

SENSOR	MANIFOLD	VALVE	
OZONE	JOINT	CLAMP	
FILTER	OTHER	DATA	

## Flowmeter FS Series FS-SC

### Features

- Simultaneous output of analog and alarm.
- Measurement value LCD digital display.
- It can display if the set value is reached or not with an LED lamp, and can output alerts.
- Compact collective piping "manifold" can be mounted.
- Display the flow rate and temperature(option) with high accuracy.



### Electrical wiring

Single unit fitting block

LCD  
L/min, °C

Cable

LED  
FLOW  
TEMP

Red	.....	Power supply
Black	.....	G N D
White	.....	Flow rate analog output
Orange	.....	Temperature analog output ※
Yellow	.....	Flow rate alarm output
Brown	.....	Temperature alarm output ※
Green	.....	Alarm common return

The figure shows optional specification (with temperature function)

○ AWM20276, 7 cores/0.2mm<sup>2</sup> having 500mm length of unprocessed terminals using by cables.

※Option: With temperature function

### Dimensions

The figure shows optional specification (with temperature function)

**For fixing the bottom**  
Counter bore for 4 x M4  
(Hexagon socket head cap bolt)

**For fixing the rear**  
Screw holes for 2 x M4 screws  
(Countersunk head screw)

**For adapter**  
4 x M4  
(hexagon socket head cap bolt)

Adapter size	BsBM	SUS
Rc3/8	92	98
Rc1/2	115	115

\* 1 The size differs depending on the type of the adapter.

(unit: mm)

### Operation display section

No option

**Flow rate alarm display LED**

**FLOW switch**  
· Flow rate mode ) Switching  
· Flow rate alarm

**LCD display**  
· Data display  
· Unit display  
No unit = L/min

**Setting switch**  
Alarm numerical value setting

Option: With temperature function

**Flow rate alarm display LED**

**Temperature alarm display LED**

**FLOW switch**  
· Flow rate mode ) Switching  
· Flow rate alarm

**TEMP switch**  
· Temperature mode ) Switching  
· Temperature alarm

**LCD display**  
· Data display  
· Unit display  
No unit = L/min  
C = °C

**Setting switch**  
Alarm numerical value setting

# Specifications

Model	FS-35C	FS-105C	FS-305C
Rated flow rate range	0.5 - 3.0 L/min	1.5 - 10.0 L/min	5.0 - 30.0 L/min
Applicable fluid	Industrial water, Water		
Detecting method	Impeller type		
Fluid temperature	0~60°C		
Ambient temperature	0~50°C		
Accuracy*2	±2.5% F.S.		
Max. operating pressure	1.0 MPa		
Power supply voltage*3	12 VDC±5% or 24 VDC±10%		
Current consumption	At voltage output: Max. 30 mA		
	At current output: Max. 50 mA *4 Max. 70 mA		
Cable	AWM 20276 (7 cores 0.2 mm <sup>2</sup> length 500 mm)		
Flow rate display and temperature display*4	Numerical value LCD display 0.1 step		
Flow rate analog output*5	Voltage output	0 - 10 V (load 3 kΩ or more)	*4 at 0 - 100°C
Temperature analog output	Current output	4 - 20 mA (load 300 Ω or less)	
*6	Maximum load current	Below 100 mA	
	Maximum applied voltage	Below 40 V	
Flow rate alarm output	Output mode	MOSFET	
Temperature alarm output	Alarm display	Lights up in one of 2 colored LED (red or green)	
Power down display	Power down LCD blinks at 75% of power supply voltage		
Certification, standard, etc.	RoHS Directive (SUS adapter specification only)		
Material of liquid contacting part	POM-PA-SUS		
Material of connecting part	SUS or BsBM (Ni-plated)		
Sealing O-ring	Fluorine rubber		
Orifice diameter	ø5	ø7	ø10
Pipe diameter	Rc3/8 or Rc1/2		
Weight	Approx. 380 g		
Mounting posture	Free		
Direction of flow	Both directions		
Protective structure	Reverse connection protection (available only for 24 VDC specification)		

\* 2 There are errors of maximum  $\pm 0.75$  L/min,  $\pm 0.25$  L/min,  $\pm 0.075$  L/min,  $\pm 2.5^\circ\text{C}$  respectively since F.S. (full scale) is 30 L/min, 10 L/min, 3 L/min, 100°C

\* 3 For the power supply voltage, either 12 VDC or 24 VDC may be selected when placing an order.

