



WLL170-2P132

WLL170

FIBER-OPTIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ

Ordering information

| Type | part no. |
|--------------|----------|
| WLL170-2P132 | 6029511 |

Included in delivery: BEF-WLL170 (1)

Other models and accessories → www.sick.com/WLL170

Detailed technical data

Features

| | |
|--|--|
| Device type | Fiber-optic amplifier |
| Dimensions (W x H x D) | 10.5 mm x 35.5 mm x 83.7 mm |
| Housing design (light emission) | Rectangular |
| Sensing range max. | 0 mm ... 4,000 mm (Through-beam system) ¹⁾ |
| Sensing range | 0 mm ... 160 mm, Proximity system ^{2) 3)} 0 mm ... 700 mm, Through-beam system ⁴⁾ |
| Focus | Approx. 65° ⁵⁾ |
| Type of light | Visible red light |
| Light source | LED ⁶⁾ |
| Angle of dispersion | Approx. 65° ⁵⁾ |
| Wave length | 660 nm |
| Adjustment | Potentiometer, 10 turns |
| Indication | LED |

¹⁾ LL3-TB02 and tip adapter LL3-TA01.

²⁾ Objects to be sensed with 90% reflectivity (based on DIN 5033 white standard). Sensing range depends on fiber-optic cable.

³⁾ LL3-DK06.

⁴⁾ LL3-TB01.

⁵⁾ See LL3 fiber-optic data.

⁶⁾ Average service life: 100,000 h at T_U = +25 °C.

Mechanics/electronics

| | |
|--|---|
| Supply voltage U_B | 10 V DC ... 30 V DC ¹⁾ |
| Ripple | 10 % ²⁾ |
| Current consumption | 30 mA ³⁾ |
| Switching output | PNP |
| Number of switching outputs | 1 |
| Switching mode | Light/dark switching |
| Switching mode selector | Selectable via light/dark selector |
| Response time | $\leq 250 \mu s$ ⁴⁾ |
| Switching frequency | 2,000 Hz ⁵⁾ |
| Time functions | Off delay |
| Delay time | Selectable by sliding switch, ≤ 40 ms |
| Input | - |
| Connection type | Cable, 3-wire, 2 m ⁶⁾ |
| Cable material | Plastic, PVC |
| Conductor cross section | 0.2 mm ² |
| Cable diameter | $\varnothing 3.8$ mm |
| Circuit protection | A ⁷⁾ B ⁸⁾ C ⁹⁾ D ¹⁰⁾ |
| Protection class | III |
| Weight | 70 g |
| Housing material | Plastic, ABS/PC |
| Enclosure rating | IP66 ¹¹⁾ |
| Items supplied | BEF-WLL170 mounting bracket |
| Ambient operating temperature | -25 °C ... +55 °C |
| Ambient temperature, storage | -40 °C ... +70 °C |
| UL File No. | NRKH.E300503 & NRKH7.E300503 |

¹⁾ Limit values.

²⁾ May not fall below or exceed U_V tolerances.

³⁾ Without load.

⁴⁾ Signal transit time with resistive load.

⁵⁾ With light/dark ratio 1:1.

⁶⁾ Do not bend below 0 °C.

⁷⁾ A = V_S connections reverse-polarity protected.

⁸⁾ B = inputs and output reverse-polarity protected.

⁹⁾ C = interference suppression.

¹⁰⁾ D = outputs overcurrent and short-circuit protected.

¹¹⁾ With correctly attached fibre-optic cable LL3 and closed protection hood.

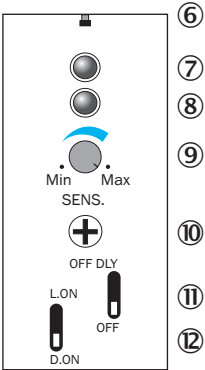
Safety-related parameters

| | |
|-------------------------|-----------|
| MTTF_D | 836 years |
| DC_{avg} | 0 % |

