

● High Precision Sonic Level Meter(SL-1000)



1. Discription

An epochal level meter that can measure the fluid level over the wide range (maximum 150 meters) with high accuracy everywhere.

2.Measurement Principle

Sonic transmitter on top of the guide pipe and multiple receiving sensors at various depth points in the guide pipe measure the distance between the base point on top of the guide pipe and the changing surface of the fluid. Use of sonic wave instead of ultrasonic wave and multiple receiving sensors in the protecting guide pipe minimizes the effect of temperature, wind directions, high waves, and humidity. This feature also minimizes the measurement errors over the whole range.

3.Features and Applications

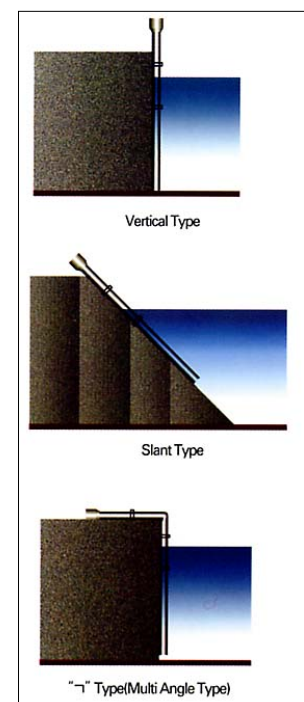
a. Measurement over the long range (maximum 150 meter)
Use of sonic wave, not ultrasonic wave, makes it possible.

b. Availability of any type (vertical, slant, and multiple joints with various slopes)
Installation is extremely flexible and least costly.

c. Minimum measurement errors
Absolute errors are between 1 mm and 10 mm all over the range regardless of temprature, humidity, atmospheric pressure, and fluid types.

d. No wave effect.
Sonic wave guide pipe enables this meter to measure the average level around it.

e. Applications
Streams, dams, reservoirs, coastal tides, underground water, tap



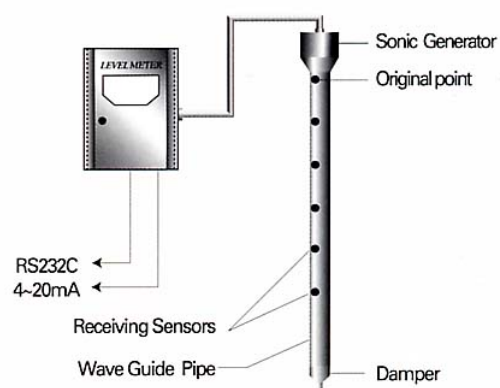
water plants, sewage treatment plants, drainage sites, open channels, industrial tanks, beverage plants, and petrochemical plants.

f. Warranty

One year full labor and parts.

g. Price

Very competitive



4.Dimension

Measurement Range		0 ~ 10m	10 ~ 150m
Accuracy		under 5mm(±2mm)	Under ±10mm(±2mm)
Control & computing Device			
Case size		268mm × 341mm × 128mm	
Weight		4.5kg	
Display		LCD Display 000.000m	
Memory		10,000 data(Year, Month;Day;Hour;Minute,Second)/100,000 (option)	
Output Signal		4~20mA, 0~10V, BCD, RS232(Alarm, RS485;option)	
Ambient Temp		-20℃ ~ +60℃	
Ambient Humidity		90% RH	
Power Source		110/220VAC, 12/24VDC	
Power Consumption		Operating:5W, Waiting:0.2W	
Measuring Device			
Sonic Generator	Operating Temp.	-20℃ ~ +60℃	
	Humidity	90% RH	
Receiver	Casing	Water Proof Type	
	Operating Temp.	-20℃ ~ +60℃	
Wave Guide	Material	Steel, STS, PVC, Other	
	Mounting Type	Vertical, slant(Min. 30°), "┐" type, Multi-angle type	
	Size(diameter)	25mm, 50mm, 65mm, 100mm, Other	

● Sonic level/flow meter with weirs&flumes(SL-2000)

1. Discription

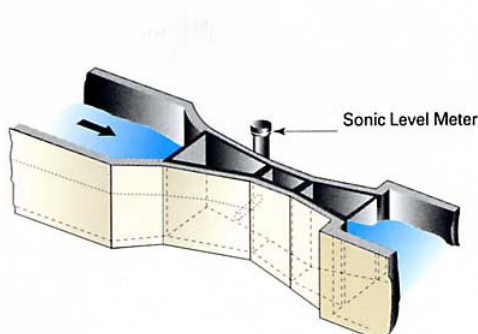
A special version of sonic level meter that measures not only the fluid level but also flow volumes in weirs and flumes.

