



W2000

Power, flexibility and reliability for long-range applications

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Technical data overview

Dimensions (W x H x D)	45 mm x 73.5 mm x 48.6 mm 45 mm x 73.7 mm x 48.6 mm
Sensing range max.	0 m ... 50 m, depends on fiber 0 m ... 3.5 m ¹⁾ 0 m ... 15 m ²⁾
Light source	LED
Type of light	Visible red light / Infrared light (depending on type)
Enclosure rating	IP67
Housing material	Plastic Glassfibre reinforced plastic
Adjustment	Potentiometer

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

²⁾ Reflector PL80A.

Product description

The W2000 sensor family offers advanced features with application flexibility and long sensing ranges. Designed with an IP 67-rated housing and a watertight front window, the W2000 is ideal for harsh duty applications. The gasketed top cover can be easily opened to provide access to timing functions, sensitivity adjustments, and a light/dark switching mode. The W2000 family also features SICK's custom Application-Specific Integrated Circuit (ASIC). This superior technology eliminates crosstalk interference and provides immunity to ambient lighting. Three LED indicators provide easily identifiable power, signal and status information from any angle. The W2000 through-beam, retro-reflective and energetic proximity variants enable users to choose the version suited for their application needs.

At a glance

- Rugged, plastic housing
- Crosstalk and ambient light immunity
- Adjustable sensing range
- Signal strength indicator
- IP 67/NEMA 6 enclosure rating

Your benefits

- Application-Specific Integrated Circuit (ASIC) technology eliminates crosstalk interference and provides ambient light immunity, which reduces false detection of unwanted targets
- Rugged IP-67 rated housing withstands harsh duty applications, increasing the sensor lifetime
- Three LED indicators make it easy to install and troubleshoot
- Versatile mounting brackets and cable options simplify installation

Ordering information

Other models and accessories →

- **Light source:** LED
- **Voltage type:** DC
- **Switching mode:** Light/dark switching
- **Type of light:** visible red light

Switching output	Adjustment	Connection type	Type	Part no.
PNP	Potentiometer	Cable, 5-wire, 2 m	WLL2000-B1302	7023068
			WLL2000-B1312	7023069
		Male connector M12, 4-pin	WLL2000-B4300	7024462
		Male connector M12, 5-pin	WLL2000-B5300	7023071
			WLL2000-B5310	7023072

- **Light source:** LED
- **Voltage type:** AC
- **Switching mode:** Light/dark switching
- **Type of light:** visible red light

Switching output	Adjustment	Connection type	Type	Part no.
FET	Potentiometer	Cable, 4-wire, 2 m ¹⁾	WLL2000-M1302	7023417
			WLL2000-M1312	7023416
			WLL2000-M1322	7023415
		Mini connector 7/8", 4-pin	WLL2000-M4300	7023426
			WLL2000-M4310	7023425
			WLL2000-M4320	7023424
		Connector Micro (1/2"-20), 4-pin	WLL2000-M9300	7023429
			WLL2000-M9310	7023428
			WLL2000-M9320	7023427

¹⁾ Do not bend below 0 °C.

- **Light source:** LED
- **Voltage type:** AC/DC
- **Switching mode:** Light/dark switching
- **Type of light:** visible red light

Switching output	Adjustment	Connection type	Type	Part no.
Relay	Potentiometer	Mini connector 7/8", 5-pin	WLL2000-R5300	7023077
		Cable, 5-wire, 2 m	WLL2000-R1302	7023074
			WLL2000-R1322	7023076

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- **Sensor principle:** Through-beam photoelectric sensor
- **Light source:** LED
- **Voltage type:** DC
- **Switching mode:** Light/dark switching
- **Type of light:** Infrared light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
0 m ... 50 m	PNP, NPN	Potentiometer	Cable, 5-wire, 2 m ¹⁾	WS/WE2000-B1102	7025964
				WS/WE2000-B1122	7025966
			Male connector M12, 4-pin	WS/WE2000-B4100	7028604
			Male connector M12, 5-pin	WS/WE2000-B5100	7025965
				WS/WE2000-B5110	7023177
				WS/WE2000-B5120	7025967

