

(Integrated display type)

Digital Flow Switch For Air

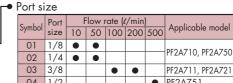
Series PF2A

Features

- Flow switch for air.
- Thermal detection has no moving parts and very little resistance to airflow.
- Flow ranges from 1 to 500 e/min.
- Integrated LED display can show metric or imperial units.
- Two independent digital outputs.
- Output modes instantaneous flow, accumulated flow and counting pulse.
- IP65 splashproof construction.

50 to 500 ℓ/min





Integrated PF2A7 display type Flow rate range • 1 to 10 ℓ/min 5 to 50 ℓ/min 10 to 100 ℓ/min 20 to 200 *l*/min

1/2 Output specifications

ymbol	Output specifications	Applicable model
27	NPN open collector 2 outputs	PF2A710, PF2A750 PF2A711, PF2A721, PF2A751
67	PNP open collector 2 outputs	PF2A710, PF2A750 PF2A711, PF2A721/PF2A751

Specifications

How to Order

Flow rate measurement range									
Flow rate measurement range		Model		PF2A750	PF2A711	PF2A721	PF2A751		
Set flow rate range	Measured fluid		Air, Nitrogen						
To 10 to 10 to 10 to 10 to 10 to 100 to 1	Flow rate measurem	ent range	0.5 to 10.5 t/min	2.5 to 52.5 ℓ/min	5 to 105 ℓ/min	10 to 210 ℓ/min	25 to 525 ℓ/min		
Minimum set unit Accumulated pulse flow rate exchange value [Pulse width: 50 ms) O. 1 \(\sqrt{min} \) O. 2 \(\sqrt{min} \) O. 5 \(\sqrt{min} \) O. 6 \(\	Set flow rate range		0.5 to 10.5ℓ /min	2.5 to 52.5 ℓ/min	5 to 105 ℓ/min	10 to 210 ℓ/min	25 to 525 ℓ/min		
Accumulated pulse flow rate exchange value (Pulse width: 50 ms) Display unit Real-time flow rate Accumulated flow Accumulated flow range Accumulate	Flow rate measuring	range	1 to 10 ℓ/min	5 to 50 ℓ/min	10 to 100 ℓ/min	20 to 200 ℓ/min	50 to 500 ℓ/min		
Display unit Display unit Real-time flow rate (/min, CFM x 10 ⁻² (/min, CFM x 10 ⁻¹ (/min, CFM			0.1 <i>t</i> /min	0.5 ℓ/min	1 <i>ℓ</i> /min	2 ℓ/min	5 ℓ/min		
Operating fluid temperature Operating fluid temperature Oto 50°C Linearity ±1% F.S. or less Repeatability ±1% F.S. or less L2% F.S.	Accumulated pulse flow re	rate exchange value (Pulse width: 50 ms)	0.1 ℓ/pulse	0.5 ℓ/pulse	1 e/pulse	2 e/pulse	5 ℓ/pulse		
Accumulated flow	Display unit	Real-time flow rate	ℓ/min, CF	$M \times 10^{-2}$		ℓ/min, CFM x 10 ⁻¹			
Linearity Expectability	Display offi	Accumulated flow			ℓ , ft ³ x 10 ⁻¹				
Expectability	Operating fluid temp	perature							
Temperature characteristics ±3% F.S. or less (15 to 35°C, based on 25°C), ±5% F.S. or less (0 to 50°C, based on 25°C) Current consumption (No load) 150 mA or less 160 mA or less 170 m					±5% F.S. or less				
Current consumption (No load) 150 mA or less 160 mA or less 170 mA or less Weight Nobe 2) 250 g 290 g Port size (NPT, G) 1/8, 1/4 3/8 1/2 Detection type Heater type Display 3-digit, 7-segment LED Operating pressure range -50 kPa to 0.5 MPa -50 kPa to 0.75 MPa Proof pressure 1.0 MPa -50 kPa to 0.75 MPa Accumulated flow range 0 to 999999 ε NPN open collector Maximum load current: 80 mA, Internal voltage drop: 1 V or less (With load current of 80 mA); Two outputs NPN open collector Maximum load current: 80 mA (Internal voltage drop: 1.5 V or less (With load current of 80 mA); Two outputs NPN open collector Ight NPN open collector (Isame as switch output) Response time 1 sec. or less Hysteresis Hysteresis mode: Variable (can be set from 0), Window comparator mode: 3-digit fixed Note 5) Power supply voltage 12 to 24 VDC (Ripple ±10% or less) Enclosure Operating: 0 to 50°C, Stored: -25 to 85°C (No condensation or freezing) Withstand voltage 1000 VAC for 1 min. between external terminal and case Insulation resistance 50 MΩ (500 VDC) between external terminal and case									
Veright Note 2 250 g 290 g									
Port size (NPT, G) Detection type Display Display Detection type Display Detection type Display Display Detection type Display Display Detection type Detection t					160 mA		170 mA or less		
Detection type			250 g						
Switch output Switch outp	. , ,	. , ,		1/8, 1/4					
Departing pressure range -50 kPa to 0.5 MPa -50 kPa to 0.75 MPa									
Proof pressure 1.0 MPa O to 999999 t									
Accumulated flow range NPN open collector Maximum load current: 80 mA; Internal voltage drop: 1 V or less (With load current of 80 mA)		range							
NPN open collector Maximum load current: 80 mA; Internal voltage drop: 1 V or less (With load current of 80 mA)									
Lights up when output is ON OUT1: Green; OUT2: Red		ange	2.12.1.1.1.1.1						
Lights up when output is ON OUT1: Green; OUT2: Red	Switch output	ıt							
Lights up when output is ON OUT1: Green; OUT2: Red	Scifico								
Test	O Accumulated	d pulse output		NPN or PNP	open collector (same a	s switch output)			
Hysteresis Hysteresis mode: Variable (can be set from 0), Window comparator mode: 3-digit fixed Note 5) Power supply voltage 12 to 24 VDC (Ripple ±10% or less) Enclosure IP65 Operating temperature range Operating: 0 to 50°C, Stored: -25 to 85°C (No condensation or freezing) Withstand voltage 1000 VAC for 1 min. between external terminal and case Insulation resistance 50 MΩ (500 VDC) between external terminal and case	0		Lights up when output is ON OUT1: Green; OUT2: Red						
Power supply voltage Power supply voltage 12 to 24 VDC (Ripple ±10% or less)	Response time		1 sec. or less						
Enclosure IP65 Operating temperature range Operating: 0 to 50°C, Stored: -25 to 85°C (No condensation or freezing) Withstand voltage 1000 VAC for 1 min. between external terminal and case Insulation resistance 50 MΩ (500 VDC) between external terminal and case	Hysteresis								
Operating temperature range Operating: 0 to 50°C, Stored: -25 to 85°C (No condensation or freezing) Withstand voltage 1000 VAC for 1 min. between external terminal and case Insulation resistance 50 MΩ (500 VDC) between external terminal and case		je							
	Enclosure Enclosure								
	Operating temper	Operating temperature range					ng)		
	Withstand voltage	<u> </u>							
Noise resistance 1000 Vp-p, Pulse width 1 µs, Rise time 1 ns		**							
	Noise resistance		1000 Vp-p, Pulse width 1 μs, Rise time 1 ns						

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) Without lead wire.

