Description

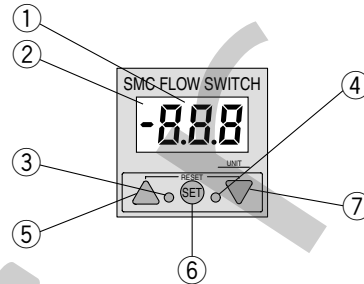### Integrated Display Type
PF2A710, 750, 711, 721, 751
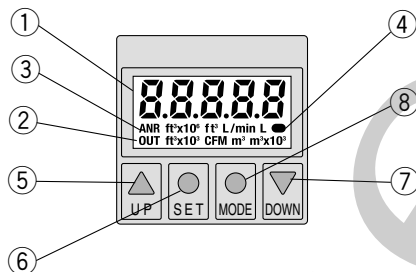### PF2W704(T), 720(T), 740(T), 11

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, m^3, m^3 x 10^3).
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
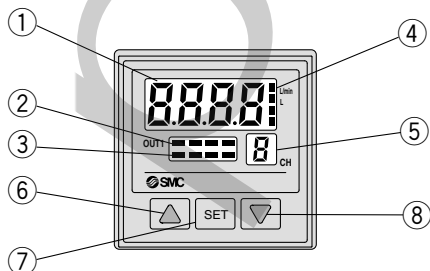
①	LCD display/Orange	Displays the measured flow rate, each setting condition, and error code.
②	Switch output display/Red	Displays the output condition of OUT1 (CH1 to 4). Illuminates when turned ON.
③	Unit display of flow rate for air/ Red (PF2A200, 201 for air only)	CH1 to 4 will illuminate when the 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.

Series *PF2A/PF2W*

Functions

Refer to the "Instruction Manual" for information on setting and operating.

Flow rate measurement selection

Real-time flow rate and accumulated flow rate can be selected.
A flow rate of up to 999999 can be accumulated.
The accumulated flow rate is reset when the power supply turns OFF. (PF2A7□H maintains the values.)

Unit switching

For Air

Display	Real-time flow rate	Accumulated flow
U_1	ℓ/min	ℓ
U_2	CFM x 10^{-2} x CFM x 10^{-1}	ft^3 x 10^{-1}

CFM = ft^3/min

High Flow Rate Type (For Air)

Display	Real-time flow rate	Accumulated flow
U_1	ℓ/min	ℓ, m^3, m^3 x 10^3
U_2	CFM	ft^3, ft^3 x 10^3, ft^3 x 10^6

For Water / High Temperature Fluid Type (For Water)

Display	Real-time flow rate	Accumulated flow
U_1	ℓ/min	ℓ
U_2	GPM	gal (US)

GPM = gal (US)/min

Note) Fixed SI unit (ℓ/min, or ℓ, m^3, m^3 x 10^3) will be set for the type without the unit switching function.

Flow rate conversion

Normal condition: 0°C, 101.3 kPa, dry air
Standard condition: 20°C, 101.3 kPa, 65%RH (ANR)
Switchable between these conditions.

Flow rate measuring unit confirmation

This function allows for the confirmation of the accumulated flow rate when real-time flow rate is selected and to confirm the real-time flow rate when accumulated flow rate is selected.

Key lock

This function prevents accidental operations such as changing the set value.

Accumulation clearance

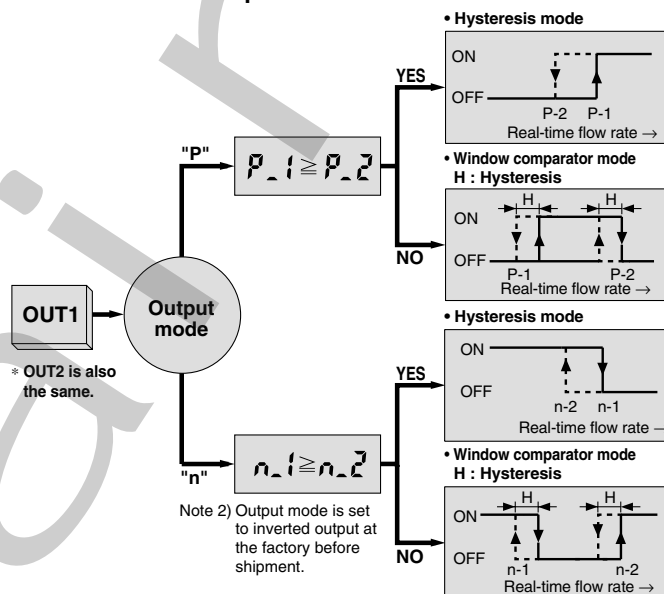This function clears the accumulated value.