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- **Light source:** LED
- **Voltage type:** DC
- **Switching mode:** Light/dark switching
- **Type of light:** Infrared light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
≤ 50 m	PNP, NPN	Potentiometer	Cable, 5-wire, 2 m ¹⁾	WE2000-B1102	7023080
			Male connector M12, 4-pin	WE2000-B4100	7024004
			Male connector M12, 5-pin	WE2000-B5100	7023083
				WE2000-B5120	7023085

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- **Sensor principle:** Through-beam photoelectric sensor
- **Light source:** LED
- **Voltage type:** AC/DC
- **Switching mode:** Light/dark switching
- **Type of light:** Infrared light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
0 m ... 50 m	Relay	Potentiometer	Mini connector 7/8", 5-pin	WS/WE2000-R5100	7025969
				WS/WE2000-R5120	7025971
			Cable, 5-wire, 2 m ¹⁾	WS/WE2000-R1102	7025968
				WS/WE2000-R1112	7023180
				WS/WE2000-R1122	7025970

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- **Light source:** LED
- **Voltage type:** AC/DC
- **Switching mode:** Light/dark switching
- **Type of light:** Infrared light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
≤ 50 m	Relay	Potentiometer	Mini connector 7/8", 5-pin	WE2000-R5100	7023089
				WE2000-R5120	7023092
			Cable, 5-wire, 2 m ¹⁾	WE2000-R1102	7023086
				WE2000-R1122	7023088

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- **Light source:** LED
- **Voltage type:** DC
- **Type of light:** Infrared light

Sensing range max.	Adjustment	Connection type	Type	Part no.
≤ 50 m	Potentiometer	Cable, 5-wire, 2 m ¹⁾	WS2000-D1102	7023137
		Male connector M12, 4-pin	WS2000-D4100	7024003
		Male connector M12, 5-pin	WS2000-D5100	7023138

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- **Light source:** LED
- **Voltage type:** AC/DC
- **Type of light:** Infrared light

Sensing range max.	Adjustment	Connection type	Type	Part no.
≤ 50 m	Potentiometer	Mini connector 7/8", 5-pin	WS2000-A5100	7023140
		Cable, 5-wire, 2 m ¹⁾	WS2000-A1102	7023139

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- **Sensor principle:** Photoelectric proximity sensor
- **Light source:** LED
- **Voltage type:** DC
- **Switching mode:** Light/dark switching
- **Type of light:** Infrared light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
0 m ... 3.5 m	PNP, NPN	Potentiometer	Cable, 5-wire, 2 m ¹⁾	WT2000-B1102	7023056
				WT2000-B1112	7023057
				WT2000-B1122	7023058
			Cable, 5-wire, 5 m ¹⁾	WT2000-B1105	7023277
				WT2000-B1115	7023278
				WT2000-B1125	7023279
			Male connector M12, 4-pin	WT2000-B4100	7024001
			Male connector M12, 5-pin	WT2000-B5100	7023059
				WT2000-B5110	7023060
				WT2000-B5120	7023061
				WT2000-B5140	7023393
				WT2000-B5140S01	7025573

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- **Sensor principle:** Photoelectric proximity sensor
- **Light source:** LED
- **Voltage type:** AC
- **Switching mode:** Light/dark switching
- **Type of light:** Infrared light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
0 m ... 3.5 m	FET	Potentiometer	Cable, 3-wire, 2 m ¹⁾	WT2000-M2102	7023435
				WT2000-M2112	7023434
				WT2000-M2122	7023433
			Cable, 4-wire, 2 m ¹⁾	WT2000-M1102	7023432
				WT2000-M1112	7023431
				WT2000-M1122	7023430
			Micro connector, 4-pin	WT2000-M9100	7023444
				WT2000-M9110	7023443
				WT2000-M9120	7023442
			Micro connector, 5-pin	WT2000-L6100	7023996
			Mini connector, 3-pin	WT2000-M3100	7023438
				WT2000-M3110	7023437
				WT2000-M3120	7023436
			Mini connector, 4-pin	WT2000-M4100	7023441
				WT2000-M4110	7023440
				WT2000-M4120	7023439
			Mini connector, 5-pin	WT2000-L5100	7023993

