WLL190T-2P474

WLL190

FIBER-OPTIC SENSORS

SICK
Sensor Intelligence.

Illustration may differ

CE

Ordering information

Type	Part no.
WLL190T-2P474	6037985

Other models and accessories ➔ www.sick.com/WLL190

Detailed technical data

Features

Device type	Fiber-optic sensors
Device type detail	Stand-alone
Dimensions (W x H x D)	10.5 mm x 34.8 mm x 76.5 mm
Housing design (light emission)	Rectangular
Sensing range max.	0 mm ... 500 mm (Through-beam system) [1] [2]
Sensing range	0 mm ... 210 mm, Proximity system [3] [4] 0 mm ... 260 mm, Through-beam system [2] [3]
Focus	Approx. 65° [5]
Type of light	Infrared light
Light source	LED [6]
Angle of dispersion	Approx. 65° [5]
Wave length	1,450 nm
Adjustment	Single teach-in button Cable
Indication	Display
Display	LED status display / 2x 4-character digital dual displays, Set value (green indicator) and actual value (red indicator) are displayed simultaneously, display of parameters

[1] Sensing range at response time 2 ms. Reduction at shorter response time (see LL3/ WLL190T-2 table).

[2] LL3-TW01.

[3] Object with 90% remission (based on standard white DIN 5033). Sensing range at 2 ms response time. Reduced at shorter response times (see LL3 / WLL190T-2 tables).

[4] LL3-DW01.

[5] See LL3 fiber-optic data.

[6] Average service life: 100,000 h at T_U = +25 °C.

Mechanics/electronics

Supply voltage U_B	10 V DC ... 24 V DC [1]
Ripple	≤ 10 % [2]
Current consumption	50 mA
Switching output	PNP [3] [4]
Switching mode	Light/dark switching [3] [4]
Switching mode selector	Manually selectable
Response time	≤ 2 ms ≤ 60 µs ≤ 250 µs
Switching frequency	8,333 Hz 2,000 Hz 250 Hz
Time functions	Without time delay Off delay On delay One shot
Delay time	Programmable, 0 ms ... 9,999 ms
Connection type	Male connector M8, 4-pin
Circuit protection	A [5] B [6] C [7] D [8]
Protection class	III
Weight	20 g
Housing material	Plastic, ABS/PC
Enclosure rating	IP66 [9]
Ambient operating temperature	–25 °C ... +55 °C
Ambient temperature, storage	–40 °C ... +70 °C

[1] +- 10%.

[2] May not exceed or fall below U_v tolerances.

[3] Q_1, Q_2.

[4] Selectable Q2, external teach or counter reset.

[5] A = V_S connections reverse-polarity protected.

[6] B = inputs and output reverse-polarity protected.

[7] C = interference suppression.

[8] D = outputs overcurrent and short-circuit protected.

[9] With correctly attached fibre-optic cable LL3 and closed protection hood.

Classifications

eCl@ss 5.0	27270905
eCl@ss 5.1.4	27270905
eCl@ss 6.0	27270905
eCl@ss 6.2	27270905
eCl@ss 7.0	27270905
eCl@ss 8.0	27270905
eCl@ss 8.1	27270905

| eCl@ss 9.0	27270905
eCl@ss 10.0	27270905
eCl@ss 11.0	27270905
eCl@ss 12.0	27270905
ETIM 5.0	EC002651
ETIM 6.0	EC002651
ETIM 7.0	EC002651
ETIM 8.0	EC002651
UNSPSC 16.0901	39121528

Adjustments
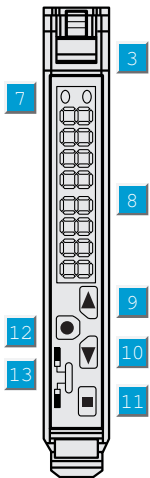
③ Locking the fiber-optic cables
⑦ Status indicator LED, yellow: Output active
⑧ Numeric display 3-digit and 4-digit
⑨ Step pushbutton > (manual switching threshold: higher/next function parameter)
⑩ Step pushbutton < (manual switching threshold: lower/previous function parameter)
⑪ Teach-in button
⑫ Mode/Enter-button
⑬ Operating mode selector switch:"SET" (active Teach-in switching threshold) /"RUN" (sensor mode and function parameter selection)
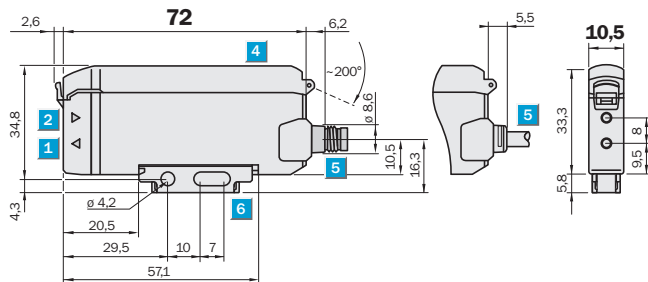
Connection type
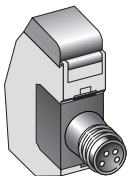
Connection diagram

Cd-133

Pin	Wire	Signal
1	BN	+ (L+)
2		Q/Ext Input
3	BU	- (M)
4	BK	Q
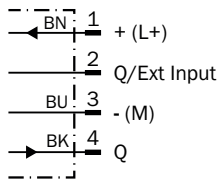
Dimensional drawing (Dimensions in mm (inch))

① Sender LED, installation of LL3 fibre-optic cable (sender fibre)
② Receiver, installation of LL3 fibre optic cable (receiver fibre)
③ Locking the fiber-optic cables
④ Protective hood opens approx. 180°
⑤ Connector M8 or 1-wire cable or 3-wire cable replaceable (cables not included with delivery)
⑥ Mounting bracket, included with delivery

Recommended accessories

Other models and accessories → www.sick.com/WLL190

	Brief description	Type	Part no.
Mounting brackets and plates			
	Mounting bracket, steel, zinc coated, without mounting hardware	BEF-WLL170	5306574
Other mounting accessories			
	Rail end piece for block mounting, stainless steel, mounting hardware included	BEF-EB01-W190	5313011
Plug connectors and cables			
	Head A: female connector, M8, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 2 m	YF8U14-020VA3XLEAX	2095888
	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

	Brief description	Type	Part no.
	Head A: female connector, M8, 4-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 2 m	YG8U14-020VA3XLEAX	2095962
	Head A: female connector, M8, 4-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YG8U14-050VA3XLEAX	2095963
	Head A: female connector, M8, 4-pin, straight Cable: unshielded	DOS-0804-G	6009974
	Head A: female connector, M8, 4-pin, angled Cable: unshielded	DOS-0804-W	6009975
	Head A: male connector, M8, 4-pin, straight Cable: unshielded	STE-0804-G	6037323

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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