



WL24-2B430T01

W24-2

COMPACT PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	Part no.
WL24-2B430T01	1018484

Other models and accessories → www.sick.com/W24-2

Detailed technical data

Features

Functional principle	Photoelectric retro-reflective sensor
Functional principle detail	Dual lens
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 m ... 15 m ¹⁾
Type of light	Visible red light
Light source	LED ²⁾
Light spot size (distance)	Ø 250 mm (15 m)
Adjustment	Potentiometer
Special features	Teflon coated housing

¹⁾ Reflector PL80A.

²⁾ Average service life: 100,000 h at T_J = +25 °C.

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC ¹⁾
Ripple	< 5 V _{pp} ²⁾
Current consumption	50 mA ³⁾
Switching output	NPN

¹⁾ Limit values when operated in short-circuit protected network: max. 8 A.

²⁾ May not exceed or fall below U_V tolerances.

³⁾ Without load.

⁴⁾ Signal transit time with resistive load.

⁵⁾ With light/dark ratio 1:1.

⁶⁾ A = V_S connections reverse-polarity protected.

⁷⁾ C = interference suppression.

⁸⁾ D = outputs overcurrent and short-circuit protected.

⁹⁾ Reference voltage: 50 V DC.

	PNP
Switching mode	Light/dark switching
Switching mode selector	Selectable via PNP/NPN selector, selectable via light/dark selector
Output current I_{max}	≤ 100 mA
Response time	≤ 500 μs ⁴⁾
Switching frequency	1,000 Hz ⁵⁾
Connection type	Male connector M12, 4-pin
Circuit protection	A ⁶⁾ C ⁷⁾ D ⁸⁾
Protection class	II ⁹⁾
Weight	350 g
Polarisation filter	✓
Special device	✓
Housing material	Metal, zinc diecast
Enclosure rating	IP67
Test input sender off	TE to 0 V
Ambient operating temperature	-40 °C ... +60 °C
Ambient temperature, storage	-40 °C ... +75 °C
UL File No.	NRKH.E181493 & NRKH7.E181493

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Classifications

eCl@ss 5.0	27270902
eCl@ss 5.1.4	27270902
eCl@ss 6.0	27270902
eCl@ss 6.2	27270902
eCl@ss 7.0	27270902
eCl@ss 8.0	27270902
eCl@ss 8.1	27270902
eCl@ss 9.0	27270902
eCl@ss 10.0	27270902
eCl@ss 11.0	27270902
eCl@ss 12.0	27270902
ETIM 5.0	EC002717
ETIM 6.0	EC002717

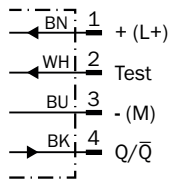
ETIM 7.0	EC002717
ETIM 8.0	EC002717
UNSPSC 16.0901	39121528

Connection type

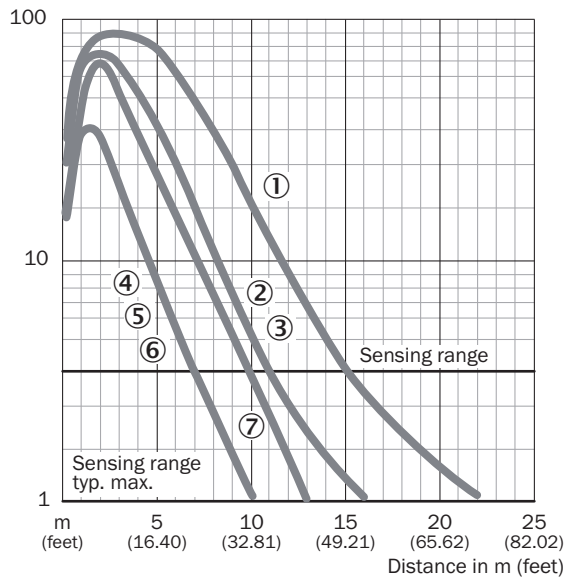


Connection diagram

Cd-117

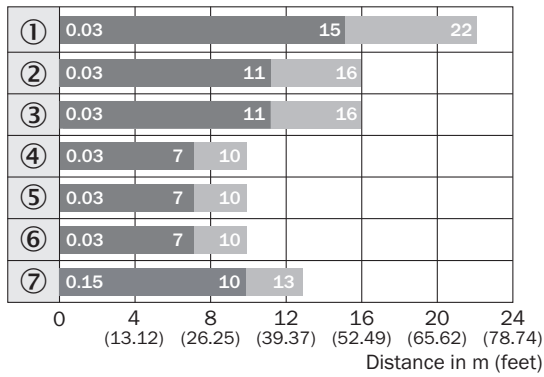


Characteristic curve



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

Sensing range diagram

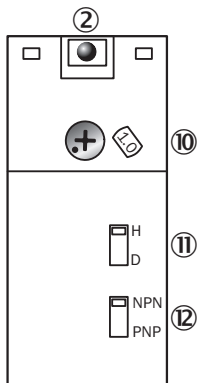


■ Sensing range ■ Sensing range max.

- ① Reflector PL80A
- ② Reflector PL50A
- ③ Reflector PL40A
- ④ Reflector PL30A
- ⑤ Reflector PL20A
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Adjustments

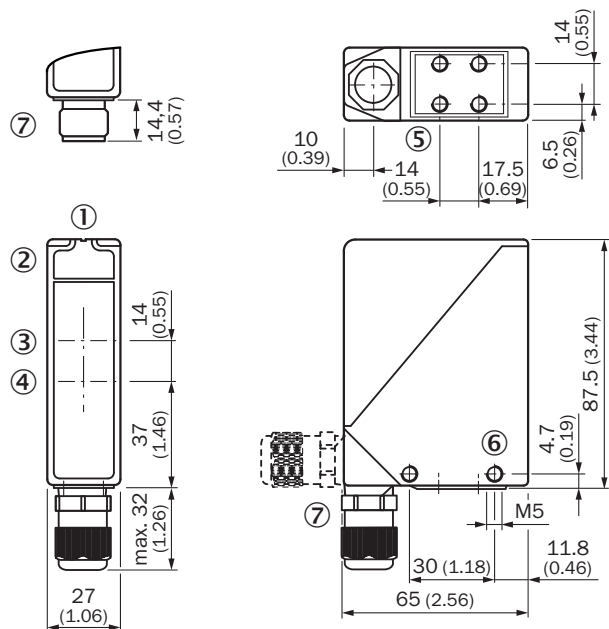
WT24-2, WL24-2, WS/WE24-2, DC



- ② LED signal strength indicator
- ⑩ Adjustment sensing range (WT) / sensitivity (WL, WS/WE)
- ⑪ Light/dark selector
- ⑫ NPN/PNP changeover switch

Dimensional drawing (Dimensions in mm (inch))





WL24-2




- 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°

Recommended accessories

Other models and accessories → www.sick.com/W24-2

	Brief description	Type	Part no.
Mounting brackets and plates			
	Mounting bracket, large, stainless steel, without mounting hardware for the sensor	BEF-WG-W24	4026324
	Universal mounting bracket for reflectors, steel, zinc coated	BEF-WN-REFX	2064574
Plug connectors and cables			
	Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YF2A14-050VB3XLEAX	2096235
	Head A: male connector, M12, 4-pin, straight Cable: unshielded	STE-1204-G	6009932

	Brief description	Type	Part no.
Reflectors			
	Rectangular, screw connection, 84 mm x 84 mm, PMMA/ABS, Screw-on, 2 hole mounting	PL80A	1003865

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