



fiber-optic sensors
WLL170-2, Fiber-optic photoelectric sensor

WLL170T-2P330



Model Name > [WLL170T-2P330](#)
Part No. > [6033949](#)



Illustration may differ

At a glance

- Rapid response time (50 µs)
- Switching threshold adjustment via potentiometer, or teach-in via button or cable
- Four different teach-in modes
- Simple installation
- Red or green LED emitter

Your benefits

- Reliable, rapid process detection
- Low installation costs due to short commissioning time
- Flexible teach-in modes allow the sensor to be customized according to the specific application
- Emitted light ideal for color or contrast detection
- Easy programming via simple potentiometer and switch adjustment



Features

| | |
|-----------------------------------|---|
| Dimensions (W x H x D): | 10.5 mm x 35.5 mm x 83.7 mm |
| Sensing range max.: | 0 mm ... 3,500 mm, through-beam system ¹⁾ |
| Sensing range::: | Ø ₃₋₄ 700 mm, through-beam system, 0 mm ... 160 mm, proximity system ²⁾ |
| Light source: | LED ⁵⁾ |
| Type of light: | Visible red light |
| Wave length: | 660 nm |
| Sensitivity adjustment: | Teach-in button |
| Adjustment of operating distance: | Teach-in button |
| Teach-in: | Menu-controlled |
| Time type: | Off-delayed |
| Delay time: | Selectable by sliding switch: ≥40 ms |
| Indication: | LED |
| Sensor/detection principle: | Fiber-optic photoelectric sensor |
| Angle of dispersion: | Ca. 65 ° |
| Housing design (light emission): | Rectangular |

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⁾ LL3DM01 ⁴⁾ LL3-TB01 ⁵⁾ Average service life of 100,000 h at T_A = +25 °C

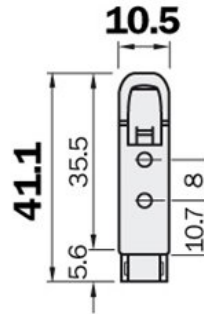
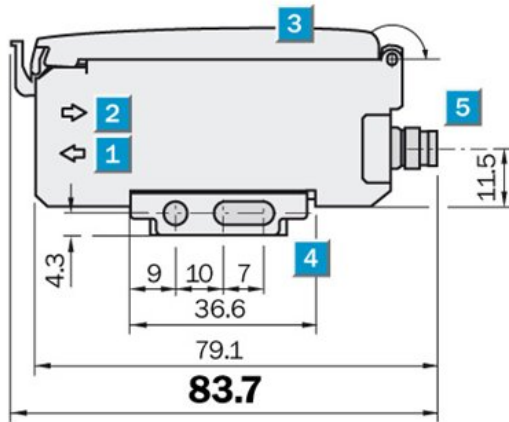
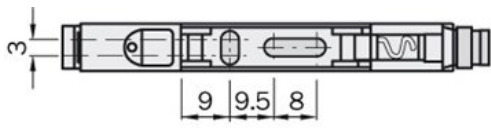
Mechanics/electronics

| | |
|-------------------------------------|---|
| Enclosure rating: | IP 66 ¹⁾ |
| Supply voltage: | 10 V DC ... 30 V DC ²⁾ |
| Ripple: | 10 % ³⁾ |
| Power consumption: | ≤ 30 mA ⁴⁾ |
| Output type: | PNP, Light/dark-switching, selectable via light/dark selector, open collector |
| Output current I _{max} ..: | ≤ 100 mA |
| Response time: | ≤ 0.25 ms ⁵⁾ |
| Switching frequency: | 2,000 Hz ⁶⁾ |
| Connection type: | Connector M8, 3-pin |
| Protection class: | III |
| Circuit protection::: | A, B, C, D ^{7) 8) 9) 10)} |
| Special device: | 0 |
| Housing material: | ABS |
| Ambient operating temperature: | -25 °C ... 55 °C |
| Ambient storage temperature: | -40 °C ... 70 °C |
| UL File-No.: | UL No. NRKH.E300503 & cUL No. NRKH7.E300503 |

