



# WT24-2R210

W24-2

PHOTOELECTRIC SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



### Ordering information

Type	Part no.
WT24-2R210	1016932

Other models and accessories → [www.sick.com/W24-2](http://www.sick.com/W24-2)

### Detailed technical data

#### Features

<b>Sensor/detection principle</b>	Photoelectric proximity sensor, Background suppression
<b>Dimensions (W x H x D)</b>	27 mm x 87.5 mm x 65 mm
<b>Housing design (light emission)</b>	Rectangular
<b>Sensing range max.</b>	100 mm ... 2,500 mm <sup>1)</sup>
<b>Sensing range</b>	100 mm ... 2,500 mm <sup>1)</sup>
<b>Type of light</b>	Infrared light
<b>Light source</b>	LED <sup>2)</sup>
<b>Light spot size (distance)</b>	Ø 80 mm (2,500 mm)
<b>Adjustment</b>	PotentiometerPotentiometer

<sup>1)</sup> Object with 90 % reflectance (referred to standard white, DIN 5033)

<sup>2)</sup> Average service life: 100,000 h at T<sub>J</sub> = +25 °C.

#### Mechanics/electronics

<b>Supply voltage</b>	12 V DC ... 240 V DC <sup>1)</sup> 24 V AC ... 240 V AC <sup>2)</sup>
<b>Power consumption</b>	< 2 VA
<b>Output type</b>	Relay, electrically isolated <sup>3)</sup>
<b>Output function</b>	Change-over contacts
<b>Switching mode</b>	Light/dark switching <sup>3)</sup>
<b>Switching mode selector</b>	Selectable via light/dark selector

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

<sup>2)</sup> +- 10 %.

<sup>3)</sup> Provide suitable spark suppression for inductive or capacitive loads.

<sup>4)</sup> With light/dark ratio 1:1.

<sup>5)</sup> A = V<sub>S</sub> connections reverse-polarity protected.

<sup>6)</sup> C = interference suppression.

<sup>7)</sup> Rated voltage: 250 V AC/DC.

<b>Switching current (switching voltage)</b>	4 A (250 V AC) 4 A (24 V DC)
<b>Response time</b>	≤ 10 ms
<b>Switching frequency</b>	10 Hz <sup>4)</sup>
<b>Connection type</b>	Terminal connection with M16 gland
<b>Circuit protection</b>	A <sup>5)</sup> C <sup>6)</sup>
<b>Protection class</b>	II <sup>7)</sup>
<b>Weight</b>	330 g
<b>Housing material</b>	Zinc diecastmetal
<b>Optics material</b>	Plastic, PMMA
<b>Enclosure rating</b>	IP 67
<b>Usage category</b>	AC-15, DC-13, according to EN 60947-1
<b>Ambient operating temperature</b>	-40 °C ... +60 °C
<b>Ambient storage temperature</b>	-40 °C ... +75 °C

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

2) +- 10 %.

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

4) With light/dark ratio 1:1.

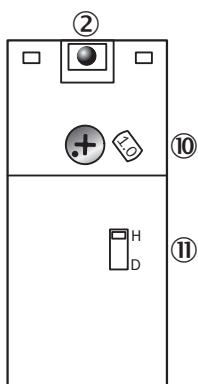
5) A = V<sub>S</sub> connections reverse-polarity protected.

6) C = interference suppression.

7) Rated voltage: 250 V AC/DC.

