LMU Serials Ultrasonic Level Meter

Application:

The series is an compact 2-wire series ultrasonic level meter for continuous non-contact level measurement in liquids and solids. It consists of probe and electronic units, both of which are leak-proof structure. This series can be widely applied to the metallurgical, chemical, electricity and oil industries.

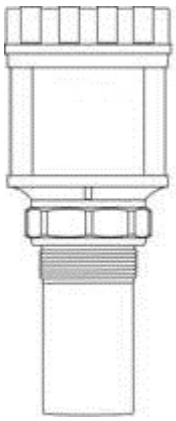
Features:

Continuous non-contact level measurement with compact version;

- Integrated design, installed conveniently;
- Protected in the excessive voltage and current , protected in the thunder and lightning;
- The big show window of LCD or LED is easy to debug and observe;
- Excellent anti-interference capability;
- 4-20mA output;
- Intellectual signal treatment technology, guarantee that the instrument meets various kinds of operating occasion
- All metal outer cover (IP67), airproof and alkali-resisting, meet the abominable environment.

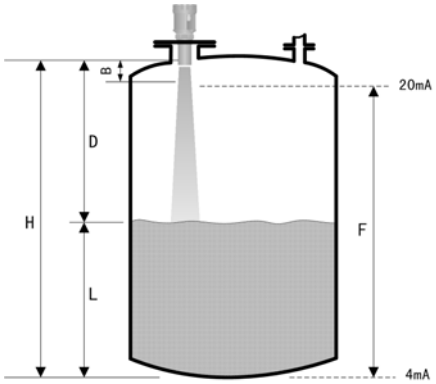
Structure:

The series is consists of sensor and electronic unit.



Measuring principle: Time-of-flight method

The sensor of the meter pulses in the direction of the product surface. There, they are reflected back and received by the sensor. The meter measures the time t between pulse transmission and reception. The meter uses the time t (and the velocity of sound c) to calculate the distance D between the sensor membrane and the product surface: D = c •t/2 . As the device knows the empty distance H from a user entry, it can calculate the level as follows: L = H – D .



H: installation height
D:distance value
L:level value
B:blacking distance
F: full scale

An integrated temperature sensor compensates for changes in the velocity of sound caused by temperature changes. Calibration Enter the empty distance H and the span F to calibrate the device.

Blanking distance : Span F may not extend into the blanking distance B. Level echo from the blanking distance cannot be evaluated due to the transient characteristics of the sensor.

Technical data:

1. Basic data

Type	LMU
Power supply	DC24V (±10%) 30mA
Display	4 digit LCD
Accuracy	0.2% of full span (in air)
Output current	4-20mA
Output load	0-500Ω
Temperature range	-40℃~80℃
Pressure range	±0.1MP (press definitely)
Measure cycle	1 second (changeable)
Beam angle	8º(3db) for range :4m 6m 8m 5º(3db) for range :12m 15m 20m 30m
Parameter set up	3 induction buttons
Cable connection	PG13.5
Material	The electronic unit : metal The sensor: ABS
Protect grade	IP67
Fix	Screw or Flange

2. The measuring range:

MODEL	LMU4	LMU6	LMU8	LMU12	LMU15	LMU20	LMU30
LIQUID	4.00m	6.00m	8.00m	12.00m	15.00m	20.00m	30.00m
SOLID			3.00m	5.00m	7.00m	10.00m	15.00m

Note: When using to measuring solid level, the most energy of ultrasonic is absorbed or scattered by solid level, so the back wave is very little, the valid measuring range of solid level is about 50% of liquid level. And the valid measuring range of solid level is determined by the installing location and rang.

3. The blacking distance:

MODEL	LMU4	LMU6	HLRM8	LMU12	LMU15	LMU20	LMU30
Blacking distance	0.20m	0.25m	0.30m	0.45m	0.60m	0.80m	1.20m

Order information:

LMU	Ultrasonic Level meter	
	Model	
	T	2-wire series, compact version
	N	3-wire series, compact version
	R	RS485 series, compact version
	U	4-wire series, compact version
	Range (for liquid measurement)	
	D4	0-4m
	D6	0-6m
	D8	0-8m
	D12	0-12m
	D15	0-15m
	D20	0-20m
	D30	0-30m
	D40	0-40m
	Wet-side material	
	S	ABS & PVC (Simple anti-corrosion)
	F	PTFE （Strict anti-corrosion）
	Process connection	
	1	G1½ screw （only for the range less than 6m）
	2	G2 screw （only for the range less than 8m）
	3	DN50 flange （only for the range less than 6m）
	4	DN65 flange （only for the range less than 8m）
	5	DN80 flange （only for the range less than 12m）
	6	DN100 flange （all）
	7	DN150 flange （all）
	8	DN200 flange （all）
	Output	
	C0	4-20mA （all）
	C1	RS485-Modbus protocol （only for LMU and UOL series）
	C2	Hart protocol （only for LUM, UOL series）
	Power supply	
	D	DC24V
	A	AC220V

LMU—T—D4—S—1—C0—D (example configuration)

Lanry Instruments (Shanghai) Co.,Ltd

Add: 6 Floor，Block F,Bldg 5,No.2800 Jiuxin Rd., Songjiang District, Shanghai 201612,China

Tel：86 21-67801665,67618991

Fax：86 21-67801625

http://www.lanry-flow.com