

For Water

Digital Flow Switch

Series PFW

How to Order



Integrated Display Type

PFW7 **20** — **03** — **27** — —

Flow rate range

04	0.5 to 4 /min
20	2 to 16 /min
40	5 to 40 /min
11	10 to 100 /min

Thread type

Nil	Rc
N	NPT
F	G

Port size

Symbol	Port size	Flow rate (/min)			Applicable models	
		4	16	40		100
03	3/8	●	●			PFW704, PFW720
04	1/2		●	●		PFW720, PFW740
06	3/4			●	●	PFW740, PFW711
10	1				●	PFW711

Wiring specification

Nil	3m lead wire with connector
N	Without lead wire

Output specification

27	NPN open collector 2 outputs
67	PNP open collector 2 outputs

Unit specification

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

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

Specifications

Model	PFW704	PFW720	PFW740	PFW711
Measured fluid	Water			
Detection type	Karman vortex			
Flow rate measurement and setting range	0.5 to 4 (setting is 0.6 to 4) /min	2 to 16 /min	5 to 40 /min	10 to 100 /min
Minimum setting unit	0.05 /min	0.1 /min	0.5 /min	1 /min
Display units ^{Note 1)}	Real-time flow rate	/min, gal (US)/min		
	Accumulated flow	/, gal (US)		
Operating pressure range	0 to 1MPa			
Proof pressure	1.5MPa			
Accumulated flow range	0.0 to 99999.9/	0 to 99999 /		
Operating temperature range	0° to 50°C (with no condensation)			
Linearity	±5% F.S. or less			±3% F.S. or less
Repeatability	±3% F.S. or less			±2% F.S. or less
Temperature characteristics	±5% F.S. or less (0° to 50°C)			±3% F.S. or less (15° to 35°C) ±5% F.S. or less (0° to 50°C)
Output specifications ^{Note 2)}	Switch output	NPN open collector	Maximum load current: 80mA; Internal voltage drop: 1V or less (with load current of 80mA) Maximum applied voltage: 30V	
		PNP open collector	Maximum load current: 80mA Internal voltage drop: 1.5V or less (with load current of 80mA)	
Indicator lights	Lights up when output is ON, OUT1: Green; OUT2: Red			
Response time	1 sec. or less			
Hysteresis	Hysteresis mode: Variable (can be set from 0), Window comparator mode: 3-digit fixed ^{Note 3)}			
Power supply voltage	12 to 24VDC (ripple ±10% or less)			
Current consumption	70mA or less			80mA or less
Withstand voltage	1000VAC for 1 min. between external terminal and case			
Insulation resistance	50MΩ (500VDC) between external terminal and case			
Noise resistance	1000Vp-p, Pulse width 1μs, Rise time 1ns			
Vibration resistance	10 to 500Hz at whichever is smaller: 1.5mm amplitude or 98m/s ² acceleration in X, Y, Z directions for 2 hrs. each			
Impact resistance	490m/s ² in X, Y, Z directions 3 times each			
Weight	460g (without lead wire)	520g (without lead wire)	700g (without lead wire)	1,150g (without lead wire)
Enclosure	IP65			
Port size (Rc, NPT, G)	3/8	3/8, 1/2	1/2, 3/4	3/4, 1

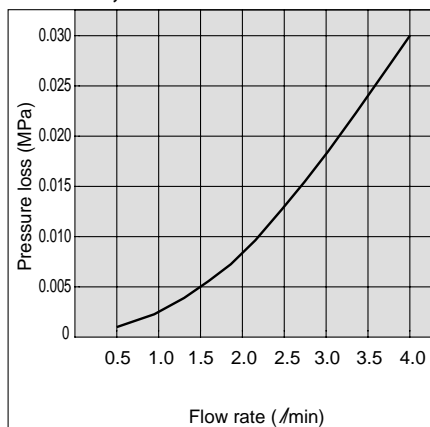
Note 1) For digital flow switch with unit switching function. (Fixed SI unit [/min or /] will be set for switch type without the unit switching function.)

Note 2) The output functions operate only for the real-time flow rate display, and do not operate for the accumulated flow display.

