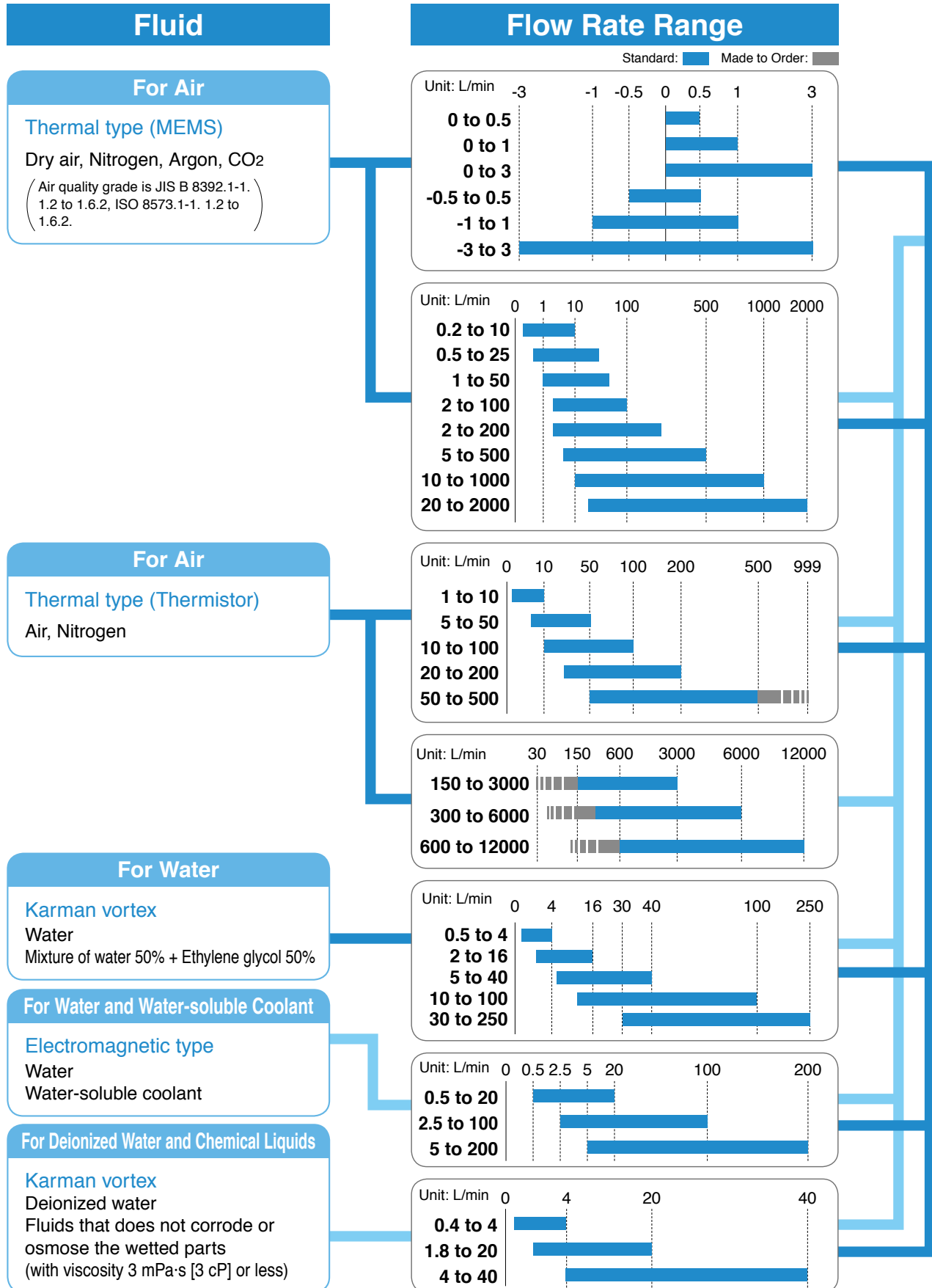


Flow Sensors

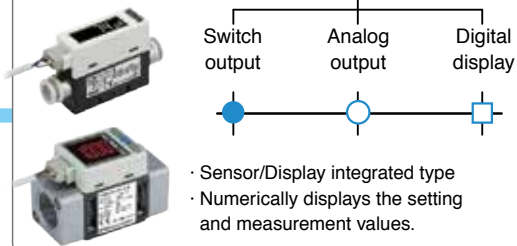


Flow Sensor Product Variations

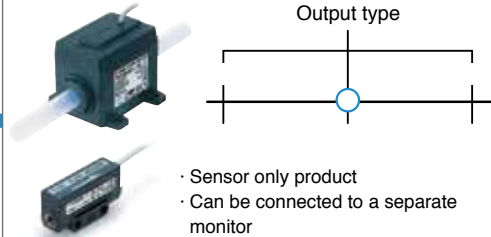


Product Type

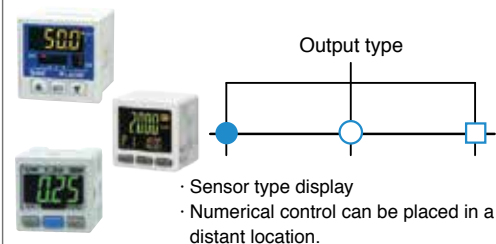
Integrated Display



Remote Sensor



Remote Monitor



Applicable Model

For air	For water	For water and water-soluble coolant	For deionized water and chemical liquids
· PF2M7 series · PFM7 series · PFMB7 series · PFMC7 series · PF2A7 series · PF3A7□H series	· PF3W7-Z series · PF3W7 series	· LFE□ series	· PF3W7 series

* The PF2A7 series and PF2A7□□H series are compatible with made-to-order specifications.

For air	For water	For water and water-soluble coolant	For deionized water and chemical liquids
· PFM5 series · PFMV5 series · PF2A5 series	· PF3W5-Z series · PF3W5 series	· LFE□ series	· PF2D5 series · PF3W5 series

For air	For water	For water and water-soluble coolant	For deionized water and chemical liquids
[For 1 ch] · PFG300 series · PFM3 series · PFMV3 series · PF2A3 series	[For 1 ch] · PF3W3 series	[For 1 ch] · LFE0 series	[For 1 ch] · PF2D3 series
 [For 4 ch] · PF2A2 series			 [For 4 ch] · PF2D2 series

Basic Performance Table

Model Selection Table					
Sensors with Displays					
Model	PF2M7	PFM7	PF2A7	PF3A7□H	PFMB7
Fluid	Dry air, N ₂ , Ar, CO ₂		Air, N ₂	Air, N ₂	Dry air, N ₂
Calibration method	Push-button calibration				
Rated flow range	0.1 to 10 L/min 0.3 to 25 L/min 0.5 to 50 L/min 1 to 100 L/min	0.2 to 10 L/min 0.5 to 25 L/min 1 to 50 L/min 2 to 100 L/min	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	30 to 3000 L/min 60 to 6000 L/min 120 to 12000 L/min	2 to 200 L/min 5 to 500 L/min 10 to 1000 L/min 20 to 2000 L/min
Power supply voltage	24 VDC ±10%		12 to 24 VDC ±10%	24 VDC ±10%	12 to 24 VDC ±10%
