



#### **Sensors**

Facilities that take advantage of data can pursue the optimisation of their processes through the increase in assets such as efficiency and obviously productivity. In those terms, sensors turn out to be an ubiquitous element as a source of that valuable information

Only by knowing what is happening at your machines, at all times, will you be able to take decisions that will lead to the increase in the productivity and efficiency of your processes. 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 e-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 can pursue the optimisation of their processes through the increase in assets such as efficiency and obviously productivity. In those terms, sensors turn out to be an ubiquitous element as a source of that valuable information.

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

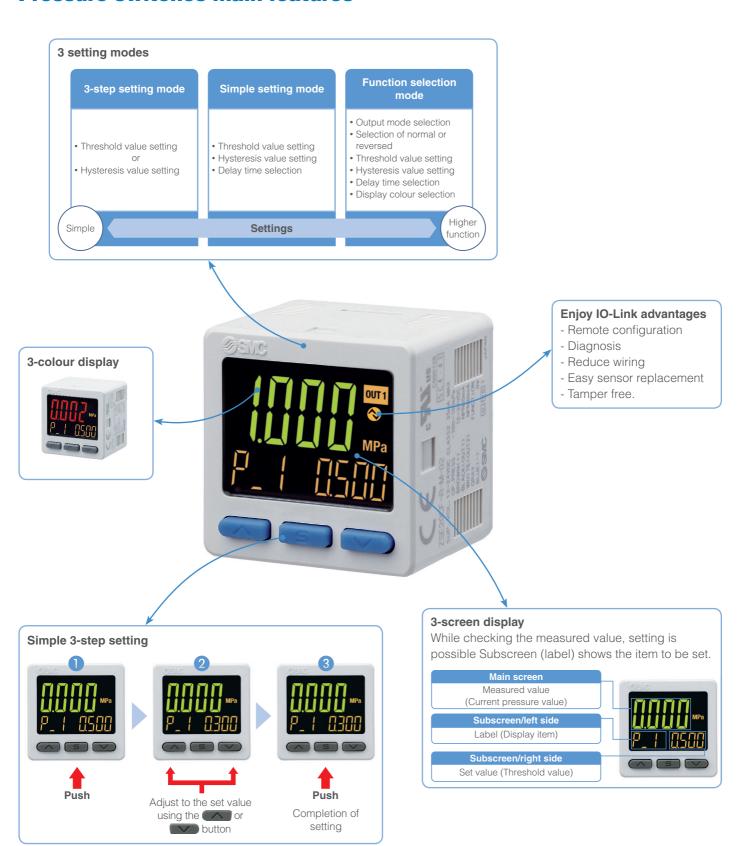
The following pages incorporate SMC's wide range of sensing solutions designed to gather and provide you with the information you need in an easy way. Several of them are fitted with 3 screens and feature two to three colours. With the possibility of easy programming in just 3 steps, and with many additional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

A portfolio of sensors capable of monitoring a diverse range of fluids. Pressure 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 switches main features**



#### Flow switches main features



## **Pressure switches portfolio**

	Applicable fluid	Rated pressure range [I/min]	Output type	Enclosure	Piping	Functions
Integrated type						
ZSE10(F)/ISE10			NPN/PNP open collector Analogue output (Voltage)		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
ZSE20(F)/ISE20	Air	0.0 to -101.0 kPa, -100.0 to 100.0 kPa,	NPN/PNP open collector 1 output	IP40		3-screen display 3 step setting Power saving mode Anti-chattering Display value fine adjustment Setting of security code Panel mount
ZSE20A(F)/ISE20A		-0.100 to 1.0 MPa	NPN/PNP open collector 2 outputs Analogue output (Voltage/Current)			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
ZSE20B(F)/ISE20B						
ZSE20B(F)-L/ ISE20B-L		0.0 to -100.0 kPa, -100.0 to 100.0 kPa, 0.0 to 1.0 MPa	IO-Link/Switch: 1 output (PNP or NPN switching type for switch output)	IP65		3-screen display 3 step setting Power saving mode Anti-chattering Display value fine adjustment Setting of security code Panel mount
ZSE20C(F)/ISE20C(H)	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)		1/8 (Rc) 1/4 (R, NPT, G) <sup>1)</sup> 1/4 (URJ <sup>2)</sup> , TSJ) <sup>3)</sup>	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
ISE70/71	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) <sup>4)</sup>	3-screen display 3 step setting Power saving mode Anti-chattering
ISE7□G	General fluids	0 to 1.0 MPa, 0 to 2.0 MPa, 0 to 5.0 MPa, 0 to 10.0 MPa			1/4 (Rc, NPT, G) <sup>4)</sup>	Display value fine adjustment Setting of security code