2. Measurement Principle

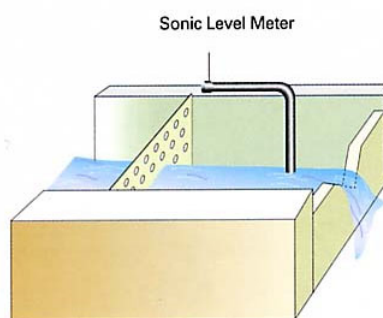
The sonic level meter measures the level of fluid in the weirs and flumes. Then instantaneous and cumulative flow volumes are calculated by applying various formulas.

3. Features and Applications

Measurement of levels and flows at sewage treatment plants, all types of weirs and flumes, flood gates, all types of orifices, natural water pipes, industrial tanks.



Parshall Flume



Triangular Weir

4. Dimension

Accuracy		0 ~ 5m : Under $\pm 0.1\%$
Control & Computing Device		
Case Size		268mm × 341mm × 128mm
Weight		4.5kg
Memory		10,000 data(Year, Month;Day;Hour;Minute;Second)/100,000 (option)
Output Signal		4~20mA, 0~10V, BCD, RS232(Alarm, RS485 ;option)
Display		LCD Display Level & Flow
Ambient Temp		-20℃ ~ +60℃
Ambient Humidity		90% RH
Power Source		110/220VAC, 12/24VDC
Measuring Device		
Channel		Weir, Flume, etc
Sonic Level Meter	Level Range	0~5m
	Wave Guide Size(Dia)	25mm, 30mm

● Sonic Level Meter for Tanks(SL-3000)

1. Discription

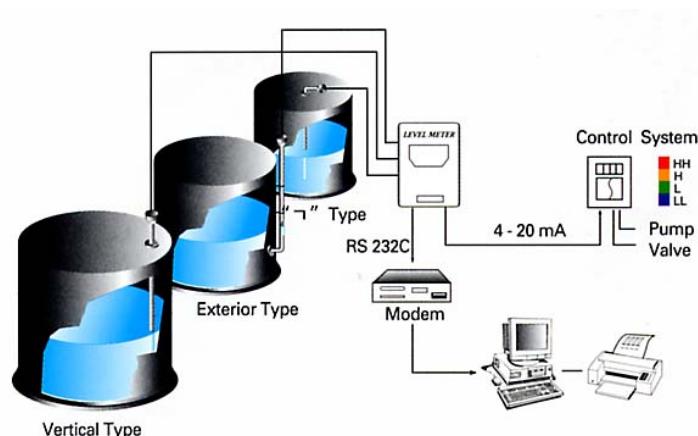
Sonic level meter that was specially designed for tanks containing various types of fluid.

2. Measurement Principle

It is basically same as SL-1000. This version is for tanks.

3. Features and Applications

- a. Easy maintenance and repair
The guide pipe protects the sonic wave sensors inside from the fluid.
- b. Availability of any type (vertical, slant, and multiple joints with various slopes)
Installation is extremely flexible and least costly.
- c. No effect from shaking fluid.
Sonic wave guide pipe enables this meter to measure the average level around it and thus nullifies the effects of the shaking fluid.
- d. Measurement of instantaneous and mean levels
This meter has various measurement modes.
- e. Applications
Various industrial tanks that contain any kind of fluid.
- f. Warranty
One year full labor and parts.
- g. Price
Very competitive



3. Dimension

Measurement Range	0 ~ 10m
Accuracy	Under $\pm 2\text{mm}$
Control & Computing Device	
Case Size	268mm × 341mm × 128mm
Weight	4.5kg
Display	LCD Display 000.000m
Memory	10,000 data(Month;Day;Hour;Minute)
Output Signal	4-20mA, 1~10V, BCD, RS232C
Ambient Temp	-20℃ ~ +60℃
Ambient Humidity	90% RH
Power Source	110/220VAC, 12/24VDC
Power Consumption	Operating:5W, Waiting:0.2W

