



Photoelectric sensors  
W190 Laser Standard, Photoelectric proximity  
sensor, Background suppression

WTB190L-N460



**Model Name** > [WTB190L-N460](#)  
**Part No.** > [6026552](#)



*Illustration may differ*

**At a glance**

- Laser LED, visible red light, class 2
- User-friendly sensor with simple alignment and adjustment
- Precise background suppression
- Setting via potentiometer
- Selectable output: light/dark switching

**Your benefits**

- Highly visible laser light provides simple alignment and adjustment
- Simple adjustment via potentiometer
- Flexible operation with two output functions in one device due to light/dark selector switch
- Reliable object detection due to precise background suppression



**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.:	100 mm ... 300 mm <sup>1)</sup>
Type of light:	Visible red light
Light source:	Laser
Laser class:	2
Light spot diameter (distance):	Ø 2.5 mm (200 mm)

<sup>1)</sup> Object with 90 % reflectance (referred to standard white DIN 5033)

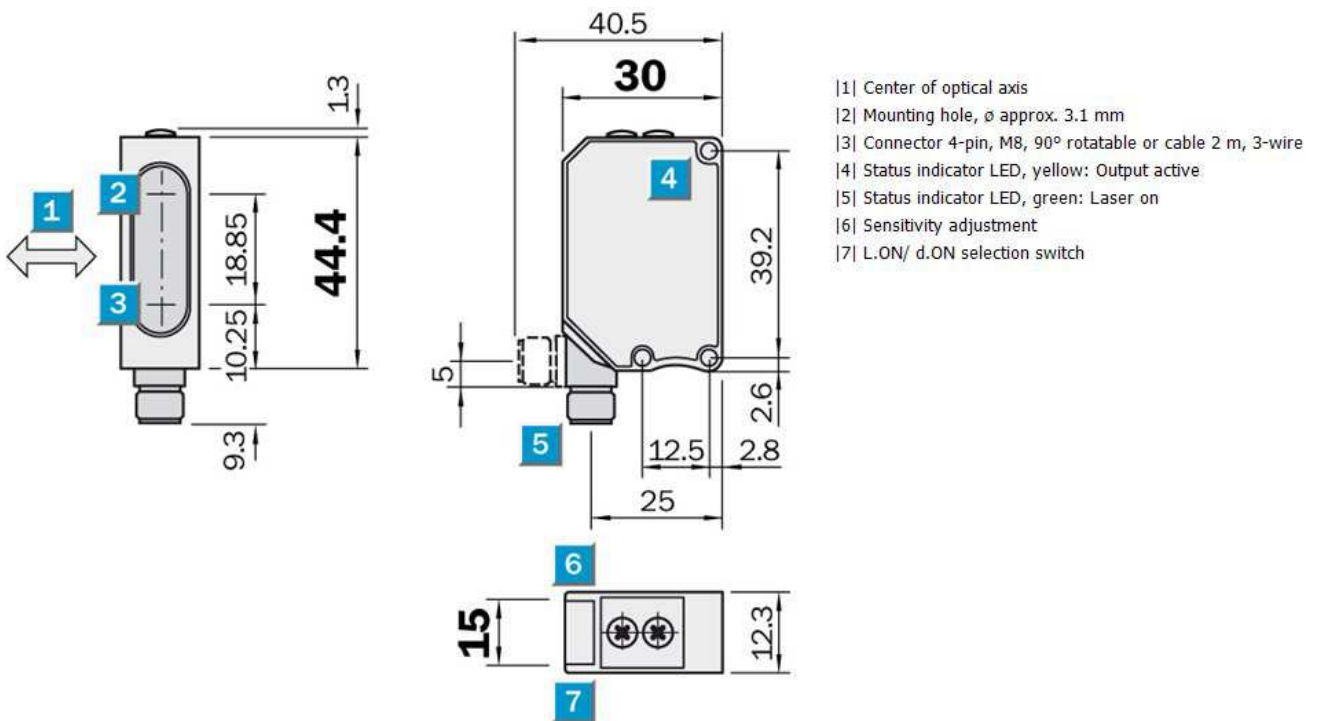
**Mechanics/electronics**

Supply voltage:	10 V DC ... 30 V DC <sup>1)</sup>
Residual ripple:	± 10 % <sup>2)</sup>
Power consumption:	≤ 40 mA <sup>3)</sup>
Output type:	NPN, Light/dark-switching, manually selectable
Output current I <sub>max</sub> .:	< 100 mA
Response time:	0.7 ms <sup>4)</sup>
Switching frequency:	700 Hz <sup>5)</sup>
Electrical connection:	Connector M8, 4-pin
Circuit protection::	A, D <sup>6) 7)</sup>

