



## PRO Radar Level Meter

### Overview

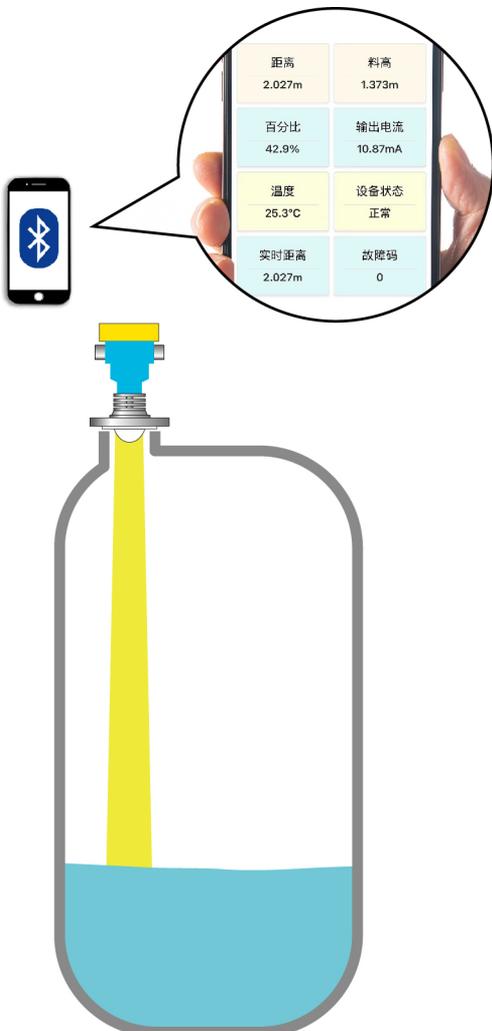
The PRO Radar Level Meters utilize 80GHz FMCW technology, offering a measuring range of up to 150 meters. With a narrow beam angle and focused energy, they are ideal for low dielectric constant and complex media. Each unit undergoes over 50 rigorous factory tests and is well-suited for harsh conditions such as high temperature, high pressure, steam, and dust.

### Principle

Radar level meters send microwave signals from above to the material surface. The signal bounces back, and the device calculates the distance to measure the level. This method works for both liquids and solids.

### Benefits

- **Non-contact Measurement:** High-precision radar technology with accuracy up to  $\pm 1$  mm, ensuring reliable results without physical contact.
- **Excellent Environmental Adaptability:** Measurement remains stable regardless of medium properties or process conditions.
- **User-Friendly Design:** Easy setup with support for remote commissioning via the "Jiwei Smart Control" Bluetooth app.
- **Self-Developed Intelligent Echo Technology:** Proprietary echo-learning algorithm that intelligently adapts to complex environments for optimized accuracy.



## JWrada-31



## JWrada-32



<b>Features</b>	60m range, Economical 80 GHz high-frequency radar level meter with high versatility	60m range, 80 GHz high-frequency radar for liquid/solid levels, full explosion-proof
<b>Applications</b>	Pharmaceutical, food, energy, and hydrology & water utilities level measurement	For all zones, high-dielectric powders/solids
<b>Measurement Medium</b>	Liquid	Solids and liquids
<b>Process Temperature</b>	Ambient temperature: -40 ~ 150°C	Ambient temperature: -40 ~ 150°C High temperature: -40 ~ 220°C
<b>Range</b>	≤60m	
<b>Process Pressure</b>	-1 ~ 30 bar	
<b>Antenna</b>	PFA、316L+PTFE、316L+PFA	
<b>Process Connection</b>	Thread, flange, bracket, hanger	
<b>Beam Angle</b>	≥3°	
<b>Frequency</b>	80GHz	
<b>Power supply</b>	12~30V DC	
<b>Signal Output</b>	<b>Two-wire:</b> 4 ~ 20mA/HART <b>Four-wire:</b> RS485/Modbus <b>Bluetooth:</b> Support Bluetooth® v5.4	
<b>Qualifications &amp; Certifications</b>	<ul style="list-style-type: none"> <li>● <b>Explosion-proof:</b> <ul style="list-style-type: none"> <li>Ex db IIC T6 Gb (Gas explosion-proof)</li> <li>Ex ia IIC T6 Ga (Gas intrinsically safe)</li> <li>Ex tb IIIC T80°C Db (Dust explosion-proof)</li> <li>Ex ia IIIC T<sub>200</sub> 80°C Da (Dust intrinsically safe)</li> </ul> </li> <li>● <b>Ingress Protection:</b> IP66/67、IP68</li> </ul>	<ul style="list-style-type: none"> <li>● <b>Explosion-proof:</b> <ul style="list-style-type: none"> <li>Ex db IIC T6 Gb (Gas explosion-proof)</li> <li>Ex ia IIC T6 Ga (Gas intrinsically safe)</li> <li>Ex tb IIIC T80°C Db (Dust explosion-proof)</li> <li>Ex ia IIIC T<sub>200</sub> 80°C Da (Dust intrinsically safe)</li> </ul> </li> <li>● <b>Ingress Protection:</b> IP66/67、IP68</li> </ul>

