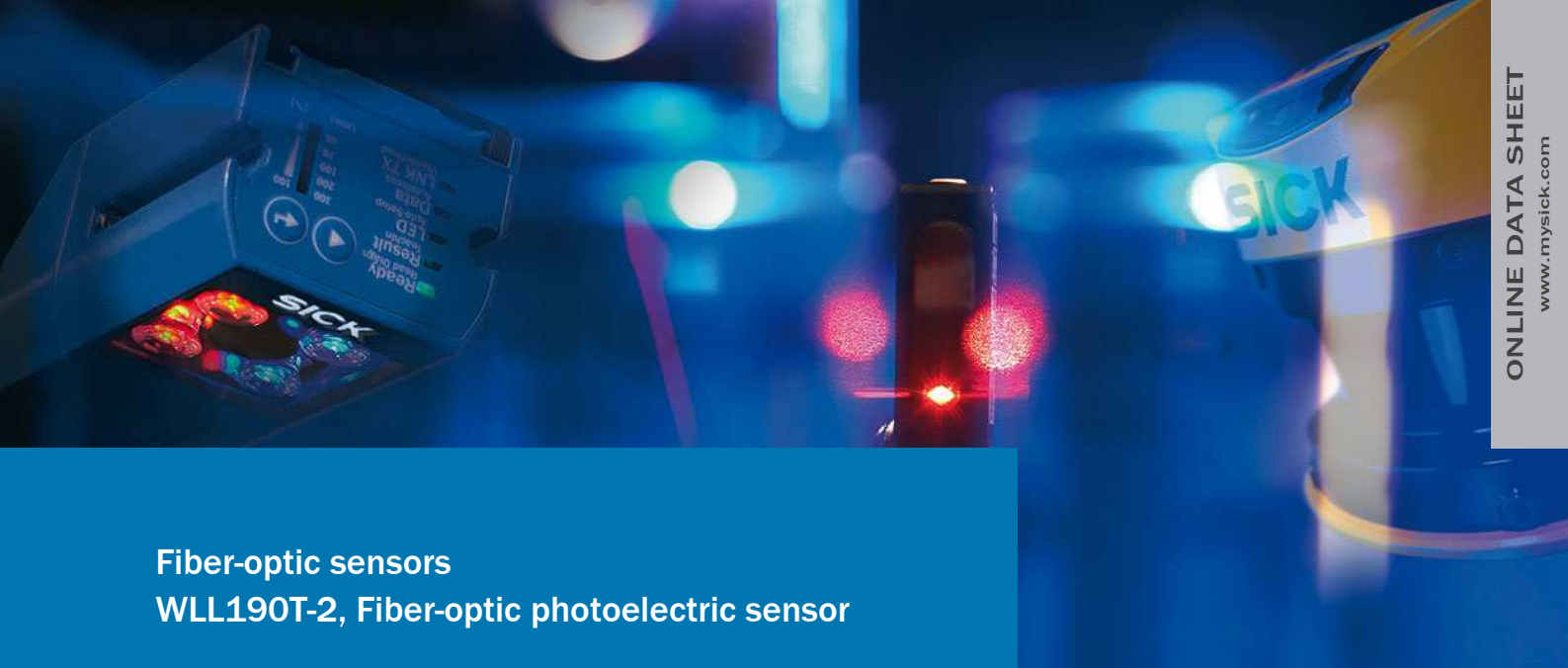




Fiber-optic sensors WLL190T-2, Fiber-optic photoelectric sensor

WLL190T-2P532S02



Model Name > [WLL190T-2P532S02](#)
Part No. > [6048196](#)



Illustration may differ

At a glance

- Sensing range up to 4 m, sensing distance up to 480 mm
- Two separately adjustable channels
- Alarm output
- Optional analog output
- Integrated counter
- Bus-compatible with anti-interference
- 2 x 4-digit display
- Red and green LED emitter

Your benefits

- Two channels can be configured independently of one another, simplifying installation
- Simple commissioning and product changeover via external teach-in
- Bus communication saves space and money, reduces wiring and eliminates interference caused by fiber-optic heads mounted close to one another
- Easy monitoring of process parameters
- Time delays can be adjusted individually to suit the application
- APC for (Automatic Power Correction) long-term, stable detection
- Alarm output for reliable detection in adverse conditions, ensuring high process reliability



Features

Device type:	Stand-alone
Dimensions (W x H x D):	10.5 mm x 34.8 mm x 76.5 mm
Sensing range max.::	0 m ... 4 m, through-beam system ^{1) 2)}
Sensing range:::	0 m ... 2 m, through-beam system, 0 mm ... 480 mm, proximity system ³⁾
Light source:	LED ⁶⁾
Type of light:	Visible red light
Wave length:	650 nm
Adjustment:	Cable, +/- increment button, manual, Teach-in button, Teach-in button cable +/- increment button, manual
Teach-in:	Menu-controlled
Time type:	Without time delay time delay off switch on delay one shot

