

ULTRASONIC LEVEL METER

MODEL **LT-200**





Major Functions

- Liquid crystal display (LCD) for indication of measuring status including Level, Echo, Trend, Temp, %, Bargraph
- Advanced sensor the material of which is suited to tank with corrosive or viscous gas or steam occurs
- Easier level identification in darkness with built-in backlight
- 2 Sensors connected to 1 converter
- There have been occasions that ultrasonic measurement were not applicable by dew condensation in misty, dewy and humid area, or by temperature difference. Our product made its surface of sensor in rounded form to swiftly help the dew concentrated around (●) the surface of sensor to fall automatically. Any potential error by dew condensation is completely resolved by 5 times of surface vibration per second that quickly vaporize water molecules. (Registered as utility model by Korean Intellectual Property Office : 20-044-0512)

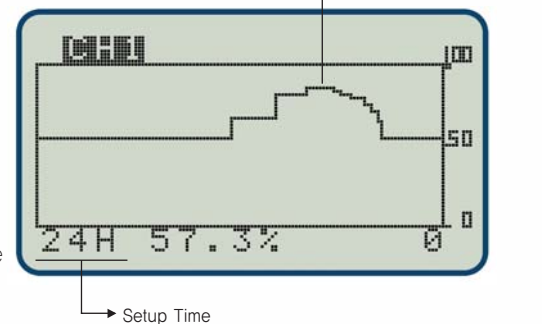
Simultaneous Indication for 2CH



Major Features

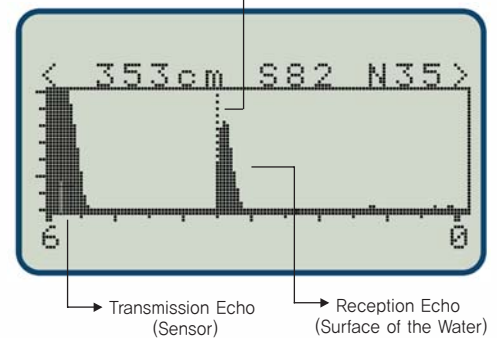
- Degree: 0.2% F.S Resolution: 1mm
- Indication unit selectable by meter, centimeter, or %
- Current value identifiable on display without tester
- Temperature sensor built in detector or converter for automatic temperature correction
- Level change ranging from 5 minute to 48 hours identifiable on display with a built-in trend
- Transmission status identifiable on display with a built-in oscilloscope
- "?" shown on the display for measuring disability or converter error
- Product defect identifiable with current output

CH 1 TREND



Current Output Value

CH 1 ECHO



Operating Principle

Ultrasonic level meter is made of sensor, converter, and exclusive cable. A ultrasonic pulse initially sent from sensor shall be reflected and returned. The pulse echo received from here shall be entered as an electric signal to the converter, and the signal in proportion to the distance measured between sending and receiving pulses shall output.





Product Specification

Equipment Configuration (Standard)

Converter	LT - 200	1 unit
Detector	SS - 01	1 unit

Converter

MODEL	LT - 200
	A (1CH) B (2CH)
Measuring method	Ultrasonic pulse reflection testing principle
Measuring range	0.30 ~ 15m
Measuring degree	±0.20%
Measuring cycle	5 ~ 10 times/sec
Control method	CPU control method
Function	Self-diagnosis, display brightness control, current output identification (output error identifiable on LED)
Operation	6 KEY (UP, DOWN, RIGHT, LEFT, MENU, ESC)
Operating temperature	-30 ~ +70°C
Output	<ul style="list-style-type: none"> ANALOG OUTPUT: DC 4~20mA (Built-in protective lightning arrester), Simultaneous output for 2CH Load resistance : <600Ω, ISOLATION OUTPUT RELAY OUTPUT: 4 contact points and A contact point (HH, H, L, LL) indicated by red and green LED 8 contact points (Option) for 1CH, and 4 contact points for 2CH (HH, H, L, LL) Rated voltage: AC 250V, 5A RS-485 OUTPUT, MAX 1500M (Option) RS-232C Profibus Communication (Option)
Resolution	1mm
Response speed	1000m/min (16.66m/sec) adjustable
Indication unit	Indication unit selectable: m, cm, %
Indication	LCD <ul style="list-style-type: none"> LEVEL (Simultaneous indication for 2CH) • TEMP (Simultaneous indication for 2CH) BAR GRAPH (Simultaneous indication for 2CH) TREND (former data trend from 10 min to 48 hours) (Simultaneous indication for 2CH) Indication of Ultrasonic Echo • CURRENT VALUE (Simultaneous indication for 2CH) TEMPERATURE (Converter sensor)
Structure	IP67 (NEMA 4)
Material	Polycarbonate
Power	AC 90 ~ 240V (50/60Hz), Solar battery DC 12V
Power consumption	5VA
Weight	1.85kg