	Applicable fluid	Rated pressure range [I/min]	Output type	Enclosure	Piping	Functions
Gap checker						
ISA3	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) <sup>4</sup> ) (type F) Detection side: Ø 4, Ø 6 (type C), 1/8 (G) <sup>4</sup> ) (type F)	3 step setting Display value fine adjustment Setting of security code
Remote sensor						
PSE570	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) <sup>1)</sup> 1/4 (R) <sup>1)</sup>	
PSE530	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)	<del>-</del>
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
PSE300  SMC PRESSURE OUT1  OUT2	_	Set pressure range: -0.1 to 1 MPa, 10 to -101 kPa, -101 to 101 kPa, -10 to 100 kPa, -50 to 500 kPa, -0.2 to 2 kPa	NPN/PNP open collector 2 outputs Analogue output (Voltage/Current)	IP40	_	Auto shift Anti-chattering Display value fine adjustment Panel mount
PSE200		Set pressure range: -0.1 to 1 MPa, 10 to -101 kPa, -101 to 101 kPa, -10 to 101 kPa	NPN/PNP open collector 1ch: 2 outputs 2 to 4ch: 1 output	Front face: IP65 (Others: IP40)		Copy function Auto shift Anti-chattering Display value fine adjustment Panel mount

- 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 [I/min]	Output type	Enclosure	Piping	Functions
Integrated type						
PF3A7□H	Air, N <sub>2</sub>	30 to 3000, 60 to 6000, 120 to 12000		IP65	1, 1 1/2, 2 (Rc, NPT, G) <sup>2)</sup>	Rotary reversible display Bypass structure Grease-free Setting of security code
PFMC	Dry air, N <sub>2</sub>	5 to 500, 10 to 1000, 20 to 2000		11 05	1/2, 3/4 (Rc, NPT, G) <sup>3)</sup>	Rotary display Bypass structure Grease-free Setting of security code
PFMB	<b>7</b> 2	2 to 200, 5 to 500, 10 to 1000, 20 to 2000	NPN/PNP open collector Accumulated pulse	IP40	1/4 (Rc, NPT, G) <sup>2)</sup> Ø 8 (5/16"), Ø 1/4" 1/2, 3/4, (Rc, NPT, G) <sup>3)</sup>	Flow adjustment valve Reversible display Bypass structure Grease-free Setting of security code
PFM7	Dry air, N <sub>2</sub> , Ar, CO <sub>2</sub>	0.2 to 10, 0.5 to 25, 1 to 50, 2 to 100	output Analogue output (Voltage/Current)	11 40	1/8, 1/4 (Rc, NPT, G) <sup>1)</sup> 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
PF3W	Water, ethylene glycol, aqueous solution	0.5 to 4, 2 to 16, 5 to 40, 10 to 100, 50 to 250			3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2 (Rc, NPT, G) <sup>3)</sup>	Flow adjustment valve Rotary display Grease-free Power-saving mode Setting of security code
PF3W (PVC piping type)	Water, deionized water, chemical liquids	10 to 100, 30 to 250			25A, 30A	Rotary display Grease-free
PF3W7□-L	Water, ethylene glycol, aqueous solution	0.5 to 4, 2 to 16, 5 to 40	NPN/PNP open collector 1 output IO-Link	IP65	3/8, 1/2, 3/4 (Rc, NPT, G) <sup>3)</sup>	Power-saving mode Setting of security code
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)	Power-saving mode Setting of security code Switching of flow direction

	Applicable fluid	Rated flow range [I/min]	Output type	Enclosure	Piping	Functions	
Remote type							
PFMV	Dry air, N <sub>2</sub>	0 to 0.5, 0 to 1, 0 to 3, -0.5 to 0.5, -1 to 1, -3 to 3			M5	Grease-free	
PFM5	Dry air, N <sub>2</sub> , Ar, CO <sub>2</sub>	0.2 to 10, 0.5 to 25, 1 to 50, 2 to 100		IP40	1/8, 1/4 (Rc, NPT, G) <sup>-1</sup> Ø 4 (5/32"), Ø 6, Ø 8 (5/16"), Ø 1/4"	Flow adjustment valve	
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)		3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2 (Rc, NPT, G) <sup>3)</sup>	Grease-free	
PF3W5 (PVC piping type)	Water, deionized water, chemical liquids	10 to 100, 30 to 250		IP65	25A, 30A	Grease-free	
LFE THE STATE OF T	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	_	Set pressure range: 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 5 to 500 l/min 5 to 500 l/min 10 to 1000 l/min 5 to 500 l/min	NPN/PNP open collector 2 outputs Analogue output (Voltage/Current)	IP40	_	Setting of security code	

<sup>1)</sup> Conforming to ISO 228-1. 2) Conforming to ISO 1179-1. 3) Conforming to ISO 228.

## Pressure switches

## **Integrated type**

### **Compact digital pressure switch**



ZSE10/ISE10 Series

• Reduced in depth: 9.8 mm

• 3 styles:

ZSE10: Vacuum pressure ZSE10F: Compound pressure ISE10: Positive pressure

- Can copy up to 10 switches simultaneously
- 3-step setting; copy function
- Analogue output: 1 5 V
- Switch output: 2 NPN/PNP or 1 PNP/NPN
- Multi-angle indicator
- Piping is possible from two directions
- Mounting: direct mounting, panel mounting, DIN rail mounting
- Enclosure IP40.



