



WLL180T-M434

WLL180T

FIBER-OPTIC SENSORS AND FIBERS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	Part no.
WLL180T-M434	6039101

Other models and accessories → www.sick.com/WLL180T

Detailed technical data

Features

Device type	Base unit ¹⁾
Sensor/detection principle	Fiber-optic photoelectric sensor
Dimensions (W x H x D)	10.5 mm x 34.6 mm x 71.9 mm
Housing design (light emission)	Rectangular
Sensing range max.	0 m ... 20 m, Through-beam system ^{2) 3)}
Sensing range	0 mm ... 1,400 mm, Proximity system ^{4) 5)} 0 ... 18 m, Through-beam system ^{2) 3)}
Focus	⁶⁾
Type of light	Visible red light
Light source	LED ⁷⁾
Angle of dispersion	Approx. 65° ⁶⁾
Wave length	650 nm
Adjustment	Menu-controlled Single teach-in button Cable
Time type	Without time delay Off delay On delay ON and OFF delay One shot
Delay time	Programmable, 0 ms, 9,999 ms

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⁾ See LL3 fiber-optic data.

⁷⁾ Average service life: 100,000 h at T_J = +25 °C.

Indication	Display
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

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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) See LL3 fiber-optic data.

7) Average service life: 100,000 h at $T_U = +25\text{ °C}$.

Mechanics/electronics

Supply voltage	12 V DC ... 24 V DC ¹⁾
Ripple	$\leq 10\%$ ²⁾
Power consumption	$\leq 50\text{ mA}$ ³⁾
Output type	PNP
Number of switching outputs	1
Switching mode	Light/dark switching
Switching mode selector	Manually selectable
Output current I_{\max}	$\leq 100\text{ mA}$
Response time	$\leq 16\text{ }\mu\text{s}$, $\leq 70\text{ }\mu\text{s}$, $\leq 250\text{ }\mu\text{s}$, $\leq 2,000\text{ }\mu\text{s}$, $\leq 8,000\text{ }\mu\text{s}$ ⁴⁾
Switching frequency	31.2 kHz 7.1 kHz 2 kHz 250 Hz 62.5 Hz
Input	Multifunctional input MF
Connection type	Connector M8, 4-pin
Circuit protection	A ⁵⁾ B ⁶⁾ C ⁷⁾ D ⁸⁾
Protection class	III
Weight	20 g
Housing material	ABS/PCPlastic
Enclosure rating	IP50 ⁹⁾
Items supplied	BEF-WLL180 mounting bracket
Ambient operating temperature	-25 °C ... $+55\text{ °C}$

1) $\pm 10\%$.

2) May not exceed or fall below U_V tolerances.

3) Without load.

4) Selectable.

5) A = V_S connections reverse-polarity protected.

6) B = inputs and output reverse-polarity protected.

7) C = interference suppression.

8) D = outputs overcurrent and short-circuit protected.

9) With correctly attached fibre-optic cable LL3 and closed protection hood.

Ambient storage temperature	-40 °C ... +70 °C
UL File No.	NRKH2.E300503 & NRKH8.E300503

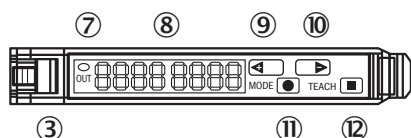
- 1) +/- 10%.
- 2) May not exceed or fall below U_V tolerances.
- 3) Without load.
- 4) Selectable.
- 5) A = V_S connections reverse-polarity protected.
- 6) B = inputs and output reverse-polarity protected.
- 7) C = interference suppression.
- 8) D = outputs overcurrent and short-circuit protected.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

Classifications

ECl@ss 5.0	27270905
ECl@ss 5.1.4	27270905
ECl@ss 6.0	27270905
ECl@ss 6.2	27270905
ECl@ss 7.0	27270905
ECl@ss 8.0	27270905
ECl@ss 8.1	27270905
ECl@ss 9.0	27270905
ETIM 5.0	EC002651
ETIM 6.0	EC002651
UNSPSC 16.0901	39121528

Adjustments possible

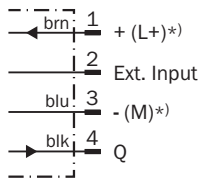
WLL180T



- 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 pushbutton > (manual switching threshold: higher/next function parameter)
- ⑩ Step pushbutton < (manual switching threshold: lower/previous function parameter)
- ⑪ Mode/Enter-button
- ⑫ Teach-in button

Connection diagram

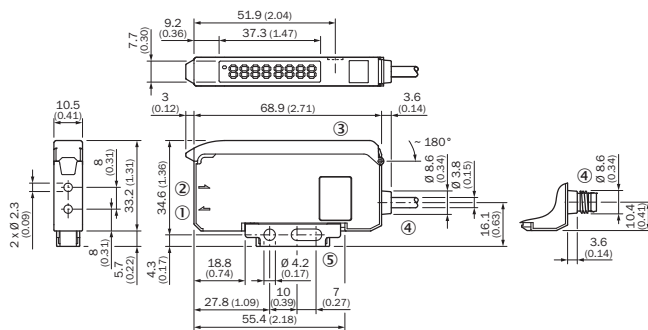
Cd-140



*) Only base unit

Dimensional drawing (Dimensions in mm (inch))




Bus type



- ① Sender LED, installation of LL3 fibre-optic cable (sender fibre)
- ② Receiver, installation of LL3 fibre optic cable (receiver fibre)
- ③ Protective hood opens approx. 180°
- ④ Connection
- ⑤ Mounting bracket, included with delivery

Recommended accessories

Other models and accessories → www.sick.com/WLL180T

	Brief description	Type	Part no.
Mounting brackets and plates			
	Mounting bracket, steel, zinc coated, without mounting hardware	BEF-WLL170	5306574
		BEF-WLL180	5325812
Other mounting accessories			
	Rail end piece for block mounting, Stainless steel, mounting hardware included	BF-EB01-W190	5313011
	Cutter for fibers, supplied with LL3	FC	5304141

	Brief description	Type	Part no.
Plug connectors and cables			
	Head A: female connector, M8, 4-pin, straight Head B: cable Cable: PVC, unshielded, 2 m	DOL-0804-G02M	6009870
	Head A: female connector, M8, 4-pin, straight Head B: cable Cable: PVC, unshielded, 5 m	DOL-0804-G05M	6009872
	Head A: female connector, M8, 4-pin, angled Head B: cable Cable: PVC, unshielded, 2 m	DOL-0804-W02M	6009871
	Head A: female connector, M8, 4-pin, angled Head B: cable Cable: PVC, unshielded, 5 m	DOL-0804-W05M	6009873

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Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

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