

SUL806 ULTRASONIC LEVEL METER

MAIN FEATURES

- Wide range, up to 60m
- Switch in both Chinese and English, Chinese and English display
- Measure and display distance and level at the same time
- High-definition dual display for distance and level
- The cause of the fault can be judged by the echo map
- Echo processing technology makes the data more realistic
- Multi-point transmitting circuit get reliable measuring data
- Acoustic matching technology makes outstanding signal radiation
- Three gear of response speed adjustment meet various needs of different working conditions.
- The detecting element is not in contact with the measured medium, and can detect the level of the high viscosity liquid and the powder.



OVERVIEW

The SUL806 series ultrasonic level gauge, also known as ultrasonic level gauge and ultrasonic level gauge, is a non-contact, microprocessor-controlled, highly easy to install and maintain digital level gauge. In the measurement, the ultrasonic pulse is emitted by the sensor (transducer), and the sound wave is reflected by the liquid surface and then received by the same sensor or received by the ultrasonic wave, converted into an electrical signal by the piezoelectric crystal or the magnetostrictive device, and is transmitted between the sound wave and the receiving body. Time to calculate the distance from the sensor to the surface of the liquid being measured. Due to the non-contact measurement, the measured medium is almost unlimited and can be widely used for the measurement of various liquid and solid materials.

Application places: storage tanks, chemical tanks, tanks, troughs, canals, wells, granaries, silos

Media to be measured: water, sewage, mortar, mud, acid and alkali, chemical reagents, lubricating oil, heavy oil, asphalt, ore, grain, solid particles

SPECIFICATION

ITEMS	DATA
Product Name	Integrated ultrasonic level gauge
Product range	5 meters, 10 meters, 15 meters, 20 meters, 30 meters, 40 meters, 50 meters, 60 meters
Measurement accuracy	0.5%-1.0%
Resolution	3mm or 1.0% (maximum value)
Screen display	Chinese LCD display or English LCD display
Power supply voltage	standard DC24V, optional AC220V+15% 50Hz
Ambient temperature	display meter -20-60 ° C, probe -20-80 ° C
Protection level	display instrument IP65, probe IP68
Probe cable	none
Installation method	thread or flange
Analog output	2-wire 4-20mA/50Ω load, 4-wire 4-20mA/10Ω load
Digital output	optional 485, 232 communication
Relay output	2 sets of AC250V/8A or DC30V/5A can be selected

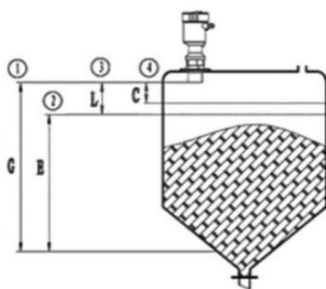
DIMENSION

<p align="center">Thread M48×2 or G2 Sensor</p>	<p align="center">Thread M60×2 or G2 Sensor</p>
<p align="center">Thread M78×2 Sensor</p>	<p align="center">Thread M108×2 Sensor</p>

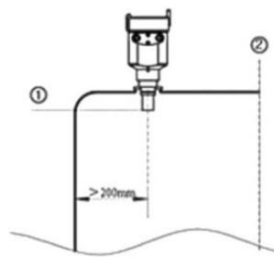
Fault phenomenon	cause of issue	Solution
Meter does not display, does not work	Power supply error Wiring error	Check if the DC24v power supply is correct. Check that the wiring is correct
The meter has a display, does not work	The level gauge is not aligned with the liquid level or the level The liquid level fluctuates greatly The surface is extremely uneven The liquid surface has a thick foam layer After the liquid is drained and the material is empty, the bottom of the container is not flat. Out of measurement range	Adjust the orientation of the level gauge, proofread with a horizontal ruler Add plastic tube to the container (see installation section) Switch to a larger range of level gauges Switch to a larger range of level gauges or other measurement methods Naturally resume work after adding liquid or feeding Switch to a larger range of level gauges
The meter shows instability or large deviation of measured values	Level entry into the blind spot Ranging value is greater than the mounting height Strong electromagnetic interference Objects that block sound waves Metal flanges are prepared on the level gauge The probe emitting surface or side is in contact with the metal	Height up the level gauge or prevent the level from being too high Modify the installation height to the correct value The meter must be connected to the earth to shield the level gauge Change the installation position or add a plastic tube Switch to plastic flange Use rubber pads to isolate from metal
For containers or probes with mounting ports placed in round tubes	The length of the 4m, 6m, 8m level gauge container flange connection should be less than 400mm, the length of the 12m level gauge container should be less than 150mm, and the 15m, 20m, 30m level gauge probe should protrude from the installation port	

