



CDL-12B Radar Liquid Level Transmitter

For weather automation applications



Features

- Small beam Angle, the energy concentration, strong anti-interference, high accuracy and reliability Fast response
- Range of up to 70 meters, covering large reservoir and other water level measurement Strong resistance to interference
- Good stability
- Multiple output signal is optional
- Transmitted power is extremely low, no harm to human body
- False Echo Filtering
- Easy Installation

CDL-12B Radar Liquid Level Transmitter antenna emitter narrow microwave pulse, the pulse in the space at the speed of light transmission, met on the surface of measured medium, some of its energy is reflected back, by the same antenna. Firing pulse and receives the pulse interval and the antenna to the surface of the measured medium is proportional to the distance, to calculate the distance on the surface of the antenna to the measured medium.

Typical installation locations

- Agricultural irrigation
- Petroleum
- Power generation plant
- Urban water drainage

Design structure

The radar level meter transmits electromagnetic waves to the surface of the measured medium through the antenna. When the electromagnetic waves meet the surface of the medium, part of the electromagnetic waves are reflected back and received by the same antenna. By measuring the time difference between the electromagnetic wave from transmission to reception, the distance from the antenna to the surface of the medium can be calculated to determine the liquid level height.

Easy installation

Before installing the radar level gauge, it is necessary to specify the measured medium, the shape and size of the container, the measurement range, and the accuracy requirements. These parameters will determine the type, installation method and installation location of the radar level meter.

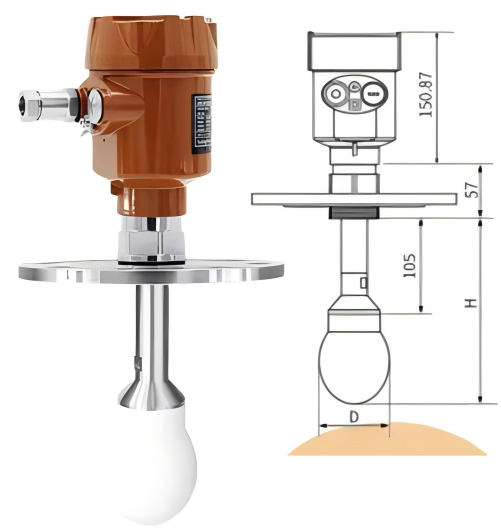
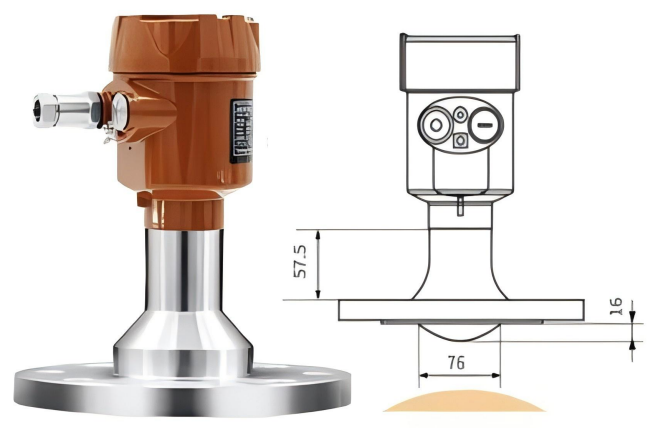
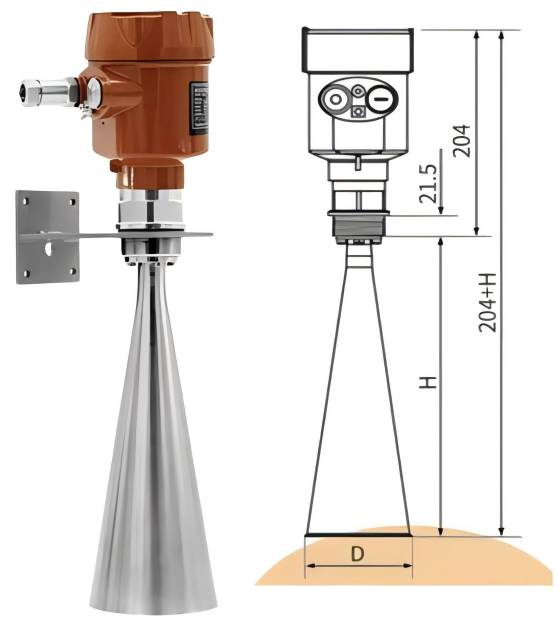
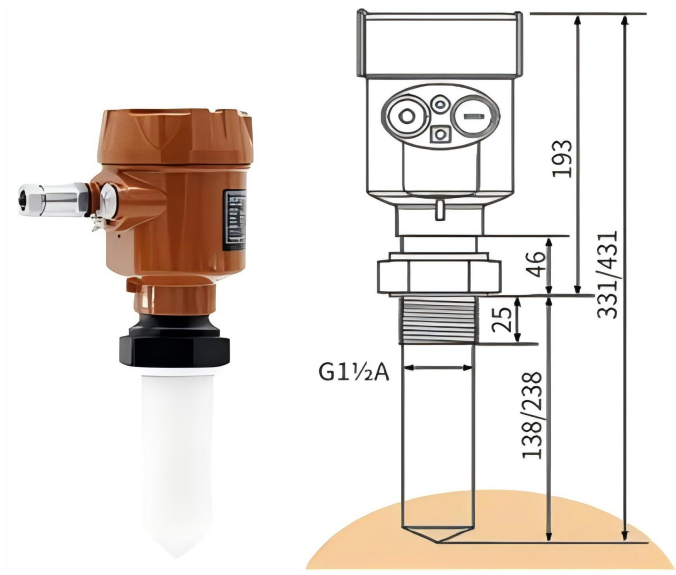
For different measuring media, it is necessary to select a suitable radar level gauge type. For example, for corrosive media, corrosion resistant models need to be selected; For high temperature media, you need to choose a high temperature resistant model.

