



W24

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

SICK
Sensor Intelligence.



Technical data overview

Dimensions (W x H x D)	27 mm x 87.5 mm x 65 mm 38 mm x 154.5 mm x 77 mm
Functional principle detail	Background suppression Foreground suppression With minimum distance to reflector (dual lens system) (depending on type)
Light source	LED
Type of light	Infrared light / visible red light (depending on type)
Enclosure rating	IP67 / IP69K (depending on type)
Housing material	Metal
Adjustment	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

Ordering information

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

- **Sensing range max.:** 100 mm ... 2,500 mm
- **Functional principle:** Photoelectric proximity sensor
- **Switching mode:** Light/dark switching
- **Functional principle detail:** Background suppression
- **Light source:** LED
- **Type of light:** Infrared light
- **Adjustment:** Potentiometer

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

- **Sensing range max.:** 100 mm ... 2,000 mm
- **Functional principle:** Photoelectric proximity sensor
- **Switching mode:** Light/dark switching
- **Functional principle detail:** Background suppression
- **Light source:** LED

Switching output	Type of light	Connection type	Adjustment	Type	Part no.
Relay	Infrared light	Terminal connection with M16 gland	Potentiometer	WT24-2R210S11	1019359

- **Sensing range max.:** 300 mm ... 900 mm
- **Functional principle:** Photoelectric proximity sensor
- **Switching mode:** Light/dark switching
- **Functional principle detail:** Background suppression
- **Light source:** LED

Switching output	Type of light	Connection type	Adjustment	Type	Part no.
NPN, PNP	Infrared light	Male connector M12, 4-pin	Potentiometer	WT24-2B420S22	1029268

- **Sensing range max.:** 100 mm ... 1,200 mm
- **Functional principle:** Photoelectric proximity sensor
- **Switching mode:** Light/dark switching
- **Light source:** LED
- **Type of light:** visible red light
- **Adjustment:** Potentiometer

Functional principle detail	Switching output	Connection type	Type	Part no.
Background suppression	NPN, PNP	Plug, M12, 5-pin	WT24-2V540	1017888
			WT24-2V540S10	1018945
			WT24-2V550S12	1019468
		Cubic connector, 3-pin	WT24-2B343	1018026
		Male connector M12, 4-pin	WT24-2B440	1016934
			WT24-2B440T01	1017911
		Terminal connection with M16 gland	WT24-2B240	1017813
			WT24-2B240S13	1022293
			WT24-2B250	1017883
			WT24-2V250	1017887
	Relay	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
Foreground suppression	NPN, PNP	Male connector M12, 4-pin	WT24-2B470	1019224

- **Sensing range max.:** 0 m ... 22 m
- **Functional principle:** Photoelectric retro-reflective sensor
- **Switching mode:** Light/dark switching
- **Functional principle detail:** With minimum distance to reflector (dual lens system)
- **Light source:** LED
- **Type of light:** visible red light
- **Adjustment:** Potentiometer

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

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

- **Sensing range max.:** 0 m ... 60 m
- **Functional principle:** Through-beam photoelectric sensor
- **Switching mode:** Light/dark switching
- **Light source:** LED
- **Type of light:** visible red light
- **Adjustment:** Potentiometer

Switching output	Connection type	Type	Part no.
NPN, PNP	Plug, M12, 5-pin	WS/WE24-2S01	1023549
		WS/WE24-2V530	1017877
	Cubic connector, 3-pin	WS/WE24-2B333	1017874
	Male connector M12, 4-pin	WS/WE24-2B430	1017853
		WS/WE24-2B440	1017875
	Terminal connection with M16 gland	WS/WE24-2B230	1017861
		WS/WE24-2B240	1017862
		WS/WE24-2V230	1017876
Relay	Terminal connection with M16 gland	WS/WE24-2R230	1017863
		WS/WE24-2R240	1017864

- **Sensing range max.:** 40 mm ... 2,000 mm
- **Info:** ATEX II 2G Ex ia op is IIC T4 Gb according to directive 2014/34/EU PTB 03 ATEX 2105 In the framework of directive 2014/34 / EU (ATEX) and DIN EN ISO/IEC 80079-34, we would like to point out that the traceability of the ordered device to your customer is your responsibility (documentation of your customer and associated product data, such as part number, datcode, serial number)
- **Functional principle:** Photoelectric proximity sensor
- **Switching mode:** Light switching
- **Functional principle detail:** Background suppression
- **Light source:** LED
- **Switching output:** NAMUR
- **Type of light:** Infrared light
- **Adjustment:** Potentiometer

Connection type	Type	Part no.
Male connector M12, 4-pin	WT24-2X400	1040722
Terminal connection with M16 gland	WT24-2X200	1041910
	WT24-2X260	1025684

- **Sensing range max.:** 0 m ... 22 m
- **Info:** ATEX II 2G Ex ia op is IIC T4 Gb according to directive 2014/34/EU PTB 08 ATEX 2029 In the framework of directive 2014/34 / EU (ATEX) and DIN EN ISO/IEC 80079-34, we would like to point out that the traceability of the ordered device to your customer is your responsibility (documentation of your customer and associated product data, such as part number, datcode, serial number)
- **Functional principle:** Photoelectric retro-reflective sensor
- **Switching mode:** Light switching
- **Light source:** LED
- **Switching output:** NAMUR
- **Type of light:** visible red light
- **Adjustment:** Potentiometer

Connection type	Type	Part no.
Male connector M12, 4-pin	WL24-2X430	1026037
Terminal connection with M16 gland	WL24-2X230	1026036

- **Sensing range max.:** 0 m ... 22 m
- **Info:** ATEX II 3G Ex nA op is IIB T4 Gc X ATEX II 3D Ex tc IIB T135°C Dc X In accordance with directive 2014/34 / EU In the framework of directive 2014/34 / EU (ATEX) and DIN EN ISO/IEC 80079-34, we would like to point out that the traceability of the ordered device to your customer is your responsibility (documentation of your customer and associated product data, such as part number, datcode, serial number)
- **Functional principle:** Photoelectric retro-reflective sensor
- **Switching mode:** Light/dark switching, Light/dark switching

Light source	Switching output	Type of light	Connection type	Adjustment	Type	Part no.
LED	NPN, PNP	Visible red light	Plug, M12, 5-pin	Potentiometer	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