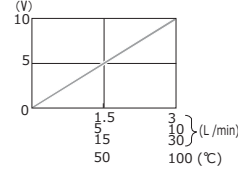
\* 4 Option: With temperature function

\* 5 For the analog output, either voltage output or current output may be selected when placing an order.

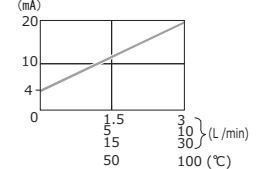
\* 6 Alarm setting value at factory shipping is set to 35C = 2.0 L/min, 105C = 6.0 L/min, 305C = 20.0 L/min.

## Output Signals

[I] Voltage output (0 - 10 V)



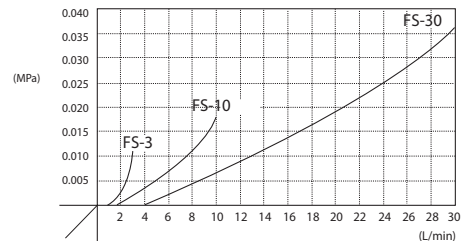
[II] Current output (4 - 20 mA)



## Flow Rate Characteristics

[Pressure loss diagram]

The figure below shows pressure difference between the primary and secondary pressures with source pressure of 0.29 MPa.



## Order form

Flow rate	Output	Wetted Materials	* Adapter Materials	* Adapter size	Power supply	Alarm		direction	Temperature (Option)	
						Flow rate	Temperature (Option)			
3SC 0.5~3.0 L/min	0 0~10V	J (Polyacetal)	B (BsBM + Ni plating)	3/8	24 DC24V	A	※ □	N Normal rotation	※ ○	
10SC 1.5~10.0 L/min	4 4~20mA					B	B		R Invert	T With
30SC 5.0~30.0 L/min						S SUS	1/2		12 DC12V	

### Definition of alarm output and display LED

Measured value	Higher than set value		Lower than set value	
	Alarm	Green lamp is ON	Red lamp is ON	Red lamp is ON
A (OFF)	ON	OFF	ON	OFF
B (ON)	OFF	ON	ON	ON

In the alarm output, COM becomes common return flow of flow rate and temperature, and GND becomes floating state. Photo MOSFET ON indicates conductive, and OFF indicates non-conductive. The alarms for the flow rate and the temperature can be set independently.

### [Entry example]

Output : 0~10V  
Direction : Normal rotation

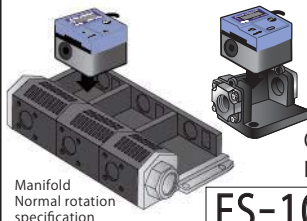


**FS-10SC-0-J-B-3/8-24-A-N**

Output : 0~10V Direction : Invert  
Alarm : Temperature(Option)



**FS-10SC-0-J-B-3/8-24-A-B-R-T**



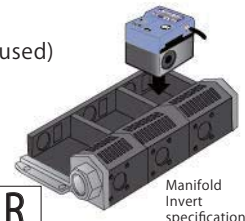
Order flowmeter body only  
(When installing manifold or using a single mounting block already used)

Output : 0~10V  
Direction : Normal rotation

**FS-10SC-0-J-24-A-N**

Output : 0~10V  
Direction : Invert

**FS-10SC-0-J-24-A-R**



Note: O ring (P - 16) is not included. Please order separately.