ONLINE DATA SHEET
www.mysick.com

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

WLL190T-2F232

SICK
Sensor Intelligence.

SICK
Sensor Intelligence.

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

Model Name > WLL190T-2F232
Part No. > 6032571

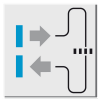


Illustration may differ

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:	Expansion unit
Dimensions (W x H x D):	10.5 mm x 34.8 mm x 68.9 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) 4) 5)]
Light source:	LED [6)]
Type of light:	Visible red light
Wave length:	650 nm
Sensitivity adjustment:	Teach-in button cable +/- increment button, manual
Adjustment of operating distance:	Cable, +/- increment button, manual, Teach-in button
Teach-in:	Menu-controlled

© SICK AG. Subject to change without notice.

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

[1] Sensing range at response time 2 ms. Reduction at shorter response time (see LL3/ WLL190T-2 table) [2] LL3-TB02 and tip adapter LL3-TA01 [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

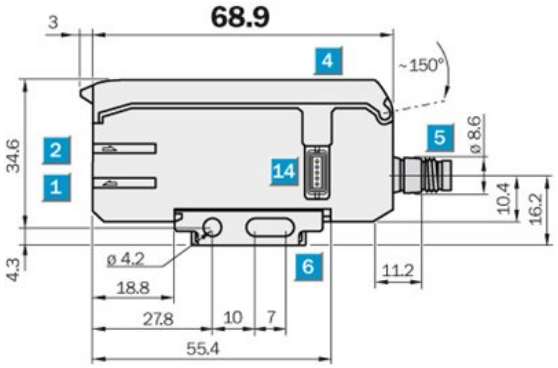
Enclosure rating:	IP 50 [1]
Supply voltage:	10 V DC ... 24 V DC [2]
Ripple:	≤ 10 % [3]
Power consumption:	≤ 50 mA
Output type::	PNP, Light/dark-switching, manually selectable, open collector [4] [5]
Output current Imax.:	≤ 100 mA
Response time:	≤ 2 ms ≤ 60 µs ≤ 250 µs
Switching frequency:	8,333 Hz 2,000 Hz 250 Hz
Connection type:	Cable, 4-wire, 2 m [6]
Cable material:	PVC
Conductor cross-section:	0.2 mm²
Protection class:	III
Circuit protection::::	A, B, C, D [7] [8] [9] [10]
Special device:	0
Housing material:	ABS/PC
Ambient operating temperature:	-25 °C ... 55 °C [11]
Ambient storage temperature:	-40 °C ... 70 °C
Weight:	20 g

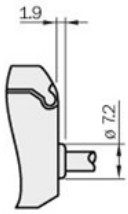
Q1, Q2; Selectable Q2, external teach or counter reset; See LL3 fiber-optic data;

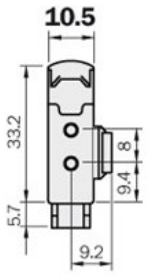
[1] With correctly attached fibre-optic cable LL3 and closed protection hood [2] +- 10% [3] May not exceed or fall short of V_S tolerances [4] Q1, Q2 [5] Selectable Q2, external teach or counter reset [6] Do not bend below 0 °C [7] A = V_S connections reverse-polarity protected [8] B = inputs and output reverse-polarity protected [9] C = interference suppression [10] D = outputs overcurrent and short-circuit protected [11] 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)

© SICK AG. Subject to change without notice.

Dimensional drawing

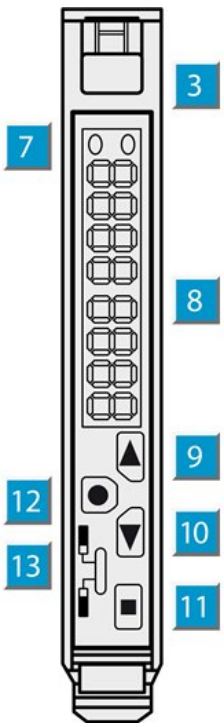






|1| Sender LED, installation of
LL3 fibre-optic cable (sender fibre)
|2| Receiver, installation of LL3
fibre optic cable (receiver fibre)
|3| Locking the fiber-optic cables
|4| Protective hood, can be raised at both ends
|5| Connector M8 or 1-wire cable or 3-wire
cable replaceable (cables not included with delivery)
|6| Mounting bracket, included

