



W4S-3 Inox

Highest reliability, maximum resistance and endless possibilities

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Technical data overview

Dimensions (W x H x D)	15.25 mm x 44.5 mm x 22.2 mm 15.25 mm x 48.6 mm x 22.2 mm 15.25 mm x 49.2 mm x 22.2 mm 15.25 mm x 44.9 mm x 22.2 mm 15.3 mm x 55.4 mm x 22.2 mm (depending on type)
Sensing range max.	4 mm ... 500 mm ¹⁾ 4 mm ... 180 mm ¹⁾ 4 mm ... 120 mm ¹⁾ 4 mm ... 280 mm ¹⁾ 20 mm ... 200 mm ¹⁾ 0 m ... 4 m ²⁾ 0 m ... 5 m ²⁾ 0 m ... 5 m (depending on type)
Light source	PinPoint LED / LED (depending on type) (depending on type)
Type of light	Visible red light
Enclosure rating	IP66 IP67 IP68 IP69K ³⁾ IP69K (depending on type)
Housing material	Stainless steel V4A (1.4404, 316L) Stainless steel AISI 316 L, SiOx (depending on type)
Adjustment	Cable ⁴⁾ Single teach-in button Cable Single teach-in button ⁴⁾ None (depending on type)

¹⁾ Object with 90 % reflectance (referred to standard white, DIN 5033).

²⁾ Reflector PL80A.

³⁾ Only in case of correctly mounted IP69K connecting cable.

⁴⁾ External teach-in: pulse > 2 s with voltage Uv with PNP and M with NPN.

Product description

The W4S-3 INOX product family in WashDown design combines rugged watertight IP 69K stainless steel housing with "best-in-class" optical functionality.

These space-saving miniature sensors are able to withstand the most aggressive cleaning agents and disinfectants thanks to a membrane teach-in button that is 100% watertight and pin-cast M12 connections. They can be relied upon for long-term service in critical applications in the food and beverage, pharmaceutical, solar, and electronics industries.

At a glance

- WashDown rated for fluid tightness (IP 66, IP 67, IP 68 and IP 69K) and Ecolab certified
- Tough stainless steel housing (316L/1.4404)
- Resistant to a variety of common cleaning and disinfection agents
- Highly visible laser-like light spot due to PinPoint LED
- Teach-in via stainless steel pushbutton with a metal membrane
- Flexible sensor settings, monitoring, advanced diagnostics, and visualization thanks to IO-Link

Your benefits

- Long service life in harsh conditions ensures less downtime and fewer replacement costs
- Quick and easy alignment due to highly visible PinPoint emitter LED
- Easy adjustment via a stainless steel metal membrane teach-in pushbutton
- IO-Link provides easy data access from the PLC
- Quick and easy configuration
- Quick and easy integration using function blocks
- Easy device replacement and identification

Ordering information

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

- **Sensor principle:** Photoelectric proximity sensor
- **Detection principle:** 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.
4 mm ... 120 mm	PNP	Teach-in button	Cable with connector M8, 3-pin, 150 mm ^{1) 2)}	WTB4S-3F3132V	1046401
			Connector M8, 3-pin ¹⁾	WTB4S-3F2132V	1046404
4 mm ... 280 mm	PNP	Cable, Teach-in button	Male connector M8, 4-pin ¹⁾	WTB4S-3F2234VS08	1053075
4 mm ... 500 mm	PNP	Teach-in button	Cable with connector M8, 3-pin, 150 mm ^{1) 2)}	WTB4S-3F3162V	1046390
			Connector M8, 3-pin ¹⁾	WTB4S-3F2162V	1046389
		Cable	Male connector M8, 4-pin ¹⁾	WTB4S-3F2265V	1048208

¹⁾ Max. tightening torque: 0.6 Nm.

²⁾ Do not bend below 0 °C.

