

SANITARY LEVEL SWITCHES

Industries

Pharmaceutical

Food and Beverage

Biotechnology

Semiconductor

Water Treatment



SL Series

Ameritrol, Inc.

Instruments and Controls

Features

- No Moving Parts
- 316L Stainless Steel
- Temperatures to 350F
- Pressures to 3000 PSIG
- Field Programmable for Level, Agitation, or Temperature
- Explosion Proof Enclosures
- Universal Level Switch
- Sanitary Process Connections
- 3A Food Design
- Top, Side, or Bottom Connection
- Special RA Polish & Electropolishing



Applications

- High Level Switch
- Low Level Switch
- Liquid to Liquid Interfaces
- Detects Solids in Liquids
- Differentiates Foam from Liquids
- Combined Level and Temperature Switch
- Adapts to Small Pressure Vessels
- Detects Highly Viscous Products
- Deionized Water Sensor
- Agitation Monitor

Sensor Head
Material of Construction: 316L Stainless Steel Standard
Operating Temperature: -50 to 350F (-46 to 177C)
Operating Pressure: Vacuum to 3000 PSIG (206 Bar)
Response Time: From 3 Seconds
Repeatability: +/- 1/8" at Sense Point
Process Connection: 1.5" Ferrule
Connection: Option 2", 3", 4" Ferrule
Probe Length: 1.8"; Option Customer Specified

Electronics Housing: Powder Coated Explosion Proof, UL/CSA Rated to Class 1, Div. 1 & 2, Group B,C,D; Class II, Div. 1 & 2, Group E,F,G; Class III. FM Option
Temperature: -50 to 150F (-46 to 65C)
Power Input: 90-135 VAC, 50/60 Hz, 4 Watts
Option 24 VDC/VAC, 200-240VAC
Relay Output: SPDT 3 Amps Resistive
Option DPDT and 10 Amps Res.
Electrical Connection: 1" FNPT
Shipping Weight: 5 lbs

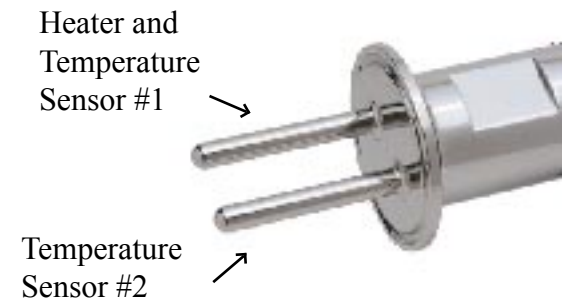
Operation

The SL series sanitary level switch has been designed to meet the most critical liquid level detection applications in the food, pharmaceutical, biotechnology, and water treatment industries. Quick disconnect tri-clamps are standard with special finishes for 3A applications and polished/electropolished for biotechnology and pharmaceutical use.

The thermal dispersion principle of operation features no moving parts exposed to the process. The instrument operates by measuring the temperature differential between a heated and a reference temperature sensor (see figure 1). An extremely low power heating element is attached to a temperature sensor and a second temperature sensor is isolated from the heater to provide compensation for changing process temperature. The electronics measure the differential and can be adjusted to switch on any product listed in the chart on the bottom of this page.

The electronics are available with single or dual switch points. The instrument can be easily field programmed to detect the increase or decrease in flow rate, level or temperature.

Relay outputs are standard and are offered with several different configurations and ratings. Remote mounted electronic are optional.



$$\text{Temperature Differential} = \text{Temperature Sensor \#1} \text{ Minus Temperature Sensor \#2}$$

Figure 1

Sensor Output (Temperature Differential) Based on Product Type

