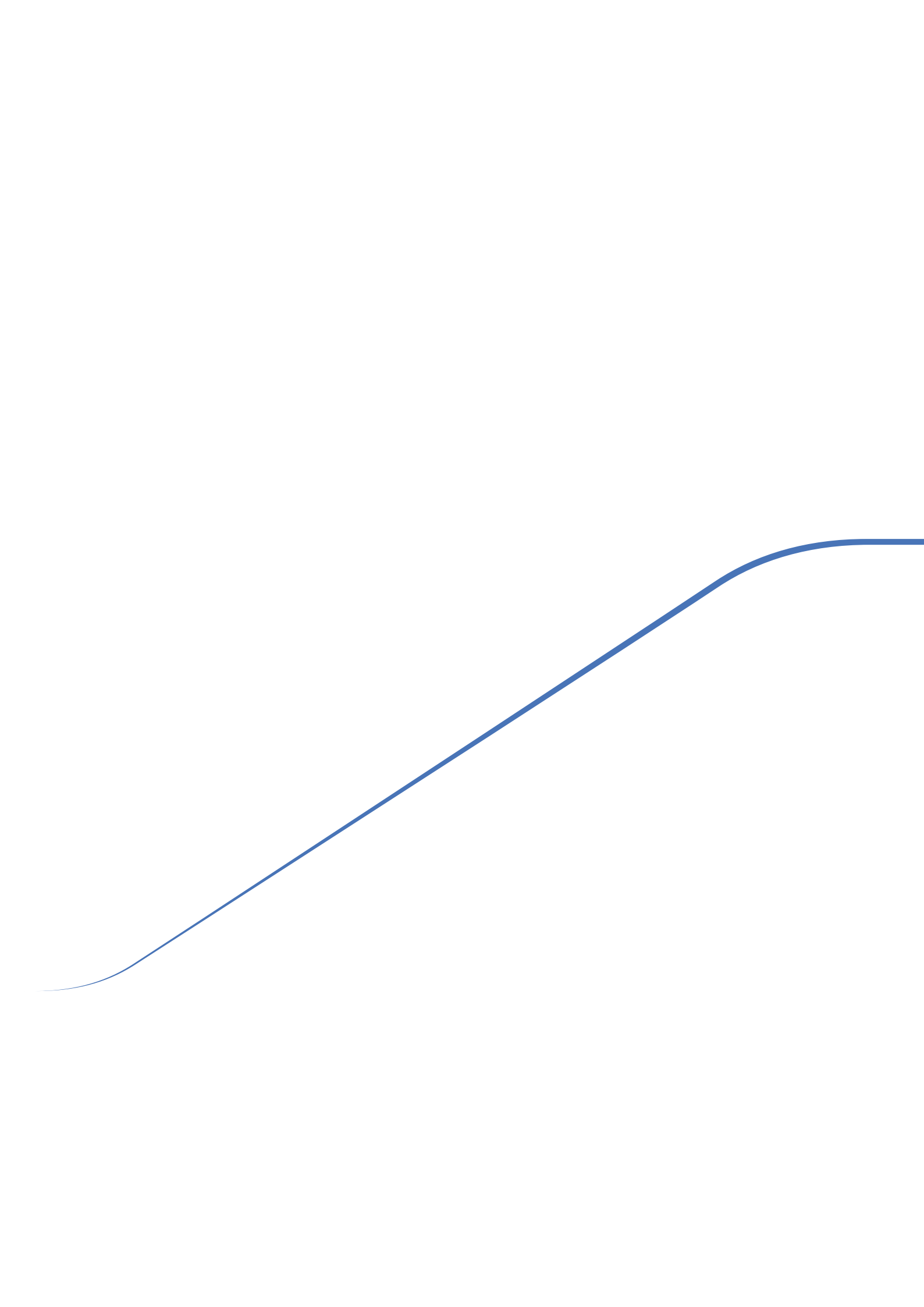




Expertise – Passion – Automation



Because it makes perfect sense
SMC sensors & switches



“Facilities that take advantage of data with Industrial communication technologies like IO-Link will help you pursue the optimisation of your processes through the increase in assets such as efficiency and obviously productivity. In those terms, digital flow and pressure sensors turn out to be an ubiquitous element as a source of that valuable information.”

Sensors

Only by knowing what is happening at your machines anytime will you be able to take decisions that will lead to the increase in the productivity and efficiency of your processes, thus leading to a good **maintenance of your installation**. Simply because you can't manage what you don't know. It makes perfect sense, doesn't it?

Maintain optimum productivity, the task of the today's ever present smart maintenance, would not be possible without sensors. Building the flexible machines that the market is demanding involves the installation of sensors that assist in information gathering.

On the other hand, efficiency nowadays is written in green. Within the 5 cornerstones which, as far as we're concerned, constitute Energy Efficiency, is monitoring. Monitoring air consumption to detect hidden energy waste. Monitoring relays, again, in sensors, because only "What gets measured, gets managed". It makes perfect sense, doesn't it?

Facilities that take advantage of data with **Industrial communication** technologies like **IO-Link** will help you pursue the optimisation of your processes through the increase in assets such as **efficiency** and obviously **productivity**. In those terms, digital flow and pressure sensors turn out to be an ubiquitous element as a source of that valuable information.

But, what can SMC's Sensors do for you?

The following pages incorporate SMC's wide range of sensing solutions designed to gather and provide you with the information you need in an easy way. Several of them are fitted with 3 screens and feature two to three colours. With the possibility of easy programming in just 3 steps, and with many additional features that will simplify your day-to-day interaction with them even more.

A variety of sensors capable of monitoring a diverse range of fluids. Pressure, vacuum and flow sensors. Sensors with rotary display to ease the reading that allow you to check the measured value while you set the sensor. Sensors with different types of outputs such as PNP/NPN, analogue (voltage/current) and IO-link.

Why an SMC Sensor? Because it makes perfect sense

General specifications

Pressure and vacuum switches main features

3 setting modes

3-step setting mode

- Threshold value setting
or
- Hysteresis value setting

Simple setting mode

- Threshold value setting
- Hysteresis value setting
- Delay time selection

Function selection mode

- Output mode selection
- Selection of normal or reversed
- Threshold value setting
- Hysteresis value setting
- Delay time selection
- Display colour selection

Simple

Settings

Higher function

3-colour display



Enjoy IO-Link advantages

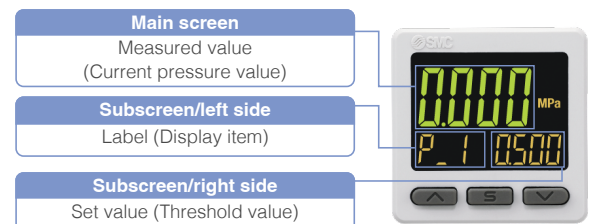
- Remote configuration
- Diagnosis
- Reduce wiring
- Easy sensor replacement
- Tamper free.

Simple 3-step setting



3-screen display

While checking the measured value, setting is possible Subscreen (label) shows the item to be set.



Flow switches main features

Flow ratio 100:1

Wide range of flow measurement with one product.

3-colour display



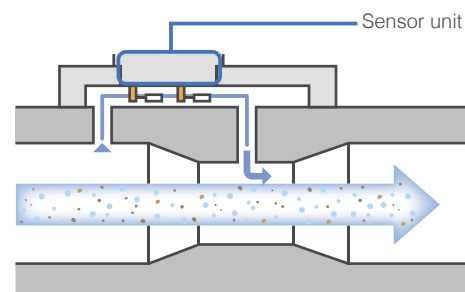
Rotary display

To ease the reading










By-pass structure to improve the product life




Reduced contact of moist air and foreign matter with the sensor.



Pressure switches portfolio

	Applicable fluid	Rated pressure range	Output type	Enclosure	Piping	Functions
Integrated type						
<div><div>ZSE10(F)/ISE10</div><div></div></div>	Air	0.0 to -101.0 kPa, -100.0 to 100.0 kPa, -0.100 to 1.0 MPa	NPN/PNP open collector Analogue output (Voltage)	IP40	M5 female thread 1/8 (R, NPT)	3 step setting Copy function Power saving mode Anti-chattering Display value fine adjustment Setting of security code Panel mount
<div><div>ZSE20(F)/ISE20</div><div></div></div>			NPN/PNP open collector 1 output		M5 female thread 1/8 (R, NPT) Ø 4, Ø 6 and Ø 1/4 inch one touch fittings (straight and elbow types)	3-screen display 3 step setting Power saving mode Anti-chattering Display value fine adjustment Setting of security code Panel mount
<div><div>ZSE20A(F)/ISE20A</div><div></div></div>			NPN/PNP open collector 2 outputs Analogue output (Voltage/Current)		M5 female thread 1/8 (R, NPT) Ø 4 and Ø 6 elbow type one touch fittings	3-screen display 3 step setting Copy function Auto shift Power saving mode Anti-chattering Display value fine adjustment Setting of security code Panel mount
<div><div>ZSE20B(F)/ISE20B</div><div></div></div>						
<div><div>ZSE20B(F)-L/ISE20B-L</div><div></div></div>						
<div><div>ZSE20C(F)/ISE20C(H)</div><div></div></div>	General fluids	-100.0 to 100.0 kPa, 0.0 to -101.0 kPa, -0.100 to 1.0 MPa, -0.100 to 2.0 MPa	NPN/PNP open collector 2 outputs Analogue output (Voltage/Current)	IP65	1/8 (Rc) 1/4 (R, NPT, G) ¹⁾ 1/4 (URJ ²⁾ , TSJ) ³⁾	3-screen display 3 step setting Copy function Auto shift Power saving mode Anti-chattering Display value fine adjustment Setting of security code Panel mount
<div><div>ZSE20C(F)-L/ISE20C(H)-L</div><div></div></div>			IO-Link/Switch: 1 output ← (PNP or NPN switching type for switch output)			3-screen display 3 step setting Auto shift Power saving mode Anti-chattering Display value fine adjustment Setting of security code Panel mount

