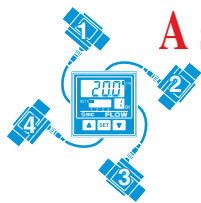


- 1 Flow rate setting and monitoring are possible with the digital display.
- 2 Two types are available:
Integrated and Remote type.
- 3 Three types of output:
Switch, accumulated pulse, and analog outputs.

- 4 Switching from real-time flow rate to accumulated flow is possible.
(Accumulated flow rate is reset when the power supply turns OFF.)
- 5 Two independent flow rate settings are possible.
- 6 Water resistant construction conforming to IP65

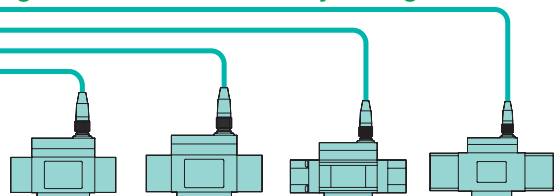


A single controller can monitor the flow rate of 4 different sensors.

4 independent flow rate ranges can be monitored by a single controller.

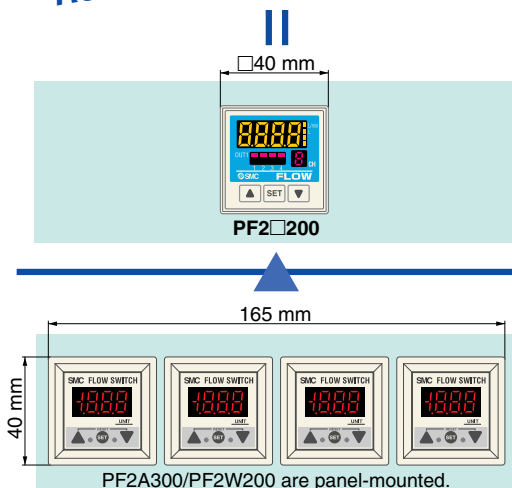


4-channel Flow Monitor
Series PF2□200



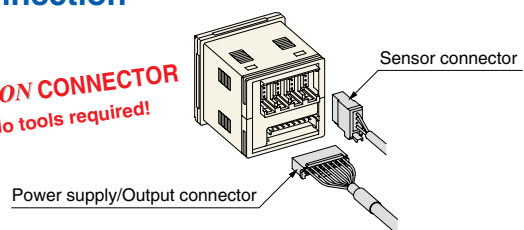
76% reduced installation space
(Compared with a PF2A3□□ and PF2W3□□, when panel mounted.)

Reduced panel fitting labor



● Connection

e-CON CONNECTOR
No tools required!

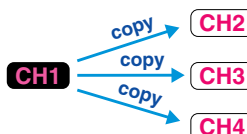


● Function

● Copy function

Possible to copy information from one channel to one or more other channels.

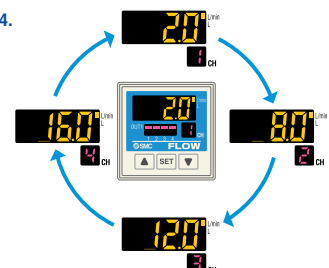
Copying CH1 setting to CH2, 3 and 4.



- Key lock function
- Unit switching function
- Peak value and lowest value holding

● Channel scan function

Allows constant monitoring of the displayed pressure value for each channel.



For Air

Digital Flow Switch/High Flow Rate Type Series PF2A



Refer to www.smcworld.com for details of products compatible with overseas standards.

How to Order



Integrated Display Type

PF2A7 H M

Flow rate range

03	150 to 3000 ℓ/min
06	300 to 6000 ℓ/min
12	600 to 12000 ℓ/min

High flow rate type

Port specification

Nil	Rc
N	NPT
F	G

Port size

Symbol	Port size	Flow rate (ℓ/min)			Applicable model
		3000	6000	12000	
10	1	●			PF2A703H
14	1 1/2		●		PF2A706H
20	2			●	PF2A712H

Lead wire (Refer to page 35.)

Nil	M12 3 m lead wire with connector
N	Without lead wire

Unit specification

Nil	With unit switching function
M	Fixed SI unit ^{Note)}

Note) Fixed units:
Real-time flow rate: ℓ/min
Accumulated flow: ℓ, m³, m³ x 10³

Output specification

28	NPN open collector 1 output + Analog output (1 to 5 V)
29	NPN open collector 1 output + Analog output (4 to 20 mA)
68	PNP open collector 1 output + Analog output (1 to 5 V)
69	PNP open collector 1 output + Analog output (4 to 20 mA)

Switching of switch output and accumulated pulse output is possible with NPN or PNP open collector outputs.