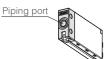
#### Selected part numbers

Stocked items

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

NPN options available upon request.

M5 female thread/side ported

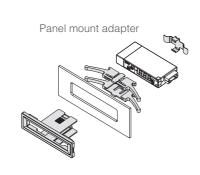


M5 female thread/Rear ported



#### **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)



<sup>\*</sup> Rear ported

## **High-precision digital pressure switch**

ZSE20□(F)/ISE20□ Series



- 3-screen, 3-colour display
- Applicable fluid: air, non-corrosive gas, non-flammable gas, or general
- Pressure ranges: from -0.1 to 2 MPa
- Repeatability: ±0.2 % F.S. ±1 digit
- Output: NPN/PNP, Analogue (Voltage/Current), IO-Link
- Select response time: from less than 1.5 ms to 5 s
- IP40 or IP65
- Consumption: 35 mA or less.

#### Selected part numbers

Stocked items

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Model	Part number	Rated pressure range	Piping	Output	Applicable fluid	Enclosure
	ISE20-P-01-L ● ¹)	-0.1 to 1 MPa				
	ZSE20-P-01-L • 1)	0 to -101 kPa		PNP open collector 1 output		
	ZSE20F-P-01	-100 to 100 kPa		σαιραί		
חחח	ISE20A-T-01	-0.1 to 1 MPa		PNP open collector 2		
P 1 0500	ZSE20AF-T-01	-100 to 100 kPa		outputs + Analogue		IP40
	ZSE20A-T-01	0 to -101 kPa		voltage output		
	ISE20A-V-01	-0.1 to 1 MPa	D4/0	PNP open collector 2		
	ZSE20AF-V-01	-100 to 100 kPa	R1/8 Piping adapter	outputs + Analogue		
	ZSE20A-V-01	0 to -101 kPa	i iping adaptor	current output	Air. non-corrosive	
	ISE20B-T-01	-0.1 to 1 MPa		PNP open collector 2	gas, non-flammable	
5000	ZSE20BF-T-01	-100 to 100 kPa		outputs + Analogue	gas	
111 111 111 111	ZSE20B-T-01	0 to -101 kPa		voltage output		
P_1 -505	ISE20B-V-01	-0.1 to 1 MPa		PNP open collector 2 outputs + Analogue		
VIII	ZSE20BF-V-01	-100 to 100 kPa				
	ZSE20B-V-01	0 to -101 kPa		current output		
	ISE20B-L-01	0 to 1 MPa		IO-Link/Switch: 1 output		
	ZSE20BF-L-01	-100 to 100 kPa	R1/8 Piping adapter			
	ZSE20B-L-01	0 to -100 kPa				IP65
	ISE20C-T-02	-0.1 to 1 MPa				
	ISE20CH-T-02	-0.1 to 2 MPa		PNP open collector 2		
	ZSE20CF-T-02	-100 to 100 kPa		outputs + Analogue voltage output		
	ZSE20C-T-02	0 to -101 kPa	R1/4		Fluid that will not corrode stainless	
P. 1 0500	ISE20C-V-02	-0.1 to 1 MPa	(M5 female thread)		steel 630 and 304	
- Ulling	ISE20CH-V-02	-0.1 to 2 MPa		PNP open collector 2 outputs + Analogue		
	ZSE20CF-V-02	-100 to 100 kPa		current output		
	ZSE20C-V-02	0 to -101 kPa		1		

<sup>1)</sup> With lead wire with connector.

Part number	er	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

Part number		Description	Model
	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,
	ZS-46-N2	NPT1/8 piping adapter	Z/ISE20A, Z/ISE20B

<sup>2)</sup> NPN options and copy function available upon request.

## **High-precision digital pressure switch**





- Applicable fluid: Air and general fluids
- Pressure ranges: from 0 to 10 MPa
- Repeatability: ±0.5 % F.S. or less
- Output: IO-Link and NPN/PNP
- Selectable response times
- IP67
- Consumption: 35 mA or less.

#### Selected part numbers

Stocked items

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

<sup>1)</sup> ISO 1179-1 compliant.

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





- Visualization with digital display: Two displays enable various information to be checked
- Easy setting by the digital display: 3 step setting (Snap shot function)
- Withstand pressure 0.6 MPa (Improved 3 times compared with the series ISA2)
- Detection principle without exhaust air:
- Exhaust noise: Zero
- 60 % reduction of air consumption
- Measures against clogging:
- Reducing the number of internal orifices from 3 to 1
- A larger orifice area. Orifice rate ratio 68 % increase
- Manifold available with or without unit control
- IP67
- Centralised lead wire
- 2 outputs type has been added.

