Portable Ultrasonic Liquid Level Indicator

SMAGALL®

With every product from Smagall, you can get:

- Safe and quick detection of liquid level in your tank
- Reliable performance
- 24-Hour English technical instruction
- Convenient and simple operation and maintenance.

General Description

The portable liquid level indicator is designed to measure the presence or absence of liquid at a certain height position in a container or in pipelines. The material of measurable liquid containers can be made of various kinds of materials like metal, glass or unfoamed plastics.

Under ordinary conditions, the maximum wall thickness of measurable containers is 30mm. The product is applicable to the detection of various types of liquids (without crystallization or other particulate matter). Due to the technique of non-contact detection this liquid level indicator is an ideal choice for the detection of dangerous toxic or corrosive liquids.

Measurable medium

pure liquid, milky liquid, suspension liquid

Applicable Tank

● **CO_2 Tank** with any of the following diameter ranges:

215mm - 225mm, 270mm- 280mm, 345mm - 355mm and 395mm-405mm

● **Common Tank**:

All tanks outside the above tank diameter ranges can be considered as common type.

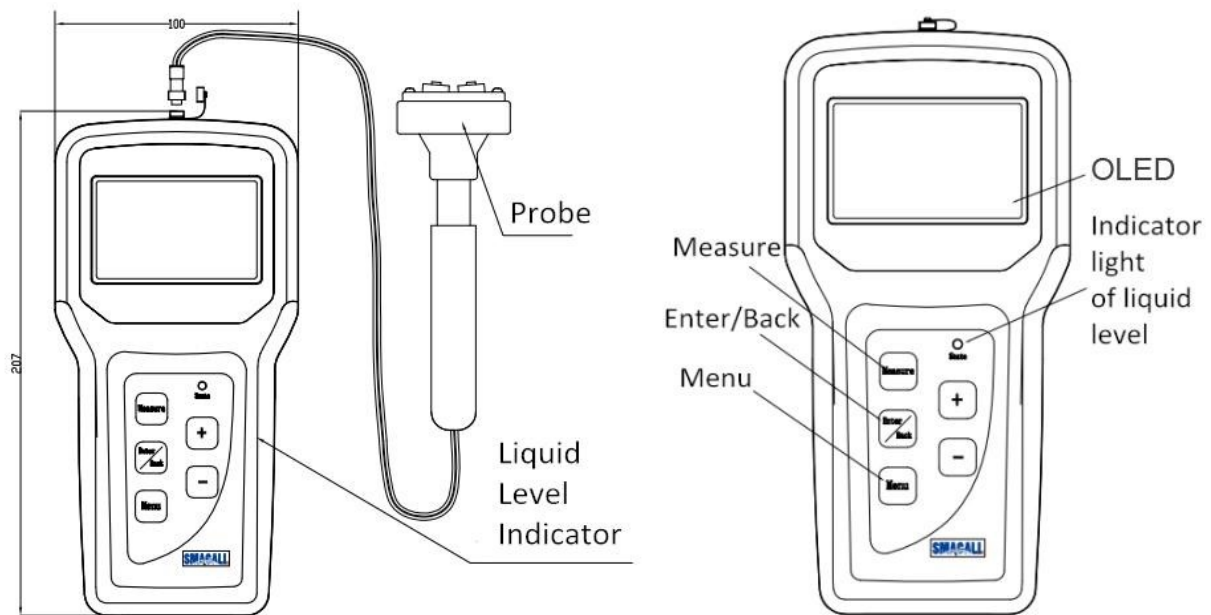vertical tank / horizontal tank / spherical tank(diameter > 3M)

The indicator has no requirement towards medium, height and pressure.

Features

● No contact with medium

● Suitable for toxic, corrosive, or invasive medium

● No need for drilling or welding on tank wall

● Advanced ultrasonic sensor technology

● Reliable measurement results

● Easy and convenient to operate and maintain

● Ultrasonic adaptive detection algorithm.

