



# CDL-13B Ultrasonic Liquid Level Transmitter

For weather automation applications



## Features

- Range of up to 30 meters
- Level or material measurement
- Good stability
- Multiple output signal is optional
- Response speed is adjustable
- With LCD display, menu settings
- Easy Installation

CDL-13B Ultrasonic Liquid Level Transmitter is a kind of non-contact, high reliability, high cost performance, easy installation and maintenance of material level measuring instrument. It doesn't have to contact medium can meet the requirements of most of the material level measurement. 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. The product can cooperate with CDH-TM data logger or general recording instrument is used.

## Typical installation locations

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

## Design structure

The ultrasonic level meter transmits ultrasonic pulses to the liquid surface through an ultrasonic sensor (transducer) mounted above the container. These ultrasonic pulses travel through the air, and when they meet the liquid level, part of the ultrasonic wave is reflected back and picked up by the sensor. By measuring the time difference between the ultrasonic wave from transmission to reception, the distance from the sensor to the liquid surface can be calculated to determine the liquid level height.

## Easy installation

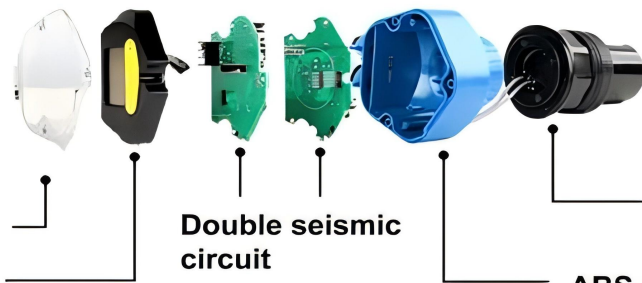
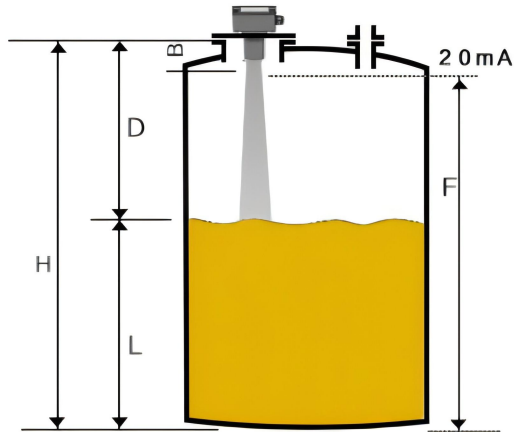
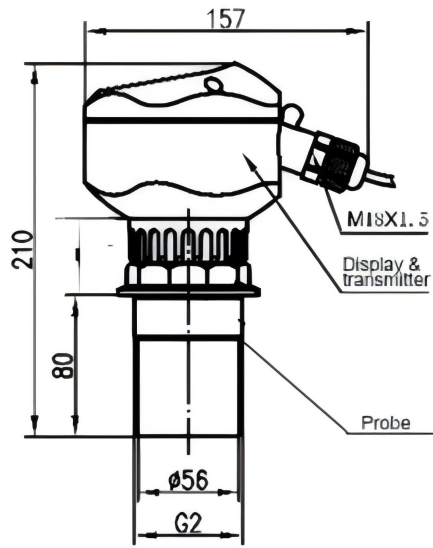
Before installing the ultrasonic level meter, it is necessary to clarify the parameters of the measured medium, the shape and size of the container, the measurement range, and the accuracy requirements. These parameters will determine the type, installation method and installation position of the ultrasonic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

## Reliable operation

Non-contact measurement: The ultrasonic 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-13B connector dimension  
 (Different models test different liquids)



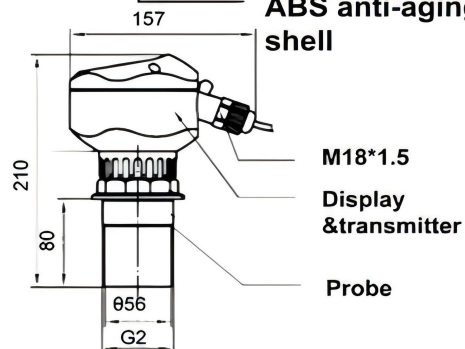
Transparent arc roof

Double seismic circuit

Transducer

Display panel

ABS anti-aging shell



# Technical data

## Measurement performance, models CDL - 13 B

|                          |  |
|--------------------------|--|
| Item                     | Technical specifications   |
| Range                    | 5m,10m,15m,20m,30m   |
| Output                   | 4-20mA( 2wires),4-20mA(4wires),RS485(4wires)   |
| Supply Voltage           | 24VDC,220VAC   |
| Accuracy                 | 0.5%-1%  |
| Resolution               | ±3mm or 0.1%FS(take the maximum value)   |
| Display                  | LCD with English   |
| Control output(optional) | Relay AC250V/8A or 30V/5A  |
| Power consumption        | 4-wire,without relay:1.9W<br>4-wire with relay:3 1W  |
| Ingress Protection       | Probe:IP68,Display unit:IP66   |
| Operating Temperature    | Probe:-40°C~ +85°C,Display unit:-20°C~ +60°C   |
| Housing material         | Anti-aging corrosion resistant engineering plastics  |
| Process connection       | Range=0-5m:M48*2<br>Range=0-10m:G2 or M60*2<br>Range=0-20m:G3 or M78*2<br>Range=0-30m:G3 M78*2<br>Range>30m:M108*2   |
| Menu setting             | Reference zero point, maximum of measuring range,minimum of measuring range,alarm point,Return difference setting,working mode,response time,parameter correction,communication setting etc. |
| 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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Hunan Coda Electronic Tech Co.,Ltd

T:+86-0731-85117089 W:www.codasensor.com E:Molly@codasensor.com