



Photoelectric sensors W24-2 Ex, Photoelectric retro-reflective sensor

WL24-2X230



Model Name > [WL24-2X230](#)
Part No. > [1026036](#)



Illustration may differ

At a glance

- Classification: EX II 2G Ex ia op is IIC T4 according to Directive 94/9/EC (ATEX)
- Corresponds to Category 2G
- Output type: EN 60947-5-6 (NAMUR)
- Long sensing range
- Red light
- M12 or terminal chamber connection: 90° rotatable
- Durable metal housing

Your benefits

- Allows longer sensing range despite the limited factors of the norms for Category 2G (ATEX, explosive environments)
- Metal housing that has been IP 69K tested provides reliability and a long service life
- Flexible installation due to 90° rotatable connector



Features

Sensor/detection principle:	Photoelectric retro-reflective sensor
Dimensions (W x H x D):	27 mm x 87.5 mm x 65 mm
Housing design (light emission):	Rectangular
Sensing range max.:	0 m ... 22 m ¹⁾
Sensing range:	0 mm ... 15 mm ²⁾
Type of light:	Visible red light
Light source:	LED ³⁾
Light spot diameter (distance):	Ø 250 mm (15 m)
Sensitivity adjustment:	Sensitivity adjustment

^{1) 2)} PL80A ³⁾ Average service life 100,000 h at Ta = +25 °C

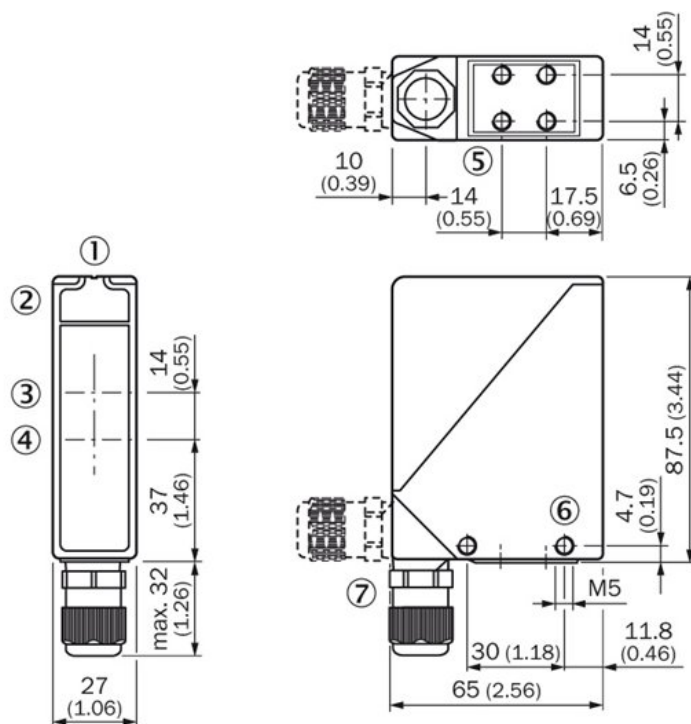
Mechanics/electronics

Supply voltage:	5 V DC ... 15.5 V DC ¹⁾
Ripple:	< 0.4 Vpp ²⁾
Output type:	NAMUR, Light-switching
Response time:	≤ 10 ms ³⁾
Switching frequency:	50 Hz ⁴⁾
Connection type:	Terminal connection with M16 gland ⁵⁾
Circuit protection:	A, C ^{6) 7)}

Protection class:	II ⁸⁾
Weight:	330 g
Polarisation filter:	✓
Housing material:	Zinc diecast
Optics material:	Glass
Enclosure rating:	IP 67
EC Approval Certificate:	PTB 08 ATEX 2029
ATEX marking:	II 2G Ex ia op is IIC T4 according to directive 94/9/EG (ATEX)
Hazardous area category:	2G
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⁾
Internal capacitance C_i max.:	80 nF ¹²⁾
Internal inductance L_i max.:	$0 \mu\text{H}$ ¹³⁾
Ambient operating temperature:	$-20^\circ\text{C} \dots 60^\circ\text{C}$
Ambient storage temperature:	$-25^\circ\text{C} \dots 70^\circ\text{C}$
UL File-No.:	Ex II 2G EEx ia op is IIC T4, ATEX Nr. PTB08 ATEX 2029

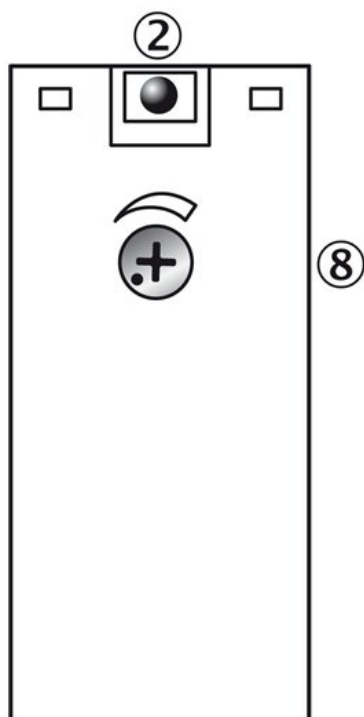
¹⁾ Limit values, supply with switching amplifier EN2Ex (internal resistor approx. 1 kOhm) ²⁾ May not exceed or fall short of V_S ³⁾ Signal transit time with resistive load ⁴⁾
 With light/dark ratio 1:1 ⁵⁾ Connection rotatable by 90° ⁶⁾ $A = V_S$ connections reverse-polarity protected ⁷⁾ C = interference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

