole \varnothing 4.2 mm, for M4 hexagon nut on both sides
- |3| Connection cable

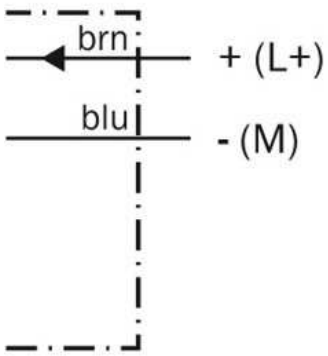
Adjustments possible



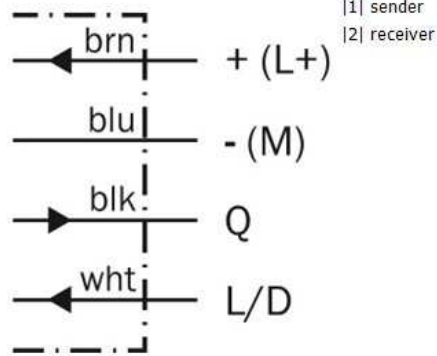
- |4| LED indicator green: Stability indicator
- |5| Status indicator LED, yellow: Status of received light beam
- |6| Sensitivity adjustment: poti
- |7| Position indicator for sensitivity setting (270°)

Connection diagram

①

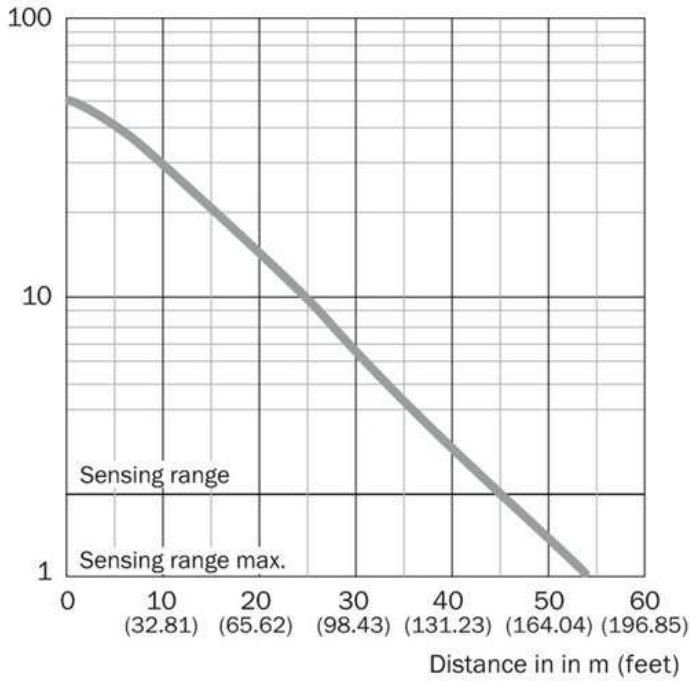


②

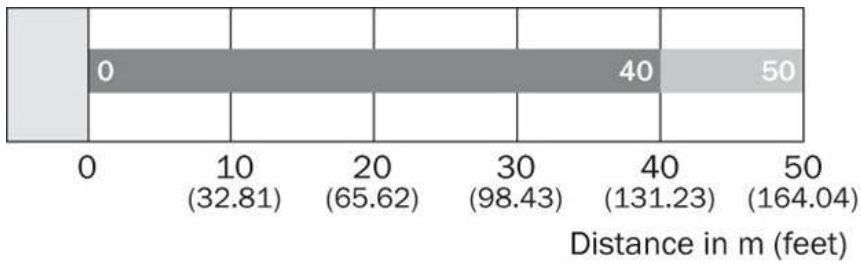


Characteristic curve

Operating reserve



Sensing range diagram



■ 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