



Part Number: UM0034-000

Model Number: FA01L03-UM0034-000Z

Overview

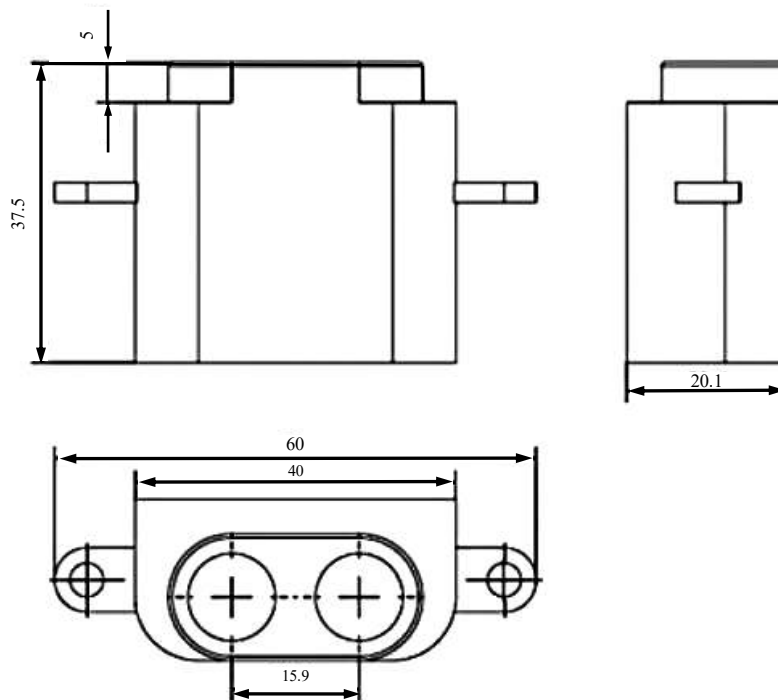
By measuring the time of flight of ultrasonic waves, this unit calculates the depth of the container and monitors the level of the liquid being added. Therefore it can control the amount of liquid being added and prevent overflow regardless of the shape of the container. Non-contact measurement is performed to avoid contamination.

Applications

Water machines, water purify machine, coffee machines and other liquid filling machines.

Appearance

- Dimensions (Unit: mm)



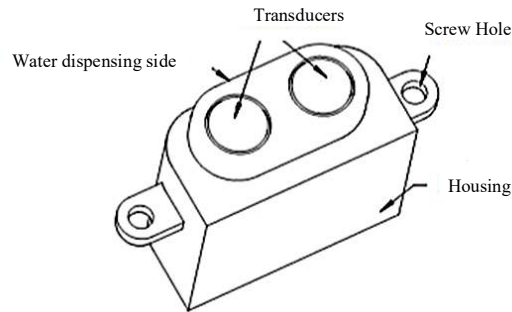
Tolerance Rating	Tolerance Type	0 ~ 3	3 ~ 6	6 ~ 10	10 ~ 14	14 ~ 18	18 ~ 24	24 ~ 30	30 ~ 40	40 ~ 50	50 ~ 65
MT3	A	±0.06	±0.07	±0.08	±0.09	±0.10	±0.12	±0.14	±0.16	±0.18	±0.20

TENTATIVE RELEASE:

