

Photoelectric proximity switch
with visible red light
Operating instructions

Safety notes

- Not a safety component in accordance with EU Machinery Directive.
- Read the operating instructions before commissioning.
- Connection, mounting, and setting is only to be performed by trained specialists.
- UL: The device shall be supplied from an isolating transformer having a secondary overcurrent protective device that complies with UL 248 to be installed in the field rated either:
 - a) max 5 amps for voltages 0 ~ 20 V (0 ~ 28.3 V peak), or
 - b) 100 / Vp for voltages of 20 ~ 30 V (28.3 ~ 42.4 V peak).
 Alternatively, they can be supplied from a Class 2 power supply. UL Environmental Rating: Enclosure type 1.
- When commissioning, protect the device from moisture and contamination.

Correct use

The WTB2S-2 is a photoelectric proximity sensor with background suppression for the optical, non-contact detection of objects, animals and persons. The sender and receiver are integrated into a single housing unit. The light beam output by the sender is reflected by the object to be detected. The receiver evaluates the reflected light.

Starting operation

1 Check the application conditions such as the scanning distance and the reflectivity of the objects being scanned and the background and compare it with the characteristic curve in the diagram (x = sensing distance, y = transition area between the sensing distance set and safe background suppression). Remission: 6 % = black, 18 % = gray, 90 % = white (referring to standard white as per DIN 5033).

2 Maintain the movement direction of the object in relation to the scanner.

Only for connector versions: Plug in the cable socket without current applied and screw it tight.

Only for versions with connecting cable: The following connections apply: brn = brown, blu = blue, blk = black, wht = white.

Apply the operating voltage to the proximity sensor.

Adjustment of the sensing range position the object direct light spot onto the object.

Visible red emitted light spot recognizable on the object.

Increase the sensing range until the LED indication lights up.

Recommendation: Set the sensing distance with a 15 % safety supplement of the sensing distance.

Background is not detected: setting is completed.

Background is detected: background influence too strong. Check setting and application.

Maintenance

SICK light barriers are maintenance-free.

We recommend doing the following regularly:

- Clean the external lens surfaces.
- Check the screw connections and plug-in connections.

No modifications may be made to devices.

