



ELF3

Hybrid sensor with integrated M18 thread for front and base 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 industry-proven ELF-3 family of hybrid photoelectric sensors supports basic functions for presence detection applications. These sensors provide a variety of features that can be optimized to meet the specific needs of 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-3 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 ELF3 comes with an integrated M18 thread for front and base mounting.

At a glance

- Flush red lens
- Polarizing filter
- Transparent back cover for clearly visible status indication
- 18 mm front and base mount
- Operational and status indicator

Your benefits

- 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 housing has a longer 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
- M18 front and base mounting ensures quick and easy installation
- Small sensor footprint easily fits into applications with limited space

Ordering information

Other models and accessories → www.sick.com/ELF3

- **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⁾	ET3-E2215	1045197
			Male connector M12, 4-pin	ET3-E2228	1045205
			Male connector M8, 4-pin	ET3-E2238	1045225
	PNP	None	Cable, 3-wire, 2 m ¹⁾	ET3-F2215	1045196
			Male connector M12, 4-pin	ET3-F2228	1045204
			Male connector M8, 4-pin	ET3-F2238	1045224

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⁾	ET3-N2215	1045194
			Male connector M12, 4-pin	ET3-N2228	1045202
			Male connector M8, 4-pin	ET3-N2238	1045222
	PNP	None	Cable, 3-wire, 2 m ¹⁾	ET3-P2215	1045195
			Male connector M12, 4-pin	ET3-P2228	1045203
			Male connector M8, 4-pin	ET3-P2238	1045223

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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⁾	ET3-E3215	1045188
			Male connector M12, 4-pin	ET3-E3228	1045212
			Male connector M8, 4-pin	ET3-E3238	1045220
	PNP	None	Cable, 3-wire, 2 m ¹⁾	ET3-F3215	1045189
			Male connector M12, 4-pin	ET3-F3228	1045213
			Male connector M8, 4-pin	ET3-F3238	1045221

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- **Light source:** LED
- **Voltage type:** DC
- **Switching mode:** Light 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⁾	ET3-N3215	1045186
			Male connector M12, 4-pin	ET3-N3228	1045210
			Male connector M8, 4-pin	ET3-N3238	1045218
	PNP	None	Cable, 3-wire, 2 m ¹⁾	ET3-P3215	1045187
			Male connector M12, 4-pin	ET3-P3228	1045211
			Male connector M8, 4-pin	ET3-P3238	1045219

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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⁾	ET3-E4215	1045192
			Male connector M12, 4-pin	ET3-E4228	1045216
			Male connector M8, 4-pin	ET3-E4238	1045282
	PNP	None	Cable, 3-wire, 2 m ¹⁾	ET3-F4215	1045193
			Male connector M12, 4-pin	ET3-F4228	1045217
			Male connector M8, 4-pin	ET3-F4238	1045283
5 mm ... 155 mm	NPN	None	Cable, 3-wire, 2 m ¹⁾	ET3-E5215	1045201
			Male connector M12, 4-pin	ET3-E5228	1045209
			Male connector M8, 4-pin	ET3-E5238	1045229
	PNP	None	Cable, 3-wire, 2 m ¹⁾	ET3-F5215	1045200
			Male connector M12, 4-pin	ET3-F5228	1045208
			Male connector M8, 4-pin	ET3-F5238	1045228

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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⁾	ET3-N4215	1045190
			Male connector M12, 4-pin	ET3-N4228	1045214
			Male connector M8, 4-pin	ET3-N4238	1045280
	PNP	None	Cable, 3-wire, 2 m ¹⁾	ET3-P4215	1045191
			Male connector M12, 4-pin	ET3-P4228	1045215
			Male connector M8, 4-pin	ET3-P4238	1045281

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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⁾	ET3-N5215	1045198
			Male connector M12, 4-pin	ET3-N5228	1045206
			Male connector M8, 4-pin	ET3-N5238	1045226
	PNP	None	Cable, 3-wire, 2 m ¹⁾	ET3-P5215	1045199
			Male connector M12, 4-pin	ET3-P5228	1045207
				ET3-P5728	1047939
			Male connector M8, 4-pin	ET3-P5238	1045227

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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⁾	EL3-E2415	1043962		
			Cable, 4-wire, 2 m ¹⁾	EL3-E2615	1044702		
			Male connector M12, 4-pin	EL3-E2428	1044706		
				EL3-E2628	1044714		
				EL3-E2828	1044710		
				EL3-E2828S21	1048358		
			Male connector M8, 4-pin	EL3-E2438	1044718		
				EL3-E2638	1044723		
			Terminal connection Wago 733-103, 3-pin	EL3-E2262	1044733		
			PNP	None	Cable with M12 male connector, 4-pin, 150 mm	EL3-F2421	1052269
					Cable, 3-wire, 2 m ¹⁾	EL3-F2415	1043961
					Cable, 4-wire, 2 m ¹⁾	EL3-F2615	1044701
	Male connector M12, 4-pin	EL3-F2428			1044705		
		EL3-F2628			1044713		
		EL3-F2828			1044709		
	Male connector M8, 4-pin	EL3-F2438			1044717		
		EL3-F2638			1044722		

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- **Voltage type:** DC
- **Switching mode:** Light switching
- **Type of light:** visible red light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
0.1 m ... 4.8 m	NPN	None	Cable, 3-wire, 2 m ¹⁾	EL3-N2415	1043959
				EL3-N2615	1044699
			Male connector M12, 4-pin	EL3-N2428	1044703
				EL3-N2628	1044711
				EL3-N2828	1044707
				EL3-N2828S21	1048357
				EL3-N2438	1044715
			Male connector M8, 4-pin	EL3-N2638	1044720
	PNP	None	Cable, 3-wire, 2 m ¹⁾	EL3-P2415	1043960
				EL3-P2417	1046970
				EL3-P2615	1044700
			Cable, 4-wire, 2 m ¹⁾	EL3-P2815	1044698
				EL3-P2428	1044704
				EL3-P2628	1044712
			Male connector M12, 4-pin	EL3-P2828	1044708
				EL3-P2438	1044716
				EL3-P2638	1044721
Male connector M8, 4-pin	EL3-P2838	1044719			

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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