



fiber-optic sensors  
WLL180T, Fiber-optic photoelectric sensor

WLL180T-M434S07



**Model Name** > [WLL180T-M434S07](#)  
**Part No.** > [6049025](#)



*Illustration may differ*

**At a glance**

- Selectable response time up to 16  $\mu$ 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:	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::	0 mm ... 1,400 mm, proximity system <sup>4) 5)</sup>
Light source:	LED <sup>6)</sup>
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) Up to 15 expansion units can be connected 2) Sensing range with 8 ms response time. Reduction with shorter response time (see tables LL3/WLL180T) 3) 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 6) Average service life of 100,000 h at T<sub>A</sub> = +25 °C

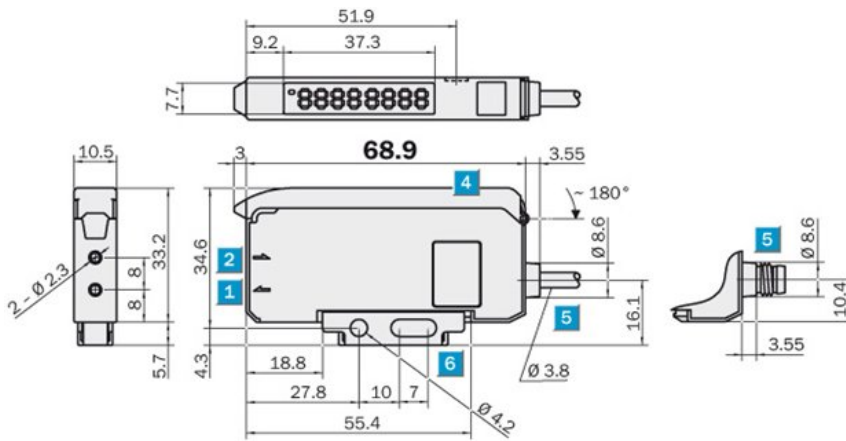
## Mechanics/electronics

Enclosure rating:	IP 50 <sup>1)</sup>
Supply voltage:	12 V DC ... 24 V DC <sup>2)</sup>
Ripple:	≤ 10 % <sup>3)</sup>
Power consumption:	≤ 50 mA <sup>4)</sup>
Output type:	PNP, Light/dark-switching, manually selectable, open collector
Output current I <sub>max.</sub> :	≤ 100 mA
Response time:	≤ 2 ms ≤ 8 ms ≤ 16 μs ≤ 70 μs <sup>5)</sup> ≤ 250 μs
Switching frequency:	31.2 kHz 7.1 kHz 2 kHz 250 Hz 62.5 Hz
Connection type:	Connector M8, 4-pin, 0.2 m <sup>6)</sup>
Protection class:	III
Circuit protection:::	A, B, C, D <sup>7) 8) 9) 10)</sup>
Special device:	1
Housing material:	ABS/PC
Ambient operating temperature:	-25 °C ... 55 °C
Ambient storage temperature:	-25 °C ... 70 °C
Special features:	Automatic sender power adjustment

See LL3 fiber-optic data;

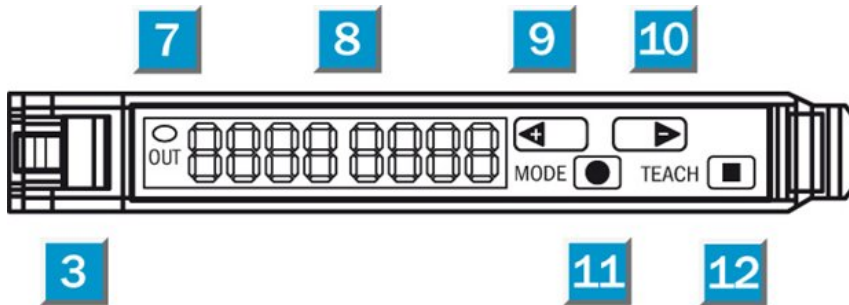
1) With correctly attached fibre-optic cable LL3 and closed protection hood 2) +/- 10% 3) May not exceed or fall short of V<sub>S</sub> tolerances 4) Without load 5) Selectable 6) Do not bend below 0 °C 7) A = V<sub>S</sub> connections reverse-polarity protected 8) B = inputs and output reverse-polarity protected 9) C = interference suppression 10) 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] Locking the fiber-optic cables
- [4] Protective hood, can be raised at both ends
- [5] Connection
- [6] 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

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