SICK

8016607.1CXH 0821 COMAT

WTB2S-2

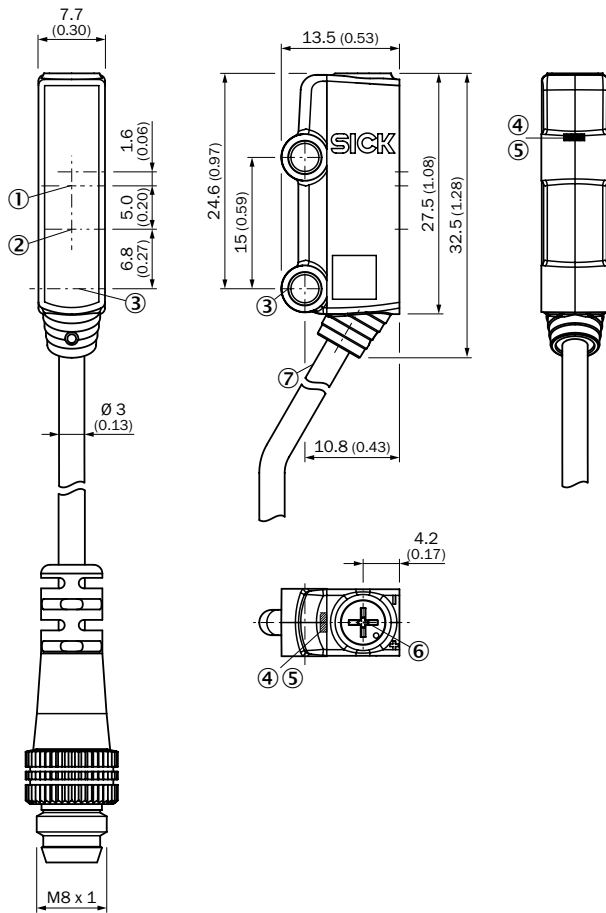
Potentiometer

Australia Phone +61 (3) 9457 0600 1800 33 48 02 - tollfree	Netherlands Phone +31 (0) 30 229 25 44
Austria Phone +43 (0) 2236 62288-0	New Zealand Phone +64 9 415 0459
Belgium/Luxembourg Phone +32 (0) 2 466 55 66	Norway Phone +47 67 81 50 00
Brazil Phone +55 11 3215-4900	Poland Phone +48 22 539 41 00
Canada Phone +1 905.771.1444	Romania Phone +40 356-17 11 20
Czech Republic Phone +420 234 719 500	Russia Phone +7 495 283 09 90
Chile Phone +56 (2) 2274 7430	Singapore Phone +65 6744 3732
China Phone +86 20 2882 3600	Slovakia Phone +421 482 901 201
Denmark Phone +45 45 82 64 00	Slovenia Phone +386 591 78849
Finland Phone +358-9-25 15 800	South Africa Phone +27 10 060 0550
France Phone +33 1 64 62 35 00	South Korea Phone +82 2 786 6321/4
Germany Phone +49 (0) 211 53 010	Spain Phone +34 93 480 31 00
Greece Phone +30 210 6825100	Sweden Phone +46 10 110 10 00
Hong Kong Phone +852 2153 6300	Switzerland Phone +41 41 619 29 39
Hungary Phone +36 1 371 2680	Taiwan Phone +886-2-2375-6288
India Phone +91-22-6119 8900	Thailand Phone +66 2 645 0009
Israel Phone +972 97110 11	Turkey Phone +90 (216) 528 50 00
Italy Phone +39 02 27 43 41	United Arab Emirates Phone +971 (0) 4 88 65 878
Japan Phone +81 3 5309 2112	United Kingdom Phone +44 (0)17278 31121
Malaysia Phone +603-8080 7425	USA Phone +1 800 325 7425
Mexico Phone +52 (472) 748 9451	Vietnam Phone +65 6744 3732

SICK AG, Erwin-Sick-Strasse 1, D-79183 Waldkirch
Detailed addresses and further locations at www.sick.com

BE 1169

A WTB2S-2



- 1 Optical axis, receiver / Optikachse, Empfänger
- 2 Optical axis, sender / Optikachse, Sender
- 3 Middle axis fixing hole Ø 3.2 mm (0.13) / Mittelachse Montagebohrung Ø 3,2 mm
- 4 Status indicator LED green: power on / Anzeige-LED grün: Betriebsspannung aktiv
- 5 LED indicator yellow: status of received light beam / Anzeige-LED gelb: Status Lichtempfang
- 6 Potentiometer / Potentiometer
- 7 Connector / Anschluss

More representatives and agencies at www.sick.com - Subject to change without notice - The specified product features and technical data do not represent any guarantee.

Weitere Niederlassungen finden Sie unter www.sick.com - Irrtümer und Änderungen vorbehalten - Angegebene Produkteigenschaften und technische Daten stellen keine Garantieerklärung dar.

Plus de représentations et d'agences à l'adresse www.sick.com - Sujet à modification sans préavis - Les caractéristiques de produit et techniques indiquées ne constituent pas de déclaration de garantie.

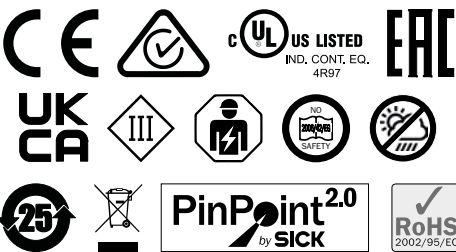
Para mais representantes e agências, consulte www.sick.com - Alterações poderão ser feitas sem prévio aviso - As características do produto e os dados técnicos apresentados não constituem declaração de garantia.

Altri rappresentanti ed agenzie si trovano su www.sick.com - Contenuti soggetti a modifiche senza preavviso - Le caratteristiche del prodotto e i dati tecnici non rappresentano una dichiarazione di garanzia.

Más representantes y agencias en www.sick.com - Sujeto a cambio sin previo aviso - Las características y los datos técnicos especificados no constituyen ninguna declaración de garantía.