#### Selected part numbers

Stocked items

Part number	Туре	Rated distance range [mm]	Port size	Operating pressure range [kPa]	Output specification	Voltage
ISA3-GFP-1N ●	1 station Without control unit	0.02 to 0.15	G1/8	100 to 200	1 PNP	24 VDC
ISA3-HFP-1N ●		0.05 to 0.30				
ISA3-FFP-1N		0.01 to 0.03				

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)		

#### **Remote type**

## Pressure sensor for general fluids





- Rated pressure ranges: 0 to 1 MPa, -100 to 100 kPa, 0 to 500 kPa, 0 to 2 MPa, 0 to 5 MPa, 0 to 10 MPa
- Applicable fluids: gas or liquid that will not attack or corrode materials of parts in contact with fluid
- Proof pressure: 3 times higher than the rated pressure
- Withstand voltage: 500 VACM12 connector for wiring
- Enclosure: IP65.

#### Selected part numbers

Stocked items

Part Number	Port Size	Pressure range	Output signal	Voltage	
PSE570-□ ●	01, 02	Positive pressure [0 to 1 MPa]	Voltage output type 1 to 5 V		
PSE570-□-28 ●	01,02	rositive pressure [o to 1 ivira]	Current output type 4 to 20 mA		
PSE573-□	01, 02	Compound pressure [-100 to 100 kPa]	Voltage output type 1 to 5 V		
PSE573-□-28	01,02	Compound pressure [-100 to 100 kPa]	Current output type 4 to 20 mA		
PSE574-□ ●	01.00	Positive pressure [0 to 500 kPa]	Voltage output type 1 to 5 V		
PSE574-□-28 ●	01, 02	Positive pressure [0 to 500 kPa]	Current output type 4 to 20 mA	12 ~ 24 VDC	
PSE575-□		Positive pressure [0 to 2 MPa]	Voltage output type 1 to 5 V	12 ~ 24 VDC	
PSE575-□-28		Current output type 4 to 20 mA  Positive pressure [0 to 5 MPa]  Voltage output type 1 to 5 V	Current output type 4 to 20 mA		
PSE576-□	02		Voltage output type 1 to 5 V		
PSE576-□-28		Positive pressure [0 to 5 MPa]	Current output type 4 to 20 mA		
PSE577-□		Positive pressure [0 to 10 MPa]	Voltage output type 1 to 5 V		
PSE577-□-28		Positive pressure [0 to 10 MPa]	Current output type 4 to 20 mA		

#### ☐ Port sizes

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

## **Compact pneumatic pressure sensor**



PSE530 Series

- Sensor and controller separate
- IP40

• Simple electr. connection using plug

• Controller unit: PSE200/PSE300.



#### Selected part numbers

Stocked items

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

#### **Monitor**

#### **Sensor monitor**





- Accepts 1-5 VDC or 4-20 mA sensor input signal
- Input Range Selection (for Pressure/ Flow rate)

Response time: 1 ms or lessNPN/ PNP Switch Function

M12 connectorEnclosure: IP65.

#### Selected part numbers

Stocked items

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

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**



PSE300 Series



- Applicable sensors: PSE53□, 54□, 550, 56□, 570, 573, 574
- Compatible with voltage input and current input
- Response time: 1 ms
- Space saving, capable of vertical and horizontal contact mounting
- Panel mounting, bracket mounting, DIN rail mounting.

#### Selected part numbers

Stocked items

Part number	Input	Switch output	Response time
PSE303-LC ●	Voltage	2 x PNP + analogue 1 to 5 V	
PSE304-LC ●	Voltage	2 x PNP + analogue 4 to 20 mA	1 200
PSE313-LC	Current	2 x PNP + analogue 1 to 5 V	1 ms
PSE314-LC	Current	2 x PNP + analogue 4 to 20 mA	

NPN options and auto-shift input available upon request.

DIN rail mounting available upon request.

Including supply cable and sensor connector.

#### **Accessories**

Part number	Description	
ZS-28-B	Bracket for PSE300	
ZS-27-C	Panel mount adapter for PSE300	
ZS-27-D	Panel mount adapter + protective front cover for PSE300	

# Multi-channel digital pressure sensor monitor



PSE200 Series



- 4 sensor can be connected
- Applicable sensors: PSE53 $\square$ , 54 $\square$ , 570, 573, 56 $\square$
- A single monitor can be used to monitor various applications
- 4 inputs, 5 outputs.

#### Selected part numbers

Stocked items

Part number	Input	Switch output	Response time
PSE201-4C ●	Voltage	PNP: 5 outputs	5 ms

Including 4 sensor connector.

Part number	Description		
ZS-26-01	Protective cover for PSE201		
ZS-26-B	Panel mounting adapter for PSE201		
ZS-28-C	Sensor connector		

## Flow switches

## Digital flow switch for large flow

PF3A7□H Series



- Applicable fluid: Air and N<sub>2</sub>
- 3-colour 2-line information display
- Flow ratio: 100:1
- Repeatability: ±1.0 % F.S.
- Outputs: NPN/PNP and analogue/External input
- IP65