Delay time:	Programmable: 0 ... 9,999 ms
Indication:	Display
Sensor/detection principle:	Fiber-optic photoelectric sensor
Angle of dispersion:	Ca. 65 °
Housing design (light emission):	Rectangular
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
Focus:	See LL3 fiber-optic data

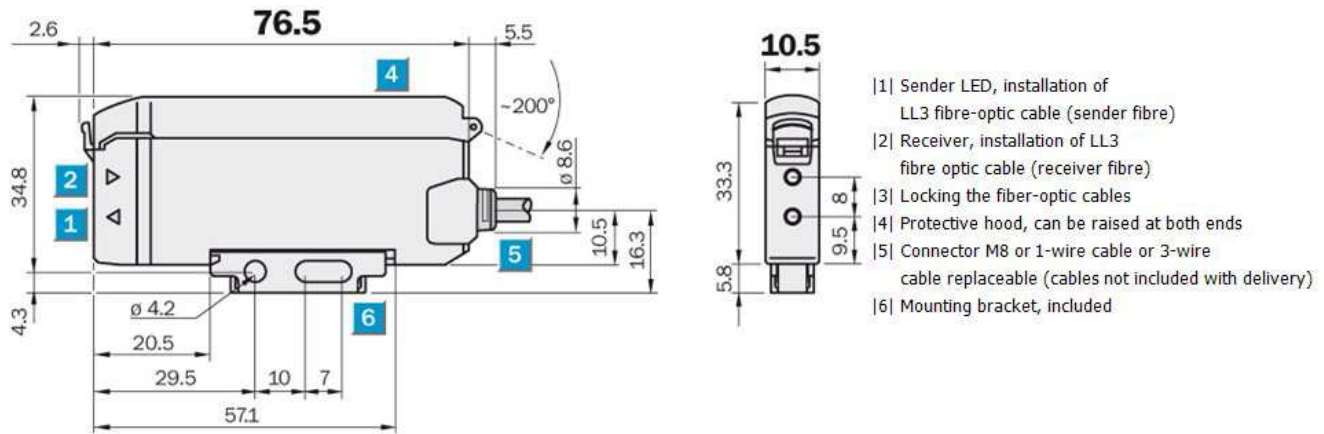
¹⁾ Sensing range at response time 2 ms. Reduction at shorter response time (see LL3/ WLL190T-2 table) ²⁾ LL3-TB01 and LL3-TA01 tip adaptor ³⁾ Objects to be sensed with 90% reflectivity (based on DIN 5033 white standard). Sensing range with 2 ms response time. Reduction with shorter response time (see tables LL3/WLL190T-2) ⁴⁾ LL3-DB01 ⁵⁾ LL3-TB01 ⁶⁾ Average service life of 100,000 h at T_A = +25 °C

