Radar Flow Meter

RLF200

Accuracy ±1mm

Power supply 9 ~ 28VDC

Operating Temperature (-)30℃~70℃

Protection Class IP68

Product Datasheet

Rocksensor is one of the global leaders specializing in process Instrumentation, Research and Development and Designing of Industrial Automation Equipment. We provide highly precise pressure sensors and transmitters, flow metres, level transmitters & temperature transmitters with a prime focus to help our clients efficiently, safely and economically run complex industrial processes.

Rocksensor headquartered in Germany (originated in Switzerland), has its footprint in various geographical regions such as the US, Russia, South Korea, Italy, Germany, Singapore, Malaysia, China, Taiwan, Australia, UAE, Brazil, and India. Our clients come from some of the major industries such as Oil and Gas, Petrochemicals, Pharmaceuticals, FMCG, Automobiles, Water, Cement, Metal & Mining and mainly from the Power Industry like Nuclear, Thermal, Hydro and Solar.

Rocksensor deals in a wide range of highly accurate industrial automation instruments ensuring that even the complex industrial processes happen efficiently.

To fulfill the needs of our clients we make sure that our instruments work in even the harsh environmental conditions offering accurate recordings and communication.

We, at Rocksensor, believe in creating bonds that last a lifetime and create a success story for each and every client. Rocksensor aims to achieve a perfect fit in global market landscape and establish our footprints across the globe.

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1. Product Introduction

Radar flowmeter refers to a product that uses radar to measure water flow velocity and water level, and converts water flow through an integral model. It can measure water flow in real time around the clock, and non-contact measurement is not easily affected by the measurement environment. The product provides a bracket fixing method.

The main advantages of the product are as follows:

1) Non-contact measurement based on mixed-band radar, flow velocity, liquid level, flow output at the same time without interfering with each other, less maintenance, and not affected by sediment, etc.
2) IP68 waterproof design, suitable for various outdoor environments and various extreme weather environments
3) Small and compact appearance, super cost-effective
4) Integrated anti- reverse connection, lightning protection and over- voltage protection functions
5) Supports Modbus-RTU protocol for easy access to the system
6) Supports Bluetooth debugging on mobile phones to facilitate maintenance work by on- site personnel

2. Technical Specifications

Speed range	0.1 m/s ∼ 30m/s
Speed measurement accuracy	±0.01m/s (Radar simulator calibration)
Speed measurement pitch angle (automatic compensation)	0° ∼ 80°
Speed measurement antenna beam angle	12°*25°
Ranging blind area	8cm
Maximum ranging range	60m
Ranging accuracy	±1mm
Ranging antenna beam angle	6°
Power supply range	9 ∼ 28VDC
Working current	25ma@12V
Communication Interface	RS485 (baud rate), Bluetooth (5.2)
Protocol	Modbus (9600/115200)
Operating temperature	(-)30 ∼ 70°
Shell material	Aluminum alloy, PBT
Dimensions (mm)	142mm*84mm*94mm
Protection level	IP68
Installation method	Bracket

3. Structural Dimensions
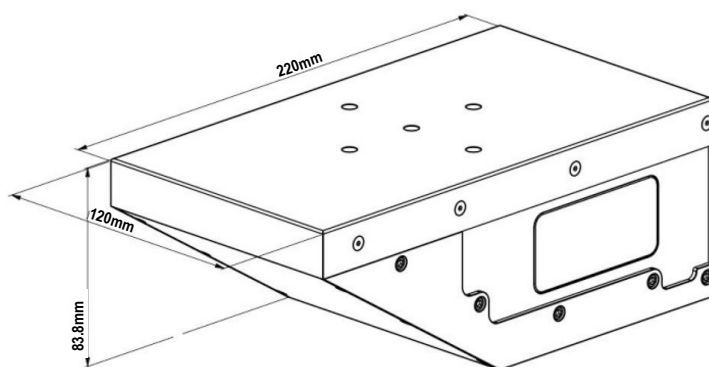
Dimension drawing of flowmeter shell
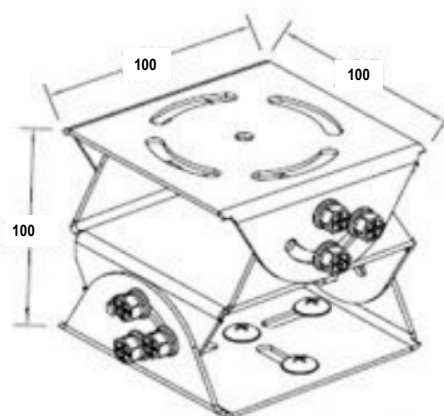
Dimension drawing of Bracket

