



WT24-2R240

W24

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

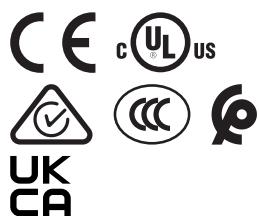
Ordering information



Type	part no.
WT24-2R240	1017854

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

Illustration may differ



Detailed technical data

Features

Functional principle	Photoelectric proximity sensor
Functional principle detail	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

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

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

Mechanics/electronics

Supply voltage U_B	20 V AC/DC ... 250 V AC/DC
Power consumption	< 2 VA
Switching output	Relay, electrically isolated ¹⁾

¹⁾ Provide suitable spark suppression for inductive or capacitive loads.

²⁾ With light/dark ratio 1:1.

³⁾ A = V_S connections reverse-polarity protected.

⁴⁾ C = interference suppression.

⁵⁾ Rated voltage: 250 V AC/DC.

⁶⁾ Static, low heat output, use in +5 °C ... +15 °C.

Output function	Change-over contacts
Switching mode	Light/dark switching ¹⁾
Switching mode selector	Selectable via light/dark selector
Switching current (switching voltage)	4 A @ 250 V AC, 4 A @ 24 V DC, 0.125 A @ 250 V DC UL: 4 A @ 250 V AC, general use / 4 A @ 250 V AC, resistive (NO) / 3 A @ 250 V AC, resistive (NC) / 4 A @ 24 V DC, NO, general use / 3 A @ 24 V DC, NC, general use / R300 / B300 (NO contacts only)
Response time	≤ 10 ms
Switching frequency	10 Hz ²⁾
Connection type	Terminal connection with M16 gland
Circuit protection	A ³⁾ C ⁴⁾
Protection class	II ⁵⁾
Weight	330 g
Front screen heating	6)
Housing material	Metal, zinc diecast
Optics material	Plastic, PMMA
Enclosure rating	IP67
Usage category	AC-15, DC-13 According to EN 60947-1
Ambient operating temperature	-40 °C ... +60 °C
Ambient temperature, storage	-40 °C ... +75 °C

1) Provide suitable spark suppression for inductive or capacitive loads.

2) With light/dark ratio 1:1.

3) A = V_S connections reverse-polarity protected.

4) C = interference suppression.

5) Rated voltage: 250 V AC/DC.

6) Static, low heat output, use in +5 °C ... +15 °C.

Safety-related parameters

MTTF_D	509 years
DC_{avg}	0 %
T_M (mission time)	20 years

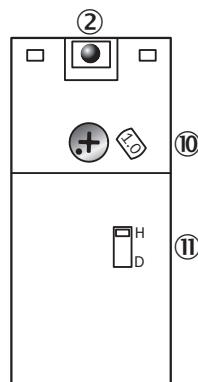
Certificates

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
CCC certificate	✓
cULus certificate	✓
Photobiological safety (DIN EN 62471) certificate	✓

Classifications

ECLASS 5.0	27270904
ECLASS 5.1.4	27270904
ECLASS 6.0	27270904
ECLASS 6.2	27270904
ECLASS 7.0	27270904
ECLASS 8.0	27270904
ECLASS 8.1	27270904
ECLASS 9.0	27270904
ECLASS 10.0	27270904
ECLASS 11.0	27270904
ECLASS 12.0	27270904
ETIM 5.0	EC002719
ETIM 6.0	EC002719
ETIM 7.0	EC002719
ETIM 8.0	EC002719
UNSPSC 16.0901	39121528

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

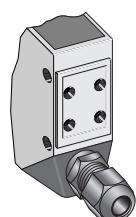


② LED signal strength indicator

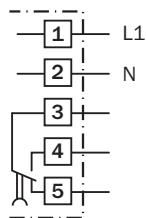
⑩ Adjustment sensing range (WT) / sensitivity (WL, WS/WE)

⑪ Light/dark selector

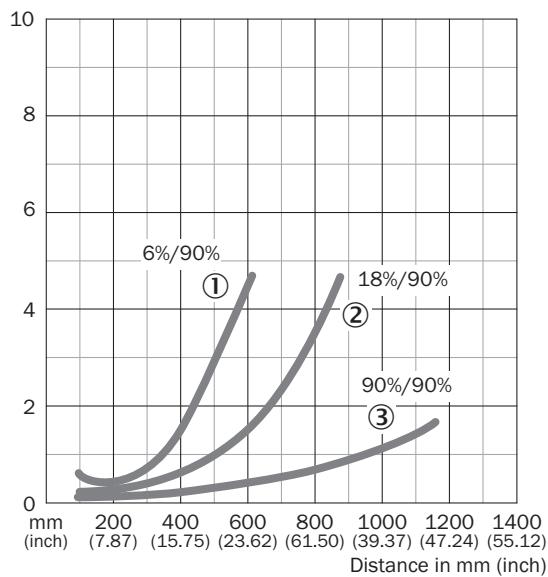
Connection type



Connection diagram Cd-167

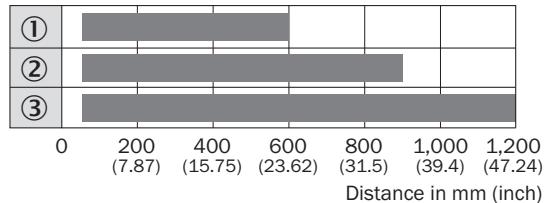


Characteristic curve WT24-2, red light



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

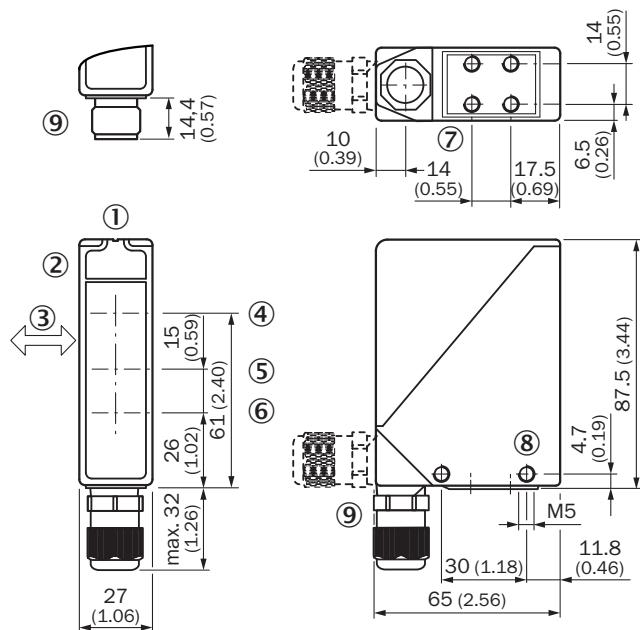
Sensing range diagram WT24-2, red light



■ Sensing range

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

Dimensional drawing WT24-2



Dimensions in mm (inch)

- 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

	Brief description	Type	part no.
	<p>• Description: Mounting bracket, large</p> <p>• Material: Stainless steel</p> <p>• Details: Stainless steel</p> <p>• Items supplied: Without mounting hardware for the sensor</p> <p>• Suitable for: W24-2</p>	BEF-WG-W24	4026324
	<p>• Description: Mounting bracket</p> <p>• Material: Stainless steel</p> <p>• Details: Stainless steel (1.4301)</p> <p>• Items supplied: Mounting hardware included</p> <p>• Suitable for: W24-2, W34</p>	BEF-WN-W24	2015248

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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."

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