See LL3 fiber-optic data;

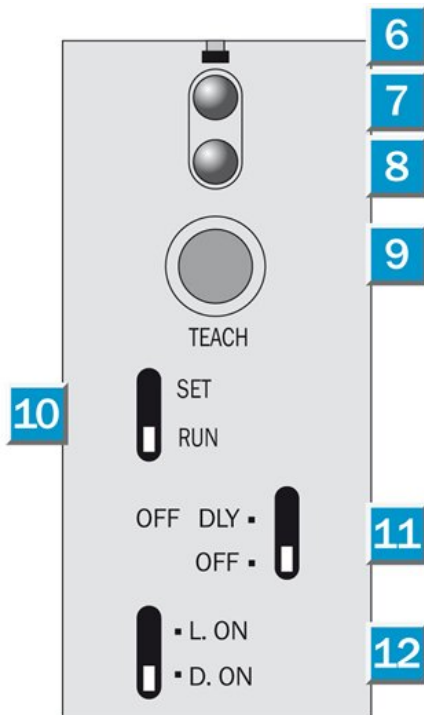
¹⁾ With correctly attached fibre-optic cable LL3 and closed protection hood ²⁾ Limit values ³⁾ May not exceed or fall short of V_S tolerances ⁴⁾ Without load ⁵⁾ Signal transit time with resistive load ⁶⁾ With light/dark ratio 1:1 ⁷⁾ A = V_S connections reverse-polarity protected ⁸⁾ B = inputs and output reverse-polarity protected ⁹⁾ C = interference suppression ¹⁰⁾ D = outputs overcurrent and short-circuit protected

Dimensional drawing



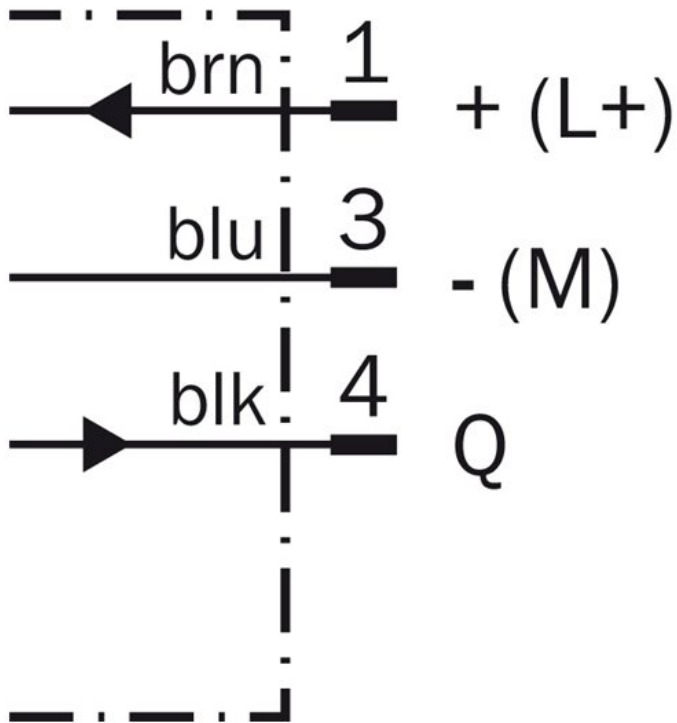
- |1| Sender LED, installation of LL3 fibre-optic cable (sender fibre)
- |2| Receiver, installation of LL3 fibre optic cable (receiver fibre)
- |3| Protective hood, can be raised at both ends
- |4| Mounting bracket, included
- |5| Connection

