



Photoelectric sensors  
W190 Laser Standard, Through-beam  
photoelectric sensor

WS/WE190L-N430



**Model Name** > [WS/WE190L-N430](#)  
**Part No.** > [6026560](#)



*Illustration may differ*

**At a glance**

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

**Your benefits**

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



**Features**

Sensor/detection principle:	Through-beam photoelectric sensor
Dimensions (W x H x D):	15 mm x 44.4 mm x 30 mm
Housing design (light emission):	Rectangular
Sensing range max.:	0 m ... 50 m
Type of light:	Visible red light
Light source:	Laser
Laser class:	2
Adjustment of operating distance:	Potentiometer, 1 revolution
Light spot size (distance):	Ø 40 mm (10 m)

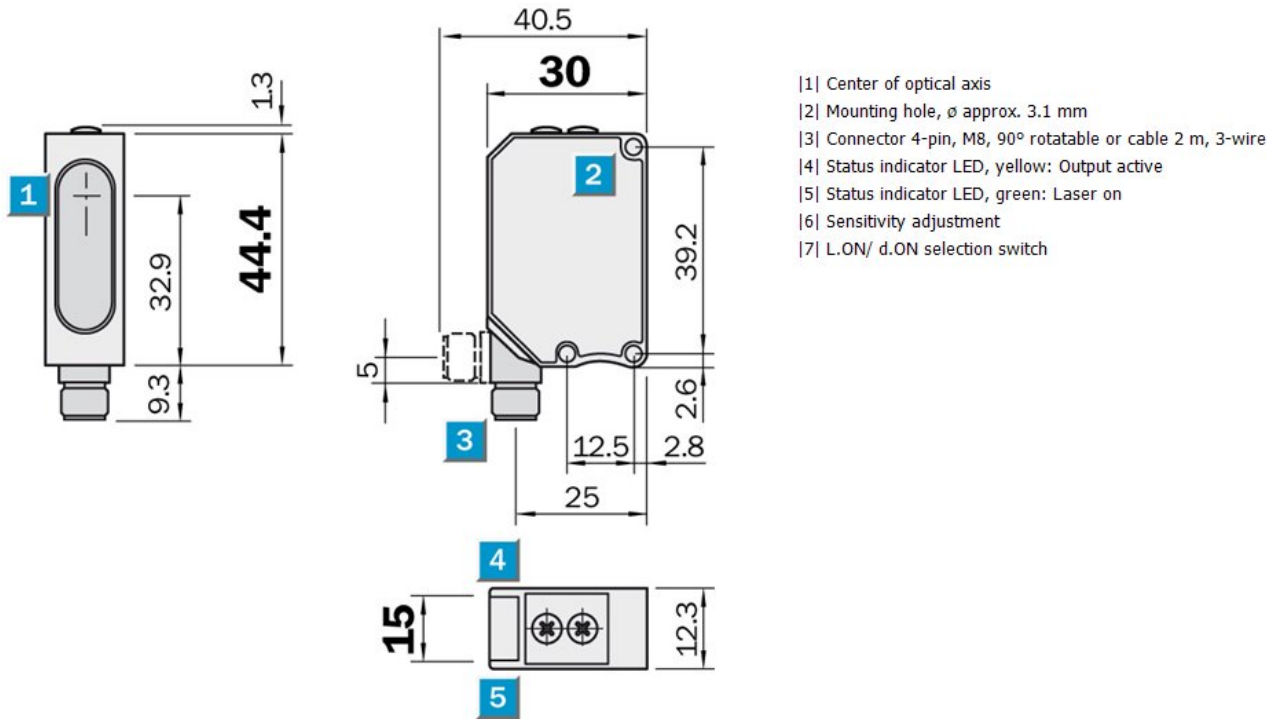
**Mechanics/electronics**

Supply voltage:	10 V DC ... 30 V DC <sup>1)</sup>
Ripple:	± 10 % <sup>2)</sup>
Power consumption:	≤ 40 mA <sup>3)</sup>
Output type:	NPN
Switching mode:	Light/dark-switching
Switching mode selector:	Manually selectable
Output current I <sub>max.</sub> :	< 100 mA
Response time:	0.5 ms <sup>4)</sup>
Switching frequency:	1,000 Hz <sup>5)</sup>
Connection type:	Connector M8, 4-pin
Circuit protection.:	A, D <sup>6) 7)</sup>
Protection class:	III <sup>8)</sup>
Weight:	120 g

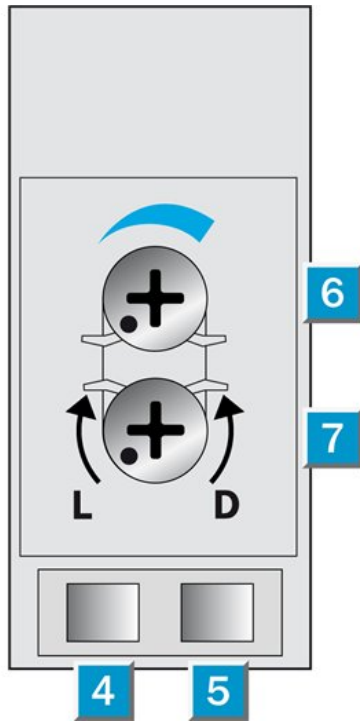
Housing material: ABS, Plastic  
 Optics material: PMMA  
 Enclosure rating: IP 67  
 Ambient operating temperature: -10 °C ... 40 °C  
 Ambient storage temperature: -20 °C ... 60 °C

