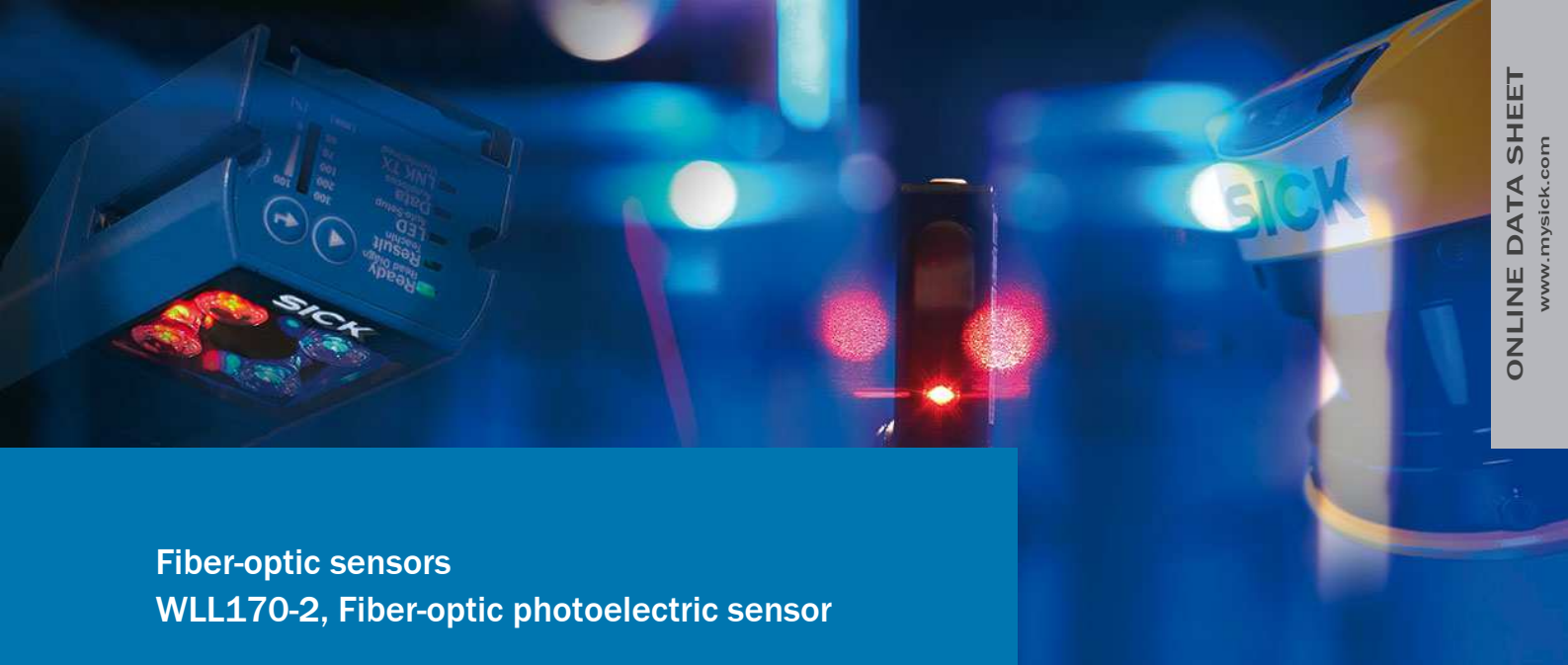




Fiber-optic sensors WLL170-2, Fiber-optic photoelectric sensor

WLL170-2N162



Model Name > [WLL170-2N162](#)
Part No. > [6029531](#)



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 ... 1,600 mm, through-beam system ¹⁾
Sensing range:::	0 mm ... 350 mm, through-beam system, 0 mm ... 65 mm, proximity system ^{2) 3) 4)}
Light source:	LED ⁵⁾
Type of light:	Visible red light
Wave length:	660 nm
Sensitivity adjustment:	Potentiometer, 10-turn
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