Adjustments possible

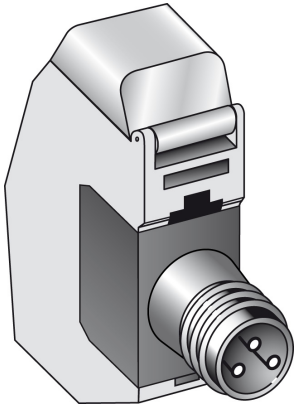


- |6| Indication of correct fibre-optic cable mounting
- |7| LED indicator orange: switching output active
- |8| LED signal strength indicator
green, lights up, when light received < 0.9 or > 1.1 (switching threshold = 1)
- |9| Teach-in button
- |10| Operating mode selector
switch: "SET" (Teach-in mode) / "RUN" (sensor mode)
- |11| L.ON/ d.ON selection
switch: "OFF DLY" (on) / "OFF", 40 ms fixed
- |12| Selector switch: "L.ON" (light-switching) / "D.ON" (dark-switching)

Connection diagram



Connection type



Australia

Phone +61 3 9457 0600
1800 334 802 – tollfree
E-Mail sales@sick.com.au

Belgium/Luxembourg

Phone +32 (0)2 466 55 66
E-Mail info@sick.be

Brasil

Phone +55 11 3215-4900
E-Mail sac@sick.com.br

Canada

Phone +1 905 771 14 44
E-Mail information@sick.com

Ceská Republika

Phone +420 2 57 91 18 50
E-Mail sick@sick.cz

China

Phone +86 4000 121 000
E-Mail info.china@sick.net.cn
Phone +852-2153 6300
E-Mail ghk@sick.com.hk

Danmark

Phone +45 45 82 64 00
E-Mail sick@sick.dk

Deutschland

Phone +49 211 5301-301
E-Mail kundenservice@sick.de

España

Phone +34 93 480 31 00
E-Mail info@sick.es

France

Phone +33 1 64 62 35 00
E-Mail info@sick.fr

Great Britain

Phone +44 (0)1727 831121
E-Mail info@sick.co.uk

India

Phone +91-22-4033 8333
E-Mail info@sick-india.com

Israel

Phone +972-4-6801000
E-Mail info@sick-sensors.com

Italia

Phone +39 02 27 43 41
E-Mail info@sick.it

Japan

Phone +81 (0)3 3358 1341
E-Mail support@sick.jp

Magyarország

Phone +36 1 371 2680
E-Mail office@sick.hu

Nederlands

Phone +31 (0)30 229 25 44
E-Mail info@sick.nl

Norge

Phone +47 67 81 50 00
E-Mail austefjord@sick.no

Österreich

Phone +43 (0)22 36 62 28 8-0
E-Mail office@sick.at

Polska

Phone +48 22 837 40 50
E-Mail info@sick.pl

România

Phone +40 356 171 120
E-Mail office@sick.ro

Russia

Phone +7-495-775-05-30
E-Mail info@sick.ru

Schweiz

Phone +41 41 619 29 39
E-Mail contact@sick.ch

Singapore

Phone +65 6744 3732
E-Mail admin@sicksgp.com.sg

Slovenija

Phone +386 (0)1-47 69 990
E-Mail office@sick.si

South Africa

Phone +27 11 472 3733
E-Mail info@sickautomation.co.za

South Korea

Phone +82 2 786 6321/4
E-Mail info@sickkorea.net

Suomi

Phone +358-9-25 15 800
E-Mail sick@sick.fi

Sverige

Phone +46 10 110 10 00
E-Mail info@sick.se

Taiwan

Phone +886-2-2375-6288
E-Mail sales@sick.com.tw

Türkiye

Phone +90 (216) 528 50 00
E-Mail info@sick.com.tr

United Arab Emirates

Phone +971 (0) 4 8865 878
E-Mail info@sick.ae

USA/México

Phone +1(952) 941-6780
1 800-325-7425 – tollfree
E-Mail info@sickusa.com

More representatives and agencies
at www.sick.com