



Photoelectric sensors  
W190 Laser High Grade Glass, Photoelectric  
retro-reflective sensor, autocollimation

WLG190T-P420



**Model Name** > [WLG190T-P420](#)  
**Part No.** > [6022830](#)



*Illustration may differ*

**At a glance**

- Configurable laser photoelectric sensor with display
- Continuous threshold adaption enables detection of transparent objects
- Precise autocollimation optics
- Programmable output: light/dark switching and switching delay

**Your benefits**

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



**Features**

Sensor/detection principle:	Photoelectric retro-reflective sensor, autocollimation
Dimensions (W x H x D):	15 mm x 44.4 mm x 30 mm
Housing design (light emission):	Rectangular
Sensing range max.:	0.01 m ... 5.5 m <sup>1)</sup>
Type of light:	Visible red light
Light source:	Laser
Light spot (distance):	15 mm (1 m)
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:	Sender power, reflectivity, switching threshold, distance, mode

<sup>1)</sup> P250F

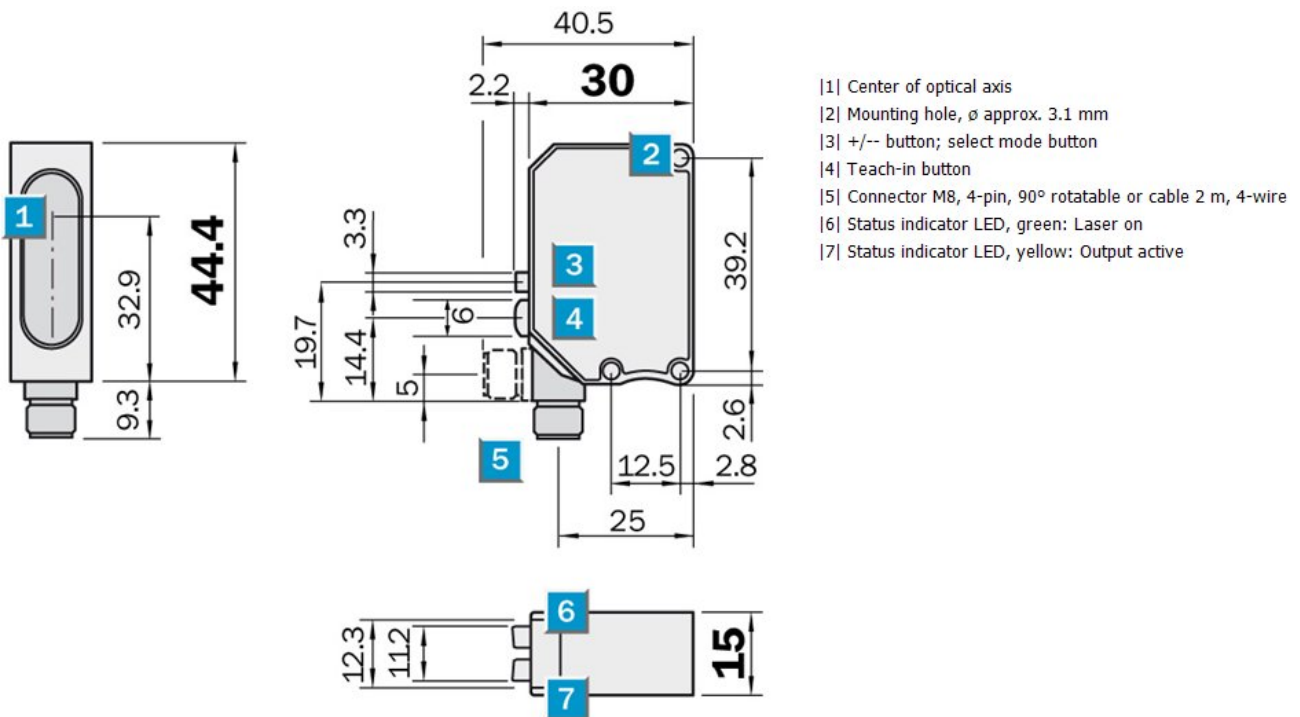
**Mechanics/electronics**

Supply voltage:	10 V DC ... 30 V DC <sup>1)</sup>
Ripple:	± 10 % <sup>2)</sup>
Power consumption:	≤ 40 mA <sup>3)</sup>

