

ULTRASONIC SLUDGE DEPTH METER

MODEL LT-2000



LETECH Co., Ltd.



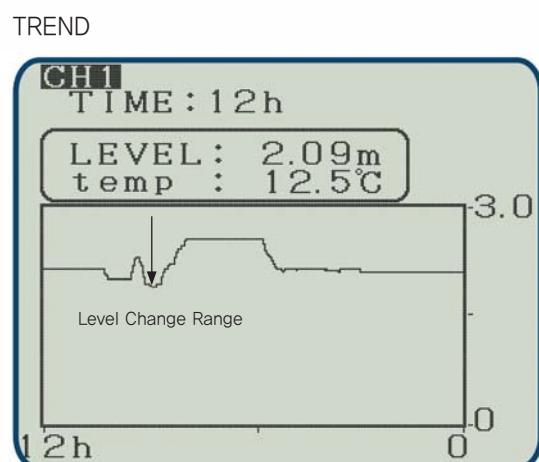
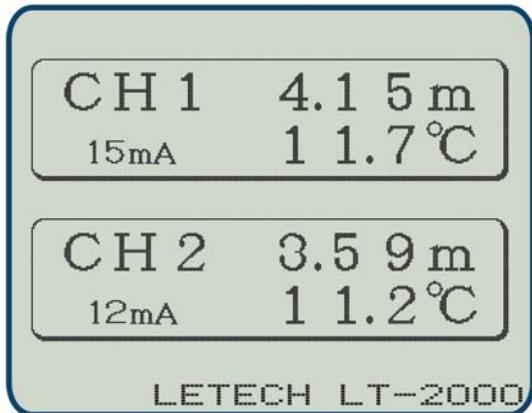
Major Features

- Stable continuous measurement of statistical signal available with microprocessor
 - Advanced measurement available without disturbance to interface
 - Excellent interface level tracking
 - Easier repair and maintenance
 - Present current value identifiable

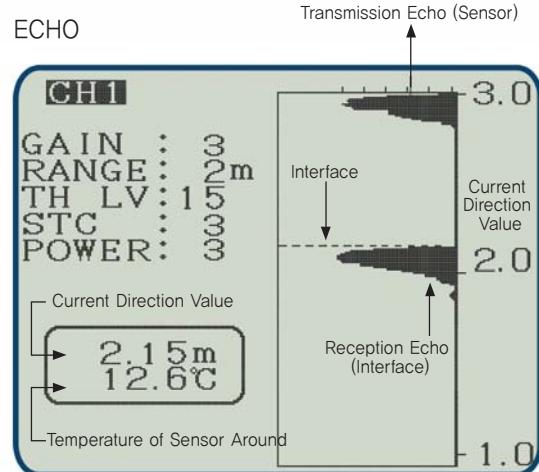
Major Functions

- Strengthened indication function with larger LCD
 - Level, Temp, Trend, Graph (Ultrasonic-Echo Wave)

Simultaneous Indication for 2CH

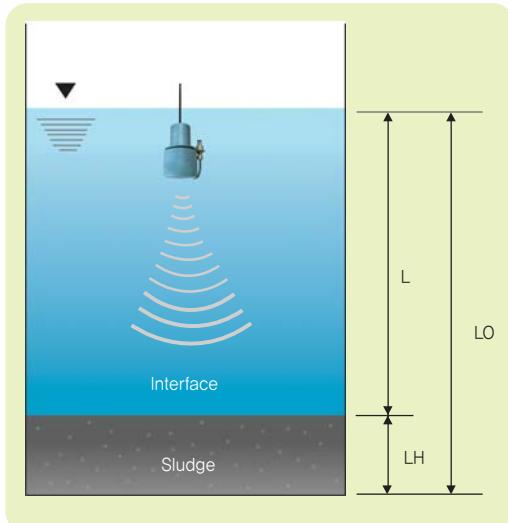


ECHO



- Simple parameter setting
 - Display brightness control
 - 2 Sensors connected to 1 converter
 - Level change ranging from 5 minute to 48 hours identifiable on display with a built-in trend