	Applicable fluid	Rated pressure range	Output type	Enclosure	Piping	Functions
Integrated type						
<div>ISE70/71</div> <div></div>	Air	0 to 1.0 MPa, 0 to 1.6 MPa	2 outputs (IO-Link: Switch output 1 + Switch output 2 Switch output: NPN or PNP switching type Open collector	IP67	1/4 (Rc, NPT, G) ⁴⁾	3-screen display 3 step setting Power saving mode Anti-chattering Display value fine adjustment Setting of security code
<div>ISE7□G/79S</div> <div></div>	General fluids	0 to 1.0 MPa, 0 to 2.0 MPa, 0 to 5.0 MPa, 0 to 10.0 MPa 0 to 16 MPa 0 to 50 MPa				
Gap checker						
<div>ISA3</div> <div></div>	Dry air	Rated distance range: 0.01 to 0.03 mm (F type) 0.02 to 0.15 mm (G type) 0.05 to 0.30 mm (H type)	NPN/PNP open collector 1 output	IP67	Supply side: 1/8 (Rc) (Type C), 1/8 (G) ⁴⁾ (Type F) Detection side: Ø 4, Ø 6 (Type C), 1/8 (G) ⁴⁾ (Type F)	3 step setting Display value fine adjustment Setting of security code
<div>ISA3-L</div> <div></div>			IO-Link: Switch output 1 + Switch output 2 (Switch output: NPN or PNP switching type)			3-step setting Display OFF mode Display colour Unit selection function Setting of security code Display value fine adjustment Forced output Zero-clear of pressure value
Remote sensor						
<div>PSE570</div> <div></div>	General fluids	0 to 1 MPa, -100 to 100 kPa, 0 to 500 kPa, 0 to 2 MPa, 0 to 5 MPa, 0 to 10 MPa	Analogue output (Voltage/Current)	IP65	1/8 (R) ¹⁾ 1/4 (R) ¹⁾	—
<div>PSE530</div> <div></div>	Air	0 to 1 MPa, 0 to -101 kPa, 0 to 101 kPa, -101 to 101 kPa	Analogue output (Voltage)	IP40	M5 Ø 6 (Reducer) 1/4" (Reducer)	

	Applicable fluid	Rated pressure range	Output type	Enclosure	Piping	Functions
Monitor						
PSE300AC 	—	Set pressure range: -0.2 to 2.1 kPa, 10 to -105 kPa, -105 to 105 kPa, -10 to 105 kPa, -50 to 525 kPa, -0.105 to 1.05 MPa, -0.105 to 2.1 MPa, -0.1 to 5.25 MPa, -0.1 to 10.5 MPa	NPN or PNP switching type open collector 2 outputs	IP65	—	3-screen display 3 step setting Power saving mode Anti-chattering Display value fine adjustment Setting of security code
PSE300A 		Set pressure range: -0.2 to 2.1 kPa, 10 to -105 kPa, -105 to 105 kPa, -10 to 105 kPa, -50 to 525 kPa, -0.105 to 1.05 MPa, -0.105 to 2.1 MPa, -0.25 to 5.25 MPa, -0.50 to 10.5 MPa	NPN or PNP switching type open collector 2 outputs + Analogue voltage NPN or PNP switching type open collector 2 outputs + Analogue current	IP40		Copy function 3-step setting Power saving mode Anti-chattering Snap shot function Analogue free span Setting of security code Auto-preset Display value fine adjustment Peak/bottom value indication function Key-lock
PSE200A 		Set pressure range: -0.2 to 2.1 kPa, 10 to -105 kPa, -105 to 105 kPa, -10 to 105 kPa, -50 to 525 kPa, -0.105 to 1.05 MPa, -0.105 to 2.1 MPa, -0.25 to 5.25 MPa, -0.50 to 10.5 MPa	NPN/PNP 5 outputs IO-Link + NPN/PNP 4 outputs	Front face: IP65 (Others: IP40)		Auto-preset Display value fine adjustment Peak/bottom value indication Key-lock Zero-clear Error display Anti-chattering Pressure range/Unit selection Power saving mode Setting of security code Auto-shift Differential pressure check mode Channel to channel copy Channel selection Channel scan

- 1) M5 female threaded.
- 2) Face seal fitting.
- 3) Compression fitting.
- 4) Conforming to ISO 1179-1.

Flow switches portfolio

	Applicable fluid	Rated flow range [l/min]	Output type	Enclosure	Piping	Functions
Integrated type						
PF3A7□H large flow 	Air, N ₂	30 to 3000, 60 to 6000, 120 to 12000	NPN/PNP open collector Accumulated pulse output Analogue output (Voltage/Current) IO-Link	IP65	1, 1 1/2, 2 (Rc, NPT, G) ²⁾	Rotary reversible display Bypass structure Grease-free Setting of security code
PF3A7□H modular and PF3A8□H 		10 to 1000, 20 to 2000			Modular (AC30-D and AW30-D for 10 to 1000 l/min, AC40-D and AW40-D for 20 to 2000 l/min)	Rotary reversible display Bypass structure Grease-free Setting of security code Temperature and pressure sensor integrated (PF3A8□H)
PF2MC7 	Dry air, N ₂	5 to 500, 10 to 1000, 20 to 2000			1/2, 3/4 (Rc, NPT, G) ³⁾	Rotary display Bypass structure Grease-free Setting of security code
PFM7 	Dry air, N ₂ , Ar, CO ₂	0.2 to 10, 0.5 to 25, 1 to 50, 2 to 100	NPN/PNP open collector Accumulated pulse output Analogue output (Voltage/Current)	IP40	1/8, 1/4 (Rc, NPT, G) ¹⁾ Ø 4 (5/32"), Ø 6, Ø 8 (5/16"), Ø 1/4"	Flow adjustment valve Grease-free Power-saving mode Setting of security code
PFMB 	Dry air, N ₂	5 to 500, 10 to 1000, 20 to 2000			1/4 (Rc, NPT, G) ²⁾ Ø 8 (5/16"), Ø 1/4" 1/2, 3/4, (Rc, NPT, G) ³⁾	Flow adjustment valve Reversible display Bypass structure Grease-free Setting of security code
PF2M7 	Dry air, N ₂ , Ar, CO ₂	0.01 to 1, 0.02 to 2, 0.05 to 5, 0.1 to 10, 0.2 to 25, 0.5 to 50, 1 to 100, 2 to 200	NPN/PNP open collector Accumulated pulse output Analogue output (Voltage/Current) IO-Link		1/8, 1/4 (Rc, NPT, G) ¹⁾ Ø 4 (5/32"), Ø 6, Ø 8 (5/16"), Ø 1/4"	Flow adjustment valve Grease-free Power-saving mode Setting of security code
PF3W7 	Water, ethylene glycol, aqueous solution	0.5 to 4, 2 to 16, 5 to 40, 10 to 100, 50 to 250	NPN/PNP open collector Accumulated pulse output Analogue output (Voltage/Current)	IP65	3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2 (Rc, NPT, G) ³⁾	Flow adjustment valve Rotary display Grease-free Power-saving mode Setting of security code

	Applicable fluid	Rated flow range [l/min]	Output type	Enclosure	Piping	Functions
Integrated type						
 PF3W7 (PVC piping type)	Water, deionized water, chemical liquids	10 to 100, 30 to 250	NPN/PNP open collector Accumulated pulse output Analogue output (Voltage/Current)	IP65	25A, 30A	Rotary display Grease-free Power-saving mode Setting of security code
 PF3W7□-Z/L	Water, ethylene glycol, aqueous solution	0.5 to 4, 2 to 16, 5 to 40, 10 to 100, 50 to 250 ⁴⁾	NPN/PNP open collector 1 output IO-Link Analogue output (Voltage/Current), Accumulated pulse output		3/8, 1/2, 3/4, 1 (Rc, NPT, G) ³⁾	
 PF3WB/C/S/R		0.5 to 4, 2 to 16, 5 to 40	NPN/PNP open collector Analogue output (Voltage/Current) IO-Link		Rc, NPT, G	
 LFE	Water, water-soluble coolant	0.5 to 20, 2.5 to 100, 5 to 200	NPN/PNP open collector Analogue output (Voltage/Current)		3/8, 1/2, 3/4, 1 (Rc, NPT, G)	
Remote type						
 PFMV	Dry air, N ₂	0 to 0.5, 0 to 1, 0 to 3, -0.5 to 0.5, -1 to 1, -3 to 3	Analogue output (Voltage)	IP40	M5	Grease-free
 PFM5	Dry air, N ₂ , Ar, CO ₂	0.2 to 10, 0.5 to 25, 1 to 50, 2 to 100	Analogue output (Voltage/Current)		1/8, 1/4 (Rc, NPT, G) ¹⁾ Ø 4 (5/32"), Ø 6, Ø 8 (5/16"), Ø 1/4"	Flow adjustment valve Grease-free

1) Conforming to ISO 228-1.

2) Conforming to ISO 1179-1.

3) Conforming to ISO 228.

4) Only for IO-Link compatible version

	Applicable fluid	Rated flow range [l/min]	Output type	Enclosure	Piping	Functions
Remote type						
PF3W5 	Water, ethylene glycol, aqueous solution	0.5 to 4, 2 to 16, 5 to 40, 10 to 100, 50 to 250	Analogue output (Voltage/Current)	IP65	3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2 (Rc, NPT, G) ³⁾	Flow adjustment valve Grease-free
PF3W5 (PVC piping type) 	Water, deionized water, chemical liquids	10 to 100, 30 to 250			25A, 30A	Grease-free
PF3W5-Z 	Water, ethylene glycol, aqueous solution	0.5 to 4, 2 to 16, 5 to 40, 10 to 100			3/8, 1/2, 3/4, 1 (Rc, NPT, G) ³⁾	
LFE 	Water, water-soluble coolant	0.5 to 20, 2.5 to 100, 5 to 200			3/8, 1/2, 3/4, 1 (Rc, NPT, G)	—
Monitor						
PFG300 	—	Up to 12000 l/min	NPN/PNP open collector 2 outputs Analogue output (Voltage/Current)	IP40	—	Setting of security code
PFG200 		Up to 500 l/min	NPN/PNP open collector 5 outputs Accumulated pulse output IO-Link	IP65 (front face), IP40 (rest)		Peak/Bottom value indication Key-lock External input Error display Delay time setting Zero-cut setting Selection of power-saving mode Setting of security code Accumulated value hold Snap shot Output check function Channel to channel copy Channel select Channel scan

Pressure switches

Integrated type

Compact digital pressure switch




⊕ ZSE10/ISE10 Series

- Applicable fluids: Air, non-corrosive gas, non-flammable gas
- Rated pressure range: -100 kPa to 1 MPa
- 1-colour 1-screen display
- Repeatability: ± 0.2 % F.S. ± 1 digit
- Outputs: 2 x NPN/PNP or NPN/PNP + analogue (voltage)
- Enclosure: IP40.



