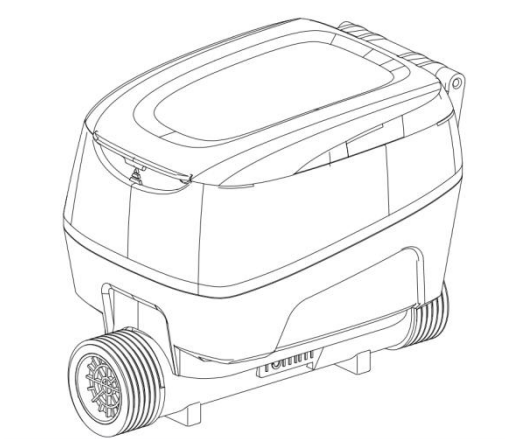


Ultrasonic Water Meter

Installation Manual

Model: UWM

FCC ID: 2BAZO-UWM



AIMEI

TECHNICAL SPECIFICATIONS

1. General Information

UWM is used in residential applications for water metrology and process control. Designed to realize the future of automatic meter reading (AMR) and IoT data collection.

Read this manual before installing the meter.

More details refer to Data sheet.

2.Features

- Brass/Plastic Body
- High Metrology Accuracy: Up to R800
- Extremely Low Start Flowrate: 2L/h
- No Measure of air
- Leakage Detection
- Reverse Flow Alarm
- IP 68 , UV-Resistance
- Battery Life Time:Up to 16years
- AMI&AMR Embedded and Standard Wireless LoRa Protocol

3.Compliance With Standard

- MID DIRECTIVE 2014/32/EU
- OIML R 49 2013
- FCC CFR PART 15
- Compliance to potable drinking water (ACS/WRAS)
- RoHs DIRECTIVE 2011/65/EU
- WEEE DIRECTIVE 2019/19/EU

4.Working Condition

Water temperature	≤50℃
for Cold Water Meter:	
Pressure:	≤1.6Mpa
Mechanical	
Environment:	M1
Electromagnetic	E1/E2
Environmental Class:	
Climatic Environment:	O

5.Max Permissible Error

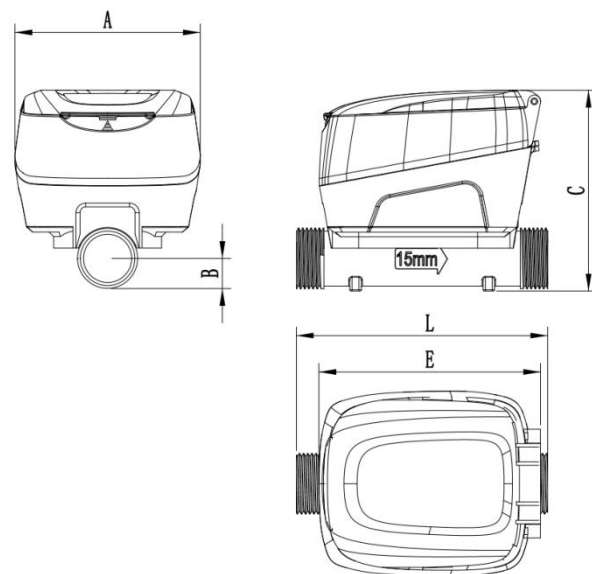
- a) In the lower zone from Q1 inclusive up to but excluding Q2: ±5%
- b) In the upper zone from Q2 inclusive up to and including Q4: ±2%

6.Specifications

Type	Size (mm)	Q ₃	Q ₃ /Q ₁	Q ₂ /Q ₁	Parameters
UWM	15	2.5m ³ /h	R160-R800	1.6	Protection Class: IP68 Installation: Any Position Sensitivity: U0D0
	20	4.0m ³ /h			

INSTALLATION REQUIREMENTS

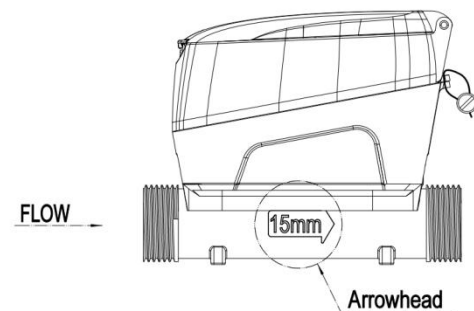
1.Dimension



Type	Size (mm)	L (mm)	E (mm)	A (mm)	C (mm)	Connection Thread	
						D	d
UW M	15	110-190	97	81	88	G 3/4B	R 1/2
	20	110-190	97	81	93	G 1B	R 3/4

Use the couplings, coupling nuts and gaskets to connect the water meter with the water pipe in both ends.

The meter must be installed with the water flow direction same as the arrow indicated on the meter body (see following drawing).



2.Installation Statement

a)The nominal diameter of water meter should be selected according to the volume of water passing through the pipeline.

b)Attention should be paid that cold water meter must not be used for hot water and caustic liquid.

c)Installation in the direct sunlight should be avoided to prevent extreme conditions where the temperature is too high to affect the function.

For outdoor installation, it is recommended to be at least 0.3m above the ground to ensure the wireless communication.

d)In order to keep the water meter in good working condition, the pipeline should be clear up before installing the meter.

e)The valves should be installed in front and back of the water meter.

f)During the service time, keep the water meter lid closed. Keep the surface of the register clean to make clear reading during the long time service

g)Ensure that the water supply line is kept operating under full pipe conditions

h)Ensure that the minimum pressure at the back end of the gauge is 0.03 MPa

3.Verification Process

Calibration:

①Place the water meters on the test bench, start water flow and wait until there is no air in the pipe. Then stop water flow.

②Read the initial index of tested water meters, make a flow rate ($Q_3/Q_2/Q_1$) and when related water magnitude has been passed, stop water flow. Then reading final index of tested water meters. And calculate relative index error of tested water meters with following formula:

$$\frac{[(V_f - V_i) - V_r]}{V_r}$$

V_i : Initial index of the water meter

V_f : Final index of the water meter

V_r : Real volume (measured by the reference device)

Note: with automatical test table, there is no need to read initial and final index

Sealing:

The sealing mark will be one of followings:



ATTENTIONS

1.Customer Attentions

- Damages and defects which take place during the loading , unloading and transport after the product is delivered to the consumer.
- In the event that there are alterations on the guarantee certificate ,the original serial number on the product is removed or altered.
- Damages and defects caused by use errors.
- Defects in the meters which are not protected by the negative effects of the external atmospheric conditions (mechanic impact,rain and dust,freezing,direct sunlight)
- Defects caused by the foreing objects in the installation
- Meters with removed seals are not covered by guarantee.

The Repairs Of The Defect Not Covered By The Above Mentioned Guarantee Are Done With Charge

2.Maintenance

There is an obligation of maintenance and calibrations at regular intervals at the repair and calibration stations authorized by the Ministry department. And the repaired and maintained water meter should be tested again according to the standard flow rate listed in the Main Technical Data before reinstalled.

3.FCC Statement

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

- (1)This device may not cause harmful interference, and
- (2)This device must accept any interference received, including interference that may cause undesired operation.

NOTE: AIMEI is not responsible for any radio or TV interference caused by unauthorized modifications or changes to this equipment. Such modifications or changes could void the user' s authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Federal Communication Commission (FCC) Radiation Exposure Statement

When using the product, maintain a distance of 20cm from the body to ensure compliance with RF exposure requirements.

4.Manufacturer

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