#### Selected part numbers

Stocked items

Part number	Flow rate [l/min]	Port size	Output specification	Lead wire
PF3A703H-F10-ES ●	30 to 3000		PNP + Analogue Voltage/External input	With lead wire and M12 connector (3 m)
PF3A703H-F10-FS	30 to 3000	G1		With lead wife and WHZ Conflector (STII)
PF3A703H-F10-FSN ●	30 to 3000		PNP + Analogue current/External input	Without lead wire and M12 connector
PF3A706H-F14-FS	60 to 6000	G1 1/2		With lead wire and M12 connector (3 m)
PF3A706H-F14-FSN ●	60 to 6000			Without lead wire and M12 connector
PF3A712H-F20-FS ●	120 to 12000	G2		With lead wire and M12 connector (3 m)
PF3A712H-F20-FSN ●	120 to 12000	GZ		Without lead wire and M12 connector

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

## **Digital flow switch**



- 3-colour digital flow switch for dry air and N<sub>2</sub>, with enclosure IP65
- Large flow rates, up to 2000 I/min
- Wide measuring range, with rangeability: 100:1
- Quick response: highest speed 0.05 s
- Compact
- Display can be rotated 360° to suit installation
- M8 standard connector.

#### Selected part numbers

Stocked items

Part number	Flow rate [I/min]	Port size	Output specification	Voltage	Operating pressure range			
PFMC7501-F04-B		G1/2	2 PNP					
PFMC7501-F04-E	5 to 500 I/min		PNP+Analogue (1 to 5 V)					
PFMC7501-F04-F			PNP+Analogue (4 to 20 mA)					
PFMC7102-F04-B			2 PNP					
PFMC7102-F04-E	10 to 1000 I/min			10 to 1000 l/min		PNP+Analogue (1 to 5 V)	12 to 24 VDC ±10 %	0 to 0.8 MPa
PFMC7102-F04-F						PNP+Analogue (4 to 20 mA)		
PFMC7202-F06-B			2 PNP					
PFMC7202-F06-E	20 to 2000 I/min G3/4	G3/4	PNP+Analogue (1 to 5 V)					
PFMC7202-F06-F			PNP+Analogue (4 to 20 mA)					

Part number	Description
ZS-40-A	Lead wire and M8 connector. Length: 3 m
ZS-42-A	Bracket. Mounting screw for PFMC7501/7102 (M3 x 5, 2 pcs.)
ZS-42-B	Bracket. Mounting screw for PFMC7202 (M3 x 5, 2 pcs.)

## **Digital flow switch**





- 2-colour digital flow switch for dry air and N<sub>2</sub>
- Large flow rates, up to 2000 I/min
- Wide measuring range, rangeability: 100:1
- Quick response: highest speed 0.05 s
- Compact
- Flip vertical option to adjust display's orientation
- Flow adjustment valve is integrated as option (only for PFMB7201 type)
- Use of by-pass structure, which reduces the contact of moist air and foreign matter with the sensor.

#### Selected part numbers

Stocked items

Selected part nu	imbers					<ul><li>Stocked items</li></ul>
Part number	Flow adjustment valve	Port size	Flow rate [I/min]	Output specification	Voltage	Operating pressure range
PFMB7102-F04-B				2 PNP		
PFMB7102-F04-E ●		G1/2	10 to 1000 l/min	PNP + Analogue 1 to 5 V		0 to 0.8 MPa
PFMB7102-F04-F				PNP + Analogue 4 to 20 mA		
PFMB7201-C8-B			2 PNP			
PFMB7201-C8-E ●		Ø 8 (5/16") One-touch fitting		PNP + Analogue 1 to 5 V		
PFMB7201-C8-F ●	None	One toder niting		PNP + Analogue 4 to 20 Ma		
PFMB7201-02-B •	None			2 PNP		
PFMB7201-02-E		Rc1/4		PNP + Analogue 1 to 5 V		0 to 0.75 MPa
PFMB7201-02-F				PNP + Analogue 4 to 20 mA	12 to 24 VDC ±10 %	
PFMB7201-F02-B ●		G1/4		2 PNP		
PFMB7201-F02-E ●				PNP + Analogue 1 to 5 V		
PFMB7201-F02-F				PNP + Analogue 4 to 20 mA		
PFMB7201S-C8-B ●		Ø 0 (F (4 0ll)		2 PNP		
PFMB7201S-C8-E ●		Ø 8 (5/16") One-touch fitting		PNP + Analogue 1 to 5 V		
PFMB7201S-C8-F ●				PNP + Analogue 4 to 20 mA		
PFMB7201S-02-B				2 PNP		
PFMB7201S-02-E	Yes	Rc1/4		PNP + Analogue 1 to 5 V		
PFMB7201S-02-F				PNP + Analogue 4 to 20 mA		
PFMB7201S-F02-B				2 PNP		
PFMB7201S-F02-E		G1/4		PNP + Analogue 1 to 5 V		
PFMB7201S-F02-F				PNP + Analogue 4 to 20 mA		
PFMB7202-F06-B				2 PNP		
PFMB7202-F06-E ●		G3/4	20 to 2000 I/min	PNP + Analogue 1 to 5 V		
PFMB7202-F06-F ●	None			PNP + Analogue 4 to 20 mA		0 to 0.8 MPa
PFMB7501-F04-B ●	140116			2 PNP		0 to 0.0 IVII a
PFMB7501-F04-E ●		G1/2 5 to 500 l/min	5 to 500 I/min	PNP + Analogue 1 to 5 V		
PFMB7501-F04-F				PNP + Analogue 4 to 20 mA		