Selected part numbers

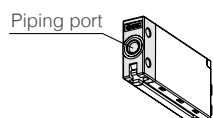
● Stocked items

Part number	Rated pressure range	Connection port	Switch output	Voltage [VDC]
ISE10-M5-B-G 	Positive pressure: -0.1~1.0 MPa	M5 female, side/rear ported (also available with R1/8 and NPT 1/8)	2 PNP	12~24
ISE10-M5-E-G			PNP + (1 - 5 V)	
ISE10-M5R-B-G ¹⁾			2 PNP	
ISE10-M5R-E-G ¹⁾			PNP + (1 - 5 V)	
ZSE10-M5-B-G 	Vacuum pressure 0 ~ -101 kPa		2 PNP	
ZSE10-M5-E-G			PNP + (1 - 5 V)	
ZSE10-M5R-B-G ¹⁾			2 PNP	
ZSE10-M5R-E-G ¹⁾			PNP + (1 - 5 V)	
ZSE10F-M5-B-G 	Vacuum + low pressure -100 ~ +100 kPa		2 PNP	
ZSE10F-M5-E-G			PNP + (1 - 5 V)	
ZSE10F-M5R-B-G ¹⁾			2 PNP	
ZSE10F-M5R-E-G ¹⁾			PNP + (1 - 5 V)	

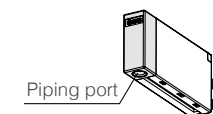
NPN options available upon request.

1) Rear ported

M5 female thread/side ported

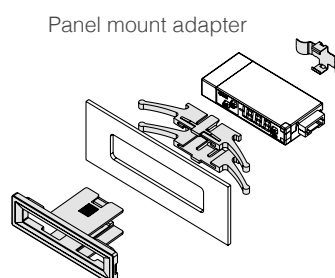


M5 female thread/Rear ported



Mounting accessories

Part number	Description
ZS-39-B	Panel mount adapter
ZS-39-R	DIN rail adapter
ZS-39-5G	Lead wire with connector (with connector cover) (5 cores, 2 m)



High-precision digital pressure switch






⊕ ZSE20□(F)/ISE20□ Series



- Applicable fluids: air, non-corrosive gas, non-flammable gas or general fluids
- Rated pressure range: -100 kPa to 2 MPa
- 3-colour 3-screen display
- Repeatability: $\pm 0.2\%$ F.S. ± 1 digit
- Outputs: NPN/PNP, analogue (Voltage/Current), IO-Link
- Enclosure: IP40 or IP65
- Consumption: 35 mA or less.

Selected part numbers

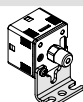
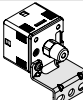
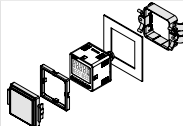
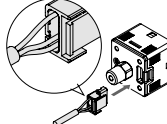
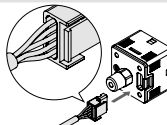
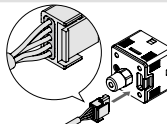


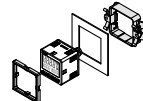
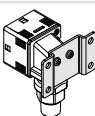
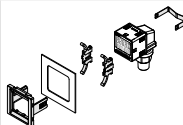
● Stocked items

Model	Part number	Rated pressure range	Piping	Output	Applicable fluid	Enclosure		
	ISE20-P-01-L ● ¹⁾	-0.1 to 1 MPa	R1/8 Piping adapter	PNP open collector 1 output	Air, non-corrosive gas, non-flammable gas	IP40		
	ZSE20-P-01-L ● ¹⁾	0 to -101 kPa						
	ZSE20F-P-01	-100 to 100 kPa						
	ISE20A-T-01	-0.1 to 1 MPa		PNP open collector 2 outputs + Analogue voltage output				
	ZSE20AF-T-01	-100 to 100 kPa						
	ZSE20A-T-01	0 to -1 01 kPa						
	ISE20A-V-01	-0.1 to 1 MPa		PNP open collector 2 outputs + Analogue current output				
	ZSE20AF-V-01	-100 to 100 kPa						
	ZSE20A-V-01	0 to -101 kPa				PNP open collector 2 outputs + Analogue voltage output		
	ISE20B-T-01	-0.1 to 1 MPa				PNP open collector 2 outputs + Analogue current output		
	ZSE20BF-T-01	-100 to 100 kPa						
	ZSE20B-T-01	0 to -101 kPa						
	ISE20B-V-01	-0.1 to 1 MPa						
	ZSE20BF-V-01	-100 to 100 kPa						
	ZSE20B-V-01	0 to -101 kPa						
	ISE20B-L-01 ●	-0.1 to 1 MPa				IO-Link/Switch: 1 output		
	ZSE20BF-L-01	-100 to 100 kPa						
	ZSE20B-L-01 ●	0 to -101 kPa		G1/4 (M5 female thread)				
	ISE20C-T-F02	-0.1 to 1 MPa	PNP open collector 2 outputs + Analogue voltage output					
	ISE20CH-T-F02	-0.1 to 2 MPa						
	ZSE20CF-T-F02 ●	-100 to 100 kPa						
	ZSE20C-T-F02	0 to -101 kPa						
	ISE20C-V-F02	-0.1 to 1 MPa	PNP open collector 2 outputs + Analogue current output					
	ISE20CH-V-F02	-0.1 to 2 MPa						
	ZSE20CF-V-F02 ●	-100 to 100 kPa						
	ZSE20C-V-F02	0 to -101 kPa						
	ISE20C-L-F02	-0.1 to 1 MPa	IO-Link/Switch: 1 output					
	ISE20CH-L-F02	-0.1 to 2 MPa						
	ZSE20C-L-F02	0 to -101 kPa						
ZSE20CF-L-F02	-100 to 100 kPa							

1) With lead wire with connector.

2) NPN options and copy function available upon request.

Accessories

Part number	Description	Model
 ZS-46-A1	Bracket A - Tapping screw: Nominal size 3 x 8 L	All
 ZS-46-A2	Bracket B - Tapping screw: Nominal size 3 x 8 L	Z/ISE20, Z/ISE20A, Z/ISE20B
 ZS-46-D	Panel mount adapter + Front protection cover (Rear ported)	All
 ZS-46-3L	Lead wire with connector (3-core, 2 m, Non-waterproof)	Z/ISE20
ZS-46-5LM12	Lead Wire M12 Connector. Non-waterproof	Z/ISE20, Z/ISE20A
ZS-46-5FM12	Lead Wire M12 Connector. Waterproof	Z/ISE20B(-L), Z/ISE20C
 ZS-46-5L	Lead wire with connector (5-core, 2 m lead wire)	Z/ISE20A
 ZS-46-5F	Lead wire with connector (5-core, 2 m, Waterproof)	Z/ISE20B, Z/ISE20C
 ZS-46-N1	R1/8 piping adapter	Z/ISE20, Z/ISE20A, Z/ISE20B
 ZS-46-N2	NPT1/8 piping adapter	
 ZS-46-B	Panel mount adapter	
 ZS-46-E	Bracket C - For bottom ported/Tapping screw: Nominal size 3 x 10 L (2 pcs.)	Z/ISE20C
 ZS-35-B	Panel mount adapter (Bottom ported)	
 ZS-35-E	Panel mount adapter + Front protection cover	
ZS-27-01	Front protection cover (Rear ported)	Z/ISE20, Z/ISE20A, Z/ISE20B
ZS-35-01	Front protection cover (Bottom ported)	Z/ISE20C
ZS-46-C4H	One-touch fitting Ø 4 mm straight	Z/ISE20, Z/ISE20A
ZS-46-C6H	One-touch fitting Ø 6 mm straight	
ZS-46-N7H	One-touch fitting Ø 1/4 inch straight	
ZS-46-C4L	One-touch fitting Ø 4 mm elbow	Z/ISE20, Z/ISE20A, Z/ISE20B
ZS-46-C6L	One-touch fitting Ø 6 mm elbow	
ZS-46-N7L	One-touch fitting Ø 1/4 inch elbow	Z/ISE20, Z/ISE20A

High-precision digital pressure switch

⊕ ISE7□/7□G/79S Series



- Applicable fluids: Air or general fluids
- Rated pressure range: 0 to 50 MPa
- 3-colour 3-screen angled display with 336° rotation possible after installation
- Repeatability: ± 0.5 % F.S or less
- Outputs: IO-Link and NPN/PNP
- Enclosure: IP67
- Consumption: 35 mA or less.


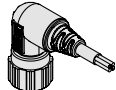
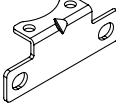

Selected part numbers

● Stocked items

Part number	Rated pressure range [MPa]	Applicable fluid	Piping	Output	Response time
ISE70-F02-L2 ●	0 to 1	Air, non-corrosive gas, non-flammable gas	G1/4 ¹⁾	IO-Link: Switch output 1 + Switch output 2 (Switch output: NPN or PNP switching type)	1.5 ms or less, variable from 0 to 60 s/0.01 s increments
ISE71-F02-L2 ●	0 to 1.6				Liquid or gas that will not corrode materials of parts in contact with fluid
ISE70G-F02-L2 ●	0 to 1				
ISE75G-F02-L2 ●	0 to 2				
ISE76G-F02-L2 ●	0 to 5				
ISE77G-F02-L2 ●	0 to 10				
ISE78G-F02-L2 ●	0 to 16				
ISE79S-F02-L2 ●	0 to 50				

1) ISO 1179-1 compliant.

Accessories

Part number	Description	
ZS-31-B	Lead wire with M12 connector: Straight Lead wire length: 5 m	
ZS-31-C	Lead wire with M12 connector: Right-angled Lead wire length: 5 m	
ZS-50-A	Interchangeable with ISE70 and ISE75(H) With 2 mounting screws (M4 x 6L)	
ZS-50-B	With 2 mounting screws (M4 x 6L)	

Gap checker

Digital gap checker

⊕ ISA3/ISA3-L Series



- Applicable fluids: Dry air (filtered through a 5 µm filter)
- Rated distance range: 0.01 to 0.30 mm
- 2-colour 2-screen display
- Repeatability: ±0.5 % F.S. ±1 digit
- Outputs: NPN/PNP, IO-Link
- Enclosure: IP67
- Consumption: 25 mA or less
- Manifold available with or without unit control.

Selected part numbers

● Stocked items

Part number	Type	Rated distance range [mm]	Port size	Operating pressure range [kPa]	Output specification	Voltage [VDC]
ISA3-GFP-1N ●	1 station Without control unit	0.02 to 0.15	G1/8	100 to 200	1 PNP	24
ISA3-HFP-1N ●		0.05 to 0.30				
ISA3-FFP-1N		0.01 to 0.03				
ISA3-FFL-1	1 station with straight cable Without control unit	0.02 to 0.15			IO-Link: Switch output 1 + Switch output 2 (Switch output: NPN or PNP switching type)	24 (when used as a switch output device) 18 to 30 (when used as an IO-Link device)
ISA3-GFL-1		0.05 to 0.30				
ISA3-HFL-1		0.05 to 0.30				

Accessories

Part number	Description
ISA-14	Bracket
ISA-12-C	Threaded plug with seal (G1/8)
ISA-5-□	DIN rail (□ number of stations)
ZS-31-C	Cable with connector (right angle 5 m)
ISA-19-□	Centralised lead wire (□ number of stations)
ISA-21-□	Centralised lead wire (□ number of stations) (IO-Link)

Control unit

Part number	Description
AR20-F02G-1-B	Regulator with round type pressure gauge
AR20-F02E-1-B	Regulator with square embedded type pressure gauge
VX210ZZ2AX276	2 port solenoid valve (24 VDC)
ISA-17	Bracket (when control unit fitted)
Y200T-A	Spacer with bracket
E210-U01	Modular adapter
ISA-18	Spacer ¹⁾

1) When a 2 port solenoid valve is connected to the right.