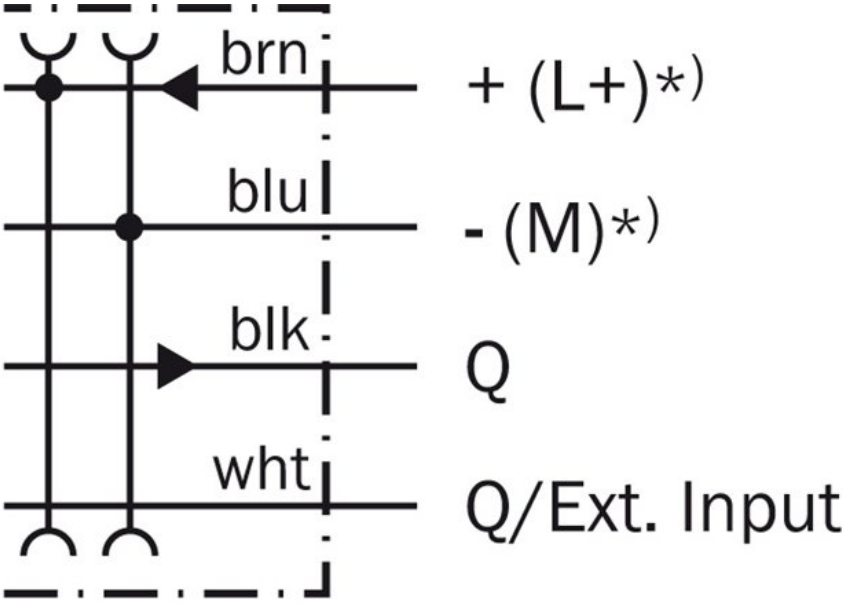
Adjustments possible



|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-button> (manual switching
threshold: higher; or next function parameter)
|10| Step-button< (manual switching
threshold: lower; or previous function parameter)
|11| Teach-in button
|12| Mode/Enter-button

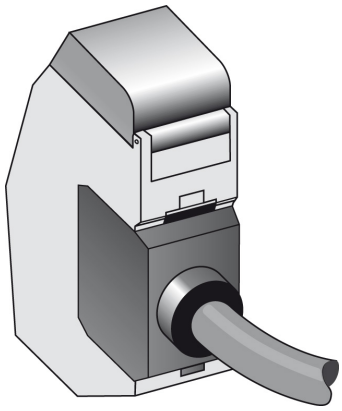
© SICK AG. Subject to change without notice.

Connection diagram



*) Only base unit

Connection type



© SICK AG. Subject to change without notice.

· USmod 4c int40

Australia
Phone +61 3 9457 0600
1800 334 802 – tollfree
E-Mail sales@sick.com.au

Belgium/Luxembourg
Phone +32 (0)2 466 55 66
E-Mail info@sick.be

Brasil
Phone +55 11 3215-4900
E-Mail sac@sick.com.br

Canada
Phone +1 905 771 14 44
E-Mail information@sick.com

Ceská Republika
Phone +420 2 57 91 18 50
E-Mail sick@sick.cz

China
Phone +86 4000 121 000
E-Mail info.china@sick.net.cn
Phone +852-2153 6300
E-Mail ghk@sick.com.hk

Danmark
Phone +45 45 82 64 00
E-Mail sick@sick.dk

Deutschland
Phone +49 211 5301-301
E-Mail kundenservice@sick.de

España
Phone +34 93 480 31 00
E-Mail info@sick.es

France
Phone +33 1 64 62 35 00
E-Mail info@sick.fr

Great Britain
Phone +44 (0)1727 831121
E-Mail info@sick.co.uk

India
Phone +91–22–4033 8333
E-Mail info@sick-india.com

Israel
Phone +972-4-6801000
E-Mail info@sick-sensors.com

Italia
Phone +39 02 27 43 41
E-Mail info@sick.it

Japan
Phone +81 (0)3 3358 1341
E-Mail support@sick.jp

Magyarország
Phone +36 1 371 2680
E-Mail office@sick.hu

Nederlands
Phone +31 (0)30 229 25 44
E-Mail info@sick.nl

Norge
Phone +47 67 81 50 00
E-Mail austefjord@sick.no

Österreich
Phone +43 (0)22 36 62 28 8-0
E-Mail office@sick.at

Polska
Phone +48 22 837 40 50
E-Mail info@sick.pl

România
Phone +40 356 171 120
E-Mail office@sick.ro

Russia
Phone +7-495-775-05-30
E-Mail info@sick.ru

Schweiz
Phone +41 41 619 29 39
E-Mail contact@sick.ch

Singapore
Phone +65 6744 3732
E-Mail admin@sicksgp.com.sg

Slovenija
Phone +386 (0)1-47 69 990
E-Mail office@sick.si

South Africa
Phone +27 11 472 3733
E-Mail info@sickautomation.co.za

South Korea
Phone +82 2 786 6321/4
E-Mail info@sickkorea.net

Suomi
Phone +358-9-25 15 800
E-Mail sick@sick.fi

Sverige
Phone +46 10 110 10 00
E-Mail info@sick.se

Taiwan
Phone +886-2-2375-6288
E-Mail sales@sick.com.tw

Türkiye
Phone +90 (216) 528 50 00
E-Mail info@sick.com.tr

United Arab Emirates
Phone +971 (0) 4 8865 878
E-Mail info@sick.ae

USA/México
Phone +1(952) 941-6780
1 800-325-7425 – tollfree
E-Mail info@sickusa.com

More representatives and agencies
at **www.sick.com**

SICK
Sensor Intelligence.