Patented Product

- Counterfeiting Will Be Prosecuted!

AS01-GW1 Capacitive Pipeline Liquid Detection Module

1. Description:

AS01-GW1 is a capacitive pipeline liquid detection module that detects capacitance changes inside the pipeline chamber through stainless steel probe sensors to determine liquid level height and liquid presence status.

2. Product Features:

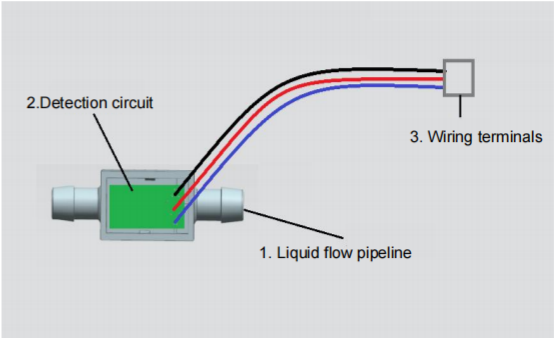
- Compact size and low cost
- High liquid level detection accuracy; detects the presence of water regardless of volume or quality, minimizing false detections and ensuring high reliability
- Stable detection even with added electrolytes
- No mechanical moving parts, ensuring durability and high reliability
- Output signal is a debounced high/low level signal for easy processing
- Compliant with RoHS directive, environmentally friendly, and highly waterproof

3. Application

- Intelligent Floor Scrubber
- Sweeping Robot
- Water Purifier
- Water Dispenser
- Coffee Machine
- Pipeline Liquid Flow Detection Equipment, etc.

4. Module Appearance Image

1. Liquid flow pipeline
2. Detection circuit
3. Wiring terminals



5. Terminal Description

Pin Sequence	Name	Type	Function
1. (Black)	GND	Power Negative Terminal	
2. (Red)	VDD	Power Positive Terminal	
3. (Yellow)	OUT	Test Output Port	High level for no liquid state, low level for liquid state.

6. Rated Value*

Operating Temperature …… -10~+75°C

Storage Temperature …… -40~+105℃

Maximum Vdd Voltage …… -0.3~+6.0V

Maximum DC Output Current for Pin…… ±10mA

Pin Voltage Tolerance …… -0.3V~(Vdd+0.3)Volts

*Note: Exceeding the above values may result in permanent damage to the chip.

7. Technical Standards:

Test Type	Test Parameters	Explanation
ESD	8000V	VDD VSS PtoP
CS	Dynamic 10V	Frequency Range: 150K-230M
EFT	4KV	

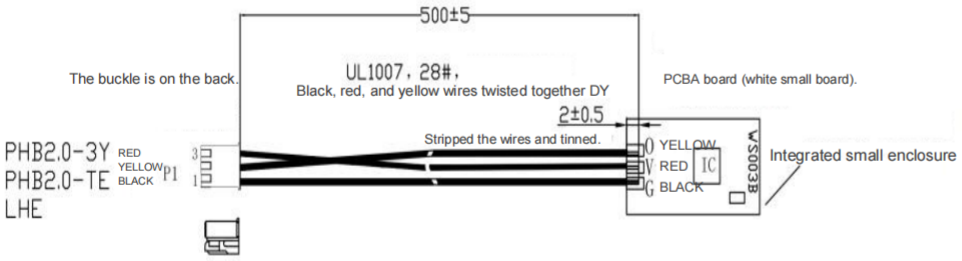
8. Electrical Characteristics:

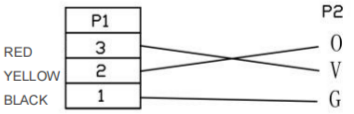
Electrical Parameters：TA=25℃

Characteristic	Symbol	Conditions	Min	Typical	Max	Unit
Operating Voltage	Vdd		2.5		6.0	V
Current Consumption	Idd	VDD=5.0V		0.68		mA
		VDD=3.0V		0.47		mA
Power-On Initialization Time	Tini			120		ms
Output Resistance (NMOSopen-drain)	Zo	Low Level		510		Ohm
		High Level		10K		
Output Sink Current	Isk	VDD=5V			10.0	mA
Response Time	rt			24		Ms

9. Structural Dimension Diagram

9-1: Wire Structure





Wiring Table

9-1: Shell Structure