Product data sheet

WLL24-2X230

WLL24

FIBER-OPTIC SENSORS

SICK
Sensor Intelligence.

Illustration may differ

Ordering information

Type	Part no.
WLL24-2X230	1026038

Other models and accessories ➜ www.sick.com/WLL24

Detailed technical data

Features

Device type	Fiber-optic sensors
Device type detail	Stand-alone
Dimensions (W x H x D)	27 mm x 87.5 mm x 74.7 mm
Housing design (light emission)	Rectangular
Sensing range max.	0 mm ... 40 mm [1] 0 ... 25 mm [2] 0 ... 10 mm [3]
Sensing range	0 mm ... 40 mm, Proximity system [4] 0 ... 1,000 mm, Through-beam system [5] 0 ... 100 mm, Through-beam system [6]
Type of light	Visible red light
Light source	LED [7]
Adjustment	Potentiometer
Indication	LED

[1] Object with 90% remission (based on standard white, DIN 5033).
[2] Object with 18 % reflectance (referred to gray).
[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 T_U = +25 °C.

Mechanics/electronics

Supply voltage U_B	5 V DC ... 15.5 V DC [1]
Ripple	≤ 0.4 V_{pp} [2]
Switching output	NAMUR
Switching mode	Light switching
Response time	≤ 10 ms [3]
Switching frequency	50 Hz [4]
Connection type	Terminal connection with M16 gland [5]
Circuit protection	A [6] C [7]
Protection class	II [8]
Weight	330 g
Housing material	Metal, zinc diecast
Optics material	Glass, glass
Enclosure rating	IP65
Type approval certificate	PTB 08 ATEX 2029
ATEX marking	Ex II 2G Ex ia op is IIC T4 Gb according to directive 2014/34/EU
Ex area category	2G
Input voltage U_i max.	≤ 15.5 V [9]
Input power P_i max.	≤ 100 mW [9]
Input current I_i max.	≤ 53 mA [9]
Internal capacitance C_i max.	80 nF [9]
Internal inductance L_i max.	0 µH [9]
Ambient operating temperature	–20 °C ... +60 °C
Ambient temperature, storage	–25 °C ... +70 °C

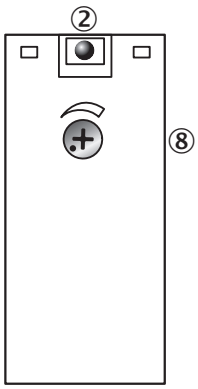
[1] Limit values, supply with switching amplifier EN2Ex (internal resistor approx. 1 kOhm).
[2] May not exceed or fall below U_V tolerances.
[3] Signal transit time with resistive load.
[4] With light/dark ratio 1:1.
[5] Connection rotable by 90°.
[6] A = V_S connections reverse-polarity protected.
[7]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

Classifications

ECLASS 5.0	27270905
ECLASS 5.1.4	27270905
ECLASS 6.0	27270905
ECLASS 6.2	27270905
ECLASS 7.0	27270905
ECLASS 8.0	27270905
ECLASS 8.1	27270905

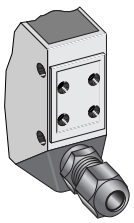
ECLASS 9.0	27270905
ECLASS 10.0	27270905
ECLASS 11.0	27270905
ECLASS 12.0	27270905
ETIM 5.0	EC002651
ETIM 6.0	EC002651
ETIM 7.0	EC002651
ETIM 8.0	EC002651
UNSPSC 16.0901	39121528

Adjustments



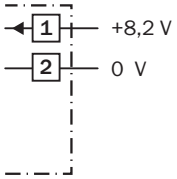
② LED signal strength indicator
⑧ Sensitivity control

Connection type

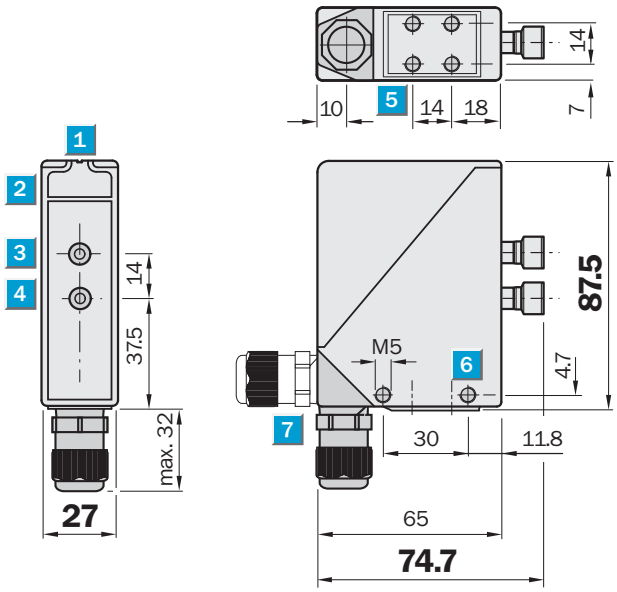


Connection diagram

Cd-050



Dimensional drawing (Dimensions in mm (inch))



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 and plug rotatable by 90°

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com