



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

WTB190L-P162



**Model Name** > [WTB190L-P162](#)  
**Part No.** > [6026553](#)



*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)

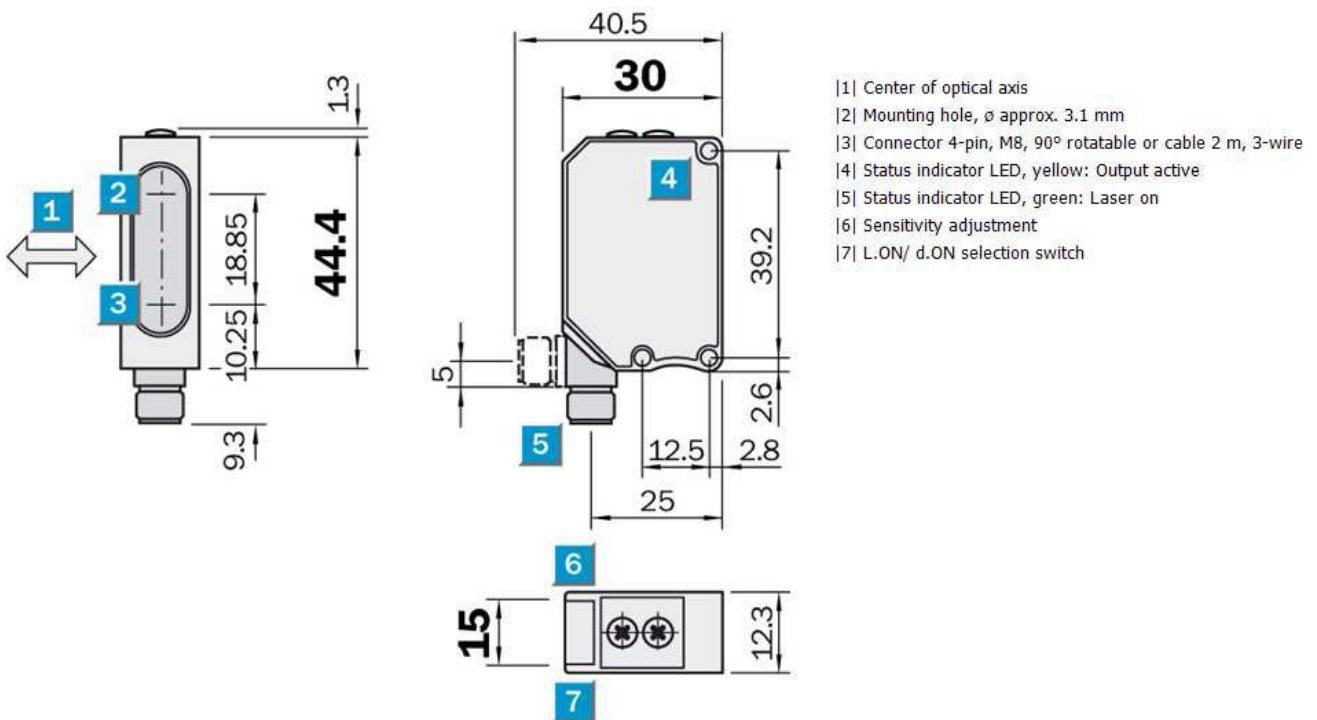
**Mechanics/electronics**

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:	PNP, 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:	Cable, 3-wire, 2 m <sup>6)</sup>
Conductor cross-section:	0.18 mm <sup>2</sup>

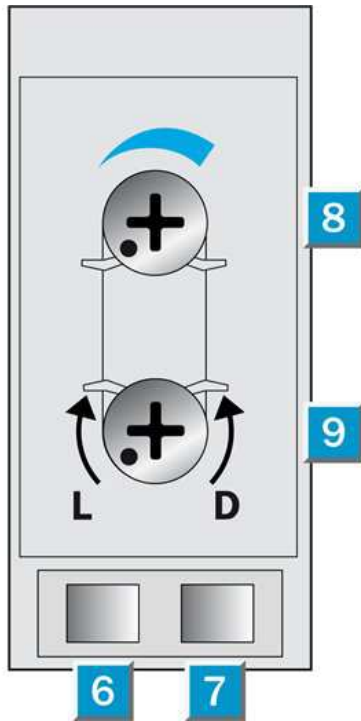
Circuit protection::	A, D <sup>7) 8)</sup>
Protection class:	III <sup>9)</sup>
Weight:	200 g
Housing material:	ABS
Optics material:	PMMA
Enclosure rating:	IP 67
Ambient temperature operation:	-10 °C ... 40 °C
Ambient storage temperature:	-20 °C ... 60 °C

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) Do not bend below 0 °C 7) A = V connections reverse-polarity protected 8) D = outputs overcurrent and short-circuit protected 9) Reference voltage 50 V DC