Scale 270°;

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-DB01 ⁴⁾ LL3-TB01 ⁵⁾ Average service life of 100,000 h at T_A = +25 °C

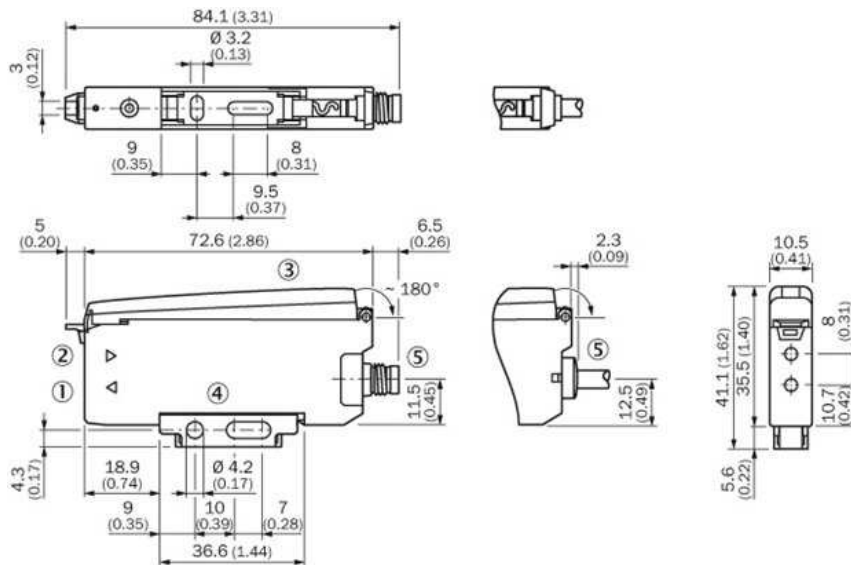
Mechanics/electronics

Enclosure rating:	IP 66 ¹⁾
Supply voltage:	10 V DC ... 30 V DC ²⁾
Residual ripple:	10 % ³⁾
Power consumption:	≤ 30 mA ⁴⁾
Output type:	NPN, Light/dark-switching, selectable via light/dark selector, open collector
Output current I _{max} :	≤ 100 mA
Response time:	≤ 50 μs ⁵⁾
Switching frequency:	10,000 Hz ⁶⁾
Electrical connection:	Cable, 3-wire, 2 m ⁷⁾
Cable material:	PVC
Conductor cross-section:	0.2 mm ²
Protection class:	III
Circuit protection:::	A, B, C, D ⁸⁾ ⁹⁾ ¹⁰⁾ ¹¹⁾
Housing material:	ABS/PC
Ambient temperature operation:	-25 °C ... 55 °C
Ambient storage temperature:	-40 °C ... 70 °C
Cable diameter:	3.8 mm
UL File-No.:	UL No. NRNT2.E128350 & cUL No. NRNT8.E128350

See LL3 fiber-optic data;

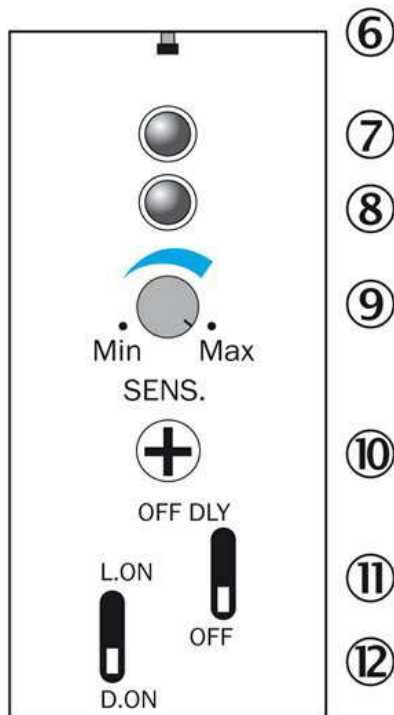
¹⁾ With correctly attached fibre-optic cable LL3 and closed protection hood ²⁾ Limit values ³⁾ May not exceed or fall short of V_S tolerances ⁴⁾ Without load ⁵⁾ Signal transit time with resistive load ⁶⁾ With light/dark ratio 1:1 ⁷⁾ Do not bend below 0 °C ⁸⁾ A = V_S connections reverse-polarity protected ⁹⁾ B = inputs and output reverse-polarity protected ¹⁰⁾ C = interference suppression ¹¹⁾ D = outputs overcurrent and short-circuit protected

