



Photoelectric sensors
W2 Slim, Photoelectric proximity sensor,
Background suppression

WT2S-E411



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Model Name > [WT2S-E411](#)
Part No. > [1028704](#)



Illustration may differ

At a glance

- Very small, focused laser-like light spot with diameter < Ø 1.5 mm
- Two background suppression variants with a fixed sensing range of 15 mm and 30 mm
- Energetic proximity sensor with a fixed sensing range of 55 mm
- Fast response time of 0.6 ms

Your benefits

- Precise recognition of all objects regardless of color or composition
- Laser-like light spot enables precise detection with a high level of accuracy
- V-optics reliably detects transparent and glossy objects
- Highly immunity to reflective and critical backgrounds, enabling use in the most restricted machine environments



Features

Sensor/detection principle:	Photoelectric proximity sensor, Background suppression
Dimensions (W x H x D):	7.6 mm x 25.1 mm x 12.5 mm
Housing design (light emission):	Rectangular, Slim
Sensing range max.:	1 mm ... 15 mm ¹⁾
Sensing range:	1 mm ... 15 mm ²⁾
Type of light:	Visible red light
Light source:	PinPoint LED ³⁾
Wave length:	660 nm
Focus adjustable:	-
Focus:	7 mm
Light spot size (distance):	Ø 1.5 mm (7 mm)

^{1) 2)} Object with 90 % reflectance (referred to standard white DIN 5033) ³⁾ Average service life 75,000 h at T_A = +25 °C

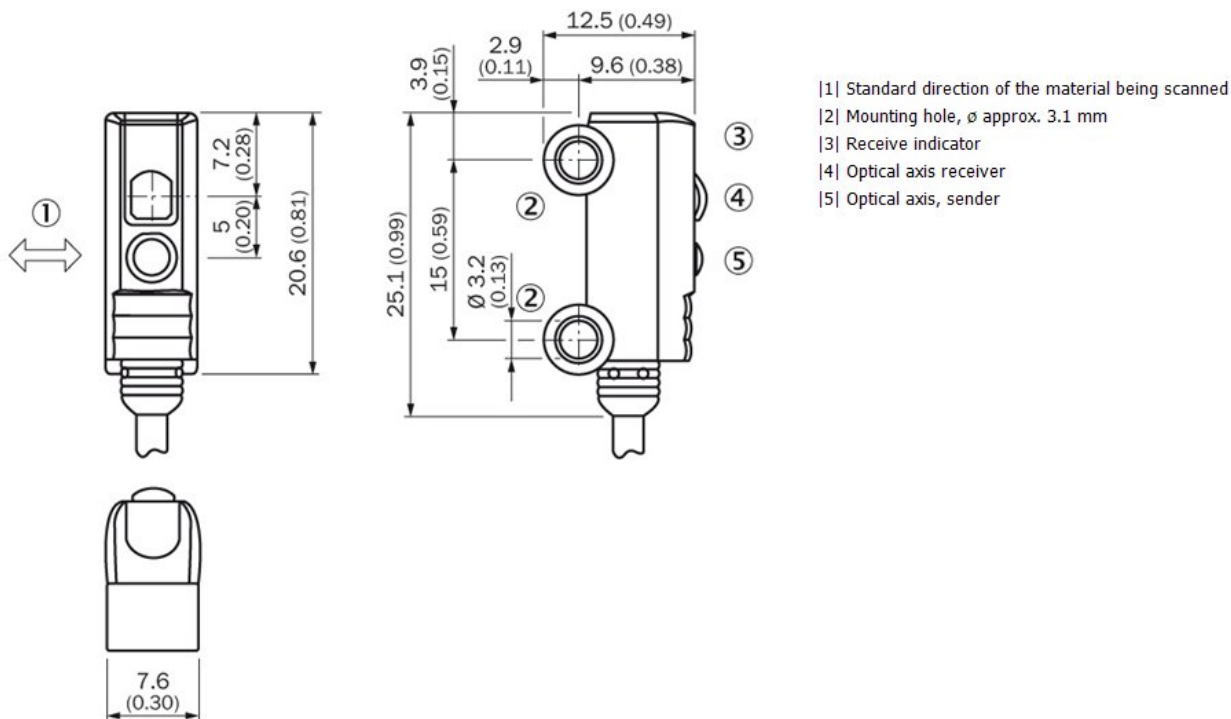
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	≤ 5 Vpp ²⁾
Output type:	NPN
Switching mode:	Dark-switching
Output current I _{max} .:	≤ 50 mA
Response time:	< 0.6 ms ³⁾

