



Photoelectric sensors
W190 Laser High Grade, Photoelectric proximity
sensor, Background suppression

WTB190TL-N132

im0019229

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W190 Laser High Grade, Photoelectric proximity sensor, Background suppression

Model Name > [WTB190TL-N132](#)
Part No. > [6026539](#)



Illustration may differ

At a glance

- Laser LED, visible red light, class 2
- Sensing range adjustment via teach-in pushbutton
- Programmable background or foreground suppression
- Programmable output: light/dark switching
- Numerical display with menu navigation

Your benefits

- Quick and easy alignment due to red light laser, class 2
- Fast configuration via a display with menu navigation
- Easy-to-use setup options with a wide range of functions
- Quick and easy sensing range adjustment via a teach-in pushbutton



Features

Sensor/detection principle:	Photoelectric proximity sensor, Background suppression
Dimensions (W x H x D):	15 mm x 44.4 mm x 30 mm
Housing design (light emission):	Rectangular
Sensing range max.:	40 mm ... 100 mm ¹⁾
Type of light:	Visible red light
Light source:	Laser
Light spot (distance):	0.8 mm (80 mm)
Laser class:	2
Adjustment of operating distance:	Teach
Teach-in:	Single teach-in button, Menu-controlled
Time type:	Programmable Programmable: 0 ... 10 s
Delay time:	Nor: normal mode: Ond: On delay mode, reactivation delay: OFd: Off-delay mode, release delay: OnE: One Shot Mode, ONE SHOT:
Display:	Switching threshold, distance, mode

¹⁾ Object with 90 % reflectance (referred to standard white DIN 5033)

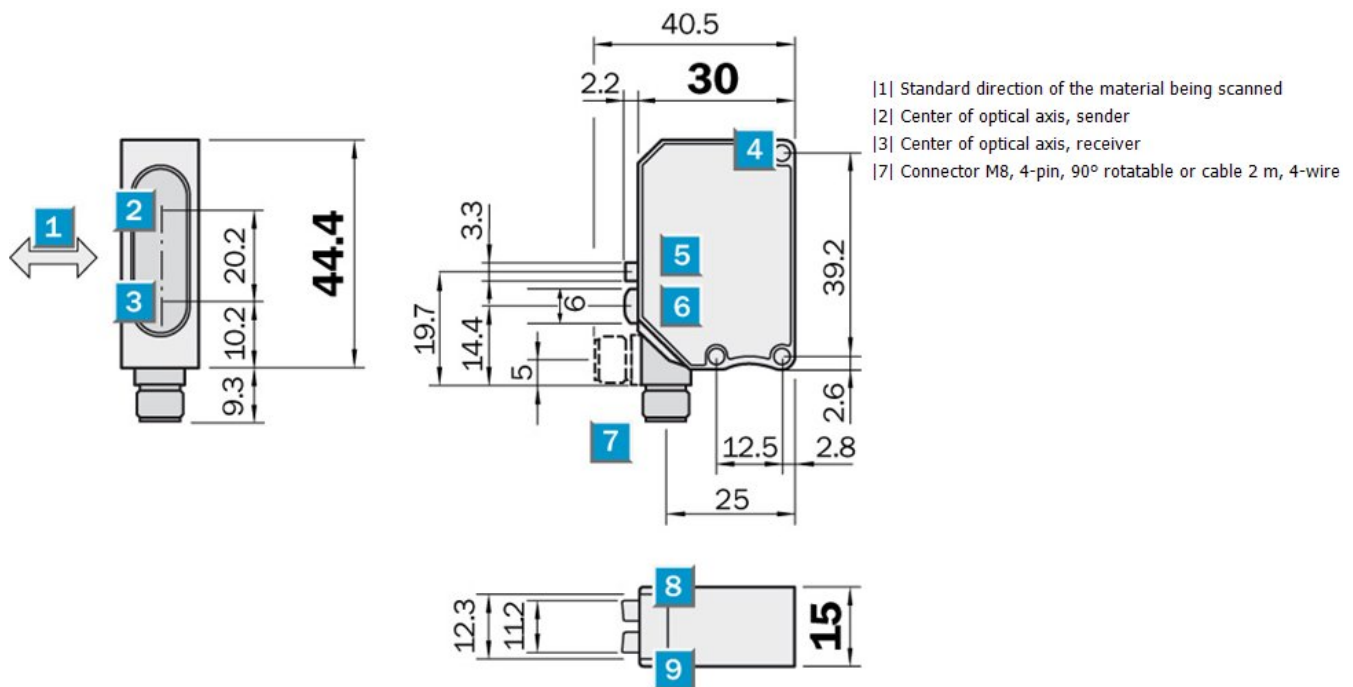
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	± 10 % ²⁾