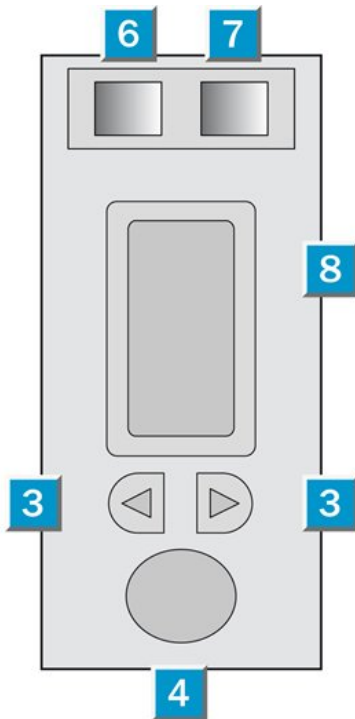
Output type:	PNP, Light/dark-switching, programmable
Output current I <sub>max</sub> ::	< 100 mA
Response time::	0.7 ms 2 ms <sup>4) 5)</sup> 5 ms
Switching frequency::	700 Hz 200 Hz <sup>6) 7)</sup> 100 Hz
Connection type:	Connector M8, 4-pin
Circuit protection::	A, D <sup>8) 9)</sup>
Protection class:	III <sup>10)</sup>
Weight:	120 g
Polarisation filter:	✓
Housing material:	ABS
Optics material:	PMMA
Enclosure rating:	IP 67
Items supplied:	Reflector P250F
Special feature:	For transparent objects
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<sub>S</sub> tolerances 3) Without load 4) Signal transit time with resistive load 5) 7) Programmable 6) With light/dark ratio  
 1:1 <sup>8)</sup> A = V<sub>S</sub> connections reverse-polarity protected <sup>9)</sup> D = outputs overcurrent and short-circuit protected <sup>10)</sup> Reference voltage 50 V DC