Measuring Device		
Sonic Generator	Operating Temp.	-20℃ ~ +60℃
	Humidity	90% RH
Receivers	Casing	Water Proof Type
	Operating Temp	-20℃ ~ +60℃
Wave Guide	Material	Steel, STS, PVC, Other
	Mounting Type	Vertical, Slant, "γ", Multi-angle type
	Size(diameter)	50mm, 65mm, 100mm

● Non-Contact Pressure Level Meter(SPL-1000)



1. Discription

A portable level meter that eliminated errors due to fluid density, atmospheric pressure and temperature by making the sensor not contact the fluid. This method allows a longer life cycle, easier and less costly installation, maintenance and repair.

2. Measurement Principle

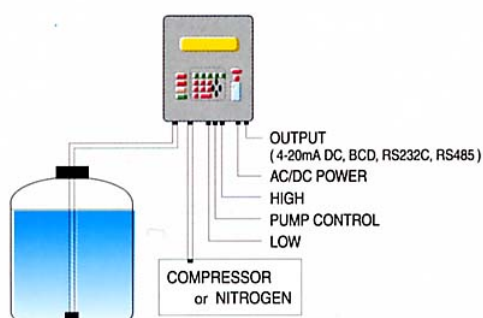
It uses the compressed air or nitrogen gas in the water column pressure measurement pipe. The water level is calculated by measuring the pressure in the part of the pipe that is under the water level.

3. Features and Applications

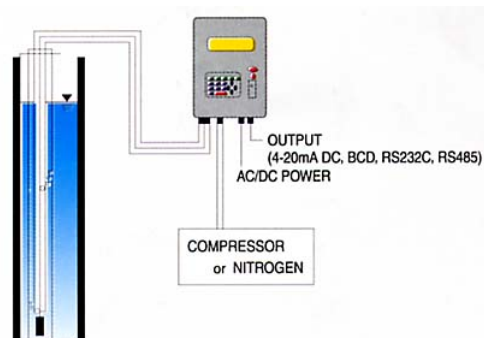
- a. Measurement of the water level under the surface ice
- b. Measurement of the water level in the streams with severe soil and sand washout
- c. Measurement of the water level in the underground water of any depth
- d. Measurement of the water level in the hot springs
Non-contact feature removes the effect of temperature (maximum 150 °C) and ingredients.
- e. Measurement of fluid level of any type
It can measure the levels in the acid, high-temperature and turbid fluid.
- f. Measurement of the coastal tides
- g. Warranty
One year full labor and parts.
- h. Price
Very competitive

4.Dimension

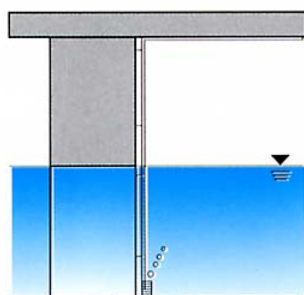
Measurement Range		0~100mm
Accuracy		Under $\pm 10\text{mm}$
Control & computing Device		
Display		Level or Depth (cm,m) 000.000m
Memory		10,000 data(Month;Day;Hour;Minute)
Ambient Temp		-20℃ ~ +60℃
Ambient Humidity		90% RH
Memory		4,000 data
Output Signal		4-20mA, BCD, RS232C, RS485
Ambient Temp		-20℃ ~ +60℃
Power Consumption		Operating:3W, Waiting:0.3W
Measuring Device		
Fluid Temperature	Urethan Tube	-20℃ ~ +80℃
	Teflon Tube	-20℃ ~ +150℃
	Copper Pipe	-20℃ ~ +200℃
Tube Size(Diameter)		OD 6mm, ID 4mm
Air Source		
Nitrogen Gas		110kgf/cm ²
Air Compressor	Internal type	1~2 HP
	External type	Over 3HP