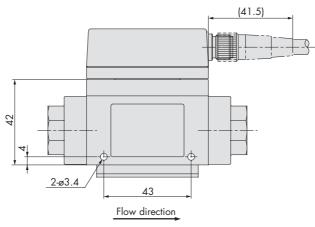
Note 3) Switch output and accumulated pulse output can be selected during initial setting.

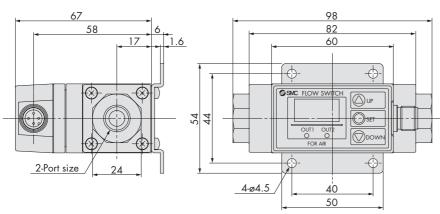
Note 4) Window comparator mode — Since hysteresis will reach 3 digits, keep P_1 and P_2 or n_1 and n_2 apart by 7 digits or more. (In case of output OUT2, n_1, 2 to be n_3, 4 and P_1, 2 to be P_3, 4.)



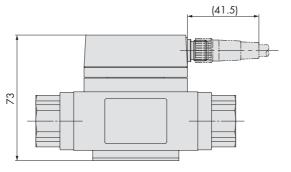
Dimensions: Integrated Display Type for Air

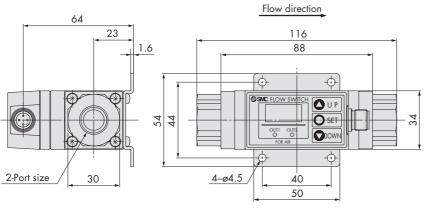
PF2A710/750





PF2A711/721/751







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









Digital Flow Switch For Air

Series PF2A

Features

- Flow switch for air
- Thermal detection has no moving parts
- Very little resistance to airflow
- Flow ranges from 1 to 500 l/min
- Output for remote display, optional analogue output
- IP65 splashproof construction



(Remote display sensor unit)

How to Order

PF2A5 10 - F Remote type Display unit Flow rate range • 1 to 10 ℓ/min 5 to 50 ℓ/min Thread type 10 to 100 *l*/min 20 to 200 ℓ/min

50 to 500 ℓ/min

 Output specifications Output for display unit Output for display unit + analog output (1 to 5 V) Output for display unit + analog output (4 to 20 mA)

Port size							
c	Port	F	low i	rate (é	/min)	A 1: 1.1
Symbol	ymbol size 10 50 100 200 500		Applicable model				
01	1/8	•	•				DEO 4 5 1 0 / 5 5 0
02	1/4	•	•				PF2A510/550
03	3/8			•	•		PF2A511/521
04	1 /2						DEO A 5.5.1

Specifications

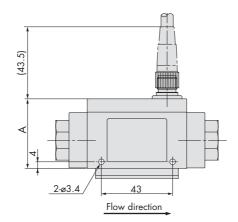
	Model	PF2A510	PF2A550	PF2A511	PF2A521	PF2A551		
Me	asured fluid	Air, Nitrogen						
Def	ection type			Heater type				
Flo	w rate measuring range	1 to 10 ℓ/min	5 to 50 ℓ/min	10 to 100 ℓ/min	20 to 200 ℓ/min	50 to 500 ℓ/min		
Ор	erating pressure range	-50 kPa t	o 0.5 MPa		–50 kPa to 0.75 MPa			
Pro	of pressure			1.0 MPa				
Ор	erating fluid temperature			0 to 50°C				
Line	earity Note 1)			±5% F.S. or less				
Rep	peatability Note 1)			±1% F.S. or less				
	nperature tracteristics			or less (15 to 35°C, based or less (0 to 50°C, based				
7	Output for display unit	Analogu	e voltage output (Non-line	ar) output impedance 1 kg	2 output for display unit P	F2A3□□		
Output Note 2)	Analog output	Voltage output 1 to 5 V within the flow rate range Linearity: $\pm 5\%$ F.S. or less; allowable load resistance: 100 k Ω or more.						
Outpu	Androg output	Current output 4 to 20 mA within the flow rate range Linearity: $\pm 5\%$ F.S. or less; allowable load resistance: 300Ω or less with 12 VDC, 600Ω or less with 24 VI						
Pov	ver supply voltage		12 t	o 24 VDC (Ripple ±10% o	r less)			
Cur	rent consumption (No load)		100 mA or less 110 mA or less					
	Enclosure	IP65						
	Operating temperature range		Operating: 0 to 50°C,	Stored: -25 to 85° C (No o	condensation or freezing)			
Resistar	Withstand voltage	1000 VAC for 1 min. between external terminal and case						
Res	Insulation resistance	50 MΩ (500 VDC) between external terminal and case						
	Noise resistance	stance 1000 Vp-p, Pulse width 1 μs, Rise time 1 ns						
We	eight Note 3)	20	0 g		240 g			
Por	t size (G)	1/8	, 1/4	3	/8	1/2		

Note 1) The system accuracy when combined with PF2A3 $\square\square$.
Note 2) Output system can be selected during initial setting.
Note 3) Without lead wire. (Add 20 g for the types of analog output whether voltage or current output selected.)
Note 4) Flow rate unit measured under the following conditions: 0°C and 101.3 kPa.

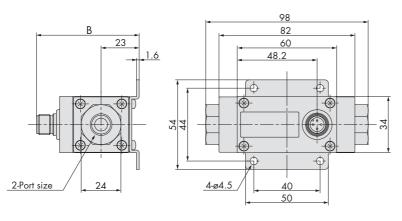


Dimensions: Remote Type Sensor Unit for Air





		(mm)
Output specifications	Α	В
Pulse output only	42	62
Pulse output + Analog output	52	72

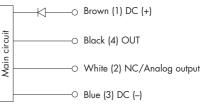


PF2A511/521/551

			(43.5)	
		(mm)		
Output specifications	Α	В		
Pulse output only	48	62		
Pulse output + Analog output	58	72		

В	Flow direction
23	76.2
2-Port size 30	4.5 40 50

Wiring



 * Use this sensor by connecting to SMC remote type display unit Series PF2A3□□.



Pin no.	Pin description
1	DC (+)
2	NC/Analog output
3	DC (-)
4	OUT









Digital Flow Switch For Air

Series PF2A

Features

- Displays flow information
- Works with remote sensor units
- Panel mounting construction
- Clear LED indication
- Two independent digital outputs
- Output modes instantaneous flow, total flow and counting pulse

1 to 10 ℓ/min

5 to 50 ℓ/min

PF2A300/301

Integrated LED display can show metric or imperial units



How to Order

Remote type Display unit Flow rate range

PF2A3 0 0 -

Flow rate range Type for sensor unit PF2A550 10 to $100 \, \ell/min$ PF2A511 20 to 200 ℓ/min PF2A521 50 to 500 ℓ/min PF2A551

 Output specifications Output specifications Applicable model NPN open collector 2 outputs PF2A300/310 PNP open collector 2 outputs PF2A301/311