Temperature characteristics (based on 25°C)	±3% F.S. ±1digit (15 to 35°C) ±5% F.S. ±1digit (0 to 50°C)	±2% F.S. (15 to 35°C) ±5% F.S. (0 to 50°C)	±3% F.S. (15 to 35°C) ±5% F.S. (0 to 50°C) ±2% F.S. (PF2A7□□H: 0 to 50°C)	±5% F.S. (0 to 50°C) [Monitor unit] ±0.5% F.S. (0 to 50°C)	±2% F.S. (15 to 35°C) ±5% F.S. (0 to 50°C)
Repeatability	±1% F.S. ±1digit (Fluid: Dry air) Analog output: ±3% F.S.	±1% F.S. (Fluid: Dry air) Analog output: ±3% F.S.	±1% F.S. (PF2A7□□0, PF2A7□□H) ±2% F.S. (PF2A7□□1)	±1% F.S. [Monitor unit] ±0.1% F.S.	±1% F.S. (Fluid: Dry air)
Hysteresis	Hysteresis mode: Variable Window comparator mode: Variable		Hysteresis mode: Variable Window comparator mode: Fixed (3 digits*1) *1 Digit is min. calibration unit.	Hysteresis mode: Variable Window comparator mode: Variable	
Output	NPN/PNP open collector Accumulated pulse output Analog voltage output Analog current output		NPN/PNP open collector Accumulated pulse output	NPN/PNP open collector Accumulated pulse output Analog voltage output Analog current output	
Display	2-color LCD display	2-color display	1-color display	3-color LCD display	2-color LED display 2-color LCD display
Enclosure	IP40		IP65	IP65 [Monitor unit IP40]	IP40
Note	Analog free span function Reversible display mode Delay time setting Flow adjustment valve integrable Selectable flow rate display unit Secret code setting function Display OFF mode Accumulated value hold function	Flow adjustment valve integrable Panel mounting possible DIN rail mountable Selectable flow rate display unit Responses time setting function → All renewed Secret code setting function Power saving mode Accumulated flow display function	Selectable flow rate display unit Accumulated flow display function	2-screen display Display rotates 90° and can be reversed Reference condition Accumulated value hold function	Flow adjustment valve integrable (200 L) Panel mounting possible (200 L) DIN rail mountable (200 L) Selectable flow rate display unit Responses time setting function → All renewed Secret code setting function Power saving mode Accumulated flow display function

