



TRadar 801 Level Meter

Frequency: 76GHz - 81GHz

Measuring range: 0.3 m- 120m

Measurement accuracy: $\pm 1\text{mm}$

Power: 15-28VDC

Communication: 4-20mA. HART, MODBUS

Introduction

76-81GHz frequency modulation wave FMCW radar product (also called millimeter wave radar), it uses a millimeter wave band with high frequency, it can detect smaller targets and achieve more precise positioning than microwave radar with higher resolution and stronger confidentiality. Therefore, it has important applications in long-distance target detection, strong smoke and dust environment, long-distance imaging, multi-spectral imaging, etc.



Advantages

1. Based on self-developed millimeter-wave radio frequency chip to achieve a more compact radio frequency architecture.
2. Higher signal-to-noise ratio, almost unaffected by level fluctuations.
3. The measurement accuracy is millimeter-level accuracy (1mm), which can be used for metrology-level measurement.
4. The measurement blind area is small (3cm), and the effect of measuring the liquid level of small storage tanks is better.
5. The beam angle can reach 3° , and the energy is more focused, effectively avoiding false echo interference.
6. High frequency signal, can effectively measure the level of medium with low dielectric constant ($\epsilon \geq 1.5$).
7. Strong anti-interference, almost unaffected by dust, steam, temperature and pressure changes.
8. The antenna adopts PTFE lens, which is effective anti-corrosion and anti-hanging material.
9. Support remote debugging and remote upgrade, reduce waiting time and improve work efficiency.
10. It supports mobile phone Bluetooth debugging, which is convenient for maintenance work of on-site personnel.



Application

Measure the level of solid particles, chemical liquid tank, oil tank and process containers.

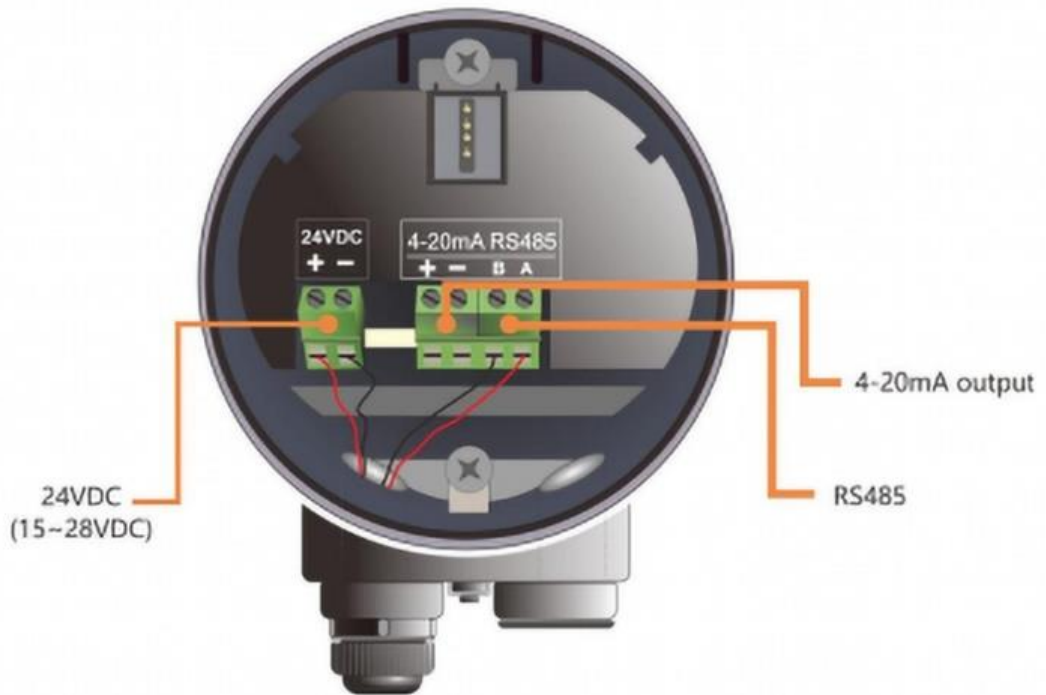
1. Radar level meter is working based on electromagnetic wave. So it could have max 120m measure range.
2. Compared with other type level meter, 80G radar level meter could measure different kinds of oil, chemical liquids, solid powder, and many other mediums.
3. 80G radar level meter could work in harsh working condition. It won't be affected by temperature, pressure and humidity. With PTFE horn, it even could work in corrosive condition, such as acid liquid.
4. Customer also could choose different connection methods, such as flange, thread, bracket.

Technical Data

Frequency	76GHz ~ 81GHz, 5GHz FMCW bandwidth
Measuring range	x0: 0.3 m ~ 60m x1: 0.08m~30m x2: 0.6m ~ 120m
Measurement accuracy	±1mm
Beam angle	3°/6°
Minimum measured dielectric constant	>=2
Power	15~28VDC
Communication	2x: MODBUS 3x: HART/Series
Signal output	2x: 4 ~ 20mA or RS-485 3x: 4~20mA
Fault output	3.8mA, 4mA, 20mA, 21mA, hold
Field operation / programming	128 × 64 dot matrix display / 4 buttons PC software Bluetooth
humidity	≤95%RH
Enclosure	Aluminum alloy, stainless steel, PP
Antenna type	Lens antenna/anti-corrosive antenna / flange isolated by quartz
Process temperature	T0:-40~85°C; T1:-40~200°C; T2:-40~500°C; T3:-40~1000°C
Process pressure	-0.1~2MPa
Product Size	Ø100*270mm
Cable entry	M20*1.5
Recommended cables	AWG18 or 0.75mm ²
Protection class	IP67 / IP68
Explosion-proof grade	ExdiaIICT6
Installation method	Thread or flange
Weight	2.480Kg/2.995Kg
Packing box size	370*270*180mm



Wiring
4-wire product



2-wire product