## Dimensional drawing

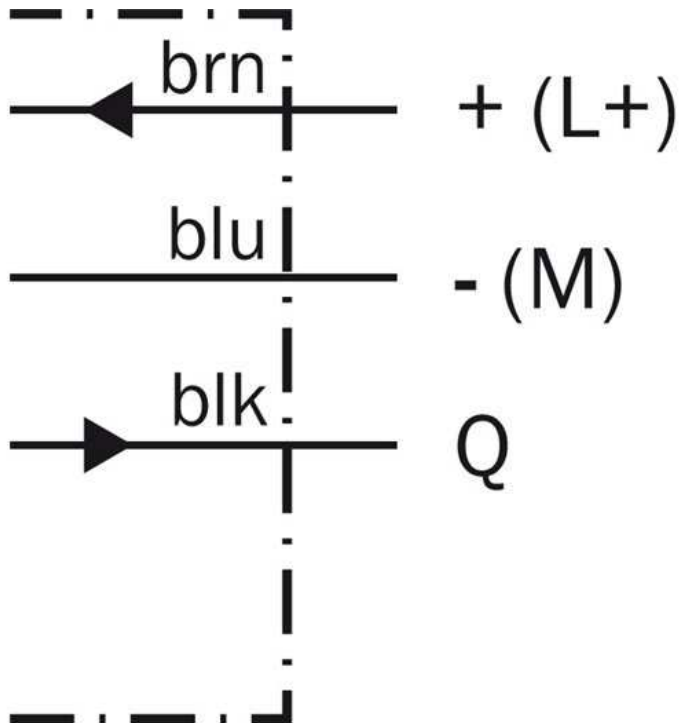


## Adjustments possible

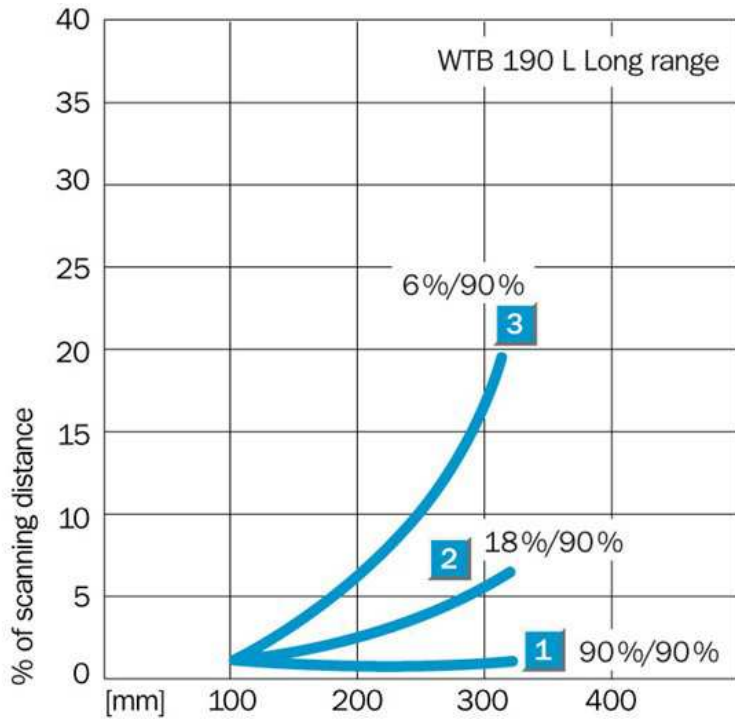


- |6| Status indicator LED, yellow: Output active
- |7| Status indicator LED, green: Laser on
- |8| Sensing range adjustment
- |9| L.ON/ d.ON selection switch

## Connection diagram



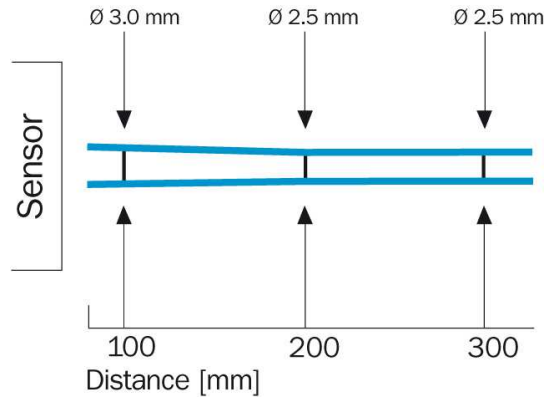
**Characteristic curve**



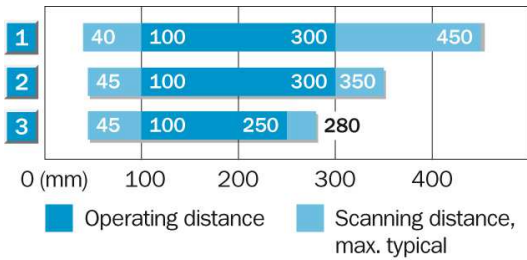
**Connection type**



**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

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