Remote type

Pressure sensor for general fluids

⊕ PSE570 Series



- Applicable fluids: Gas or liquid that will not corrode materials of parts in contact with fluid
- Rated pressure range: -100 kPa to 10 MPa
- Linearity: ± 0.5 % F.S or less
- Outputs: Analogue (voltage/current)
- Enclosure: IP65
- Consumption: 10 mA or less
- M12 connector for wiring.

Selected part numbers

● Stocked items

Part Number	Port Size	Pressure range	Output signal	Voltage [VDC]
PSE570-□ ●	01, 02	Positive pressure [0 to 1 MPa]	Voltage output type 1 to 5 V	12 ~ 24
PSE570-□-28 ●			Current output type 4 to 20 mA	
PSE573-□		Compound pressure [-100 to 100 kPa]	Voltage output type 1 to 5 V	
PSE573-□-28 ●			Current output type 4 to 20 mA	
PSE574-□ ●	02	Positive pressure [0 to 500 kPa]	Voltage output type 1 to 5 V	
PSE574-□-28 ●			Current output type 4 to 20 mA	
PSE575-□		Positive pressure [0 to 2 MPa]	Voltage output type 1 to 5 V	
PSE575-□-28			Current output type 4 to 20 mA	
PSE576-□		Positive pressure [0 to 5 MPa]	Voltage output type 1 to 5 V	
PSE576-□-28			Current output type 4 to 20 mA	
PSE577-□		Positive pressure [0 to 10 MPa]	Voltage output type 1 to 5 V	
PSE577-□-28			Current output type 4 to 20 mA	

□ Port sizes

01 ¹⁾	R1/8 (with M5 female thread)
02	R1/4 (with M5 female thread)

1) Only for PSE570/3/4.

Compact pneumatic pressure sensor

⊕ PSE530 Series



- Applicable fluids: Air, non-corrosive gas, non-flammable gas
- Rated pressure range: -101 kPa to 1 MPa
- Linearity: ± 1 % F.S or less
- Outputs: Analogue (voltage)
- Enclosure: IP40
- Consumption: 15 mA or less.

Selected part numbers

● Stocked items

Part number	Connection thread	Pressure range	Output signal [V]
PSE530-M5 ●	M5	0 ~ 1 MPa	Analogue 1 ~ 5
PSE531-M5 ●		0 ~ -101 kPa	
PSE532-M5 ●		0 ~ 101 kPa	
PSE533-M5 ●		-101 ~ 101 kPa	

Monitor

Sensor monitor

⊕ PSE300AC Series



- 3-colour 3-screen display
- Inputs: Analogue (1 - 5 VDC or 4 - 20 mA)
- Outputs: NPN/PNP
- Repeatability: ± 0.1 % F.S. \pm Min. display unit
- Enclosure: IP65
- Consumption: 25 mA or less
- M12 connector for wiring.

Selected part numbers

Part number	Input	Switch output	Response time	Unit specification
PSE300AC-AB	Voltage	2 output (NPN or PNP switching type)	1 ms or less (with anti-chattering function: 20, 100, 500, 1000, 2000, 5000 ms)	With unit selection function
PSE310AC-AB	Current			

Accessories

Part number	Description
ZS-31-B	Power supply/ output lead wire - Straight type 5 m
ZS-31-C	Power supply/ output lead wire - Right angle type 5 m
PCA-1557743	Assembly type connector

Digital pressure sensor monitor

⊕ PSE300A Series



- 3-colour 3-screen display
- Inputs: Analogue (1 - 5 VDC or 4 - 20 mA)
- Outputs: NPN/PNP
- Repeatability: ± 0.1 % F.S. ± 1 digit
- Enclosure: IP40
- Analogue response time: 50 ms or less
- Applicable sensors: PSE53□, 54□, 550, 56□, 57□.

Selected part numbers

Part number	Input	Switch output
PSE303A-LC	Voltage	PNP/NPN open collector 2 outputs + Analogue voltage
PSE304A-LC		PNP/NPN open collector 2 outputs + Analogue current
PSE306A-LC		PNP/NPN open collector 2 outputs + Copy function
PSE313A-LC	Current	PNP/NPN open collector 2 outputs + Analogue voltage
PSE314A-LC		PNP/NPN open collector 2 outputs + Analogue current
PSE316A-LC		PNP/NPN open collector 2 outputs + Copy function

Including supply cable and sensor connector.

Accessories

Part number	Description
ZS-46-A1	Bracket for PSE300A
ZS-46-B	Panel mount adapter
ZS-46-D	Panel mount adapter + Front protection cover

Part number	Description
ZS-46-5L	Lead wire with connector
ZS-27-01	Front protection cover
ZS-28-C ¹⁾	Sensor connector
ZS-28-CA-4 ²⁾	Sensor connector

1) Not available for PSE57□.

2) Only for PSE57□.

Multi-channel digital pressure sensor monitor

⊕ PSE200A Series



- 3-colour 3-screen display
- Inputs: Any sensor (if consumption is less than 50 mA and output is 1 - 5 VDC)
- Outputs: IO-Link, NPN/PNP
- 4-channel monitor (4 inputs, 5 outputs)
- Repeatability: ± 0.1 % F.S. ± 1 digit
- Enclosure: IP65 (when panel-mounted), others: IP40
- IO-Link hub function available
- A single monitor can be used to monitor various applications.

Selected part numbers

Part number	Input
PSE201A-4C	PNP 5 outputs + Auto-shift input
PSE203A-4C	IO-Link + PNP 4 outputs or PNP 5 outputs (SIO mode)

Including 4 sensor connector and supply cable.

Accessories

Part number	Description
ZS-26-B	Panel mount adapter
ZS-26-C	Front protection cover + Panel mount adapter
ZS-26-D	□48 conversion adapter ¹⁾
ZS-26-01	Front protection cover

Part number	Description
ZS-28-C	Sensor connector (excludes the PSE570 series)
ZS-28-CA-4	Sensor connector for PSE570 series
ZS-26-LM12	Power supply with M12 connector/Output cable

1) This adapter is used to mount the PSE200A series on the panel fitting of the PSE100 series.

Flow switches

Digital flow switch for large flow

⊕ PF3A7□H Series



- Applicable fluid: Air and N₂
- 3-colour 2-line information display
- Flow ratio: 100:1
- Repeatability: ±1.0 % F.S.
- Outputs: IO-Link, NPN/PNP and analogue/External input
- Enclosure: IP65.

Selected part numbers

● Stocked items

Part number	Flow rate [l/min]	Port size	Output specification	Lead wire
PF3A703H-F10-ES ●	30 to 3000	G1	PNP + Analogue Voltage/External input	With lead wire and M12 connector (3 m)
PF3A703H-F10-FS ●				Without lead wire and M12 connector
PF3A703H-F10-FSN ●				With lead wire and M12 connector (3 m)
PF3A706H-F14-FS ●	60 to 6000	G1 1/2	PNP + Analogue current/External input	Without lead wire and M12 connector
PF3A706H-F14-FSN ●				With lead wire and M12 connector (3 m)
PF3A712H-F20-FS ●				Without lead wire and M12 connector
PF3A712H-F20-FSN ●	120 to 12000	G2		
PF3A703H-F10-L3	30 to 3000	G1	IO-Link: Switch output (N/P) + Analogue voltage/External input	With lead wire and M12 connector (3 m)
PF3A703H-F10-L4				
PF3A706H-F14-L3				
PF3A706H-F14-L4	60 to 6000	G1 1/2		
PF3A712H-F20-L3	120 to 12000	G2		
PF3A712H-F20-L4				

Accessories

Part number	Description
ZS-37-A	Lead wire and M12 connector. 3 m length
ZS-49-A	Lead wire with M12-M12 connector

Modular type digital flow switch



⊕ PF3A□H Series



- Applicable fluid: Air and N₂
- 3-colour 2 or 4-screen display
- Possibility of connecting, with built-in pressure and temperature sensor (PF3A8□H), to an air combination unit.
- Flow ratio: 100:1
- Repeatability: ±1.0 % F.S.
- Outputs: IO-Link, NPN/PNP and analogue/External input
- Enclosure: IP65.

Selected part numbers

● Stocked items

Part number	Flow rate [l/min]	Port size	Output specification	Lead wire	Integrated pressure & temperature sensor
PF3A701H-ES	10 to 1000	Modular, connectable to AC30-D/AW30-D	PNP + Analogue voltage/External input	With lead wire and M12 connector (3 m)	No
PF3A701H-FS			PNP + Analogue current/External input		
PF3A702H-ES	20 to 2000	Modular, connectable to AC40-D/AW40-D	PNP + Analogue voltage/External input		
PF3A702H-FS			PNP + Analogue current/External input		
PF3A701H-L3	10 to 1000	Modular, connectable to AC30-D/AW30-D	IO-Link: Switch output (N/P)/ Analogue voltage output External input		
PF3A701H-L4					
PF3A702H-L3	20 to 2000	Modular, connectable to AC40-D/AW40-D			
PF3A702H-L4					
PF3A801H-L2 	10 to 1000	Modular, connectable to AC30-D/AW30-D	IO-Link/Switch output (N/P)		Yes
PF3A802H-L2 	20 to 2000	Modular, connectable to AC40-D/AW40-D			

Accessories

Part number	Description
ZS-37-A	Lead wire and M12 connector. 3 m length
ZS-49-A	Lead wire with M12-M12 connector. 3 m length

Digital flow switch




PF2MC7 Series



- Applicable fluid: Air and N₂
- Rated flow range: 5 to 2000 l/min
- 3-colour 3-screen display
- Flow ratio: 100:1
- Repeatability: ±1.0 % F.S.
- Outputs: IO-Link, NPN/PNP and analogue/external input
- Enclosure: IP65.

