



Wzmacniacze światłowodowe WLL24 Ex, Fiber-optic photoelectric sensor

WLL24-2X230



Nazwa modelu > **WLL24-2X230**

Numer części > **1026038**



At a glance

- Marking: EX II 2G Ex ia op is IIC T4, according to Directive 94/9/EC (ATEX)
- Rated category 2G for explosive environments
- Output type: EN 60947-5-6 (NAMUR)
- Long sensing distances with fiber-optic systems
- M12 plug or M16 screw connection: rotatable 90°
- Durable zinc die-cast housing

Your benefits

- Long sensing distance despite sensing limits for 2G-rated devices
- Metal housing provides high resistance to external factors and a long service life
- Flexible installation due to rotatable connector



Cechy

Wymiary (Szer. x Wys. x Głęb.):	27 mm x 87,5 mm x 74,7 mm
Maks. strefa działania:::	0 ... 10 mm, 0 ... 25 mm, 0 mm ... 40 mm ^{1) 2) 3)}
Sensing range:::	0 ... 1.000 mm, through-beam system, 0 ... 100 mm, through-beam system, 0 mm ... 40 mm, proximity system ^{4) 5) 6) 7)}
Nadajnik światła:	LED ⁷⁾
Rodzaj światła:	Widzialne światło czerwone
Nastawienie czułości:	Sensitivity adjustment
Indication:	LED
Zasada działania czujnika/Sposób detekcji:	Fiber-optic photoelectric sensor
Housing design (light emission):	Prostopadłościenna

¹⁾ Obiekt odbijający 90% światła (standardowy biały zgodnie z normą DIN 5033) ²⁾ Object with 18 % reflectance (referred to grey) ³⁾ Objects to be sensed with 6 % reflectivity (based on black) ⁴⁾ LL3-DB01 ⁵⁾ LL3-TB02 and tip adapter LL3-TA01 ⁶⁾ LL3-TB02 ⁷⁾ Average service life 100,000 h at Ta = +25 °C

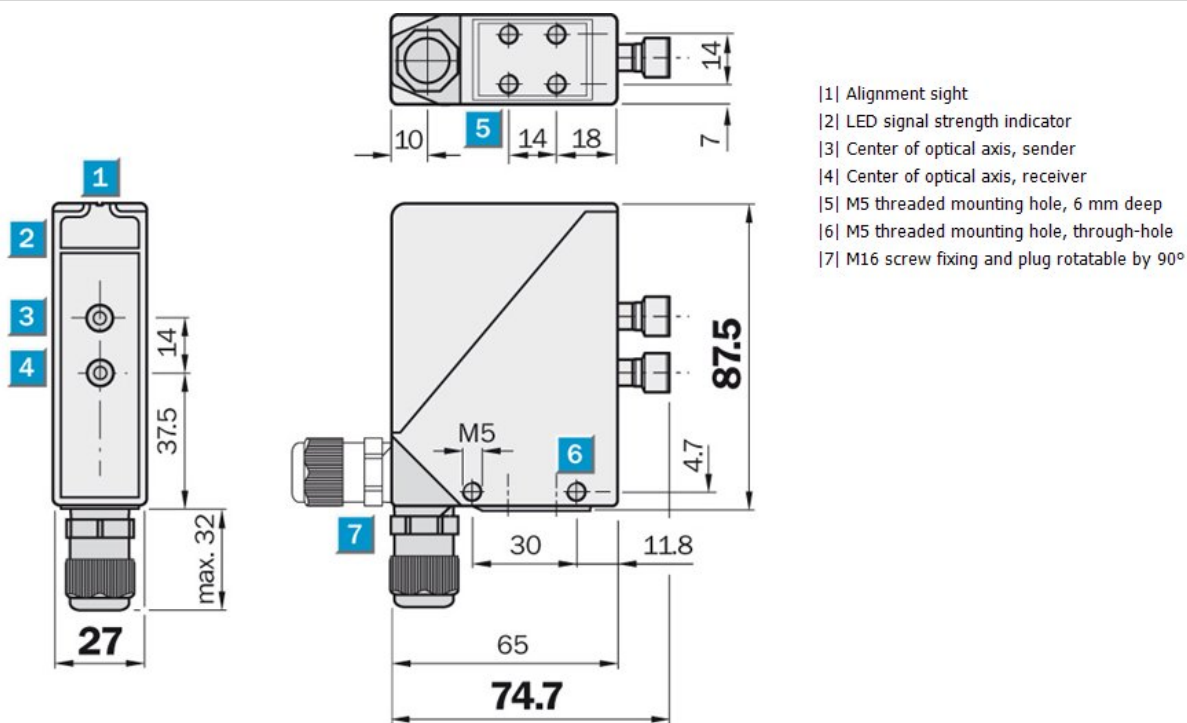
Mechanika/elektronika

Rodzaj zabezpieczenia:	IP 65
Napięcie zasilania:	5 V DC ... 15,5 V DC ¹⁾
Tętnienia resztkowe:	< 0,4 Vss ²⁾
Wyjście przełączające:	NAMUR, Light-switching ³⁾
Czas reakcji:	≤ 10 ms ⁴⁾
Switching frequency:	50 Hz ⁴⁾
Sposób przyłączenia:	Terminal connection with M16 gland ⁵⁾
Klasa ochronności:	II ⁶⁾

