FRM6002 Radar flowmeter

FEATURES

- Non-contact measurement based on hybrid-band radar. Simultaneous output of
- flow velocity, level, and flow rate without interference. Low maintenance and unaffected
- by sediment. IP68 waterproof design, suitable for a variety of field environments and even extreme
- weather conditions. Compact design, highly cost-effective. Integrated reverse polarity protection, lightning protection, and overvoltage
- protection. Supports Modbus-RTU protocol for easy system integration. Supports mobile Bluetooth debugging, facilitating on-site maintenance.

OVERVIEW

FRM6002 Radar flow meters use radar to measure water velocity and level, converting the flow rate into an integral model. They provide real-time flow measurement around the clock, and their non-contact measurement is less susceptible to environmental influences. They also offer a bracket for mounting.

SPECIFICATION

Speed range	0.05 m/s ~40m/s
Speed measurement accuracy	±0.01m/s（Radar simulator calibration）
Resolution	1mm/s
Speed measurement pitch angle(automatic compensation)	0°- 80°
Speed measurement antenna beam angle	10°*27°
Ranging blind spot	20cm
Maximum ranging range	65m
Ranging accuracy	±1mm
Ranging antenna beam angle	6°
Power supply range	7~28VDC
Measurement time	0.5~2.5s
Start time	<2s
Working current	When 12V is working normally and continuously, the current is about 120mA
Communication interface	RS485（baud rate）、Bluetooth（5.2）
Communication protocol	Modbus（9600/115200）
working temperature	-40-85°
Shell material	Aluminum alloy,PBT
Dimensions (mm)	171.58×77.12×87.12
Protection level	IP68
Anti-surge	6000V

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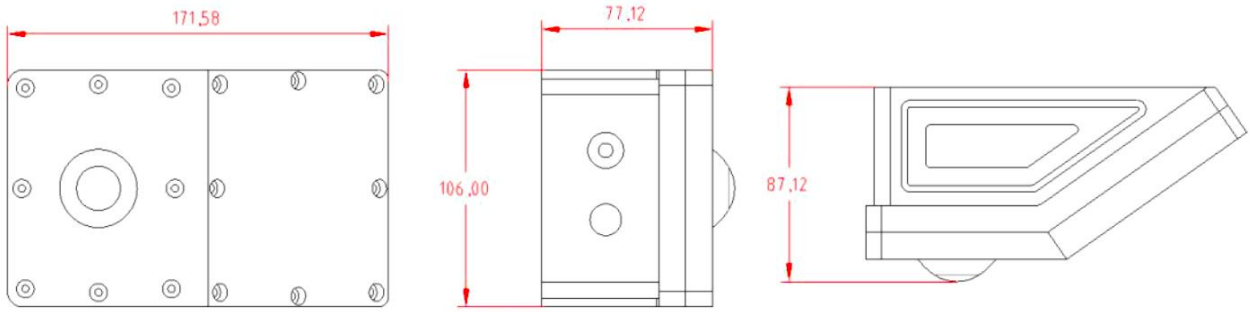
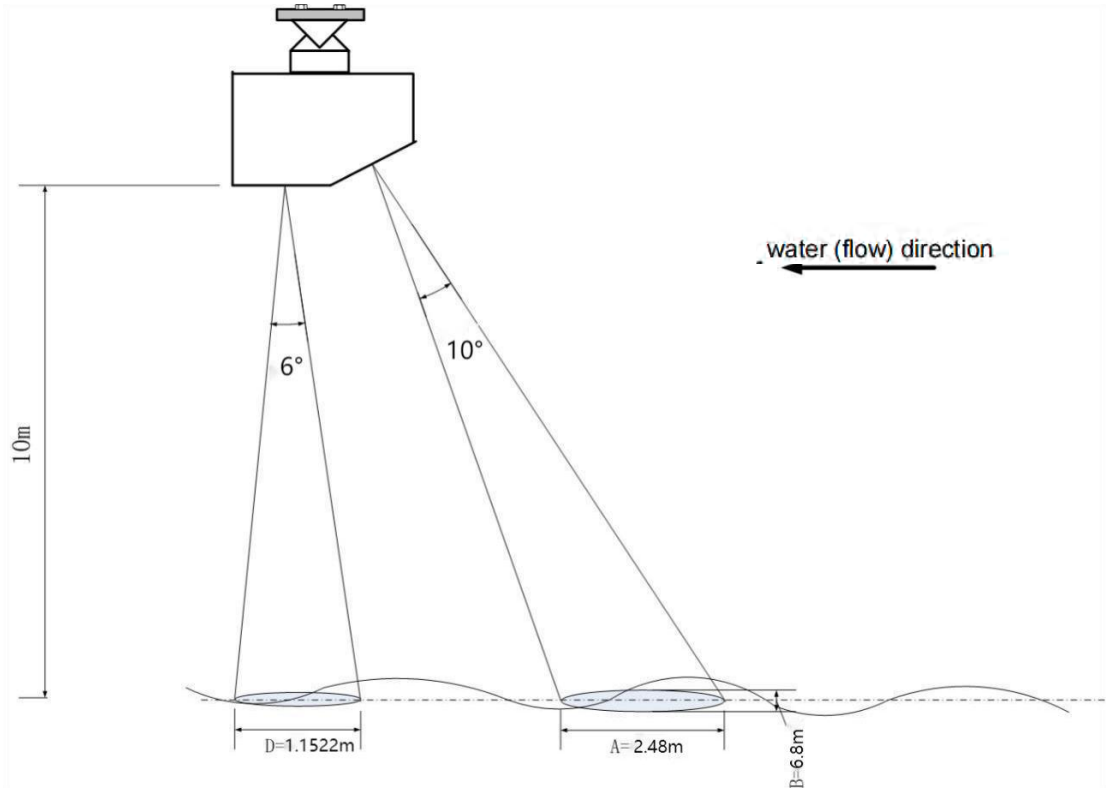
DIMENSION