Part number	Description
ZS-33-M	Bracket for PFMB7201
ZS-42-C	Bracket for PFMB7501/7102
ZS-33-J	Panel mount adapter for PFMB7201
ZS-42-D	Bracket for PFMB7202

## **Digital flow switch**



- For air, N<sub>2</sub>, Ar and CO<sub>2</sub>
- A digital flow switch that uses MEMS sensor for detecting the flow
- Compact size
- Improved visibility with two colour display indication
- Two piping directions are possible
- Integrated flow adjustment valve is available as option
- Multiple mounting combinations.





Remote type

#### Selected part numbers

Integrated type (without adjustment flow valve)

Stocked items

intogratou typo (without	,	/				
Part number	Port size	Flow rate Dry air, N <sub>2</sub> , Ar	Flow rate $CO_2$	Output specification	Voltage	Operating pressure range
PFM710-C4-B	~	0.2 to 10 l/min	0.2 to 5 l/min	2 PNP		-100 kPa to 750 kPa
PFM710-C4-E	Ø 4 one-touch fitting			PNP + (1 - 5V)		
PFM710-C4-F	ittiiig			PNP + (4 - 20 mA)		
PFM725-C6-B	Ø 6 one-touch	0.5 to 25 l/min	0.5 to 12,5 l/min	2 PNP	24 VDC	
PFM725-C6-E				PNP + (1 - 5V)		
PFM725-C6-F ●				PNP + (4 - 20 mA)		
PFM750-C6-B ●	fitting	1 to 50 l/min	1 to 25 l/min	2 PNP		
PFM750-C6-E ●				PNP + (1 - 5V)		
PFM750-C6-F ●				PNP + (4 - 20 mA)		
PFM711-C8-B	Ø 8 one-touch		2 to 50 l/min	2 PNP		
PFM711-C8-E		2 to 100 l/min		PNP + (1 - 5V)		
PFM711-C8-F ●	mulig			PNP + (4 - 20 mA)		

#### Remote type (without adjustment flow valve)

	-	•				
PFM510-C4-1	Ø 4 one-touch	0.2 to 10 l/min	0.2 to 5 l/min	1 - 5V	24 VDC	-100 kPa to 750 kPa
PFM510-C4-2	fitting			4 - 20 mA		
PFM525-C6-1		0.5 to 25 l/min	0.5 to 12,5 l/min	1 - 5V		
PFM525-C6-2	Ø 6 one-touch			4 - 20 mA		
PFM550-C6-1	fitting			1 - 5V		
PFM550-C6-2			1 10 25 1/111111	4 - 20 mA		
PFM511-C8-1	Ø 8 one-touch	2 to 100 l/min	2 to 50 l/min	1 - 5V		
PFM511-C8-2	fitting			4 - 20 mA		

#### Accessories

Part number	Description
ZS-33-M	Bracket (for "without adjustment flow valve")
ZS-33-J	Panel mount adapter (for "without adjustment flow valve")
ZS-33-R*	DIN rail mounting bracket, *=number of stations (1 to 5)

Part number	Description		
ZS-28-B	Bracket		
ZS-27-C	Panel mount adapter		
ZS-27-D	Panel mount adapter + front protective cover		

#### Flow sensor monitor

Part number	Input specification	Output specification	Voltage	Note
PFM313-LF	Commant innove	2 PNP + 1 to 5 V outputs	041//50	With power/ output connector
PFM314-LF	Current input	2 PNP + 4 to 20 mA outputs	24 VDC	included

## Flow sensor and voltage monitor





- Suction check of very small workpieces
- PFMV5: Flow sensor

PFMV3: Voltage monitor for PFMV5

- Reduced piping space
- Response speed: 5 ms or less
- Applicable fluid: dry, air, N<sub>2</sub>.

#### **Selected part numbers**

#### Stocked items

#### Flow sensor

Part number	Port size	Rated flow range [I/min]	Output specification	Voltage
PFMV505-1 ●	M5 x 0.8	0.0 to 0.5	Analogue output (1 - 5 V)	12 - 24 VDC
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	
PFMV303-M		2 PNP + (1 - 5 V)		
PFMV304-M ●	PFMV5□□-1 (voltage input)	2 PNP + (4 - 20 mA)	12 - 24 VDC	
PFMV305-M	(voitage input)	2 PNP + auto shift input		

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



PF3W Series



- Integrated temperature sensor
- Space saving, reduced piping space
- 3 colour/2 screen integrated display
- Rotatable display: easy operation, improved visibility
- Two models: integrated type and remote type
- PVC piping type: for deionised water, chemical, etc (Viscosity 3 mPas or less)
- Integrated flow adjustment valve Up to 40 I/min
- Enclosure IP65.