## Adjustments possible

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



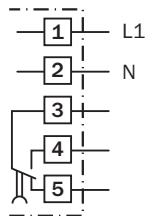
② LED signal strength indicator

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

⑪ Light/dark selector

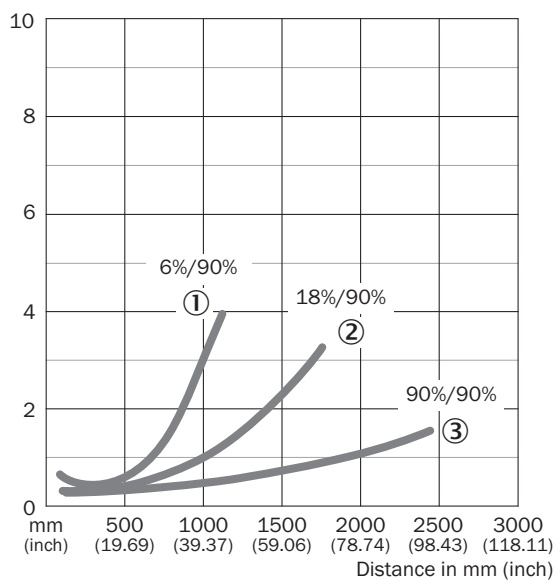
### Connection diagram

Cd-167



### Characteristic curve

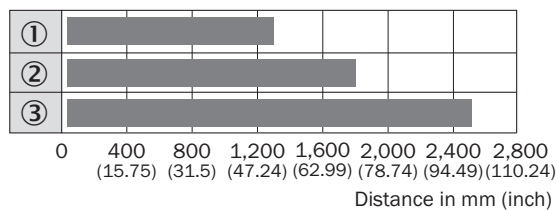
WT24-2, infrared light



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

### Sensing range diagram

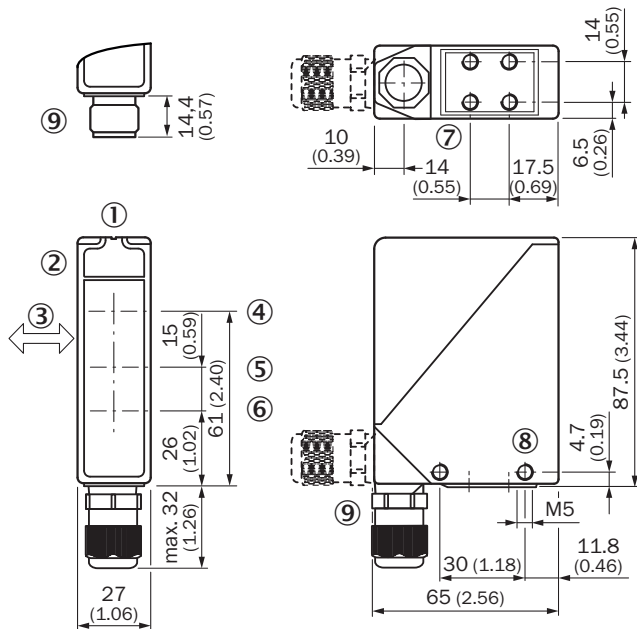
WT24-2, infrared light



- 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](http://www.sick.com/W24-2)

	Brief description	Type	Part no.
<b>Universal bar clamp systems</b>			
	Universal bar clamp for mounting bars with 12 mm diameter, Zinc diecast, without mounting plate and screws	BEF-KHS-KH3	5322626
	Plate N04 for universal clamp, steel, Zinc plated steel (sheet), Zinc die cast (clamping bracket), Universal clamp (5322626), mounting hardware	BEF-KHS-N04	2051610
<b>Device protection (mechanical)</b>			
	Water cooling plate	BEF-KP-W24	2015071
	Dust protection tube, air-purged, Aluminum (anodised), mounting hardware included	OBS-W24	2015069

	<b>Brief description</b>	<b>Type</b>	<b>Part no.</b>
	Weather hood for universal clamp bracket, steel, zinc coated, mounting hardware included	OBW-KHS-M01	2023240
	Weather hood, Aluminum (anodised), mounting hardware included	OBW-W24	2015070
		WSG1-01	1018470
<b>Mounting brackets and mounting plates</b>			
	Mounting bracket, small, Stainless steel, without mounting hardware	BEF-WK-W24	4027532
	Mounting bracket, Stainless steel (1.4301), mounting hardware included	BEF-WN-W24	2015248

## 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](http://www.sick.com)