

ELS-1200 Series

LEVEL SWITCHES

ELECTRO OPTIC

LEVEL SWITCHES

Integral Electronics

High pressure liquid processes can now be monitored effectively with very little intrusion into tanks or piping. ELS-1200 switches feature fused glass prisms fused to zinc/nickel plated, carbon steel housings. You will find them to be a compact, reliable and durable solution to liquid level monitoring of refrigerant, compressor oil, hydraulic system reservoirs and machine tools.

Removable Electronics

These electro-optic switches feature a one piece removable electronics module with 1/2" NPT conduit connection and an internal O-ring seal to protect against external moisture intrusion. Simply unthread the 1/2" NPT conduit connection for easy replacement of the electronics module without the inconvenience of emptying or depressurising tanks. ELS-1200 switches feature glass prisms fused to zinc/nickel plated, carbon steel housings. Select from either 1/2" NPT mounting connections, or 3/4"-16 UNJF-3A straight thread connections with an external O-ring seal. They monitor high pressure liquid processes with very little intrusion into tanks or piping.

Specifications

| | |
|---------------------------------|---|
| Mounting | 1/2" NPT or 3/4"-16 UNJF-3A Thread (Viton 'O' ring) |
| Materials | |
| Housing | Zinc/Nickel Plated Carbon Steel ^① |
| Prism | Fused Glass |
| Operating Pressure | 172 bar, Maximum* |
| Operating Temperature*** | |
| 5/12 VDC | -40°C to +100°C |
| 24/120 VAC | -29°C to +116°C (Prism tip) -29° to 75°C (Electronics) |
| Current Consumption | |
| 5/12 VDC | ~45 mA |
| 24/120 VAC | ~6 mA |
| Output | |
| 5/12 VDC | TL/CMOS compatible. Transistor output with 10K pull up Resistor may sink 18mA. 12 VDC Input power units switch a maximum 5 VDC on output |
| 24/120 VAC | Normally Open: SPST (10 VA Resistive) Max. Switching Volts: V in ±10% Max. Switching current: 225 mA @ rated voltage @ 25°C |
| Electrical Termination** | |
| 5/12 VDC | 22 AWG, Polymeric, 0.3m extended lead wires |
| 24/120 VAC | 20 AWG, Polyester, 0.3m extended lead wires |
| Repeatability | ±1mm |

* For straight thread mounting units when installed with tube fitting per MS 33649

** Consult GEMS for cable options

*** These switches are not for use in freezing liquids. Consult factory for higher temperature units.

① Hastelloy thread with Stainless Steel body is available for harsh environments. Contact Sales Office for details

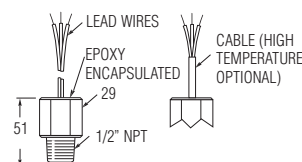
How To Order

| Input Power | Probe Condition at Current Sink | Electronics | Mounting Style | |
|-------------|---------------------------------|-------------|----------------|--------------|
| | | | 1/2" NPT | 3/4"-16 UNJF |
| 5 VDC | Wet | Integral | 153842 | --- |
| | Dry | Integral | 154177 | --- |
| | Wet | Removable | 171574 | 161431 |
| | Dry | Removable | 160953 | 161432 |
| 12 VDC | Wet | Integral | 153843 | --- |
| | Dry | Integral | 154178 | --- |
| | Wet | Removable | 160646 | 161433 |
| | Dry | Removable | 160954 | 161434 |
| 24 VAC | Wet | Removable | 166852 | 168174 |
| | Dry | Removable | 166854 | 168422 |
| 120 VAC | Wet | Removable | 164219 | 166848 |
| | Dry | Removable | 164222 | 166850 |

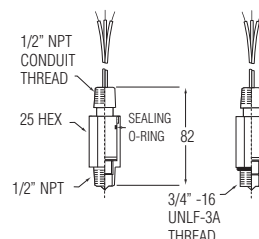


Dimensions

ELS-1200 Integral Electronics

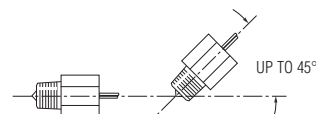


ELS-1200 Removable Electronics



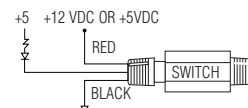
Mounting Attitude

These units must be mounted horizontally or up to 45° from horizontal only.

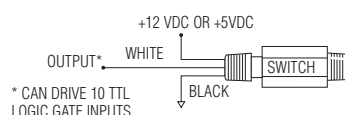


Wiring Diagrams

Transistor Output



TTL Compatible Output



SPST, 24 or 120 VAC Output

