

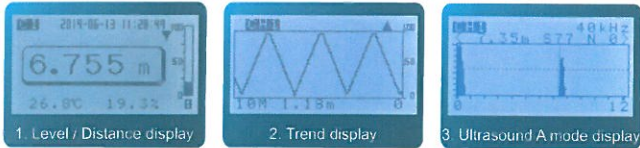
ULTRASONIC LEVEL METER

# HD1200

Stable measurement with **DSP**

**Display screen (3 display modes)**

- Level / Distance display:** Display for the remaining amount and the distance from the sensor
- Trend display:** Display for the change of remaining amount in the tank
- Ultrasound A mode display:** Display for the ultrasonic reflection waveform



**Features**

- DSP gives the unique level detection algorithm and the stable measurement by the rejection of noise and the undesired reflection.
- By one main unit with 2 different sensors, 2 different measurement ranges at different locations can be measured.
- Log data can be stored on a micro SD™.
- Open channel flowmeter function is provided with the standard specifications.
- RS-485 (MODBUS protocol) is provided with the standard specifications for the communication with PLC (the sequencer).
- 4 lines of alarm output for the process control are provided to each channel.

**Applications and examples**

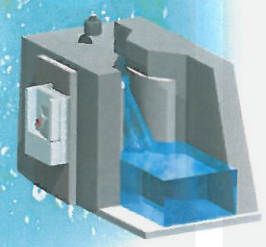
- Liquid / powder level management of the tank inside the machine
- Water level measurement for lakes, ponds and rivers
- Open channel flow measurement



■Liquid level measurement



■Powder level measurement



■Application to the large weir

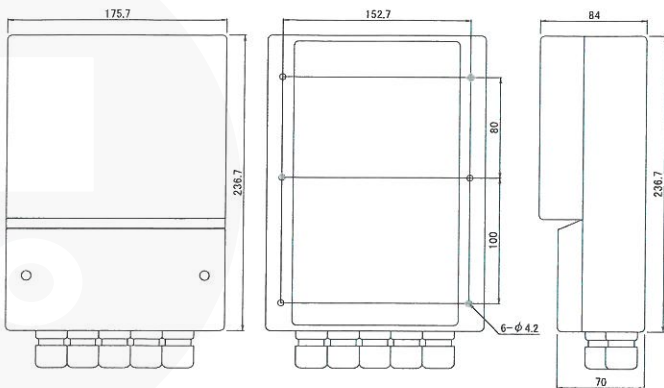
**Sensor**

Model no.	TS40-5	TS40T-5	TS21-5	TS12-5
Measurement distance range	0.3 to 20m	0.3 to 15m	0.6 to 40m	1.2 to 60m
Sensor image		Chemical-resistant 		

# ULTRASONIC LEVEL METER

# HD1200

## ■ Main Unit

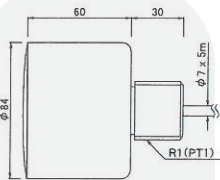


Model No.	HD1200	
Number of channels	2	
Frequency	10 to 60kHz transducer dependant	
Object to be measured	Liquid / powder	
Resolution	Measurement	1mm
	Display	1mm
Accuracy	±0.25%F.S.	
Data update cycle	Approx. 2sec transducer dependant	
Power source	Voltage	100 to 230V AC ±15%
	Power consumption	10VA
Display	LCD	
Output	Alarm output	4 lines for each channel 250V AC, 5A (Relay contact)
	4-20mA current output	Resolution 1/4000 RL(Max)=600Ω
Interface	RS-485 (Max transmission range:1,200m) RS-232C (Max transmission range:10m)	
Communication	microSD™	
Operating ambient temp.	-20 to +70°C	
Material	ABS	
Structure	IP66 equivalent	
Dimensions(WxDxH)	175.7 x 84 x 236.7mm	
Weight	1.8kg	

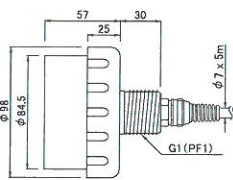
\* Open channel flowmeter function is provided to CH1 only.

## ■ Sensor

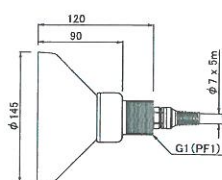
### ■ TS40-5



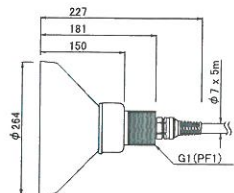
### ■ TS40T-5 (Chemical-resistant)



### ■ TS21-5



### ■ TS12-5



Model No.	Sensor			
	TS40-5	TS40T-5	TS21-5	TS12-5
Frequency	40kHz	40kHz	21kHz	12kHz
Measurement distance range (1/2 for powder)	0.3 to 20m	0.3 to 15m	0.6 to 40m	1.2 to 60m
Sensor directivity angle (beam angle)	12°	22°	14°	14°
Operating ambient temperatures	-20 to +70°C	-20 to +70°C	-20 to +60°C	-20 to +60°C
Material	Epoxy, PP	PVDF	PVC and others	PVC and others
Structure	IP 66 equivalent	IP 66 equivalent	IP 53 equivalent	IP 53 equivalent
Dimensions	φ84 x 90mm	φ98 x 87mm	φ145x 120mm	φ264x 181mm
Sensor cord length	5m	5m	5m	5m
Weight	500g	860g	290g	1kg
Sensor attachment screw	R1	G1	G1	G1

\* Any sensor cannot be used under the hydrofluoric atmosphere.  
\* Please do not hesitate to consult us regarding the extension of sensor cable.

\* [micro SD™] is a trademark or a registered trademark of SD card Association.  
\* All brand names and product names are registered trademarks of their respective companies.  
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