



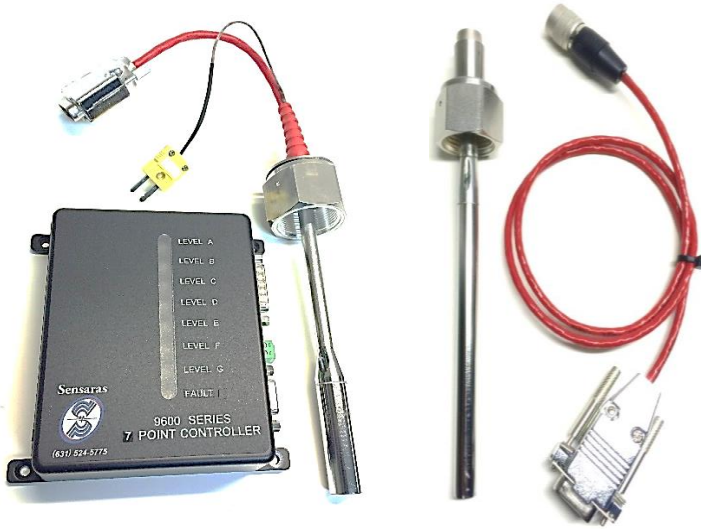
# Sensaras PLS960 Series

Sound Steadfast Solutions

Made in the U.S.A.

## Invasive Point Level System

## Multi-Point Level



### Description

The Ultrasonic Point Level System 960 Series is designed to detect the level of Ultra-Pure Liquid Chemical in Bubblers and Ampoules in the Semiconductor industry in PVD, CVD and ALD processes. The probe fits in the 1/2" or 3/4" VCR fill port of the ampoules. There are no moving parts to the probe that may introduce impurities. It is not dependent on the color, dielectric, density and viscosity of the chemical. The design allows for multiple sensing points. All wetted parts of the probe is 316LSS, electro-polish finish and leak tested. Each probe is custom made to user's specifications and requirements. The electronics are remotely mounted from the probes to allow for higher temperature applications. There is no calibration or adjustments between sensors.

### Operation

The 960 Series unit consists of a pair of piezoelectric elements per point, mounted between two tubes to detect presence or absence of liquid. The ultrasonic signal is attenuated with no liquid present and passes freely across the gap when liquid is present. The circuit detects the presence or absence of the ultrasonic signal and converts the signal to a relay output. A Relay for FAULT FUNCTION is standard on the electronics to detect if a sensors not connected, the wrong sensors is connected or if the output sequence is not in order. FAIL-SAFE and an independent WATCH-DOG-TIMER-CIRCUIT option adds safety should the electronic module lose power or if the processor fails.



### Applications

Continuous level monitoring  
High Level / Overflow Alarm  
Low Level / Stop , Refill

### Industries served

Semiconductor

Medical / Pharmaceutical



Sensor material 316LSS is standard, other materials available  
CONSULT FACTORY FOR CUSTOMIZATION

**Electronics**

Input: 24VDC

Output: Up to 7 sensing points, 1A SPDT each set point

Independent Fault function, 1A SPDT

Optional: Local Temperature Display

Optional: Fail-Safe for relays

Optional: Fail-Safe and Watch-Dog-Timer Circuit function

No Calibration for Liquid Properties

Repeatability: Typical +/- 0.04"(1mm)

Accuracy: +/- 0.06 (1.5mm)

Current consumption: Typical 250mA max

**Sensor**

Material: 316LSS

Up to 7 sensing points on 3/4" VCR

Up to 4 sensing points on 1/2" VCR

K-type SLE thermocouple sensor Optional

Lowest point 5mm from end of probe

Minimum distance between set points: 2.5mm

Max length : 600mm

Consult factory for longer

Sensor Temperature: -0° to 125°C (standard)

Consult factory for temperature up to 150°C

Consult factory for more than 7 points (up to 16 available)

