W250-2
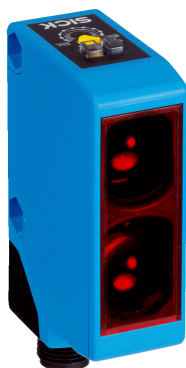
High performance in a compact housing for AC and DC applications

SICK
Sensor Intelligence.

W250-2

Technical data overview

Dimensions (W x H x D)	20 mm x 65 mm x 43.9 mm 20 mm x 60 mm x 43.9 mm
Functional principle detail	Background suppression / With minimum distance to reflector (dual lens system) (depending on type)
Light source	LED
Type of light	Visible red light
Enclosure rating	IP67
Housing material	Plastic
Adjustment	Potentiometer

Product description

The W250 family of photoelectric sensors is characterized by a special combination where both DC and AC/DC types are integrated in one highly compact housing. With a cable variant and a rotatable male connector variant, the W250 is highly flexible when it comes to system integration. Users are aided by an easy-to-read positioning indicator when adjusting sensitivity and sensing distance. Light/dark switching via a control cable cuts the number of device variants by half and reduces storage.

At a glance

- Easily visible red light thanks to BrightLight LED
- Potentiometer with a positioning indicator for adjusting the sensing range/sensitivity
- Light/dark switching via control cable
- Rotatable male connector or cable
- Variants for 10 … 30 V DC or 24 … 240 V DC / 24 … 240 V AC power supply in compact design
- BEF-W250 mounting bracket made of stainless steel (1.4301) included in delivery

Your benefits

- Mounting bracket is included to ease installation
- Visible red Bright Light LED for simpler alignment of the sensors
- Cable or rotatable M12 connector provide installation flexibility
- Operating mode (light/dark) is selectable via a control cable to reduce the number of device variants
- Variants with DC voltage and universal AC/DC voltage in the same housing provide increased flexibility

Ordering information

Other models and accessories → www.sick.com/W250-2

- **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 … 300 mm	NPN	Potentiometer	Cable, 4-wire, 2 m [1]	WTB250-2N1131	6044672
			Male connector M12, 4-pin [2]	WTB250-2N2431	6044673
	PNP	Potentiometer	Cable, 4-wire, 2 m [1]	WTB250-2P1131	6044674
			Male connector M12, 4-pin [2]	WTB250-2P2431	6044675
150 mm … 500 mm	NPN	Potentiometer	Cable, 4-wire, 2 m [1]	WTB250-2N1141	6044678
			Male connector M12, 4-pin [2]	WTB250-2N2441	6044679
	PNP	Potentiometer	Cable, 4-wire, 2 m [1]	WTB250-2P1141	6044680
			Cable, 4-wire, 5 m [1]	WTB250-2P1241	6044681
			Male connector M12, 4-pin [2]	WTB250-2P2441	6044682
200 mm … 1,000 mm	NPN	Potentiometer	Cable, 4-wire, 2 m [1]	WTB250-2N1151	6044686
			Cable, 5-wire, 5 m [1]	WTB250-2N1251	6044687
			Male connector M12, 4-pin [2]	WTB250-2N2451	6044689
	PNP	Potentiometer	Cable, 4-wire, 2 m [1]	WTB250-2P1151	6044690
			Cable, 4-wire, 5 m [1]	WTB250-2P1251	6044691
			Male connector M12, 4-pin [2]	WTB250-2P2451	6044692

[1] Do not bend below 0 °C.

[2] Rotatable through 90°.

- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression
- **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.
150 mm … 500 mm	PNP	Potentiometer	Male connector M12, 4-pin [1]	WTB250-2F2441	6044685

[1] Rotatable through 90°.

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

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
100 mm … 300 mm	Relay	Potentiometer	Cable, 5-wire, 2 m [1]	WTB250-2R1531	6044676
			Cable, 5-wire, 5 m [1]	WTB250-2R1631	6044677
150 mm … 500 mm	Relay	Potentiometer	Cable, 5-wire, 2 m [1]	WTB250-2R1541	6044683
			Cable, 5-wire, 5 m [1]	WTB250-2R1641	6044684
200 mm … 1,000 mm	Relay	Potentiometer	Cable, 5-wire, 2 m [1]	WTB250-2R1551	6044693
			Cable, 5-wire, 5 m [1]	WTB250-2R1651	6044694

[1] Do not bend below 0 °C.

- **Functional principle:** Photoelectric retro-reflective sensor
- **Functional principle detail:** With minimum distance to reflector (dual lens system)
- **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.
0.01 m … 15 m 0.01 m … 12 m	NPN	Potentiometer	Cable, 4-wire, 2 m [1]	WL250-2N1131	6044695
			Male connector M12, 4-pin [2]	WL250-2N2431	6044696
	PNP	Potentiometer	Cable, 4-wire, 2 m [1]	WL250-2P1131	6044697
			Cable, 4-wire, 5 m [1]	WL250-2P1231	6044698
			Male connector M12, 4-pin [2]	WL250-2P2431	6044699

[1] Do not bend below 0 °C.
[2] Rotatable through 90°.

- **Functional principle:** Photoelectric retro-reflective sensor
- **Functional principle detail:** With minimum distance to reflector (dual lens system)
- **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.
0.01 m … 15 m 0.01 m … 12 m	PNP	Potentiometer	Male connector M12, 4-pin [1]	WL250-2F2431	6044702

[1] Rotatable through 90°.

- **Functional principle:** Photoelectric retro-reflective sensor
- **Functional principle detail:** With minimum distance to reflector (dual lens system)
- **Light source:** LED
- **Voltage type:** AC/DC
- **Switching mode:** Light switching
- **Type of light:** visible red light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
0.01 m … 15 m 0.01 m … 12 m	Relay	Potentiometer	Cable, 5-wire, 2 m [1]	WL250-2R1531	6044700
			Cable, 5-wire, 5 m [1]	WL250-2R1631	6044701

[1] Do not bend below 0 °C.

- **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 … 50 m	NPN	Potentiometer	Cable, 4-wire, 2 m [1]	WSE250-2N1131	6044709
			Cable, 4-wire, 5 m [1]	WSE250-2N1231	6044710
			Male connector M12, 4-pin [2]	WSE250-2N2431	6044711
	PNP	Potentiometer	Cable, 4-wire, 2 m [1]	WSE250-2P1131	6044703
			Cable, 4-wire, 5 m [1]	WSE250-2P1231	6044704
			Male connector M12, 4-pin [2]	WSE250-2P2431	6044705

[1] Do not bend below 0 °C.
[2] Rotatable through 90°.

- **Functional principle:** Through-beam photoelectric 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 … 50 m	PNP	Potentiometer	Male connector M12, 4-pin [1]	WSE250-2F2431	6044706

[1] Rotatable through 90°.

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

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
0 m ... 50 m	Relay	Potentiometer	Cable, 5-wire, 2 m [1]	WSE250-2R1531	6044707
			Cable, 5-wire, 5 m [1]	WSE250-2R1631	6044708

[1] Do not bend below 0 °C.

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."

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