Specifications

Model		PF2A703H	PF2A706H	PF2A712H
Measured fluid		Dry air, Nitrogen		
Detection type		Heater type		
Rated flow range ^{Note 1)}		150 to 3000 ℓ/min	300 to 6000 ℓ/min	600 to 12000 ℓ/min
Minimum set unit ^{Note 1)}		5 ℓ/min	10 ℓ/min	
^{Note 2)} Display units	Real-time flow rate	ℓ/min, CFM		
	Accumulated flow	ℓ, m³, m³ x 10³, ft³, ft³ x 10³, ft³ x 10⁶		
Operating pressure range		0.1 to 1.5 MPa		
Proof pressure		2.25 MPa		
Pressure loss		20 kPa (at maximum flow rate)		
Accumulated flow range		0 to 9,999,999,999 ℓ		
Linearity ^{Note 3)}		±1.5% F.S. or less (0.7 MPa, at 20°C)		
Repeatability		±1.0% F.S. or less (0.7 MPa, at 20°C), ±3.0% of F.S. or less in case of analog output		
Pressure characteristics		±1.5% F.S. or less (0.1 to 1.5 MPa, based on 0.7 MPa)		
Temperature characteristics		±2.0% F.S. or less (0 to 50°C, based on 25°C)		
Output specifications	Switch output ^{Note 4)}	NPN open collector Max. load current: 80 mA; Max. applied voltage: 30 V; Internal voltage drop: 1 V or less (with load current of 80 mA) PNP open collector Max. load current: 80 mA; Internal voltage drop: 1.5 V or less (with load current of 80 mA)		
	Accumulated pulse output ^{Note 4)}	NPN or PNP open collector	Flow rate per pulse: 100 ℓ/pulse, 10.0 ft³/pulse ON time per pulse width: 50 msec	
	Analog output ^{Note 5)}	Output voltage: 1 to 5 V; Load impedance: 100 kΩ or more		
		Output current: 4 to 20 mA; Load impedance: 250 Ω or less		
Response time		1 sec. or less		
Hysteresis		Hysteresis mode: Variable (can be set from 0); Window comparator mode: (can be set from 0 to 3% F.S.)		
Power supply voltage		24 VDC (ripple ±10% or less)		
Current consumption		150 mA or less		
Resistance	Enclosure	IP65		
	Operating temperature range	0 to 50°C (with no freezing and condensation)		
	Withstand voltage	1000 VAC for 1 min. between external terminal and case		
	Insulation resistance	50M Ω (500 VDC Mega) between external terminal and case		
	Vibration resistance	10 to 500 Hz with a 1.5 mm amplitude or 98 m/s² acceleration, in each X, Y, Z direction for 2 hrs, whichever is smaller.		
	Impact resistance	490 m/s² in X, Y, Z directions 3 times each		
	Noise resistance	1000 Vp-p, Pulse width 1 μs, Rise time 1 ns		
Weight		1.1 kg (without lead wire)	1.3 kg (without lead wire)	2.0 kg (without lead wire)
Port size (Rc, NPT, G)		1	1½	2

Note 1) Flow rate display can be switched between the basic condition of 0°C, 101.3 kPa and the standard condition (ANR) of 20°C, 101.3 kPa, and 65% RH.

Note 2) For digital flow switch with unit switching function. (Fixed SI unit [(ℓ/min, or ℓ, m³ or m³ x 10³)] will be set for switch type without the unit switching function.)

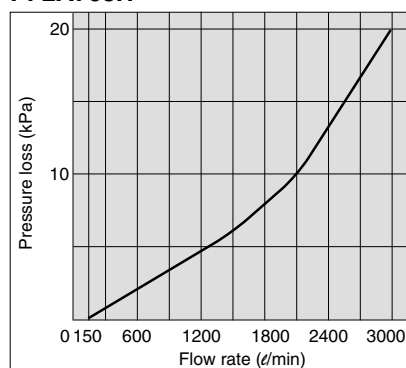
Note 3) The high flow rate type is CE marked; however, the linearity with applied noise is ±5% F.S. or less.

Note 4) Switch output and accumulated pulse output selections are made using the button controls.

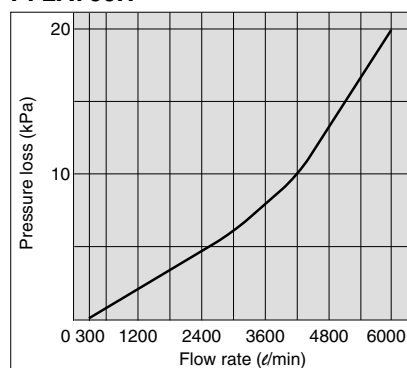
Note 5) The analog output operates only for real-time flow rate, and does not operate for accumulated flow.

