

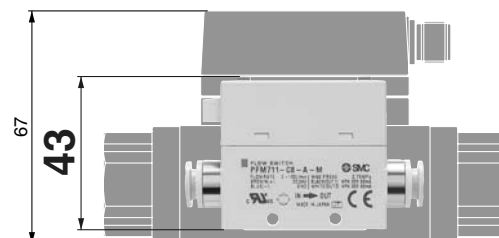
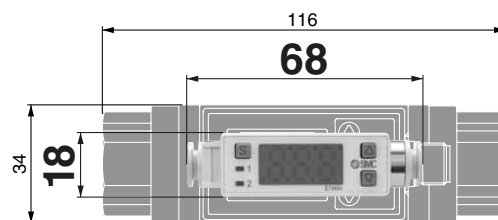
Compact

Same size even when the model with different flow rate range (10, 25, 50, 100 l/min) is chosen.

Lightweight: 55 g (PFM711)

(With one-touch fitting, without flow adjustment valve)

Conventional model PF2A711: 290 g

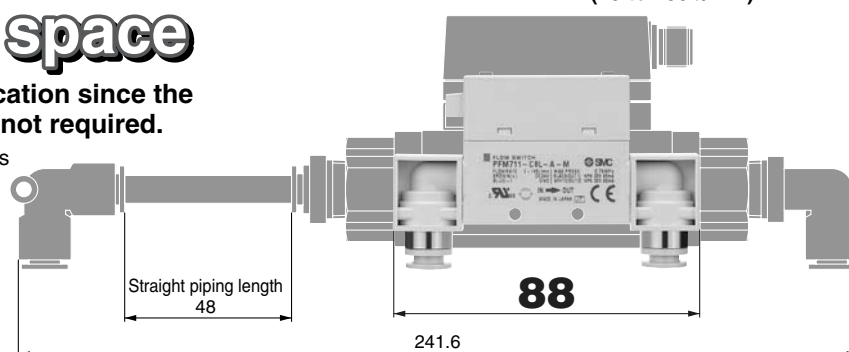


Comparison with the conventional model PF2A711 (10 to 100 l/min)

Reduced piping space

Mountable in a narrow location since the straight piping length* is not required.

* A straight piping length of 8 times the piping diameter is required for the conventional model.



Comparison with the conventional model PF2A711 (10 to 100 l/min) when $\phi 6$ one-touch fittings are attached.

Piping Variations

One-touch fitting: $\phi 4$, $\phi 6$, $\phi 8$, $\phi 1/4$		Female thread: Rc 1/8, 1/4 • NPT 1/8, 1/4 • G 1/8, 1/4	
	Straight	Bottom	
Without flow adjustment			
With flow adjustment			

PFM

PFMV

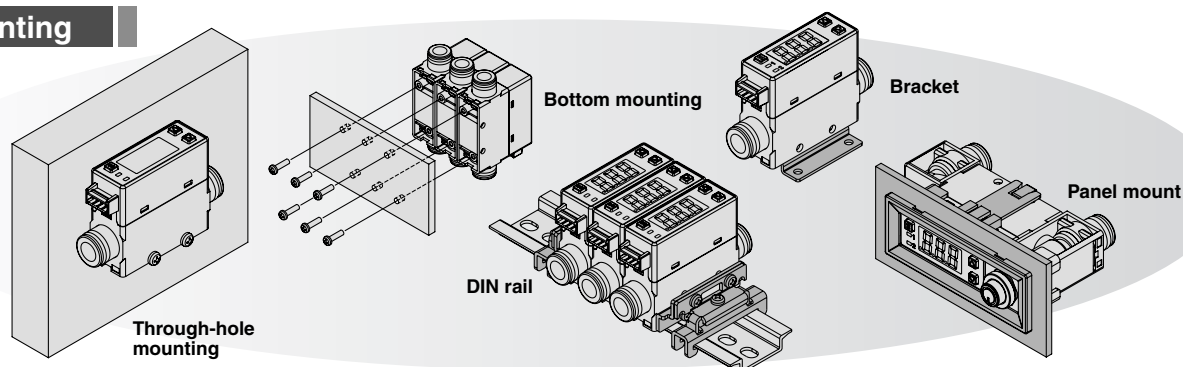
PF2A

PF2W

PF2D

IF

Mounting



2-Color Display Digital Flow Switch Series *PFM7*

Integrated
display



How to Order

Integrated
display

PFM7 **10** **-C4** **-A** **-M** **-** **-** **-** **-**

Type

7 Integrated display

Rated flow range (Flow rate range)