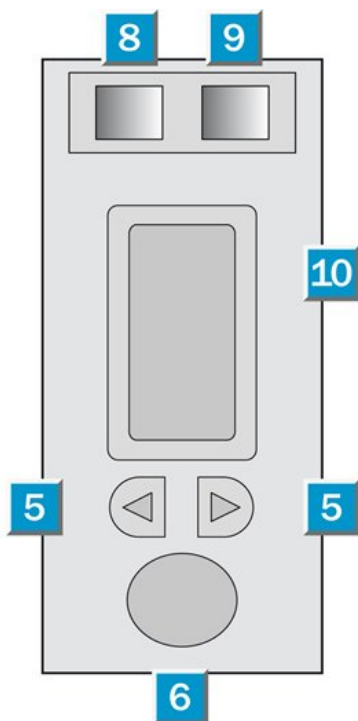
Power consumption:	$\leq 40 \text{ mA}$ ³⁾
Output type:	NPN, Light/dark-switching, programmable
Output current I _{max} :	$< 100 \text{ mA}$
Response time:	1.5 ms ⁴⁾
Switching frequency:	300 Hz ⁵⁾
Connection type:	Cable, 4-wire, 2 m ⁶⁾
Conductor cross-section:	0.18 mm^2
Circuit protection:	A, D ^{7) 8)}
Protection class:	III ⁹⁾
Weight:	200 g
Housing material:	ABS
Optics material:	PMMA
Enclosure rating:	IP 67
Ambient operating temperature:	$-10 \text{ }^{\circ}\text{C} \dots 40 \text{ }^{\circ}\text{C}$
Ambient storage temperature:	$-20 \text{ }^{\circ}\text{C} \dots 60 \text{ }^{\circ}\text{C}$

¹⁾ Limit values ²⁾ May not exceed or fall short of V_S tolerances ³⁾ Without load ⁴⁾ Signal transit time with resistive load ⁵⁾ With light/dark ratio 1:1 ⁶⁾ Do not bend below $0 \text{ }^{\circ}\text{C}$ ⁷⁾ A = V_S connections reverse-polarity protected ⁸⁾ D = outputs overcurrent and short-circuit protected ⁹⁾ Reference voltage 50 V DC

