

SUL801 ULTRASONIC LEVEL TRANSMITTER

MAIN FEATURES

- Designed for application conditions such as multiple measuring points, small installation space.
- Using SMD chip components and self-developed ASC special chip, making the whole circuit very compact and simple.
- Internal electromagnetic shielding and software digital filtering (industrial grade) factory 48 hours high and low temperature and electrical aging, high stability and long-term reliability.
- The shell is made of NLEPF synthetic material with strong texture and good acoustic properties.



OVERVIEW

SUL801 ultrasonic level gauge is a very practical level measuring sensor with simple installation and convenient on-site commissioning. Not affected by the measured medium, It can measure the liquid level of various media very well. Especially for viscous media (similar to liquid glue, slurry, etc.), where the input level sensor is not suitable for practical use.

It uses SMD components and ASC chip, which makes the circuit compact and concise. The circuit board is plated and has high stability and long-term reliability. Meanwhile, the shell uses NLEPF synthetic materials with sturdy texture and good acoustic property. The transducer can be used in most working condition sites. While fixing it on the liquid wall or instrument housing, there is no need tools such as screws, but a 68mm hole. It has the features of stabilization, easy installation and disassembly.

SPECIFICATION

Ultrasonic sensor	Low power	Middle power-sensor		Large power-sensor		
The Max. range	≤5m	≤7m	≤10m	≤10m	≤12m	≤15m
Power supply	DC24V /DC12V	DC24V /DC12V	DC24V	DC24V /DC12V	DC24V	DC24V
Beam angle	15°	12°		9°		
Frequency	38K±10Khz	55K±10Khz		40K±5Khz		
Accuracy	Standard: ±0.5%F S or ±5mm (at 25°C, Absolutely flat target under the condition of standard) OEM: FS≤1m, accuracy can be ±1mm FS≤2m, accuracy can be ±3mm FS≤15m, accuracy can be ±0.25% FS Above OEM not available for two wire system					
Output signal	Standard: 4-20mA (2 wires) OEM: 4-20mA(4 wires), 0-20mA, 0-5v, 1-5v 0-10v, 1-10v (both signal can not be customized DC12v) RS485(MCU protocol as default, Address=01, bps=9600) 4-20mA+RS485; 1-5V+RS485, 1~2NPN 1-10V, 0-10V, 4-20mA(two wire) - Power supply 24VDC can not be OEM					
Measuring mode	Standard: Distance mode, the distance of ultrasonic sensor surface to measuring target surface OEM: Level mode; the distance of level surface to level bottom(the bottom of tank) NOTE: Ensuring the distance of sensor surface to the level bottom is the actual mounting height, otherwise might be have installation error.					
Working temp.	Standard: 0~50°C OEM: Negative Temp. -10°C,-20°C,-30°C; Positive Temp. 60°C,70°C,80°C					
Wiring Mode	Waterproof connect port, down-lead 0.5m(length can be customized)					
Installation	Screw type or sifter clamping ; screw size: M68*2.0mm					
Protection class	IP65, OEM of IP66, IP67, IP68					
Working environment	Normal pressure OEM: Anti-explosion symbol Exia II AT3 (DC12 V, range≤10m) The material sensor housing: PTFE for large power sensor Strong in corrosion resistance					
Notes	1. When level range ≥15m, equip with other type ultrasonic sensors 2. Users no need to set the address, bps, installation height, so please verify to factory before ordering 3.For RS485-PC product, users can adjust the parameter by software(the default software) The max measure range depends on the smooth level surface, so please confirm the real using environment and level surface when ordering.					

OUTLINE CONSTRUCTURE



→ Best Material

Quality engineering plastics
Using ultrasonic transmitter
Using high-quality waterproof cables

→ Features

High detection and measurement accuracy
Support multiple signal output
Multi-range measurement range is optional
Small beam angle design



→ Comprehensive protection design

IP66 protection level, dust-proof and waterproof washing,
high protection level can be customized.