■ Operating Principle



The speed of ultrasonic wave in water is approximately 1500m/sec, which allows calculation of the distance assuming that the transmission time is given. Where the detector is erected perpendicular to the floor in water, the ultrasonic pulse sent from detector shall be reflected at the interface and received by the detector. T, the transmission time of ultrasonic pulse, shall be as follows,

But, C: sonic

L : distance from detector to interface

T: transmission time of ultrasonic pulse

The above formula can be also written as $L = CT/2$ (2)
 Therefore, the location of interface shall be $LH = LO - L$

※ Built-in Temperature Sensor

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■ Product Specification

■ Equipment Configuration (Standard)

Converter	LT – 2000	1 unit
Detector	SS – 02	1 unit

■ Converter

MODEL	LT-2000	
	A (1ch)	B (2ch)
Measuring method	Ultrasonic pulse reflection testing principle (Ultrasonic concentration difference testing method)	
Measuring range	0 ~ 10M, 0 ~ 20M, 0 ~ 30M (incl. Blind zone)	
Measuring degree	$\pm 1\text{cm}$	
Control method	CPU control method	
Measuring cycle	5 ~ 10 times/sec	
Function	Self-diagnosis, display brightness control	
Indication	LCD (H×W : 88mm×148mm) • LEVEL (Simultaneous indication for 2CH) • TEMP (Simultaneous indication for 2CH) • TREND (Former data trend from 10 min to 48 hours) • GRAPH (Indication of ultrasonic echo)	
Output	① DC 4~20mA (Built-in lightning arrestor), Simultaneous indication for 2CH ② Alarm contact points H, L (Simultaneous indication for 2CH) ③ RS-485 (Simultaneous indication for 2CH), Profibus (Option)	
Workable temperature	-20 ~ +70°C	
Power	AC 90 ~ 240V (50/60Hz)	
Material	Special coated STEEL	
Power consumption	Approx. 20VA	
Structure	Spinning structure	
Weight	3.8kg	

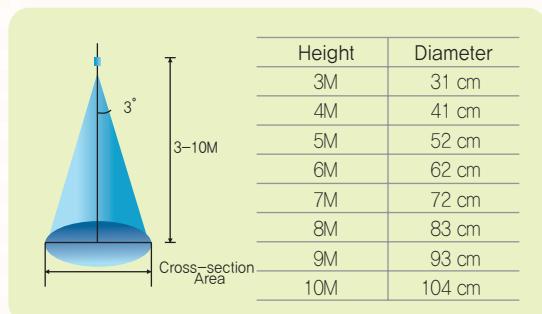
■ Detector

MODEL	SS – 02	
	A (1ch)	B (2ch)
Frequency	200kHz (Both for high and low frequency)	
Measuring range	0~10M, 0 ~ 20M (incl. Blind zone)	
Beam range	$\pm 3^\circ$	
Workable temperature	-10 ~ +80°C	
Structure	Water-proof type	
Radiating surface	Round form (Air and gas prevention)	
Material	Urethane, PP	
Cable	$\phi 7 \times 14\text{M}$ (Standard)/4C Shield	
Weight	800g	
Cleaning method	Water, air or wiper cleaning selectable	