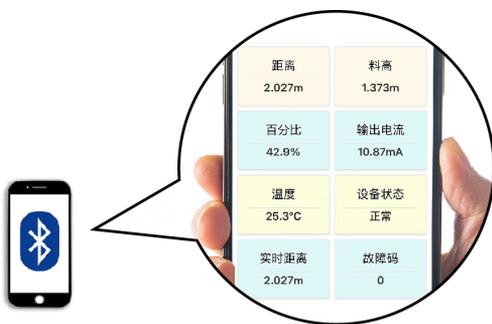
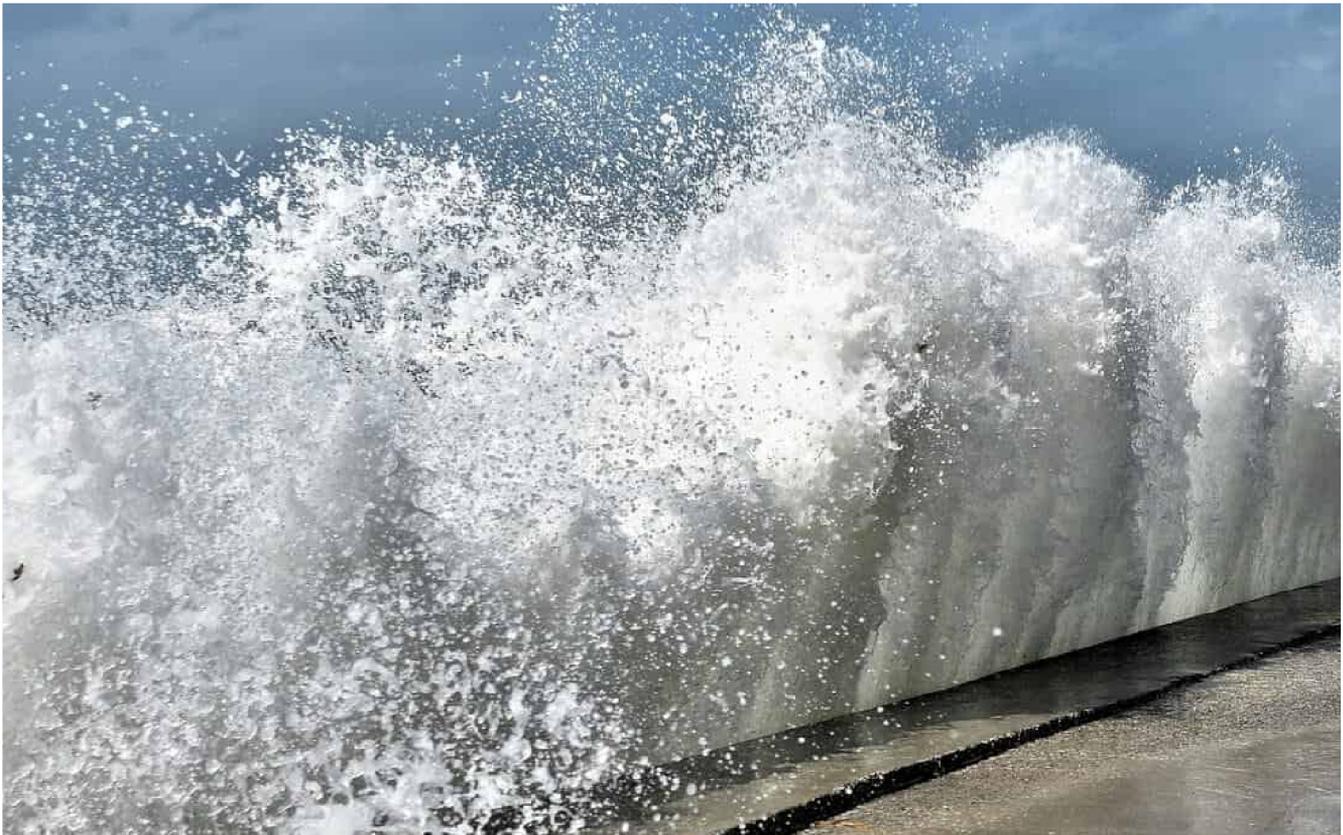
## JWrada-34