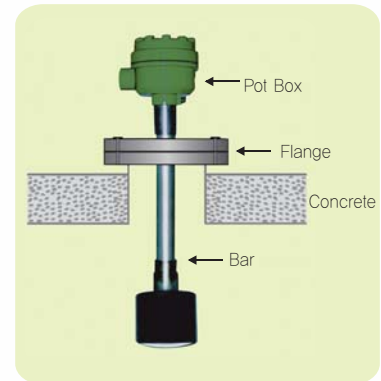
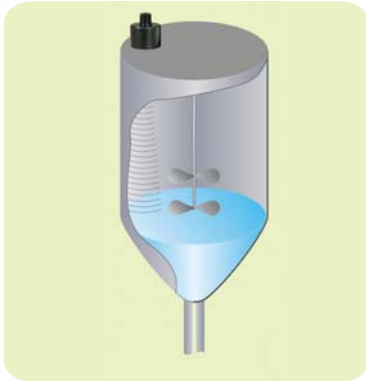
Detector

MODEL	SS - 01
Frequency	43KHz
Range	0.30 ~ 15M (Blind zone 30cm)
Beam range	3°
Workable temperature	-20 ~ +85°C
Pressure	-0.3 ~ 1.5 (kg/cm ²)
Mounting	1" Pt
Size	ø 86mm
Mounting flange	≥100A
Cable	ø 7 ~ 2M (Standard)/4C Shield
Structure	IP68
Material	Body PP, PVC, Urethane, Teflon (PVDF), SUS304, POM, CPVC Radiating surface PP, PVC, Urethane, Teflon (PVDF), SUS304, POM, CPVC
Radiating surface	Round form (Prevention of Condensation)
Humidity	RH 0 ~ 100%
Distance from converter to detector	300m
Weight	400g



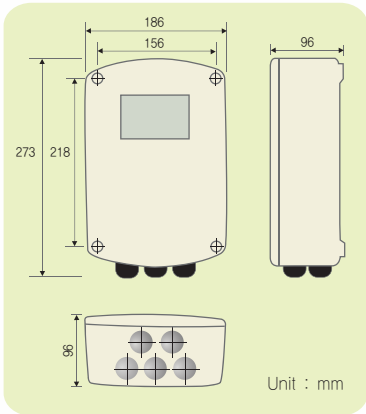


■ Sensor Installation Tips



■ Outside View

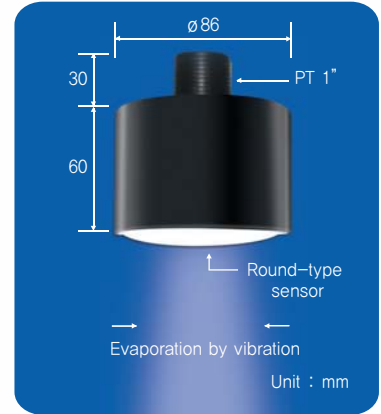
■ Converter



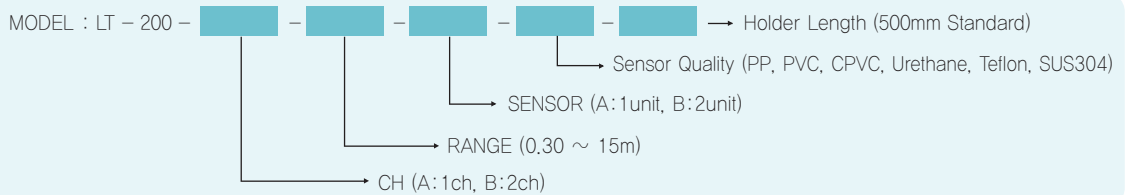
■ Teflon Sensor



■ Detector (A, B type)



■ Order Information



■ Wiring Diagram

FG	RS232			RS485			CH1		CH2			
	GND	TX	RX	FG	A	B	GND	4-20	GND	4-20	GND	
A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12	
	AC	AC	CH1				CH2					
			TD WHITE	TD BLACK	TH RED	TH GREEN	TH SWIELD	TD WHITE	TD BLACK	TH RED	TH GREEN	TH SWIELD
	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12
	CH1 ALARM					CH2 ALARM						
	HH	H	L	LL	COMMON	HH	H	L	LL	COMMON		
	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12