Dimensional drawing



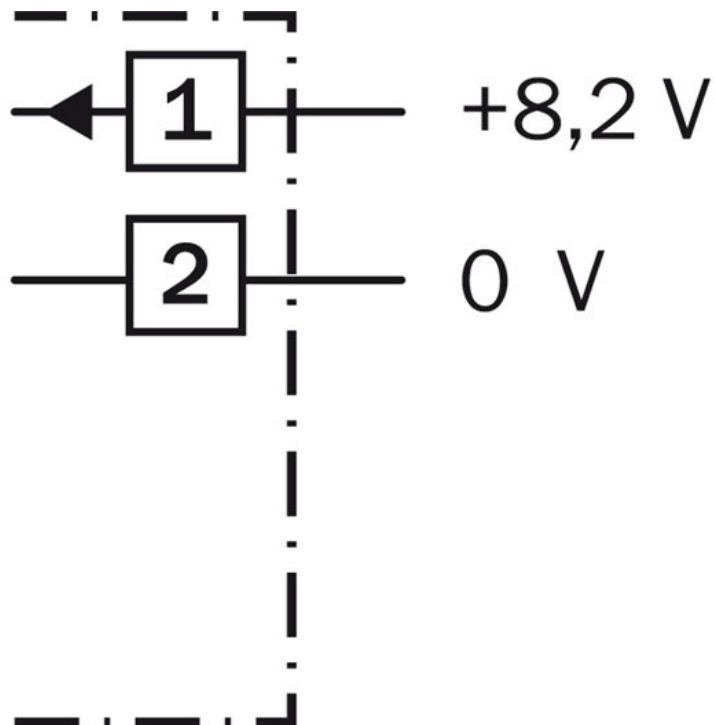
- [1] Alignment sight
- [2] LED signal strength indicator
- [3] Center of optical axis, sender
- [4] Center of optical axis, receiver
- [5] M5 threaded mounting hole, 6 mm deep
- [6] M5 threaded mounting hole, through-hole
- [7] M16 screw fixing rotatable by 90°

Adjustments possible

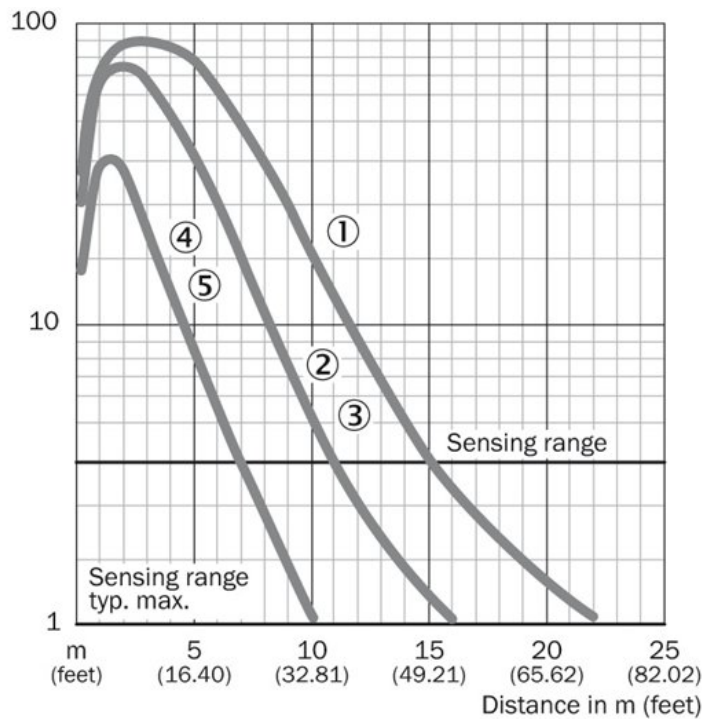


|2| LED signal strength indicator
|8| Sensitivity adjustment

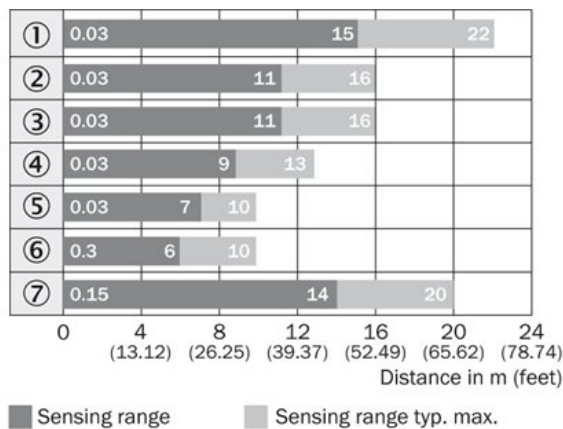
Connection diagram



Characteristic curve



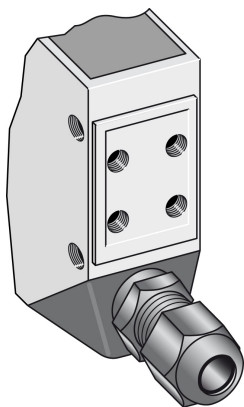
Sensing range diagram



Reflector type

- ① PL80A
- ② PL50A
- ③ PL40A
- ④ PL30A
- ⑤ PL20A
- ⑥ Diamond Grade (20 cm x 20 cm)
- ⑦ C110

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