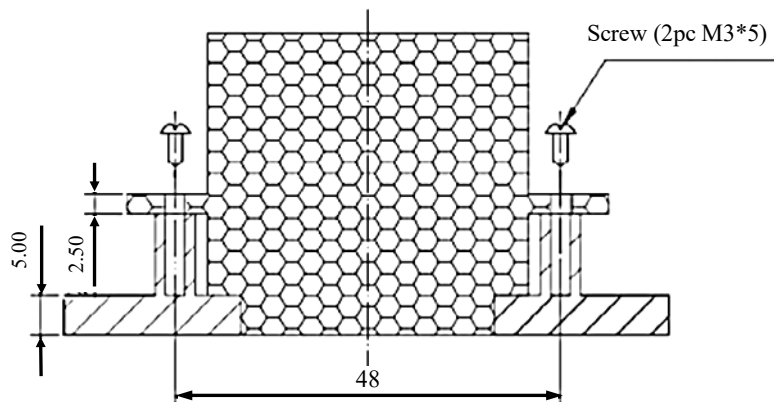
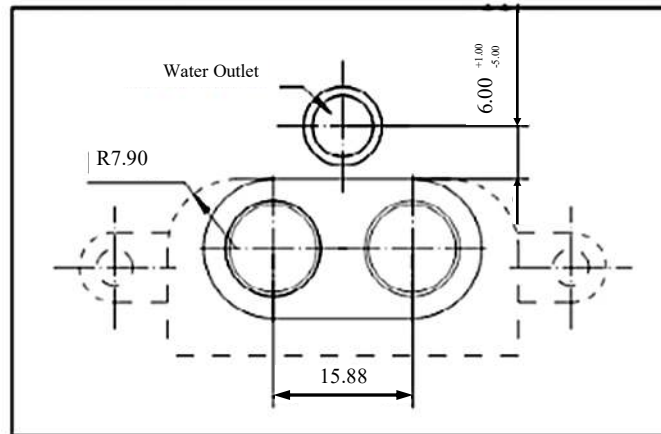
This specification is based on design objectives and is strictly Preliminary and subject to change. Test data may exist, but this specification is subject to change based on the results of additional testing and evaluation. Application specific specifications will be produced for approval prior to production product being released.

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Appearance



2. Installation (Unit: mm):



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Product Installation Requirement:

1. There shall be no significant protrusion within 8cm from the product on the surface of the panel where the product is installed.
2. Keep the sidewall of the water dispenser/purifier smooth and the distance between the drip tray and the sensor less than 25cm.
3. If the product is fully embedded into a panel, the sensitive surface should be flush with the panel or less than 2mm recessed.
4. The distance between the water outlet and the sensor shall be less than 7mm (See the installation drawing). And the diameter of the outlet shall be less than 15mm.

Electrical Parameters

Operation	
Theory	Ultrasonic Technology
Typical Application	Level Sensing, Proximity Switch
Functional	
Theory	Ultrasonic Technology
Detect Range ^①	Max. 25cm (15°C)
Blind Zone	2cm
Min Cup Height ^②	>6cm (Cup wall Thickness >2mm)
Respond Time when put in cup ^③	≤3s
Respond Time after put in cup	<2s
Power Delay ^④	<3s
Output	
Output Method	Level Signal
Output Signal ^⑤	Cup Status and Water Level Status
Environment Parameter	
Operation Environment	Indoor/Outdoor
Operation Temperature	0°C ~ 85°C
Storage Temperature	-40°C ~ 85°C
Humidity	≤95% (No Frozen)
Power	
Power Supply	DC 5V
Current	≤12mA (Not including drive current in Output pin)

NOTES:

