



ELF4

Hybrid sensor with flexible alignment and mounting

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Technical data overview

Dimensions (W x H x D)	23.8 mm x 45.4 mm x 33.6 mm 23.8 mm x 43.4 mm x 33.6 mm 23.8 mm x 46.7 mm x 33.6 mm
Light source	LED
Type of light	Visible red light / Infrared light (depending on type)
Enclosure rating	IP67
Housing material	Plastic
Adjustment	None



Product description

The ELF-4 family of hybrid photoelectric sensors supports basic functions for presence detection applications. These sensors provide a variety of features that can be optimized for customers in order to reduce installation and procurement costs. They are ideal for standard short-range applications such as conveyor systems, vending machines, packaging lines, or other simple on/off applications. ASIC (application-specific integrated circuit) technology, which is proprietary to SICK, guarantees the best optical performance.

ELF-4 sensors are available as retro-reflective sensors with background suppression, energetic retro-reflective sensors, and photoelectric retro-reflective sensors. The background suppression variant supports a fixed sensing range of 50 mm. The energetic variant has a sensing range of 155 mm and the retro-reflective variant has a sensing range of 5 m. A transparent back cover provides makes the power and status indicators clearly visible. The ability to integrate the optical and electronic elements into different housings makes this family multifunctional. The ELF-4 has an integrated M18 thread on the base of the sensor with a 24 mm spherical front mount for flexible alignment when used with a ball and swivel bracket.

At a glance

- 24 mm spherical front mount and 18 mm base mount for endless possible adjustments
- Flush red lens
- IP67 for harsh environments
- Transparent back cover for clearly visible status indication
- Photoelectric retro-reflective sensor, retro-reflective sensor with background suppression, or energetic variant
- Operational and status indicator

Your benefits

- 24 mm spherical front mount and 18 mm base mount provides increased mounting flexibility
- A wide range of customizable options reduces material and labor costs
- Flush red lens provides increased sensing range for a broader range of application possibilities
- IP67 has offers a long service life that stands up to harsh environments, reducing maintenance time and costs
- The convenience and reliable status information provided by perfectly visible LED indicators makes for rapid troubleshooting
- Small sensor footprint easily fits into applications with limited space

Ordering information

Other models and accessories → www.sick.com/ELF4

- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Energetic
- **Light source:** 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.
5 mm ... 60 mm	NPN	None	Cable, 3-wire, 2 m ¹⁾	ET4-E2215	1045295
			Male connector M12, 4-pin	ET4-E2228	1045303
			Male connector M8, 4-pin	ET4-E2238	1045323
	PNP	None	Cable, 3-wire, 2 m ¹⁾	ET4-F2215	1045294
			Male connector M12, 4-pin	ET4-F2228	1045302
			Male connector M8, 4-pin	ET4-F2238	1045322

¹⁾ Do not bend below 0 °C.

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Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
5 mm ... 60 mm	NPN	None	Cable, 3-wire, 2 m ¹⁾	ET4-N2215	1045292
			Male connector M12, 4-pin	ET4-N2228	1045300
			Male connector M8, 4-pin	ET4-N2238	1045320
	PNP	None	Cable, 3-wire, 2 m ¹⁾	ET4-P2215	1045293
			Male connector M12, 4-pin	ET4-P2228	1045301
			Male connector M8, 4-pin	ET4-P2238	1045321

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

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
0 mm ... 50 mm	NPN	None	Cable, 3-wire, 2 m ¹⁾	ET4-E3215	1045286
			Male connector M12, 4-pin	ET4-E3228	1045310
			Male connector M8, 4-pin	ET4-E3238	1045318
	PNP	None	Cable, 3-wire, 2 m ¹⁾	ET4-F3215	1045287
			Male connector M12, 4-pin	ET4-F3228	1045311
			Male connector M8, 4-pin	ET4-F3238	1045319

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- **Light source:** LED
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- **Type of light:** Infrared light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
0 mm ... 50 mm	NPN	None	Cable, 3-wire, 2 m ¹⁾	ET4-N3215	1045284
			Male connector M12, 4-pin	ET4-N3228	1045308
			Male connector M8, 4-pin	ET4-N3238	1045316
	PNP	None	Cable, 3-wire, 2 m ¹⁾	ET4-P3215	1045285
			Male connector M12, 4-pin	ET4-P3228	1045309
			Male connector M8, 4-pin	ET4-P3238	1045317

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Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
1 mm ... 100 mm	NPN	None	Cable, 3-wire, 2 m ¹⁾	ET4-E4215	1045290
			Male connector M12, 4-pin	ET4-E4228	1045314
			Male connector M8, 4-pin	ET4-E4238	1045330
	PNP	None	Cable, 3-wire, 2 m ¹⁾	ET4-F4215	1045291
			Male connector M12, 4-pin	ET4-F4228	1045315
			Male connector M8, 4-pin	ET4-F4238	1045331
5 mm ... 155 mm	NPN	None	Cable, 3-wire, 2 m ¹⁾	ET4-E5215	1045299
			Male connector M12, 4-pin	ET4-E5228	1045307
			Male connector M8, 4-pin	ET4-E5238	1045327
	PNP	None	Cable, 3-wire, 2 m ¹⁾	ET4-F5215	1045298
			Male connector M12, 4-pin	ET4-F5228	1045306
			Male connector M8, 4-pin	ET4-F5238	1045326

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Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
1 mm ... 100 mm	NPN	None	Cable, 3-wire, 2 m ¹⁾	ET4-N4215	1045288
			Male connector M12, 4-pin	ET4-N4228	1045312
			Male connector M8, 4-pin	ET4-N4238	1045328
	PNP	None	Cable, 3-wire, 2 m ¹⁾	ET4-P4215	1045289
			Male connector M12, 4-pin	ET4-P4228	1045313
			Male connector M8, 4-pin	ET4-P4238	1045329

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Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
5 mm ... 155 mm	NPN	None	Cable, 3-wire, 2 m ¹⁾	ET4-N5215	1045296
			Male connector M12, 4-pin	ET4-N5228	1045304
			Male connector M8, 4-pin	ET4-N5238	1045324
	PNP	None	Cable, 3-wire, 2 m ¹⁾	ET4-P5215	1045297
			Male connector M12, 4-pin	ET4-P5228	1045305
			Male connector M8, 4-pin	ET4-P5238	1045325

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- **Functional principle:** Photoelectric retro-reflective sensor
- **Light source:** 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.
0.1 m ... 4.8 m	NPN	None	Cable, 3-wire, 2 m ¹⁾	EL4-E2415	1044685
			Male connector M12, 4-pin	EL4-E2428	1044689
			Male connector M8, 4-pin	EL4-E2438	1044693
	PNP	None	Cable, 3-wire, 2 m ¹⁾	EL4-F2415	1044684
			Male connector M12, 4-pin	EL4-F2428	1044688
			Male connector M8, 4-pin	EL4-F2438	1044692

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- **Type of light:** visible red light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
0.1 m ... 4.8 m	NPN	None	Cable, 3-wire, 2 m ¹⁾	EL4-N2415	1044682
			Male connector M12, 4-pin	EL4-N2428	1044686
			Male connector M8, 4-pin	EL4-N2438	1044690
	PNP	None	Cable, 3-wire, 2 m ¹⁾	EL4-P2415	1044683
			Male connector M12, 4-pin	EL4-P2428	1044687
			Male connector M8, 4-pin	EL4-P2638	1047826
				EL4-P2838	1044694

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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.”

WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com