- **Sensor principle:** Photoelectric proximity sensor
- **Detection principle:** 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.
4 mm ... 120 mm	NPN	Teach-in button	Cable, 3-wire, 2 m ¹⁾	WTB4S-3N1332V	1046406
			Connector M8, 3-pin ²⁾	WTB4S-3N2132V	1046405
	PNP	Teach-in button	Cable with connector M8, 3-pin, 150 mm ^{1) 2)}	WTB4S-3P3132V	1046400
			Connector M8, 3-pin ²⁾	WTB4S-3P2132V	1046397
			Male connector M12, 4-pin ³⁾	WTB4S-3P2432V	1054672
		Cable	Cable with M12 male connector, 4-pin, 150 mm ^{1) 3)}	WTB4S-3P3435V	1046407
			Cable, 4-wire, 10 m ¹⁾	WTB4S-3P1035VS06	1051749
			Male connector M8, 4-pin ²⁾	WTB4S-3P2235V	1045093
				WTB4S-3P2235VS07	1053760
		Cable, Teach-in button	Cable with M12 male connector, 4-pin, 150 mm ^{1) 3)}	WTB4S-3P3434V	1048016
			Male connector M8, 4-pin ²⁾	WTB4S-3P2234VS10	1058488
4 mm ... 280 mm	PNP	Teach-in button	Male connector M8, 4-pin ²⁾	WTB4S-3P2234VS05	1050833
		Cable	Male connector M8, 4-pin ²⁾	WTB4S-3P2205VS01	1046214
		Cable, Teach-in button	Male connector M8, 4-pin ²⁾	WTB4S-3P2204VS02	1047652

¹⁾ Do not bend below 0 °C.

²⁾ Max. tightening torque: 0.6 Nm.

³⁾ Max. tightening torque: 0.7 Nm.

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
4 mm ... 500 mm	NPN	Teach-in button	Cable, 3-wire, 2 m ¹⁾	WTB4S-3N1362V	1046393
			Connector M8, 3-pin ²⁾	WTB4S-3N2162V	1046392
		Cable	Male connector M8, 4-pin ²⁾	WTB4S-3N2265V	1047620
	PNP	Teach-in button	Cable with connector M8, 3-pin, 150 mm ^{1) 2)}	WTB4S-3P3162V	1046387
			Connector M8, 3-pin ²⁾	WTB4S-3P2162V	1046384
		Cable	Cable with M12 male connector, 4-pin, 150 mm ^{1) 3)}	WTB4S-3P3465V	1046394
			Male connector M12, 4-pin ³⁾	WTB4S-3P2465V	1096885
			Male connector M8, 4-pin ²⁾	WTB4S-3P2265V	1045091
		Cable, Teach-in button	Cable with M12 male connector, 4-pin, 150 mm ^{1) 3)}	WTB4S-3P3464V	1048015
			Male connector M8, 4-pin ²⁾	WTB4S-3P2264V	1047651

¹⁾ Do not bend below 0 °C.

²⁾ Max. tightening torque: 0.6 Nm.

³⁾ Max. tightening torque: 0.7 Nm.

- **Sensor principle:** Photoelectric proximity sensor
- **Detection principle:** 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.
4 mm ... 120 mm	NPN	Teach-in button	Cable, 4-wire, 2 m ¹⁾	WTB4S-3N1132V	1046403
			Male connector M12, 4-pin ²⁾	WTB4S-3N2432V	1054674
	PNP	Teach-in button	Cable with M12 male connector, 4-pin, 150 mm ^{1) 2)}	WTB4S-3P3432V	1046399
			Cable with M8 male connector, 4-pin, 150 mm ^{1) 3)}	WTB4S-3P3232V	1046398
			Cable, 4-wire, 2 m ¹⁾	WTB4S-3P1132V	1046402
			Cable, 4-wire, 5 m ¹⁾	WTB4S-3P1232V	1052411
			Male connector M8, 4-pin ³⁾	WTB4S-3P2232V	1046396

¹⁾ Do not bend below 0 °C.

²⁾ Max. tightening torque: 0.7 Nm.

³⁾ Max. tightening torque: 0.6 Nm.

