



WL190L-P430

W190 Laser Standard

SMALL PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	Part no.
WL190L-P430	6026558

Included in delivery: P250F (1)

Other models and accessories → www.sick.com/W190_Laser_Standard

Detailed technical data

Features

Functional principle	Photoelectric retro-reflective sensor
Functional principle detail	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 ¹⁾
Type of light	Visible red light
Light source	Laser
Light spot size (distance)	Ø 45 mm (5 m)
Laser class	2
Adjustment	Potentiometer, 1 turn Potentiometer, 1 rotation

¹⁾ Reflector P250F.

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC ¹⁾
Ripple	± 10 % ²⁾
Current consumption	40 mA ³⁾
Switching output	PNP
Switching mode	Light/dark switching
Switching mode selector	Selectable via light/dark rotary switch

¹⁾ Limit values.

²⁾ May not exceed or fall below U_V 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.

Output current I_{\max}	≤ 100 mA
Response time	0.5 ms ⁴⁾
Switching frequency	1,000 Hz ⁵⁾
Connection type	Male connector M8, 4-pin
Circuit protection	A ⁶⁾ D ⁷⁾
Protection class	III ⁸⁾
Weight	120 g
Polarisation filter	✓
Housing material	Plastic, ABS
Optics material	Plastic, PMMA
Tightening torque, max.	0.5 Nm
Enclosure rating	IP67
Items supplied	Reflector P250F
Ambient operating temperature	-10 °C ... +40 °C
Ambient temperature, storage	-20 °C ... +60 °C

1) Limit values.

2) May not exceed or fall below U_V 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.

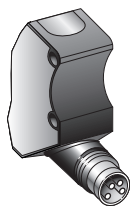
7) D = outputs overcurrent and short-circuit protected.

8) Reference voltage: 50 V DC.

Classifications

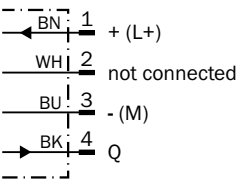
eCl@ss 5.0	27270902
eCl@ss 5.1.4	27270902
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eCl@ss 12.0	27270902
ETIM 5.0	EC002717
ETIM 6.0	EC002717
ETIM 7.0	EC002717
ETIM 8.0	EC002717
UNSPSC 16.0901	39121528

Connection type

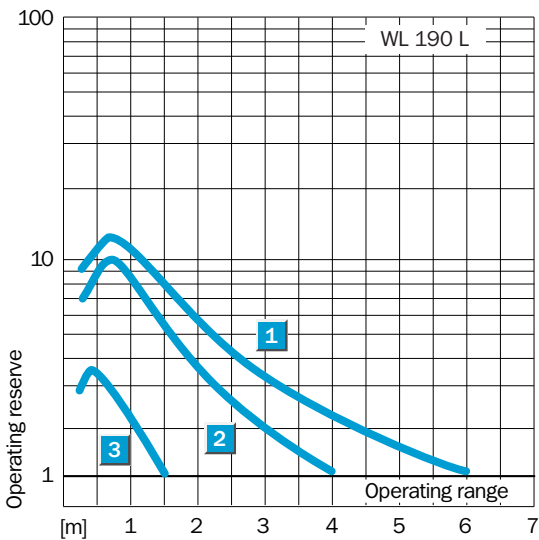


Connection diagram

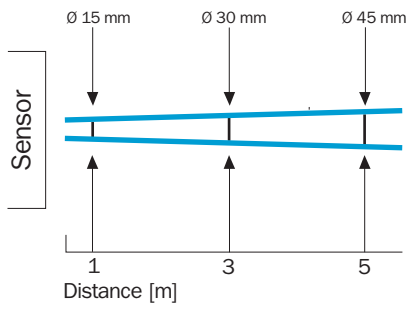
Cd-066



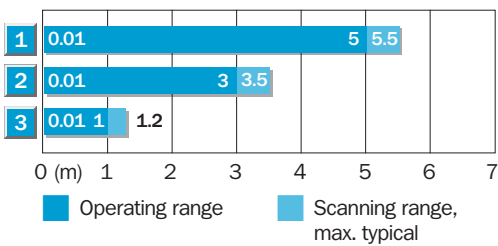
Characteristic curve



Light spot size

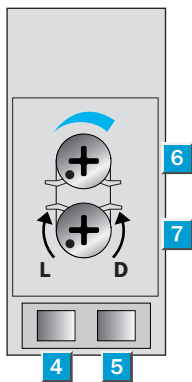


Sensing range diagram



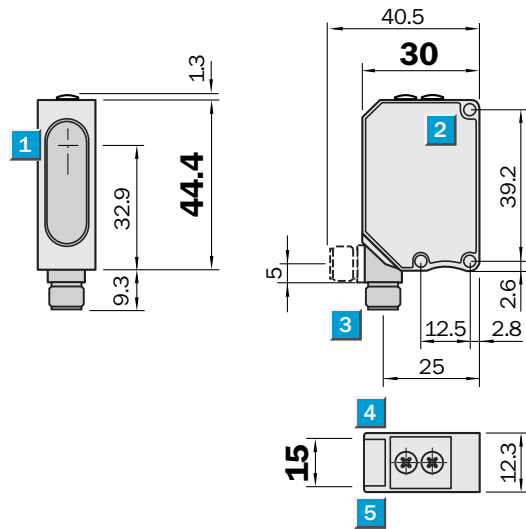
Reflector type	Operating range
1 P 250 F	0.01 ... 5 m
2 PL 20 F	0.01 ... 3 m
3 PL 10 F	0.01 ... 1 m

Adjustments



- ④ Status indicator LED, yellow: Output active
- ⑤ Status indicator LED, green: Laser on
- ⑥ Sensitivity control
- ⑦ Selector switch light/dark switching






Dimensional drawing (Dimensions in mm (inch))




- ① Center of optical axis
- ② Mounting hole, \varnothing approx. 3.1 mm
- ③ Connector 4-pin, M8, 90° rotatable or cable 2 m, 3-wire
- ④ Status indicator LED, yellow: Output active
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Recommended accessories

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	Brief description	Type	Part no.
Mounting brackets and plates			
	Mounting bracket, steel, zinc coated, mounting hardware included	BEF-W190	5311362
	Universal mounting bracket for reflectors, steel, zinc coated	BEF-WN-REFX	2064574
Plug connectors and cables			
	Head A: female connector, M8, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YF8U14-050VA3XLEAX	2095889
	Head A: male connector, M8, 4-pin, straight Cable: unshielded	STE-0804-G	6037323
Reflectors			
	Rectangular, screw connection, 51 mm x 61 mm, PMMA/ABS, Screw-on, 2 hole mounting	P250	5304812

	Brief description	Type	Part no.
	Fine triple reflector, screw connection, suitable for laser sensors, 52 mm x 62 mm, PM-MA/ABS, Screw-on, 2 hole mounting	P250F	5308843

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

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