PF2A310/311

Mounting

Panel mounting

Specifications

Model

Set flow rate measurement range Note 1) 0.5 to 10.5 t/min 2.5 to 52.5 t/min 5 to 105 t/min 10 to 210 t/min 25 to 525 t/min 2.5 to 52.5 t/min 5 to 105 t/min 10 to 210 t/min 25 to 525 t/min 2.5 to 52.5 t/min 5 to 105 t/min 10 to 210 t/min 25 to 525 t/min 2.5 to 52.5 t/min 5 to 105 t/min 10 to 210 t/min 25 to 525 t/min 10 to 210 t/min 2 t/min 2 t/min 5 t/min 10 to 210 t/min 2 t/min 5 t/min 10 to 210 t/min 10 to 210 t/min 2 t/min 10 to 210 t/min 10 to 10 t/min 10	1110001				-,				
Minimum set unit Note 1) O.1 t/min O.5 t/min 1 t/min 2 t/min 5 t/min Accumulated pulse Row rate exchange value (Pluse width: 50 ms) Note 1) O.1 t/pulse O.5 t/pulse 1 t/pulse 2 t/pulse 5 t/pulse 5 t/pulse O.5 t/p	Flow rate measurement range Note 1)			0.5 to 10.5 ℓ/min	2.5 to 52.5 ℓ/min	5 to 105 e/min	10 to 210 ℓ/min	25 to 525 ℓ/min	
Accumulated pulse flow rate exchange value (Pluse width: 50 mg) Note 1) Display unit	S	Set flow rate range Note 1)		0.5 to 10.5 ℓ/min	2.5 to 52.5 ℓ/min	5 to 105 e/min	10 to 210 ℓ/min	25 to 525 ℓ/min	
value (Pluse width: 50 ms) Note: 1) O.1 // pulse 0.5 // pulse 1 // pulse 2 // pulse 5 // pulse Display unit Note: 2) Note: 2) Note: 2) Note: 2) Note: 30 Note: 31 Note: 32 Note: 32 Note: 34 Not	٨	linimum set uni	it Note 1)	0.1 <i>e</i> /min	0.5 ℓ/min	1 ℓ/min	2 e/min	5 ℓ/min	
Accumulated flow range Display unit Accumulated flow Accumulated flow range Display Disp				0.1 <i>(</i> /pulse	0.5 <i>l</i> /pulse	1 ℓ/pulse	2 e/pulse	5 l/pulse	
Accumulated flow range Common to the proper of the proper of the properties of t	_		Real-time flow rate	ℓ/min, CF	$M \times 10^{-2}$		ℓ/min, CFM x 10 ⁻¹	·	
Linearity Note 3		ispiay unit	Accumulated flow			ℓ, ft ³ x 10 ⁻¹			
## F.S. or less ## F.S. or less ## F.S. or less 15 to 35°C based on 25°C ## F.S. or less 15 to 35°C based on 25°C ## F.S. or less 15 to 35°C based on 25°C ## F.S. or less 15 to 35°C based on 25°C ## F.S. or less 15 to 35°C based on 25°C ## F.S. or less 15 to 35°C based on 25°C ## F.S. or less 15 to 35°C based on 25°C ## F.S. or less 15 to 35°C based on 25°C ## F.S. or less 15 to 35°C based on 25°C ## F.S. or less 15 to 35°C based on 25°C ## F.S. or less 15 to 35°C based on 25°C ## F.S. or less 15 to 35°C based on 25°C ## F.S. or less 15 to 35°C based on 25°C ## F.S. or less 15 to 35°C based on 25°C ## F.S. or less 15 to 35°C based on 25°C ## F.S. or less 15 to 35°C based on 25°C ## F.S. or less 15 to 35°C based on 25°C ## F.S. or less 15 to 35°C based on 25°C ## F.S. or less 15 to 35°C based on 25°C ## Maximum load current: 80 mA ## Internal voltage drop: 1 V or less With load current of 80 mA ## Maximum load current: 80 mA ## Maximum load current: 80 mA ## Internal voltage drop: 1.5 V or less With load current of 80 mA ## PNP open collector (PF2A301, PF2A311) ## PNP open collector (PF2A301, PF2A311) ## PNP open collector (PF2A301, PF2A311) ## Maximum load current: 80 mA ## Internal voltage drop: 1.5 V or less With load current of 80 mA ## PNP open collector (PF2A301, PF2A311) ## PNP open collector (PF2A301, PF2A311) ## PNP open collector (PF2A301, PF2A311) ## Maximum load current: 80 mA ## Internal voltage is 30 V or less ## PNP open collector (PF2A301, PF2A311) ## PNP open collector (PF2A301, PF2A311) ## PNP open collector (PF2A301, PF2A311) ## Accumulated pulse output ## Maximum load current: 80 mA ## Internal voltage is 30 V or less ## Accumulated pulse output ## Accumulated	A	ccumulated flo	w range			0 to 999999 ℓ			
Temperature characteristics ±1% F.S. or less (15 to 35°C based on 25°C) ±2% F.S. or less (0 to 50°C based on 25°C) Current consumption 50 mA or less 60 mA or less 45 g 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 Accumulated pulse output PNP open collector (PF2A301, PF2A311) Display Indicator light Lights up when output is ON OUT1: Green; OUT2: Red Power supply voltage Response time 1 sec. or less Hysteresis mode: Variable (can be set from 0), Window comparator mode: Fixed (3 digits) Note 5) Enclosure Operating temperature range Operating: 0 to 50°C, Stored: -25 to 85°C (No condensation or freezing) Withstand voltage Insulation resistance 50 MΩ (500 VDC) between external terminal and case	Li	nearity Note 3)				±5% F.S. or less			
Emperature characteristics	R	epeatability Note	e 3)			±1% F.S. or less			
Weight A5 g 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 Maximum load current: 80 mA Internal voltage drop: 1.5 V or less (With load current of 80 mA) Maximum applied voltage: 30 V 2 outputs 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) Display 3-digit, 7-segment LED Indicator light Lights up when output is ON OUT1: Green; OUT2: Red Power supply voltage 12 to 24 VDC (Ripple ±10% or less) Response time 1 sec. or less Hysteresis Hysteresis mode: Variable (can be set from 0), Window comparator mode: Fixed [3 digits] Note 5] Enclosure Operating: 0 to 50°C, Stored: -25 to 85°C (No condensation or freezing) Withstand voltage Insulation resistance 50 MΩ (500 VDC) between external terminal and case	Temperature characteristics					,	•		
NPN open collector (PF2A300, PF2A310) 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	C	urrent consum	otion	50 mA	or less		60 mA or less		
NPN open collector (PF2A300, PF2A310) Internal voltage drop: 1 V or less (With load current of 80 mA) Maximum applied voltage: 30 V 2 outputs	V	Veight				45 g			
Accumulated pulse output NPN or PNP open collector (same as switch output)		Switch out	out	NPN open collector (PF2A300, PF2A310) Internal voltage drop: 1 V or less (With load current of 80 mA) Maximum applied voltage: 30 V				current of 80 mA)	
Accumulated pulse output NPN or PNP open collector (same as switch output)	Output	pecificati		PNP open collector (I	PF2A301, PF2A311)	1) Internal voltage drop: 1.5 V or less (With load current of 80 mA)			
Indicator light Lights up when output is ON OUT1: Green; OUT2: Red		Accumulate	ed pulse output		NPN or PNP o	ppen collector (same as	switch output)		
Power supply voltage 12 to 24 VDC (Ripple ±10% or less)	D	isplay		3-digit, 7-segment LED					
Response time 1 sec. or less	lr	dicator light		Lights up when output is ON OUT1: Green; OUT2: Red					
Hysteresis Hysteresis mode: Variable (can be set from 0), Window comparator mode: Fixed (3 digits) Note 5) Enclosure IP40	P	ower supply vo	oltage	12 to 24 VDC (Ripple ±10% or less)					
Enclosure Operating temperature range Operating: 0 to 50°C, Stored: -25 to 85°C (No condensation or freezing) Withstand voltage 1000 VAC for 1 min. between external terminal and case Insulation resistance 50 MΩ (500 VDC) between external terminal and case	R	esponse time		1 sec. or less					
Operating temperature range Operating: 0 to 50°C, Stored: -25 to 85°C (No condensation or freezing)	H	ysteresis		Hysteresis mode: Variable (can be set from 0), Window comparator mode: Fixed (3 digits) Note 5)					
Insulation resistance 50 MΩ (500 VDC) between external terminal and case		Enclosure				IP40			
$\frac{2}{2}$ Insulation resistance 50 M Ω (500 VDC) between external terminal and case	nce		·	OF	perating: 0 to 50°C, Sto	ored: -25 to 85°C (No	condensation or freezing	ng)	
	ista	Withstand vol	tage		1000 VAC for 1	min. between external t	terminal and case		
Noise resistance 1000 Vp-p, Pulse width 1 µs, Rise time 1 ns	Res	Insulation resi	stance		50 MΩ (500 VI	DC) between external te	erminal and case		
		Noise resistan	nce		1000 Vp-p	o, Pulse width 1 μs, Rise	e time 1 ns		