Initialization of setting (only for Series PF2A7□□H)

This function restores the setting to the original state, just as it had been shipped from the factory.
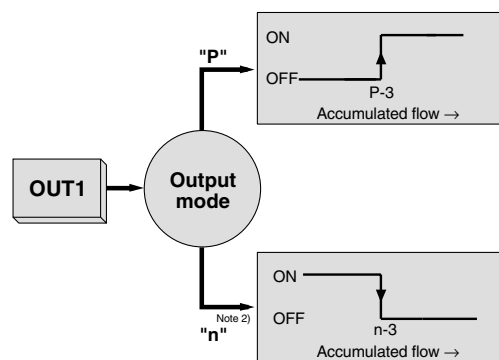
Output types

Real-time switch output, accumulated switch output, or accumulated pulse output can be selected as an output type.
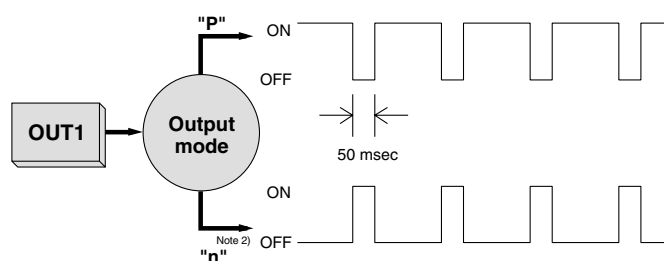
Real-time switch output

* Hysteresis mode
* Window comparator mode H : Hysteresis
* Hysteresis mode
* Window comparator mode H : Hysteresis

∗ OUT2 is also the same.

Note 2) Output mode is set to inverted output at the factory before shipment.

Accumulated switch output

Note 2) Output mode is set to inverted output at the factory before shipment.

Accumulated pulse output

50 msec

Note1) For a digital flow switch with an unit switching function. (Fixed SI unit [ℓ/min, or ℓ, m^3 or m^3 x 10^3] will be set for switch types without an unit switching function.)
Refer to the specifications of the display unit for the flow rate value per pulse.

Functions

Copy function (PF2□200, 201 only)

Information to be copied is:
① **Flow rate range**
② **Display mode**
③ **Display unit (Only available when the unit specification is nil.)**
④ **Output method**
⑤ **Output mode**
⑥ **Flow rate display unit (available with PF2A20□ only)**
⑦ **Flow rate value**

Peak hold, Bottom hold display function
(PF2□200, 201 only)

The maximum or minimum value can be held in the case where the real-time flow rate display mode is selected during the initial setting.

Error correction

LED display	Contents	Solution
Er1 Note 1) / Err_1 Note 2)	A current of more than 80 mA is flowing to OUT1.	Check the load and the wiring for OUT1.
Er2 Note 1)	A current of more than 80 mA is flowing to OUT2.	Check the load and the wiring for OUT2.
Err_3 Note 2) / Er4 Note 1)	The set data has changed for some reason.	Perform the RESET operation, and reset all the data again.
- - - Note 1) / - - - - - Note 2)	The flow rate is over the flow rate measurement range.	Use an adjustment valve, etc. to reduce the flow rate until it is within the flow rate range.

Note 1) Applicable to display integrated type and remote type except PF2A7□□H series.
Note 2) Applicable to PF2A7□□H series only.

For PF2A/W200, 201

LED display	Contents	Solution
Er1	Over current is flowing to the load of a switch output.	Shut off the power supply. After eliminating the output factor that caused the excess current, turn the power supply back on.
Er0	Internal data error.	Contact P/A.
Er7	Internal data error.	
Er10	Internal data error.	
Er5	Internal data error.	Shut off the power supply and then reset the switch.
Er6	Internal data error.	
- - -	The flow rate is over the flow rate measurement range.	Use an adjustment valve, etc. to reduce the flow rate until it is within the flow rate range.