APPLICATION ATTENTIONS

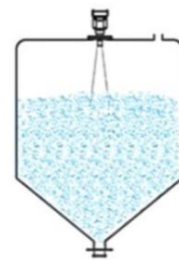
- 1) Measuring range and Requirements of blind zone.
- 2) Media type to be measured (Liquid or solid, such as: Water, sewage, mud, gasoline, diesel oil, toluene, sulfur dioxide, ore, coal, cement, soybeans, wheat, corn, flour etc.)
If it is liquid: Is there liquid steam, mist, foam, wave, stirring, floating objects;
If it is solid: Is there a dust, granular or powder media is.
- 3) The minimum ~ maximum temperature and pressure of media.
- 4) Corrosion of media. If it is placed inside the jar, the jar needs to know the material, and if there is corrosion of the lining.
- 5) The need for anti-corrosion, explosion-proof, to split or an integrated one.
- 6) Working environment: exposure to the pond, cover the pond, lying tank, vertical tank, tank, pot is through atmospheric pressure and so on.



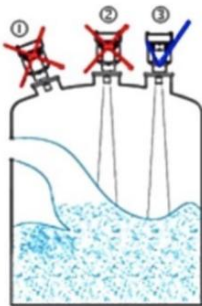
- ① Current level
 - ② Installation height G
 - ③ Air distance L
 - ④ Dead zone C
- Note: When using ultrasonic (liquid) position timing, it is important to ensure that the highest material level cannot enter the measurement dead zone.



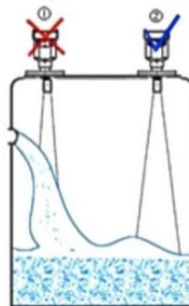
- When installing the ultrasonic (liquid) level gauge, be careful that the meter and container are at least 200 mm away.
- ① Datum
 - ② The container center or axis of symmetry



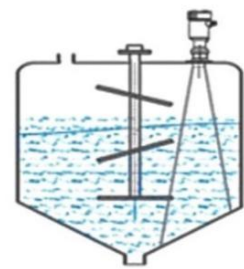
For conical containers, which are flat tank tops, the best mounting position for the meter is the center of the top of the container, which ensures that the bottom of the container is measured.



- ① Error: The transducer (probe) should be perpendicular to the surface of the measured medium.
- ② Error: The ultrasonic (liquid) level gauge is installed on the top of the arched round tank, which will cause multiple reflection echoes. It should be installed in the center of the container as much as possible during installation.
- ③ Correct.



- ① Error: Do not install the ultrasonic level gauge above the influent stream to ensure the measured media surface rather than the incoming stream.
- ② Correct: Pay attention to the sunshade and rain protection measures when installing outdoors.



When there is agitation in the tank, the instrument should be installed as far as possible from the agitator. If the foam is generated by agitation or the waves are turned up, the waveguide installation method is used.

ORDER CODE

SUL806- ①-②-③-④-⑤-⑥

① Range	
1 Meter	01
2 Meter	02
....	
15 Meter	15

② Water Proof	
IP66	A
IP65	B
IP67	C
IP68	D

③ Output	
Current Output (4-20mA 2 wires)	A2
Current Output (4-20mA 3 wires)	A3
Current Output (4-20mA 4 wires)	A4
Switch output (1 or 2 switches)	N1/N2
Relay (Upper & Lower alarm)	R1
Voltage output (0-5V)	V0
Voltage output (1-5V)	V1
Digital RS485(MCU Protocol)	R4
By Customized	X

⑥ Cable Length	
1 Meter	01
2 Meter	02
....	

⑤ Temperature	
0...50 °C	T
-10...60 °C	T1
-20...70 °C	T2

④ Power Supply	
DC12V/max 300mA	U1
DC24V/max 300mA	U2
DC12V/max 300mA Ex	Ue

Order Example:
SUL806-05-A-A2-U1-T2-05

Order specification as follows:
 05: Range=5 meters
 A: IP66 proof protection
 A2: Current Output (4-20mA 2 wires)
 U1: DC12V/max 300mA
 T2: -20...70 °C
 05: Cable length 5 meters