

# A410 Bubble Sensor



The **A410 Bubble Sensor** is part of the newest generation of off-the-shelf bubble sensors designed to detect bubbles noninvasively in 1/4" outside diameter tubing. Designed with our OEM Medical Device customers in mind, it features all the most requested features and options to streamline designs and optimize performance. The sensor includes our newest digital noninvasive ultrasonic bubble sensing technology to reliably detect bubbles in any liquid through a wide variety of rigid and soft tubing materials.

Product Specifications	
<b>Housing Material:</b>	Black ABS
<b>Supply Voltage (VIN):</b>	3.3 - 5 VDC 5.5 VDC Max
<b>Intended Tube:</b>	1/4" Nominal OD
<b>Output Signal:</b>	TTL Liquid High: >(VCC-0.7) VDC Low: <0.6 VDC 3mA Max
<b>Response Time:</b>	100µs
<b>Test Pin:</b>	10k Ohm pull-down resistor on sensor
<b>Current Draw:</b>	< 4mA

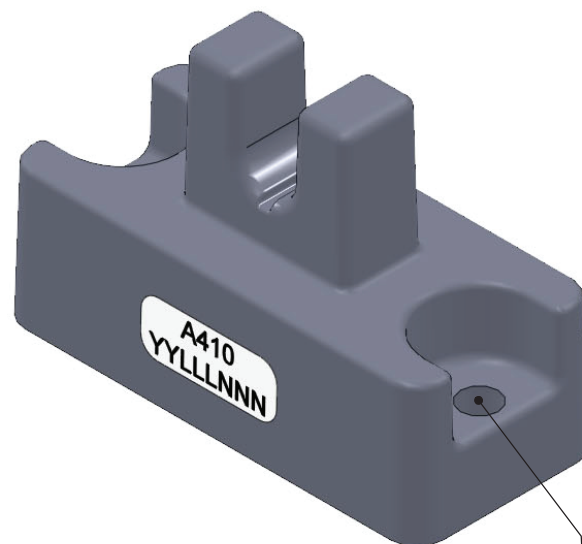
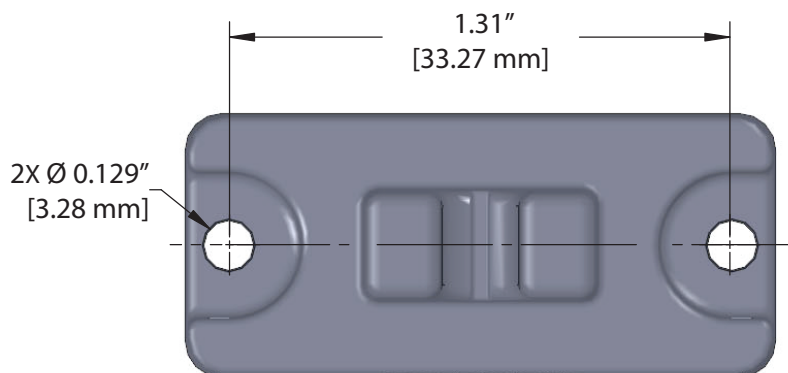
## Features:

- Detects air in liquid-filled tubes non-invasively
- Bubble size can be custom-calibrated to detect bubbles as small as 50% of the tube inside diameter
- Dry-couples to tubing (no grease or acoustic coupling material needed)
- Functions out of the box with a variety of tube materials including rigid plastics (e.g. fluoropolymers), soft plastics, and rubbers
- Integrated test function
- Designed to easily mount to a custom designed panel with an optional silicone gasket (see accessories table/website for recommended mounting configuration)

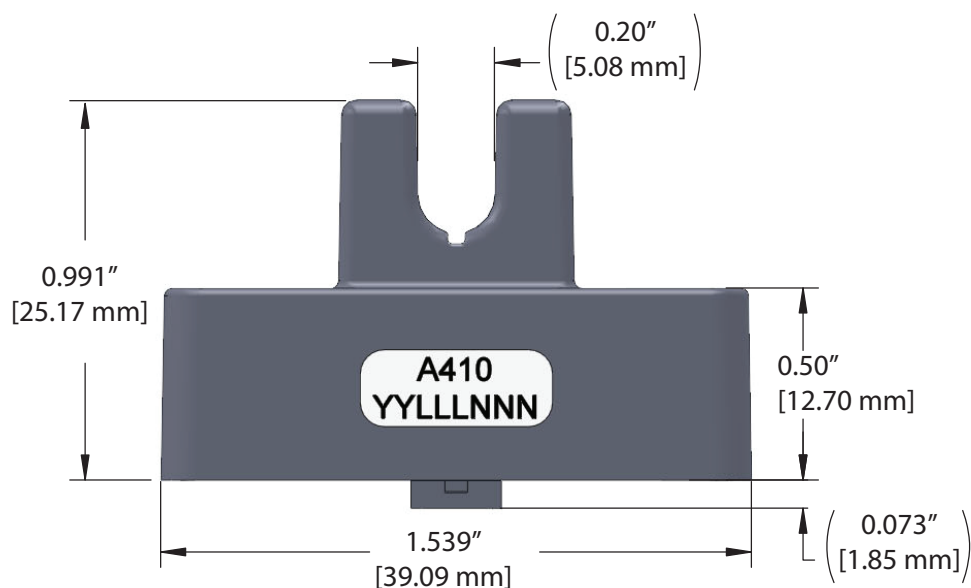
## Applications:

- Medical Devices
- Chemical Processing Equipment
- Pharmaceutical Instruments
- Other OEM Products
- Food Processing
- Biotech analysis

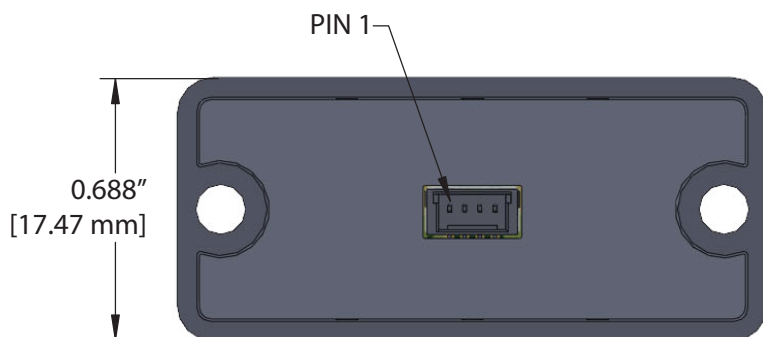
Part Number	Optional Accessories
SMD8799	Cable, 18" length, Molex 501330-0400 connector to flying leads
SMD8800	Cable, 12" length, Molex 501330-0400 connector to Molex 501330-0400 connector
SMD8172-A410	Adhesive-backed silicone gasket for A410 Bubble Sensor



Mounting features designed for #4-40 for M2.5 Threaded inserts in bosses on mating panel



Serial Number Legend	
A410	SMD Part #
YY	Year Code
LLL	Lot Number
NNN	Unit Number



Pinout	
Connector P/N	MOLEX 5013310407
1	VIN
2	GND
3	Output
4	Test