



WT24-2V540S10

W24-2

COMPACT PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

Ordering information



Type	Part no.
WT24-2V540S10	1018945

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

Illustration may differ



Detailed technical data

Features

Device type	Photoelectric sensors
Sensor/ detection principle	Photoelectric proximity sensor, Background suppression
Dimensions (W x H x D)	27 mm x 87.5 mm x 65 mm
Housing design (light emission)	Rectangular
Sensing range max.	100 mm ... 1,200 mm ¹⁾
Sensing range	100 mm ... 1,200 mm ¹⁾
Type of light	Visible red light
Light source	LED ²⁾
Light spot size (distance)	Ø 40 mm (1,200 mm)
Adjustment	Potentiometer
Alarm output	✓
Special features	Front lense made of glass

¹⁾ Object with 90% remission (based on standard white, DIN 5033).

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⁾

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.

Current consumption	50 mA ³⁾
Switching output	NPN 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, 5-pin
Circuit protection	A ⁶⁾ C ⁷⁾ D ⁸⁾
Protection class	II ⁹⁾
Weight	350 g
Special device	✓
Housing material	PTFE coating, zinc diecast
Optics material	Glass, glass
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

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.

Safety-related parameters

MTTF_D	796 years
DC_{avg}	0 %

Classifications

eCl@ss 5.0	27270904
eCl@ss 5.1.4	27270904
eCl@ss 6.0	27270904
eCl@ss 6.2	27270904
eCl@ss 7.0	27270904
eCl@ss 8.0	27270904
eCl@ss 8.1	27270904
eCl@ss 9.0	27270904
eCl@ss 10.0	27270904

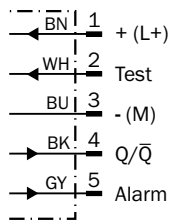
eCl@ss 11.0	27270904
eCl@ss 12.0	27270904
ETIM 5.0	EC002719
ETIM 6.0	EC002719
ETIM 7.0	EC002719
ETIM 8.0	EC002719
UNSPSC 16.0901	39121528

Connection type



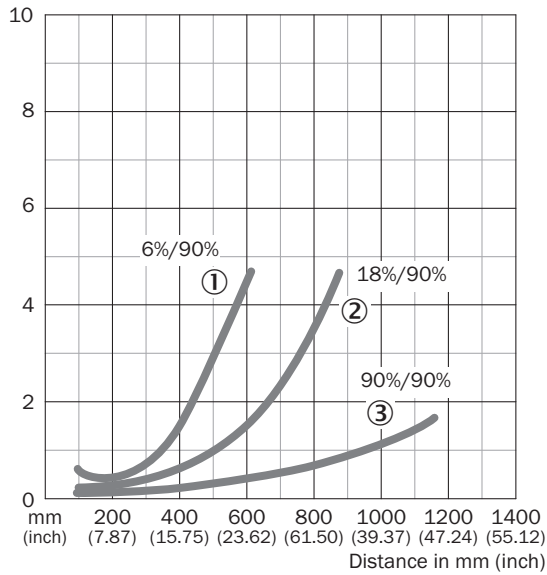
Connection diagram

Cd-150



Characteristic curve

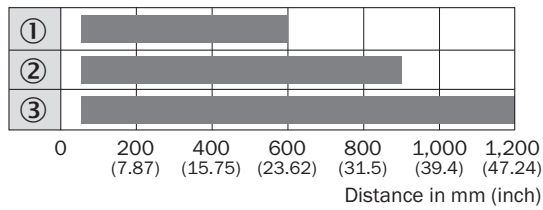
WT24-2, red light



- ① Sensing range on black, 6% remission
- ② Sensing range on gray, 18 % remission
- ③ Sensing range on white, 90% remission

Sensing range diagram

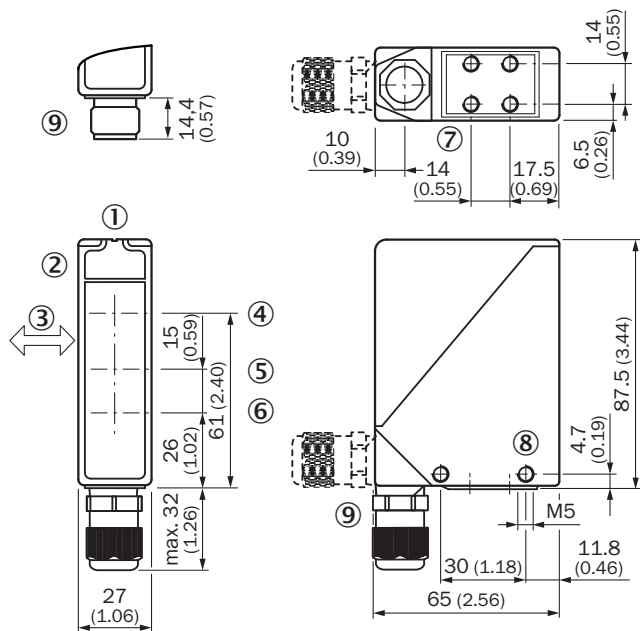
WT24-2, red light



- Sensing range
- ① Sensing range on black, 6% remission
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Dimensional drawing (Dimensions in mm (inch))



WT24-2



- ① Alignment sight
- ② LED signal strength indicator
- ③ Standard direction of the material being detected
- ④ Center of optical axis, sender
- ⑤ Center of optical axis, receiver (close range)
- ⑥ Center of optical axis, receiver (far range)
- ⑦ M5 threaded mounting hole, 6 mm deep
- ⑧ M5 threaded mounting hole, through-hole
- ⑨ 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
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

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:

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