



Fiber-optic sensors  
WLL180T, Fiber-optic photoelectric sensor

WLL180T-M634S11



**Model Name** > [WLL180T-M634S11](#)  
**Part No.** > [6050776](#)



*Illustration may differ*

**At a glance**

- Selectable response time up to 16  $\mu$ s
- Sensing range up to 20 m (Through-beam system); up to 1400 mm (proximity system)
- 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:	Base unit <sup>1)</sup>
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 <sup>2) 3)</sup>
Sensing range::::	4) 5) 6) 7) 18 m, through-beam system, 0 mm ... 1,400 mm, proximity system
Light source:	LED <sup>8)</sup>
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 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
Focus:	See LL3 fiber-optic data

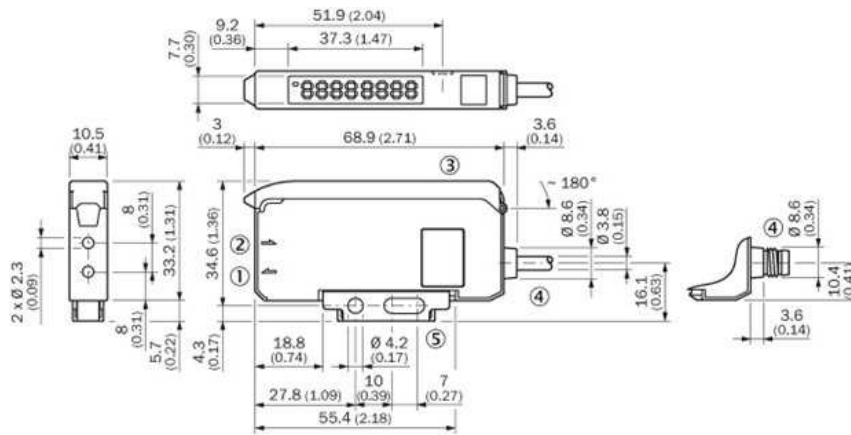
1) Up to 15 expansion units can be connected 2) 6) Sensing range with 8 ms response time. Reduction with shorter response time (see tables LL3/WLL180T) 3) 7) LL3-TX01 4) Objects to be sensed with 90% reflectivity (based on DIN 5033 white standard). Sensing range with 8 ms response time. Reduction with shorter response time (see tables LL3/WLL180T) 5) LL3-DK06 8) 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)
Residual ripple:	$\leq 10\%$ 3)
Power consumption:	$\leq 50\text{ mA}$ 4)
Output type:	2 x PNP, open collector
Output current I <sub>max.</sub> :	$\leq 100\text{ mA}$
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:	$\pm 31.2\text{ kHz}$ $\pm 7.1\text{ kHz}$ $\pm 2\text{ kHz}$ $\pm 250\text{ Hz}$ $\pm 62.5\text{ Hz}$
Electrical connection:	Connector M8, 4-pin
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
Ambient storage temperature:	-40 °C ... 70 °C
Special features:	Anti-interference, Parameter (pre-setting)
Weight:	Ca. 20 g
Switching mode:	Light/dark switching
Switching mode selector:	Manually selectable

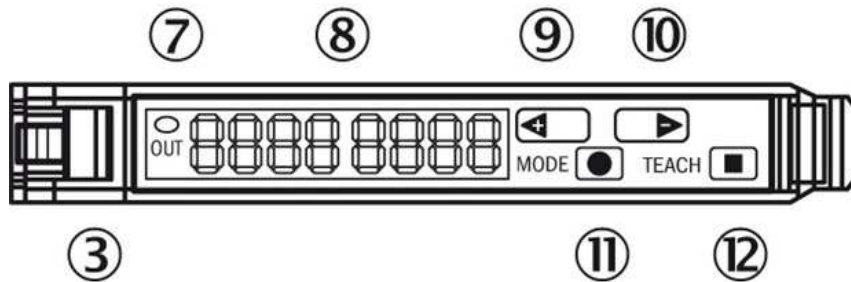
1) With correctly attached fibre-optic cable LL3 and closed protection hood 2) +/- 10% 3) May not exceed or fall short of  $V_S$  tolerances 4) Without load 5) Selectable 6) A =  $V_S$  connections reverse-polarity protected 7) B = inputs and output reverse-polarity protected 8) C = interference suppression 9) D = outputs overcurrent and short-circuit protected

## Dimensional drawing



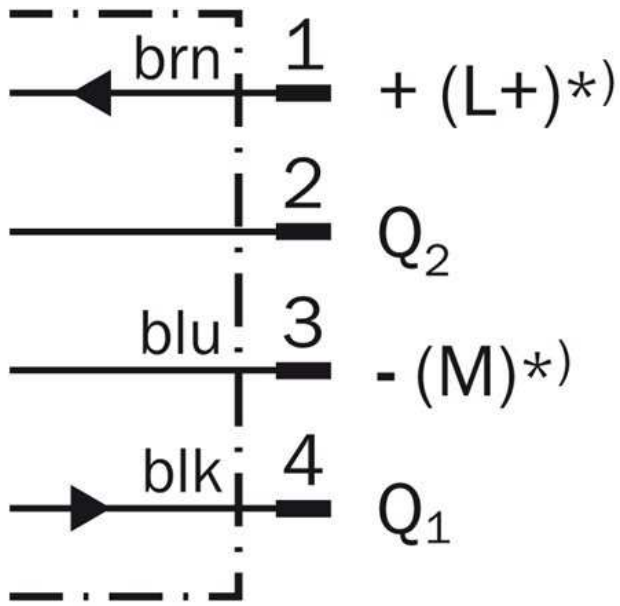
- [1] Sender LED, installation of LL3 fibre-optic cable (sender fibre)
- [2] Receiver, installation of LL3 fibre optic cable (receiver fibre)
- [3] Protective hood, can be raised at both ends
- [4] Connection
- [5] Mounting bracket, included

## Adjustments possible



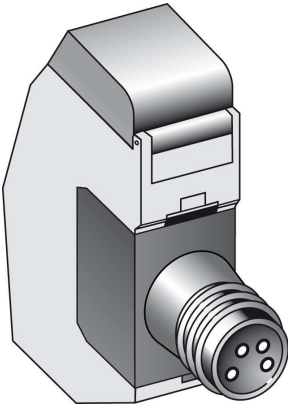
- [3] Locking the fiber-optic cables
- [7] LED indicator orange, lights up when switching output is active
- [8] Numeric display 2 x 4-digit; green: switching threshold, operating mode; red: actual value, Teach-in and function parameter
- [9] Step-button > (manual switching threshold: higher; or next function parameter)
- [10] Step-button < (manual switching threshold: lower; or previous function parameter)
- [11] Mode/Enter-button
- [12] Teach-in button

Connection diagram



\*) Only base unit

Connection type



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