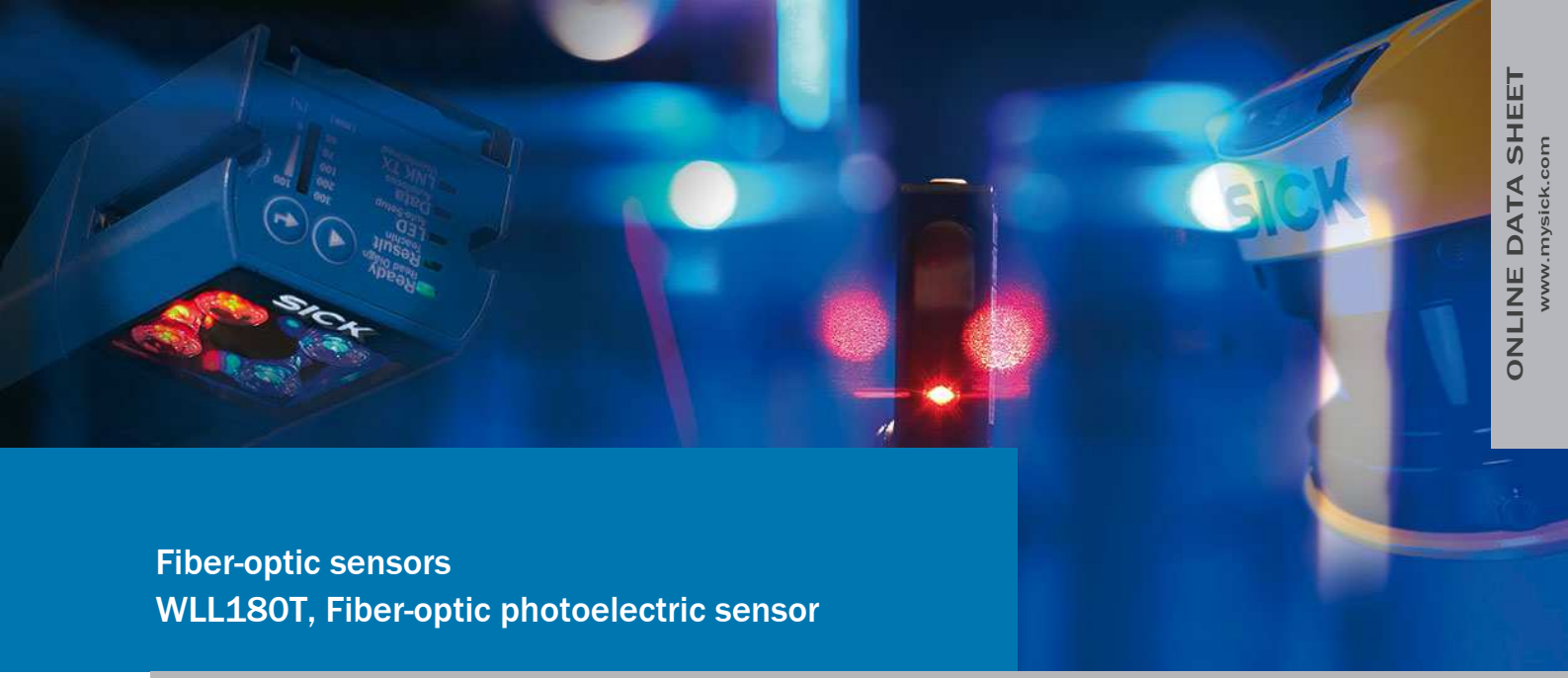


ONLINE DATA SHEET
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Fiber-optic sensors
WLL180T, Fiber-optic photoelectric sensor

WLL180T-M434



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Fiber-optic sensors
WLL180T, Fiber-optic photoelectric sensor

Model Name > WLL180T-M434
Part No. > 6039101

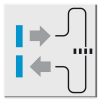




Illustration may differ

At a glance

- Selectable response time up to 16 µs
- 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 [1)]
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 [2) 3)]
Sensing range::::	0 m ... 18 m, through-beam system, 0 mm ... 1,400 mm, proximity system [4) 5) 6) 7)]
Light source:	LED [8)]
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
Time type:	Without time delay time delay off switch on delay ON and OFF delay one shot

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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] [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 °C