Channel select function (PF2□200, 201 only)

Every pushing the △ button, channel selection "1→2→3→4→1..." is available. The flow rate measurement of each selected channel is shown in the display unit.

Channel scan function (PF2□200, 201 only)

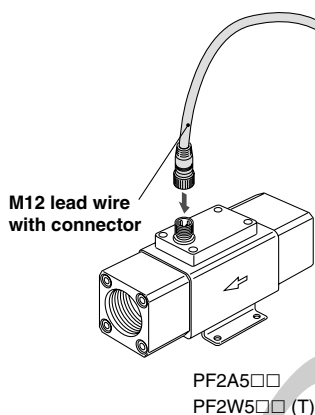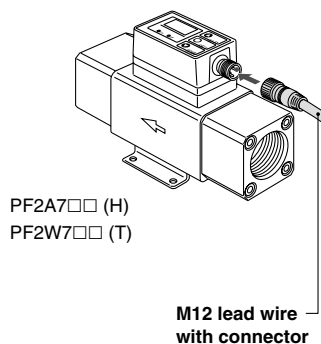**Changes displaying the channel shown every about 2 seconds and its detected flow rate.**

Series PF2A/PF2W

Option

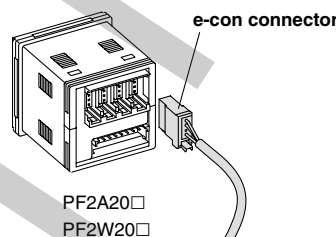**When only optional parts are required, order with the part numbers listed below.**

M12 lead wire with connector

Part no.	Qty.	Lead wire length
ZS-29-A	1	3 m

PF2A7□□ (H)
PF2W7□□ (T)

M12 lead wire with connector

M12 lead wire with connector

PF2A5□□
PF2W5□□ (T)

In addition to the lead wire assembly shown above, those listed below (female contact) can be connected.
However, they cannot be connected with an e-con connector because the diameter of the core wire and its coverage diameter are different. For details, contact each manufacturer.

Connector size	Pin no.	Manufacturer	Applicable series
M12	4	Correns Corp.	VA-4D
		OMRON Corp.	XS2
		Yamatake Co.,Ltd.	PA5-4I
		Hirose Electric Co., Ltd.	HR24
		DKK Ltd.	CM01-8DP4S

e-con connector

Part no.	Qty.
ZS-28-CA-4	1

e-con connector

PF2A20□
PF2W20□

In addition to the connectors shown above, those listed below (e-con) can be connected.

Manufacturer	Model
Sumitomo 3M Limited	37104-3122-000FL
Tyco Electronics AMP K.K.	2-1473562-4
OMRON Corp.	XN2A-1430

Panel mounting

Pin no.	Description	Note
ZS-22-E	Panel mounting adapter A, B	With mounting bracket

Panel

PF2A3□□
PF2W3□□

Panel mounting adapter A

Panel mounting adapter B

Mounting bracket (accessory)
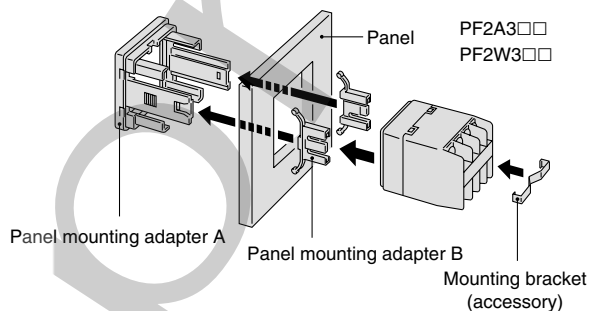
Part no.	Description	Note
ZS-26-B	Panel mounting adapter	With waterproof seal, mounting screw
ZS-26-C	Front protective cover + Panel mounting adapter	With waterproof seal, mounting screw

Front protective cover

Mounting screw (M3 x 8 L) (accessory)

Waterproof seal (accessory)

Panel

Panel mounting adapter

PF2A20□□
PF2W20□□