

DISCHARGE MEASURING SYSTEM WITH INTEGRATED RADAR LEVEL SENSOR

t062b-WD-ET



- Integrated calculation of water discharge
- Non-contact measuring system
- Doppler effect-based technology
- Internal radar level sensor

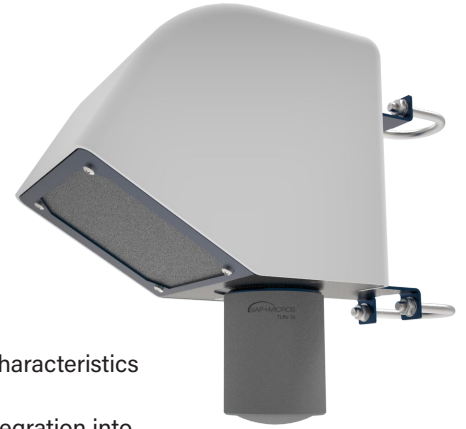
Description

The t062-WD sensor is a flow measurement system specifically designed for installations on rivers and artificial canals. The use of non-contact technology allows for easy installation of the sensor cantilevered on the water surface, as well as ensuring minimal maintenance. The t062-WD integrates a water velocity measurement system and an internal level sensor interfaced via Modbus in the same sensor. The measurement principle of the velocity sensor is physically based on the different frequency of the returning signal according to the Doppler effect, while the radar level sensor typically measures the flight time of the signal emitted by the sensor-towards the water surface.

These two measurements are combined by the internal electronics to get the real-time flow measurement, after a sensor configuration taking into account geometry and main hydraulic characteristics of the river section to be monitored.

The sensor can be supplied with different electrical outputs that allow greater versatility for integration into telemetry and SCADA systems.

The electronics are housed inside a powder-coated aluminum body with IP67 protection class, also designed to ensure high robustness against possible vandalism.



Main features

- **Ease of maintenance**
- **Vandalism proof housing**
- **Measuring flow longitudinally and transversely**
- **Easy configuration of channel geometry**
- **Automatic compensation of vertical angle**
- **Overvoltage protection**

Technical Specifications*

Measurement Performance		
Velocity [m/s]; Level [m]		
Transducer	24 GHz (K Band)	
Measurement range	0.03-16 m/s; Level: 0-30 m	
Accuracy	± 0.01 m/s; Level: ± 2 mm	
Resolution	1 mm/s	
Radar opening angle	12°	
Distance to water surface	0.2-35 m	
Operating Conditions		
Temperature	-40°C ÷ +70°C (storage -40 to +80 °C)	
Humidity	0% ÷ 100%	
Outputs		
RS485-Modbus ASCII / RTU	Velocity 0.03 ÷ 16 m/s	
SDI-12	Velocity 0.03 ÷ 16 m/s	
Current	4 ÷ 20 mA ↔ 0.03 ÷ 16 m/s	
Power Supply and Consumption		
Voltage Supply	6 ÷ 30 Vdc	
Power consumption (mA)	Standby	1 mA
	Active mode (typical)	140 mA
Mechanical specifications		
Protection class	IP68	
Housing material	Powder coated aluminium	
Ordering codes		
RS485 Modbus	PSM-t062b-WD-ET	

*Changes on technical performances can be applied upon request of specific calibration