



# Sensaras

## CLS860 Series



Made in the U.S.A.

### Continuous Measurement Through Liquid

### Bottom up

#### Description

Ultrasonic Point Level System 8600 Series is designed to detect continuously 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  $\frac{3}{4}$ " VCR fill port of the standard ampoules or non-invasively through the side of a Sensaras designed canisters to sense the interface height of the liquid from the bottom. 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 calibrated by the customer. All wetted parts of the invasive 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 or liquids.

#### Operation

The 8600 Series unit consists of a pair of piezoelectric elements, mounted at the bottom of the invasive probe. The pairs of the elements is able to transmit an ultrasonic signal that is able to be received the reflection from the top of the liquid. The ultrasonic signal is processed using the speed of sound to calculate the height of the liquid. Temperature is compensated by measuring the liquid media. The circuit converts the digital signal to a USB, Analog and Transistor (points) output.

#### Applications

#### Industries served

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

Semiconductor

Medical / Pharmaceutical

Sensor material 316LSS is standard, other materials available

CONSULT FACTORY FOR CUSTOMIZATION



### CMC TECHNOLOGIES

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Industrial  
Instrumentation

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AUSTRALIA

## Electronics

Input: 24VDC

Output: Level Analog Out (4-20mA or 0-5V)

Temperature Analog Out (4-20mA or 0-5V)

4 set points (NPN) with local display

Lost echo or Fault NPN Out

USB, Digital Out and programming,

Bluetooth wireless connection.

Repeatability: Typical +/- 0.01" (.25mm)

Accuracy: +/- 0.04 (1mm)

Current consumption: Typical 250mA max

No Calibration for Liquid Properties

## Sensor

Material: C-Probe (Invasive) 316LSS

S-Probe (non-Invasive) Epoxy

Built In Level Sensing with 316LSS canister

Minimum Sensing: C-Probe 0.75" of probe

S-Probe 0.4" of canister

BILS 0.2" of canister Consult Factory

Max Range: 999.99mm Consult Factory

Sensor Temperature: -0° to 125°C (C-Probe)  
-0° to 85°C (S-Probe)  
-0° to 125°C (BILS)

## Design Options and Ordering information

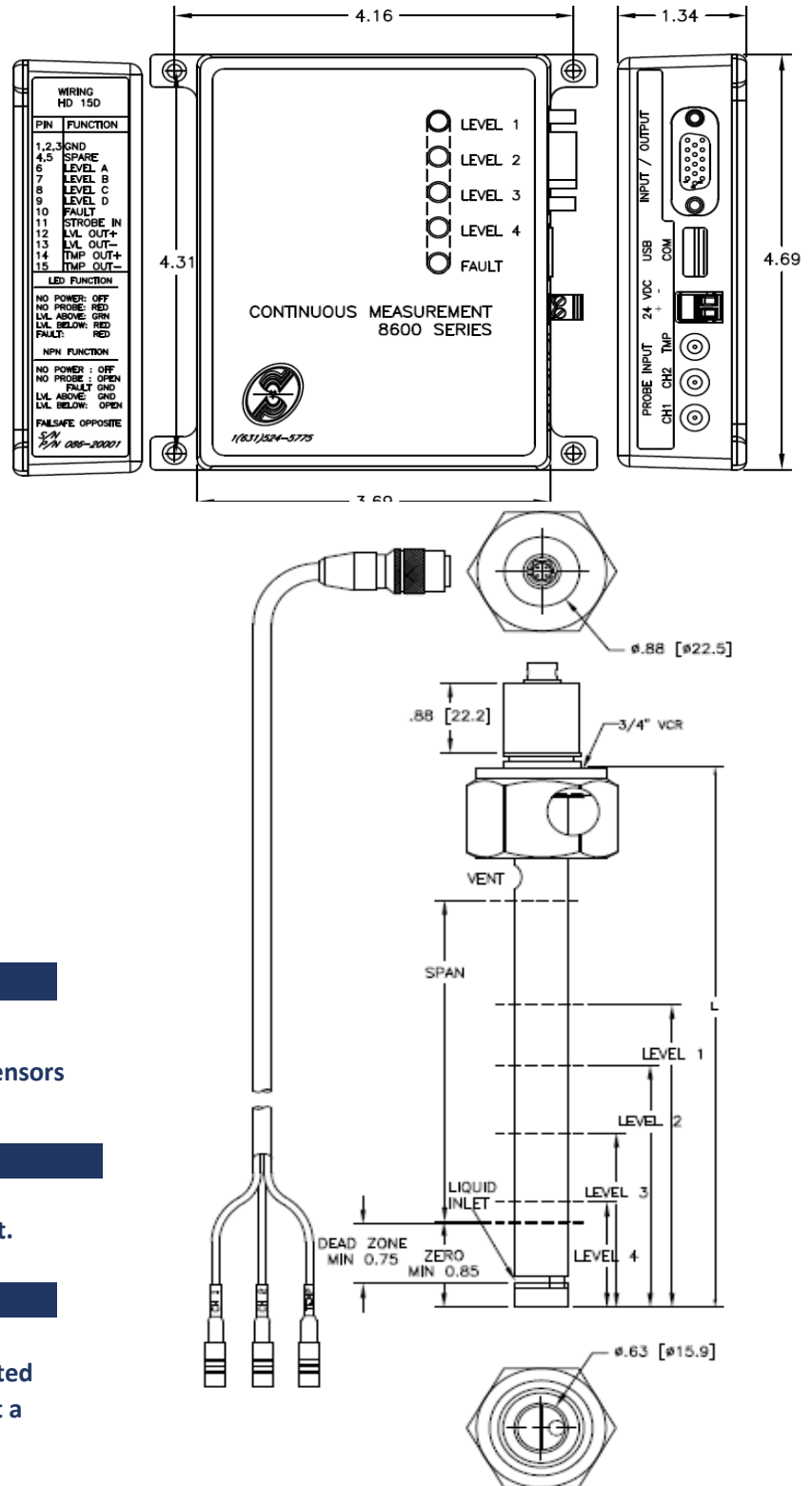
Please call Sensaras for part numbers for electronics and sensors

## 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.