



W4S-3

Photoelectric sensor family with best-in-class performance

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	PinPoint LED
Type of light	Visible red light
Enclosure rating	IP67 / IP66 / IP67 (depending on type)
Housing material	Plastic
Adjustment	Potentiometer Teach-in button Cable None (depending on type)



Product description

The W4S-3 family of photoelectric sensors offers best-in-class performance in a slim housing design. Universal use of the latest ASIC and PinPoint LED technologies provide maximum reliability in the detection of all objects, including transparent and shiny objects like blisters, e-cards and aluminum cans. Optical axes on the flat side enable simple, space-saving integration in the machine environment - even without separate mounting brackets.

At a glance

- Best background suppression sensor in its class
- Universal use of PinPoint LED technology in all models
- BGS proximity sensor with laser-like light spot for precise detection tasks
- Reliable setting via 5-turn potentiometer, teach-in pushbutton, teach-in via cable or IO-Link
- Flexible sensor settings, monitoring, advanced diagnostics, and visualization thanks to IO-Link

Your benefits

- Application versatility due to reliable detection of shiny, transparent or jet-black objects
- Very quick and easy alignment due to the highly visible, intense PinPoint LED light spot
- Rugged mounting system with M3 threaded metal inserts reduces maintenance costs due to a long service life
- Background suppression sensors with a laser-like light spot reduce costs and installation of additional protective measures by replacing laser sensors
- IO-Link provides easy data access from the PLC
- Quick and easy configuration
- Quick and easy integration using function blocks

Ordering information

Other models and accessories → www.sick.com/W4S-3

- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression
- **Light source:** PinPoint 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.	
30 mm ... 100 mm	NPN	Potentiometer	Cable, 4-wire, 2.5 m ¹⁾	WTB4S-3N1061S14	1095761	
3 mm ... 120 mm	PNP	None	Cable with M8 male connector, 4-pin, 100 mm ¹⁾	WTB4S-3P3260S02	1044275	
4 mm ... 120 mm	NPN	Potentiometer	Cable, 3-wire, 2 m ¹⁾	WTB4S-3N1331	1042062	
			Cable, 4-wire, 2 m ¹⁾	WTB4S-3W1331	1050573	
			Connector M8, 3-pin	WTB4S-3N2131	1042061	
		Teach-in button	Cable with connector M8, 3-pin, 100 mm ¹⁾	WTB4S-3N3132	1074980	
			Cable, 3-wire, 2 m ¹⁾	WTB4S-3N1332	1042055	
			Cable, 4-wire, 2 m ¹⁾	WTB4S-3N1132	1051563	
		Cable	Cable, 4-wire, 2 m ¹⁾	WTB4S-3N1135	1047127	
			Cable, Teach-in button	Cable, 4-wire, 2 m ¹⁾	WTB4S-3N1134	1042052
		PNP	Potentiometer	Cable with connector M8, 3-pin, 100 mm ¹⁾	WTB4S-3P3131	1042058
	Cable, 3-wire, 2 m ¹⁾			WTB4S-3P1331	1042059	
	Connector M8, 3-pin			WTB4S-3P2131	1042056	
	Teach-in button		Cable with connector M8, 3-pin, 100 mm ¹⁾	WTB4S-3P3132	1042054	
			Cable, 3-wire, 2 m ¹⁾	WTB4S-3P1332	1052284	
			Connector M8, 3-pin	WTB4S-3P2132	1042053	
	Cable, Teach-in button		Cable with M8 male connector, 4-pin, 100 mm ¹⁾	WTB4S-3P3234	1042051	
			Male connector M8, 4-pin	WTB4S-3P2234	1042050	
				WTB4S-3P2234S07	1058763	
	4 mm ... 150 mm	NPN	Cable, Teach-in button	Cable, 4-wire, 2 m ¹⁾	WTB4S-3N1164	1042036
		PNP	Teach-in button	Cable with connector M8, 3-pin, 100 mm	WTB4S-3P3162	1042038
				Connector M8, 3-pin	WTB4S-3P2162	1042037
Teach-in button, Teach-in button			Male connector M8, 4-pin	WTB4S-3P2264S01	1043652	
Cable, Teach-in button			Cable with M8 male connector, 4-pin, 100 mm ¹⁾	WTB4S-3P3264	1042035	
			Male connector M8, 4-pin	WTB4S-3P2264	1042034	

¹⁾ Do not bend below 0 °C.