Dimensional drawing



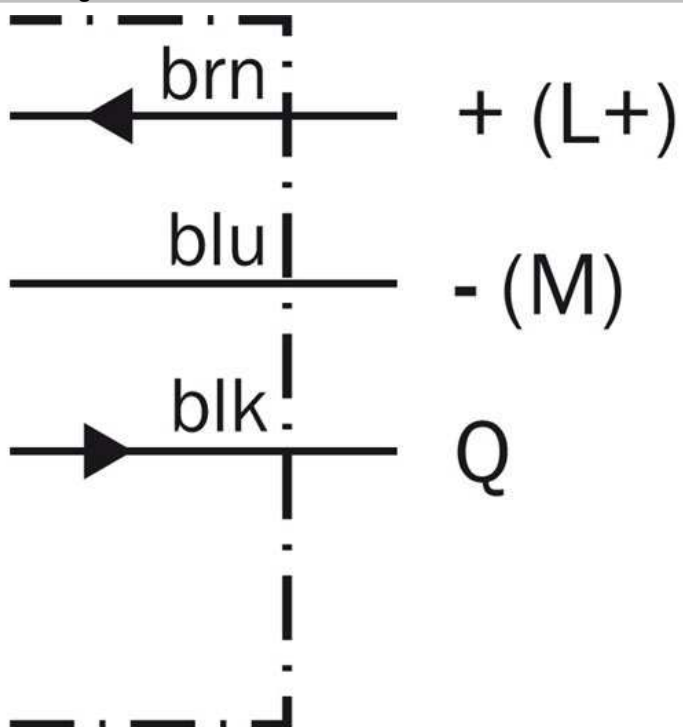
- |1| Sender LED, installation of LL3 fibre-optic cable (sender fibre)
- |2| Receiver, installation of LL3 fibre optic cable (receiver fibre)
- |3| Protective hood, can be raised at both ends
- |4| Mounting bracket, included
- |5| Connection

Adjustments possible

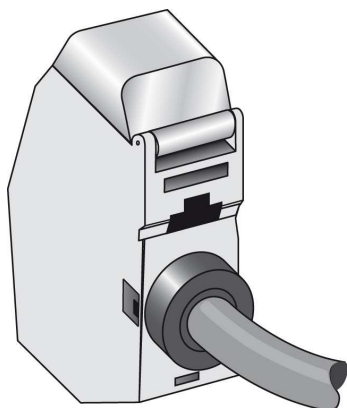


- |6| Indication of correct fibre-optic cable mounting
- |7| LED indicator orange, lights up when switching output is active
- |8| LED signal strength indicator green, lights up, when light received < 0.9 or > 1.1 (switching threshold = 1)
- |9| Sensitivity scale 270°
- |10| Sensitivity control (10 revolutions)
- |11| 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 33 48 02 – 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 marketing@sick.com.br

Canada

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

Česká 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 info@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 +972-4-6881000
E-Mail info@sick-sensors.com

Italia

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

Japan

Phone +81 (0)3 5309 2112
E-Mail support@sick.jp

Magyarország

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

Nederland

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

Norge

Phone +47 67 81 50 00
E-Mail sick@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 sales.gsg@sick.com

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 88 65 878
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