Classifications

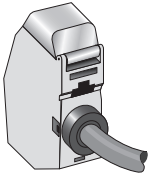
| | |
|----------------|----------|
| ECLASS 5.0 | 27270905 |
| ECLASS 5.1.4 | 27270905 |
| ECLASS 6.0 | 27270905 |
| ECLASS 6.2 | 27270905 |
| ECLASS 7.0 | 27270905 |
| ECLASS 8.0 | 27270905 |
| ECLASS 8.1 | 27270905 |
| ECLASS 9.0 | 27270905 |
| ECLASS 10.0 | 27270905 |
| ECLASS 11.0 | 27270905 |
| ECLASS 12.0 | 27270905 |
| ETIM 5.0 | EC002651 |
| ETIM 6.0 | EC002651 |
| ETIM 7.0 | EC002651 |
| ETIM 8.0 | EC002651 |
| UNSPSC 16.0901 | 39121528 |

Adjustments WLL170-2

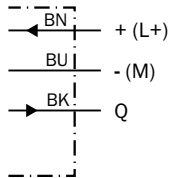


- ⑥ indicating pin correctly inserted LL3 fiber
- ⑦ LED indicator orange, lights up when switching output is active
- ⑧ LED signal strength indicator green, lights up, when light received < 0.9 or > 1.1 (switching threshold = 1)
- ⑨ Sensitivity scale 270°
- ⑩ Sensitivity control (10 revolutions)
- ⑪ OFF delay selector switch: "OFF DLY" (on)/"OFF" (off), 40 ms fixed
- ⑫ Selector switch: "L.ON" (light switching) /"D.ON" (dark switching)

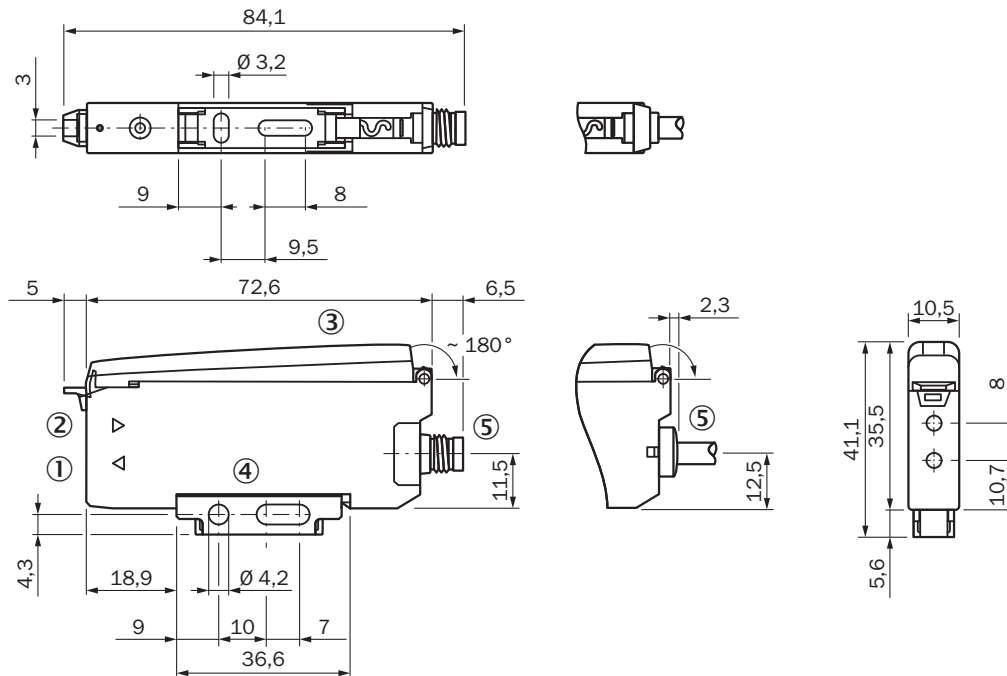
Connection type



Connection diagram Cd-043



Dimensional drawing WLL170-2





Dimensions in mm (inch)

- 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 Mounting bracket, included with delivery
- ⑤ Connection

Recommended accessories

Other models and accessories → www.sick.com/WLL170

| | Brief description | Type | part no. |
|---|---|---------------|----------|
| Mounting systems | | | |
|  | <ul style="list-style-type: none">• Description: Mounting bracket• Material: Steel• Details: Steel, zinc coated• Items supplied: Without mounting hardware• Suitable for: WLL170-2, WLL190-2 | BEF-WLL170 | 5306574 |
|  | <ul style="list-style-type: none">• Description: Rail end piece for block mounting• Material: Stainless steel• Details: Stainless steel• Items supplied: Mounting hardware included | BEF-EB01-W190 | 5313011 |

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

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

For us, that is “Sensor Intelligence.”

WORLDWIDE PRESENCE:

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