Unit: MM



STRUCTURE & FUNCTIONS

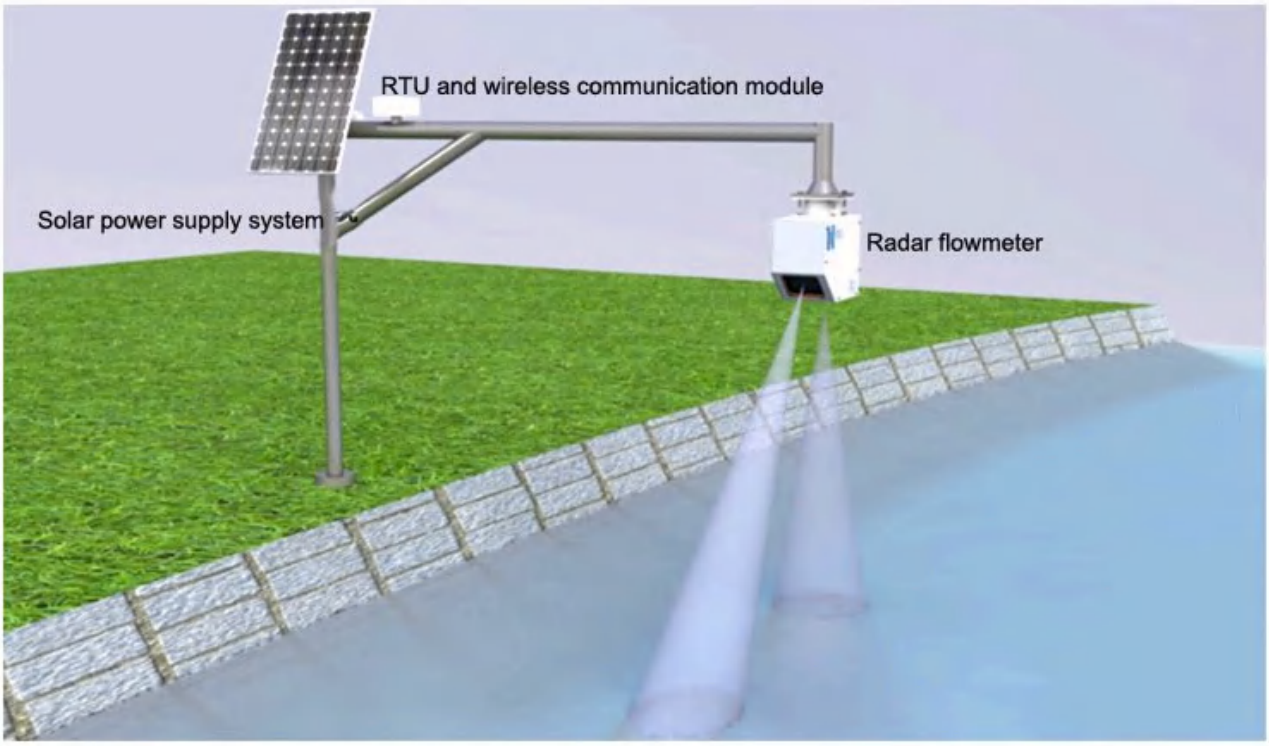


Antenna beam illumination surface parameter values (1 meter)

Name	Length (m)
Flowmeter A	0.248
Flowmeter B	0.68
Water level gauge diameter D	0.115

INSTALLATION EXAMPLE

The flowmeter integrates a radar water level gauge and a radar flowmeter. When installing the flowmeter, the water level gauge and the flowmeter radar cannot be blocked, otherwise the measurement accuracy will be affected. When installing the flowmeter, try to ensure that the upper surface of the housing is level and installed in the middle of the channel. The beam of the current meter is recommended to face the direction of the incoming water, and the horizontal angle to the direction of the water flow is 0 degrees. The current meter is only affected by the dynamic target. When the channel is hardened and there are no weeds or trees, even if the beam is irradiated on both sides of the channel, it will not affect the flow measurement.



APPLICATION CASES

- Flow velocity, water level or flow measurement of rivers, lakes, tides, reservoir gates, underground water pipe networks, irrigation channels, etc.
- Auxiliary water treatment operations, such as urban water supply, sewage monitoring, etc.
- It is suitable for general river and channel flow measurement, especially for flow velocity measurement of high flood, rapid flow, high sediment content and high pollution.