Selected part numbers

● Stocked items

Part number	Flow rate [l/min]	Connection	Output specification	Lead wire	
PF2MC7501-F04-B	5 to 500	G1/2	PNP + PNP/External input	With lead wire and M8 connector (3 m)	
PF2MC7501-F04-E			PNP + Analogue voltage		
PF2MC7501-F04-F			PNP + Analogue current		
PF2MC7102-F04-B	10 to 1000		PNP + PNP/External input		
PF2MC7102-F04-E			PNP + Analogue voltage		
PF2MC7102-F04-F			PNP + Analogue current		
PF2MC7202-F06-B	20 to 2000	G3/4	PNP + PNP/External input		
PF2MC7202-F06-E			PNP + Analogue voltage		
PF2MC7202-F06-F			PNP + Analogue current		
PF2MC7501-F04-L3	5 to 500	G1/2	IO-Link/Switch output (N/P) + Analogue voltage		
PF2MC7501-F04-L4 			IO-Link/Switch output (N/P) + Analogue current		
PF2MC7102-F04-L3	10 to 1000		IO-Link/Switch output (N/P) + Analogue voltage		
PF2MC7102-F04-L4 			IO-Link/Switch output (N/P) + Analogue current		
PF2MC7202-F06-L3	20 to 2000	G3/4	IO-Link/Switch output (N/P) + Analogue voltage		
PF2MC7202-F06-L4 			IO-Link/Switch output (N/P) + Analogue current		

Accessories

Part number	Description
ZS-40-A	Lead wire and M8 connector. Length: 3 m
ZS-42-A	Bracket. Mounting screw for PF2MC7501/7102 (M3 x 5, 2 pcs.)
ZS-42-B	Bracket. Mounting screw for PF2MC7202 (M3 x 5, 2 pcs.)
ZS-40-M12M8-A	M12-M8 conversion leaf wire. Length: 0.1 m

Digital flow switch

⊕ PFMB Series



- Applicable fluids: Dry air and N₂
- Rated flow range: 5 to 20 l/min
- 2-colour 1-screen display
- Flow ratio: 100:1
- Repeatability: ± 1 % F.S. (± 2 % F.S. when the response time is set to 0.05 s)
- Outputs: NPN/PNP and analogue (voltage/current)
- Enclosure: IP40
- Consumption: 55 mA or less.

Selected part numbers

● Stocked items

Part number	Port size	Flow rate [l/min]	Output specification	Voltage [VDC]	Operating pressure range [MPa]
PFMB7102-F04-B ●	G1/2	10 to 1000	2 PNP	12 to 24 ± 10 %	0 to 0.8
PFMB7102-F04-E ●			PNP + Analogue 1 to 5 V		
PFMB7102-F04-F ●			PNP + Analogue 4 to 20 mA		
PFMB7202-F06-B ●	G3/4	20 to 2000	2 PNP		
PFMB7202-F06-E ●			PNP + Analogue 1 to 5 V		
PFMB7202-F06-F ●			PNP + Analogue 4 to 20 mA		
PFMB7501-F04-B ●	G1/2	5 to 500	2 PNP		
PFMB7501-F04-E ●			PNP + Analogue 1 to 5 V		
PFMB7501-F04-F ●			PNP + Analogue 4 to 20 mA		

Accessories

Part number	Description
ZS-42-C	Bracket for PFMB7501/7102
ZS-42-D	Bracket for PFMB7202

Digital flow switch

⊕ PF2M7 Series

- Applicable fluid: Dry air, N₂, Ar, CO₂
- Rated flow range: 0.01 to 200 l/min
- 2-colour 1-screen display
- Flow ratio: 100:1
- Repeatability: ±1.0 % F.S.
- Outputs: IO-Link, NPN/PNP and analogue/external input
- Enclosure: IP40.



Selected part numbers

● Stocked items

Part number	Flow rate: Dry air, N ₂ , Ar [l/min]	Flow rate: CO ₂ [l/min]	Port size	Output specification	Lead wire
PF2M701-C4-E	0.01 to 1	0.01 to 0.5	Ø 4	PNP + Analogue voltage	With lead wire with connector (2 m)
PF2M701-C4-F				PNP + Analogue current	
PF2M702-C4-E	0.02 to 2	0.02 to 1	Ø 4	PNP + Analogue voltage	
PF2M702-C4-F				PNP + Analogue current	
PF2M705-C6-E	0.05 to 5	0.05 to 2.5	Ø 6	PNP + Analogue voltage	
PF2M705-C6-F				PNP + Analogue current	
PF2M710-C6-E ●	0.1 to 10	0.1 to 5	Ø 6	PNP + Analogue voltage	
PF2M710-C6-F ●				PNP + Analogue current	
PF2M725-C6-E	0.3 to 25	0.3 to 12.5	Ø 6	PNP + Analogue voltage	
PF2M725-C6-F				PNP + Analogue current	
PF2M750-C6-E	0.5 to 50	0.5 to 25	Ø 6	PNP + Analogue voltage	
PF2M750-C6-F ●				PNP + Analogue current	
PF2M711-C8-E ●	1 to 100	1 to 50	Ø 8	PNP + Analogue voltage	
PF2M711-C8-F				PNP + Analogue current	
PF2M721-C8-E	2 to 200	2 to 100	Ø 8	PNP + Analogue voltage	
PF2M721-C8-F				PNP + Analogue current	
PF2M701-C4-L3	0.01 to 1	0.01 to 0.5	Ø 4	IO-Link/NPN/PNP + Analogue voltage	
PF2M701-C4-L4				IO-Link/NPN/PNP + Analogue current	
PF2M702-C4-L3	0.02 to 2	0.02 to 1	Ø 4	IO-Link/NPN/PNP + Analogue voltage	
PF2M702-C4-L4				IO-Link/NPN/PNP + Analogue current	
PF2M705-C6-L3	0.05 to 5	0.05 to 2.5	Ø 6	IO-Link/NPN/PNP + Analogue voltage	
PF2M705-C6-L4 ●				IO-Link/NPN/PNP + Analogue current	
PF2M710-C6-L3	0.1 to 10	0.1 to 5	Ø 6	IO-Link/NPN/PNP + Analogue voltage	
PF2M710-C6-L4 ●				IO-Link/NPN/PNP + Analogue current	
PF2M725-C6-L3	0.3 to 25	0.3 to 12.5	Ø 6	IO-Link/NPN/PNP + Analogue voltage	
PF2M725-C6-L4 ●				IO-Link/NPN/PNP + Analogue current	
PF2M750-C6-L3	0.5 to 50	0.5 to 25	Ø 6	IO-Link/NPN/PNP + Analogue voltage	
PF2M750-C6-L4 ●				IO-Link/NPN/PNP + Analogue current	
PF2M711-C8-L3	1 to 100	1 to 50	Ø 8	IO-Link/NPN/PNP + Analogue voltage	
PF2M711-C8-L4 ●				IO-Link/NPN/PNP + Analogue current	
PF2M721-C8-L3	2 to 200	2 to 100	Ø 8	IO-Link/NPN/PNP + Analogue voltage	
PF2M721-C8-L4 ●				IO-Link/NPN/PNP + Analogue current	

Accessories

Part number	Description
ZS-33-D	Lead wire with connector. Length: 2 m
ZS-33-F	Connector cover (Silicone rubber)
ZS-33-M	Bracket (for the type without a flow adjustment valve)
ZS-33-2J	Panel mount adapter (for the type without a flow adjustment valve)
ZS-33-MS	Bracket (For the type with a flow adjustment valve)
ZS-33-2JS	Panel mount adapter (For the type with a flow adjustment valve)
ZS-33-DM	M12 conversion lead wire

Flow sensor and voltage monitor

⊕ PFMV Series



PFMV5



PFMV3

- Applicable fluids: Dry air, N₂
- Rated flow range: -3 to 3 l/min
- 2-colour display (PFMV3)
- Repeatability: ±2 % F.S. or less
- Outputs: NPN/PNP and analogue (voltage/current)
- Enclosure: IP40
- Consumption: 16 mA or less (PFMV5), 50 mA or less (PFMV3).

Selected part numbers

● Stocked items

Flow sensor

Part number	Port size	Rated flow range [l/min]	Output specification	Voltage [VDC]
PFMV505-1 ●	M5 x 0.8	0.0 to 0.5	Analogue output (1 - 5 V)	12 - 24
PFMV510-1 ●		0.0 to 1.0		
PFMV530-1 ●		0.0 to 3.0		
PFMV505F-1 ●		-0.5 to 0.5		
PFMV510F-1		-1.0 to 1.0		
PFMV530F-1		-3.0 to 3.0		

Voltage monitor

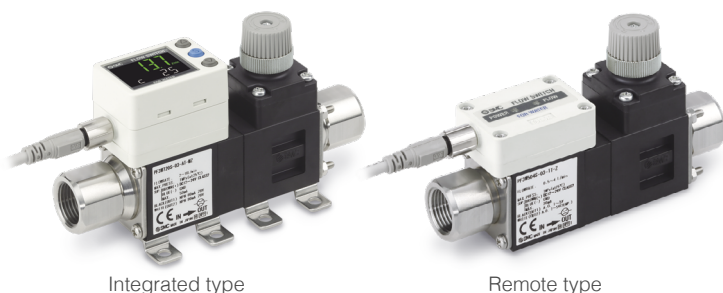
Part number	Applicable sensor	Output specification	Voltage [VDC]
PFMV303-M	PFMV5□□-1 (voltage input)	2 PNP + (1 - 5 V)	12 - 24
PFMV304-M ●		2 PNP + (4 - 20 mA)	
PFMV305-M		2 PNP + auto shift input	

Accessories

Part number	Description
ZS-28-A	Power supply/output connector (2 m)
ZS-28-B	Bracket
ZS-28-C	Sensor connector
ZS-27-C	Panel mount adapter
ZS-27-D	Panel mount adapter + front protective cover

Digital flow switch for water IO-link compatible

⊕ PF3W□-Z/L Series



Integrated type

Remote type

- Applicable fluid: Water and ethylene glycol aqueous solution
- Rated flow range: 0.5 to 250 l/min
- 3-colour 2-screen rotatable display (integrated type)
- Repeatability: ± 2.0 % F.S.
- Outputs: IO-Link, NPN/PNP and analogue/external input
- Enclosure: IP65
- In-built temperature sensor (-10 to 110 °C)
- Integrated and remote type available.

