



## W24

For harsh industrial environments or zone 1 Ex areas thanks to device category 2G

**SICK**  
Sensor Intelligence.



### Technical data overview

<b>Dimensions (W x H x D)</b>	27 mm x 87.5 mm x 65 mm 38 mm x 154.5 mm x 77 mm
<b>Functional principle detail</b>	Background suppression Foreground suppression Dual lens (depending on type)
<b>Light source</b>	LED
<b>Type of light</b>	Infrared light / visible red light (depending on type)
<b>Enclosure rating</b>	IP67 / IP69K (depending on type)
<b>Housing material</b>	Metal / PTFE coating (depending on type)
<b>Adjustment</b>	Potentiometer

### Product description

W24 photoelectric sensors are characterized by their long service life: The sensor and control elements are protected by a zinc die cast housing, which is also available with IP69 enclosure rating. Even in adverse ambient conditions, a powerful front screen heater ensures reliable detection results. The high ambient light immunity and the high operating reserve enable use in harsh industrial environments. And the integrated diagnostic functions of the sensors enable predictive maintenance, to name one example. This reduces downtime. For applications in explosion-hazardous areas, SICK also offers the W24 photoelectric sensors as variants that meet the requirements of device category 2G.

### At a glance

- Rugged zinc die cast housing
- ASIC from SICK
- Standardized swiveling M12 male connector or M16 fitting as well as light/dark switching
- Protected control elements and optional integrated standard or powerful front screen heater
- High operating reserve
- Available either as DC or AC/DC variants

### Your benefits

- High stability and a long service life
- Fault-free system operation due to high ambient light immunity of the sensors
- High flexibility thanks to numerous assembly options
- A wide range of uses in harsh industrial environments
- High plant availability
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## Ordering information

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

- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression
- **Light source:** LED
- **Voltage type:** DC
- **Switching mode:** Light/dark switching
- **Type of light:** Infrared light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
100 mm ... 2,500 mm	NPN, PNP	Potentiometer	Cubic connector, 3-pin	WT24-2B313	1017884
			Male connector M12, 4-pin	WT24-2B410	1016933
				WT24-2B410S25	1052138
				WT24-2B420	1017885
				WT24-2B420S14	1023363
			Male connector M12, 5-pin	WT24-2V510	1017855
				WT24-2V510S15	1023637
			Terminal connection with M16 gland	WT24-2B210	1016931
				WT24-2B220	1017882
				WT24-2V210S09	1018311
				WT24-2V220	1017886
			300 mm ... 900 mm	NPN, PNP	Potentiometer

- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression
- **Light source:** LED
- **Voltage type:** AC/DC
- **Switching mode:** Light/dark switching
- **Type of light:** Infrared light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
100 mm ... 2,000 mm	Relay	Potentiometer	Terminal connection with M16 gland	WT24-2R210S11	1019359
100 mm ... 2,500 mm	Relay	Potentiometer	Micro connector, 5-pin	WT24-2R519	1018315
			Mini connector 7/8", 5-pin	WT24-2R518	1018317
			Terminal connection with M16 gland	WT24-2R210	1016932
				WT24-2R210S03	1017856
			WT24-2R220	1016854	

- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression
- **Light source:** LED
- **Voltage type:** DC
- **Switching mode:** Light/dark switching
- **Type of light:** visible red light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
100 mm ... 1,200 mm	NPN, PNP	Potentiometer	Cubic connector, 3-pin	WT24-2B343	1018026
			Male connector M12, 4-pin	WT24-2B440	1016934
				WT24-2B440T01	1017911
			Male connector M12, 5-pin	WT24-2V540	1017888
				WT24-2V540S10	1018945
				WT24-2V550S12	1019468
			Terminal connection with M16 gland	WT24-2B240	1017813
				WT24-2B240S13	1022293
				WT24-2B250	1017883

- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression
- **Light source:** LED
- **Voltage type:** AC/DC
- **Switching mode:** Light/dark switching
- **Type of light:** visible red light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
100 mm ... 1,200 mm	Relay	Potentiometer	Micro connector, 5-pin	WT24-2R549	1018316
			Mini connector 7/8", 5-pin	WT24-2R548	1018318
			Terminal connection with M16 gland	WT24-2R240	1017854
				WT24-2R250	1016820

- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Foreground suppression
- **Light source:** LED
- **Voltage type:** DC
- **Switching mode:** Light/dark switching
- **Type of light:** visible red light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
100 mm ... 1,200 mm	NPN, PNP	Potentiometer	Male connector M12, 4-pin	WT24-2B470	1019224

- **Functional principle:** Photoelectric retro-reflective sensor
- **Functional principle detail:** Dual lens
- **Light source:** LED
- **Voltage type:** DC
- **Switching mode:** Light/dark switching
- **Type of light:** visible red light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.		
0 m ... 22 m	NPN, PNP	Potentiometer	Cubic connector, 3-pin	WL24-2B333	1017878		
			Male connector M12, 4-pin	WL24-2B430	1017860		
				WL24-2B430T01	1018484		
				WL24-2B440	1017879		
			Male connector M12, 5-pin	WL24-2V530	1017881		
				WL24-2V530S04	1023550		
				WL24-2V540	1018025		
			Terminal connection with M16 gland	WL24-2B230	1015852		
				WL24-2B230S02	1018954		
				WL24-2B240	1017859		
				WL24-2V230	1017880		
				WL24-2V240	1018024		
						WL24-2V240S03	1019466

- **Functional principle:** Photoelectric retro-reflective sensor
- **Functional principle detail:** Dual lens
- **Light source:** LED
- **Voltage type:** AC/DC
- **Switching mode:** Light/dark switching
- **Type of light:** visible red light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
0 m ... 22 m	Relay	Potentiometer	Mini connector 7/8", 5-pin	WL24-2R538	1018313
			Terminal connection with M16 gland	WL24-2R230	1017857
				WL24-2R240	1017858

- **Functional principle:** Through-beam photoelectric sensor
- **Light source:** LED
- **Voltage type:** DC
- **Switching mode:** Light/dark switching
- **Type of light:** visible red light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
0 m ... 60 m	NPN, PNP	Potentiometer	Cubic connector, 3-pin	WS/WE24-2B333	1017874
			Male connector M12, 4-pin	WS/WE24-2B430	1017853
				WS/WE24-2B440	1017875
			Male connector M12, 5-pin	WS/WE24-2S01	1023549
				WS/WE24-2V530	1017877
			Terminal connection with M16 gland	WS/WE24-2B230	1017861
				WS/WE24-2B240	1017862
WS/WE24-2V230	1017876				

- **Functional principle:** Through-beam photoelectric sensor
- **Light source:** LED
- **Voltage type:** AC/DC
- **Switching mode:** Light/dark switching
- **Type of light:** visible red light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
0 m ... 60 m	Relay	Potentiometer	Terminal connection with M16 gland	WS/WE24-2R230	1017863
				WS/WE24-2R240	1017864

- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression
- **Light source:** LED
- **Voltage type:** DC
- **Switching mode:** Light switching
- **Type of light:** Infrared light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
40 mm ... 2,000 mm	NAMUR	Potentiometer	Male connector M12, 4-pin	WT24-2X400	1040722
			Terminal connection with M16 gland	WT24-2X200	1041910
				WT24-2X260	1025684

- **Functional principle:** Photoelectric retro-reflective sensor
- **Light source:** LED
- **Voltage type:** DC
- **Switching mode:** Light switching
- **Type of light:** visible red light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
0 m ... 22 m	NAMUR	Potentiometer	Male connector M12, 4-pin	WL24-2X430	1026037
			Terminal connection with M16 gland	WL24-2X230	1026036

- **Functional principle:** Photoelectric retro-reflective sensor
- **Light source:** LED
- **Voltage type:** DC
- **Switching mode:** Light/dark switching, Light/dark switching
- **Type of light:** visible red light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
0 m ... 22 m	NPN, PNP	Potentiometer	Male connector M12, 5-pin	WL24-2V530S06	1027613

## 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)