

# For Water

## Digital Flow Switch

# Series PF2W



Refer to [www.smcworld.com](http://www.smcworld.com) for details of products compatible with overseas standards.

### How to Order

Integrated Display Type

PF2W7 20 03 27 M

Flow rate range

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

Thread type

Nil	Rc
N	NPT
F	G

Port size

Symbol	Port size	Flow rate (ℓ/min)				Applicable model
		4	16	40	100	
03	3/8	●	●			PF2W704, PF2W720
04	1/2		●	●		PF2W720, PF2W740
06	3/4			●	●	PF2W740, PF2W711
10	1				●	PF2W711

Lead wire (Refer to page 35.)

Nil	M12 3 m 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: ℓ/min  
Accumulated flow: ℓ



### Specifications

Model	PF2W704	PF2W720	PF2W740	PF2W711
Measured fluid	Water			
Flow rate measurement range	0.35 to 4.5 ℓ/min	1.7 to 17.0 ℓ/min	3.5 to 45 ℓ/min	7 to 110 ℓ/min
Set flow rate range	0.35 to 4.5 ℓ/min	1.7 to 17.0 ℓ/min	3.5 to 45 ℓ/min	7 to 110 ℓ/min
Rated flow range	0.5 to 4 ℓ/min	2 to 16 ℓ/min	5 to 40 ℓ/min	10 to 100 ℓ/min
Minimum set unit	0.05 ℓ/min	0.1 ℓ/min	0.5 ℓ/min	1 ℓ/min
Accumulated pulse flow rate exchange value (Pulse width: 50 ms)	0.05 ℓ/pulse	0.1 ℓ/pulse	0.5 ℓ/pulse	1 ℓ/pulse
Operating fluid temperature	0 to 50°C			
Linearity	±5% F.S. or less			±3% F.S. or less
Repeatability	±3% F.S. or less			±2% F.S. or less
Temperature characteristics (Note 1)	±5% F.S. or less (0 to 50°C, based on 25°C)			
Current consumption (No load)	70 mA or less			80 mA or less
Weight (Note 2)	460 g	520 g	700 g	1150 g
Port size (Rc, NPT, G)	3/8	3/8, 1/2	1/2, 3/4	3/4, 1
Detection type	Karman vortex			
Indicator light	3-digit, 7-segment LED			
Display units (Note 3)	ℓ/min, gal(US)/min			
Real-time flow rate	ℓ, gal(US)			
Accumulated flow				
Operating pressure range	0 to 1 MPa			
Proof pressure	1.5 MPa			
Accumulated flow range (Note 4)	0 to 999999 ℓ			
Ambient temperature range	Operating: 0 to 50°C, Stored: -25 to 85°C (with no freezing and condensation)			
Output specifications (Note 5)	NPN open collector: Maximum load current: 80 mA; Internal voltage drop: 1 V or less (with load current of 80 mA); Maximum applied voltage: 30 V; 2 outputs			
Switch output	PNP open collector: Maximum load current: 80 mA; Internal voltage drop: 1.5 V or less (with load current of 80 mA); 2 outputs			
Accumulated pulse output	NPN or PNP open collector (same as switch output)			
Status LED's	Illuminates 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 (Note 6): 3-digit fixed			
Power supply voltage	12 to 24 VDC (ripple ±10% or less)			
Resistance	Enclosure IP65			
Operating temperature range	0 to 50°C			
Withstand voltage	1000 VAC for 1 min. between external terminal and case			
Insulation resistance	50M Ω or more (500 VDC Mega) between external terminal and case			
Vibration resistance	10 to 500 Hz with a 1.5 mm amplitude or 98 m/s <sup>2</sup> acceleration in each X, Y, Z direction for 2 hrs, whichever is smaller.			
Impact resistance	490 m/s <sup>2</sup> in X, Y, Z directions 3 times each			
Noise resistance	1000 Vp-p, Pulse width 1 μs, Rise time 1 ns			

Note 1) In the case of PF2W711, ±3% of F.S. or less (15°C to 35°C, based on 25°C). Note 2) Without lead wire.

Note 3) For digital flow switch with unit switching function. (Fixed SI unit [ℓ/min or ℓ] will be set for switch type without the unit switching function.)

Note 4) Accumulated flow rate is reset when the power supply turns OFF. Note 5) Switch output and accumulated pulse output can be selected during initial setting.

Note 6) Window comparator mode — Since hysteresis will reach 3 digits, keep P\_1 and P\_2 or n\_1 and n\_2 apart by 7 digits or more.

(In case of output OUT2, n\_1, 2 to be n\_3, 4 and P\_1, 2 to be P\_3, 4.) Note 7) This product conforms to the CE mark.