



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

WL24-2X430



Model Name > [WL24-2X430](#)
Part No. > [1026037](#)



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⁾
Adjustment:	Sensitivity adjustment
Light spot size (distance):	Ø 250 mm (15 m)

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

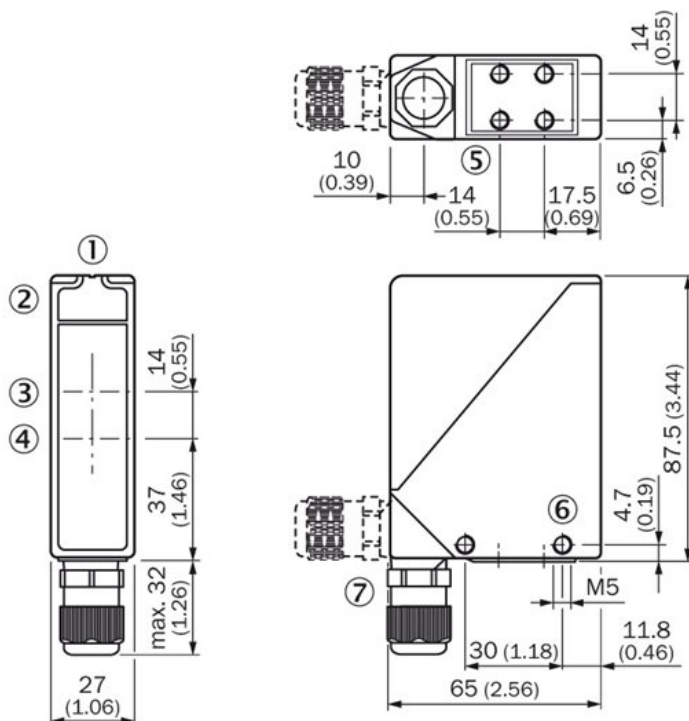
Mechanics/electronics

Supply voltage:	5 V DC ... 15.5 V DC ¹⁾
Output type:	NAMUR
Switching mode:	Light switching
Response time:	≤ 10 ms ²⁾
Switching frequency:	50 Hz ³⁾
Connection type:	Connector M12, 4-pin ⁴⁾
Circuit protection:	A, C ^{5) 6)}

Protection class:	II ⁷⁾
Weight:	330 g
Polarisation filter:	✓
Front screen heating:	-
Special device:	-
Housing material:	Metal, 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.:	$\leq 15.5 \text{ V}$ ⁸⁾
Input power P_i max.:	$\leq 100 \text{ mW}$ ⁹⁾
Input current I_i max.:	$\leq 53 \text{ mA}$ ¹⁰⁾
Internal capacitance C_i max.:	80 nF ¹¹⁾
Internal inductance L_i max.:	$0 \mu\text{H}$ ¹²⁾
Ambient operating temperature:	$-20 \text{ }^\circ\text{C} \dots 60 \text{ }^\circ\text{C}$
Ambient storage temperature:	$-25 \text{ }^\circ\text{C} \dots 70 \text{ }^\circ\text{C}$
UL File No.:	Ex II 2G EEx ia op is IIC T4, ATEX Nr. PTB08 ATEX 2029

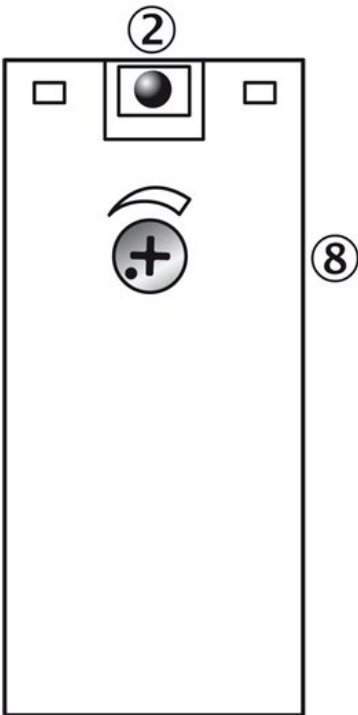
¹⁾ Limit values, supply with switching amplifier EN2Ex (internal resistor approx. 1 kOhm) ²⁾ Signal transit time with resistive load ³⁾ With light/dark ratio 1:1 ⁴⁾
Connection rotatable by 90° ⁵⁾ $A = V_S$ connections reverse-polarity protected ⁶⁾ C = interference suppression ⁷⁾ Reference voltage 50 V DC ⁸⁾ ⁹⁾ ¹⁰⁾ ¹¹⁾ ¹²⁾ For
connection to a separately certified intrinsically safe circuit only