→ Multiple installation options


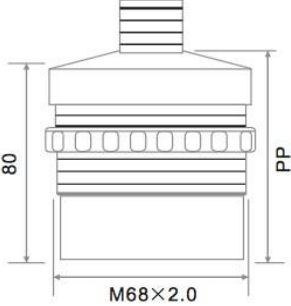

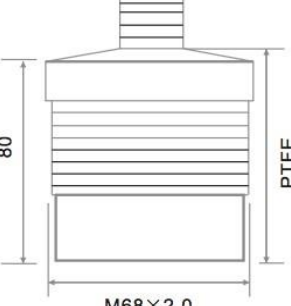

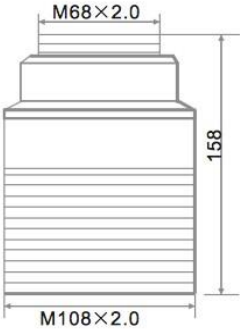

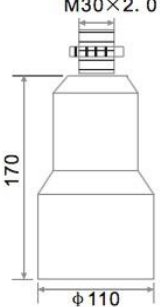
Supports M49x1.5mm screw hole screw-in installation and
coil clamp installation for easy installation

→ Multi-type output optional

4 ~ 20MA three-wire system (default)
4 ~ 20MA two-wire system
4 ~ 20MA four-wire system
1 ~ 5V, RS485 and other signal outputs

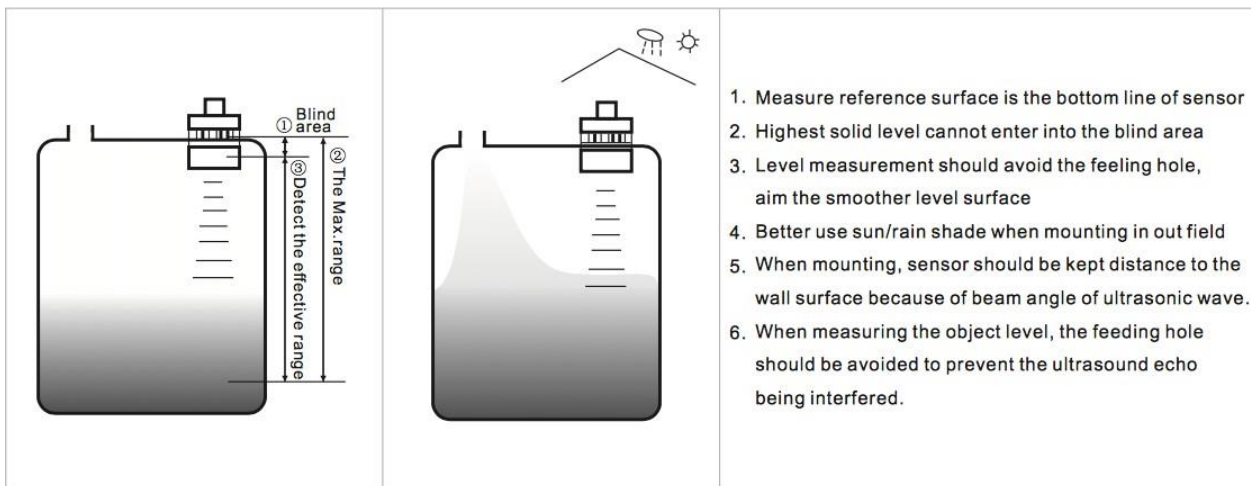


MORE MODEL TYPES

 	<p>Housing material: sensor surface was packaged, waterproof, corrosion resistance Max range: 10m, 12m, 15m Dead zone: 600-1000mm Beam angle: 9 Degree Accuracy: $\pm 0.5\%$ F.S. Output signal: 4-20mA three wire, optional Operating temp: -10~60C, optional</p>
 	<p>Housing material: PTFE, high ability of corrosion resistance Max range: 10m, 12m, 15m Dead zone: 600-1000mm Beam angle: 9 Degree Accuracy: $\pm 0.5\%$ F.S. Output signal: 4-20mA three wire, optional Operating temp: -10~60C, optional Protection class: IP66, optional Mounting size: M68*2mm</p>
 	<p>Max range: 20m, 30m Dead zone: 1000-1200mm Beam angle: 9 Degree Accuracy: $\pm 0.5\%$ F.S. Output signal: 4-20mA three wire, optional Operating temp: -10~60C, optional Protection class: IP66, optional Mounting size: M68*2mm, M108*2.0mm</p>
 	<p>Max range: 40m, 50m Dead zone: 1200-1500mm Beam angle: 9 Degree Accuracy: $\pm 0.5\%$ F.S. Output signal: 4-20mA three wire, optional Operating temp: -10~60C, optional Protection class: IP66, optional Mounting size: M30*2mm</p>

INSTALLATION 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.



ORDER GUIDE

SUL801- 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