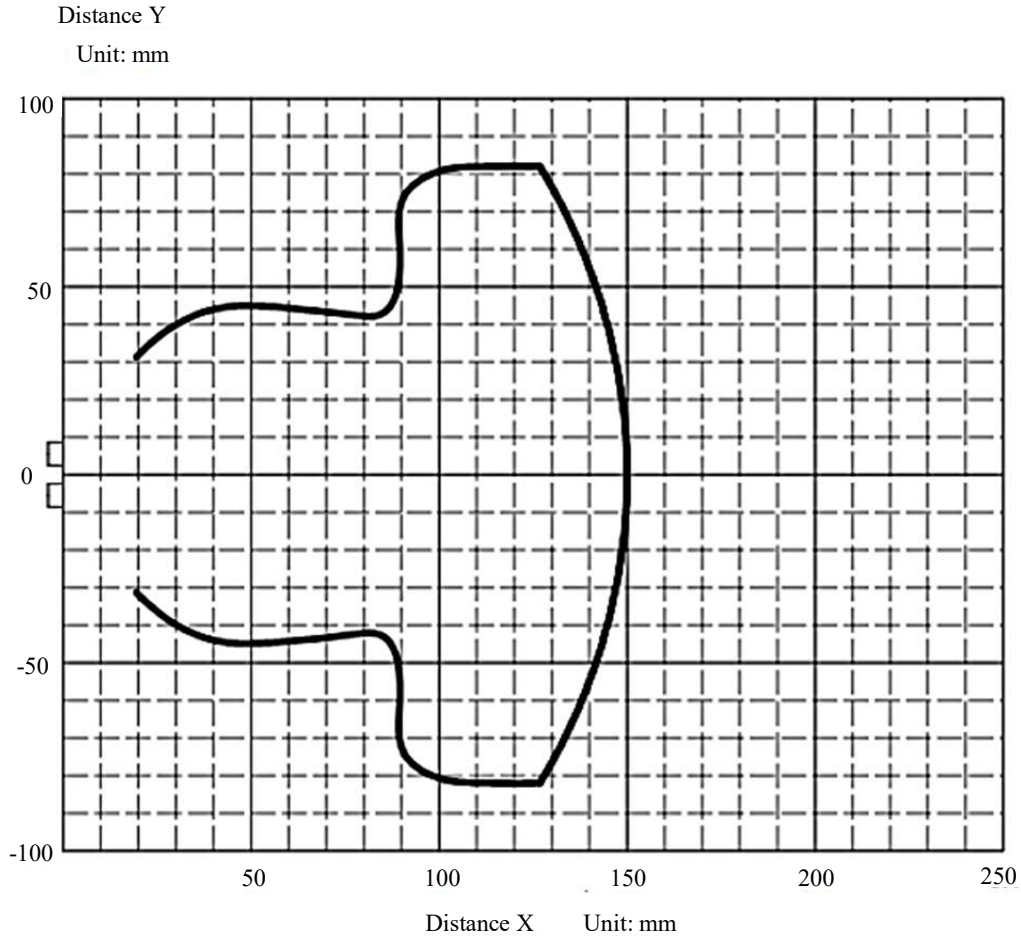
- ① Distance between waste water container and sensor should be less than 25cm, ideal distance should be 18cm ~ 22cm
- ② Diameter of cup should be less than 10cm
- ③ Interval should be more than 1s when filling 2 or more cups
- ④ Please check if Sensor is being correctly installed before powering up
- ⑤ There might be a failure when putting in a cup with more than half cup of water
- ⑥ Flow Rate of water should be less than 18ml/h, the higher the flow rate is, the lower accuracy it will have

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Respond Curve



PVC Pipe Ø 1.0cm

Note: The curve area is where the Ø 1.0cm pipe can be detected.

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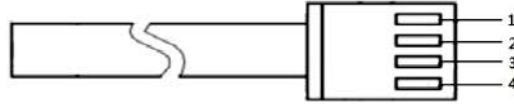
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Output:

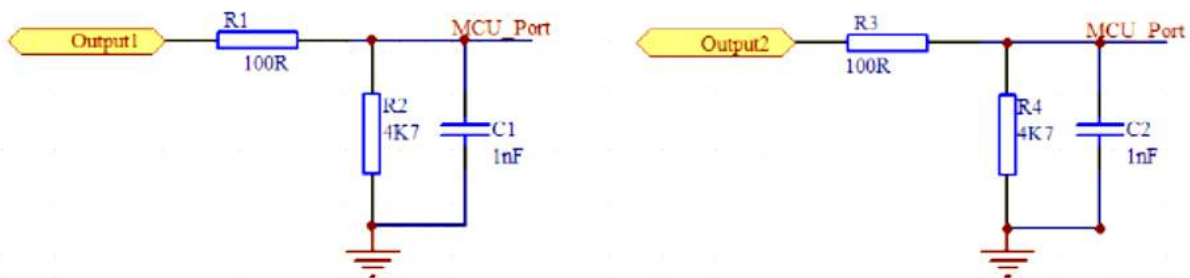
1. Connection Definition

Connector Part No.: XH2.54 TJC4, White Color:



Pin No.	Function	Color	Remark
1	VCC	Red	DC 5V
2	GND	Black	GND
3	Output 1	White	Level Output/Enable
4	Output 2	Yellow	Level Output

2. Reference Circuit



3. Output Definition

No.	Output2	Output1	Status	Condition
1	0	0	No Cup	VDD = 5V Temp.: 15°C
2	0	1	Cup in Place	
3	1	0	Half Full	
4	1	1	Full	

Revision History:

Version	Date (MM/DD/YY)	DWN	Statement
A1.0	1/7/2016	Kunliang Peng	Added Sensor Installation Requirement

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