

Portable Ultrasonic Flowmeter

US300PM

Wide applications for maintenance and checking work,
measurements at laboratories or manufacturing lines



- Improved measurement ability on difficult conditions
- Easy setup by interactive parameter setting
- Small, light and easy-to-install transducers
- Two flow-input channels as standard
- Maximum two current outputs
- Long hour battery operation
- Wall thickness measurement function as standard
(Wall thickness probes are optional)
- Data logging function as standard
- Data transfer software for PC available



Left: Transducers for large pipe
Middle: Transducers for small and medium pipe
Right: Wall thickness probe (for general temperature)

Wide Applications

The usage of this flowmeter is not only for the maintenance and the check of your facilities but also for the measurements at laboratories or manufacturing line. The transducers are made for harsh industrial environment.

Enhanced Functions

Easy setup

The interactive operation through 15 keys and 2 × 16 character LCD display with back light assures you easy setup.

Transducers

The sensor parts of the transducers are as small as we can hold it in our hand and easy to install. The pipe sizes from 25mm to 6500mm are covered with three types of transducers. For high temperature fluids, you can select the transducers for the temperature up to 200 deg C. You can also select optional extension cable with the length 5m, 10m, or 20m.

Inputs

Two flow-input channels are as standard. You can measure two different flows in different pipes at the same time. You can also take the average (for two path measurement), sum or difference of two flow inputs.

Outputs

You can select maximum two current and two binary outputs. The binary outputs can be assigned freely to pulse or alarm outputs. You can also select a frequency output (0 to 1kHz) that indicates the flow rate. You can assign to the outputs not only measured flow data but also the sound speed in the fluid.

Battery operation

The operation by a re-chargeable battery is possible maximum 14 hours besides the operation with the AC power supply adapter.

Wall thickness measurement

The wall thickness measurement function is equipped as standard. Only preparing the optional wall thickness probe enables you to measure the wall thickness of the pipe. It is connected to one of the connectors for the two flow inputs and easy to setup.

Data storage memory

Data logging function for storing measurement data has the data storage memory for 27,000 values as standard. Maximum 100,000 values available optionally. Also, 80 sets of parameter records for the pipe and fluid conditions and 14 sets of parameter records for all the conditions of the measurement are equipped as standard, which becomes the strength when you use this instrument for the maintenance and checking work or experimental measurement at laboratories.

Communication function and data transfer software

The RS232 serial communication is equipped as standard and you can read the measurement flow data. If you use the data transfer software, you can read the parameters and also download the logging data to a personal computer.

Advanced Technologies

Easy installation

The transducers are calibrated one by one when shipped and easy to install at the sites. It is not necessary to adjust zero flow condition, which used to be necessary.

Fast response

With our original signal processing, fast and accurate measurement has been realized.

Improved measurement ability on difficult conditions

With our noise suppression technique, the measurement against the air bubble in the fluid has been improved.

NOTICE

- Before operating the product, read the instruction manual thoroughly for proper and safe operation.
- If this product is for use with a system requiring safeguards that directly involve personnel safety, please contact the Yokogawa sales offices.

A rotatable handle is equipped with the instrument.



(Note) For the detailed specifications and model codes, please refer to our specification sheet GS 01G05B02-01E.

General Specifications

Fluid	Liquid (Turbidity < 10,000 mg/L, fluid sound velocity 800 to 3500m/s)
Measured value	Volume flow, mass flow (by setting density), flow velocity, sound velocity in the fluid Wall thickness of the pipe (when optional wall thickness probe is prepared)
Pipe size	25 to 6500 mm
Pipe material	Carbon steel, Stainless steel, Grey cast iron, Ductile iron, Copper, Glass, PVC, etc
Flow velocity range	0.01 to 25 m/s
Accuracy	1 to 3% of reading depending on application 0.5% of reading with process calibration
Straight pipe run in the upstream	10 to 50 diameters, depending on the kind of the flow disturbance

Model and Suffix Code

Ultrasonic flowmeter, portable type

Model	Suffix code	Specifications
US300PM		Ultrasonic flowmeter, portable type
Output	-A0	No current output
	-A1	One current output
	-A2	Two current outputs
Power Supply Adapter and AC cable	1	Japan
	2	USA
	3	Europe
Option	/WTG	Wall thickness probe for general temperature
	/WTH	Wall thickness probe for high temperature

Transducers for portable type

Model	Suffix code	Specifications
US300PT		Transducers for portable type
Usage	-G	General purpose (IP65)
	-W	Waterproof (IP67)
Pipe Size / Fluid Temperature	BG	Size 25 to 400mm, general temp.
	BH	Size 25 to 400mm, high temp.
	CG	Size 100 to 2500mm, general temp.
	CH	Size 100 to 2500mm, high temp.
	DG	Size 2000 to 6500mm, general temp.
Mounting fixture	-S	Standard type
	-M	Magnet type, general temp.
Fixing chain	B	Pipe size up to 1200mm
	C	Pipe size up to 3000mm
	D	Pipe size up to 6500mm
Acoustic couplant	G	General temperature type
	H	High temperature type

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VigilantPlant is Yokogawa's automation concept for safe, reliable, and profitable plant operations. VigilantPlant aims to enable an ongoing state of Operational Excellence where plant personnel are watchful and attentive, well-informed, and ready to take actions that optimize plant and business performance.

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