欲了解更多代表机构和代理商信息，请登录 www.sick.com。如有更改，不另行通知。对所给出的产品特性和技术参数的正确性不予保证。

その他の営業所は www.sick.com よりご覧ください。予告なしに変更されることがあります。記載されている製品機能および技術データは保証を明示するものではありません。



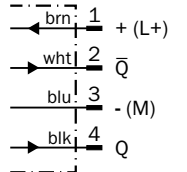
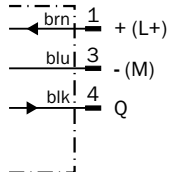
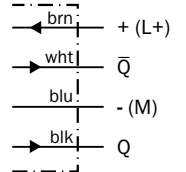
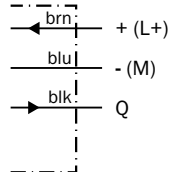
B

WTB2S-2P / N13xx
WTB2S-2F / E13xx

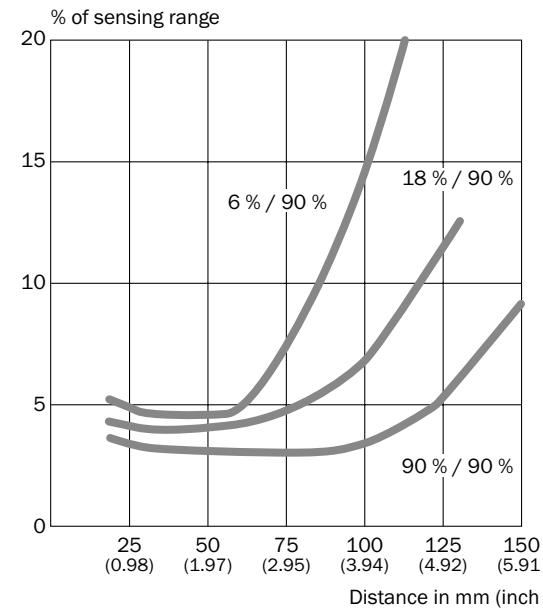
WTB2S-2P / N11xx
WTB2S-2F / E11xx

WTB2S-2P / N31xx
WTB2S-2F / E31xx

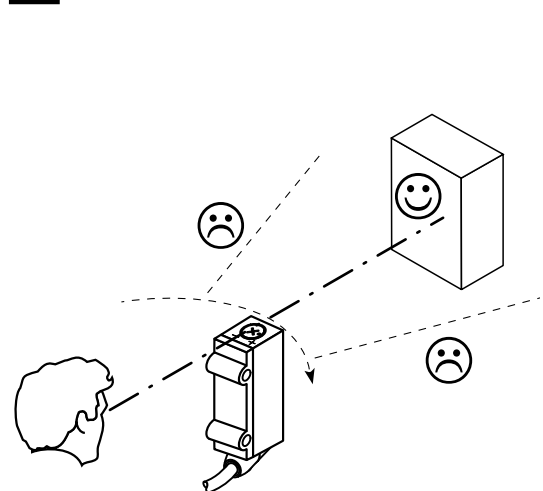
WTB2S-2P / N32xx
WTB2S-2F / E32xx



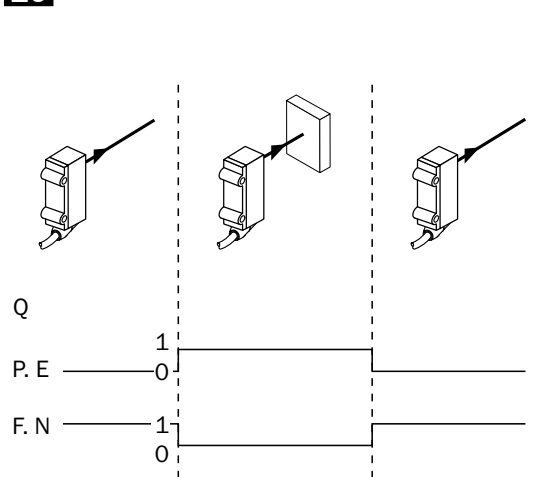
1a



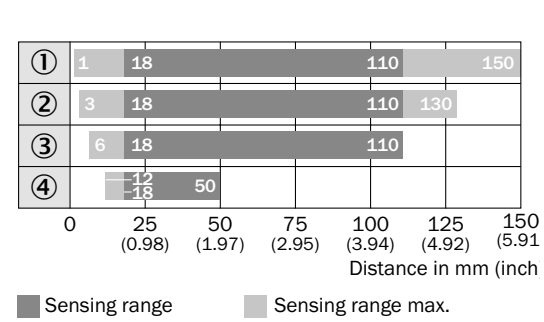
2a



2c



1b



- 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 ultra black, 1 % remission

2b