● High-contrast OLED color display, suitable for outdoor use under strong light
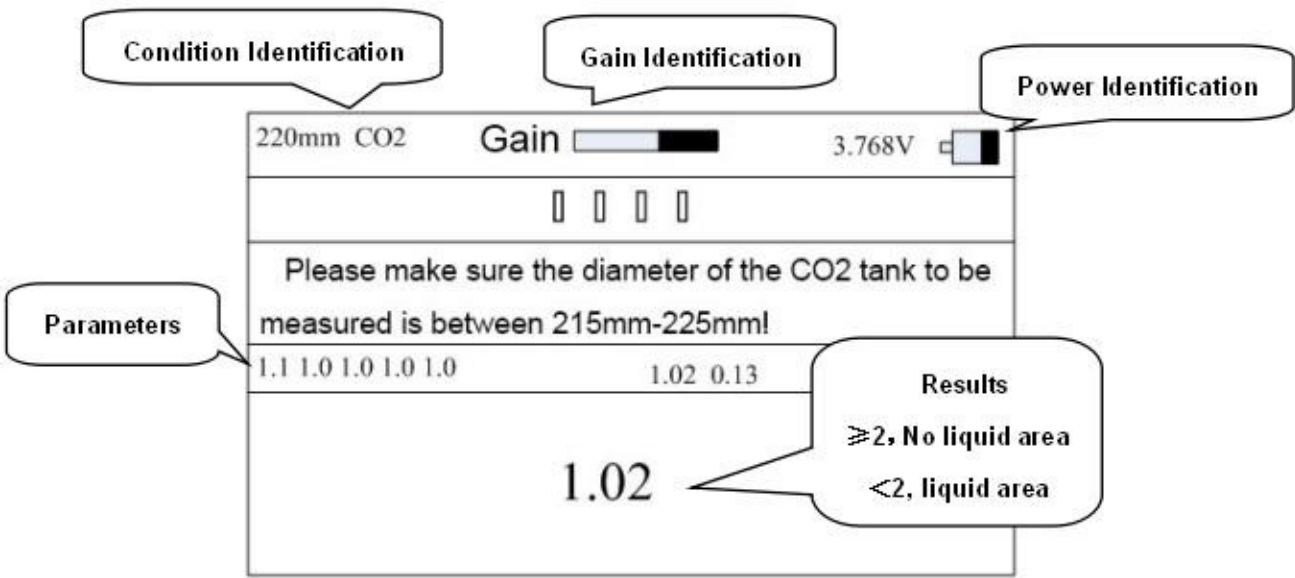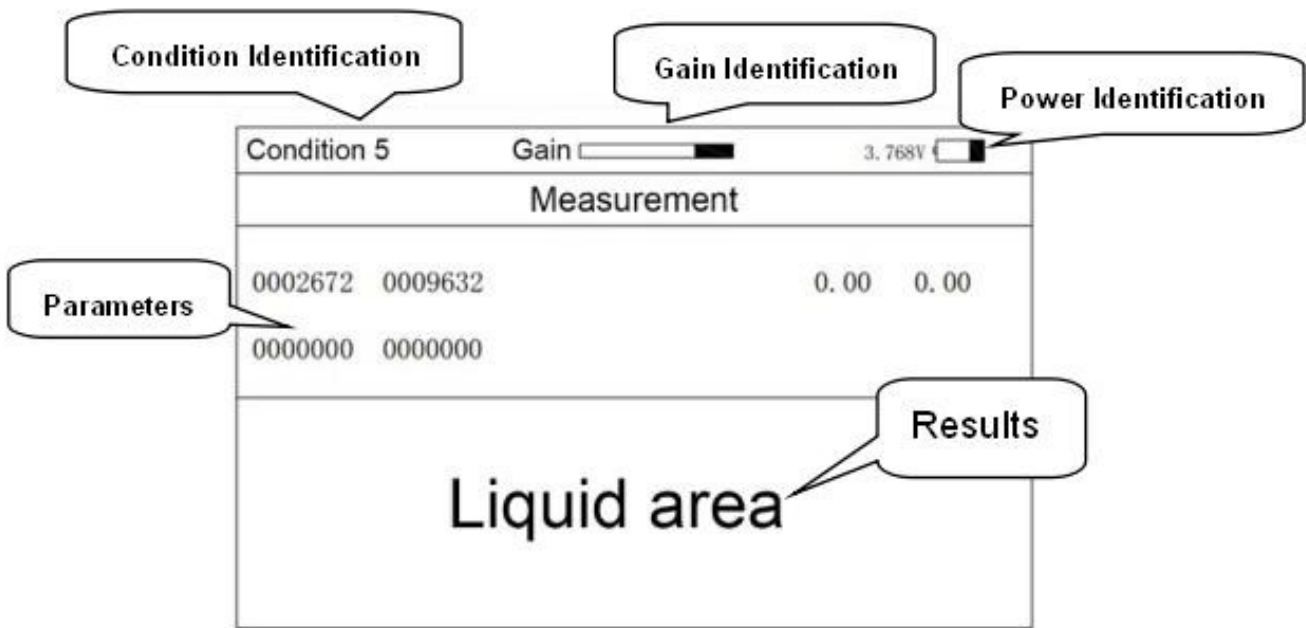
Product Structure

- Simple to operate using button

- OLED light indicating liquid level

- Good user interface design

- Bilingual operation modes (Chinese/English)

- The ultrasonic-waveform-display function facilitates parameter testing, waveform comparing and application of other functions to ensure measurement accuracy in complicated situations

- Comprehensive software displays measurements in a simple manner

Interface Display

CO2 Tank: 215mm-225mm, 270mm-280mm, 345mm-355mm,395mm-405mm

Condition Identification

Gain Identification

Power Identification

| 220mm CO2 | Gain | 3.768V |

Please make sure the diameter of the CO2 tank to be
measured is between 215mm-225mm!

