Product family overview

W4SL-3

Laser precision for very small or transparent objects

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

Technical data overview

Dimensions (W x H x D)	12.2 mm x 41.8 mm x 17.3 mm
Light source	Laser
Type of light	Visible red light
Enclosure rating	IP66, IP67
Housing material	Plastic
Adjustment	Potentiometer Cable Teach-in button (depending on type)

Product description

Maximum performance for handling demanding detection tasks involving tiny objects. With its precise laser light spot, the W4SL-3 miniature product family sets new standards by providing high optical light immunity from undesired background reflections and immunity to ambient light - even from modern energy-saving lamps. The combination of SICK's proprietary laser and ASIC technologies reduces incorrect switching to minimize machine downtime, reducing the variety of devices and saving on storage costs. The photoelectric sensors also provide an IO-Link interface for initial system performance diagnostics. Furthermore, IO-Link permits the integration of additional functions such as meters directly into the sensor. There is no need for complex control programming.

At a glance

- Precise laser light spot, laser class 1
- Teach-in pushbutton can be switched between detection of transparent and non-transparent objects
- Sensing ranges between 25 mm and 60 m
- Latest SICK proprietary ASIC and laser technologies with second emitter LED to provide outstanding background suppression and ambient light immunity
- Choice of adjustment via teach-in button, potentiometer, cable, or IO-Link

Your benefits

- Precise laser light spot for highly accurate switching behavior
- High optical ambient light immunity reduces incorrect switching and thus machine downtime, even when modern energy-saving lamps are used
- The highest degree of machine design flexibility BGS (background suppression) eliminates the effect of undesired background reflections. In addition, autocollimation allows detection through small drilled holes
- One device for detecting both transparent objects and the smallest non-transparent objects, thus reducing the variety of sensors and saving on storage costs
- IO-Link facilitates initial system performance diagnostics and uses additional sensor functions (optional) to reduce complex control programming

Fields of application

- Overhang control – sensor avoids overhanging panels
- Precise object positioning – Monitoring the exact position of a part in order to prepare a quality check
- Precise edge detection of glass panel
- Monitoring additional features of a part such as boreholes
- Check whether a part is located in the gripper of the robot
- Application are, e.g. at the packaging, automotive and part supplier, electronic and solar industry, machine building and the industries of commercial goods

Ordering information

Other models and accessories ➜ www.sick.com/W4SL-3

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

Sensing range max.	Switching output	Adjustment	Connection type	Laser class	Type	Part no.
25 mm ... 300 mm	NPN	Potentiometer	Cable with M8 male connector, 4-pin, 120 mm [1]	1	WTB4SL-3N3261	1058241
			Cable, 4-wire, 2 m [1]	1	WTB4SL-3N1161	1058242
			Male connector M8, 4-pin	1	WTB4SL-3N2261	1058240
	PNP	Potentiometer	Cable with M8 male connector, 4-pin, 120 mm [1]	1	WTB4SL-3P3261	1058238
			Cable, 4-wire, 2 m [1]	1	WTB4SL-3P1161	1058239
			Male connector M8, 4-pin	1	WTB4SL-3P2261	1058237
		Cable, Teach-in button	Male connector M8, 4-pin	1	WTB4SLC-3P2262A00	1080939
					WTB4SLC-3P2262A70	1080940
					WTB4SLC-3P2262A71	1080941

[1] Do not bend below 0 °C.

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

Sensing range max.	Switching output	Adjustment	Connection type	Laser class	Type	Part no.
25 mm ... 300 mm	PNP	Potentiometer	Cable with connector M8, 3-pin, 100 mm [1]	1	WTB4SL-3P3161	1075216

[1] Do not bend below 0 °C.

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

Sensing range max.	Switching output	Adjustment	Connection type	Laser class	Type	Part no.
0 m ... 12 m	NPN	Teach-in button	Cable, 4-wire, 2 m [1]	1	WL4SL-3N1132	1061565
	PNP	Teach-in button	Cable with M8 male connector, 4-pin, 120 mm [1]	1	WL4SL-3F3232	1106888
					WL4SL-3P3232	1061563
			Male connector M8, 4-pin	1	WL4SL-3F2232	1076420
					WL4SL-3P2232	1061561
		Cable, Teach-in button	Male connector M8, 4-pin	1	WL4SLC-3P2232A00	1080945
					WL4SLC-3P2232A70	1080947
					WL4SLC-3P2232A71	1080949
					WL4SLC-3P2232A72	1098509

[1] Do not bend below 0 °C.

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

Sensing range max.	Switching output	Adjustment	Connection type	Laser class	Type	Part no.
0 m ... 12 m	NPN	Cable, Teach-in button	Cable, 4-wire, 2 m [1]	1	WL4SL-3E1134	1061566
	PNP	Cable, Teach-in button	Cable with M8 male connector, 4-pin, 120 mm [1]	1	WL4SL-3F3234	1061564
			Male connector M8, 4-pin	1	WL4SL-3F2234	1061562

[1] Do not bend below 0 °C.

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

Sensing range max.	Switching output	Adjustment	Connection type	Laser class	Type	Part no.
0 m ... 12 m	NPN	Teach-in button	Cable with connector M8, 3-pin, 160 mm [1]	1	WL4SL-3N3132S03	1092001

[1] Do not bend below 0 °C.

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

Sensing range max.	Switching output	Adjustment	Connection type	Laser class	Type	Part no.
0 m ... 60 m	NPN	Teach-in button	Cable, 4-wire, 2 m [1]	1	WSE4SL-3N1137	1058250
	PNP	Teach-in button	Cable with M8 male connector, 4-pin, 100 mm [1]	1	WSE4SL-3P3237	1095976
			Male connector M8, 4-pin	1	WSE4SL-3P2237	1058249
		Cable	Male connector M8, 4-pin	1	WSE4SLC-3P2236A00	1080957
					WSE4SLC-3P2236A70	1080959
					WSE4SLC-3P2236A71	1080961

[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.”

WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com