



Fiber-optic sensors
WLL180T, Fiber-optic photoelectric sensor

WLL180T-P474S14



Model Name > [WLL180T-P474S14](#)
Part No. > [6052848](#)



Illustration may differ

At a glance

- Selectable response time up to 16 μ 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:	Stand-alone
Dimensions (W x H x D):	10.5 mm x 34.6 mm x 71.9 mm
Sensing range max.::	0 mm ... 1,000 mm, through-beam system ^{1) 2)}
Sensing range::::	0 m ... 850 mm, through-beam system, 0 mm ... 400 mm, proximity system ^{3) 4) 5) 6)}
Light source:	LED ⁷⁾
Type of light:	Infrared light
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

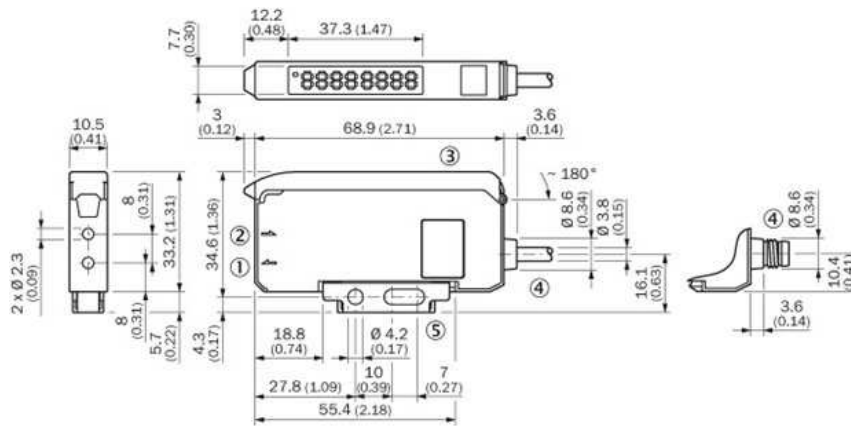
1) 5) Sensing range with 8 ms response time. Reduction with shorter response time (see tables LL3/WLL180T) 2) 6) LL3-TW01 3) Objects to be sensed with 90% reflectivity (based on DIN 5033 white standard). Sensing range with 8 ms response time. Reduction with shorter response time (see tables LL3/WLL180T) 4) LL3-DW01 7) 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, open collector
 Output current I_{max.}: ≤ 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, Plastic
 Ambient temperature operation: -25 °C ... +55 °C
 Ambient storage temperature: -40 °C ... +70 °C
 Weight: Ca. 20 g
 Switching mode: Light/dark switching
 Switching mode selector: Manually selectable
 UL File No.: NRKH2.E300503 & NRKH8.E300503

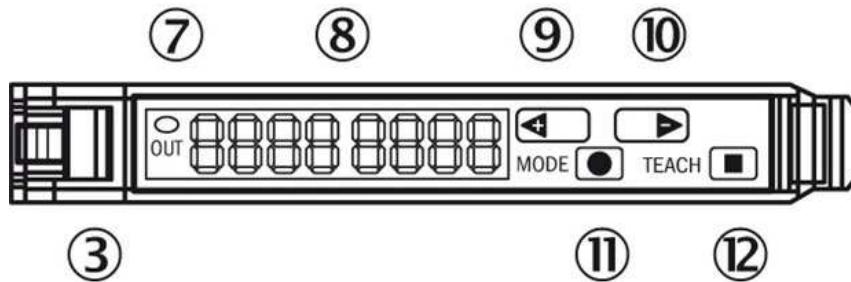
1) With correctly attached fibre-optic cable LL3 and closed protection hood 2) +/- 10% 3) May not exceed or fall short of V_S tolerances 4) Without load 5) Selectable 6) A = V_S connections reverse-polarity protected 7) B = inputs and output reverse-polarity protected 8) C = interference suppression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

Dimensional drawing



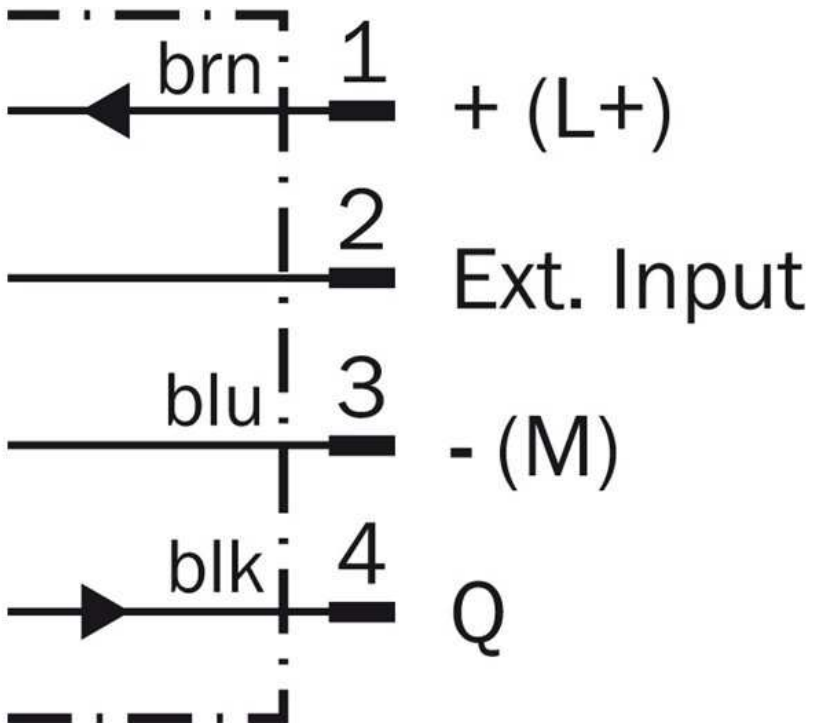
- [1] Sender LED, installation of LL3 fibre-optic cable (sender fibre)
- [2] Receiver, installation of LL3 fibre optic cable (receiver fibre)
- [3] Protective hood, can be raised at both ends
- [4] Connection
- [5] Mounting bracket, included

Adjustments possible

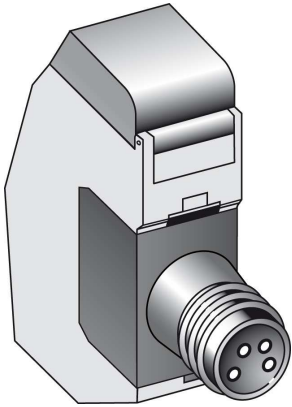


- [3] Locking the fiber-optic cables
- [7] LED indicator orange, lights up when switching output is active
- [8] Numeric display 2 x 4-digit; green: switching threshold, operating mode; red : actual value, Teach-in and function parameter
- [9] Step-button> (manual switching threshold: higher; or next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

Connection diagram



Connection type



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