



*Ultrasonic Flowmeter*

# US300FM

***Easy setup by interactive  
parameter setting***

***Easy adjustment by no zero-  
offset transducers***

*Ultra  
Sonicwaves*

### Small, light and easy-to-install transducers

The sensor parts of the transducers are as small as we can hold them in our hand and easy to install.

### Wide range of applicable pipe sizes

The pipe sizes from 25mm to 6,500mm (1 to 255 inches) are covered with three types of transducers.

### Data storage memory

Data logging function for storing measurement data has the data storage memory for 27,000 values as standard.

### Fast response

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

### High stability against air bubbles

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

### Dual flow inputs as optional

Maximum two flow inputs are available. You can measure two different flows in different pipes at the same time.

### US300FM (Main unit)

|                       |  |
|-----------------------|--|
| Water and dust-proof  | IP65 (EN60529), IPx5 (JIS C 0920)              |
| Weight                | 2.8kg (6,17 lb)                                |
| Mounting              | Wall mounting or optional 2-inch pipe mounting |
| Electrical connection | ISO M20 x 1.5 female                           |
| Display               | 2x16 characters LCD with back light            |
| Current output        | 4 to 20mA                                      |
| Frequency output      | 0 to 1 kHz (optional)                          |
| Binary output         | Pulse or alarm (optional)                      |
| Power Supply          | 100 to 240VAC or 24VDC                         |
| Ambient Temperature   | -10° to +60 °C (14° to 140 °F)                 |

### US300FM (Inside panel)



### General Specifications

|                                   |   |
|-----------------------------------|---|
| Fluid                             | Liquid (Turbidity < 10,000mg/l)   |
| Pipe size                         | 25 to 6,500mm (1 to 255 inches)   |
| Measured quantity                 | Volume flow (by setting density), mass flow, flow velocity, sound velocity in the fluid                     |
| Fluid temperature                 | General temp. type: -30° to +130 °C (-22° to +266 °F)<br>High temp. type: -30° to +200 °C (-22° to +392 °F) |
| Pipe and lining material          | Carbon steel, Stainless steel, Grey cast iron, Ductile iron, Copper, Glass, PVC, etc                        |
| Flow velocity range               | ±0.01 to ±25 m/s (±0.033 to ±82 ft/s)   |
| Accuracy                          | 1 to 3% of reading depending on application<br>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   |

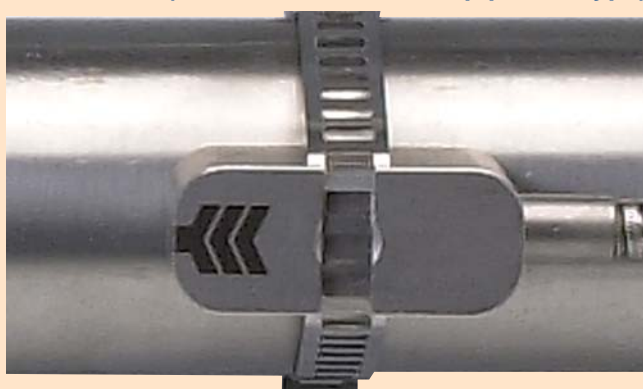
### Functions

|   |   |
|---|---|
| Site parameters storage function                      | Storage of pipe and fluid parameters. (Maximum 80 different settings)   |
| Measuring/Calculation function                        | Flow value<br>Sound velocity<br>Arithmetic operation on dual flow inputs:<br>Two values from average, sum or difference of the channel A and channel B inputs are available freely. |
| Alarm function (optional)                             | Alarm Items: High limit, Low limit, Flow direction change, Quantity limit (for batch operation)   |
| Data logging function (for maintenance purpose only)  | Store measured values in the internal memory (used with communication function below)<br>Memory size: 27,000 values.  |
| Communication function (for maintenance purpose only) | RS232<br>On-line/Off line output of the measured values to personal computers or serial printers.   |
| Time-programmable measurement function                | Automatic start and stop of the measurement using internal clock. Can be used with data logging function or communication.  |

### US300FT (Transducers)

|                      |  |
|----------------------|--|
| Dust and water-proof | General: IP65(EN60529), IPx5 (JIS C 0920)<br>Immersible: IP67 (EN60529), IPx7 (JIS C 0920)   |
| Weight               | approx: 0.9kg (1.98 lb) (Medium pipe size type)<br>approx: 1.5kg (3.31 lb) (Large pipe size type)<br>approx: 2.5kg (5.51 lb) (Very large pipe size type) |

### US300FT (Actual size of medium pipe size type)



Pipe Size 40mm (1.5 inch)

#### 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.

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