Parameters

1.1 1.0 1.0 1.0 1.0   1.02 0.13

Results

≥2, No liquid area

<2, liquid area

1.02

Common Tank: Vertical tank, horizontal tank, spherical tank (diameter > 3m)

Condition Identification

Gain Identification

Power Identification

| Condition 5 | Gain | 3. 768V |

Measurement

Parameters

0002672   0009632   0. 00   0. 00

0000000   0000000

Results

Liquid area

Main Specifications

Measurement accuracy	<5mm
Measurable range of wall thickness	3～30mm
Measurable tank material	Steel, stainless steel, glass, unformed plastics
Measurable medium	Pure liquid, milky liquid, suspension liquid
Ambient temperature	-20℃～60℃ (-4°F~+140°F)
Ambient humidity	15%～85%RH
Power supply	2 18650 lithium batteries (supplied by customers)
Current	150mAh (on average)
Operation Duration (fully charged)	> 8 hours

Product Details

Housing Body

● Nontoxic harmless engineering plastics

● Hand held ergonomic design

● Large screen with clear interface

● Simple operation, saving training cost

LED Display

- Visual operation interface

- High screen resolution：night time visibility

- Liquid area or no liquid data can be visually

  displayed

Interface

- Aviation plug

- Locking structure, reliable connection

  and not easy to loose

- With protective cap, keep joint clean

  and not easy to be damaged

Switch

- Mechanical Switch
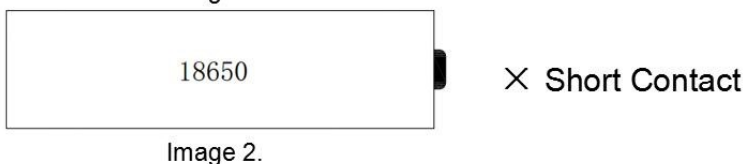
- Short start-up time

- Easy handling

Power Indicator Light

- Easy to judge battery power according to lightness of the indicator

  （More power, brighter）

Battery

- 18650 lithium rechargeable battery

- Convenient replacement

- Environmental

- Single battery is workable for indicator

- Two batteries

Image 1.

Image 2.

Please note, the length of standard 18650 lithium battery is 65±2.0mm.
If you see the above two dimensions of 18650 battery, please select the one with longer protruding.
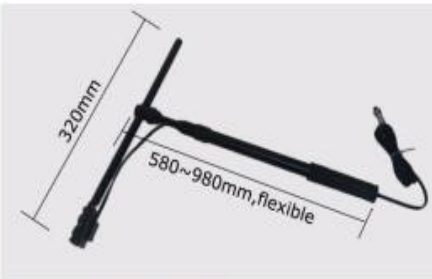**(see Image 1.)**

Model Selection:

One Probe with two sensors, suitable for various types of tanks;

No need of ultrasonic couplant, cost saving, convenient and no pollution;

Three kinds of probe rod optional for different requirement

Standard Probe
Length: 190mm
Application: For Single row tanks

Extension Probe
Length: 600mm
Application: For multi-row tanks

Extension Probe
Length: 580~980mm
Application: For multi-row and narrow space tanks

Six combinations are optional

No.	Product Description	Probe Rode Combination
1	Portable Ultrasonic Liquid Level Indicator with STANDARD PROBE ROD HS-MLI-1	

2	Portable Ultrasonic Liquid Level Indicator with EXTENSION PROBE ROD HS-MLI-2	
3	Portable Ultrasonic Liquid Level Indicator with 90 DEGREE PROBE ROD HS-MLI-3	
4	Portable Ultrasonic Liquid Level Indicator with one STANDARD PROBE RODE and one EXTENSION PROBE ROD HS-MLI-4	
5	Portable Ultrasonic Liquid Level Indicator with one STANDARD PROBE RODE and one 90 DEGREE PROBE ROD HS-MLI-5	
6	Portable Ultrasonic Liquid Level Indicator with one EXTENSION PROBE RODE and one 90 DEGREE PROBE ROD HS-MLI-6	

Application

For CO2 storage tank of the fire fighting system in the offshore drilling platform.

For dangerous chemicals in storage tank

For calibration of liquid level meter

Measurement results visually displayed;

Green light indicating liquid area;

Red light indicating non-liquid area;

Qualifications

Certificate of High-tech Enterprise

ISO 9001

Patent for Invention

Innovation Fund

Certificate by CCAIA

License for Producing Measurement Equipment

Authorized Supplier for CNOOC

Authorized Supplier for CNPC

Certificate of Software Copyright

Explosion-proof Certificate