Basic Performance Table

Model Selection Table				
Sensors with Displays				
PFMC7 	PF3W-Z 	PF3W-L 	PF3W7   PVC piping type	LFE□ 
Dry air, N ₂	Water, ethylene glycol aqueous solution		Water, deionized water, chemicals	Water, water-soluble coolant
5 to 500 L/min 10 to 1000 L/min 20 to 2000 L/min	0.5 to 4 L/min 2 to 16 L/min 5 to 40 L/min 10 to 100 L/min	0.5 to 4 L/min 2 to 16 L/min 5 to 40 L/min 10 to 100 L/min 50 to 250 L/min		10 to 100 L/min 30 to 250 L/min
12 to 24 VDC ±10%	12 to 24 VDC ±10% 18 to 30 VDC ±10%*1 *1 When used as an IO-Link device		12 to 24 VDC ±10%	24 VDC ±10%
±2% F.S. (15 to 35°C) ±5% F.S. (0 to 50°C)	±5% F.S. (0 to 50°C)			±5% F.S.
±1% F.S. (Fluid: Dry air)	±2% F.S.			±2% F.S. (Displayed values) Analog output: ±1.5% F.S.
Hysteresis mode: Variable Window comparator mode: Variable	Variable			
NPN/PNP open collector Accumulated pulse output Analog voltage output Analog current output	Analog voltage output Analog current output		NPN/PNP open collector Accumulated pulse output Analog voltage output Analog current output	NPN/PNP open collector Analog voltage output Analog current output
3-color LCD display	3-color display			
IP65				
Flow adjustment valve integrable Responses time setting function → All renewed Secret code setting function Power saving mode Accumulated flow display function	3-color/2-screen display Selection of display on sub screen Switching of flow direction Responses time setting function Secret code setting function Power saving mode Accumulated flow display function	IO-Link compatible 3-color/2-screen display Selection of display on sub screen Switching of flow direction Responses time setting function Secret code setting function Power saving mode Accumulated flow display function	3-color/2-screen display Selection of display on sub screen Switching of flow direction Responses time setting function Secret code setting function Power saving mode Accumulated flow display function	

