



Operating Parameters & Specifications

• Temperature range: 0°C - 40°C

• Response time: 0.2ms

• Input: 5VDC-24VDC

• Output: 3.3 V TTL Logic

AD-101Air 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

Standard Tube Slot Dimensions Dimension A Dimension B 071-06403 3.2 mm 8.0 mm 071-06402 4.8 mm 10.3 mm PART NUMBER SERIAL NUMBER **Schematic** 0.375 [9.53 mr **0**5 to 24 VDC Signal Output AD-101 Air Bubble Detector YEL Self Test BLK **o** GND

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 C	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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