



ELF and Z Photoelectric Sensors

Flexible, Low-Cost Sensor Solutions

SENSORS
INCORPORATED

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SICK
Sensor Intelligence.

Reduce Material and Labor Costs

Industry-proven:

ELF Photoelectric Sensor

The industry-proven ELF (economical, little, functional) has been updated to its second generation. The extremely compact ELF3 and ELF4 Photoelectric Sensors offer improved features for a wide range of applications, such as presence detection on conveyor lines, packaging machines, bin controls, and hands-free systems. The ELF4 is offered in a new spherical front mount style that enables infinite adjustability and greater mounting flexibility.

A wide range of customization options (cable cut to length, addition of different connectors, brackets, customer-specific cable label, bulk pack, kit with reflector/bracket, etc.) reduce material and labor costs.

ELF3

- Replaces ELF1 and ELF2
- High level of functionality at low cost
- Three variants: retro-reflective, background suppression, energetic
- Flush red lens provides increased sensing range
- IP 67 rated for harsh environments
- Highly visible output/power indicator
- M18 front and base mount



ELF4

- 24 mm spherical front mount enables infinite adjustability
- High level of functionality at low cost
- Three variants: retro-reflective, background suppression, energetic
- Flush red lens provides increased sensing range
- IP 67 rated for harsh environments
- Highly visible output/power indicator





The Clear Choice: Z Photoelectric Sensor

The Z Photoelectric Sensors incorporate SICK technology in a new style of housing that is easily adjustable and designed to fit in a wide range of presence detection applications. The Z series is IP 67 rated and its clear housing provides status indication that can be seen from 360° around the device, making it easy to monitor anywhere. The compact Z3 uses a spherical “eyeball” style of housing that is infinitely adjustable.

A wide range of customization options (cable cut to length, addition of different connectors, brackets, customer-specific cable label, bulk pack, kit with reflector/bracket, etc.) reduce material and labor costs.

Z1/Z2 RIGHT ANGLE CABLE

- High level of functionality at low cost
- Three variants: retro-reflective, background suppression, energetic
- Clear housing enables 360° status indication
- Flush red lens provides increased sensing range
- IP 67 rated for harsh environments
- Cable or pigtail versions
- M18 front mount and 24-25.4 mm slotted side through holes

Z2 CONNECTOR

- High level of functionality at low cost
- Three variants: retro-reflective, background suppression, energetic
- Clear housing enables 360° status indication
- Flush red lens provides increased sensing range
- IP 67 rated for harsh environments
- M18 front mount and 24-25.4 mm slotted side through holes
- M8 4-pin or M12 4-pin connector

Z3 CABLE

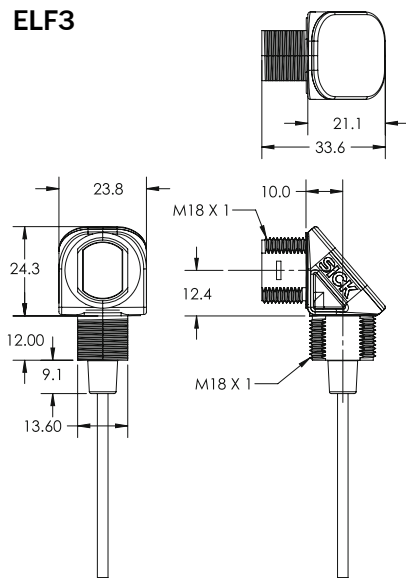
- Spherical “eyeball” style of housing that is infinitely adjustable
- High level of functionality at low cost
- Clear housing enables 360° status indication
- Flush red lens provides increased sensing range
- IP 67 rated for harsh environments
- Retro-reflective version only
- Cable or pigtail versions