#### Selected part numbers

Stocked items

Integrated type				
Part number	Port size	Flow rate [I/min]	Output specification	Voltage
PF3W704-F03-BN-M ●		0.5 to 4	2 PNP	
PF3W704-F03-BTN-M ●			Z FINF	
PF3W704-F03-EN-M •	G3/8		PNP + (1 - 5V)	
PF3W704-F03-ETN-M		0.5 to 4	11VI + (1-5V)	
PF3W704-F03-FN-M •			PNP + (4-20 mA)	
PF3W704-F03-FTN-M ●			7111 1 (12011)()	
PF3W720-F04-BN-M •			2 PNP	
PF3W720-F04-BTN-M				
PF3W720-F04-EN-M	G1/2	2 to 16	PNP + (1 - 5V)	
PF3W720-F04-ETN-M			PNP + (4-20 mA)	
PF3W720-F04-FN-M				
PF3W720-F04-FTN-M ● PF3W740-F06-BN-M ●	G3/4	5 to 40		
PF3W740-F06-BN-M •			2 PNP PNP + (1 - 5V)	12 ~ 24 VDC
PF3W740-F06-EN-M •				
PF3W740-F06-ETN-M				
PF3W740-F06-FN-M				
PF3W740-F06-FTN-M •			PNP + (4-20 mA)	
PF3W711-F10-BN-M				
PF3W711-F10-BTN-M •			2 PNP PNP + (1 - 5V) PNP + (4-20 mA)	
PF3W711-F10-EN-M	0.4	10 +- 100		
PF3W711-F10-ETN-M	G1	10 to 100		
PF3W711-F10-FN-M				
PF3W711-F10-FTN-M			FINF + (4-20 IIIA)	
PF3W721-F14-BN-M •			2 PNP	
PF3W721-F14-BTN-M •			∠ 1 1 VI	
PF3W721-F14-EN-M •	G1 1/2	50 to 250	PNP + (1 - 5V)	
PF3W721-F14-ETN-M •	G/E	50 to 250	PNP + (4-20 mA)	
PF3W721-F14-FN-M				
PF3W721-F14-FTN-M				

<sup>1)</sup> Part numbers with "T" include temperature sensor.

<sup>2)</sup> Lead wire with M8 connector is not included.

<sup>3)</sup> NPN option available upon request.

#### Remote type

Part number	Port size	Flow rate [l/min]	Output specification	Voltage
PF3W504-F03-1N			(1 - 5V)	
PF3W504-F03-2N	G3/8	0.5 to 4	(4-20 mA)	
PF3W504-F03-1TN			2 (1 - 5V)	
PF3W520-F04-1N			(1 - 5V)	
PF3W520-F04-2N	G1/2	2 to 16	(4-20 mA)	
PF3W520-F04-1TN			2 (1 - 5V)	
PF3W540-F06-1N	G3/4	5 to 40	(1 - 5V)	
PF3W540-F06-2N			(4-20 mA)	12 ~ 24 VDC
PF3W540-F06-1TN			2 (1 - 5V)	
PF3W511-F10-1N			(1 - 5V)	
PF3W511-F10-2N	G1		10 to 100 (4-20 mA)	
PF3W511-F10-1TN			2 (1 - 5V)	
PF3W521-F14-1N	G1 1/2		(1 - 5V)	
PF3W521-F14-2N			50 to 250 (4-20 mA)	(4-20 mA)
PF3W521-F14-1TN			2 (1 - 5V)	

Part numbers with "T" include temperature sensor.
 Lead wire with M8 connector is not included.
 NPN option available upon request.

#### Digital flow monitor for PVC piping:

#### Integrated type

Part number	Port size	Rated flow range [I/min]	Output specification	Voltage
PF3W711-U25-BN-M ●	25A (32 mm O.D.)	10 to 100	2 PNP	12 ~ 24 VDC
PF3W711-U25-EN-M			PNP + (1 - 5V)	
PF3W711-U25-FN-M			PNP + (4 - 20 mA)	
PF3W721-U30-BN-M	30A (38 mm O.D.)	30 to 250	2 PNP	12 ~ 24 VDC
PF3W721-U30-EN-M			PNP + (1 - 5V)	
PF3W721-U30-FN-M			PNP + (4 - 20 mA)	

#### Remote type

Part number	Port size	Rated flow range [I/min]	Output specification	Voltage
PF3W511-U25-1N	25A	10 to 100	(1 - 5V)	
PF3W511-U25-2N	(32 mm O.D.)		(4 - 20 mA)	12 ~ 24 VDC
PF3W521-U30-1N	30A	30 to 250	(1 - 5V)	12 ~ 24 VDC
PF3W521-U30-2N	(38 mm O.D.)		(4 - 20 mA)	

<sup>1)</sup> Lead wire with M8 connector is not included.

