Radar Flow Measurement System

RSHU

LIQUID

OVERVIEW

Operation

The RSHU series radar flowmeter can continuously measure the flow of water in rivers and open channels and obtain surface flow velocity and water level height by non-contact measurement. It is suitable for rectangular, trapeziodal, circular, polygonal, irregular(refer Below) etc. channel shape.

Application

- River flood monitoring
- Open channel flow measurement
- Dam discharge measurement
- Water & waste water treatment
- Contactless flow measurement
- Irrigation and drainage

- **Features**

- 4.3" TFT screen
- 480x272 pixel resistive touchscreen
- Display Rate & Total Flow Simultaneously
- Level, Velocity, Average Flow, Signal Status
- NEMA 4X, IP65 Front
- 30-Segment Bargraph with Numeric Percent Indication
- Selectable Analog and Digital Outputs
- Second Main Screen for All Datas in Same Time
- RS485 Modbus-RTU Communication
- Data Recorder as Optional

OPERATING DATA

Operating Temperature	-20...+70°C for flow computer -35...+70°C for sensors
Humidity	80% non-condensating
Accuracy	±0,2% F.S for ultrasonic sen. ±1 mm for radar sensor ±0,01 m/s for flow velocity sen.
Frequency	50 kHz for ultrasonic sensor 80 GHz for radar sensor 36 GHz (Ka-Band) ±50 MHz for flow velocity sensor
3 db Beam Width	10 Degrees(±1°) for ultrasonic 5 Degrees(±1°) for radar 12 Degrees(±1°) for velocity
Enclosure	IP65 front
Measuring Units	m³, lt, feet, gallon, second, minute, hour, day

ELECTRICAL DATA

Power Supply	24 VDC for panel mount 24 VDC or 100...240 VAC for wall mount
Power Consumption	DC: <50W / AC: 40VA
Analog Output	4...20 mA, 0-5 VDC, 0-10 VDC
Digital 1 Output	Pulse
Digital 2 Output(Optional)	Four SPDT relay, 5A max.
Communication	RS-485 Modbus RTU

MEASURING RANGES

Flow Velocity	0,1...20 m/s
Ultrasonic Level	0...10 m
Radar Level	0...10 m 0...20 m

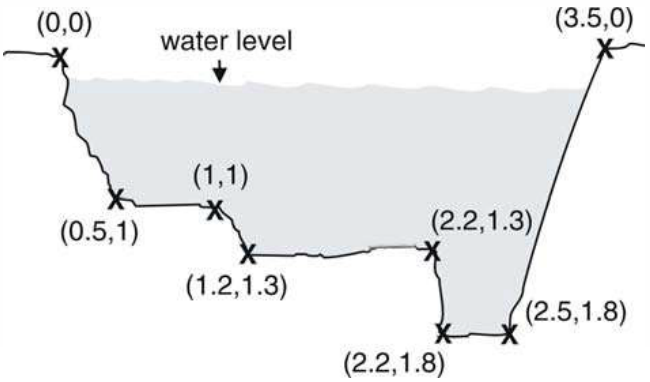
DISPLAY

Type	4.3” TFT full graphic colour display
Resolution	480x272 pixel resistive touchscreen
Refresh rate	Fast or user selectable (1…99s)
Programming	By touch-screen or push-button
Memory(optional)	SD Card, 1 GB

DIRECTIVE & STANDARDS

EMC	Directive 2014/30/EU, FCC 47 CFR part 15.
Low Voltage	Directive 2014/35/EU
RoHS	Directive 2011/65/EU
IP & NEMA	EN 60529 & NEMA 250

MEASURING PRINCIPLE



ORDERING

RSHU							Radar Flow Measurement System
Level Sensor	ULS						Ultrasonic Level Sensor
	RLM						Radar Level Sensor
Level Range		10					0...10 m
		20					0...20 m (only with RLM sensor)
Protection (Sensor)			AP				IP67
			WP				IP68
Data Storage				NN			None
				BG			1 GB SD Card
Output					S		4-20 mA / 0-10 VDC and pulse output
					R		4-20 mA / 0-10 VDC, pulse output, 4 SPDT relay
Communication						NN	None
						TC	TCP/IP Modbus
						RS	RS-485 Modbus RTU

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