## JWrada-35



<b>Features</b>	120m range, 80 GHz high-frequency radar for liquid & solid level, fully explosion-proof certified	150m range, 80 GHz high-frequency radar for high temp, high pressure, corrosion resistance
<b>Applications</b>	Level measurement in steam, foam; low-medium dielectric powders and solids in steam	Level measurement in high temp, pressure, corrosion, steam, foam; powders, solids, dust in steam environments
<b>Measurement Medium</b>	Solids and liquids	
<b>Process Temperature</b>	Ambient temperature: -40 ~ 150°C	High temperature: -40 ~ 220°C
<b>Range</b>	≤120m	≤150m
<b>Process Pressure</b>	-1 ~ 30 bar	
<b>Antenna</b>	PFA, 316L+PTFE, 316L+PFA	
<b>Process Connection</b>	Flange, bracket, hanger	
<b>Beam Angle</b>	≥3°	
<b>Frequency</b>	80GHz	
<b>Power supply</b>	12~30V DC	
<b>Signal Output</b>	<b>Two-wire:</b> 4 ~ 20mA/HART <b>Four-wire:</b> RS485/Modbus <b>Bluetooth:</b> Support Bluetooth® v5.4	
<b>Qualifications &amp; Certifications</b>	<ul style="list-style-type: none"> <li>● <b>Explosion-proof:</b> <ul style="list-style-type: none"> <li>Ex db IIC T6 Gb      (Gas explosion-proof)</li> <li>Ex ia IIC T6 Ga      (Gas intrinsically safe)</li> <li>Ex tb IIIC T80°C Db    (Dust explosion-proof)</li> <li>Ex ia IIIC T<sub>200</sub> 80°C Da    (Dust intrinsically safe)</li> </ul> </li> <li>● <b>Ingress Protection:</b> IP66/67、IP68</li> </ul>	



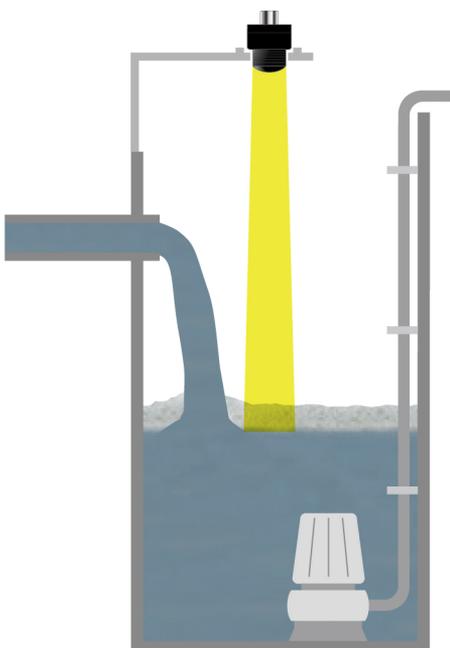
## MINI Radar Sensor

### 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 ( $\pm 1$  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



<b>Features</b>	Compact, simple and cost-effective 80GHz high-frequency radar level sensor	Compact, simple and cost-effective 80GHz high-frequency radar level sensor with display
<b>Applications</b>	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
<b>Measurement Medium</b>	Solids and liquids	
<b>Process Temperature</b>	Ambient temperature: -40 ~ 80°C	
<b>Range</b>	≤30m	
<b>Process Pressure</b>	-1 ~ 3 bar	
<b>Antenna</b>	Nylon plastic, with optional metal material available upon request	
<b>Process Connection</b>	Direct threaded installation, or bracket through-hole (φ48 mm ±1) installation with fastening nut	
<b>Beam Angle</b>	≥6°	
<b>Frequency</b>	80GHz	
<b>Power supply</b>	12~30V DC	
<b>Signal Output</b>	<b>Two-wire:</b> 4~20mA/HART <b>Four-wire:</b> RS485/Modbus <b>Bluetooth:</b> Support Bluetooth® v5.4	
<b>Ingress Protection</b>	IP66/67、IP68	