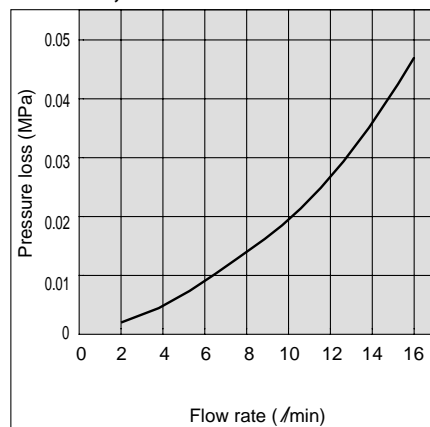
Note 3) Window comparator mode — Since hysteresis will reach 3 digits, keep P1 and P2 apart by 7 digits or more. The minimum setting unit is 1digit. (refer to the table above).

Flow Characteristics (Pressure Loss)

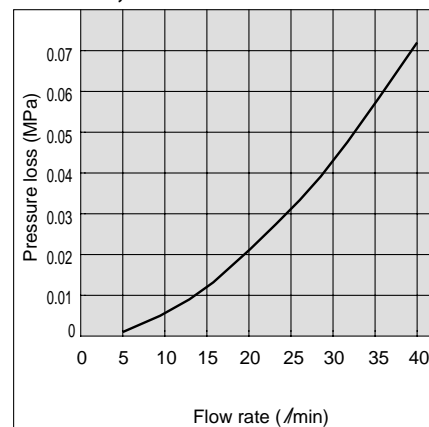
PFW704, PFW504



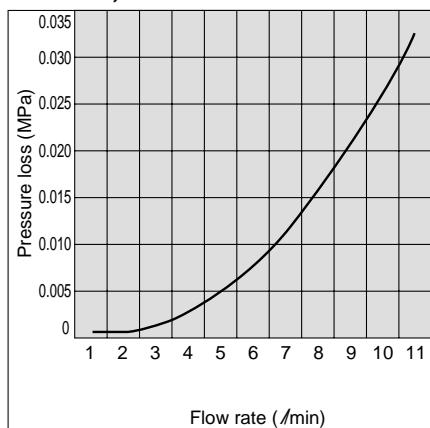
PFW720, PFW520



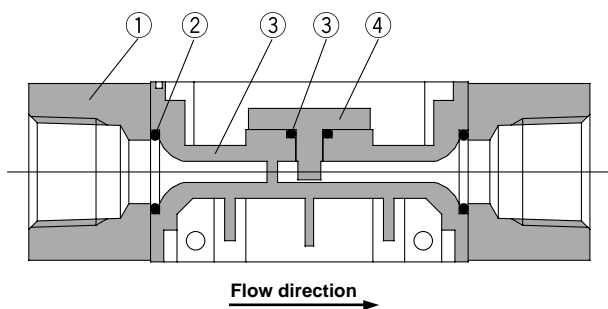
PFW740, PFW540



PFW711, PFW511



Sensor Unit Construction



Parts list

No.	Description	Material
1	Attachment	Class 303 stainless steel ^{Note)}
2	Seal	NBR
3	Body	PPS
4	Sensor	PPS

Note) Attachment material for PFW711 and PFW511 is class 304 stainless steel.

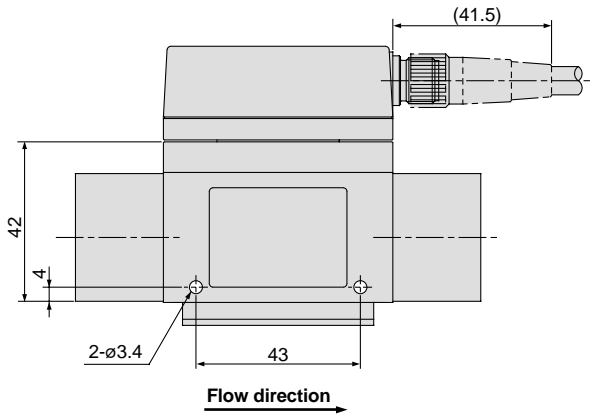
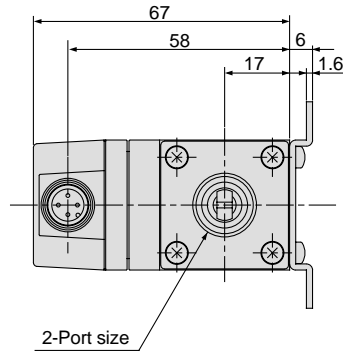
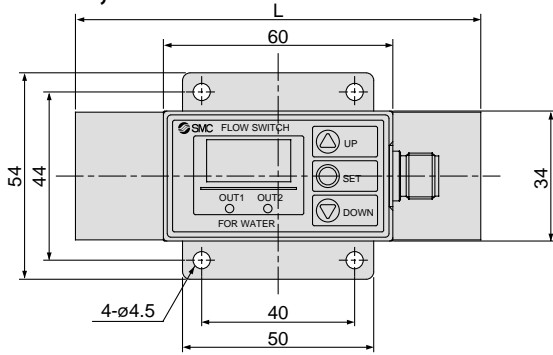