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
4 mm ... 180 mm	PNP	Teach-in button	Cable with M12 male connector, 4-pin, 150 mm ^{1) 2)}	WTB4SC-3P3462VA00	1097823
			Male connector M12, 4-pin ²⁾	WTB4SC-3P2462VA00	1097825
			Male connector M8, 4-pin ³⁾	WTB4SC-3P2262VA00	1097824
4 mm ... 280 mm	PNP	Cable, Teach-in button	Male connector M12, 4-pin ²⁾	WTB4S-3P2402VS09	1054706
4 mm ... 500 mm	NPN	Teach-in button	Cable, 4-wire, 2 m ¹⁾	WTB4S-3N1162V	1046391
			Male connector M12, 4-pin ²⁾	WTB4S-3N2462V	1054703
	PNP	Teach-in button	Cable with M12 male connector, 4-pin, 150 mm ^{1) 2)}	WTB4S-3P3462V	1046386
				WTB4S-3P3462VS15	1098603
			Cable with M8 male connector, 4-pin, 150 mm ^{1) 3)}	WTB4S-3P3262V	1046385
			Cable, 4-wire, 2 m ¹⁾	WTB4S-3P1162V	1046388
			Cable, 4-wire, 5 m ¹⁾	WTB4S-3P1262V	1100117
			Male connector M12, 4-pin ²⁾	WTB4S-3P2462V	1054675
			Male connector M8, 4-pin ³⁾	WTB4S-3P2262V	1046383
				WTB4SC-3P2262VB01	1115584

¹⁾ Do not bend below 0 °C.

²⁾ Max. tightening torque: 0.7 Nm.

³⁾ Max. tightening torque: 0.6 Nm.

- **Sensor principle:** Photoelectric proximity sensor
- **Detection principle:** 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.
20 mm ... 200 mm	PNP	Teach-in button	Male connector M12, 4-pin ¹⁾	WTF4S-3P2462V	1072453
			Male connector M8, 4-pin ¹⁾	WTF4S-3P2262V	1046410

¹⁾ Max. tightening torque: 0.6 Nm.

- **Sensor principle:** Photoelectric proximity sensor
- **Detection principle:** Foreground 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.
20 mm ... 200 mm	PNP	Cable	Male connector M8, 4-pin ¹⁾	WTF4S-3P2265V	1045094
		Cable, Teach-in button	Male connector M8, 4-pin ¹⁾	WTF4S-3P2205VS02	1046742

¹⁾ Max. tightening torque: 0.6 Nm.

- **Sensor principle:** Photoelectric retro-reflective sensor
- **Detection principle:** 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-3E1330V	1046420
			Connector M8, 3-pin ²⁾	WL4S-3E2130V	1045097
	PNP	None	Cable with connector M8, 3-pin, 150 mm ^{1) 2)}	WL4S-3F3130V	1046416
			Cable, 3-wire, 2 m ¹⁾	WL4S-3F1330V	1046417
			Connector M8, 3-pin ²⁾	WL4S-3F2130V	1045096

¹⁾ Do not bend below 0 °C.

²⁾ Max. tightening torque: 0.6 Nm.

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
0 m ... 5 m	NPN	Teach-in button	Cable, 3-wire, 2 m ¹⁾	WL4S-3E1332V	1046437
			Connector M8, 3-pin ²⁾	WL4S-3E2132V	1046435
	PNP	Teach-in button	Cable with connector M8, 3-pin, 150 mm ^{1) 2)}	WL4S-3F3132V	1046429
			Cable, 3-wire, 2 m ¹⁾	WL4S-3F1332V	1046430
			Cable, 3-wire, 5 m ¹⁾	WL4S-3F1432V	1055380
			Connector M8, 3-pin ²⁾	WL4S-3F2132V	1046428
			Male connector M8, 4-pin ²⁾	WL4S-3V2232V	1046422

¹⁾ Do not bend below 0 °C.

²⁾ Max. tightening torque: 0.6 Nm.

- **Sensor principle:** Photoelectric retro-reflective sensor
- **Detection principle:** 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	PNP	None	Cable with connector M8, 3-pin, 150 mm ^{1) 2)}	WL4S-3P3130V	1046414
			Cable, 3-wire, 2 m ²⁾	WL4S-3P1330V	1048044
			Connector M8, 3-pin ¹⁾	WL4S-3P2130V	1046413
0 m ... 5 m	NPN	Teach-in button	Cable, 3-wire, 2 m ²⁾	WL4S-3N1332V	1046434
			Connector M8, 3-pin ¹⁾	WL4S-3N2132V	1046432
	PNP	Teach-in button	Cable with connector M8, 3-pin, 150 mm ^{1) 2)}	WL4S-3P3132V	1046425
			Cable, 3-wire, 2 m ²⁾	WL4S-3P1332V	1046427
			Connector M8, 3-pin ¹⁾	WL4S-3P2132V	1046424

¹⁾ Max. tightening torque: 0.6 Nm.

