



Fiber-optic sensors
WLL180T, Fiber-optic photoelectric sensor

WLL180T-N432



Model Name > [WLL180T-N432](#)
Part No. > [6039094](#)



Illustration may differ

At a glance

- Selectable response time up to 16 μ s
- Sensing range up to 20 m (Through-beam system); up to 1400 mm (proximity system)
- Bus-compatible with anti-interference
- 2 x 4-digit display
- Adjustable hysteresis
- Rotatable display screen
- High-resolution signal processing
- Programmable time delays

Your benefits

- Reliable, rapid process detection, even under the most difficult ambient conditions, such as dust, spray or mist
- Easy commissioning and product changeover due to external teach-in
- Cross-talk is eliminated when utilizing bus configuration option
- Quick, easy setup and adjustment due to an intuitive operating menu
- Flexible parameter adjustment due to high-resolution signal processing. Hysteresis and time delays can be adapted to suit the application, e.g., when detecting tiny or transparent objects
- Easy-to-read display, even under difficult installation conditions



Features

Device type:	Stand-alone
Dimensions (W x H x D):	10.5 mm x 34.6 mm x 71.9 mm
Sensing range max.:	0 m ... 20 m, through-beam system ^{1) 2)}
Sensing range:::	4) - 5) 18 m, through-beam system, 0 mm ... 1,400 mm, proximity system ³⁾
Light source:	LED ⁷⁾
Type of light:	Visible red light
Wave length:	650 nm
Adjustment:	Single teach-in button, Cable, Menu-controlled
Time type:	Without time delay time delay off switch on delay ON and OFF delay one shot
Delay time:	Programmable, 0 ms, 9,999 ms
Indication:	Display

Sensor/detection principle: Fiber-optic photoelectric sensor
 Angle of dispersion: Ca. 65 °
 Housing design (light emission): Rectangular
 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
 Focus: See LL3 fiber-optic data

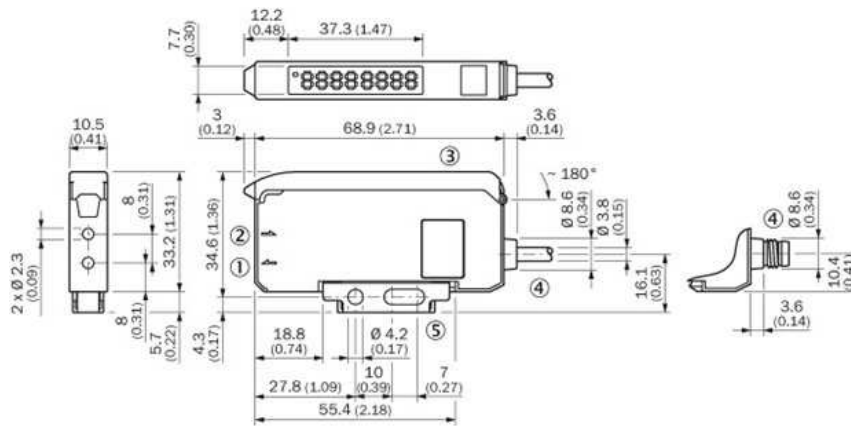
1) 5) Sensing range with 8 ms response time. Reduction with shorter response time (see tables LL3/WLL180T) 2) 6) LL3-TX01 3) Objects to be sensed with 90% reflectivity (based on DIN 5033 white standard). Sensing range with 8 ms response time. Reduction with shorter response time (see tables LL3/WLL180T) 4) LL3-DK06
 7) Average service life of 100,000 h at $T_A = +25\text{ °C}$

Mechanics/electronics

Enclosure rating: IP 50 ¹⁾
 Supply voltage: 12 V DC ... 24 V DC ²⁾
 Residual ripple: $\leq 10\%$ ³⁾
 Power consumption: $\leq 50\text{ mA}$ ⁴⁾
 Output type: NPN, open collector
 Output current I_{max.}: $\leq 100\text{ mA}$
 Response time: $\leq 2\text{ ms}$
 $\leq 8\text{ ms}$
 $\leq 16\text{ }\mu\text{s}$
 $\leq 70\text{ }\mu\text{s}$ ⁵⁾
 $\leq 250\text{ }\mu\text{s}$
 Switching frequency: 31.2 kHz
 7.1 kHz
 2 kHz
 250 Hz
 62.5 Hz
 Electrical connection: Cable, 4-wire, 2 m ⁶⁾
 Cable material: PVC
 Conductor cross-section: 0.2 mm²
 Protection class: III
 Circuit protection:::: A, B, C, D ^{7) 8) 9) 10)}
 Special device: 0
 Ambient temperature operation: -25 °C ... +55 °C
 Ambient storage temperature: -40 °C ... +70 °C
 Weight: 25 g
 Switching mode: Light/dark switching
 Switching mode selector: Manually selectable
 UL File No.: NRKH2.E300503 & NRKH8.E300503
 Housing material: ABS/PC, Plastic