Note 1) The flow rate measurement range can be modified depending on the setting.

Note 2) 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 3) The system accuracy when combined with PF2A5□□.

Note 4) Switch output and accumulated pulse output can be selected during initial setting.

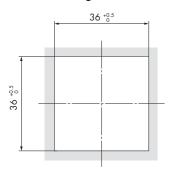
Note 5) Window comparator mode — Since hysteresis will reach 3 digits, keep P_1 and P_2 or n_1 and n_2 apart by 7 digits or more. (In case of output OUT2, n_1, 2 to be n_3, 4 and P_1, 2 to be P_3, 4.)



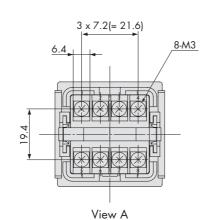
Dimensions: Remote Type Display Unit for Air

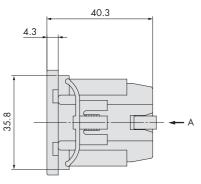
PF2A3□□-A Panel mounting type

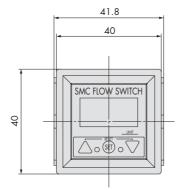
Panel fitting dimensions



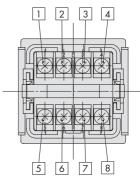
 \ast The applicable panel thickness is 1 to 3.2 mm.

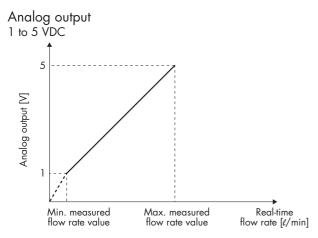






Terminal block number





	Basic co	ondition	Standard condition		
Part no.	Minimum measured flow rate value [t/min]		Minimum measured flow rate value [t/min]		
PF2A510-□-1	1	10	1.1	10.7	
PF2A550-□-1	5	50	5.4	53.5	
PF2A511-□-1	10	100	11	107	
PF2A521-□-1	20	200	21	214	
PF2A551-□-1	50	500	54	535	

4 to 2	0 mADC	5 6 7	8
Analog output [mA]	4		•
	Min. measured flow rate value	Max. measured flow rate value	Real-time flow rate [l/min]

	Basic co	ondition	Standard condition		
Part no.	Minimum measured flow rate value [l/min]	Maximum measured flow rate value [l/min]			
PF2A510-□-2	1	10	1.1	10.7	
PF2A550-□-2	5	50	5.4	53.5	
PF2A511-□-2	10	100	11	107	
PF2A521-□-2	20	200	21	214	
PF2A551-□-2	50	500	54	535	









Digital Flow Switch, Large Flow Type For Air

Series PF2A

Features

- High volume flow switch for air
- Thermal detection has no moving parts
- Very little resistance to airflow
- Flow ranges from 150 to 12000 I/min
- Integrated LED display can show metric or imperial units
- Digital and analogue outputs
- Digital output gives instantaneous flow, accumulated flow or counting pulse

Port specifications

- IP65 splashproof construction
- Display can be rotated for ease of viewing

How to Order

Integrated

Flow rate range •

03 150 to 3000 ℓ/min

300 to 6000 ℓ/min 12 600 to 12000 e/min

PF2A7 03H- F10-68

High flow type

Cll	Port	Flow	/ rate (ℓ/	min)	Applicable
Symbol	size	3000	6000	12000	model
10	1	•			PF2A703H
14	$1^{1}/_{2}$		•		PF2A706H
20	2			•	PF2A712H

Output specifications

Port size

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				
Detection type		Heater type				
Flow rate measur	ring range Note 1)	150 to 3000 ℓ/min	300 to 6000 ℓ/min	600 to 12000 ℓ/min		
Minimum setting		5 ℓ/min	10 €	/min		
D: 1 ''	Real-time flow rate	t/min, CFM t, m³, m³ × 10³, fi³ × 10³, fi³ × 106				
Display unit	Accumulated flow					
Operating pressu	ure range		0.1 to 1.5 MPa			
Proof pressure			2.25 MPa			
Pressure loss			20 kPa (at maximum flow rate)			
Accumulated flov	v range		0 to 9,999,999,999 ℓ			
Linearity Note 2)			±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), $\pm 3.0\%$ of F.S. or less in	case of analog output		
Pressure characte	eristics	±1.5% F.S. or less (0.1 to 1.5 MPa, based on 0.7 MPa)				
Temperature cha	racteristics	±2.0% F.S. or less (0 to 50°C, based on 25°C)				
	Switch output Note 3)	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)				
	Swiich oulput	PNP open collector Max. load current: 80 mA; Internal voltage drop: 1.5 V or less (With load current of 80 mA)				
Output specifications	Accumulated Note 3) pulse output	NPN or PNP open collector	Flow rate per pulse: 100 ℓ /pulse, 10.0 Pulse width: 50 msec	ft ³ /pulse		
	Analogue output Note 4)	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 vol	tage	24 VDC (Ripple ±10% or less)				
Current consump	tion	150 mA or less				
Enclosure		IP65				
Operating ter	mperature range	0 to 50°C (No condensation)				
Withstand vo		1000 VAC for 1 min. between external terminal and case				
Operating ter Withstand vol Insulation resi			2 (500 VDC) between external terminal a			
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		1	11/2	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] The high flow rate type is CE marked; however, the linearity with applied noise is $\pm 5\%$ F.S. or less. Note 3] Switch output and accumulated pulse output selections are made using the button controls. Note 4] The analog output operates only for real-time flow rate, and does not operate for accumulated flow.