²⁾ Do not bend below 0 °C.

- **Sensor principle:** Photoelectric retro-reflective sensor
- **Detection principle:** autocollimation
- **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 ... 4 m	NPN	None	Cable, 3-wire, 2 m ¹⁾	WL4S-3N1330V	1046419

¹⁾ Do not bend below 0 °C.

- **Sensor principle:** Photoelectric retro-reflective sensor
- **Detection principle:** 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	NPN	None	Cable, 4-wire, 2 m ¹⁾	WL4S-3N1130V	1046418
			Male connector M12, 4-pin ²⁾	WL4S-3N2430V	1054712
	PNP	None	Cable with M12 male connector, 4-pin, 150 mm ^{1) 2)}	WL4S-3P3430V	1046415
			Male connector M12, 4-pin ²⁾	WL4S-3P2430V	1054707
			Male connector M8, 4-pin ³⁾	WL4S-3P2230V	1045095
0 m ... 5 m	NPN	Teach-in button	Cable, 4-wire, 2 m ¹⁾	WL4S-3N1132V	1046431
			Male connector M12, 4-pin ²⁾	WL4S-3N2432V	1054722
	PNP	Teach-in button	Cable with M12 male connector, 4-pin, 150 mm ^{1) 2)}	WL4S-3P3432V	1046426
			Male connector M12, 4-pin ²⁾	WL4S-3P2432V	1054715
			Male connector M8, 4-pin ³⁾	WL4S-3P2232V	1046421

¹⁾ Do not bend below 0 °C.

²⁾ Max. tightening torque: 0.7 Nm.

³⁾ Max. tightening torque: 0.6 Nm.

- **Sensor 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 ... 5 m	NPN	None	Male connector M12, 4-pin	WSE4S-3N2430V	1054786
	PNP	None	Male connector M12, 4-pin ¹⁾	WSE4S-3P2430V	1054784

¹⁾ Max. tightening torque: 0.7 Nm.

- **Sensor 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-3E1330V	1052869
			Connector M8, 3-pin ²⁾	WSE4S-3E2130V	1052877
	PNP	–	Cable with M12 male connector, 4-pin, 150 mm ^{1) 3)}	WSE4SC-3P3430VA00	1097831
				WSE4S-3F3430V	1052885
		None	Cable with connector M8, 3-pin, 150 mm ^{1) 2)}	WSE4S-3F3130V	1052883
			Cable, 3-wire, 2 m ¹⁾	WSE4S-3F1330V	1052880
			Connector M8, 3-pin ²⁾	WSE4S-3F2130V	1052891

¹⁾ Do not bend below 0 °C.

²⁾ Max. tightening torque: 0.6 Nm.

³⁾ Max. tightening torque: 0.7 Nm.

- **Sensor 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-3N1330V	1052874
			Connector M8, 3-pin ²⁾	WSE4S-3N2130V	1052878
	PNP	None	Cable with M8 male connector, 4-pin, 150 mm ^{1) 2)}	WSE4S-3P3230V	1061108
			Cable with connector M8, 3-pin, 150 mm ^{1) 2)}	WSE4S-3P3130V	1052889
			Cable, 3-wire, 2 m ¹⁾	WSE4S-3P1330V	1052887
			Cable, 3-wire, 5 m ¹⁾	WSE4S-3P1430V	1058184
			Cable, 4-wire, 10 m ¹⁾	WSE4S-3P1030VS02	1059404
			Connector M8, 3-pin ²⁾	WSE4S-3P2130V	1052893
			Male connector M8, 4-pin ²⁾	WSE4S-3P2230V	1061815

¹⁾ Do not bend below 0 °C.

²⁾ Max. tightening torque: 0.6 Nm.

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