

MINI Radar Sensor

Overview

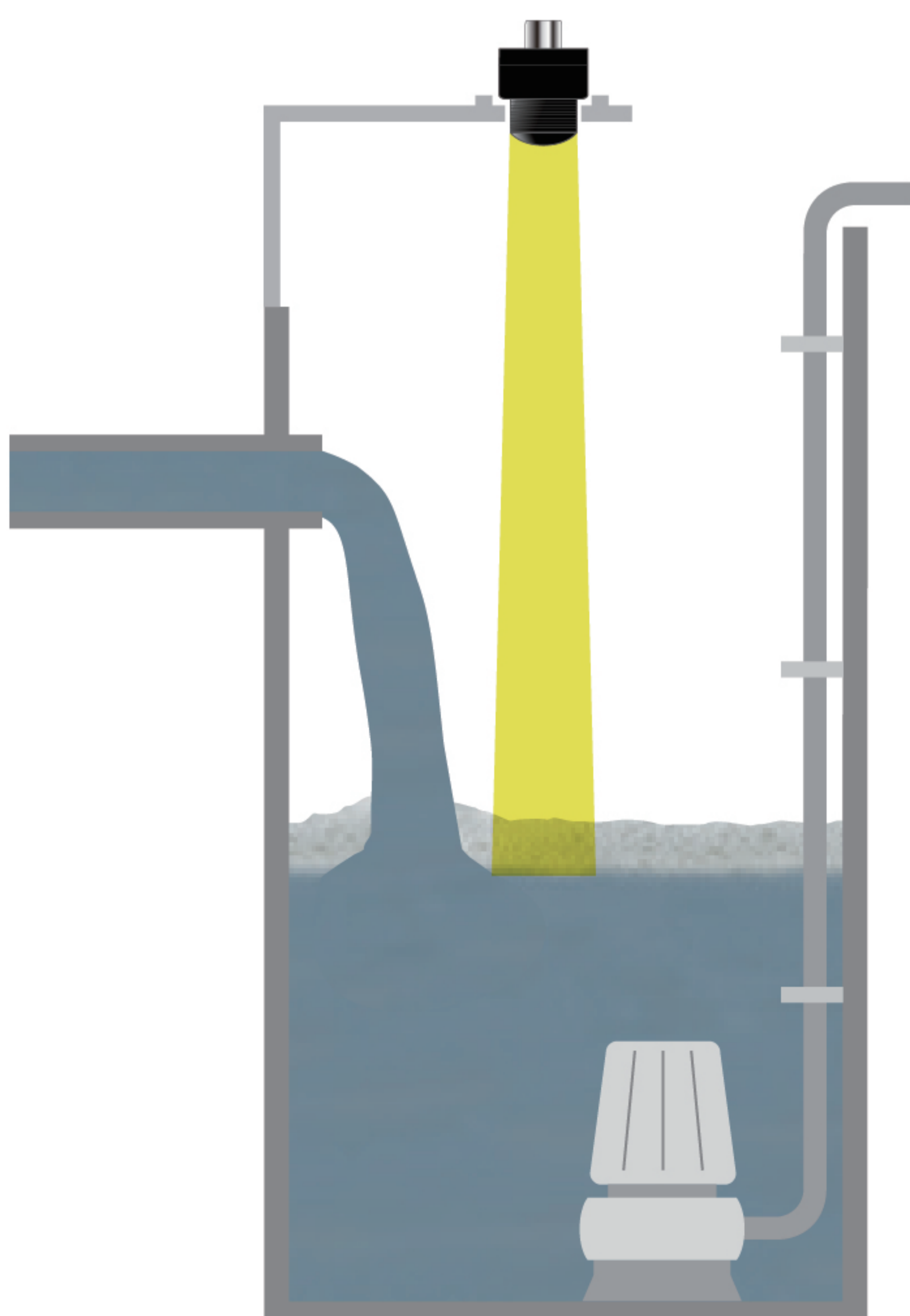
The 80GHz FMCW MINI Radar Sensors measure to 30 m for liquids/solids. HART/Modbus, Bluetooth + WeChat app enable setup/cloud updates. Smart echo algorithm ensures stable, maintenance-free use. Widely used in hydrology and water management, it is also suitable for short-range and simple-condition bulk solid level measurement applications.

Principle

An 80 GHz FMCW radar sends a chirp, receives echoes. Mixing transmit/return yields an IF signal; FFT gives beat frequency/time delay. With light speed, distance—and thus level—is computed.

Benefits

- Compact, cost-effective design.
- Simple display for easy on-site installation and setup.
- High accuracy (± 1 mm), 30 m range for liquids; also fits short-range bulk solids.
- Built-in Bluetooth 5.0, supports "Jiwei Smart Control" WeChat app and cloud for remote setup, upgrades, and monitoring.
- Smart echo processing with self-learning: suppresses false echoes, separates multi-echoes, tracks targets for stable accuracy.
- Lightweight, UV-resistant nylon housing.
- Ideal ultrasonic meter replacement, perfect for hydrology and water management.



JWrada-21



JWrada-22



Features	Compact, simple and cost-effective 80GHz high-frequency radar level sensor	Compact, simple and cost-effective 80GHz high-frequency radar level sensor with display
Applications	Especially suitable for hydrology, simple liquid level, and short-range bulk solid measurement	Especially suitable for hydrology and water management, simple liquid level measurement, and short-range bulk solid level measurement
Measurement Medium	Solids and liquids	
Process Temperature	Ambient temperature: -40 ~ 80°C	
Range	≤30m	
Process Pressure	-1 ~ 10 bar	
Antenna	Nylon plastic, with optional metal material available upon request	
Process Connection	Direct threaded installation, or bracket through-hole (φ48 mm ±1) installation with fastening nut	
Beam Angle	≥6°	
Frequency	80GHz	
Power supply	12~30V DC	
Signal Output	Two-wire: 4 ~ 20mA/HART Four-wire: RS485/Modbus Bluetooth: Support Bluetooth® v5.4	
Ingress Protection	IP66/67、IP68	