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
4 mm ... 180 mm	NPN	Potentiometer	Cable, 3-wire, 2 m ¹⁾	WTB4S-3N1361	1042046
				WTB4S-3N1361P01	1103888
			Connector M8, 3-pin	WTB4S-3N2161	1042045
	PNP	Potentiometer	Cable with connector M8, 3-pin, 100 mm ¹⁾	WTB4S-3P3161	1042042
			Cable, 3-wire, 2 m ¹⁾	WTB4S-3P1361	1042043
			Connector M8, 3-pin	WTB4S-3P2161	1042040
4 mm ... 280 mm	PNP	Cable, Teach-in button	Cable with M8 male connector, 4-pin, 100 mm ¹⁾	WTB4S-3P3234S04	1050600
4 mm ... 500 mm	PNP	Cable, Teach-in button		WTB4S-3P3264S13	1123076

¹⁾ Do not bend below 0 °C.

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

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
100 mm	PNP	None	Cable with connector M8, 3-pin, 100 mm	WTB4S-3F3160S12	1062834
4 mm ... 120 mm	NPN	Potentiometer	Cable, 3-wire, 2 m ¹⁾	WTB4S-3E1331	1042064
	PNP	Potentiometer	Connector M8, 3-pin	WTB4S-3F2131	1042060
4 mm ... 180 mm	NPN	Potentiometer	Cable, 3-wire, 2 m ¹⁾	WTB4S-3E1361	1042047
	PNP	Potentiometer	Connector M8, 3-pin	WTB4S-3F2161	1042044

¹⁾ Do not bend below 0 °C.

- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression
- **Light source:** PinPoint 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.
3 mm ... 280 mm	PNP	Teach-in button	Cable with M12 male connector, 4-pin, 150 mm ¹⁾	WTB4S-3P3432S05	1051765
4 mm ... 100 mm	PNP	Potentiometer	Cable with M8 male connector, 4-pin, 100 mm ¹⁾	WTB4S-3P3231S09	1063276
		None	Male connector M8, 4-pin	WTB4S-3P2264S03	1046255

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Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.	
4 mm ... 120 mm	NPN	Potentiometer	Cable, 4-wire, 2 m ¹⁾	WTB4S-3N1131	1042063	
		Teach-in button	Male connector M8, 4-pin	WTB4S-3N2232	1051872	
	PNP	Potentiometer	Cable with M12 male connector, 4-pin, 150 mm ¹⁾	WTB4S-3P3431	1055059	
			Male connector M8, 4-pin	WTB4S-3P2231	1042057	
		Teach-in button	Cable with M12 male connector, 4-pin, 150 mm ¹⁾	WTB4S-3P3432	1051373	
			Male connector M8, 4-pin	WTB4S-3P2232	1054282	
		Teach-in button, Teach-in button	Male connector M8, 4-pin	WTB4SC-3P2232A00	1042049	
		4 mm ... 180 mm	PNP	Potentiometer	Cable with M12 male connector, 4-pin, 150 mm ¹⁾	WTB4S-3P3461
Cable with M8 male connector, 4-pin, 150 mm	WTB4S-3P3261				1064142	
Male connector M8, 4-pin	WTB4S-3K2261				1047804	
Teach-in button	Teach-in button		Cable with M12 male connector, 4-pin, 150 mm ¹⁾	WTB4S-3P3462	1051374	
			Male connector M8, 4-pin	WTB4S-3P2262	1070222	
Teach-in button, Teach-in button	Teach-in button, Teach-in button		Teach-in button, Teach-in button	Cable with M12 male connector, 4-pin, 150 mm	WTB4SC-3P3462A00	1117403
				Male connector M8, 4-pin	WTB4SC-3P2262A00	1042033
				WTB4SC-3P2262A70	1067756	
				WTB4SC-3P2262A71	1067757	
				WTB4SC-3P2262A73	1093610	
				WTB4SC-3P2262A91	1067758	
				WTB4SC-3P2262B03	1099918	
				4 mm ... 280 mm	PNP	Teach-in button, Teach-in button
8 mm ... 120 mm	PNP		Teach-in button, Teach-in button	Male connector M8, 4-pin	WTB4SC-3P2232B02	1088195

¹⁾ Do not bend below 0 °C.

- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Foreground suppression
- **Light source:** PinPoint 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.
3 mm ... 100 mm	PNP	Potentiometer	Cable with M8 male connector, 4-pin, 100 mm ¹⁾	WTF4S-3P3231S08	1061140

¹⁾ Do not bend below 0 °C.

