



### Operating Parameters & Specifications

- Temperature range: 0°C - 40°C
- Response time: 0.2ms
- Input: 5VDC-24VDC
- Output: 3.3 V TTL Logic

## AD-101 Air Bubble Detector

Bubble detection is critical in applications such as infusion pumps, hemodialysis and blood flow monitoring. TE Connectivity (TE) has developed a new compact AD-101 Air Bubble Detector (ABD) for non-invasive continuous monitoring of fluid for air bubble detection. Using ultrasonic technology, the AD-101 sensor is capable of positively identifying the presence of a break in flow of any type of liquid.

### Features

- Detects bubble size as small as 70% of tubing inner diameter
- Tubing outer diameters of 4mm and 6mm standard (sensor can be customized to tubing outer diameters between 3 and 10 mm)
- Non-invasive design eliminates sterility and fluid compatibility concerns
- High noise immunity to EMI/RFI
- Acoustic coupling agent not required
- Integral electronics
- Power-on and continuous self-diagnostic tests to confirm functionality
- LED indication of sensor wet and dry state visible through housing

### Applications

- Infusion Pump
- Apheresis/Auto-transfusion
- Biotech/DNA Analysis
- Blood Processing
- Immunoassay
- Chemical Analysis
- Hemodialysis
- IN-VIVO Detection of Gas
- Hydroponics
- Smart Farming
- Food Processing

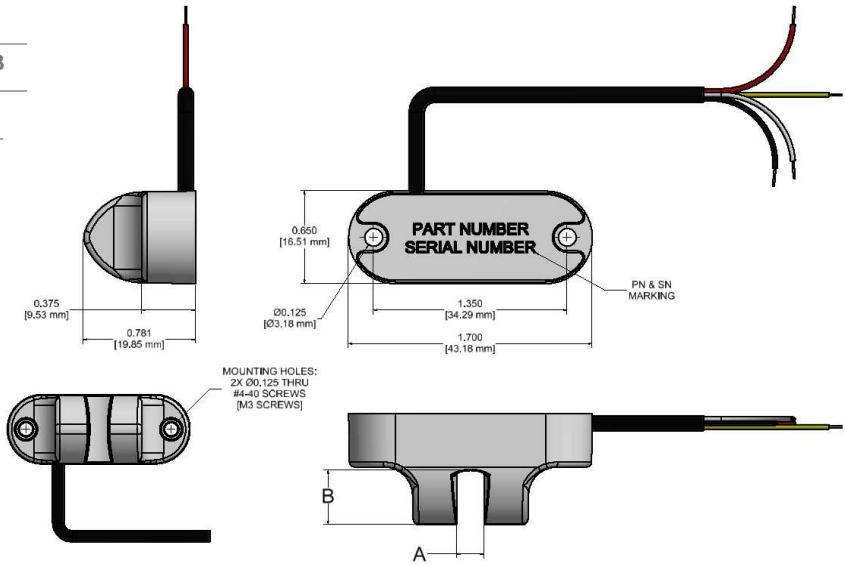
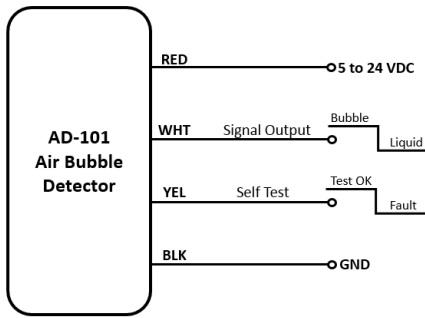
# AD-101

## Air Bubble Detector

### Standard Tube Slot Dimensions

P/N	Dimension A	Dimension B
071-06403	3.2 mm	8.0 mm
071-06402	4.8 mm	10.3 mm

### Schematic



### Specifications

<b>Input</b>	Red = 5 – 24 VDC Black = GND
<b>Sensor Output</b>	White = Output 3.3V TTL, Low When Liquid Present, High When Bubble Present
<b>Self-Test Output</b>	Yellow = Self-test output, 3.3V TTL, High When Pass, Low When Fault
<b>Response Time</b>	0.22 Milliseconds
<b>Temp. Range</b>	0 to 40°C
<b>Bubble Size</b>	Smallest bubble detected =70% of tubing I.D.
<b>Material</b>	ABS/PC (55/45) Plastic Blend, Injection Molded Parts, UL 94 V-2 Rated
<b>Cable</b>	4 Conductor 28AWG, 350mm Long UL Style Number 2725
<b>Electronics</b>	Integral

### Pin Out

Pin	Color	Function
1	Black	GND
2	White	Output
3	Yellow	Self-test
4	Red	5 - 24 VDC

### Part Number

### Description

071-06403 or 10217784-00	AD-101 compact ABD assembly 4MM
071-06402 or 10217758-00	AD-101 compact ABD assembly 6MM

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