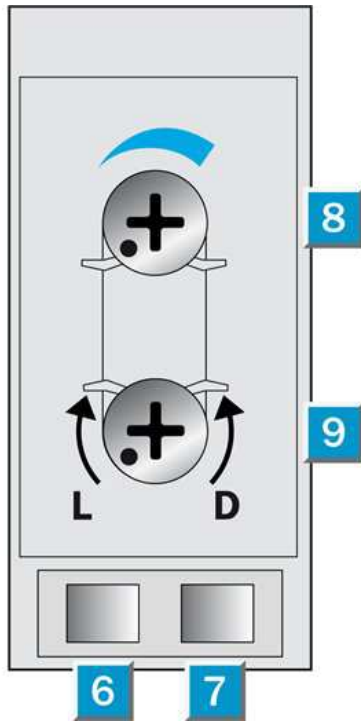
Protection class:	III <sup>8)</sup>
Weight:	120 g
Housing material:	ABS
Optics material:	PMMA
Enclosure rating:	IP 67
Ambient temperature operation:	-10 °C ... 40 °C
Ambient storage temperature:	-20 °C ... 60 °C

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)  $A = V_S$   
 connections reverse-polarity protected 7) D = outputs overcurrent and short-circuit protected 8) Reference voltage 50 V DC

### Dimensional drawing



## Adjustments possible

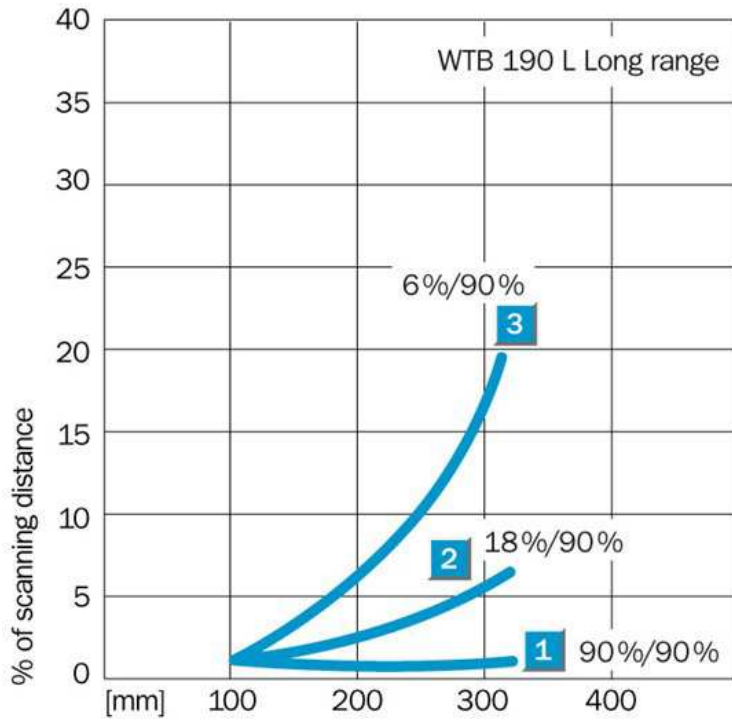


- |6| Status indicator LED, yellow: Output active
- |7| Status indicator LED, green: Laser on
- |8| Sensing range adjustment
- |9| L.ON/ d.ON selection switch

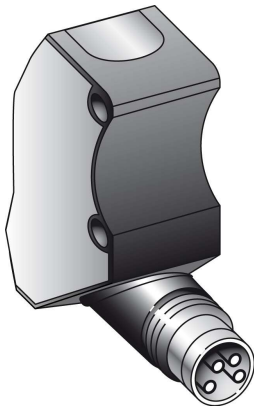
## Connection diagram



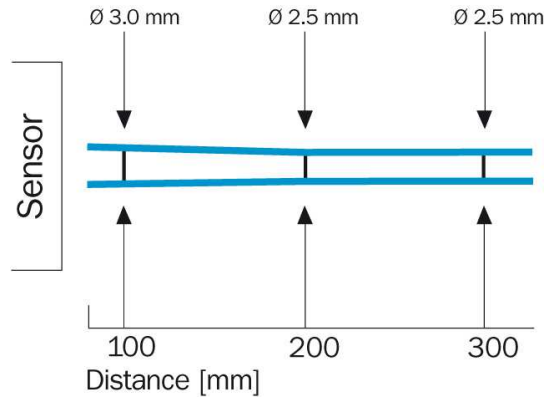
**Characteristic curve**



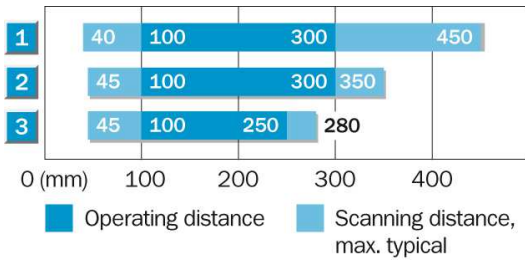
**Connection type**



**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 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](http://www.sick.com)