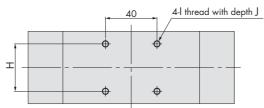
Dimensions

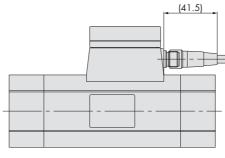
PF2A703H/706H/712H

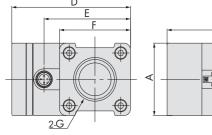
Connector pin numbers

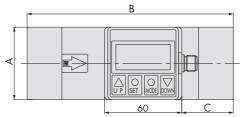


Pin no.	Pin description
1	DC (+)
2	Analog output
3	DC (-)
4	OUT1



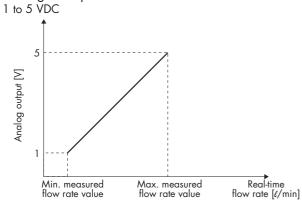




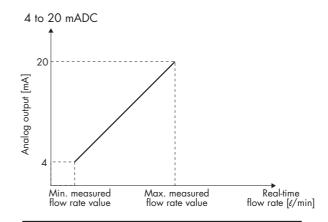


Model	Α	В	С	D	Е	F	G	Н	I	J
PF2A703H	55	160	40	92	67	55	1"	36	M5 x 0.8	8
PF2A706H	65	180	45	104	79	65	11/2"	46	M6 x 1	9
PF2A712H	75	220	55	114	89	75	2"	56	M6 x 1	9

Analogue output



Part no.	Minimum measured flow rate value [ℓ/min]	Maximum measured flow rate value [ℓ/min]
PF2A703H-□-28 PF2A703H-□-68	150	3000
PF2A706H-□-28 PF2A706H-□-68	300	6000
PF2A712H-□-28 PF2A712H-□-68	600	12000



Part no.	Minimum measured flow rate value [ℓ/min]	Maximum measured flow rate value [ℓ/min]
PF2A703H-□-29 PF2A703H-□-69	150	3000
PF2A706H-□-29 PF2A706H-□-69	300	6000
PF2A712H-□-29 PF2A712H-□-69	600	12000







Digital Flow Switch For Water

Series PF2W

Features

- Flow switch for water
- Karmann vortex detection method
- No moving parts inside the unit
- Very little resistance to water flow
- Flow ranges from 0.5 to 100 l/min
- Integrated LED display can show metric or imperial units
- Two independent digital outputs
- Output modes instantaneous flow, accumulated flow and counting pulse
- IP65 splashproof construction
- Display can be rotated for ease of viewing



(Integrated display type)

How to Order

Integrated display type

PF2W7 20-

Thread type

Port size

 Output specifications 27 NPN open collector 2 outputs PNP open collector 2 outputs

Flow rate range •						
riow raic range						
ĺ	04	0.5 to 4 <i>l</i> /min				
	20	2 to 16 ℓ/min				
Ì	40	5 to 40 ℓ/min				
	11	10 to 100 {/min				

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

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				
Flow rate measu		0.5 to 4 ℓ /min	2 to 16 ℓ/min	5 to 40 ℓ/min	10 to 100 ℓ/min				
Minimum set uni	t	0.05 ℓ/min	0.1 ℓ/min	0.5 ℓ/min	1 ℓ/min				
Accumulated pulse t	flow rate exchange value (Pulse width: 50 ms)	0.05 ℓ/pulse	0.1 ℓ/pulse	0.5 ℓ/pulse	1 ℓ/pulse				
Linearity			±5% F.S. or less		±3% F.S. or less				
Repeatability			±3% F.S. or less		±2% F.S. or less				
Temperature cha			±5% F.S. or less (0 to	50°C, based on 25°C)					
Current consump	otion (No load)		70 mA or less		80 mA or less				
Weight		460 g	520 g	700 g	1150 g				
Port size		3/8	3/8, 1/2	1/2, 3/4	3/4, 1				
Detection type			Karman						
Display			3-digit, 7-se						
Display unit	Real-time flow rate	ℓ/min, gal (US)/min							
Display offit	Accumulated flow	ℓ, gal (US)							
Operating press	Operating pressure range		0 to 1 MPa						
Proof pressure		1.5 MPa							
Accumulated flov		0 to 999999 ℓ							
Ambient tempero	ature range	Operating: 0 to 50°C, Stored: –25 to 85°C (No condensation or freezing)							
Note 2)	Switch output	Maximum load current: 80 mA; Internal voltage drop: 1 V or less (With load current of 80 mA) NPN open collector Maximum applied voltage: 30 V; 2 outputs							
specifications	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)							
Indicator light		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 24 VDC (Ripple ±10% or less)							
Enclosure		IP65							
Operating temperature range Withstand voltage Insulation resistance		0 to 50°C							
.발 Withstand vo	ltage	1000 VAC for 1 min. between external terminal and case							
Insulation res	istance	50	$M\Omega$ (500 VDC) between	n external terminal and c	ase				
Noise resista	nce		1000 Vp-p, Pulse wid	th 1 μs, Rise time 1 ns	1000 Vp-p, Pulse width 1 μs, Rise time 1 ns				

Note 1) In the case of PF2W711, $\pm 3\%$ of F.S. or less (15°C to 35°C, based on 25°C).

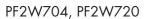
Note 2) Switch output and accumulated pulse output can be selected during initial setting.

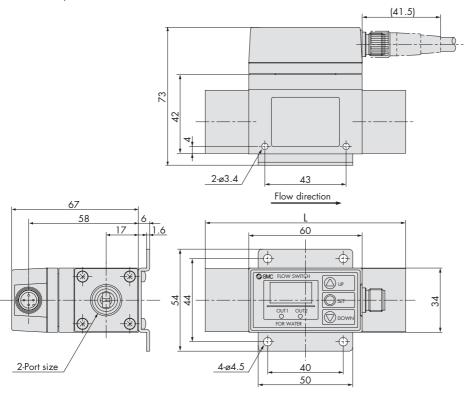
Note 3) Window comparator mode — Since hysteresis will reach 3 digits, keep P_1 and P_2 or n_1 and n_2 apart by 7 digits or more. The minimum setting unit is 1 digit. (Refer

(In case of output OUT2, n_1, 2 to be n_3, 4 and P_1, 2 to be P_3, 4.)



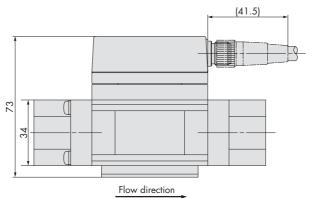
Dimensions: Integrated Display Type for Water

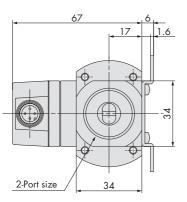


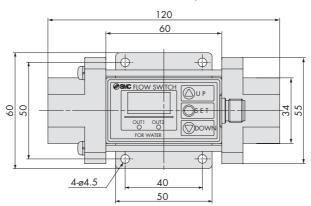


Model	L dimension
PF2W704	100
PF2W720	106

PF2W740



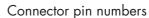












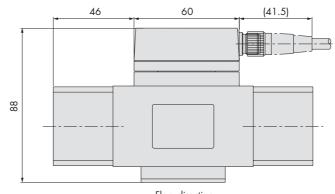


Pin no.	Pin description
1	DC (+)
2	OUT2
3	DC (-)
1	OUT1

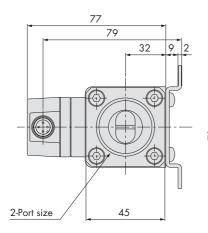


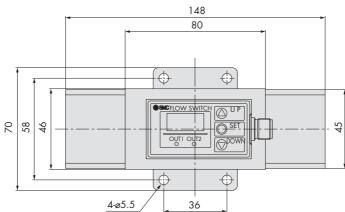
Dimensions: Integrated Display Type for Water