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- **Sensor principle:** Photoelectric proximity sensor
- **Light source:** LED
- **Voltage type:** AC/DC
- **Switching mode:** Light/dark switching
- **Type of light:** Infrared light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
0 m ... 3.5 m	Relay	Potentiometer	Mini connector, 5-pin	WT2000-R5100	7023065
				WT2000-R5110	7023066
				WT2000-R5120	7023067
			Cable, 5-wire, 2 m ¹⁾	WT2000-R1102	7023062
				WT2000-R1112	7023063
				WT2000-R1122	7023064
			Cable, 5-wire, 3 m ¹⁾	WT2000-R1103	7023291
			Cable, 5-wire, 5 m ¹⁾	WT2000-R1105	7023280
				WT2000-R1115	7023281
				WT2000-R1125	7023282

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- **Sensor principle:** Photoelectric retro-reflective 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 ... 15 m	PNP, NPN	Potentiometer	Mini connector, 5-pin	WL2000-R5300S01	7029058
			Cable, 5-wire, 2 m ¹⁾	WL2000-B1302	7023044
				WL2000-B1312	7023045
				WL2000-B1322	7023046
				WL2000-B1352	7023954
			Cable, 5-wire, 5 m ¹⁾	WL2000-B1305	7023271
				WL2000-B1315	7023272
				WL2000-B1325	7023273
			Male connector M12, 4-pin	WL2000-B4300	7024002
			Male connector M12, 5-pin	WL2000-B5300S01	7025980
				WL2000-B5310	7023048
				WL2000-B5320	7023049
				WL2000-B5350	7028913

¹⁾ Do not bend below 0 °C.

- **Sensor principle:** Photoelectric retro-reflective sensor
- **Light source:** LED
- **Voltage type:** AC
- **Switching mode:** Light/dark switching
- **Type of light:** visible red light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
0 m ... 15 m	FET	Potentiometer	Cable, 3-wire, 2 m ¹⁾	WL2000-M2302	7023405
				WL2000-M2312	7023404
				WL2000-M2322	7023403
			Cable, 4-wire, 2 m ¹⁾	WL2000-M1302	7023402
				WL2000-M1302H	7029667
				WL2000-M1312	7023401
				WL2000-M1322	7023400
			Micro connector, 4-pin	WL2000-M9300	7023414
				WL2000-M9310	7023413
				WL2000-M9320	7023412
			Micro connector, 5-pin	WL2000-L6300	7023997
			Mini connector, 3-pin	WL2000-M3300	7023408
				WL2000-M3310	7023407
				WL2000-M3320	7023406
			Mini connector, 4-pin	WL2000-M4300	7023411
				WL2000-M4310	7023410
				WL2000-M4320	7023409
			Mini connector, 5-pin	WL2000-L5300	7023994

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- **Sensor principle:** Photoelectric retro-reflective sensor
- **Light source:** LED
- **Voltage type:** AC/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 ... 15 m	Relay	Potentiometer	Mini connector, 5-pin	WL2000-R5300	7023053
				WL2000-R5310	7023054
				WL2000-R5320	7023055
			Cable, 5-wire, 2 m ¹⁾	WL2000-R1302	7023050
				WL2000-R1312	7023051
				WL2000-R1322	7023052
			Cable, 5-wire, 3 m ¹⁾	WL2000-R1303	7023618
			Cable, 5-wire, 5 m ¹⁾	WL2000-R1305	7023274
				WL2000-R1315	7023275
				WL2000-R1325	7023276

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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."

SICK
Sensor Intelligence.