



DATA SHEET

WLL80P-RZZZZ1DMZZZZ1ZZ

WLL80
Fiber-optic sensors

SICK

Sensor Intelligence



Illustration may differ

FIBER-OPTIC SENSORS

WLL80P-
RZZZZ1DMZZZZ1ZZ

ORDERING INFORMATION

Type	part no.
WLL80P-RZZZZ1DMZZZZ1ZZ	6076712

Further device versions and accessories at www.sick.com/WLL80



DETAILED TECHNICAL DATA

FEATURES

Device type	Fiber-optic amplifier
Device type detail	Base unit ¹⁾
Functional principle detail	Depending on the optical fiber cable used
Sensing range max.	Depending on the optical fiber cable used
Emitted beam	Light source LED Type of light Visible red light
Key LED figures	Normative reference EN 62471:2008-09 IEC 62471:2006, modified LED risk group marking Free group Wave length 660 nm Average service life 100,000 h at T _a = +25 °C
Adjustment	Wire/pin For deactivating the sender and executing the test logic/for setting the sensing range/for resetting the counter Display + operating buttons For configuring the sensor parameters
Display	LED green Operating indicator Static on: power on LED yellow 1 Status of switching output 1 Permanently on: Switching output 1 active Permanently off: Switching output 1 not active Flashing: Executing teach-in/teach-in error LED yellow 2 Status of switching output 2 Permanently on: Switching output 2 active Permanently off: Switching output 2 not active Flashing: Executing teach-in/teach-in error Display Display of sensor functions Menu languages. German, English, Chinese, Korean, Japanese
Items supplied	BEF-WLL180 mounting bracket

¹⁾ Up to 15 expansion units can be connected.

SAFETY-RELATED PARAMETERS

MTTF _D	325.4 years
DC _{avg}	0%
T _M (mission time)	20 years

COMMUNICATION INTERFACE

Serial	✓
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ELECTRONICS

Supply voltage U _B	12 V DC ... 24 V DC ¹⁾
Ripple	± 10 % ²⁾
Current consumption	≤ 50 mA ³⁾
Protection class	III
Digital output	
Number	0
Switching mode	Light/dark switching
Response time	≤ 16 µs ⁴⁾
	≤ 70 µs
	≤ 250 µs
	≤ 500 µs
	≤ 1,000 µs
	≤ 2,000 µs
	≤ 8,000 µs
Switching frequency	31.2 kHz ⁵⁾
	7.1 kHz
	2 kHz
	1 kHz
	500 Hz
	250 Hz
	62.5 Hz
Time functions	Switch-on delay
	Off delay
	ON and OFF delay
	Impulse (one shot)
	Switch-on delay and pulse
	Deactivated
Delay time	Adjustment via operating buttons / via gateway, 0 ms ... 30,000 ms

¹⁾ Limit values.²⁾ May not fall below or exceed U_v tolerances.³⁾ Without load.⁴⁾ In bus mode, the fastest response time is 22 µs.⁵⁾ With a light/dark ratio of 1:1. In bus mode, the highest switching frequency is 22.7 kHz.**MECHANICS**

Housing	Rectangular
Dimensions (W x H x D)	10.5 mm x 33.2 mm x 79.9 mm
Connection	Internal bus connector
Material	
Housing	Plastic, PC
Protection hood	Plastic, PC
Operating buttons	Plastic, Rubber
Weight	Approx. 23 g

AMBIENT DATA

Enclosure rating	IP54 (EN 60529)
Ambient operating temperature	-25 °C ... +55 °C ¹⁾
Ambient temperature, storage	-40 °C ... +70 °C
Typ. Ambient light immunity	Artificial light: ≤ 16,000 lx Sunlight: ≤ 67,000 lx
Shock resistance	50 g, 11 ms (3 positive and 3 negative shocks along X, Y, Z axes, 18 total shocks (EN60068-2-27))
Vibration resistance	10 Hz ... 55 Hz (Amplitude 1 mm, 3 x 30 min (EN60068-2-6))
Air humidity	35 % ... 85 %, relative humidity (no condensation)
Electromagnetic compatibility (EMC)	EN 60947-5-2

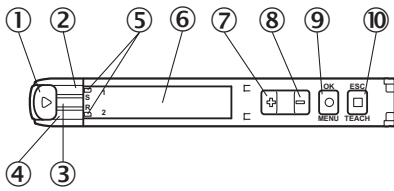
¹⁾ In bus mode, the temperature range is restricted (I_{max} 20 mA): -25 °C ... +45 °C.

SMART TASK

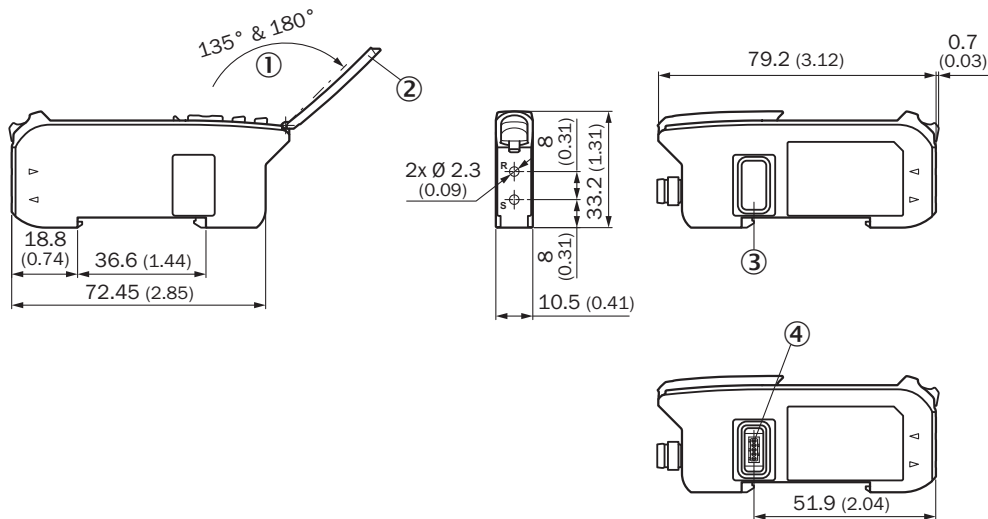
Smart Task name	Counter + debouncing
Timer function	Deactivated Switch-on delay Off delay ON and OFF delay Impulse (one shot) Switch-on delay and pulse
Inverter	Yes
Switching signal	Switching signal Q _{L1} Switching output Switching signal Q _{L2} Switching output

CERTIFICATES

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
China Compulsory Product Certification (CCC) ex-empt	✓
cULus certificate	✓
Photobiological safety (DIN EN 62471) certificate	✓
Information according to Art. 3 of Data Act (Regulation EU 2023/2854)	✓

DISPLAY AND ADJUSTMENT ELEMENTS

- ① Fiber optic interlock
- ② LED yellow 1
- ③ LED green
- ④ LED yellow 2
- ⑤ Indicator for correctly inserted fibers
- ⑥ Display
- ⑦ (+) button
- ⑧ (-) pushbutton
- ⑨ Menu/OK pushbutton
- ⑩ Teach-in/escape pushbutton

DIMENSIONAL DRAWING

Dimensions in mm (inch)

- ① aperture angle
- ② Hinged cover for the pushbuttons
- ③ side cover
- ④ Female connector for bus module

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/6076712



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SICK AT A GLANCE

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SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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