## Dimensional drawing

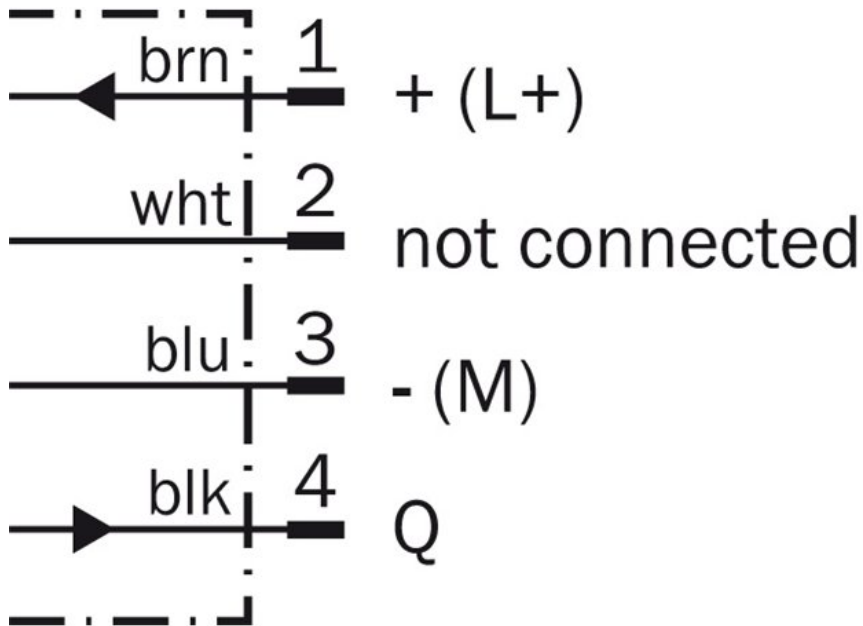


## Adjustments possible

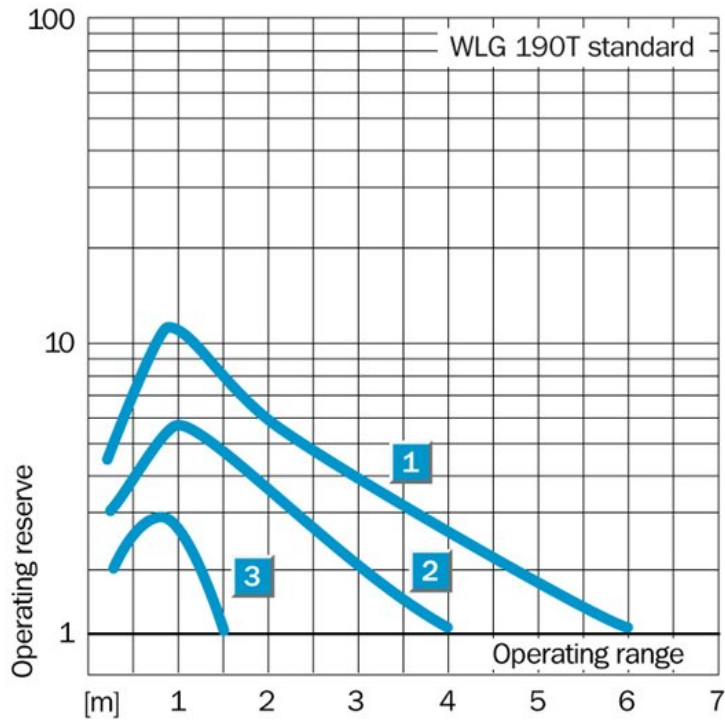


- [3] +/- button; select mode button
- [4] Teach-in button
- [6] Status indicator LED, green: Laser on
- [7] Status indicator LED, yellow: Output active
- [8] Numerical Display

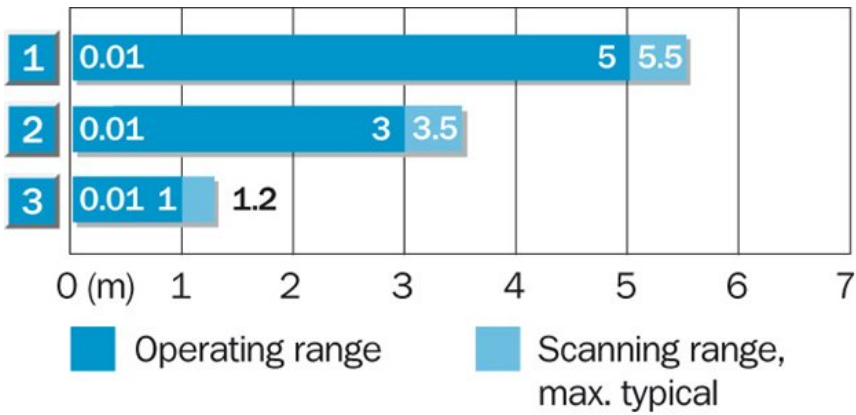
## Connection diagram



**Characteristic curve**

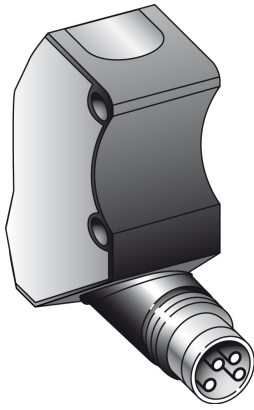


**Sensing range diagram**

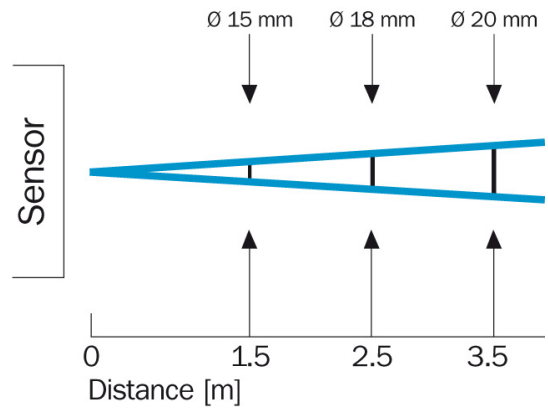


Reflector type	Operating range
1 P 250 F	0.01 ... 5 m
2 PL 20 F	0.01 ... 3 m
3 PL 10 F	0.01 ... 1 m

**Connection type**



**Light spot size**



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