

WS/WE190L-N132

W190 Laser Standard

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ

Ordering information

Type	part no.
WS/WE190L-N132	6026559

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

Detailed technical data

Features

Functional 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
Light spot size (distance)	Ø 40 mm (10 m)
Laser class	2
Adjustment	Potentiometer, 1 turn Potentiometer, 1 rotation

Mechanics/electronics

Supply voltage U_B	10 V DC ... 30 V DC ¹⁾
Ripple	± 10 % ²⁾
Current consumption	40 mA ³⁾
Switching output	NPN
Switching mode	Light/dark switching
Switching mode selector	Selectable via light/dark rotary switch
Output current I_{max}	≤ 100 mA
Response time	0.5 ms ⁴⁾

¹⁾ Limit values.

²⁾ May not fall below or exceed U_V 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_S connections reverse-polarity protected.

⁸⁾ D = outputs overcurrent and short-circuit protected.

⁹⁾ Reference voltage: 50 V DC.

Switching frequency	1,000 Hz ⁵⁾
Connection type	Cable, 3-wire, 2 m ⁶⁾
Conductor cross section	0.18 mm ²
Circuit protection	A ⁷⁾ D ⁸⁾
Protection class	III ⁹⁾
Weight	200 g
Housing material	Plastic, ABS
Optics material	Plastic, PMMA
Tightening torque, max.	0.5 Nm
Enclosure rating	IP67
Ambient operating temperature	-10 °C ... +40 °C
Ambient temperature, storage	-20 °C ... +60 °C

1) Limit values.

2) May not fall below or exceed U_V 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_S connections reverse-polarity protected.

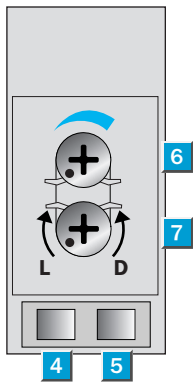
8) D = outputs overcurrent and short-circuit protected.

9) Reference voltage: 50 V DC.

Classifications

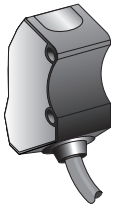
ECLASS 5.0	27270901
ECLASS 5.1.4	27270901
ECLASS 6.0	27270901
ECLASS 6.2	27270901
ECLASS 7.0	27270901
ECLASS 8.0	27270901
ECLASS 8.1	27270901
ECLASS 9.0	27270901
ECLASS 10.0	27270901
ECLASS 11.0	27270901
ECLASS 12.0	27270901
ETIM 5.0	EC002716
ETIM 6.0	EC002716
ETIM 7.0	EC002716
ETIM 8.0	EC002716
UNSPSC 16.0901	39121528

Adjustments

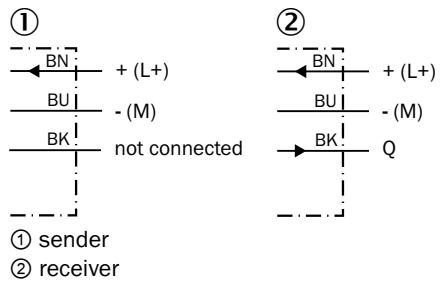


- ④ Status indicator LED, yellow: Output active
- ⑤ Status indicator LED, green: Laser on
- ⑥ sensitivity control
- ⑦ selector switch light/dark switching

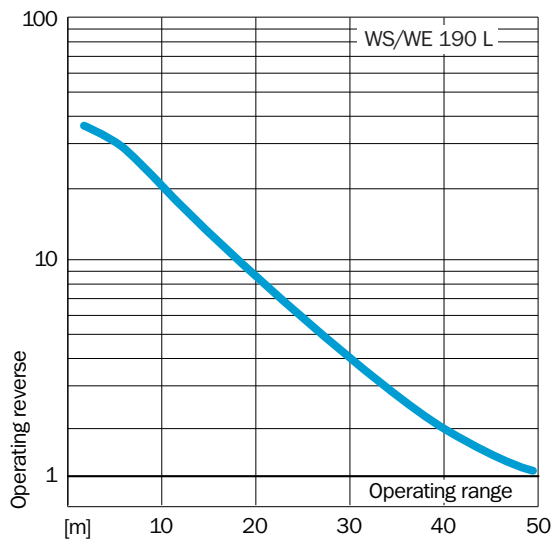
Connection type



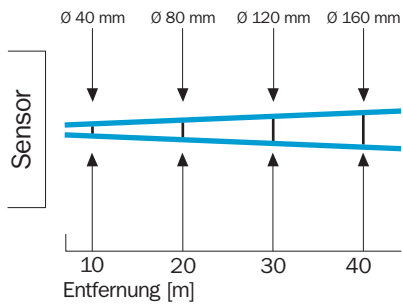
Connection diagram Cd-049



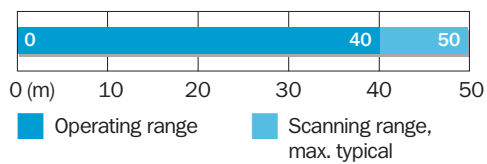
Characteristic curve



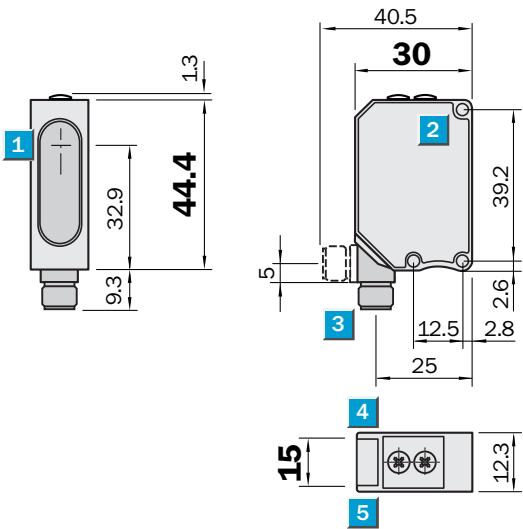
Light spot size



Sensing range diagram



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 systems			
	<ul style="list-style-type: none">Description: Mounting bracketMaterial: SteelDetails: Steel, zinc coatedItems supplied: Mounting hardware included	BEF-W190	5311362
	<ul style="list-style-type: none">Description: Plate N11N for universal clamp bracketMaterial: Stainless steelDetails: Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp)Items supplied: Universal clamp (5322627), mounting hardwareUsable for: DeltaPac, Glare, WTD20E	BEF-KHS-N11N	2071081
connectors and cables			
	<ul style="list-style-type: none">Connection type head A: Male connector, M8, 3-pin, straight, A-codedDescription: UnshieldedConnection systems: Screw-type terminalsPermitted cross-section: 0.14 mm² ... 0.5 mm²	STE-0803-G	6037322

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.”

WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com