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



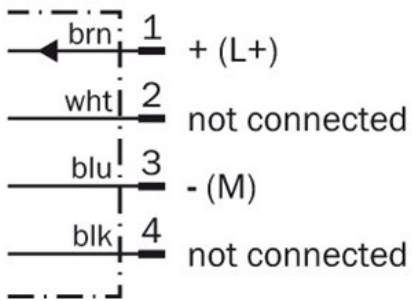
## Adjustments possible



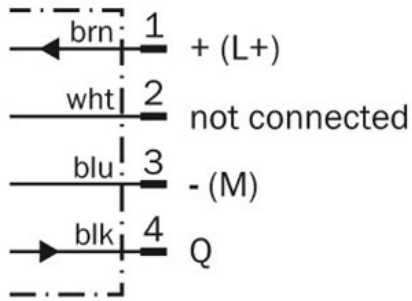
- [4] Status indicator LED, yellow: Output active
- [5] Status indicator LED, green: Laser on
- [6] Sensitivity control
- [7] L.ON/ d.ON selection switch

## Connection diagram

①

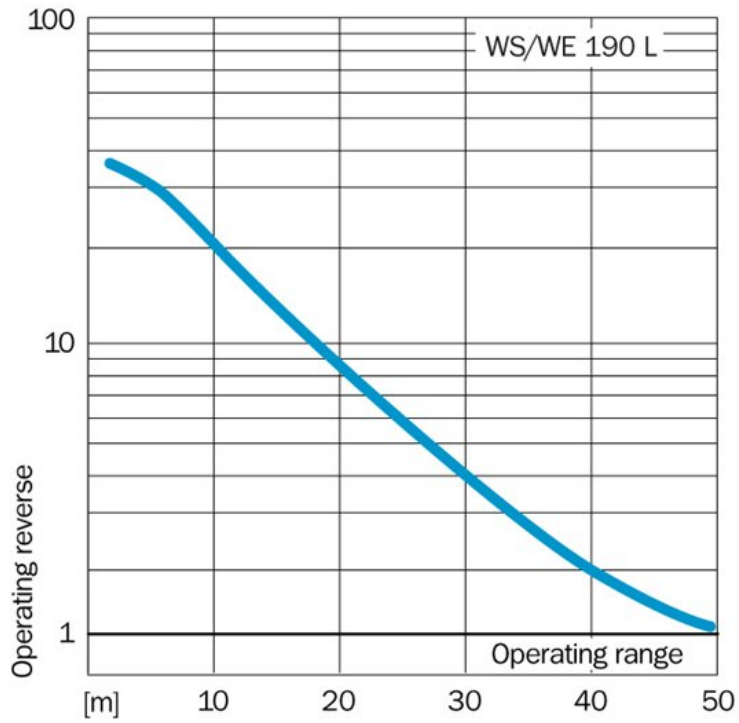


②

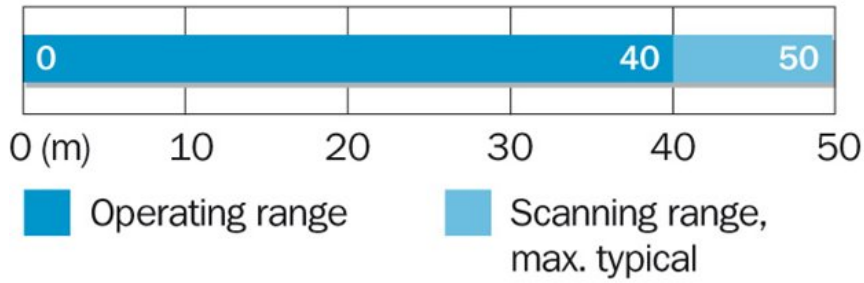


- [1] sender
- [2] receiver

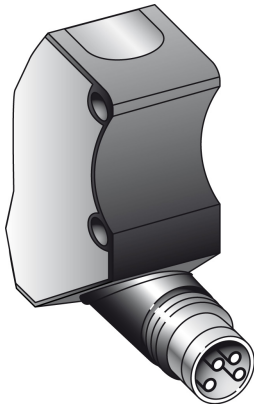
### Characteristic curve



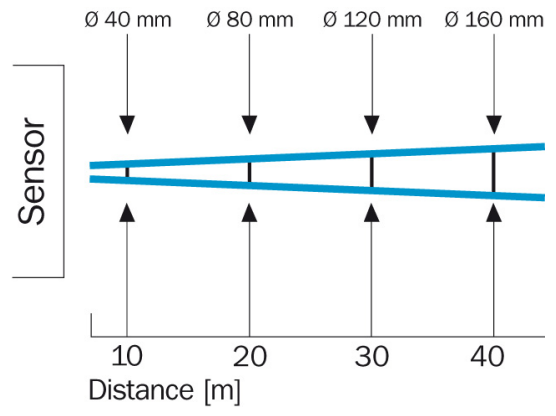
### Sensing range diagram



**Connection type**



**Light spot size**



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