Selected part numbers

Integrated type

Part number	Rated flow range [l/min]	Port size	Output specification	Temperature sensor	Lead wire
PF3W704-F03-E-MZ	0.5 to 4	3/8	PNP + Analogue (voltage)	No	Lead wire with M8 connector (3 m)
PF3W704-F03-ET-MZ				Yes	
PF3W704-F03-F-MZ			PNP + Analogue (current)	No	
PF3W704-F03-FT-MZ				Yes	
PF3W720-F04-E-MZ	2 to 16	1/2	PNP + Analogue (voltage)	No	
PF3W720-F04-ET-MZ				Yes	
PF3W720-F04-F-MZ			PNP + Analogue (current)	No	
PF3W720-F04-FT-MZ				Yes	
PF3W740-F06-E-MZ	5 to 40	3/4	PNP + Analogue (voltage)	No	
PF3W740-F06-ET-MZ				Yes	
PF3W740-F06-F-MZ			PNP + Analogue (current)	No	
PF3W740-F06-FT-MZ				Yes	
PF3W711-F10-E-MZ	10 to 100	1	PNP + Analogue (voltage)	No	
PF3W711-F10-ET-MZ				Yes	
PF3W711-F10-F-MZ			PNP + Analogue (current)	No	
PF3W711-F10-FT-MZ				Yes	
PF3W704-F03-LTQ-MZ	0.5 to 4	3/8	IO-Link/NPN/PNP + NPN/PNP	Yes	M12-M8 conversion lead wire
PF3W720-F04-LTQ-MZ	2 to 16	1/2			
PF3W740-F06-LTQ-MZ	5 to 40	3/4			
PF3W711-F10-LTQ-MZ	10 to 100	1			
PF3W721-F12-LTQ-M	50 to 250	1 1/4			

Remote type

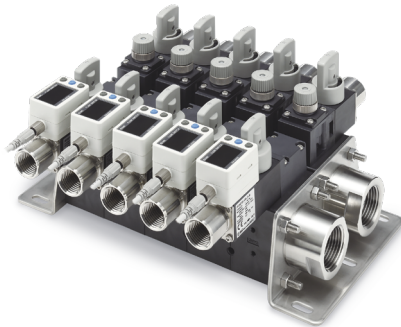
Part number	Rated flow range [l/min]	Port size	Output specification	Temperature sensor	Lead wire
PF3W504-F03-1-Z	0.5 to 4	3/8	Analogue (voltage)	No	Lead wire with M8 connector (3 m)
PF3W504-F03-1T-Z				Yes	
PF3W520-F04-1-Z	2 to 16	1/2		No	
PF3W520-F04-1T-Z				Yes	
PF3W540-F06-1-Z	5 to 40	3/4		No	
PF3W540-F06-1T-Z				Yes	
PF3W511-F10-1-Z	10 to 100	1		No	
PF3W511-F10-1T-Z				Yes	

Accessories

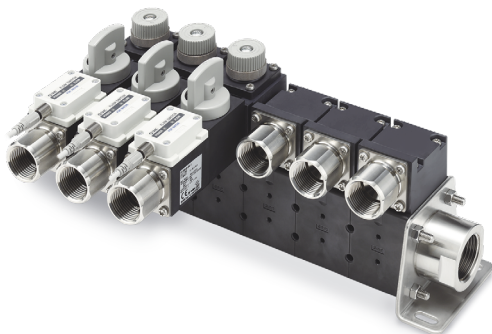
Part number	Description
ZS-40-K	Bracket for PF3W704/720/504/520
ZS-40-L	Bracket for PF3W740/540
ZS-40-M	Bracket for PF3W711/511
ZS-40-A	Lead wire with M8 connector. Length: 3 m
ZS-40-M12M8-A	M12-M8 conversion lead wire

Digital flow switch manifold for water

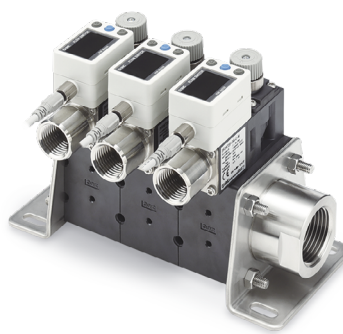
⊕ PF3WB/C/S/R Series



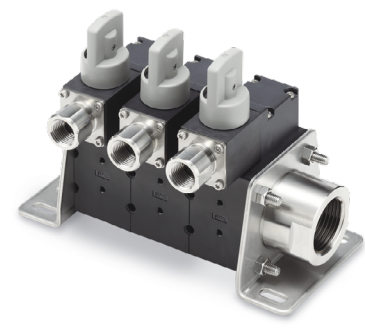
Integrated basic type



Integrated straight type



Remote supply type



Return type

- Up to 10 stations (PF3WB/S/R), up to 5 stations (PF3WC)
- 4 types available: Integrated basic, integrated straight, remote supply and remote return types
- Applicable fluid: Water and ethylene glycol aqueous solution
- Rated flow range: 0.5 to 40 l/min
- In-built temperature sensor (-10 to 110 °C)
- Flow adjustment valve and stop valve available.
- * Rest of the features depend on the selected flow switch unit (PF3WC-Z/L)

Selected part numbers

Integrated basic type

Part number	Rated flow range [l/min]	Port size	Output specification
PF3WB□BF-704-03-B-M	0.5 to 4	3/8	PNP
PF3WB□BF-720-04-B-M	2 to 16	1/2	
PF3WB□BF-740-06-B-M	5 to 40	3/4	
PF3WB□BF-704-03-BT-M	0.5 to 4	3/8	PNP with temperature sensor
PF3WB□BF-720-04-BT-M	2 to 16	1/2	
PF3WB□BF-740-06-BT-M	5 to 40	3/4	
PF3WB□BF-704-03-LT-M	0.5 to 4	3/8	IO-Link with temperature sensor
PF3WB□BF-720-04-LT-M	2 to 16	1/2	
PF3WB□BF-740-06-LT-M	5 to 40	3/4	
PF3WB□BF-504-03-1T	0.5 to 4	3/8	Analogue (voltage) with temperature sensor
PF3WB□BF-520-04-1T	2 to 16	1/2	
PF3WB□BF-540-06-1T	5 to 40	3/4	

□: Number of stations

Integrated straight type

Part number	Rated flow range [l/min]	Port size	Output specification
PF3WC□DF-704-03-B-M	0.5 to 4	3/8	PNP
PF3WC□DF-720-04-B-M	2 to 16	1/2	
PF3WC□DF-740-06-B-M	5 to 40	3/4	
PF3WC□DF-704-03-BT-M	0.5 to 4	3/8	PNP with temperature sensor
PF3WC□DF-720-04-BT-M	2 to 16	1/2	
PF3WC□DF-740-06-BT-M	5 to 40	3/4	
PF3WC□DF-704-03-LT-M	0.5 to 4	3/8	IO-Link with temperature sensor
PF3WC□DF-720-04-LT-M	2 to 16	1/2	
PF3WC□DF-740-06-LT-M	5 to 40	3/4	
PF3WC□DF-504-03-1T	0.5 to 4	3/8	Analogue (voltage) with temperature sensor
PF3WC□DF-520-04-1T	2 to 16	1/2	
PF3WC□DF-540-04-1T	5 to 40	3/4	

□: Number of stations

Remote return type

Part number	Rated flow range [l/min]	Port size	Output specification
PF3WR□BF-504-03-1T	0.5 to 4	3/8	Analogue (voltage) with temperature sensor
PF3WR□BF-520-04-1T	2 to 16	1/2	
PF3WR□BF-540-06-1T	5 to 40	3/4	
PF3WR□BF-704-03-B-M	0.5 to 4	3/8	PNP
PF3WR□BF-720-04-B-M	2 to 16	1/2	
PF3WR□BF-740-06-B-M	5 to 40	3/4	
PF3WR□BF-704-03-BT-M	0.5 to 4	3/8	PNP with temperature sensor
PF3WR□BF-720-04-BT-M	2 to 16	1/2	
PF3WR□BF-740-06-BT-M	5 to 40	3/4	
PF3WR□BF-704-03-L-M	0.5 to 4	3/8	IO-Link with temperature sensor
PF3WR□BF-720-04-L-M	2 to 16	1/2	
PF3WR□BF-740-06-L-M	5 to 40	3/4	

□: Number of stations

Remote supply type

Part number	Rated flow range [l/min]	Port size	Output specification
PF3WS□BF-04-03	0.5 to 4	3/8	—
PF3WS□BF-20-04	2 to 16	1/2	
PF3WS□BF-40-06	5 to 40	3/4	

□: Number of stations

Accessories

Part number	Description
ZS-40-A	Lead wire with M8 connector. Length: 3 m
ZS-40-M12M8-A	M12-M8 conversion lead wire

Electromagnetic type digital flow switch

⊕ LFE Series



- Applicable fluids: Water, water-soluble coolant or any fluids with electric conductivity of 5 $\mu\text{S}/\text{cm}$ or more which do not corrode the fluid contact materials
- Rated flow range: 0.5 to 200 l/min
- 3-colour 2-screen display (integrated display)
- Repeatability: Displayed values: $\pm 2\%$ F.S. analogue output: $\pm 1.5\%$ F.S.
- Outputs: NPN/PNP and analogue (voltage/current)
- Enclosure: IP65
- Consumption: 45 mA or less (non-insulated type), 60 mA or less (insulated type)
- Insulated and non-insulated types available.

Selected part numbers

● Stocked items

Integrated display type

Part number	Type	Port size	Flow rate [l/min]	Output specification	Voltage [VDC]	Parts material in contact with fluid
LFE1B4F1 ●	Integrated display type Without lead wire	G1/2	0.5 to 20	2 PNP	24	PPS, FKM, C37 (Brass)
LFE1C4F1 ●				NPN + (1 - 5 V)		
LFE1D4F1 ●				NPN + (4 - 20 mA)		
LFE2B6F1 ●		G3/4	2.5 to 100	2 PNP		
LFE2C6F1 ●				NPN + (1 - 5 V)		
LFE2D6F1 ●				NPN + (4 - 20 mA)		
LFE3B8F1 ●		G1	5 to 200	2 PNP		
LFE3C8F1 ●				NPN + (1 - 5 V)		
LFE3D8F1 ●				NPN + (4 - 20 mA)		

Remote type sensor unit

Part number	Type	Port size	Flow rate [l/min]	Output specification	Voltage [VDC]	Parts material in contact with fluid
LFE1J4F1	Remote type sensor unit Without lead wire	G1/2	0.5 to 20	Analogue 1 - 5 V	24	PPS, FKM, C37 (Brass)
LFE1K4F1				Analogue 4 - 20 mA		
LFE2J6F1		G3/4	2.5 to 100	Analogue 1 - 5 V		
LFE2K6F1				Analogue 4 - 20 mA		
LFE3J8F1		G1	5 to 200	Analogue 1 - 5 V		
LFE3K8F1				Analogue 4 - 20 mA		

Remote type monitor unit for LFE series

Part number	Output specification	Voltage [VDC]
LFE0C-MC	Analogue 1 - 5 V	24

Accessories

Part number	Description
LFE-1-A3 ●	Lead wire with M12 connector
LFE-1-D	Bracket (for LFE1)
LFE-2-D	Bracket (for LFE2)
LFE-3-D	Bracket (for LFE3)

Digital flow monitor

⊕ PFG300 Series



- 3-colour 3-screen display
- Inputs: Analogue (voltage/current)
- Outputs: NPN/PNP and analogue (voltage/current)
- Repeatability: $\pm 0.1\%$ F.S.
- Enclosure: IP40
- Consumption: 25 mA or less.

