



fiber-optic sensors
WLL180T, Fiber-optic photoelectric sensor

WLL180T-F232S01



Model Name > [WLL180T-F232S01](#)
Part No. > [6041509](#)



Illustration may differ

At a glance

- Selectable response time up to 16 μ s
- Sensing range up to 20 m, sensing distance up to 1400 mm
- Bus-compatible with anti-interference
- 2 x 4-digit display
- Adjustable hysteresis
- Rotatable display screen
- High-resolution signal processing
- Programmable time delays

Your benefits

- Reliable, rapid process detection, even under the most difficult ambient conditions, such as dust, spray or mist
- Easy commissioning and product changeover due to external teach-in
- Cross-talk is eliminated when utilizing bus configuration option
- Quick, easy setup and adjustment due to an intuitive operating menu
- Flexible parameter adjustment due to high-resolution signal processing. Hysteresis and time delays can be adapted to suit the application, e.g., when detecting tiny or transparent objects
- Easy-to-read display, even under difficult installation conditions



Features

Device type:	Expansion unit
Dimensions (W x H x D):	10.5 mm x 34.6 mm x 71.9 mm
Sensing range max.::	0 m ... 20 m, through-beam system ^{1) 2)}
Sensing range::	0 mm ... 1,400 mm, proximity system ^{3) 4)}
Light source:	LED ⁵⁾
Type of light:	Visible red light
Wave length:	650 nm
Sensitivity adjustment:	Teach
Adjustment of operating distance:	Teach
Teach-in:	Menu-controlled
Time type:	Without time delay time delay off switch on delay ON and OFF 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 with 8 ms response time. Reduction with shorter response time (see tables LL3/WLL180T) ²⁾ LL3-TX01 ³⁾ Objects to be sensed with 90% reflectivity (based on DIN 5033 white standard). Sensing range with 8 ms response time. Reduction with shorter response time (see tables LL3/WLL180T) ⁴⁾ LL3-DK06 ⁵⁾

Average service life of 100,000 h at $T_A = +25\text{ °C}$

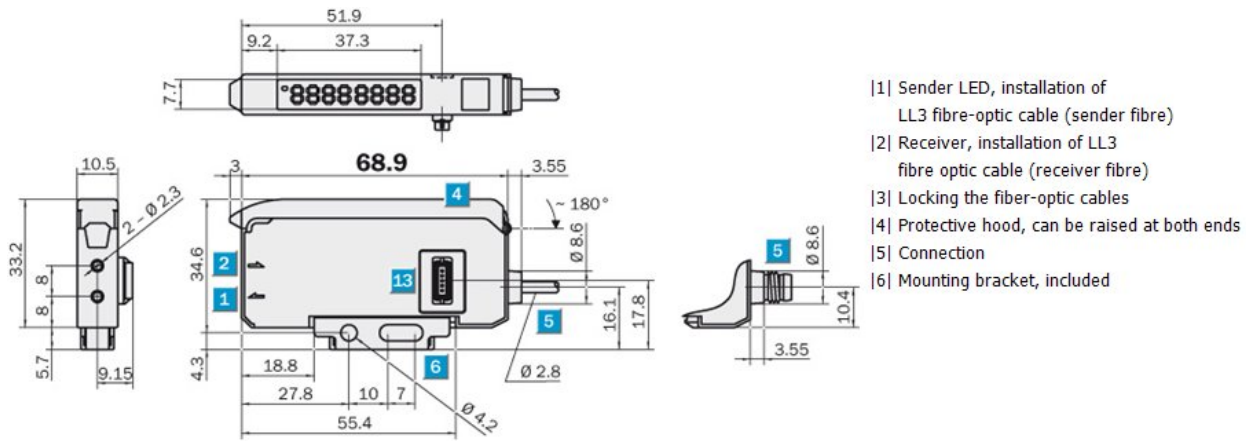
Mechanics/electronics

Enclosure rating:	IP 50 ¹⁾
Supply voltage:	12 V DC ... 24 V DC ²⁾
Ripple:	$\leq 10\%$ ³⁾
Power consumption:	$\leq 50\text{ mA}$ ⁴⁾
Output type:	PNP, Light/dark-switching, manually selectable, open collector
Output current I _{max} :	$\leq 100\text{ mA}$
Response time:	$\leq 2\text{ ms}$ $\leq 8\text{ ms}$ $\leq 16\text{ }\mu\text{s}$ $\leq 70\text{ }\mu\text{s}$ ⁵⁾ $\leq 250\text{ }\mu\text{s}$
Switching frequency:	31.2 kHz 7.1 kHz 2 kHz 250 Hz 62.5 Hz
Connection type:	Cable, 2-wire, 2 m ⁶⁾
Protection class:	III
Circuit protection:::	A, B, C, D ⁷⁾ ⁸⁾ ⁹⁾ ¹⁰⁾
Special device:	1
Housing material:	ABS/PC
Ambient operating temperature:	-25 °C ... 55 °C ¹¹⁾
Ambient storage temperature:	-25 °C ... 70 °C
Special features:	Switching frequency with object: 90.9 Hz

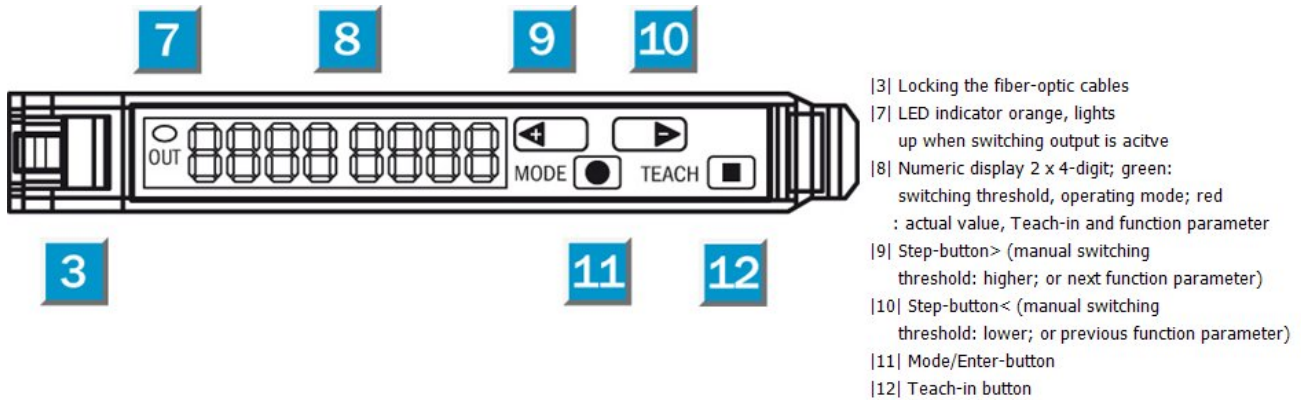
See LL3 fiber-optic data;

¹⁾ With correctly attached fibre-optic cable LL3 and closed protection hood ²⁾ $\pm 10\%$ ³⁾ May not exceed or fall short of V_S tolerances ⁴⁾ Without load ⁵⁾ Selectable 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)

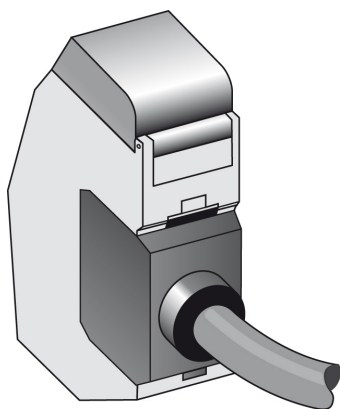
Dimensional drawing



Adjustments possible



Connection type



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