10	0.2 to 10 (5) ℓ /min
25	0.5 to 25 (12.5) ℓ /min
50	1 to 50 (25) ℓ /min
11	2 to 100 (50) ℓ /min

* (): Fluid: CO₂

Flow adjustment valve

Nil	None
S	Yes

Port size

Symbol	Description	Flow rate range			
		10	25	50	11
01	Rc1/8	●	●	●	
02	Rc1/4				●
N01	NPT1/8	●	●	●	
N02	NPT1/4				●
F01	G1/8	●	●	●	
F02	G1/4				●
C4	ø4 (5/32") one-touch fitting	●			
C6	ø6 one-touch fitting	●	●	●	●
C8	ø8 (5/16") one-touch fitting		●	●	●
N7	ø1/4" one-touch fitting		●	●	●

Piping entry direction

Nil	Straight
L	Bottom

* Different combinations of piping entry directions for IN and OUT side are available as made-to-order. (Refer to page 940.)

• Made to Order
(Refer to page 907 and 940.)

• Option 2
(Refer to page 907.)

• Option 1
(Refer to page 907.)

• Calibration certificate

Nil	None
A	With calibration certificate

* The certificate is written in English and Japanese. Other languages are available as specials.

• Instruction manual

Nil	With instruction manual (Leaflet: Japanese and English)
N	None

• Unit specification

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

Note) Fixed unit: Real-time flow rate: ℓ /min
Accumulated flow: ℓ

• Output specification

A	2 NPN outputs
B	2 PNP outputs
C	1 NPN output + Analog (1 to 5 V)
D	1 NPN output + Analog (4 to 20 mA)
E	1 PNP output + Analog (1 to 5 V)
F	1 PNP output + Analog (4 to 20 mA)
G	1 NPN output + External input ^{Note 3)}
H	1 PNP output + External input ^{Note 3)}

Note 3) User can select from accumulated value external reset, auto-shift and auto-shift zero.

Piping Variations

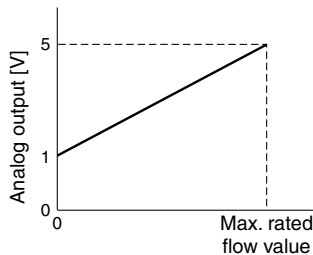
	With one-touch fittings (C4, C6, C8, N7)		Female thread (01, 02, N01, N02, F01, F02)	
	Straight (Nil)	Bottom (L)	Straight (Nil)	Bottom (L)
Without flow adjustment valve (Nil)				
With flow adjustment valve (S)				

Piping Specifications / Mass

Part no.	01	02	N01	N02	F01	F02		C4	C6	C6	N7
Port size	Rc 1/8	Rc 1/4	NPT 1/8	NPT 1/4	G1/8	G1/4		ø4 (5/32") one-touch fitting	ø6 one-touch fitting	ø8 (5/16") one-touch fitting	ø1/4" one-touch fitting
Mass	Straight		Without orifice: 95 g			Straight		Straight		Without orifice: 55 g	
	Bottom		Without orifice: 105 g			Bottom		Bottom		Without orifice: 65 g	
	Straight		With orifice: 135 g			Straight		Straight		With orifice: 95 g	
	Bottom		With orifice: 145 g			Bottom		Bottom		With orifice: 105 g	
Wetted parts material	LCP, PBT, Brass (Electroless nickel plated), HNBR (+ Fluoro coated), FKM (+ Fluoro coated), Silicon, Au, Stainless steel 304										

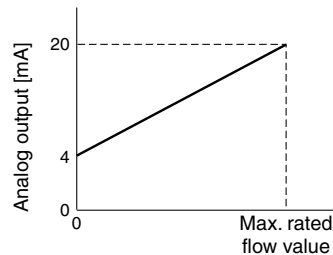
Analog Output

Note: Analog output at maximum rated flow rate when CO₂ is selected is 3 [V] for the voltage output type and 12 [mA] for the current output type.