Basic Performance Table

Model Selection Table

Remote Sensors and Monitors

Model	Sensor unit	Monitor unit	Sensor unit	Monitor unit	Sensor unit	Monitor unit	
	PFM5	PFM3	PFMV5	PFMV3	PF2A5	PF2A3	PF2A2
Fluid	Dry air, N ₂ , Ar, CO ₂		Dry air, N ₂		Air, N ₂		
Sensor input amount		1 input		1 input		1 input	4 inputs
Calibration method		Push-button calibration		Push-button calibration		Push-button calibration	
Rated flow range	0.2 to 10 L/min 0.5 to 25 L/min 1 to 50 L/min 2 to 100 L/min		0 to 0.5 L/min 0 to 1 L/min 0 to 3 L/min -0.5 to 0.5 L/min -1 to 1 L/min -3 to 3 L/min		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		
Power supply voltage	24 VDC ±10%		24 VDC ±10%		12 to 24 VDC ±10%		
Temperature characteristics (25°C reference)	±2% F.S. (15 to 35°C) ±5% F.S. (0 to 50°C)	±0.5% F.S. (0 to 50°C)	±2% F.S. (15 to 35°C) ±5% F.S. (0 to 50°C)	±0.5% F.S. (0 to 50°C)	±2% F.S. (15 to 35°C) ±3% F.S. (0 to 50°C)	±1% F.S. (15 to 35°C) ±2% F.S. (0 to 50°C)	±2% F.S. (0 to 50°C)
Repeatability	±1% F.S. (Fluid: Dry air) Analog output: ±5% F.S.	±0.1% F.S. (Fluid: Dry air) Analog output: ±0.5% F.S.	±1% F.S. (Fluid: Dry air) Analog output: ±5% F.S.	±0.1% F.S. (Fluid: Dry air) Analog output: ±0.5% F.S.	±1% F.S. (Connected with PF2A3□) ±2% F.S. (Connected with PF2A2□)	±1% F.S.	±3% F.S.
Hysteresis		Hysteresis mode: Variable Window comparator mode: Variable		Hysteresis mode: Variable Window comparator mode: Variable		Hysteresis mode: Variable Window comparator mode: Fixed (3 digits*1) *1 Digit is min. calibration unit.	
Output	Analog voltage output Analog current output	NPN/PNP open collector Accumulated pulse output Analog voltage output Analog current output	Analog voltage output Analog current output	NPN/PNP open collector Analog voltage output Analog current output	Analog voltage output Analog current output	NPN/PNP open collector Accumulated pulse output	
Display		2-color display		2-color display		1-color display	1-color display
Enclosure	IP40		IP40		IP65	IP40	Front only: IP65 The rest: IP40
Note	Flow adjustment valve integrable Panel mounting possible Manifold mounting possible Manifold mountable DIN rail mountable	Panel mounting possible Selectable flow rate display unit Security code setting function Power saving mode Accumulated flow display function	Manifold mountable	Panel mounting possible Selectable flow rate display unit Security code setting function Power saving mode Auto shift function	Connectable with 4 ch monitor (Analog voltage output only)	Selectable flow rate display unit Accumulated flow display function	

Basic Performance Table

Model Selection Table

Remote Sensors and Monitors

Sensor unit		Monitor unit	Sensor unit	Sensor unit	Monitor unit	Sensor unit	Monitor unit		PFG300
PF3W5-Z	PF3W5	PF3W3	PF3W5	LFE□	LFE0	PF2D5	PF2D3	PF2D2	
									