Selected part numbers

Part number	Input	Switch output	Time ³⁾	Unit specification
PFG300-RT	Voltage input	2 outputs (NPN/PNP switching type) + Analogue voltage output ^{1) 2)}	3 ms or less. Select from 0.00, 0.05 to 0.1 s, 0.1 to 1.0 s, 1 to 10 s, 20 s, 30 s, 40 s, 50 s, or 60 s	With unit selection function
PFG300-SV		2 outputs (NPN/PNP switching type) + Analogue current output ²⁾		
PFG310-RT	Current input	2 outputs (NPN/PNP switching type) + Analogue voltage output ^{1) 2)}		
PFG310-SV		2 outputs (NPN/PNP switching type) + Analogue current output ²⁾		

1) Can switch between 1 to 5 V and 0 to 10 V

2) Can be switched to external input or copy function

3) Value without digital filter (at 0 ms).

Options/Part numbers

When only optional parts are required, order with the part numbers listed below.

Part number	Option	Note
ZS-28-C-1	Sensor connector	For PFMB
ZS-28-CA-4		For PFMC, PF3A7□H
ZS-46-A1	Bracket A (Vertical mounting)	Tapping screw: Nominal size 3 x 8 L (2 pcs.)
ZS-46-A2	Bracket B (Horizontal mounting)	
ZS-46-B	Panel mount adapter	
ZS-46-D	Panel mount adapter + Front protection cover	
ZS-46-5L	Power supply/output connection lead wire	5-core, 2 m
ZS-27-01	Front protection cover	

4-channel flow monitor

⊕ PFG200 Series



- 3-colour 3-screen display
- Inputs: Any sensor (If total consumption is less than 440 mA with switch output or less than 200 mA with IO-Link output)
- Outputs: IO-Link, NPN/PNP and external input
- 4-channel monitor (4 inputs, 5 outputs)
- Repeatability: ± 3.0 % F.S. Max. (depends on the connected sensor)
- Enclosure: IP65 (front face), others: IP40
- IO-Link hub function available
- A single monitor can be used to monitor various applications.

Selected part numbers

Part number	Input/Output
PFG201	PNP 5 outputs + external input
PFG203	IO-Link + PNP 4 outputs or PNP 5 outputs (SIO mode)

Accessories

Part number	Description
ZS-26-B	Panel mount adapter
ZS-26-C	Front protection cover + Panel mount adapter
ZS-26-01	Front protection cover
ZS-26-L	Power supply/output connection cable
ZS-28-CA-2	Sensor connector (for PF2D5)
ZS-28-CA-4	Sensor connector (for PF2A5, PF2W5, PF3W5)
ZS-26-LM12	Power supply with M12 connector/Output cable

Applications

Regarding the applications, although these products can be used in several and different ones, followings can be highlighted:

Pressure & vacuum switches

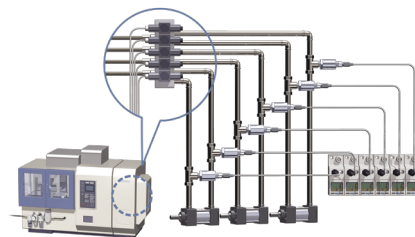
Product detection in a high speed transfer line.



Suitable for machine tool industry and high production manufacturing.



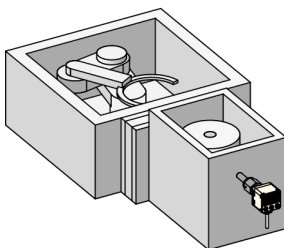
When hydraulic cylinder monitorization is needed.



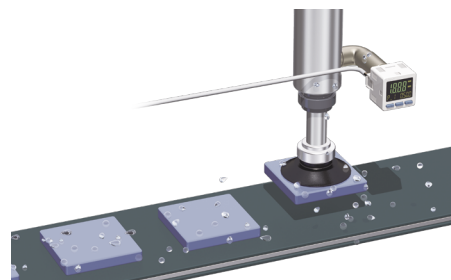
Confirm the pressure condition during operation and monitor the device status. Monitor the abnormal pressure and the abnormal status of a pressure sensor remotely to prevent unexpected stops.



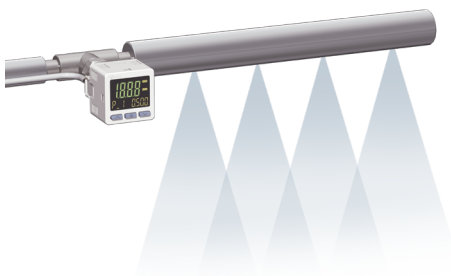
Confirmation of the atmospheric pressure of a load lock chamber. Welded structure for sensor units and fitting parts.



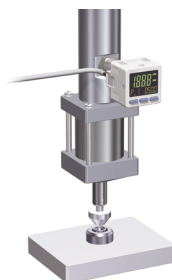
Suction confirmation for workpieces containing moisture.



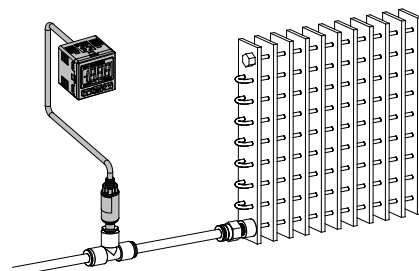
Confirmation of cleaning line supply pressure.



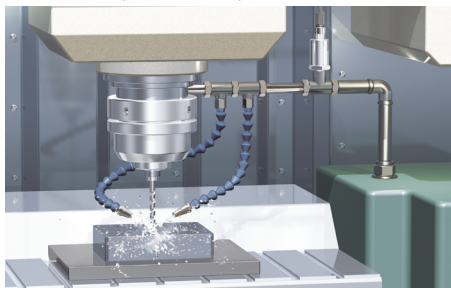
Confirmation of hydraulic cylinder working pressure. For example Rockwell hardness test.



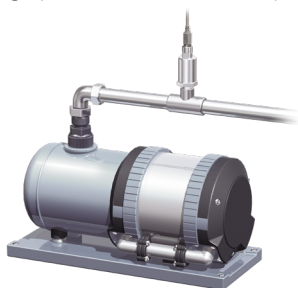
Leak test. A low pressure sensor is used to detect minute differences.



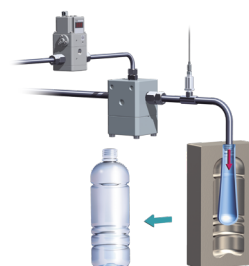
Control of liquid coolant pressure.



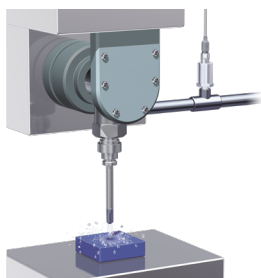
Discharge pressure control for compressor.



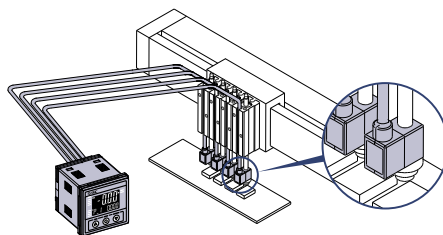
PET bottle molding machines.



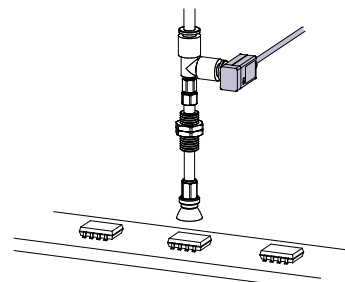
Liquid pressure control of gun drills.



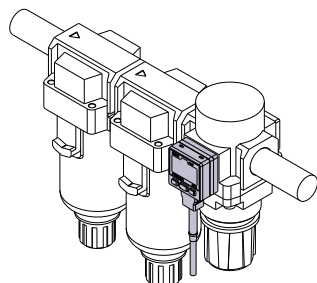
Due to the small size, the sensor can be installed close to a pad.
Calibration is easy with the auto-preset function.



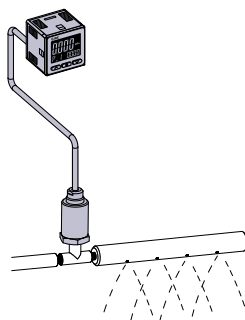
Easy suction verification is possible. Response delays, caused by piping will not be a factor, due to the close proximity of the sensor to the pad.



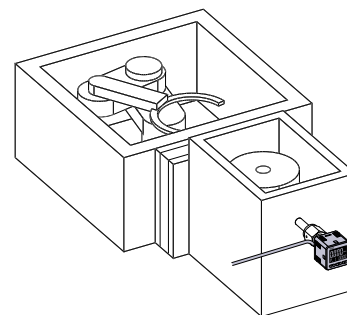
The line pressure can be adjusted by monitoring the digital readout. Which provides a visual verification of the operating pressure. The output can be programmed to respond to supply pressure drops, etc.



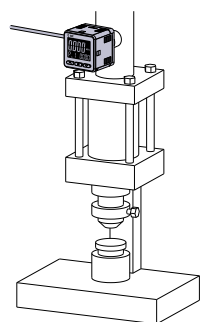
The supply pressure of water, oil, etc. can be confirmed by using a sensor for gas and fluids.



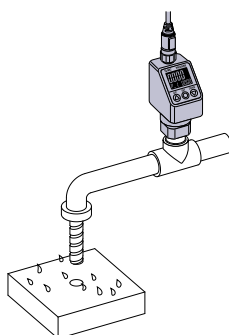
Verification of pressure in a load lock chamber (vacuum spare chamber of the main chamber).



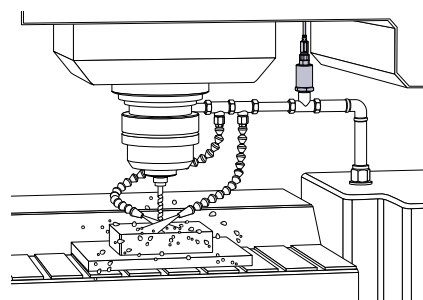
Confirmation of working pressure of hydraulic cylinder.



