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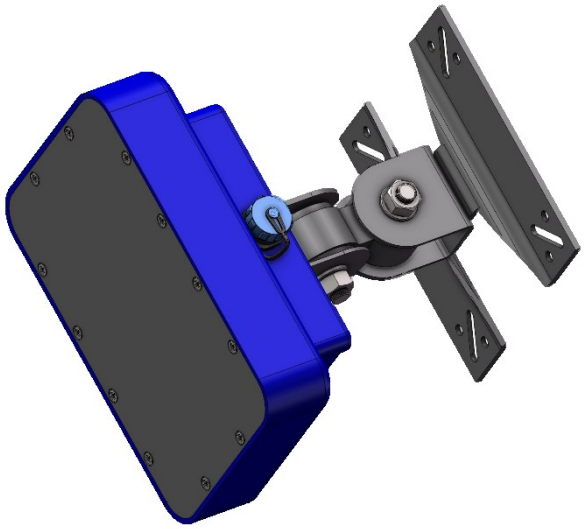
AiW-5112x

Planar Array Antenna Surface Velocity Radar

Characteristics



- Non-contact surface velocity radar / hydrological measurement products, fully enclosed IP68 protection design with fixed installation usage type.
- The use of planar array antenna design with field adaptability, Eliminate field ecological interference, maintenance-free Identify data influenced by sensor movement (e.g., wind, traffic) using Meta data from integrated vibration and tilt sensors.

Applications

- The AiW-5112x is a non-contact, be adapted to all-weather, compact surface water speed radar sensor for measuring open channel flow.
- Designed for flow measurements in open channels and rivers where reliable velocity data is required continuously during floods or high concentrations of suspended sediment.
- The sensor is mounted above the water surface, using flexible brackets for vertical or horizontal mounting away from floating debris. Speed measurements and sensor status information from the integrated vibration and tilt sensors are available via RS-485/Modbus. It is also compatible with AQUA flow software for system calibration.

Specifications

Radar Emission Frequency	23.8~25.3GHz (Frequency parameters can be adjusted adaptively) / RF output power -5dBm
Measurement Range	0.015 ~ 25 m/s, Detection diagonal distance 0.8 ~ 100 m
Measurement Accuracy	±2% of measured value / Resolution 0.03 mm/s @70M high/45°
Measuring Response Time	Effective data output time for power boot <5s, Measurement data update cycle <1.5s
Radar Opening Angle	12° Azimuth / 24° Elevation
Dimensions	158mm x 100mm x 57 mm (H)
Electrical Connection	M12/ 4 wires of watertight aerial plug, AWG≤0.785/18
Antenna Type	Φ80mm Planar array antenna, gain 29dB (with POM antenna cover)
Signal output	RS-485 (Option: Relay/4-20mA/SDI-12/Wi-Fi /RTU/Bluetooth/IIoT)
Communication protocol	RS485 MODBUS (include attitude tilt angle & ambient temperature, measurement flow rate value output)
Ambient Temperature	-60….105 °C
Relative Humidity	≤95%RH
Environmental Pressure	860 ~ 1060 mbar (12,47 ~ 15,37psi)
Power Supply	9.0~38VDC, 4 wires, < 120mW (Supports intermittent power supply)
Diagnostic Method	Remote PC / mobile Application Software: AQUAflow
Shell Material	Anodized Aluminum + POM or PTFE (Antenna cover)
Mounting Method	M6 Universal Joint Bracket, Rotation range of swivel mount, Lateral axis: ±90°,Longitudinal axis: ±90°
Ratings	IP68
Standard Lead-time	4 to 5 weeks (Non-customized products)

SERVICE CONTACT: 86-13799977915, 86-18965063391(TECHNICAL SUPPORT), 86-18106067295(AFTER SALE SERVICE)
ALTHOUGH WE HAVE RECONCILED THE CONTENTS OF THE MANUAL WITH DESCRIPTION OF INSTRUMENT, THERE MAY STILL BE CHANGES WE CANNOT ENSURE THAT IT IS FULLY CONSISTENT. THE CONTENT WILL BE CHECKED AND CORRECTED IN AN ORDERLY, AND THE ERRATA WILL BE IN SUBSEQUENT RELEASES. WE WELCOME USERS TO MAKE VARIOUS SUGGESTIONS FOR IMPROVEMENT. [TECHNICAL DATA SUBJECT TO CHANGE]

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AiW-5112 产品结构安装图(Dimensions):