Analog Voltage Output (1 to 5 V)

Model	Max. rated flow value [l/min]
PFM710-□-C/E	10
PFM725-□-C/E	25
PFM750-□-C/E	50
PFM711-□-C/E	100



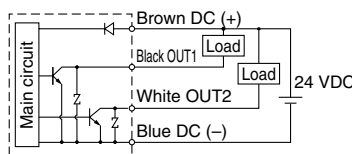
Analog Current Output (4 to 20 mA)

Model	Max. rated flow value [l/min]
PFM710-□-D/F	10 (5)
PFM725-□-D/F	25 (12.5)
PFM750-□-D/F	50 (25)
PFM711-□-D/F	100 (50)

* (): Fluid: CO₂

Internal Circuits and Wiring Examples

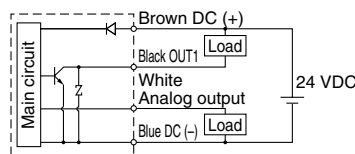
2 NPN outputs type PFM7□□□-□□-A-□□



Max. 28 V, 80 mA
Internal voltage drop 1 V or less

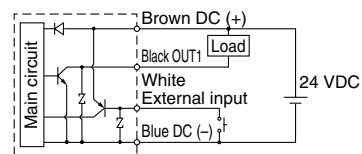
NPN + Analog output type PFM7□□□-□□-C-□□

NPN + Analog output type PFM7□□□-□□-D-□□



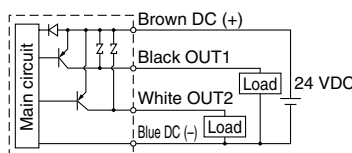
Max. 28V, 80 mA
Internal voltage drop 1 V or less
C: Analog output 1 to 5 V
Output impedance 1 kΩ
D: Analog output 4 to 20 mA
Load impedance 50 to 600 Ω

NPN + External input type PFM7□□□-□□-G-□□



Max. 28 V, 80 mA
Internal voltage drop 1 V or less
External input: No-voltage input
Reed switch or solid state switch input
30 msec or more

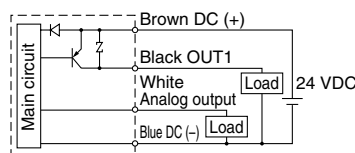
2 PNP outputs type PFM7□□□-□□-B-□□



Max. 80 mA
Internal voltage drop 1.5 V or less

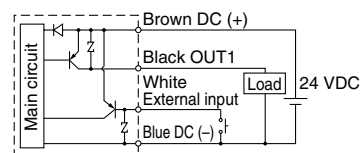
PNP + Analog output type PFM7□□□-□□-E-□□

PNP + Analog output type PFM7□□□-□□-F-□□



Max. 80 mA
Internal voltage drop 1.5 V or less
E: Analog output 1 to 5 V
Output impedance 1 kΩ
F: Analog output 4 to 20 mA
Load impedance 50 to 600 Ω

PNP + External input type PFM7□□□-□□-H-□□



Max. 80 mA
Internal voltage drop 1.5 V or less
External input: No-voltage input
Reed switch or solid state switch input
30 msec or more

Accumulated pulse output wiring examples

2 NPN outputs type PFM7□□□-□□-A-□□

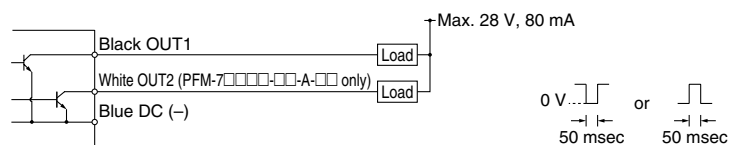
NPN + Analog output type PFM7□□□-□□-C-□□/PFM7□□□-□□-D-□□

NPN + External input type PFM7□□□-□□-G-□□

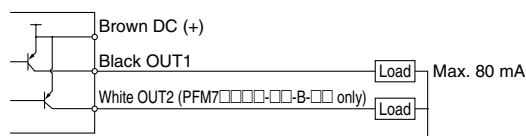
2 PNP outputs type PFM7□□□-□□-B-□□

PNP + Analog output type PFM7□□□-□□-E-□□/PFM7□□□-□□-F-□□

PNP + External input type PFM7□□□-□□-H-□□



Max. 28 V, 80 mA
0 V... or 50 msec



Max. 80 mA
0 V... or 50 msec