Water, ethylene glycol aqueous solution			Water, deionized water, chemicals	Water, water-soluble coolant		Deionized water, fluids that dose not corrode or osmose Super PFA.			
		1 input			1 input		1 input	4 inputs	1 input
		Push-button calibration			Push-button calibration		Push-button calibration		Push-button calibration
0.5 to 4 L/min 2 to 16 L/min 5 to 40 L/min 10 to 100 L/min	0.5 to 4 L/min 2 to 16 L/min 5 to 40 L/min 10 to 100 L/min 50 to 250 L/min		10 to 100 L/min 30 to 250 L/min	0.5 to 20 L/min 2.5 to 100 L/min 5 to 200 L/min		0.4 to 4 L/min 1.8 to 20 L/min 4 to 40 L/min			2 to 200 L/min 5 to 500 L/min 10 to 1000 L/min 20 to 2000 L/min 30 to 3000 L/min 60 to 6000 L/min 120 to 12000 L/min
12 to 24 VDC ±10%				24 VDC ±10%		12 to 24 VDC ±10%			
±5% F.S. (0 to 50°C)		±0.5% F.S. (0 to 50°C)	±5% F.S. (0 to 50°C)	±5% F.S.		±5% F.S. (0 to 50°C)	±1% F.S. (15 to 35°C) ±2% F.S. (0 to 50°C)	±2% F.S. (0 to 50°C)	±2% F.S. (0 to 50°C)
±2% F.S.		±0.5% F.S.	±2% F.S.	±1.5% F.S.	±0.5% F.S.	±1% F.S.	±0.5% F.S.	±3% F.S.	±0.5% F.S.
		Variable			Variable		Hysteresis mode: Variable Window comparator mode: Fixed (3 digits*1) *1 Digit is min. calibration unit.		Variable
Analog voltage output Analog current output		NPN/PNP open collector Analog voltage output Analog current output	Analog voltage output Analog current output	Analog voltage output Analog current output	NPN/PNP open collector Analog voltage output Analog current output	Analog voltage output Analog current output	NPN/PNP open collector Accumulated pulse output		NPN/PNP open collector Analog voltage output Analog current output
		3-color display			3-color display		1-color display	1-color display	2-color display
IP65		Front only: IP65 The rest: IP40	IP65	IP65	Front only: IP65 The rest: IP40	IP65	IP40	Front only: IP65 The rest: IP40	IP40
Temperature sensor and flow adjustment valve integrable Flow indicator		3-step setting Copy function 3-color/ 2-screen display	Flow indicator		3-color/ 2-screen display	Connectable with 4 ch monitor (Analog voltage output only)	Selectable flow rate display unit Accumulated flow display function		NPN/PNP switch function Input range selection Delay time setting Analog output Free range function Accumulated value hold function Copy function

Digital Flow Sensor Manifold for Water PF3WB/C/S/R Series

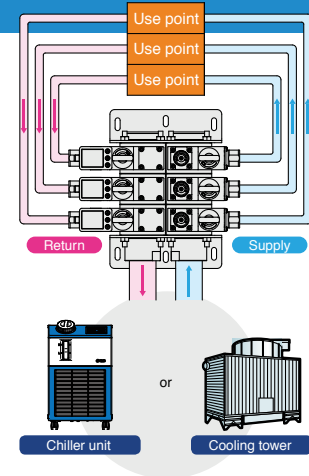
Highly Configurable Layouts

- Up to 10 stations
- Sensor, flow adjustmet valve, stop valves
- IO-Link compatible

Integrated Type

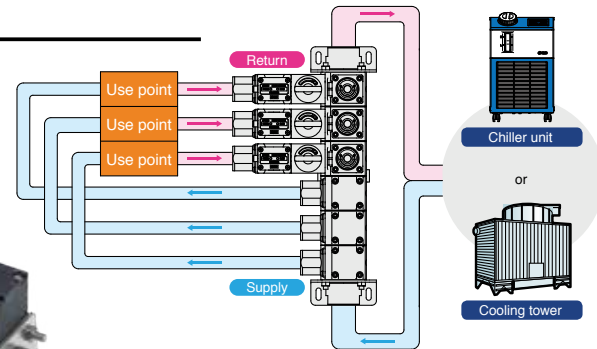
Basic type PF3WB

Space can be saved by integrating the supply and return in one unit.