**Design Options and Ordering information**

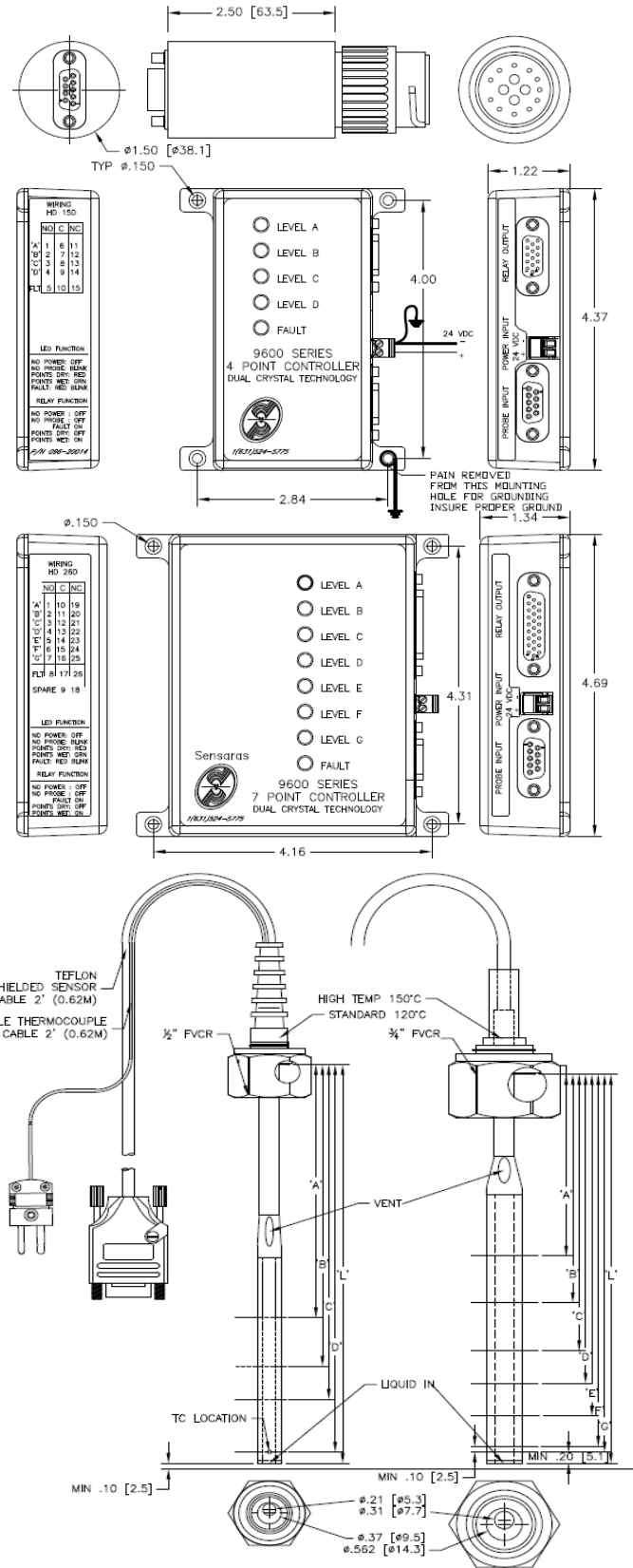
Please call Sensaras for part numbers for electronics and sensors

**Warranty**

Sensaras' level sensors are warranted against inherent defects for a period of two years from the date of shipment.

**Performance Guarantee**

Should the unit not perform as we claim within 45 days of delivery and was properly installed consistent with our stated requirements and specifications Sensaras will gladly accept a return of the unit for a full credit.



Disclaimer: Due to technical progress all Data Sheets are subject to change without notice. Sensaras believes all information in this Data Sheet is correct but is not responsible for any inaccuracies. Sensaras is not liable for any damages. It is the customer's responsibility to install, operate and maintain products properly.