Dimensional drawing



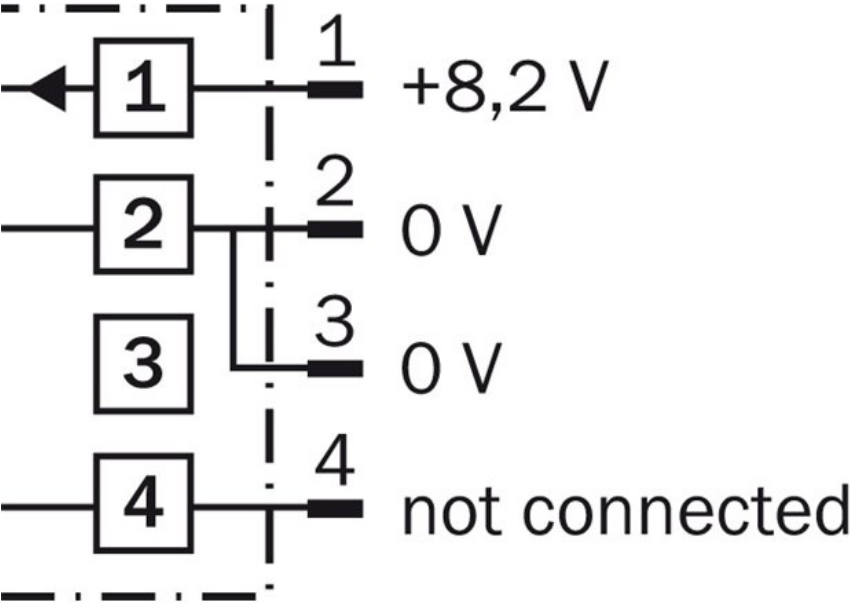
- [1] Alignment sight
- [2] LED signal strength indicator
- [3] Center of optical axis, sender
- [4] Center of optical axis, receiver
- [5] M5 threaded mounting hole, 6 mm deep
- [6] M5 threaded mounting hole, through-hole
- [7] M16 screw fixing rotatable by 90°

Adjustments possible

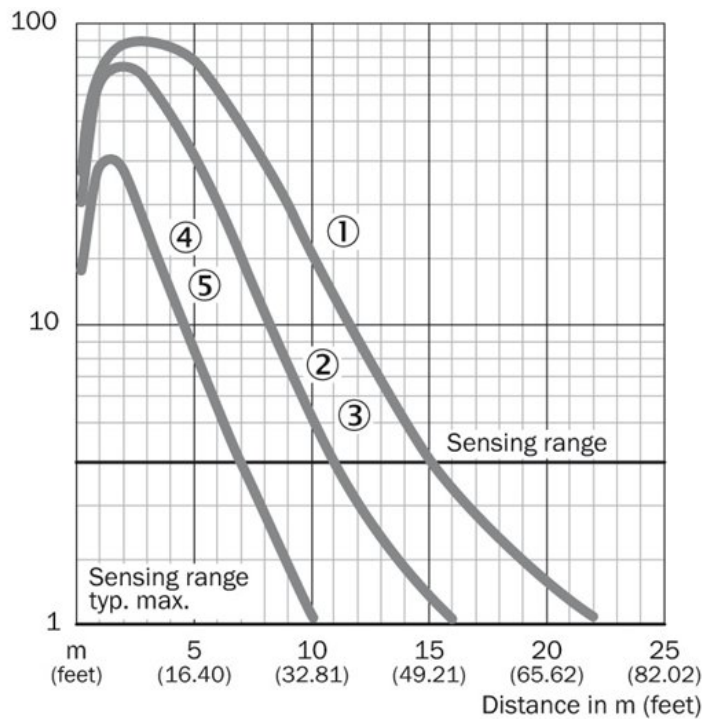


- |2| LED signal strength indicator
- |8| Sensitivity adjustment

Connection diagram

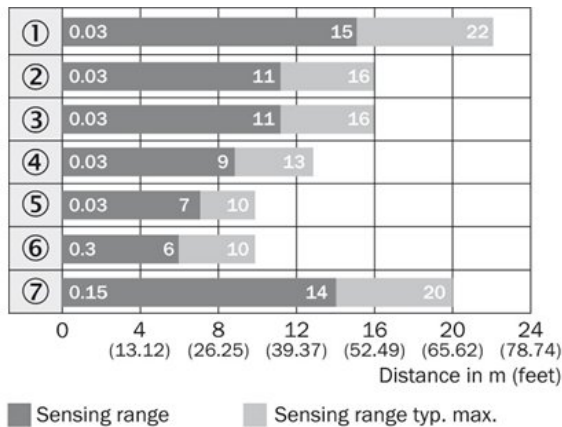


Characteristic curve



- |1| PL80A
- |2| PL50A
- |3| PL40A
- |4| PL30A
- |5| PL20A

Sensing range diagram

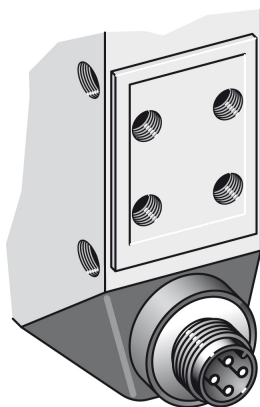


- |1| PL80A
- |2| PL50A
- |3| PL40A
- |4| PL30A
- |5| PL20A
- |6| Reflective tape Diamond Grade
- |7| C110A

Reflector type

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

Connection type



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