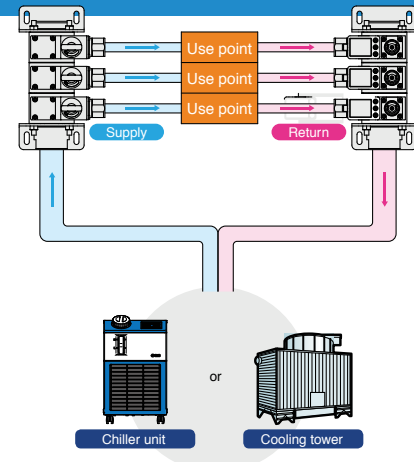
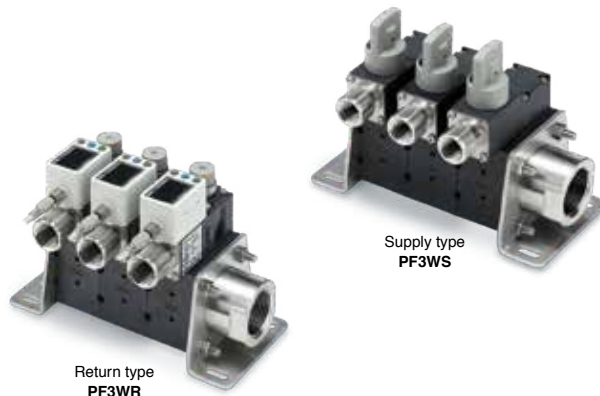
Straight type PF3WC

Space can be saved by integrating the supply and return in on unit. The piping for the supply and return can be arranged in the same direction.



Remote Type

Free layout is possible by separating the supply and return unit.



IO-Link Compatible

3-Color Display Digital Flow Sensor for Water

PF3W-L

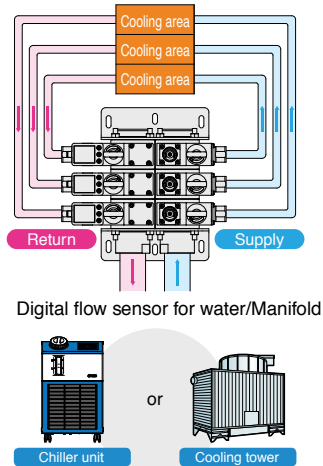
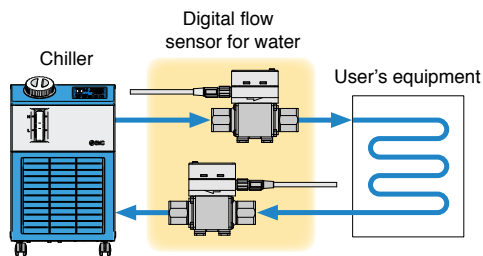


IO-Link Compatible

- IO-Link version V1.1
- Process data length 6-byte input
- Transmission speed COM2 (38.4 kbps)
- Minimum cycle time 3.5 ms
- IO-Link port type Class A

For the predictive maintenance of cooling water problems

- Monitors flow rate and temperature's "switch ON/OFF signals" and "analog values" to determine the cooling status
The process and cooling status can be compared.



Energy Saving Program

For details, refer to the SMC website.

<https://www.smcworld.com> SMC Model Selection Software Search

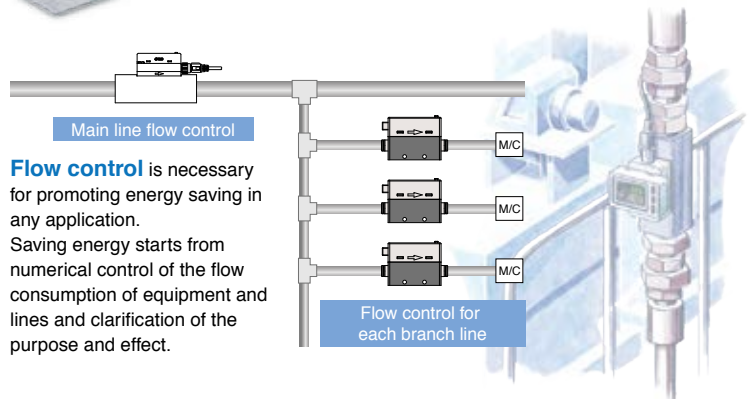


Digital flow sensor to save energy!

3-Color Display Digital Flow Sensor for Large Flow PF3A7□H



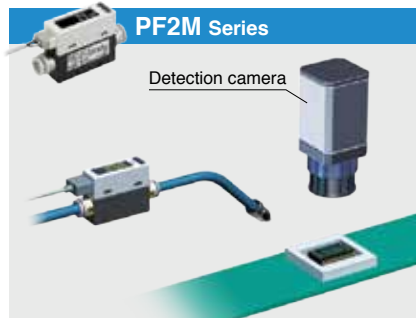
Videos can be viewed here



Flow control is necessary for promoting energy saving in any application. Saving energy starts from numerical control of the flow consumption of equipment and lines and clarification of the purpose and effect.