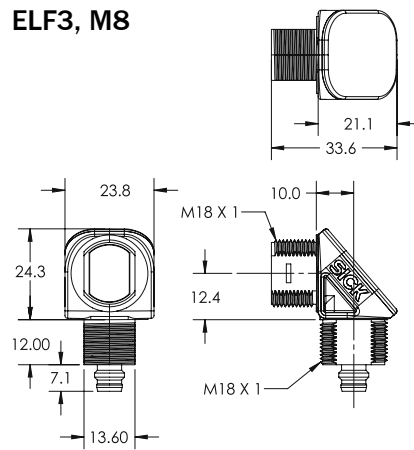
Dimensional Drawings

ELF3, ELF4

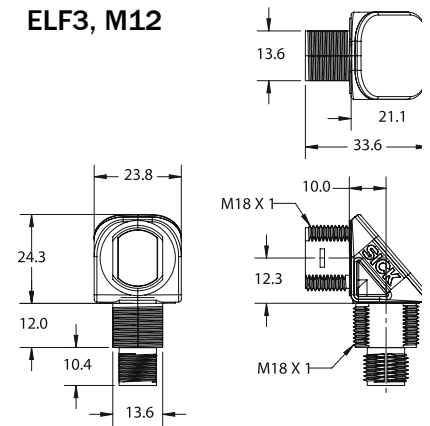
ELF3



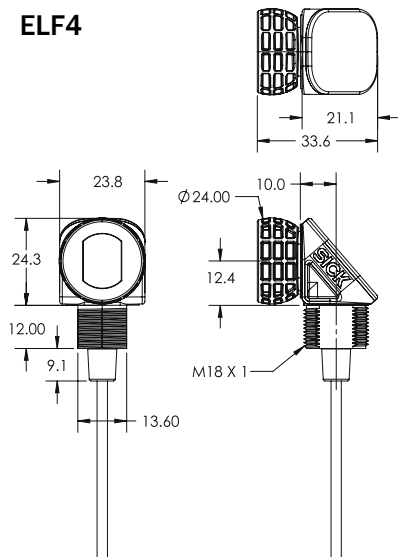
ELF3, M8



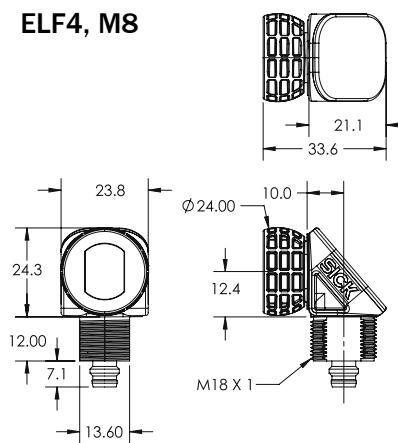
ELF3, M12



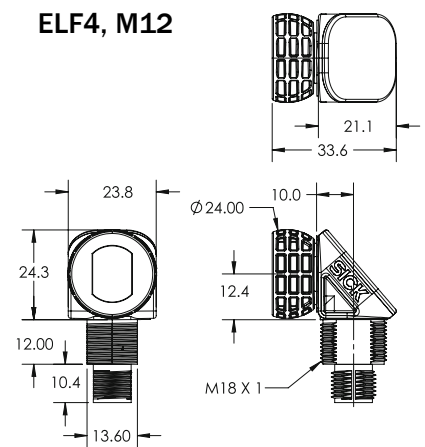
ELF4



ELF4, M8



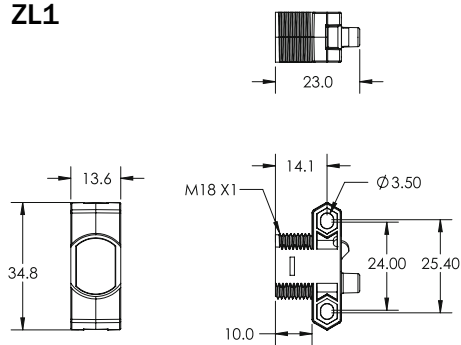
ELF4, M12



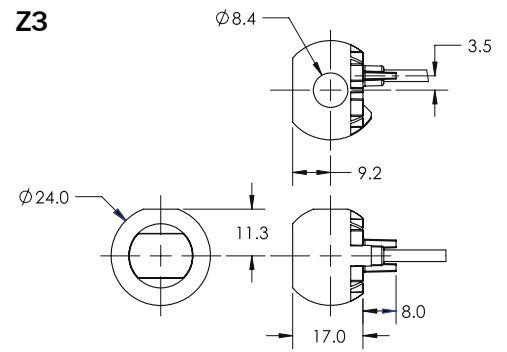
Dimensional Drawings

ZL1, ZL2, Z3

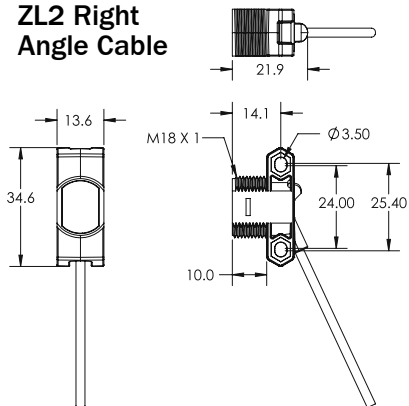
ZL1



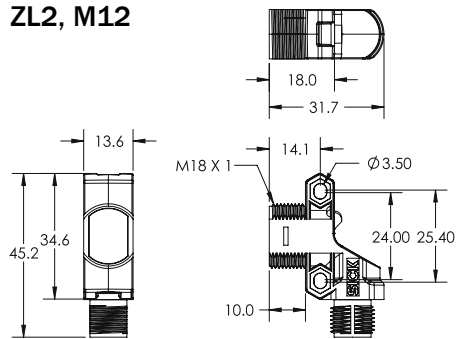
Z3



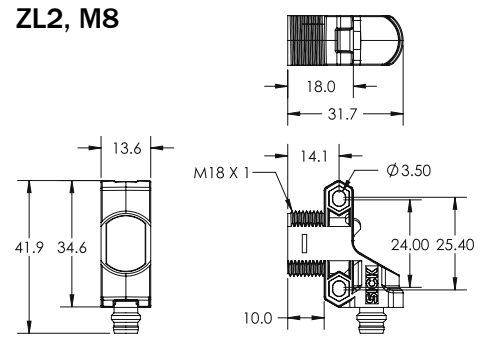
ZL2 Right Angle Cable



ZL2, M12



ZL2, M8



Z1, Z2, Z3

Selection Guide



Z Photoelectric Sensors

	Z1	Z2 Cable	Z2 Connector	Z3
Housing				
Clear housing	X	X	X	X
Blue housing with illuminated back cover				
Connection types				
Cable version	X	X		X
Cable exiting bottom of device		X		
Cable exiting back of device	X			X
M8 4-pin connector			X	
M12 4-pin connector			X	
Mounting				
18 mm front mountable	X	X	X	
18 mm base mountable				
24 mm ball front mountable				X
24-25.4 mm slotted side mount through holes	X	X	X	
Detection Type				
Available in diffuse mode (50 mm BGS, 60, 100, 155 mm Energetic)	X	X	X	
Available in retro-reflective mode (4.8 m)	X	X	X	X
Mechanical specifications				
IP 67 rated	X	X	X	X
Operating temperature -13...122 °F (-25...50 °C)	X	X	X	X
Electrical				
PNP or NPN, depending on model ordered	X	X	X	X
Light or dark operate, depending on model ordered	X	X	X	X
Health or alarm available upon request	X	X	X	X

ELF3, ELF4

Selection Guide



ELF Photoelectric Sensors

	ELF3	ELF4
Housing		
Clear housing		
Blue housing with illuminated back cover	X	X
Connection types		
Cable version	X	X
Cable exiting bottom of device	X	X
Cable exiting back of device		
M8 4-pin connector	X	X
M12 4-pin connector	X	X
Mounting		
18 mm front mountable	X	
18 mm base mountable	X	X
24 mm ball front mountable		X
24-25.4 mm slotted side mount through holes		
Detection Types		
Available in diffuse mode (50 mm BGS, 60, 100, 155 mm Energetic)	X	X
Available in retro-reflective mode (4.8 m)	X	X
