



ULTRASONIC LEVEL METER

# HD350

HD350-A / HD350-B

### DSP model

Stable measurement by DSP

### Compact one unit includes sensor and control circuit

Housing material is chemical-resistant resin, PP.

### Rich information display by graphic LCD

Easy and straight forward operation by Menu driven mode control and data image display

### Wide measurement range

HD350-A: 0.3 - 10 m (1 - 33 ft.)

HD350-B: 0.15 - 4 m (0.5 - 13 ft.)

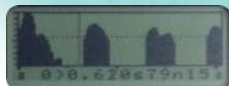
Reduced dead zone distance than conventional model

### Four display mode

Display mode can be selected from 4 display modes.

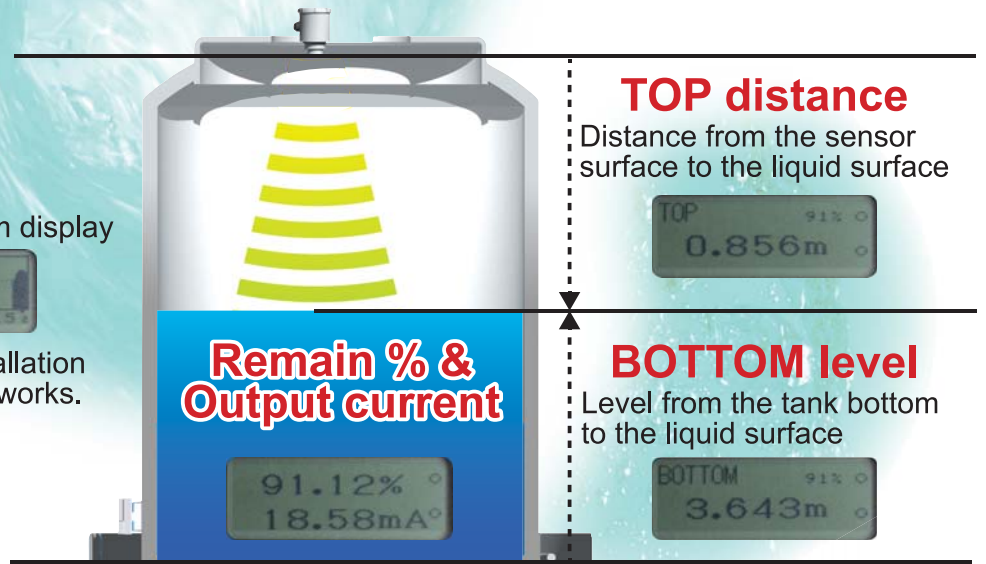
#### A-mode

Refelected waveform display



Useful for the installation and maintenance works.

## DSP Accurate measurement Graphic display in compact body



### Specifications

- 1) RS-485 (MODBUS protocol)
- 2) 4-20 mA current output
- 3) Alarm sensors / points

### Open channel flow measurement

Measures integrating or instantaneous flow of triangular, rectangular (with or without end contraction) or parshall flume.

### Usage

- Level control of liquid, particulate level in a tank
- Level measurement of pond, lake or river
- Open channel flow measurement



■ Liquid level ■ Particulate level ■ Level control of a river

# ULTRASONIC LEVEL METER

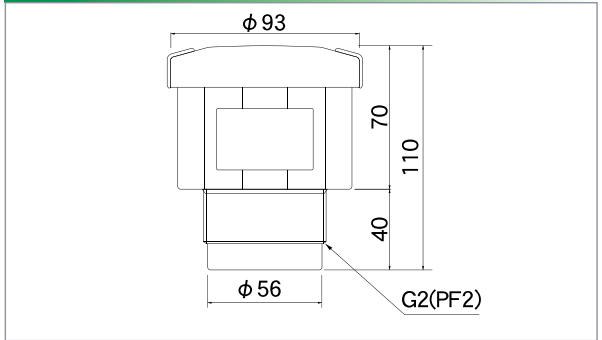
# HD350

## Specifications

Model	HD350-A	HD350-B
Channel	1 CH	
Frequency	50kHz	100 kHz
Measurement Object	liquid, powder, particulate	
Measurement range	0.3~10m	0.15~4m
Resolution	1 mm	
Accuracy	±0.25%F.S. (±2.5cm)	±0.25%F.S. (±1.0cm)
Data update cycle	0.5 sec	
Sensor directive angle (beam angle)	14°(-6dB) / 10° (-3dB)	
Power source	Voltage	DC12 - 24V
	Power consumption	3W
Display	Graphic LCD	
Output	Alarm output (contact point)	1 point each top/ bottom NPN open collector
	4-20 mA current	Resolution: 12 bit (Max. load 500Ω 24V)
Interface	RS-485 (max. distance:1200 m)	
Operation temperature	-20 to 70 deg C	
Material	PP	
Protection	IP65 level (without cap: IP20 level)	
Dimension	dia. 93 x 110 mm	
Cord length	10 m	
Weight	350 g	
Screw	G2	

●Option: 30 m cord

## Dimensions



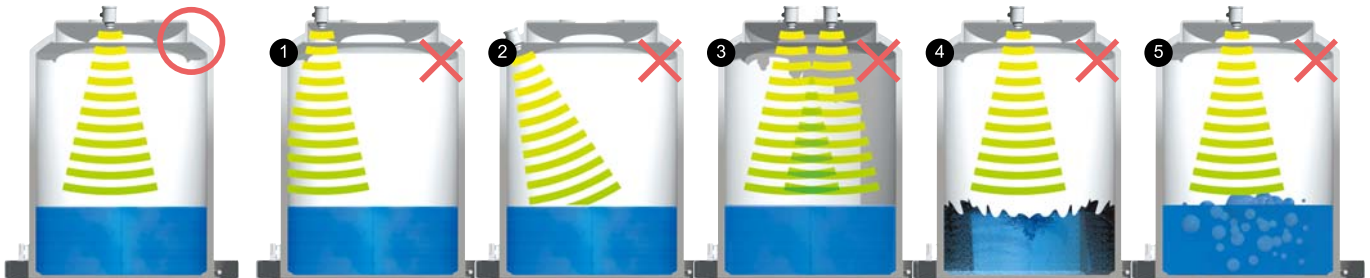
## Notice for installation

\* Do not install the unit inside of a tube like below image



- \* Do not use metal nut or metal flange. It may cause error on measurement.
- \* Please use nut or flange that made of plastic.

## Ultrasonic Level Meter - Notes on sensor installation



### • Avoid obstacles

Make sure that no obstacles are interfered within the directivity angle of the sensor of the ultrasonic level meter. (1)

### • Make sure the sensor position

Make sure the transmitting/receiving plane of the ultrasonic sensor is arallel to the object to be measured.Do not install a sensor in the center of a tank. (2, 4)

### • Do not install more than one sensor

Multiple ultrasonic sensors in a tank will interfere with another one. (3)

### • Avoid strong water movements or bubbles

Swirling water and bubbles might have bad effect on precise measurement. (4, 5)