PF2W711



Flow direction







Digital Flow Switch For Water

Series PF2W

Features

- Flow switch for water
- Remote display type
- Karmann vortex detection method
- No moving parts inside the sensor
- Very little resistance to passage of water
- Units with flow ranges from 0.5 to 100 l/min
- Output for remote display, optional analogue output
- IP65 splashproof construction



(Remote display sensor unit)

How to Order

Remote type Sensor unit

now rate range					
04	0.5 to 4 <i>l</i> /min				
20	2 to 16 ℓ/min				
40	5 to 40 ℓ/min				
11	10 to 100 ℓ/min				
	04 20				

Thread type

Output specifications

Nil	Output for display unit (sensor output) only
1	Output for display unit + Analog output (1 to 5V)
2	Output for display unit + Analog output (4 to 20 mA)

Ŧ	Port	ciz
$\mathbf{-}$	LOU	SIZ

c	Port	Flo	w rat	e (l/n	nin)	A 1: 1.1
Symbol	nbol size		16	40	100	Applicable model
03	3/8	•	•			PF2W504, PF2W520
04	1/2		• •			PF2W520, PF2W540
06	3/4			•	•	PF2W540, PF2W511
10	1				•	PF2W511

Specifications

	Model	PF2W504	PF2W520	PF2W540	PF2W511	
Meas	ured fluid	Water				
Detec	tion type		Karmann vortex			
Flow	rate measuring range	0.5 to 4 ℓ/min	2 to 16 <i>l</i> /min	5 to 40 ℓ/min	10 to 100 ℓ/min	
Oper	ating pressure range		0 to 1	I MPa		
With	stand pressure		1.5	MPa		
Oper	ating fluid temperature		0 to 50°C		0 to 50°C	
Linea	rity Note 1)		±5% F.S. or less		±3% F.S. or less	
Repe	atability Note 1)		±2% F.S. or less		±1% F.S. or less	
Temp	erature characteristics	±2% F.S. or les	s (15 to 35°C based on 25°C)	, ±3% F.S. or less (0 to 50°C	based on 25°C)	
te 2) ns	Output for display unit		Pulse output, N channel, open drain, output for display unit PF2W3□□. (Specifications: Maximum load current of 10mA; Maximum applied voltage of 30 V)			
Output Note 2) specifications	Analog output	Voltage output 1 to 5V within the flow rate range Linearity: $\pm 5\%$ F.S. or less; allowable load resistance: $100~k\Omega$ or more.			nore.	
Out		Current output 4 to 20 mA within the flow rate range Linearity: $\pm 5\%$ F.S. or less; allowable load resistance: 300 Ω or less with 12 VDC, 600 Ω or less with 24 VDC			O Ω or less with 24 VDC	
Powe	r supply voltage	upply voltage 12 to 24 VDC (Ripple ±10% or less)				
Curre	nt consumption (No load)		20 mA or less			
	closure		IP	65		
Resistance	perating temperature range	Оре	rating: 0 to 50°C, Stored: –25 to	o 85°C (No condensation or fre	ezing)	
Siste	ithstand voltage		1000 VAC for 1 min. betwe	en external terminal and case		
a Ins	sulation resistance		50 M Ω (500 VDC) betwee	n external terminal and case		
N	oise resistance		1000 Vp-p, Pulse width 1 μs, Rise time 1 ns			
Weig	ht Note 3)	410 g	470 g	650 g	1,100 g	
Port s	ize (G)	3/8	3/8, 1/2	1/2, 3/4	3/4, 1	

Note 1) The system accuracy when combined with PF2W3 .

Note 2) Output system can be selected during initial setting.

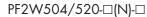
Note 3) Without lead wire. (Add 20 g for the types of analog output whether voltage or current output selected.)





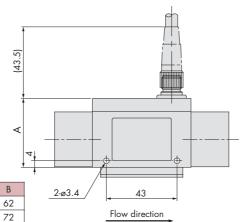


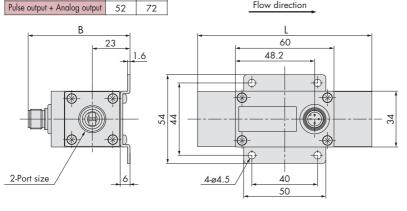
Dimensions: Remote Type Sensor Unit for Water



Output specifications

Pulse output only



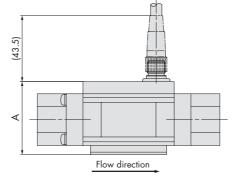


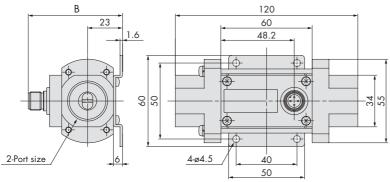
Model	L dimension	
PF2W504	100	
PF2W520	106	

42

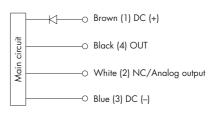
PF2W504-□(N)-□

Output specifications	A	В
Pulse output only	42	62
Pulse output + Analog output	52	72





Wiring



* Use this sensor by connecting to SMC remote type display unit Series PF2W3 \square .



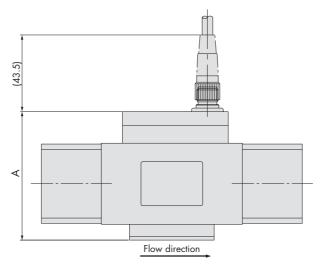
Pin no.	Pin description	
1	DC (+) NC/Analog output	
2		
3	DC (-)	
4	OUT	

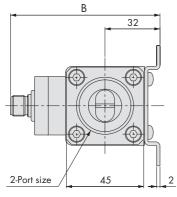


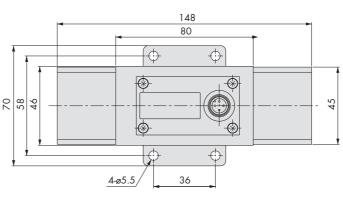
Dimensions: Remote Type Sensor Unit for Water

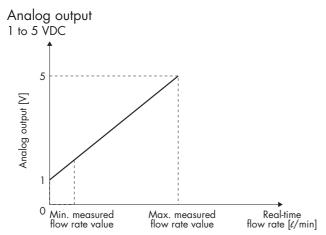
PF2W511-□(N)-□

Output specifications	Α	В
Pulse output only	63	77
Pulse output + Analog output	73	87

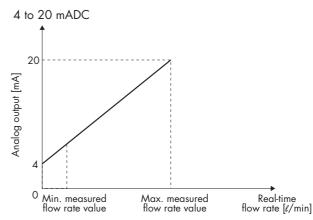








Part no.	Minimum measured flow rate value [ℓ/min]	Maximum measured flow rate value [ℓ/min]
PF2W504-□-1	0.5	4
PF2W520-□-1	2	16
PF2W540-□-1	5	40
PF2W511-□-1	10	100



Part no.	Minimum measured flow rate value [ℓ/min]	Maximum measured flow rate value [ℓ/min]
PF2W504-□-2	0.5	4
PF2W520-□-2	2	16
PF2W540-□-2	5	40
PF2W511-□-2	10	100









Digital Flow Switch For Water

Series PF2W

Features

- Displays flow information
- Works with remote sensor units
- Panel mounting construction
- Clear LED indication and can display metric or imperial units
- Two independent digital outputs
- Output modes instantaneous flow, total flow and counting pulse



How to Order

Remote type Display unit

PF2W3

Flow rate range

PF2W504

PF2W520

PF2W540

PF2W511

PF2W300/301

Flow rate range Type for sensor unit

0.5 to 4 *l*/min

2 to 16 ℓ/min

5 to 40 ℓ/min

3 10 to 100 ℓ/mim

Mounting Panel mounting Panel mount adapter part no.