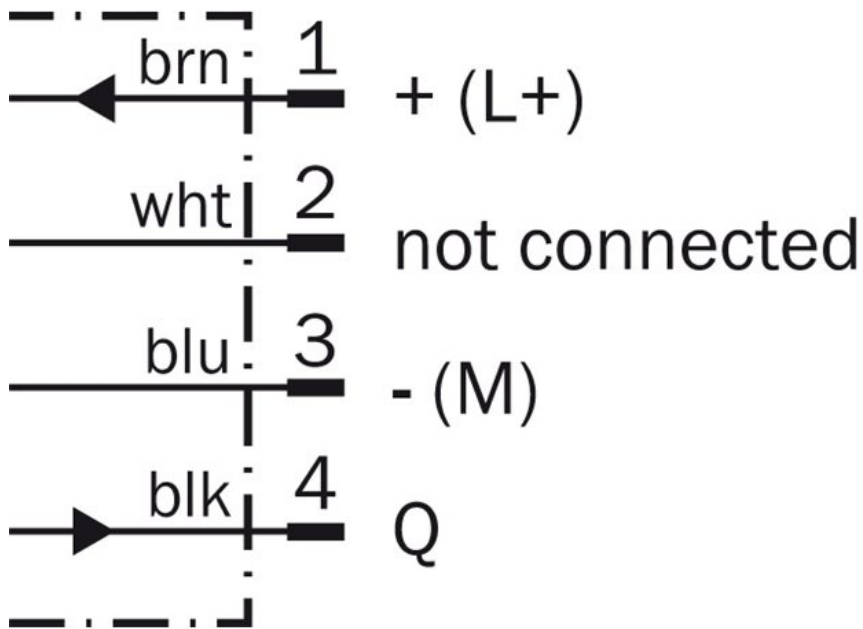
Switching frequency:	800 Hz ⁴⁾
Connection type:	Cable with connector M8, 4-pin, 200 mm ⁵⁾
Cable material:	PVC
Cable diameter:	Ø 2.4 mm
Circuit protection:::	A, C, D ⁶⁾ ⁷⁾ ⁸⁾
Weight:	20 g
Polarisation filter:	-
Reverse polarity protection:	✓
Short-circuit protection:	✓
Housing material:	ABS, Plastic
Optics material:	PMMA
Enclosure rating:	IP 67 IP 69K
Ambient operating temperature:	-20 °C ... 50 °C
Ambient storage temperature:	-40 °C ... 75 °C

¹⁾ Limit values 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
⁷⁾ C = interference suppression ⁸⁾ D = outputs overcurrent and short-circuit protected

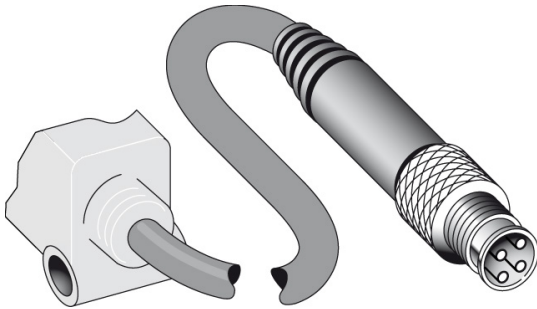
Dimensional drawing



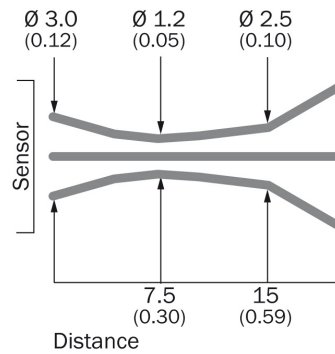
Connection diagram



Connection type

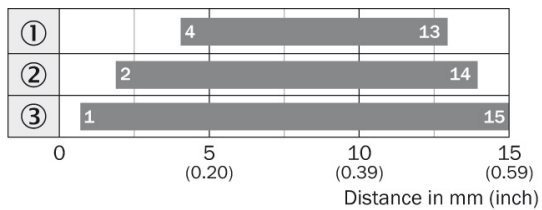


Light spot size



All dimensions in mm (inch)

Sensing range diagram



■ Sensing range

- ① Sensing range on black, 6 % remission
- ② Sensing range on gray, 18 % remission
- ③ Sensing range on white, 90 % remission

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