Flow Characteristics (Pressure Loss)

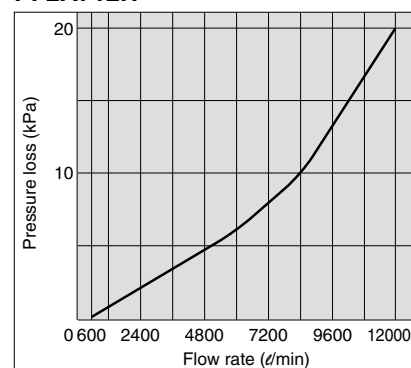
PF2A703H



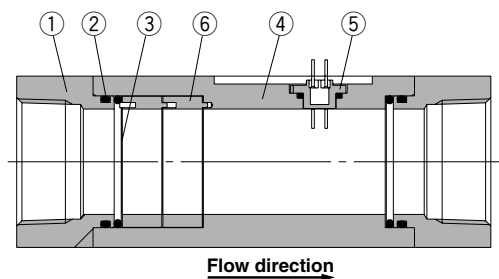
PF2A706H



PF2A712H



Construction



Parts list

No.	Description	Material	Note
1	Attachment	Aluminum alloy	Anodized
2	Seal	HNBR	—
3	Mesh	Stainless steel	—
4	Body	Aluminum alloy	Anodized
5	Sensor	PPS	—
6	Spacer	PBT	—

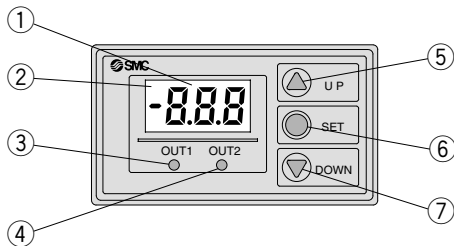
For Air/Water Digital Flow Switch *Series PF2A/PF2W*

Description

Integrated Display Type

PF2A710, 750, 711, 721, 751

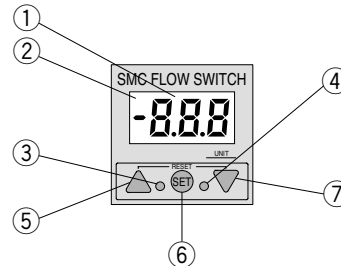
PF2W704(T), 720(T), 740(T), 11



Remote Type/Display Unit

PF2A300, 301, 310, 311

PF2W300, 301, 330, 331



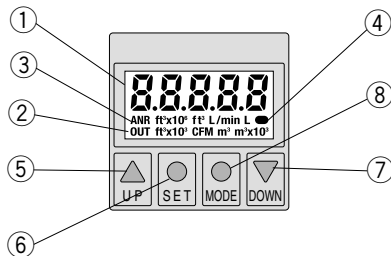
RESET button (▲ + ▼ button)

If the UP and DOWN buttons are pressed simultaneously, the RESET function will activate. In case of an emergency, please clear the display. The display of the accumulated flow will be reset to zero.

① LED display/Red	Displays the measured flow rate, each setting condition, and error code.
② Indicator (PF2A7□□, PF2A3□□ for air only)	Illuminates when the normal condition (nor) is selected.
③ Output (OUT1) display/Green	Displays the output condition of OUT1. Illuminates when turned ON.
④ Output (OUT2) display/Red	Displays the output condition of OUT2. Illuminates when turned ON.
⑤ UP button (▲ button)	Use to change the mode or to increase the set value.
⑥ SET button (● button)	Use this button to set the valve or the set mode.
⑦ DOWN button (▼ button)	Use to change the mode or decrease the set value.

Integrated Display Type

PF2A703H, 706H, 712H



RESET button (▲ + ▼ button)

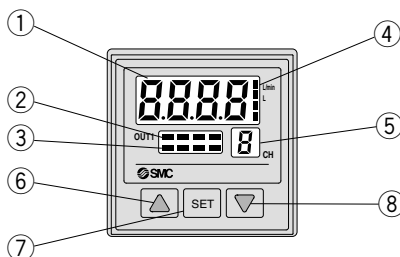
If the UP and DOWN buttons are pressed simultaneously, the RESET function will activate. In case of an emergency, please clear the display. The display of the accumulated flow will be reset to zero.

① LCD display/Orange	Displays the measured flow rate, each setting condition, and error code.
② Output (OUT1) display/Orange	Displays the output condition of OUT1. Illuminates when turned ON.
③ Unit display/Orange	Displays the selected unit. Type without unit switching function is fixed SI units (L/min, or L, m³, m³ x 10³).
④ Flow rate confirmation display/Orange	The blinking intervals change depending on the flow rate value.
⑤ UP button (▲ button)	Use to change the mode or to increase the set value.
⑥ SET button (● button)	Use to select the function.
⑦ DOWN button (▼ button)	Use to change the mode or decrease the set value.
⑧ MODE button (● button)	Use for changing the function.

4-channel Flow Monitor (Remote type/Display unit)

PF2A200, 201

PF2W200, 201



① LCD display/Orange	Displays the measured flow rate, each setting condition, and error code.
② Switch output display/Red	Displays the output condition of OUT1 (CH1 to 4). Illuminates when turned ON.
③ Unit display of flow rate for air/Red (PF2A200, 201 for air only)	CH1 to 4 will illuminate when the normal condition (nor) is selected.
④ Unit display/Orange	Illuminates the selected unit. Use after putting the unit label other than L/min, L.
⑤ Channel display/Red	Displays the selected channel.
⑥ UP button (▲ button)	Use to change the mode or to increase the set value.
⑦ SET button	Use this button to set the value or the set mode.
⑧ DOWN button (▼ button)	Use to change the mode or decrease the set value.