Panel adapter B Description ZS-22-02

PF2W330/331

Output specifications 0 NPN open collector 2 outputs PNP open collector 2 outputs

Specifications

Nodel		Model	FF2VV300/301 FF2VV330/331				
Flow re	ate med	asurement range Note 1)	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 Note 1)		range Note 1)	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
Minimum setting unit Note 1)		ting unit Note 1)	0.05 ℓ/min	0.1 <i>l</i> /m	in	0.5 ℓ/min	1 ℓ/min
		ulse flow rate exchange dth: 50 ms) Note 1)	0.05 ℓ/pulse	0.1 <i>6</i> /pu	lse	0.5 <i>t</i> /pulse	1 <i>C</i> /pulse
Displa	splay unit Real-time flow rate		ℓ/min, gal (US)/min				
Dispiu	y Ullii	Accumulated flow			ℓ, ga	l (US)	
		l flow range			0 to 99	99999 <i>l</i>	
Linear	ity Note :	2)		±5% F.S	or less		±3% F.S. or less
Repec	atability	/ Note 2)		±3% F.S	or less		±1% F.S. or less
Tempe	erature	characteristics	±2% F.S. or less	(0 to 50°C, base	d on 25°C),	±1% F.S. or less (15 to 35°C, b	pased on 25°C)
Curre	nt cons	umption (No load)		50 mA	or less		60 mA or less
Weig	ht				45	5 g	
Note 3)	Switch output		NPN open collector (PF2W3	300, PF2W330)	Internal vo	load current: 80 mA oltage drop: 1V or less (With loapplied voltage: 30 V	ad current of 80 mA)
Output Note 3) specifications	PNP open collector (PF	PNP open collector (PF2W3	Maximum load current: 80 mA Internal voltage drop: 1.5 V or less (With load current of 80 mA) 2 outputs			load current of 80 mA)	
	Accur	mulated pulse output		NPN or PNP	open collect	or (Same as switch output)	
	closure	•	IP40				
<u>'</u>		g temperature range	Opera	Operating: 0 to 50°C, Stored: -25 to 85°C (No condensation or freezing)			
Sist W		d voltage	1000 VAC for 1 min. between external terminal and case				
		resistance		,		n external terminal and case	
		resistance	10 to 500 Hz at whichever i	is smaller: 1.5 mm	amplitude o	or 98 m/s ² acceleration in X, Y,	Z directions for 2 hrs. each
Displo	ау		3-digit, 7-segment LED				
	itor ligh			Lights up when	output is ON	I, OUT1: Green; OUT2: Red	
Power	r supply	y voltage		12 to 24 VDC (Ripple ±10% or less)			
Response time		ne	1 sec. or less				
Hyster				Variable (can be	set from 0)	Window comparator mode:	3-digit fixed Note 4)
		1 1	1 . 0 .				

Note 1) Values vary depending on each set flow rate range.

Note 2) The system accuracy when combined with PF2W5.

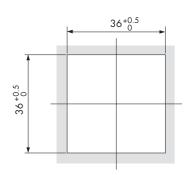
Note 3) Switch output and accumulated pulse output can be selected during initial setting.

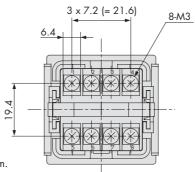
Note 4) Window comparator mode — Since hysteresis (H) will reach 3 digits, keep P_1 and P_2 or n_1 and n_2 apart by 7 digits or more. (In case of output OUT2, n_1, 2 to be n_3, 4 and P_1, 2 to be P_3, 4.)



Dimensions: Remote Type Display Unit for Water

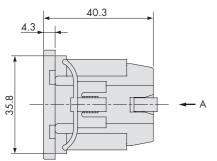
PF2W3□□-A Panel mounting type

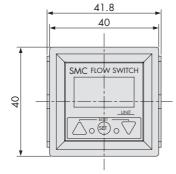




 \ast The applicable panel thickness is 1 to 3.2 mm.

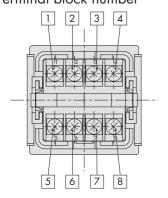
View A





Panel fitting dimension

Terminal block number







Digital Flow Switch, High Temperature Fluid Type For Water

Series PF2W

Features

- Flow switch for heated water up to 90°C
- Karmann vortex detection method
- No moving parts inside the unit and very little resistance to water flow 🐠
- Flow ranges from 0.5 to 40 l/min
- Integrated LED display can show metric or imperial units
- One digital output plus analogue output

Digital Output modes instantaneous flow, accumulated flow and counting pulse

IP65 splashproof construction with all stainless body parts



((Integrated	display	type
- 1	miograica	alopia	17 20

How to Order	Output specificatio	ns
Integrated display type PF2W7 20 T — F	03 — 27 PNP open collector 2 outp	_
Flow rate range •	Port size	
04 0.5 to 4 ℓ/min Temperature range ●	Symbol Port Flow rate (t/min) Applicable model	
20 2 to 16 ℓ/\min T 0 to 90°C	/ size 4 16 40	
40 5 to 40 t/min Thread type	03 3/8 ● ● PF2W704T, PF2W720T	-
	04 1/2 ● PF2W720T, PF2W740T	
F G	06 3/4 ■ PF2W740T	

Specifications

	Model	PF2W704T	PF2W720T	PF2W740T	
Measured fluid		Water, Mixture of water (50%) and ethylene glycol (50%)			
Flow rate measure	ement range	0.35 to 4.5 ℓ/min	1.7 to 17.0 ℓ/min	3.5 to 45 ℓ/min	
Set flow rate rang		0.35 to 4.5 ℓ/min	1.7 to 17.0 ℓ/min	3.5 to 45 ℓ/min	
Flow rate measuri	0 0	0.5 to 4 ℓ/min	2 to 16 <i>l</i> /min	5 to 40 ℓ/min	
Minimum setting u		0.05 ℓ/min	0.1 ℓ/min	0.5 ℓ/min	
	v rate exchange value (Pulse width: 50 ms)	0.05 ℓ/pulse	0.1 <i>t</i> /pulse	0.5 ℓ/pulse	
Operating fluid te	mperature		0 to 90 C (With no cavitation)		
Linearity			±5% F.S. or less		
Repeatability			±3% F.S. or less		
Temperature char		±5% F	F.S. or less (0 to 90°C, based on 2	25°C)	
Current consumpt	ion (No load)		70 mA or less		
Weight			710 g		
Port size		3/8	3/8, 1/2	1/2, 3/4	
Detection type			Karmann vortex		
Display	D 1:: (1	3-digit, 7-segment LED			
Display unit Real-time flow rate Accumulated flow		ℓ/min, gal (US)/min			
		l, gal (US) O to 1 MPa			
Operating pressu					
Withstand pressu Accumulated flow			1.5 MPa 0 to 999999 ℓ		
	v range				
Switch outp	ut	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			
Output Switch output Switch output Switch output Accumulate	oi .	PNP open collector Maximum load current: 80 mA; Internal voltage drop: 1.5 V or less (With load current of 80 mA); 2 outputs			
	d pulse output	NPN or PNP open collector (Same as switch output)			
Indicator light		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			
Power supply voltage		12 to 24 VDC (Ripple ±10% or less)			
© Enclosure		IP65			
	temperature range	Operating: 0 to 50°C, Stored: –25 to 85°C (No condensation or freezing)			
.ts Withstand		1000 VAC for 1 min. between external terminal and case			
		50 MΩ (500 VDC) between external terminal and case			
Noise resis	tance	1000	D Vp-p, Pulse width 1 μs, Rise time	e 1 ns	

