

# ELS-1200 Series with Integral Electronics for Pressurized Vessels to 2500 PSI!

LEVEL SWITCHES

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'll find them to be a compact, reliable and durable solution to liquid level monitoring of refrigerant, compressor oil, hydraulic system reservoirs and machine tools.

## Specifications

<b>Materials</b>	
Housing	Zinc/Nickel-Plated Carbon Steel
Prism	Fused Glass
<b>Operating Pressure</b>	
0 to 2500 PSI, Maximum	
<b>Operating Temperature*</b>	
-40°F to +212°F (-40°C to +100°C)	
<b>Current Consumption</b>	
~45 mA	
<b>Output</b>	
TL/CMOS Compatible. Transistor Output with 10K Pul UP Resistor. May Sink 18 mA. 12 VDC Input Power Units Switch A Maximum 5 VDC on Output.	
<b>Electrical Termination**</b>	
22 AWG, Polymeric, 12" to 14" Extended Lead Wires	
<b>Repeatability</b>	
±1 mm	
<b>Approvals</b>	
U.L. Approval	

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

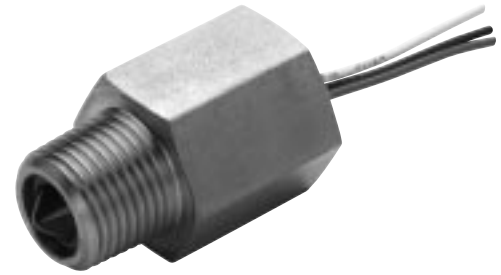
## How To Order

Specify Part number based on desired Input Power, Output Condition and Electrical Termination.

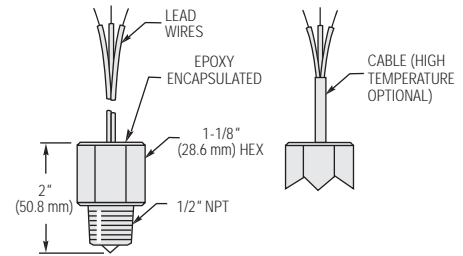
Input Power	Probe Condition at Current Sink	
	Wet	Dry
5 VDC	153842	154177
12 VDC*	153843 ⚡	154178

\*12 VDC input power units switch a maximum 5 VDC on output.

⚡ - Stock Items.

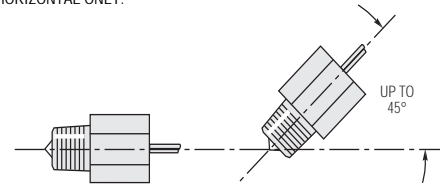


## Dimensions



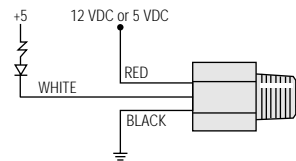
## Mounting Attitude

THESE UNITS MUST BE MOUNTED HORIZONTALLY OR UP TO 45° FROM HORIZONTAL ONLY.

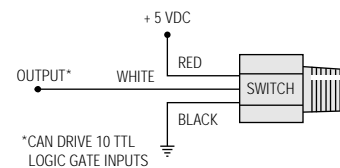


## Wiring Diagrams

### Transistor Output



### TTL Compatible Output



## ELS-1200 Series with Removable Electronics Module and Conduit Connection

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 depressurizing 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

<b>Mounting</b>	1/2" NPT 3/4"-16 UNJF-3A Thread
<b>Materials</b>	
Housing	Zinc/Nickel-Plated Carbon Steel
Prism	Fused Glass
<b>Operating Pressure</b>	0 to 2500 PSI, Maximum*
<b>Operating Temperature</b>	
5/12 VDC	-40°F to +212°F (-40°C to +100°C)
24/120 VAC	
Prism Tip	-20°F to +240°F (-29°C to +116°C)
Electronics	-20°F to +162°F (-29°C to +72°C)
<b>Current Consumption</b>	
5/12 VDC	~45 mA
24/120 VAC	~6 mA
<b>Output</b>	
5/12 VDC	TTL/CMOS Compatible. Transistor Output with 10K Pull Up Resistor May Sink 18 mA.
24/120 VAC	Switch Rating 225 mA @ Rated Voltage @ 77°F (25°C); 60 mA @ Rated Voltage @ 161°F (72°C)
<b>Electrical Termination**</b>	
5/12 VDC	22 AWG, Polymeric, 12" to 14" Extended Lead Wires
24/120 VAC	20 AWG, Polyester, 12" to 14" Extended Lead Wires
<b>Repeatability</b>	±1 mm
<b>Approvals</b>	U.L. Approved – File No. E180359

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

\*\*Consult GEMS for cable options.

### How To Order

Specify Part Number based on desired Input Power, Output Condition, and Mounting Type.

Input Power	Probe Condition at Current Sink	Mounting Type	
		1/2" NPT Thread	3/4"-16UNJF Thread
5 VDC	Wet	171574	161431
	Dry	160953	161432
12 VDC*	Wet	160646	161433
	Dry	160954	161434
24 VAC	Wet	166852	168174
	Dry	166854	168422
120 VAC	Wet	164219	166848
	Dry	164222	166850

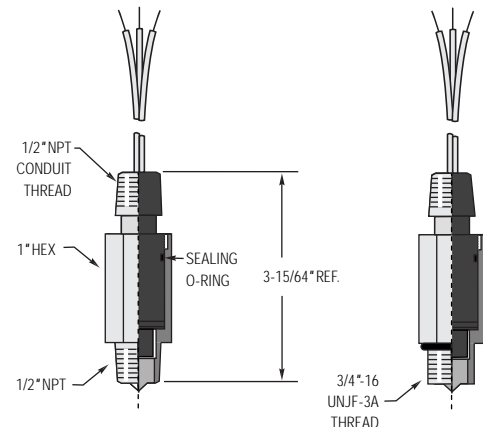
\*12 VDC input power units switch a maximum 5 VDC on output.

Notes:

1. 24 VDC available on request.
2. Delay option available on VAC versions. Please contact Gems factory.

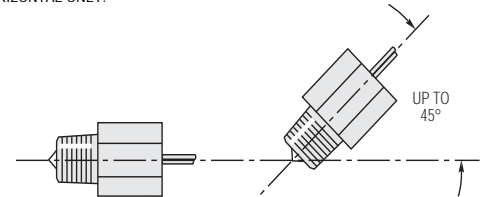


### Dimensions



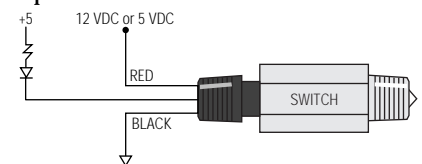
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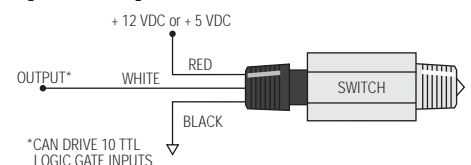


### Wiring Diagrams

#### Transistor Output – 5 VDC and 12 VDC Version



#### TTL Compatible Output – 5 VDC and 12 VDC Version



#### SPST, 24 or 120 VAC Version