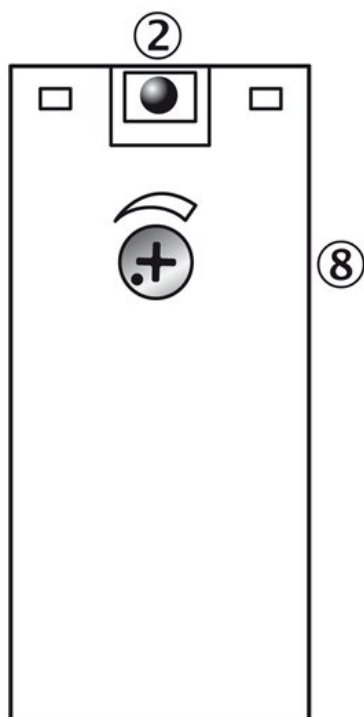
Układ zabezpieczenia::	A, C ^{7) 8)}
Tworzywo, obudowa:	Cynkowa, odlewana
Ambient operating temperature:	-20 °C ... 60 °C
Ambient storage temperature:	-25 °C ... 70 °C
Ciężar:	330 g
Tworzywo, układ optyczny:	Szkło
Potwierdzenie kontroli typu konstrukcyjnego przez WE:	PTB 08 ATEX 2029
Oznakowanie strefy zagrożonej (ATEX):	II 2G Ex ia op is IIC T4 according to directive 94/9/EG (ATEX)
Input voltage U_i max.:	$\geq 15,5 \text{ V}$ ⁹⁾
Input power P_i max.:	$\geq 100 \text{ mW}$ ¹⁰⁾
Input current I_i max.:	$\geq 53 \text{ mA}$ ¹¹⁾
Pojemność wewnętrzna:	80 nF ¹²⁾
Pojemność zewnętrzna:	$0 \mu\text{H}$ ¹³⁾
UL File-No.:	Ex II 2G EEx ia op is IIC T4, ATEX Nr. PTB08 ATEX 2029
Kategoria strefy zagrożonej:	2G

¹⁾ Limit values, supply with switching amplifier EN2Ex (internal resistor approx. 1 kOhm) ²⁾ May not exceed or fall short of V_S ³⁾ Signal transit time with resistive load ⁴⁾
 With light/dark ratio 1:1 ⁵⁾ Connection rotatable by 90° ⁶⁾ Reference voltage 50 V DC ⁷⁾ $A = V_S$ connections reverse-polarity protected ⁸⁾ C = interference suppression
⁹⁾ ¹⁰⁾ ¹¹⁾ ¹²⁾ ¹³⁾ For connection to a sperately certified intrinsically safe circuit only

Dimensional drawing

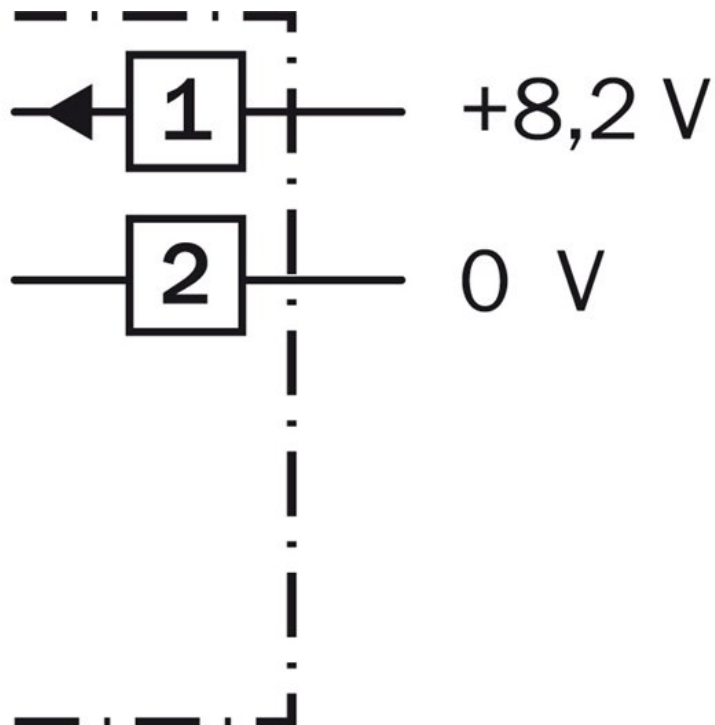


Adjustments possible

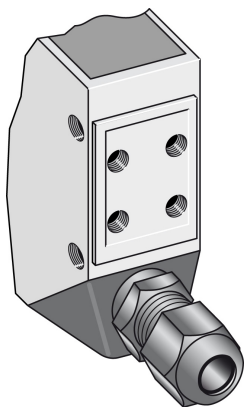


|2| LED signal strength indicator
|8| Sensitivity adjustment

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