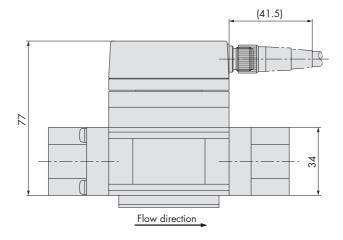
Note 1) ±5% F.S. or less (0 to 50°C, based on 25°C), ±3% F.S. or less (15 to 35°C, based on 25°C)
Note 2) Switch output and accumulated pulse output can be selected during initial setting.
Note 3) Window comparator mode — Since hysteresis will reach 3 digits, keep P_1 and P_2 or n_1 and n_2 apart by 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 4) The flow switch is comformed to CE mark.

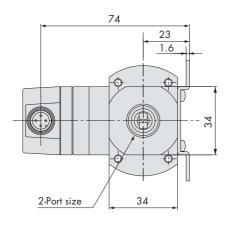


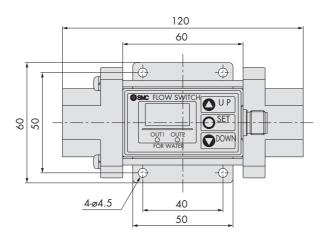
Dimensions: Integrated Display Type for Water



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













Digital Flow Switch, High Temperature Fluid Type For Water

Series PF2W

Features

- Flow switch for hot water
- Remote display type
- Karmann vortex detection method
- No moving parts inside the sensor
- Very little resistance to passage of water
- Units with flow ranges from 0.5 to 100 l/min
- Output for remote display, optional analogue output
- IP65 splashproof construction



(Remote type display unit)

How to Order

Remote type Display unit	PF2	W5	2	0]	<u> </u>	Ē
Diopiay onin	Flo	w rate rang	je 🌡			
	04	0.5 to 4 l/r	nin			
	20	2 to 16 ℓ/n	nin			
T	40	5 to 40 ℓ/n	nin			
Temperature range					١.	1
T 0 to 90°C				Three	ad type	•
	_		F		G	

Output for display unit Output for display unit + Analog output (1 to 5 V) Output for display unit + Analog output (4 to 20 mA) Port size

Symbol	Port	Flow	rate (l	/min)	A : - - -
Symbol	size	e 4 1	16	40	Applicable model
03	3/8	•	•		PF2W504T/520T
04	1/2		•	•	PF2W520T/540T
06	3/4			•	PF2W540T

Specifications

Mod	el	PF2W504T	PF2W520T	PF2W540T		
Measured fluid		Water, A	Aixture of water (50%) and ethylene glyc	ol (50%)		
Detection type		Karmann vortex				
Flow	rate measuring range	0.5 to 4 <i>l</i> /min	2 to 16 ℓ /min	5 to 40 ℓ/min		
Оре	rating pressure range		0 to 1 MPa			
With	stand pressure		1.5 MPa			
Оре	rating fluid temperature		0 to 90°C (With no cavitation)			
Line	arity Note 1)		±5% F.S. or less			
Repe	eatability Note 1)		±2% F.S. or less			
Tem	perature characteristics	±2% F.S. or less (15 to 35°	$^{\circ}$ C based on 25 $^{\circ}$ C), ±3 $^{\circ}$ F.S. or less (0 to 50°C based on 25°C)		
Output for display unit Pulse output, N channel, open drain, output for display (Specifications: Maximum load current of 10 mA; Maximum of						
Output Note 2 specifications	Analogue output	Voltage output 1 to 5 V within the flow rate range Linearity: $\pm 5\%$ F.S. or less; allowable load resistance: 100 k Ω or more.				
Out		Current output 4 to 20 mA within the flow rate range Linearity: $\pm 5\%$ F.S. or less; allowable load resistance: 300 Ω or less with 12 VDC, 600 Ω or less with 24 VDC				
Pow	er supply voltage	12 to 24 VDC (Ripple ±10% or less)				
Curr	ent consumption (No load)	20 mA or less				
Er	closure	IP65				
	perating temperature range	Operating: 0 to 50°C, Stored: -25 to 85°C (No condensation or freezing)				
Resistar or	ithstand voltage	1000 VAC for 1 min. between external terminal and case				
Se In	sulation resistance	50 MΩ (500 VDC) between external terminal and case				
Noise resistance 1000 Vp-p, Pulse width 1 μs, R			000 Vp-p, Pulse width 1 μs, Rise time 1 ι	ns		
Wei	ght		660 g			
Port	size	3/8	3/8, 1/2	1/2, 3/4		

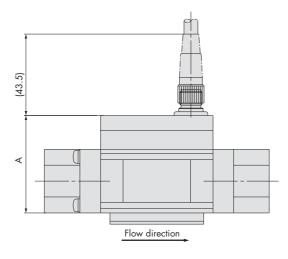
Note 1) The system accuracy when combined with PF2W3□□. Note 2) Output system can be selected during initial setting. Note 3) The sensor unitis comformed to CE mark.

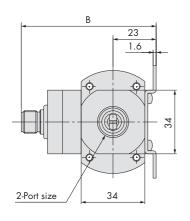


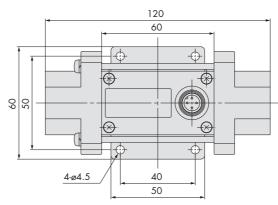
Dimensions: Remote Type Sensor Unit for Water

PF2W504T/520T/540T-□(N)

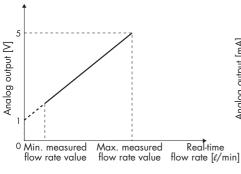
	_	
Output specifications	Α	В
Pulse output only	52	72
Pulse output + Analog output	62	82



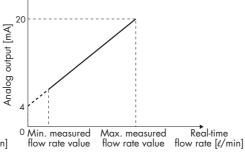




Analog output 1 to 5 VDC



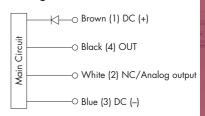
4 to 20	mADC
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Part no.		Maximum measured flow rate value [ℓ/min]
PF2W504T-□-1	0.5	4
PF2W520T-□-1	2	16
PF2W540T-□-1	5	40

Part no.		Maximum measured flow rate value [ℓ /min]
PF2W504T-□-2	0.5	4
PF2W520T-□-2	2	16
PF2W540T-□-2	5	40

Wiring



* Use this sensor by connecting to SMC remote type display unit Series PF2W3□□.



Pin no.	Pin description			
1	DC (+)			
2	NC/Analog output			
3	DC (-)			
4	OUT			





