



### 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

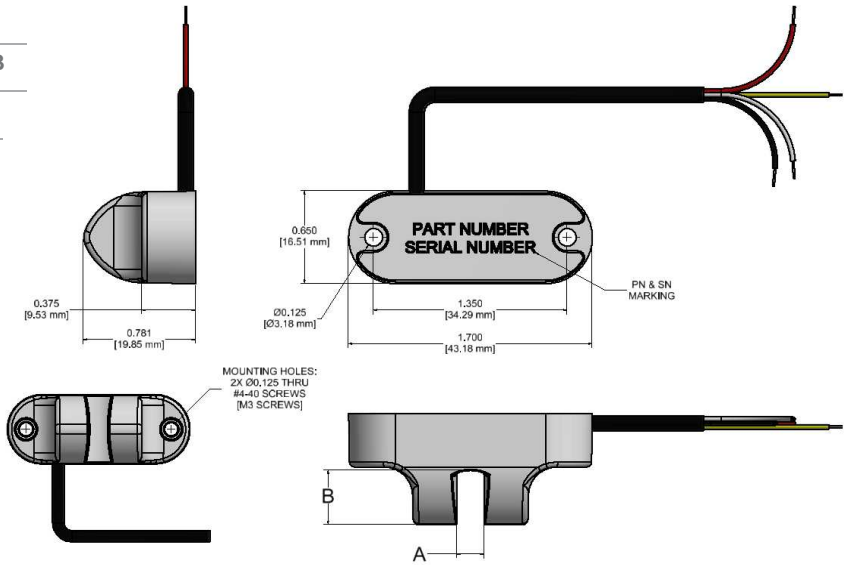
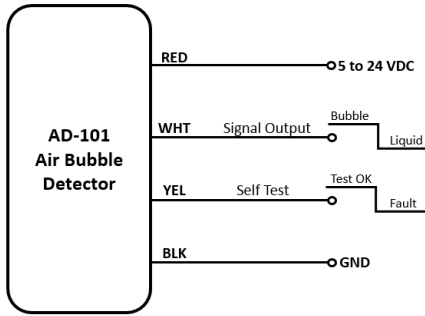
# AD-101

## 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

### NORTH AMERICA

Measurement Specialties, Inc.,  
a TE Connectivity Company  
Tel 800-522-06752 (option 2)  
[customercare.hmpt@te.com](mailto:customercare.hmpt@te.com)

### EUROPE

Measurement Specialties, (Europe) Ltd.,  
a TE Connectivity Company  
Tel +31-73-624-6999  
[customercare.dtmtd@te.com](mailto:customercare.dtmtd@te.com)

### ASIA

Measurement Specialties (China), Ltd.,  
a TE Connectivity Company  
Tel 400-820-6049  
[customercare.shzn@te.com](mailto:customercare.shzn@te.com)

### TE.com/sensorsolutions

TE Connectivity, TE connectivity (logo), and Measurement Specialties are trademarks. All other logos, products and/or company names referred to herein might be trademarks of their respective owners.

The information given herein, including drawings, illustrations and schematics which are intended for illustration purposes only, is believed to be reliable. However, TE Connectivity makes no warranties as to its accuracy or completeness and disclaims any liability in connection with its use. TE Connectivity's obligations shall only be as set forth in TE Connectivity's Standard Terms and Conditions of Sale for this product and in no case will TE Connectivity be liable for any incidental, indirect or consequential damages arising out of the sale, resale, use or misuse of the product. Users of TE Connectivity products should make their own evaluation to determine the suitability of each such product for the specific application.

© 2017 TE Connectivity. All Rights Reserved.