WLL190T-2M434S01
WLL190

FIBER-OPTIC SENSORS

SICK
Sensor Intelligence.

Illustration may differ

CE

Ordering information

Type	Part no.
WLL190T-2M434S01	6042524

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

Detailed technical data

Features

Device type	Fiber-optic sensors
Device type detail	Base unit [1]
Dimensions (W x H x D)	10.5 mm x 34.8 mm x 68.9 mm
Housing design (light emission)	Rectangular
Sensing range max.	0 m ... 4 m (Through-beam system) [2] [3]
Sensing range	0 mm ... 480 mm, Proximity system [4] [5] 0 m ... 2 m, Through-beam system [6]
Focus	Approx. 65° [7]
Type of light	Visible red light
Light source	LED [8]
Angle of dispersion	Approx. 65° [7]
Wave length	650 nm
Adjustment	Menu-controlled 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] Up to 15 expansion units can be connected.

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

[3] LL3-TB02 and tip adapter LL3-TA01.

[4] 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).

[5] LL3-DB01.

[6] LL3-TB01.

[7] See LL3 fiber-optic data.

[8] 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	25 g
Special device	✓
Housing material	Plastic, ABS/PC
Enclosure rating	IP54 [9]
Ambient operating temperature	–25 °C … +55 °C [10]
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.

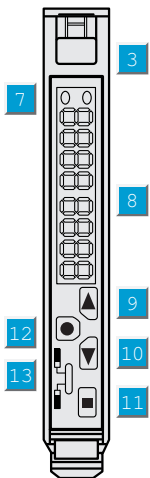[9] With correctly attached fibre-optic cable LL3 and closed protection hood.

[10] Operating temperature fluctuates according to number of devices connected: 4–8 devices: –25 °C … +50 °C (output current 50 mA) / 9–16 devices: –25 °C … +45 °C (output current 20 mA).

Classifications

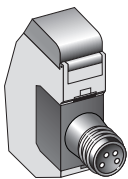|	
eCl@ss 5.0	27270905
eCl@ss 5.1.4	27270905
eCl@ss 6.0	27270905
eCl@ss 6.2	27270905
eCl@ss 7.0	27270905

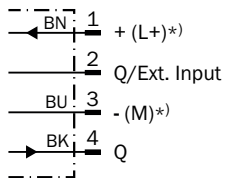|	
eCl@ss 8.0	27270905
eCl@ss 8.1	27270905
eCl@ss 9.0	27270905
eCl@ss 10.0	27270905
eCl@ss 11.0	27270905
eCl@ss 12.0	27270905
ETIM 5.0	EC002651
ETIM 6.0	EC002651
ETIM 7.0	EC002651
ETIM 8.0	EC002651
UNSPSC 16.0901	39121528

Adjustments

③ Locking the fiber-optic cables
⑦ LED indicator yellow;Lights continuously: output aktivNo light: output inactiveBlinks slowly: shot circuit detected
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)
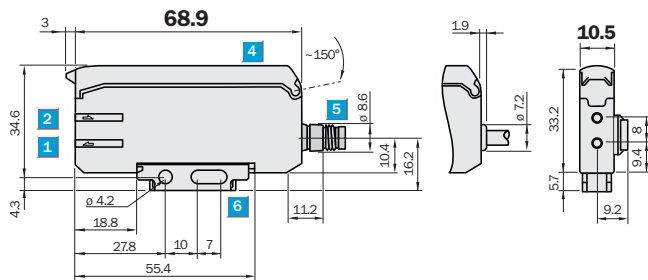⑪ Teach-in button
⑫ Mode/Enter-button

Connection type

Connection diagram

Cd-139

BN	1	+ (L+)*)
	2	Q/Ext. Input
BU	3	- (M)*)
BK	4	Q

*) Only base unit

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

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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.

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