Reliable operation

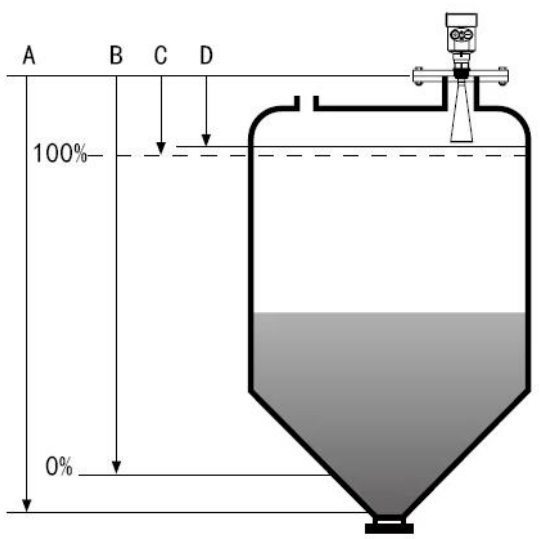
Non-contact measurement: The radar level meter measures the liquid level by transmitting electromagnetic waves and receiving reflected waves, without direct contact with the measured medium. This makes it immune to corrosion, wear, adhesion and other effects of the medium, reducing the risk of measurement errors and equipment damage caused by contact.

Dimensions

CDL-12B connector dimension
 (Different models test different liquids)



Installing



- A: measurement range**
- B: Low level adjustment**
- C: High level adjustment**
- D: Blind zone**

Technical data

Measurement performance, models CDL - 12 B

| Item | Technical specifications |
|-----------------------|---|
| Range | 10m,30m,50m,70m |
| Output | 4-20mA, RS485(MODBUS-RTU) |
| Supply Voltage | 12VDC,24VDC,220VAC |
| Process connection | G1_1/2,support flange |
| Working frequency | Range <30m: 6.8GHz , Range >30m/<70m: 26GHz |
| Accuracy | ±3mm |
| Display | 128*64LCD display resolution:1mm |
| Relay alarm | 250VAC/30VDC@5A Optional |
| Ingress Protection | IP67 |
| Medium temperature | -40~+150°C |
| Medium pressure | -100~100kPa |
| Operating Temperature | -40°C~ +85°C |
| Housing material | Aluminum alloy |
| Antenna material | 304ss |
| Shock | 10m/s ² @10~150Hz |
| Storage Condition | 10°C-50°C@20%-90%RH |

| Model number | Type | Output | Special features |
|--------------|--|--|---|
| CDF-10A | Wind speed | Pulses(PNP) RS485 4-20MA 0-5V | Three cup plastic wind speed |
| CDF-11A | Wind direction | RS485 4-20MA 0-5V | Plastic wind direction sensor |
| CDW-33A | Atmospheric Temperature, Humidity & Pressure | RS485 | Shelter installation |
| CDQ-T6A | Miniature Ultrasonic Automatic Weather | RS485 | Wind speed & direction temp & humidity & pressure |
| CDY-12A | Economical Tipping Bucket Rainfall | Pulses(@10kΩ&0.01uF),RS485 | Diameter :φ200mm, height: 271mm |
| CDG-10B | Solar Radiation | 0-5V,4-20mA,RS485 | Spectral range:300~1100nm |
| CDG-12B | PAR sensor | 0-5V 4-20mA RS485 | Spectral range:400~700nm |
| CDG-13B | Ultraviolet(UV) Radiation | 0-5V 0-10V 4-20mA RS485 | Spectral range:280~400nm |
| CDL-10B | Submersible Liquid Level Transmitter | 4-20mA,0-5V,0-10V,RS485 | Range 0 ~ 0.5m...200mH2O or 0 ~ 5KPa...2MPa |
| CDL-12B | Radar Liquid Level Transmitter | 4-20mA, RS485(MODBUS-RTU) | Range 10m,30m,50m,70m |
| CDL-13B | Ultrasonic Liquid Level Transmitter | 4-20mA(2wires),4-20mA(4wires),RS485(4wires) | Range 5m,10m,15m,20m,30m |
| CDL-17B | Radar flowmeter | RS485(MODBUS-RTU) | Range 0.1 ~ 20 m/s & 0-45m |

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