Applications

- Flow control of N₂ gas to prevent lead frame oxidation
- N₂ blow prevents distortion of camera image due to air turbulence.



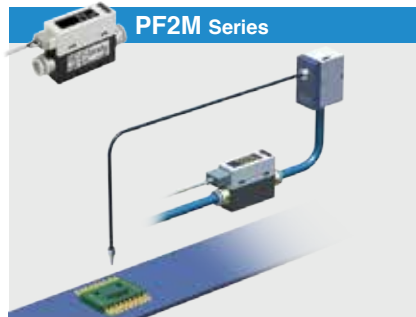
- Accumulated indication shows the operating flow rate or residual amount (of N₂, etc.) in a gas cylinder.



- Welding machine



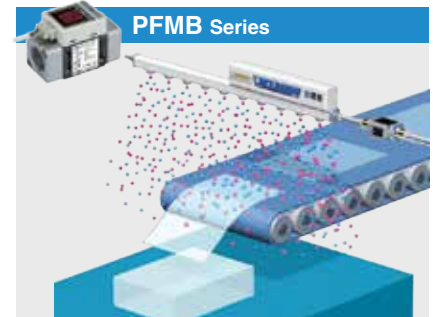
- Control of metal wire tension



- Flow control of the air for spray painting

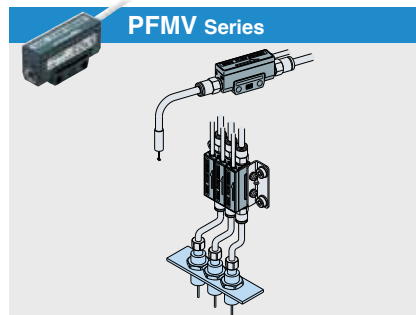


- Control of purge air flow of ionizer

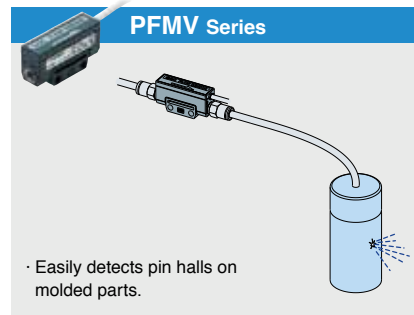


* The product is not designed to be explosion proof.

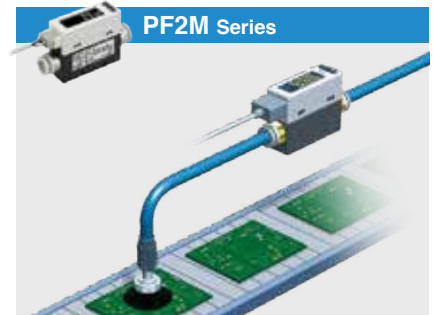
- Suction verification of very small workpieces