Mechanics/electronics

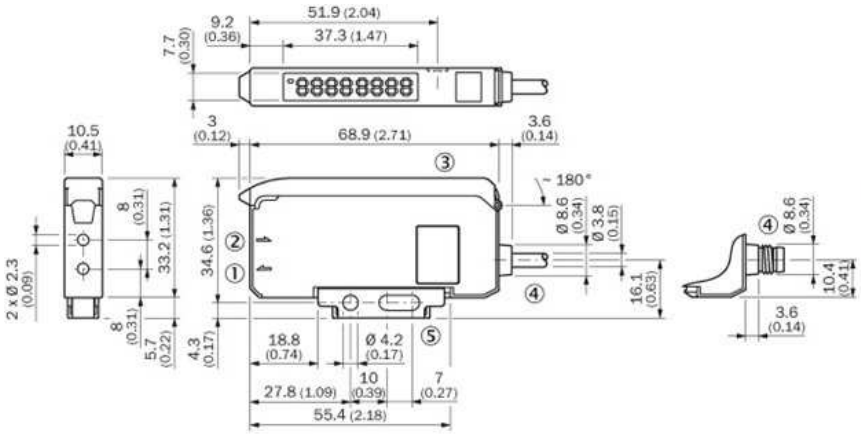
Enclosure rating:	IP 50 [1]
Supply voltage:	12 V DC ... 24 V DC [2]
Residual ripple:	≤ 10 % [3]
Power consumption:	≤ 50 mA [4]
Output type:	PNP, Light/dark-switching, manually selectable, open collector
Output current Imax.:	≤ 100 mA
Response time:	≤ 2 ms ≤ 8 ms ≤ 16 µs ≤ 70 µs ≤ 250 µs [5]
Switching frequency:	31.2 kHz 7.1 kHz 2 kHz 250 Hz 62.5 Hz
Electrical connection:	Connector M8, 4-pin
Protection class:	III
Circuit protection::::	A, B, C, D [6] [7] [8] [9]
Special device:	0
Housing material:	ABS/PC
Ambient temperature operation:	-25 °C ... 55 °C
Ambient storage temperature:	-40 °C ... 70 °C

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] 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

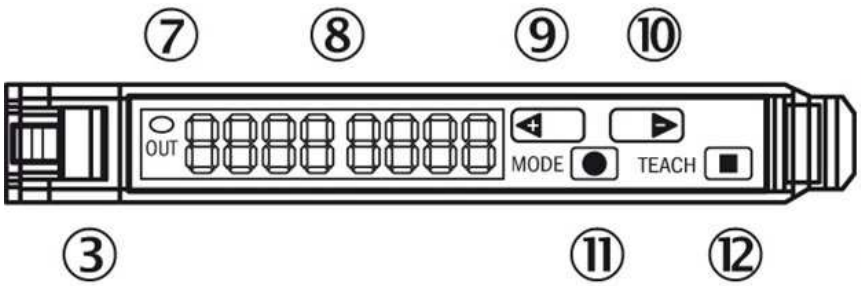
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Dimensional drawing



|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

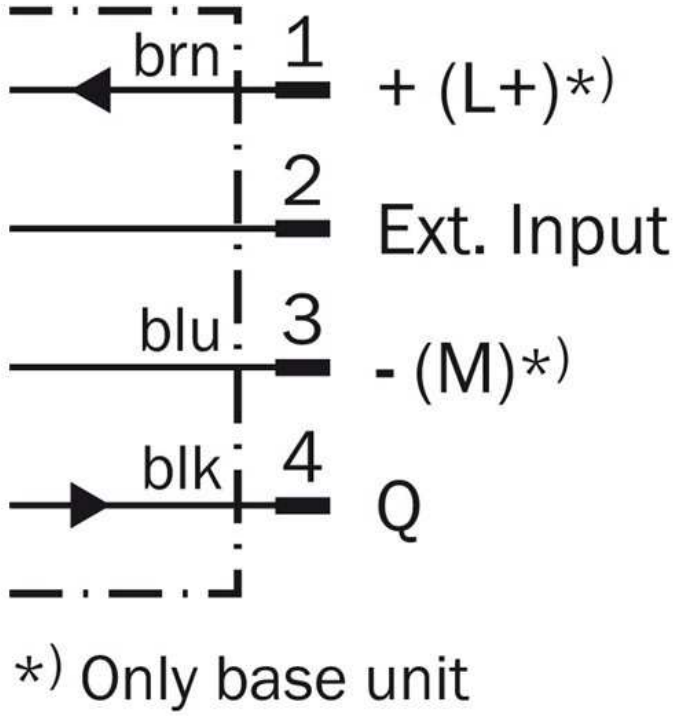
Adjustments possible



|3| Locking the fiber-optic cables
|7| LED indicator orange, lights up when switching output is acitve
|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

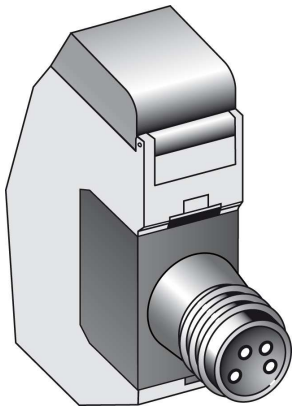
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Connection diagram



*) Only base unit

Connection type



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