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

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
0 m ... 4 m	NPN	None	Cable, 3-wire, 2 m ¹⁾	WL4S-3E1330	1042072
			Cable, 4-wire, 2 m ¹⁾	WL4S-3E1130S05	1052970
			Connector M8, 3-pin	WL4S-3E2130	1042071
	PNP	None	Cable with M12 male connector, 4-pin, 150 mm ¹⁾	WL4S-3F3430S01	1053409
			Cable with connector M8, 3-pin, 100 mm ¹⁾	WL4S-3F3130	1042067
			Cable with connector M8, 3-pin, 300 mm ¹⁾	WL4S-3F3130S04	1056053
			Cable, 3-wire, 2 m ¹⁾	WL4S-3F1330	1042068
			Connector M8, 3-pin	WL4S-3F2130	1042065
0 m ... 5 m	NPN	Teach-in button	Cable with connector M8, 3-pin, 100 mm ¹⁾	WL4S-3E3132	1074981
			Cable, 3-wire, 2 m ¹⁾	WL4S-3E1332	1042081
			Cable, 4-wire, 2 m ¹⁾	WL4S-3W1132	1042083
			Connector M8, 3-pin	WL4S-3E2132	1042080
	PNP	Teach-in button	Cable with connector M8, 3-pin, 100 mm ¹⁾	WL4S-3F3132	1042075
			Cable, 3-wire, 2 m ¹⁾	WL4S-3F1332	1042076
			Cable, 4-wire, 2 m ¹⁾	WL4S-3V1132	1069132
			Connector M8, 3-pin	WL4S-3F2132	1042074
			Male connector M8, 4-pin	WL4S-3V2232	1042079

¹⁾ Do not bend below 0 °C.

- **Functional principle:** Photoelectric retro-reflective sensor
- **Functional principle detail:** autocollimation
- **Light source:** PinPoint 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 ... 4 m	NPN	None	Cable, 3-wire, 2 m ¹⁾	WL4S-3N1330	1042073
	PNP	None	Cable with connector M8, 3-pin, 100 mm ¹⁾	WL4S-3P3130	1042070
			Connector M8, 3-pin	WL4S-3P2130	1042069
0 m ... 5 m	NPN	Teach-in button	Cable, 3-wire, 2 m ¹⁾	WL4S-3N1332	1042082
	PNP	Teach-in button	Cable with connector M8, 3-pin, 100 mm ¹⁾	WL4S-3P3132	1044802
			Connector M8, 3-pin	WL4S-3P2132	1042077

¹⁾ Do not bend below 0 °C.

- **Functional principle:** Photoelectric retro-reflective sensor
- **Functional principle detail:** autocollimation
- **Light source:** PinPoint 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 ... 4 m	PNP	None	Cable with M8 male connector, 4-pin, 100 mm	WL4S-3P3230	1073200
			Male connector M8, 4-pin	WL4S-3P2230	1042066
				WL4S-3P2230S02	1054695
0 m ... 5 m	PNP	Teach-in button	Male connector M8, 4-pin	WL4S-3P2232	1042078
				Teach-in button, Teach-in button	Male connector M8, 4-pin
		WL4SC-3P2232A70	1067760		
		WL4SC-3P2232A71	1067761		
		WL4SC-3P2232A91	1067762		

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

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
0 m ... 5 m	PNP	Teach-in button, Teach-in button	Cable with M8 male connector, 4-pin, 200 mm ¹⁾	WL4SC-3P3232B02	1104554

¹⁾ Do not bend below 0 °C.

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

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
0 m ... 5 m	NPN	None	Cable, 3-wire, 2 m ¹⁾	WSE4S-3E1330	1042093
					1052867
			Connector M8, 3-pin	WSE4S-3E2130	1042092
					1052876
	PNP	None	Cable with M12 male connector, 4-pin, 150 mm ¹⁾	WSE4S-3F3430	1051883
					1052884
			Cable with connector M8, 3-pin, 100 mm ¹⁾	WSE4S-3F3130	1042089
					1052881
			Cable, 3-wire, 2 m ¹⁾	WSE4S-3F1330	1042090
					1052879
Connector M8, 3-pin	WSE4S-3F2130	1042088			
		1052890			

¹⁾ Do not bend below 0 °C.

- **Functional principle:** Through-beam photoelectric sensor
- **Light source:** PinPoint 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 ... 5 m	NPN	None	Cable, 3-wire, 2 m ¹⁾	WSE4S-3N1330	1042094
					1052872
	PNP		Connector M8, 3-pin	WSE4S-3P2130	1042091
					1052892

¹⁾ Do not bend below 0 °C.

- **Functional principle:** Through-beam photoelectric sensor
- **Light source:** PinPoint 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 ... 2 m	PNP	Cable	Male connector M8, 4-pin	WSE4SC-3P2230S04	1079435

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
0 m ... 5 m	PNP	Cable	Male connector M8, 4-pin	WSE4SC-3P2230A00	1067767
				WSE4SC-3P2230A70	1067768
				WSE4SC-3P2230A71	1067769
				WSE4SC-3P2230A91	1067770
				WSE4SC-3P2230S03	1078552
		None	Male connector M8, 4-pin	WSE4S-3K2236	1074138
				WSE4S-3P2230	1067843

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