

FRM5100 24G Radar Level Meter

FEATURES

- FMCW Frequency Modulated Continuous Wave Mode
- Non-contact measurement, safe and low-loss, low maintenance, unaffected by silt, etc.;
- All-weather operation, unaffected by temperature, strong anti-interference capability;
- Combines measurement operation and sleep modes for energy saving and consumption reduction;
- Provides multiple interface options for easy integration with platform systems;
- IP68 waterproof design, suitable for various outdoor environments;
- Compact and stylish design, excellent cost performance;
- Simple installation, minimal civil engineering work;
- Customizable 4G integrated voice water level measurement.



OVERVIEW

FRM5100 radar level gauge is a non-contact water (material) level detection device independently developed by our company. It can be used to monitor water levels in rivers, lakes, and reservoirs, and to assist in water treatment operations.

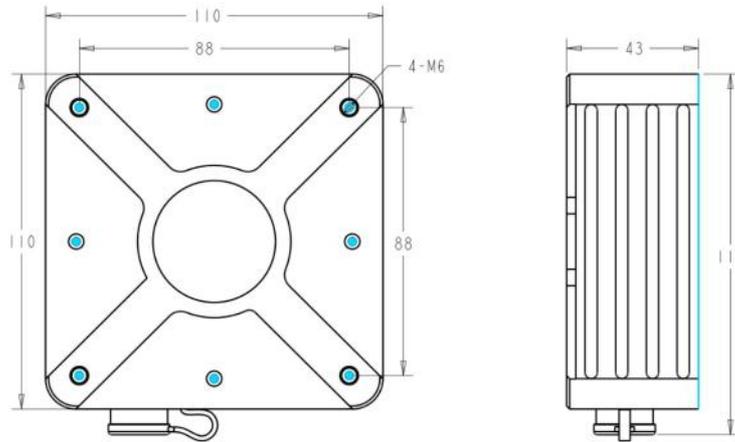
This radar level gauge operates in the 24GHz ISM band and uses FMCW modulation. It can detect water level information in real time, 24/7, unaffected by climate, temperature, surface water vapor, or pollutants in the water. The product incorporates a highly efficient data processing algorithm to ensure high accuracy of measurement results. The product provides standard physical circuit interfaces: RS485, 4~20mA (optional).

SPECIFICATION

Measurement range	400-40000mm
Measurement accuracy	±3mm
Resolution	1mm
Measurement time	300 ~ 20000ms
Measurement interval	1~30000s
Intervals	1 ~ 18000s
Data format	9600, n, 8, 1
Communication interface	RS-485/ 4-20mA current loop
Communication protocol	MODBUS/custom ASCII
Antenna type	Planar microstrip array antenna, 11°×11°
Protocol	Custom ASCII/MODBUS
Transmit frequency	24GHz
Operating voltage	+6 ~ 30V DC
Operating current	≤ 18mA@12V (Operating mode), Low power (sleep) mode, operating current ≤ 0.3mA@12V
Working current	Working mode, working current ≤ 120mA@12V Low power consumption (sleep) mode, working current ≤ 1mA@12V
Operating temperature	-40 ~ 85°C
Protection class	IP68
Dimensions (l×w×h)	110×110×43 (mm)
Outer shell material	Front cover: Pyrite (white), Rear cover: Aluminum alloy (black)

DIMENSION

Unit: MM



INSTALLATION & APPLICATION

- Hydrological surveying of rivers, lakes, and reservoirs
- Water level monitoring of rivers, irrigation canals, and flood control systems
- Monitoring of urban flood control and waterlogging
- Monitoring of torrential floods in mountainous areas, etc.

