

# Open Channel Radar Area Velocity Flow Meter



## General Description

FLRT-11-RLVT is designed for measurement of flow rate & totalized water flow through dam discharge, flow in open ducts and channels. It can be adapted to any type of weir or flume.

## Features

- Two piece design - Radar Level and Velocity Transmitter and Flow Computer
- Adaption to any kind of standard or nonstandard weirs and flumes
- Facility to calibrate the Input range in nonlinear scale up to 100 steps
- Built in totalizer function.
- Built in RTC with data memory of 1 to 24 months data log subject to data log frequency
- Data Logger function with 1GB memory, USB Port to retrieve the data locally
- Optional digital output of RS485 Modbus RTU protocol Optional analogue output of 4 to 20 mA corresponding to flow rate
- Multiple AC & DC Supply system options 12V DC, 24V DC, 230V AC
- Auxiliary supply of 12V DC, 24V DC for external sensor is available
- Overall accuracy of flow measurement up to +/- 5% FS
- Optional RTU function with wireless GSM and GPRS communication
- Flow Reporter software available for remote monitoring, configuration and data retrieval from multiple locations



## Applications

- Measurement and recording of water flow through dam discharge
- Measure and record flow through open channels, streams & rivers

## Function

When FLRT-11-RLVT flow meter is installed across open canal or stream, it can measure, calculate & totalize the flow based on one of the two following principles:

- Programmed formulas for different dimensions of the most common flumes and weirs such as Cut Throat, Parshall flumes and V-notch weirs based on ISO 1438
- In case of Flow measurement on the basis of Area Velocity calculation, Input range can be programmed in nonlinear scale up to 100 steps

## Technical Specifications

### Sensor:

Range (Velocity)	0.01 m/s to 30 m/s
Accuracy (velocity)	+/- 0.01 m/s
Pitch angle for velocity measurement	0° to 80°
Range (Level)	40 m
Accuracy (Level)	+/- 1 mm
Maximum Distance between Sensor and Water surface	30 m
Voltage Supply	24 V DC
Working Current	25 mA at 24 V DC
Communication Interface	RS485 (Baud Rate: 9600/115200), Bluetooth 5.2
Protocol	Modbus RTU
Operating temperature	-20°C to 70°C
Material of construction	Aluminium, PBT
Degree of protection	IP-68
Installation	Bracket Mount

### Flow Logger:

Service	Flow Indicator, Totalizer, Flow Converter, Flow Logger & RTU
Input	Pulse, 4 to 20mA, RS485 Modbus RTU
Range	0 to 99999 LPM
Unit of measure (flow)	LPM, LPH, m <sup>3</sup> /m, m <sup>3</sup> /h
Unit of measure (totalizer)	L, KL, ML, m <sup>3</sup>
Temperature	-25 to 60 °C
Supply	12 V DC, 24 V DC, 110 V AC, 220-240 V AC
Relays (optional)	2 Potential Free, High & Low cut off
Relay rating	2A, 230 V AC/ 0.5A, 24 V DC
Accuracy	+/- 0.5% FS
Averaging time	1 to 60 secs (Configurable)

Logging frequency	1 reading/sec up to 24 hours
Display	TFT Screen Size 4" to display characters up to 24 digits
Operation & setting	Touch Screen
Program	Non-volatile Flash, Linear & Non Linear
Modes	RUN mode, SETTING mode
User levels	2 Levels, Supervisor & Operator - Supervisor: Calibration, Modify, View Operator: View
Memory type & size	EEPROM 512KB, expandable up to 2GB
USB port	Pen Drive connectivity for data download
GSM / GPRS	900Mhz GPRS Modem with external antenna
Housing	Polystyrol, 185 x 240 x 115 mm (H*W*D)
Degree of protection	IP-65
Mounting	Indoor, Wall mounted

**Note:**

- User & application specific features can be accommodated. Customized Data Acquisition System along with Flow Reporter software is available. For more details, please contact us.
- Due to continuous improvement, specifications are subject to change without prior notice.