

## FRM6300 4G Solar Integrated Radar Flow Meter

### FEATURES

- Ultra-high ranging accuracy: Wide range and high precision, accurate long-distance measurement, meeting high-precision requirements.
- Wide temperature range: Stable operation in extreme climates.
- Ultra-low power consumption: Operating current  $\leq 6\text{mA}$ , low power consumption, longer battery life and extended lifespan.
- Strong signal reception: High RF sensitivity, strong multi-band reception, stable communication in weak signal areas.
- Stable power output: Stable LTE power, ensuring reliable wireless communication and long-distance transmission.
- Integrated structure: Integrated core components reduce failures and improve stability.
- High-quality antenna configuration: Built-in 4G and BLE5.1 antennas, stable wireless connection and wide coverage.
- Fully compatible internal coordination: Pre-set parameter matching, no debugging required, ready to use right out of the box.
- Multi-section algorithm adaptation: Built-in multiple algorithms adapt to different sections, applicable to a wide range of scenarios.
- Multiple configuration methods: Supports Bluetooth, Type-C USB, and 4G configurations, adapting to multiple operating scenarios.



### SPECIFICATION

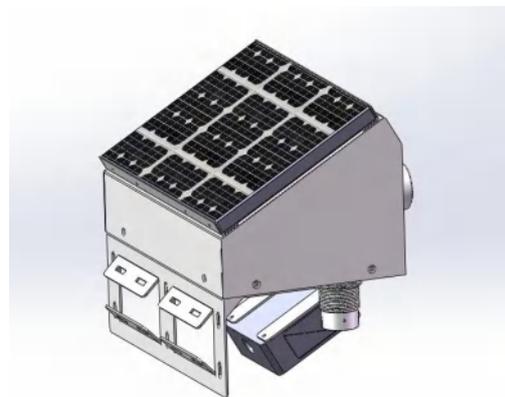
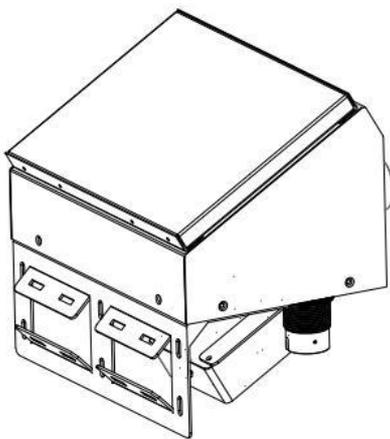
Power Supply Range	DC 12V/24V (Extreme DC 6-28V) Recommended DC12V
Water Level Measurement Range	0-50m
Water Level Resolution	1mm
Water Level Measurement Accuracy	$\pm 3\text{mm}$
Water Level Radar Frequency	60-62GHz
Water Level Antenna Angle	(Horizontal and Vertical, 3dB) $\pm 8^\circ$
Flow Velocity Range	0-65m/s (Settable range 0-18m/s; 0-36m/s; 0-65m/s), default 0-18m/s ②
Flow Velocity Accuracy	1% (Accuracy within 1m $\pm 1\text{cm/s}$ )
Flow Velocity Resolution	1mm/s
Flow Measurement Radar Frequency	24GHz
Flow Measurement Antenna Beam Angle	Horizontal 12°, Vertical 25°
Housing Material	Aluminum Alloy
Operating Current	Average Current $< 18\text{mA}$ @ DC12V 25°C
Waterproof Rating	IP68
Sensor Interface	1 RS485 interface
Controllable Power Output	1 controllable power output
Storage Capacity	128MB (1Gbit) memory
Bluetooth Type	BLE5.1 2.4G~2.48GHz
Communication Method	Internal integrated 4G DTU for full network compatibility, no external DTU required
Operating Temperature	-30°C~70°C
Storage Temperature	-40°C~85°C
Communication Protocol	Standard Modbus-RTU protocol, function code 03H
Power Supply System	6W solar panel @ DC12V Built-in integrated charging and discharging lithium battery @ DC12V

### OVERVIEW

The FRM6300 integrated radar flow meter is a high-precision, low-power, and highly integrated non-contact telemetry device. It integrates a radar level gauge, a flow velocity meter (based on the Doppler principle and including optimized intelligent algorithms), a solar lithium battery power supply system, a low-power acquisition, storage, and transmission module, a Bluetooth module, and a charging controller. As an intelligent telemetry sensor integrating power supply, acquisition, storage, transmission, and remote configuration and upgrades, it adopts an industrial-grade processor and wireless module. Through built-in embedded software, it collects data and transmits it to a monitoring platform, meeting the application needs of multiple industries such as water conservancy, hydrology, and environmental protection.

### DIMENSION

External dimensions: Length: 295mm, Width: 215mm, Thickness: 175mm (excluding mounting bracket)



### APPLICATION

The equipment comes with a clamp for crossarm installation by default. The crossarm is usually made of steel pipe with a diameter of about 50mm, but it can actually be between 45-75mm. The installation diagram is as follows:

