



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

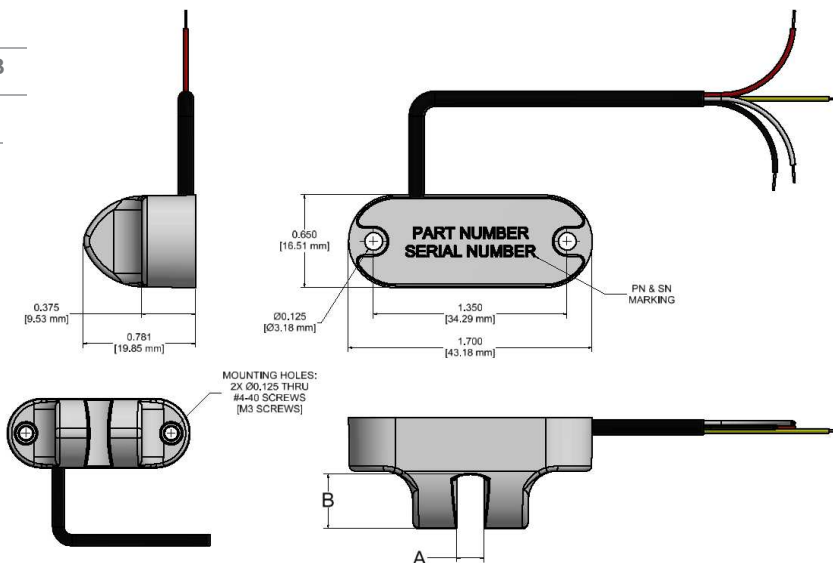
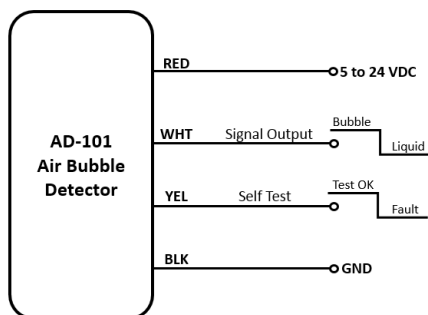
AD-101

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

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