Mechanics/electronics

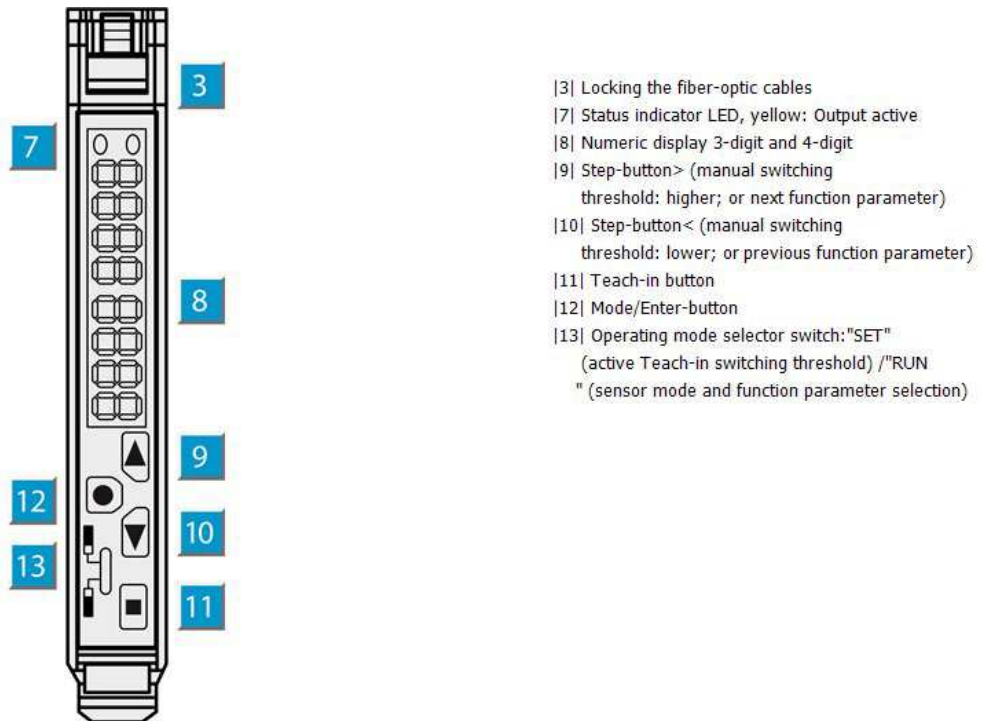
Enclosure rating:	IP 66 ¹⁾
Supply voltage:	10 V DC ... 24 V DC ²⁾
Residual ripple:	≤ 10 % ³⁾
Power consumption:	≤ 50 mA
Output type:	PNP, open collector ⁴⁾
Output current I _{max} :	≤ 100 mA
Response time:	≤ 2 ms ≤ 60 µs ≤ 250 µs
Switching frequency:	± 8,333 Hz ± 2,000 Hz ± 250 Hz
Electrical connection:	Cable, 4-wire, 2 m ⁵⁾
Cable material:	PVC
Conductor cross-section:	0.2 mm ²
Protection class:	III
Circuit protection:::	A, B, C, D ⁶⁾ ⁷⁾ ⁸⁾ ⁹⁾
Special device:	1
Housing material:	ABS/PC, Plastic
Ambient temperature operation:	-25 °C ... 55 °C ¹⁰⁾
Ambient storage temperature:	-40 °C ... 70 °C
Special features:	Reduced sender power
Weight:	20 g
Output current QA2:	4 ... 20 mA
Switching mode:	Light/dark switching ¹¹⁾
Switching mode selector:	Manually selectable
Output function:	Analog

¹⁾ With correctly attached fibre-optic cable LL3 and closed protection hood ²⁾ ± 10% ³⁾ May not exceed or fall short of V_S tolerances ⁴⁾ ¹¹⁾ Q1 ⁵⁾ Do not bend below 0 °C ⁶⁾ A = V_S connections reverse-polarity protected ⁷⁾ B = inputs and output reverse-polarity protected ⁸⁾ C = interference suppression ⁹⁾ D = outputs overcurrent and short-circuit protected 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)

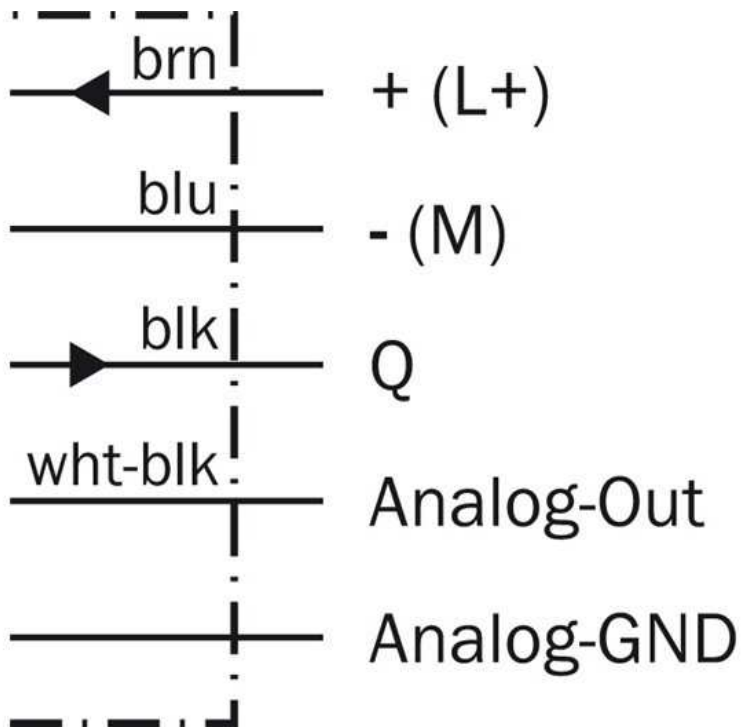
Dimensional drawing



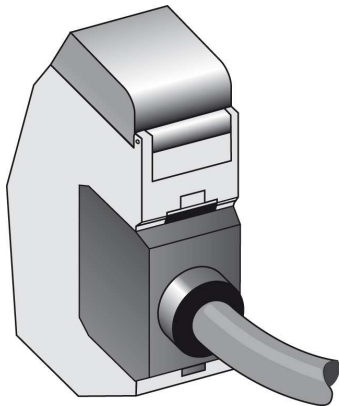
Adjustments possible



Connection diagram



Connection type



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