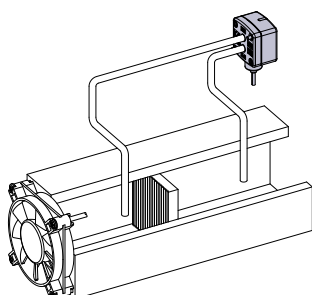
Liquid pressure control of a gun drill.



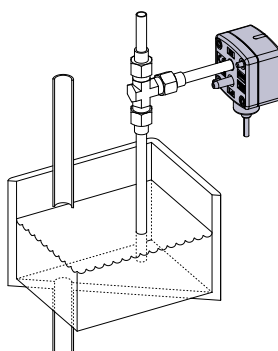
Liquid coolant pressure control.



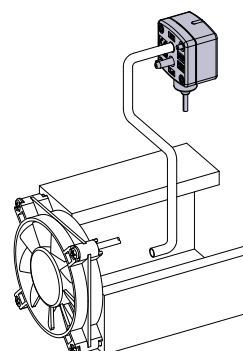
The filtration and replacement periods can be controlled by monitoring the clogging of the filter.



Can detect the level of a liquid through changes in the purge pressure.

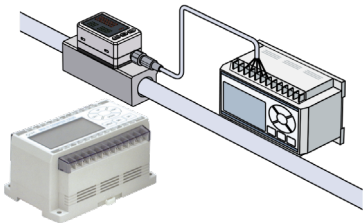


Can monitor the air flow in the duct and control air blasts.

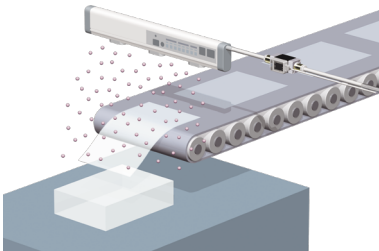


Flow switches

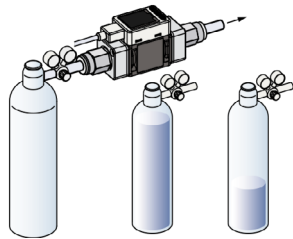
Flow control of equipment, main line and branch line.



Control of purge air flow of ionizer.



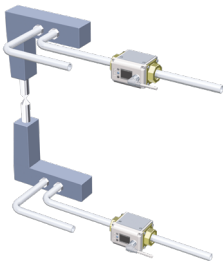
Accumulated indication shows the operating flow rate or residual amount (of N₂ etc.) in a gas cylinder.



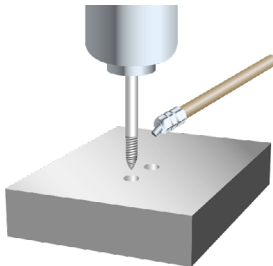
Flow control of the air for spray painting.



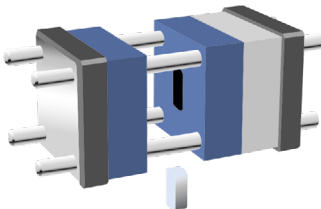
Flow control for pressurised cooling water for welding guns.



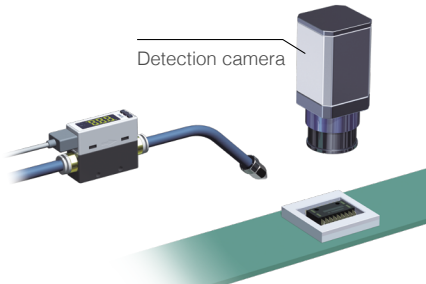
Flow control for water-soluble coolant.



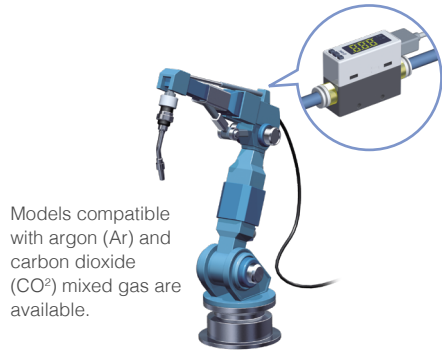
Flow control for cooling water for metal molds.



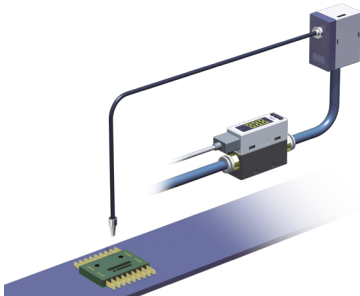
Flow control of N₂ gas to prevent lead frame oxidation.
N₂ blow prevents distortion of camera image due to air turbulence.



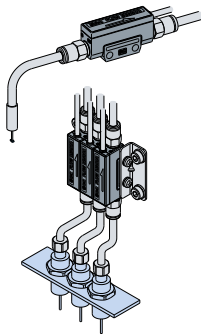
Welding machine.



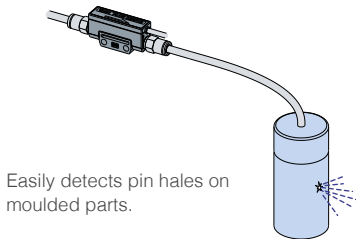
Control of metal wire tension.



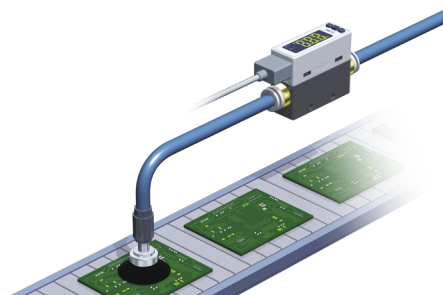
Suction verification of very small workpieces.



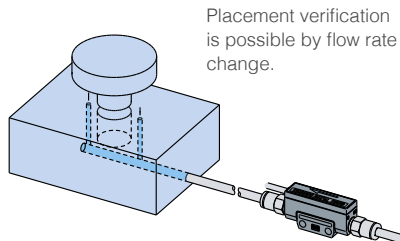
Easy leak test.



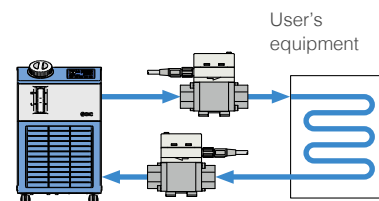
Suction verification.



Easy placement verification.



Flow control of the circulating fluid in a chiller.



Related products

For pressure and vacuum switches

	<p>Directly operated 2-port solenoid valve for medium vacuum/water/oil/steam VX2 Series</p>	<p>To control the application fluid while measuring the pressure to detect possible sources of failures.</p>
	<p>2-port solenoid valve for air VXZ2□0 Series</p>	<p>To control the application fluid while measuring the pressure to detect possible sources of failures.</p>
	<p>2-port solenoid valve JSX Series</p>	<p>To control the application fluid while measuring the pressure to detect possible sources of failures.</p>
	<p>Electro-pneumatic regulator ITV1000/2000/3000 Series</p>	<p>To precisely monitor the application pressure and control it with the electro-pneumatic regulator.</p>
	<p>Digital flow switch for large flow PF3A7□H Series and PF3A□H modular Series</p>	<p>To monitor main line or branch line flow precisely to detect possible pressure losses.</p>
	<p>Digital flow switch for water PF3W7(-Z/L) Series</p>	<p>Add more information to your line with a flow switch.</p>



Electromagnetic type digital flow switch
LFE Series

Add more information to your line with a flow switch.



3-screen display sensor monitor
PSE300A Series

To visualise the pressure sensor value with a monitor.



3-screen display, multi-channel digital sensor monitor
PSE200A Series

To monitor the parameters of up to 4 different sensors at the same time.



Sensor monitor
PSE300AC Series

Visualise the pressure sensor value with a monitor.



FRL combination units
AC-D Series

To guarantee the suitable air quality for the correct operation of the sensors.



Vacuum filter
AFJ Series

Add a vacuum switch to your vacuum line.



In-line air filter with one-touch fitting
ZFC Series

Improve your air line with a filter.



Refrigerated air dryer
IDFA Series

To remove moisture from the air to avoid malfunction of sensors.



In-line air filter with one-touch fitting
WF300 Series










Removes foreign matter from water lines.



IO-Link unit
EX600-LAB1/LBB1 Series

To gather the information of any IO-Link sensor.

For flow switches

 <p>Digital flow monitor PFG300 Series</p>	<p>Visualise the flow switch value in a panel with a monitor.</p>
 <p>4-channel flow monitor PFG200 Series</p>	<p>To monitor the parameters of up to 4 different sensors at the same time.</p>
 <p>Modular digital flow switch PF3A□H modular Series</p>	<p>To monitor flow, pressure and temperature of your line with one product.</p>
 <p>Sensor monitor PSE300AC Series</p>	<p>Visualise the flow switch value in a panel with a monitor.</p>
 <p>3-screen display Digital pressure switch ZSE20□/ISE20□ Series</p>	<p>To monitor the application pressure precisely to detect possible sources of failures.</p>
 <p>3-screen display High-precision digital pressure switch ISE7□G/79S Series</p>	<p>To monitor the application pressure of general fluids precisely to detect possible sources of failure.</p>
 <p>3-screen display High-precision digital pressure switch ISE7□ Series</p>	<p>To monitor the application pressure of air precisely to detect possible sources of failure.</p>
 <p>FRL combination units AC-D Series</p>	<p>To guarantee the suitable air quality for the correct operation of the sensors.</p>
 <p>Main line filter AFF□□ Series</p>	<p>High filtration of the main line filter improving the performance of the downstream products.</p>



Mist separator
AM/AMD Series

Dust and oil filtration of the main line filter improving the performance of the downstream products.



Refrigerated air dryer
IDFA Series

To remove moisture from the air to avoid malfunction of sensors.



Circulating fluid temperature controller
HRS Series

To control precisely the application fluid temperature for improving the performance & reliability.



Multi counter
CEU5 Series











Remote control is possible with accumulated pulse.



IO-Link unit
EX600-LAB1/LBB1 Series

To gather the information of any IO-Link sensor.

For monitors

	General fluids pressure sensor PSE570 Series	Monitors the pressure sensor.
	Sensor for multi channel controller PSE530 Series	
	General fluids pressure sensor PSE560 Series	
	Low differential pressure sensor PSE550 Series	
	Small pneumatic pressure sensor PSE540 Series	
	Compact digital flow switch PF2M7 Series	Monitors the flow sensor.
	Compact digital flow switch PFM5 Series	
	Digital flow switch for water PF3W5(-Z) Series	
	Digital flow switch for water PF3W7(-Z/L) Series	
	Electromagnetic type digital flow switch LFE Series	



Expertise – Passion – Automation

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