

LEVEL SENSORS

- ▶ **ELS-900 Series – Engineered Plastic**
- ▶ **ELS-1150 Series – Stainless Steel**

Features

- Small, compact size
- Solid-state technology
- High temperature capabilities
- Variety of materials
- Economically priced
- Configurable

Benefits

- Fits easily into small bottles/vessels
- No moving parts to bind or wear
- Reliability at higher temperature
- Compatible with variety of fluids
- Affordable for OEMs
- Easily customized to application needs

Equipment Used On

- Immuno-chemistry
- Hematology
- Hemodialysis
- Aesthetic lasers
- Chemical sterilizers for reprocessing

Fluid Monitoring Applications

- Reagents
- Waste
- Dialysate
- Diluent
- Detergent/wash
- Coolant

Custom Modifications

Gems can accommodate many special requirements. Here are a few examples of what we've already done:

- O-ring/custom housing integration into customer's housing
- Thin hex for tight installation areas
- Heated design to prevent coating of prism
- Shortened design for tight installation areas
- Special thread & flange mountings to meet equipment specifications

Electro-Optic Single Point Level Sensors

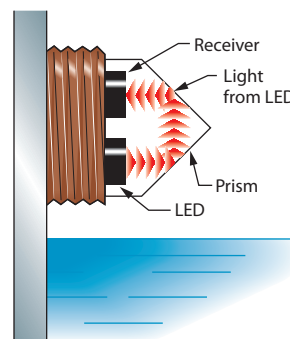


ELS Series Level Switches are low cost, compact, optical level sensors with built-in switching electronics. With no moving parts, these small units are ideal for a variety of point level sensing applications — especially where dependability and economy are a must.

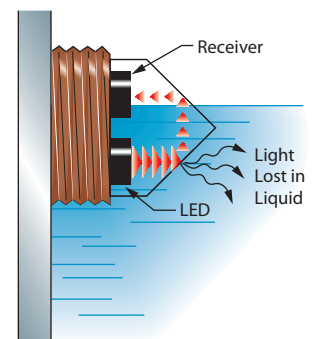
Installation is simple and quick through the tank top, bottom or side for high, low or intermediate level detection in practically any tank, large or small. Solid-state switching ensures dependability over long service life. They are, however, not recommended for use in any liquid that crystallizes or leaves a solid residue.

Operating Principle

These sensors contain both infrared LED and light receiver. Light from the LED is directed into a prism that forms the tip of the sensor. When no liquid is present, light from the LED is reflected within the prism to the receiver. When liquid immerses the prism, the light refracts out of the prism, into the liquid, leaving little or no light to reach the receiver. Sensing this change, the receiver actuates electronic switching within the unit to operate an external alarm or control circuit.



Liquid below the sensing prism.



Liquid immersing the sensing prism.

Note: Any optical sensor may be affected by reflective surfaces.

Consult Gems if prism is to be less than 2 inches (51 mm) from any reflective surface.

Specifications

ELS-900

Mounting	1/4" NPT, 1/2"-20 SAE #5, M12X1-8
Materials	
Housing	Polyethersulfone
O-Ring	Viton® (1/2" SAE #5 and M12x1-8)
Operating Pressure	0 to 250 PSI (17 bar), maximum
Operating Temperature*	-40°F to +257°F (-40°C +125°C)
Current Consumption	4 mA, for 5 VDC (No Load) 10 mA for 12 VDC (No Load)
Output	Open Collector Output, 40 mA Sink, Max. up to 30 VDC
Repeatability	±1 mm (0.039")
EMI	CE approved per EN 61000
Shock Tested	Per MIL-Std-202 Method 204
Vibration Tested	Per MIL-Std-202 Method 213B

* These switches are not for use in freezing liquids

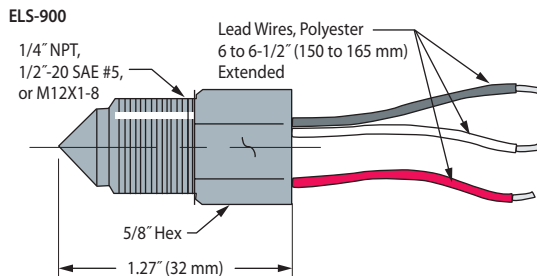
ELS-1150

Mounting	1/2" NPT, 3/4"-16 Straight Thread
Materials	
Housing	Nickel-Plated Carbon Steel or 316 Stainless Steel
Prism	Fused Glass
Operating Pressure	0 to 2500 PSI (0 to 172 bar), Maximum
Operating Temperature*	-40°F to +212°F (-40°C to +100°C)
Current Consumption	~45 mA
Output	Open Collector Output, 18 mA Sink, Max.
Electrical Termination	22 AWG, Polymeric, 12" to 14" Extended Lead Wires
Repeatability	±1 mm (0.039")
Approvals**	CE, UL File No. E108913, CUL

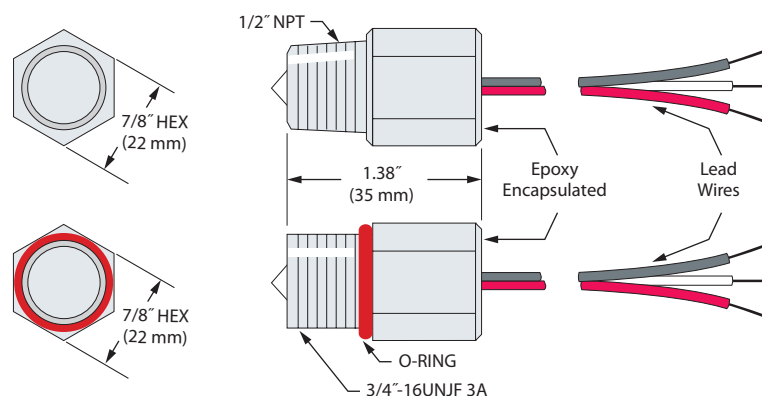
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** Carbon Steel model only.

Dimensions



ELS-1150



ELS-900 Series

The smallest electro optic sensor in our arsenal, the ELS-900 also carries the highest temperature capability of any of our optic sensors. Its Polyethersulfone housing extends this sensor's compatibility and is very affordable in high volumes. Excellent for medical OEMs preferring optics with high temperature and small space requirements.

ELS-1150 Series

At just 1.38" (35 mm) long, ELS-1150 represents the smallest electro-optic level sensor in its performance class, and by far the most economical. ELS-1150 switches utilize a strong, glass prism fused to a nickel-plated, carbon steel or stainless steel housing to easily monitor vessels pressurized up to 2500 PSI (172 bar). Their compact package size makes them the ideal candidate for monitoring the small, pressurized vessels found in medical applications. Industry's only glass-fused stainless steel electro-optic sensor, the ELS-1150SS, offers greater corrosion resistance and fluid compatibility than carbon steel versions. It is ideal for acids, solvents, and dielectric deionized water applications.

Our Medical Equipment Specialists are ready to discuss your sensor requirements, so don't hesitate to give us a call.



50 YEARS OF INNOVATION

GemsSensors.com

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