

# FUJI ULTRASONIC FLOWMETER SERIES

A sensor best suited for high-temperature application (0 to 120°C) is now on sale!

This detector for high-temperature application, produced based upon our rich experience in diverse flowmeter applications, can be used for process temperatures of up to 120°C.

The new product meets customers' requirements for an increasing variety of applications

Flow transmitters, which can be combined with



TIME DELTA-C (Type: FSV)



M-Flow PW (Type: FLR)

**New product**

Detector (FLS)

Note: A detector (type: FLD320), which can be used up to 200°C, is also available.

## Features

### 1. Compact and lightweight

High-temperature resin is used for the sensor housing and the wedge material.

FLSE12: 0.3kg, FLSE22: 0.4kg

### 2. Easily mountable and waterproof structure (IP65)

It is very easy to mount on the frame, and waterproof BNC connectors are used to simplify the wiring.

### 3. High accuracy 1 – 2% of rate

When combined with a flow transmitter FSV and the flow velocity is 2m/sec or more

### 4. Superior anti-bubble performance (when combined with a flow transmitter FSV)

The use of digital signal processing drastically improves the tolerable bubble quantity (Advanced ABM is adopted.)

## Specifications

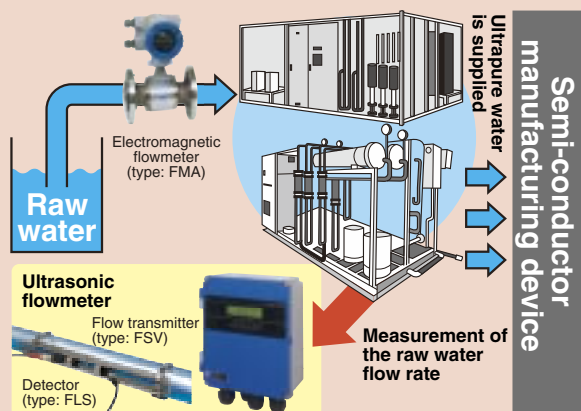
- Process temperature range: 0 to +120°C
- Ambient temperature range: -20 to +80°C
- Applicable piping diameter
  - FLSE12: ø25mm to ø100mm (plastic pipe)  
ø50mm to ø100 (metallic pipe)
  - FLSE22: ø50mm to ø150mm (plastic and metallic pipes)
- Accuracy (when combined with a flow transmitter FSV)
  - Plastic pipe
    - ø25mm to ø50mm: 2.0% of rate (flow velocity 2m/sec or more)
    - ø50mm to ø150mm: 1.0% of rate (flow velocity of 2m/sec or more)
  - Metallic pile
    - ø50mm to ø150mm: 2% of rate (flow velocity of 2m/sec or more)

**Fuji Electric Systems Co., Ltd.**

## Application /

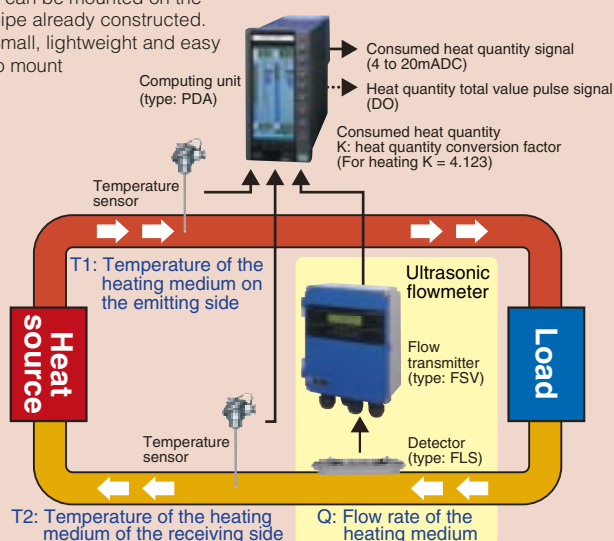
### Flow rate measurement of high-temperature chemical and pure water in semi-conductor manufacturing facilities

- 1) It can be easily mounted on the exterior of a pipe, helping reduce mounting cost.
- 2) As a sensor, it can operate without coming into contact with fluid, so the fluid is not affected by metallic ions.
- 3) This meter, compact and lightweight, can be easily carried and mounted.



### Measurement of the hot water flow rate in buildings and local air conditioning equipment

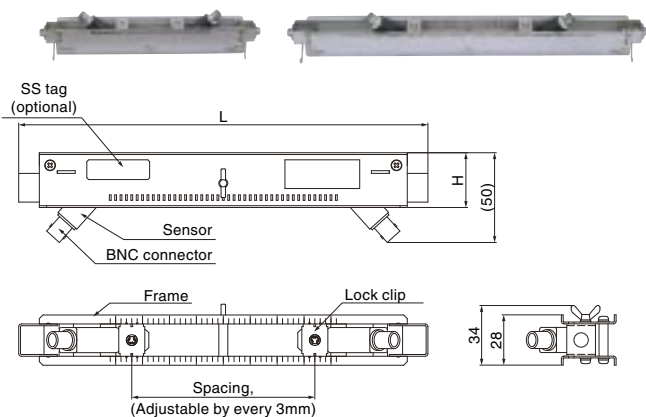
- It can be mounted on the pipe already constructed.
- Small, lightweight and easy to mount



## Outline diagram of detector (unit: mm) /

Type: FLSE1 (for diameter of  $\phi 25\text{mm}$  to  $\phi 100\text{mm}$ )

Type: FLSE2 (for diameter of  $\phi 50\text{mm}$  to  $\phi 150\text{mm}$ )



Type	Diameter (mm)	L	H	Spacing	Mass approx. (kg)
FLSE12	25 to 100	228	31	21 to 120	0.3
FLSE22	50 to 150	348	30	21 to 240	0.4

## Code symbol of detector

Digit	Specifications	FLS
5	<Applicable diameter>	E
6	$\phi 25$ to $\phi 100\text{mm}$ $\phi 50$ to $\phi 150\text{mm}$	1 2 2 2
7	<Acoustic coupler> None, Silicone rubber, Silicone-free glass	Y A B
9	<Fluid temperature range> 0 to $+120^\circ\text{C}$	A
10	<Optional specifications> None, Tag nameplate	Y B

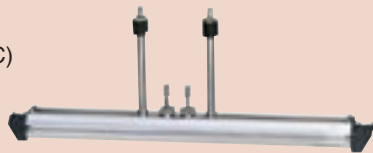
FLS 4 5 6 7 8 9 10  
E 1 2 2 - A

### ● Relevant product

Detector for high temperatures (up to  $200^\circ\text{C}$ )

Type: FLD320S1-Y

Applicable pipe diameter:  $\phi 50$  to  $\phi 400\text{mm}$



## Fuji Electric Systems Co., Ltd.

### Head Office

Gate City Ohsaki, East Tower,  
11-2, Osaki 1-chome, Shinagawa-ku, Tokyo 141-0032, Japan  
<http://www.fesy.co.jp/eng>

### Instrumentation Div.

### International Sales Dept.

No.1, Fuji-machi, Hino-city, Tokyo, 191-8502 Japan  
Phone : 81-42-585-6201,6202  
Fax : 81-42-585-6187  
<http://www.fic-net.jp/eng>