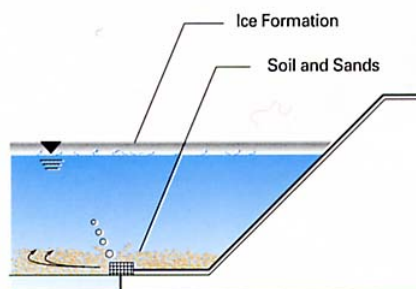
For tank



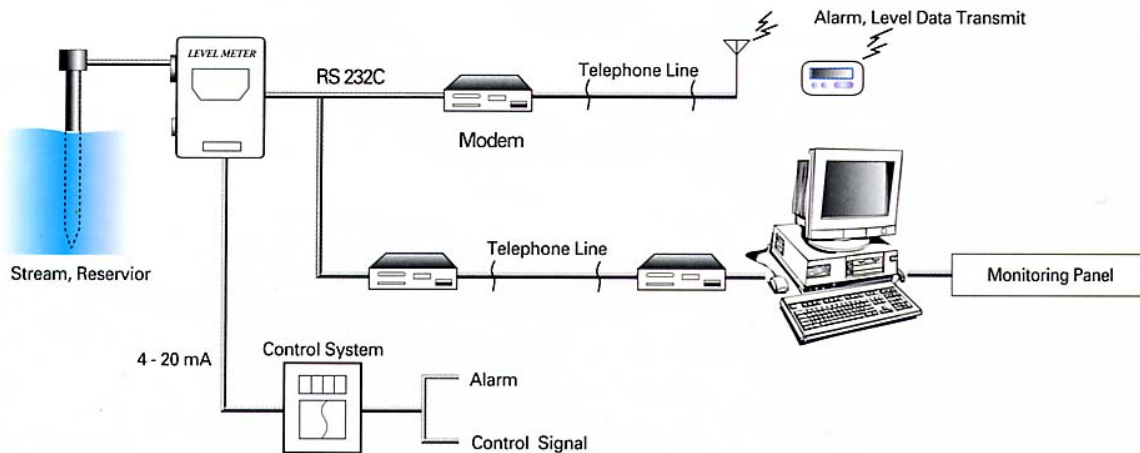
For ground water and hot spring water



On a Pier of a Bridge

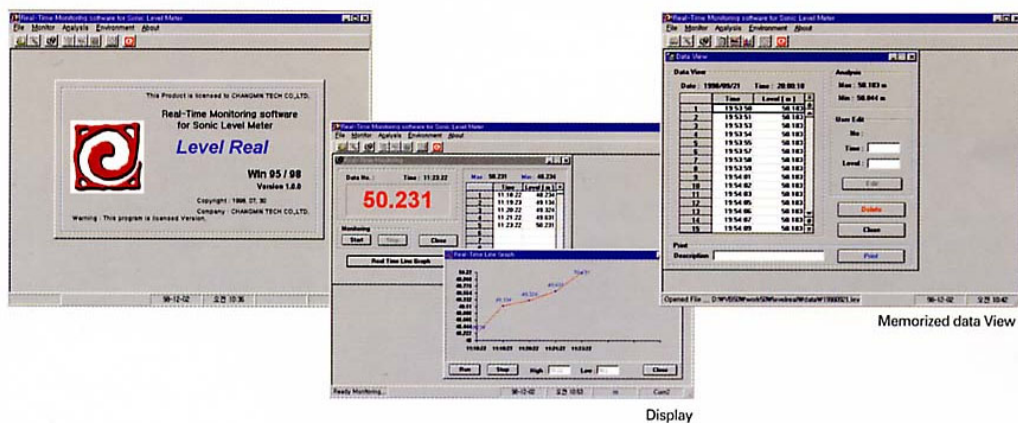


With ice formation and the streams where the soil and sands severely flow in



Flood Forecast and Alarm System

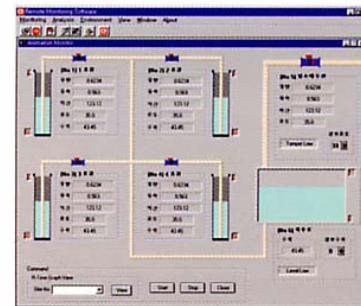
A. Real Time Monitoring Program (One Site)



B. 10 Site Monitoring



C. Multi Data Monitoring (Flow, Level, Temperature, Pressure)



Monitoring Program