■ Major Use

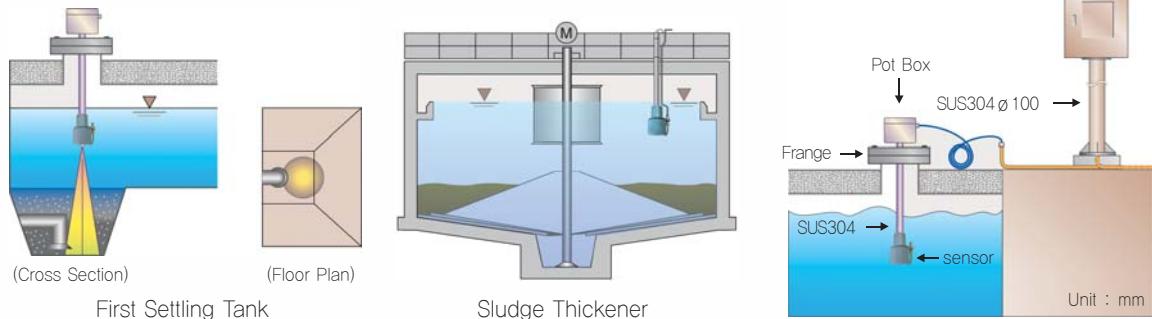
- Sewage disposal plant (1st depositing reservoir, sludge thickener, sludge undercurrent tank, 2nd depositing reservoir)
- Water purification plant (flocculent settling basin, sludge thickener)
- Interface measurement of solid and liquid separator and fluid separator of various plants
- Sludge level measurement of various waste water disposal facilities

■ Cross-section Area

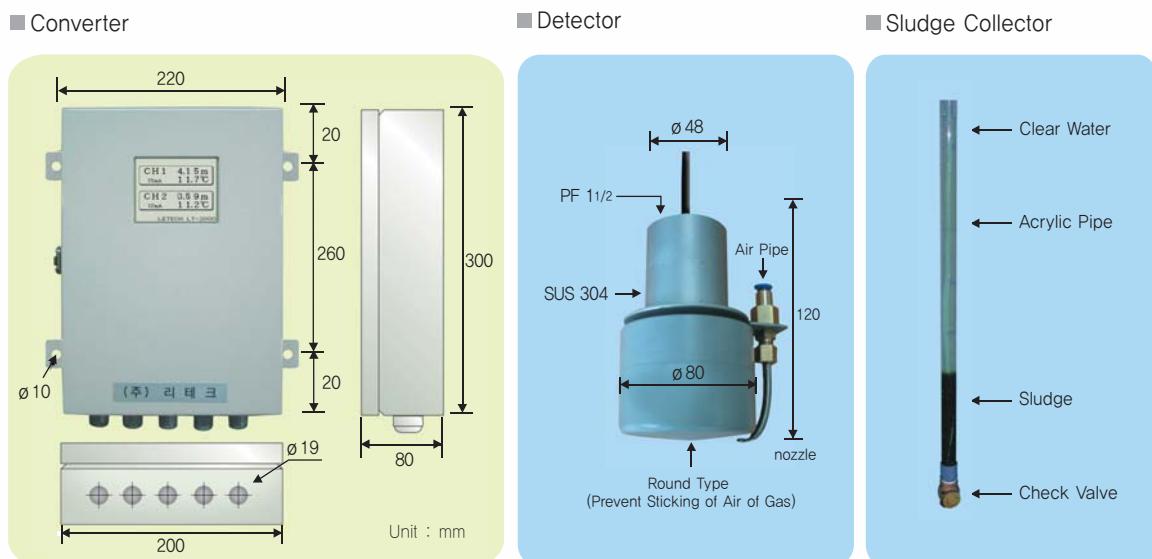




■ Sensor Installation Tips



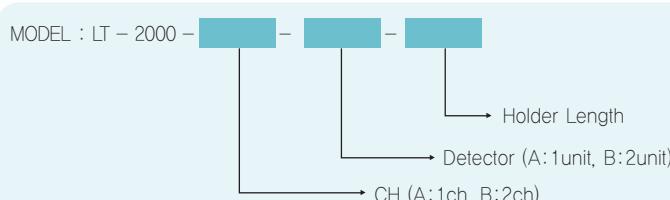
■ Outside View



■ Wiring Diagram

RELAY1			RELAY2			RELAY3			RELAY4			4-20mA CH1		OUT CH2			
A	B	C	A	B	C	A	B	C	A	B	C	+	-	+	-	NC	
18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
AC		FG	NC	SENSOR			CH1			SENSOR			CH2			RS-232C TX RX GND	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	

■ Order Information



※ These contents are subject to change without notice for quality improvement.