



# A330 Bubble Detector/Air-In Line Sensor



The **A330 Air-In-Line/Bubble Detector** is one of our standard sensors for use with most 3/16 inch OD tubing. It uses our proprietary digital noninvasive ultrasonic bubble sensing technology to accurately and reliably detect bubbles in a wide variety of fluids and tubing materials. Custom characteristics can be provided for OEM users.

## Specifications:

<b>Tube Size:</b>	3/16" OD Nominal
<b>Bubble Size:</b>	Customer Selectable
<b>Sensor Input:</b>	See Product Configuration
<b>Sensor Output:</b>	High: Liquid   Low: Air (See Product Configuration)
<b>Response Time:</b>	50 Microseconds (typical)

## Lead Out (Typically):

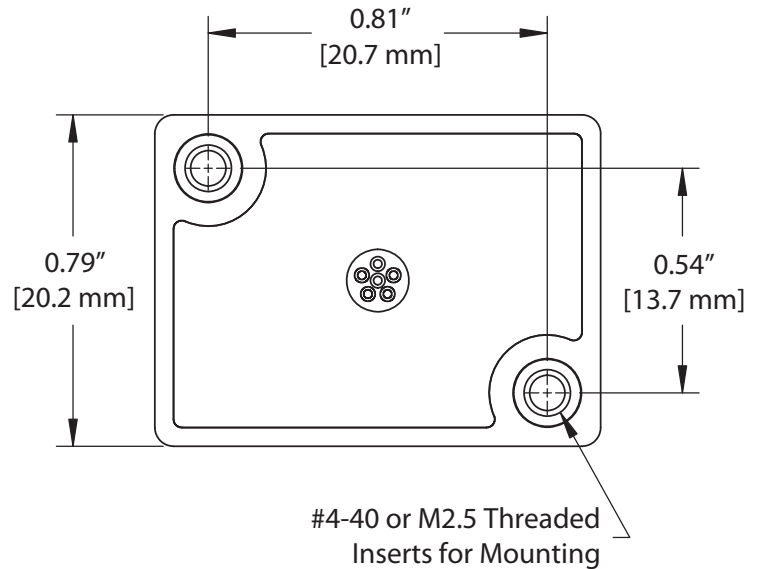
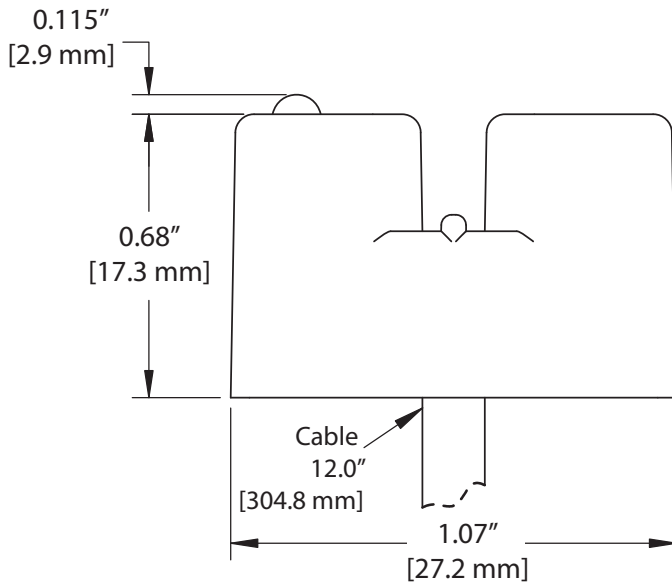
<b>Red:</b>	VCC
<b>Black:</b>	Ground
<b>Green:</b>	Output
<b>White:</b>	Test (Optional)

## Features:

- Optional integrated self-test function
- Power consumption as low as 3mA on some models
- Dry-couples with a variety of tubing materials
- Custom pinouts, cables, and connectors available
- Digital "smart" circuit for superior customability
- Noninvasive ultrasonic bubble sensing technology
- Optional red/green LED for visual output indication

## Applications:

- Medical Instrumentation
- Semiconductor Processing
- Food Dispensing Equipment
- Chemical Processing
- Pharmaceutical Industry



## Product Configuration

# A330 - S L T D

### Mounting Options

**S:** #4-40 Threaded Inserts  
**M:** M2.5 Threaded Inserts

### LED Configurations

**L:** With Red/Green LED to indicate output  
**N:** Without Red/Green LED to indicate output

### Test Pin Functionality

**D:** Test Pin Disabled  
**E:** Test Pin Enabled (Contact SMD)

### Electronic Configuration

**T:** Supply Voltage: 5-15 VDC  
Output Signal: 5V TTL  
High: >4.3 VDC  
Low: <0.6 VDC  
3mA Max  
**P:** Supply Voltage: 5-24 VDC  
Output Signal: PNP/Sourcing  
High: >Vsupply - 0.5V  
Low: Open, 10K Pull-Down  
300mA Max