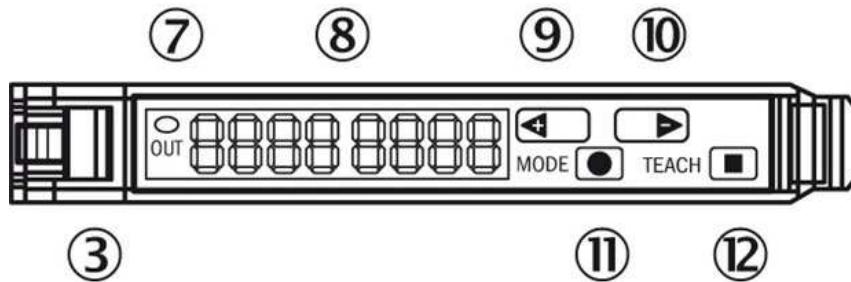
1) With correctly attached fibre-optic cable LL3 and closed protection hood ²⁾ +- 10% ³⁾ May not exceed or fall short of V_S tolerances ⁴⁾ Without load ⁵⁾ Selectable ⁶⁾
 Do not bend below 0 °C ⁷⁾ A = V_S connections reverse-polarity protected ⁸⁾ B = inputs and output reverse-polarity protected ⁹⁾ C = interference suppression ¹⁰⁾ D = outputs overcurrent and short-circuit protected

Dimensional drawing



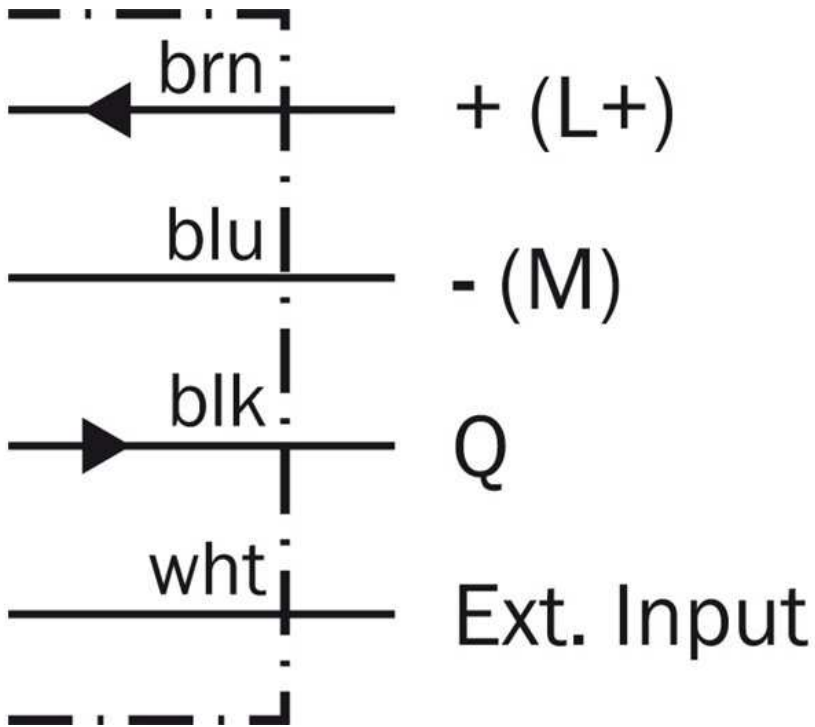
- [1] Sender LED, installation of LL3 fibre-optic cable (sender fibre)
- [2] Receiver, installation of LL3 fibre optic cable (receiver fibre)
- [3] Protective hood, can be raised at both ends
- [4] Connection
- [5] Mounting bracket, included

Adjustments possible

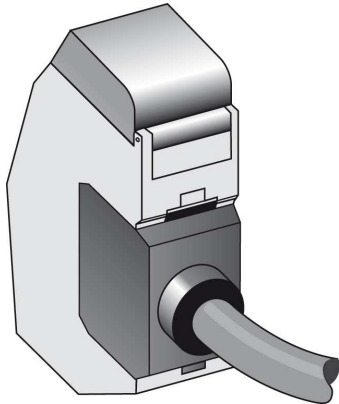


- [3] Locking the fiber-optic cables
- [7] LED indicator orange, lights up when switching output is active
- [8] Numeric display 2 x 4-digit; green: switching threshold, operating mode; red : actual value, Teach-in and function parameter
- [9] Step-button> (manual switching threshold: higher; or next function parameter)
- [10] Step-button< (manual switching threshold: lower; or previous function parameter)
- [11] Mode/Enter-button
- [12] Teach-in button

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