Dimensional drawing

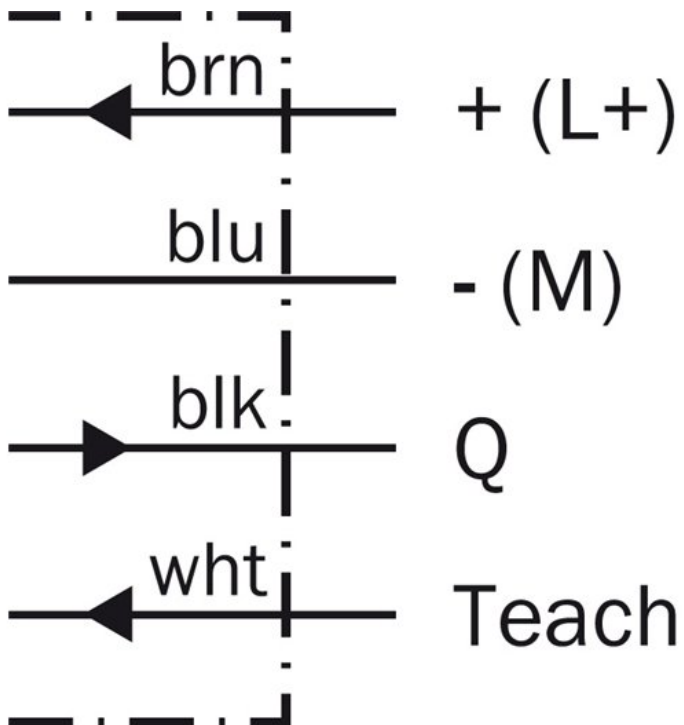


Adjustments possible

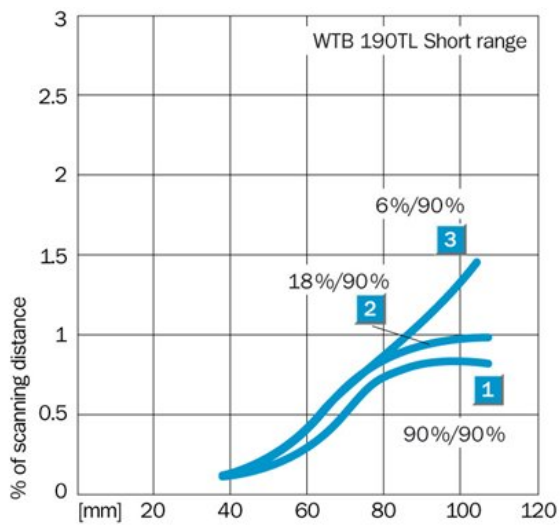


- |5| +/- button; select mode button
- |6| Teach-in button
- |8| Status indicator LED, green: Laser on
- |9| LED indicator yellow; lights
continuously: output aktivno light:
output inactiveblinks slowly: shot circuit detected
- |10| Numerical Display

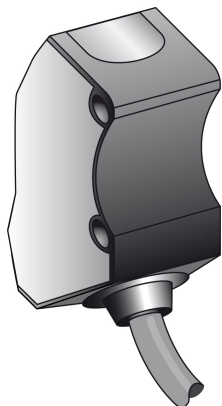
Connection diagram



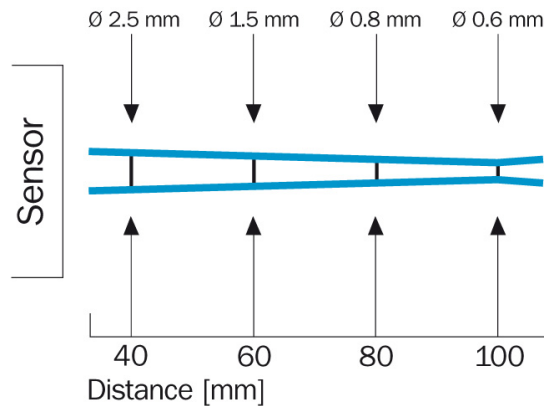
Characteristic curve



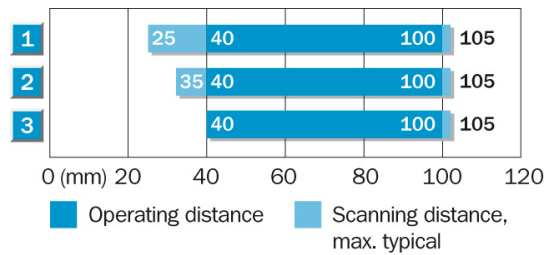
Connection type



Light spot size



Sensing range diagram



- 1 Scanning range on white, 90 % remission
- 2 Scanning range on grey, 18 % remission
- 3 Scanning range on black, 6 % 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