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The flow meter has a compact structure and comes with horizontal bubbles for installation and adjustment. Integrated surface, internal potting and reinforced sealing, adaptable to various extreme working conditions.
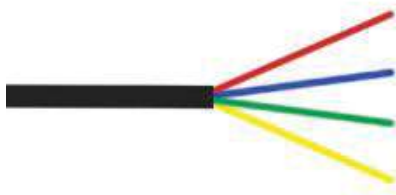
4. Installation
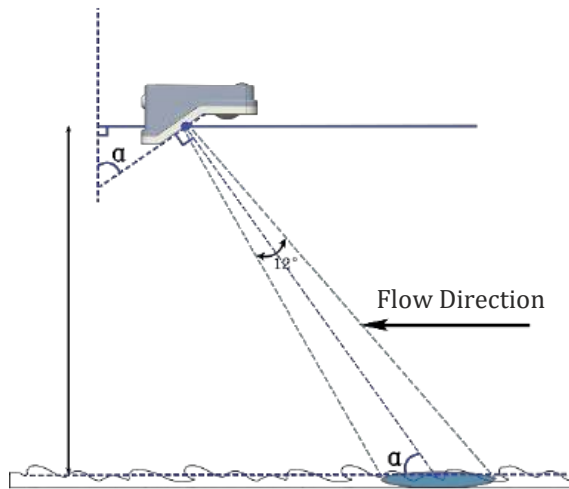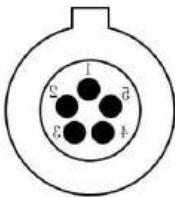

Schematic diagram of instrument installation location

5. Connection

5.1 Wiring Instructions

Product wiring diagram

Wiring instructions: When inserting the aviation plug, the red dots on the two parts should be aligned. When you hear a snap, insert it. For specific wiring instructions, refer to Table 5-1.

	Sequence	Wire order	Function	Interior color	Internal functions	Remark
	1	Blue	Negative pole of power supply	Black	Negative pole of power supply	-
	2	Red	Positive pole of power supply	Red	Positive pole of power supply	9~28V
	3	Yellow	485B	Yellow	485B	The baud rate is 9600, reverse connection is not allowed
	5	Green	485A	Green	485A	The baud rate is 9600, reverse connection is not allowed

Line sequence description

Sensing Beyond the Vision

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Field Instrumentation Range

Pressure Measurement

- Smart Differential Pressure Transmitter
- Smart Gauge Pressure Transmitter
- Smart Absolute PressureTransmitter
- Miniature Pressure Transducer without display
- Sanitary Gauge/ Absolute Pressure Transmitter

- Submersible Pressure Transmitter
- Remote Seal Differential P.T. with capillary
- Remote Seal Differential P.T. Direct Mount
- Remote Seal Gauge/Absolute P.T. with capillary
- Remote Seal Gauge/Absolute P.T. Direct Mount

Flow Measurement

- Coriolis Mass Flowmeter
- Thermal Gas Mass Flowmeter
- Positive Displacement Flowmeter
- Electromagnetic Flowmeter
- Vortex Flowmeter

- Turbine Flowmeter
- Variable Area Flowmeter
- Clamp On Ultrasonic Flowmeter
- Inline Ultrasonic Flowmeter
- Portable Ultrasonic Flowmeter

Level Measurement

- RADAR Level Transmitter Horn Antenna
- Compact RADAR Level Transmitter
- RADAR Level Transmitter Sanitary
- RADAR Level Transmitter
- Guided Wave RADAR Level Transmitter
- Guided Wave RADAR Level Transmitter
- RADAR Level Transmitter Lens Antenna

- RADAR Level Transmitter Rod Antenna
- Ultrasonic Level Transmitter
- Microwave Barrier Level Switch
- Admittance Level Switch Series
- Vibrating Rod Level Switch Series
- Tuning Fork Level Switch Series

Temperature Measurement

- Head Mount Temperature Transmitter
- Temperature Transmitter for Sanitary Applications

- DIN Rail Temperature Transmitter
- Field Mount Temperature Transmitter

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