Error correction, connectors, operating part descriptions, and flow rate setting are the same as series PFA for air. Refer to pages 1 through 7.

Series PFW

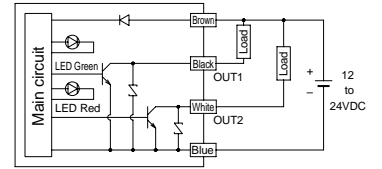
Dimensions: Integrated Display Type for Water

PFW704, PFW720

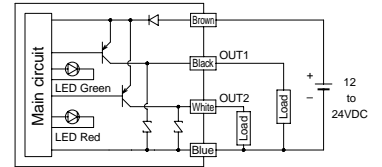


Model	L Dimension
PFW704	100
PFW720	106

Internal circuits and wiring examples

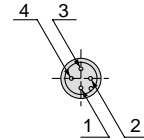


PFW7□□-□□-27□(-M)



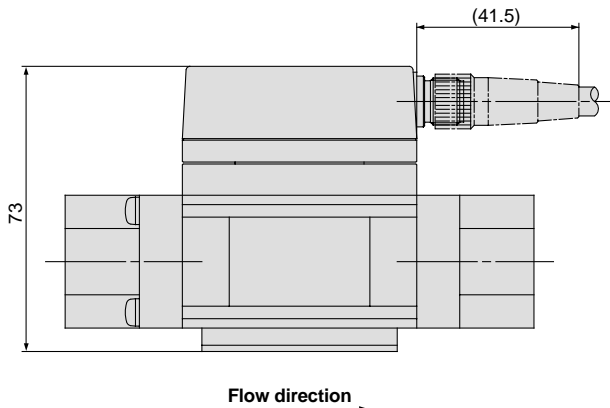
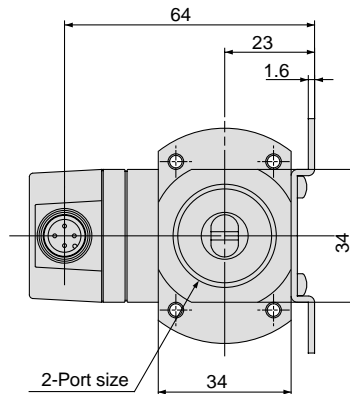
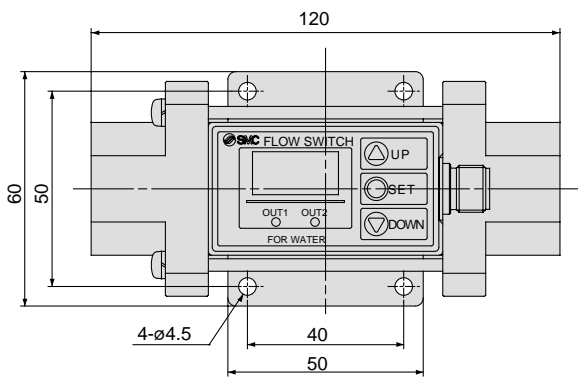
PFW7□□-□□-67□(-M)

Connector pin numbers



Pin no.	Pin description
1	DC(+)
2	OUT2
3	DC(-)
4	OUT1

PFW740



Dimensions: Integrated Display Type for Water

PFW711