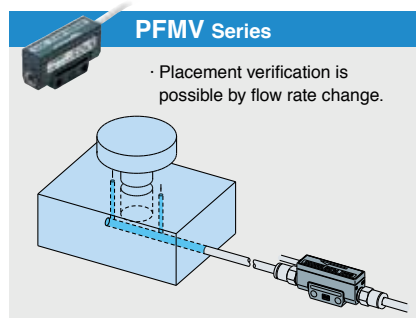
- Easy leak test



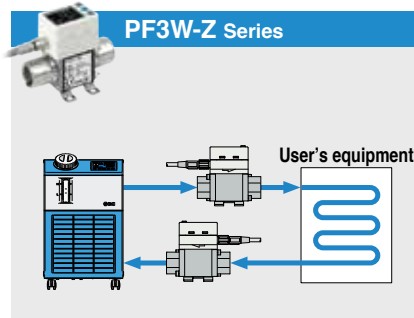
- Suction verification



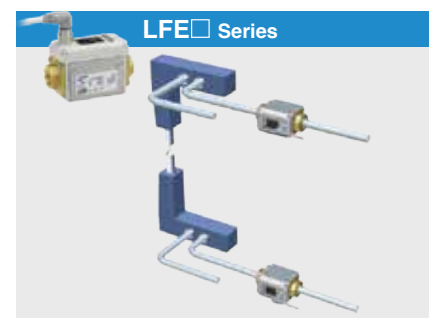
- Easy placement verification



- Flow control of the circulating fluid in a chiller



- Flow control for pressurized cooling water for welding guns





E-TECH

DIGITAL PNEUMATIC PRODUCTS BUILDER

Validate Your Part Number

- Design a Custom Part Easily and Accurately with E-Tech's Part Number Validation
- Allows user to Build Part Numbers by Choosing Options through a Series of Pull-Downs
- E-Tech let's you know if a Part is Incomplete or Incompatible by Flagging it as either "Partial" or "Invalid"

The screenshot shows the E-Tech Part Number Validation interface. It includes several input fields for part numbers (e.g., MXS 20-75 A) and options (e.g., MXS 20 A). There are also buttons for 'Save', 'Print', and 'Reset'. A 'Configuration Error' message is displayed, indicating that the selected options are not compatible. The interface is designed to help users build and validate part numbers for SMC pneumatic products.

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SMC North American Headquarters, Manufacturing and Central Distribution Facility



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The North American Manufacturing and Central Warehouse expansion has positioned SMC to support sales and growth in the U.S. and Canada.

- 2 million sq. ft. total manufacturing and warehouse space
- Additional investment in warehouse space to increase inventory levels
- Incorporating FTZ area within the expanded warehouse reducing overseas delivery time



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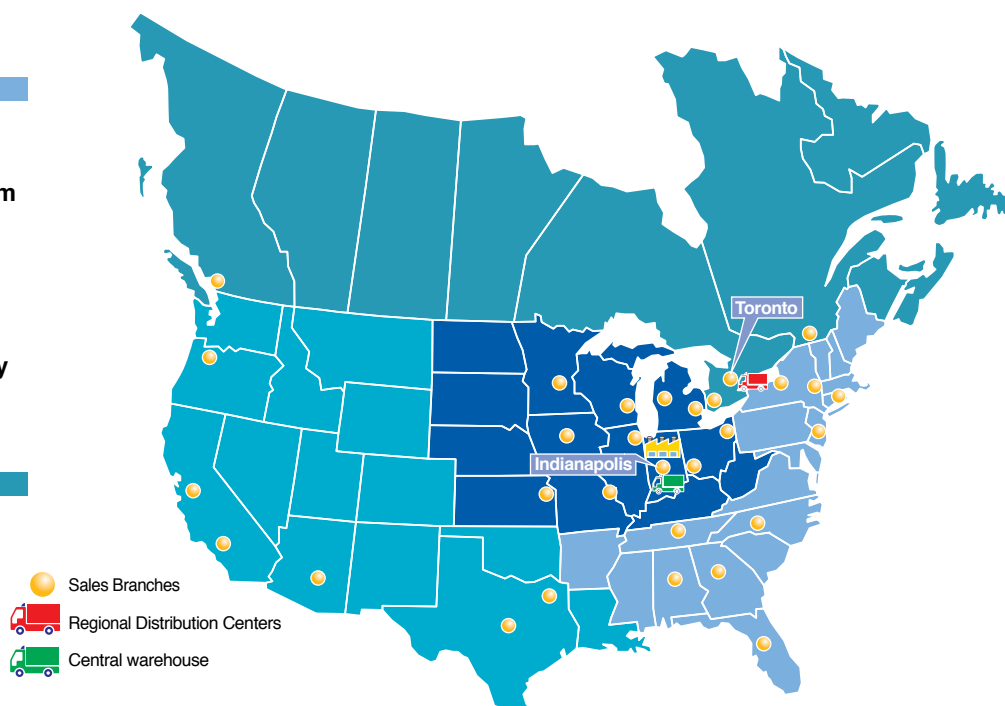
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