Mechanical specifications		
IP 67 rated	X	X
Operating temperature -13...122 °F (-25...50 °C)	X	X
Electrical		
PNP or NPN, depending on model ordered	X	X
Light or dark operate, depending on model ordered	X	X
Health or alarm available upon request	X	X

RANGE OF EXPERTISE

INDUSTRIAL SENSORS

Our complete range of sensors provides solutions for any application in the field of automation. Even under rugged ambient conditions, objects are reliably detected, counted and positioned in respect to their form, location and surface finish, as well as their distances.



SAFETY SYSTEMS

Comprehensive safeguarding of both personnel and machinery. As specialists in safety technology, SICK develops and manufactures pioneering products for providing protection in hazardous zones, dangerous locations and for safeguarding access points. By providing services, which encompass all aspects of machine safety and security, SICK is setting new standards in Safety Technology.



AUTOMATIC IDENTIFICATION

Whether the tasks involve identification, handling, classification or volume measurement, innovative automatic identification systems and laser measurement systems function extremely reliably, even under rapid cycle times. They conform to the latest standards and can be simply and quickly integrated in all industrial environments and external applications.



ANALYZERS AND PROCESS INSTRUMENTATION

SICK MAIHAK offers solutions for system control, maintaining setpoints, optimizing process control and monitoring the flow of materials. Our analysis and process measurement products are setting the standards for these applications in terms of technology and quality.



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Czech Republic
Denmark
Finland
France
Germany
Great Britain
India
Italy
Japan
Netherlands
Norway
Poland
Republic of Korea
Republic of Slovenia
Russia
Singapore

Spain
Sweden
Switzerland
Taiwan
Turkey
USA/Canada/Mexico

Please find the detailed addresses and more representatives and agencies in all major industrial nations at www.sick.com