#### Digital flow monitor for PF3W series

Part number	Output specification	Voltage	
PF3W30B-M	2 PNP		
PF3W30E-M	PNP + (1 - 5V)	12 ~ 24 VDC	
PF3W30F-M	PNP + (4 - 20 mA)		

Part number	Description
ZS-40-K	Bracket (with 4 tapping screws, 3 x 8, for PF3W704/720/504/520)
ZS-40-L	Bracket (with 4 tapping screws, 3 x 8, for PF3W740/540)
ZS-40-M	Bracket (with 4 tapping screws, 4 x 10, for PF3W711/511)
ZS-40-A	Lead wire (3 m) with M8 connector

# Digital flow switch for water IO-link compatible



- Applicable fluid: Water and ethylene glycol aqueous solution
- · 3-colour 2-screen display
- Flow ranges: from 0.5 to 40 l/min
- Flow ratio: 8:1
- Repeatability: ±2 % F.S.
- Output: 1 output, NPN/PNP or IO-Link
- IP65
- In-built temperature sensor (-10 to 110 °C)
- Consumption: 50 mA or less.

#### Selected part numbers

Part number	Flow rate [I/min]	Port size	Output specification	Voltage
PF3W704-F03-LTN-MZ	0.5 to 4 l/min	G3/8		
PF3W720-F04-LTN-MZ	2 to 16 l/min	G1/2		10 to 04 VDC (when your and an applitude autout device)
PF3W740-F06-LTN-MZ	5 to 40 I/min	G3/4	IO-Link: Switch output	12 to 24 VDC (when used as switch output device) 18 to 30 VDC (when used as an IO-Link device)
PF3W711-F10-LTN-MZ	10 to 100 l/min	G1		18 to 30 VDC (when used as an IO-Link device)
PF3W721-F14-LTN-M	50 to 250 I/min	G1 1/2		

#### **Accessories**

Part number	Description
ZS-40-M12M8-A	M12-M8 conversion lead wire (0.1 m)
ZS-37-A	Lead wire with M12 connector (3 m)
ZS-40-M12M8-A	Lead wire with M8 connector (3 m)

## Electromagnetic type digital flow switch



- Applicable fluid: water, water-soluble coolant or any fluids with electric conductivity of 5  $\mu$ S/cm or more which do not corrode the fluid contact materials
- Smooth fluid passage and no obstacles or moving parts in the fluid path
- Very low pressure loss (0.02 MPa or less)
- Construction without electrodes immersed in the fluid
- Good rangeability, 40:1 and flow range up to 200 I/min
- Backflow can be detected and the flow direction can be changed after installation.

#### Selected part numbers

Integrated display type

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

#### Remote type sensor unit

Part number	Туре	Port size	Flow rate [I/min]	Output specification	Voltage	Parts material in contact with fluid										
LFE1J4F1		01/0		Analogue 1 - 5 V												
LFE1K4F1	Remote type	G1/2	0.5 to 20	Analogue 4 - 20 mA												
LFE2J6F1	sensor unit	G3/4 2.5 to 1	2.5 to 100	2.5 to 100 Analog Analog Analog	2.5 to 100	2.5 to 100 Analogue 1 - 5 V  Analogue 4 - 20 mA	0.E to 100	2.5 to 100	2.E.to. 100	0 E to 100	2.5 to 100	1 2.5 to 100	2 E to 100	Analogue 1 - 5 V	24 VDC	PPS, FKM,
LFE2K6F1	Without lead	G3/4					Analogue 4 - 20 mA	24 VDC	C37 (Brass)							
LFE3J8F1	wire	G1	5 to 200		Analogue 1 - 5 V											
LFE3K8F1		GT			Analogue 4 - 20 mA											

#### Remote type monitor unit for LFE series

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

#### **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-screen, 3-colour display
- Applicable series: PF3A7□H, PFMB, PFMC
- Outputs: 2 outputs, NPN/PNP and analogue (voltage/current)
- IP40
- Copy function: copy master monitor settings to slaves
- External input: reset parameters remotely
- Repeatability: ±0.1 % F.S.Consumption: 25 mA or less.

#### Selected part numbers

Stocked items

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

- 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	Sensor connector	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)	Tapping screw: Nominal size 3 x 8 L (2 pcs.)	
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		

## **Applications**

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

#### **Pressure switches**

Product detection in a high speed transfer line.

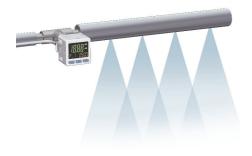


Confirm the pressure condition during operation and monitor the device status.

Monitor the abnormal pressure and the abnormal status of a pressure sensor remotely



Confirmation of cleaning line supply pressure.



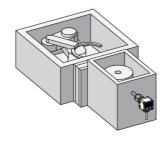
Control of liquid coolant pressure.



Suitable for machine tool industry and high production manufacturing.



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



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



Discharge pressure control for compressor.



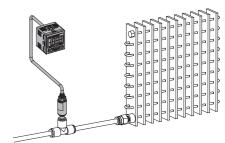
When hydraulic cylinder monitorization is needed.



Suction confirmation for workpieces containing moisture.



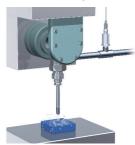
Leak test. A low pressure sensor is used to detect minute differences.



PET bottle molding machines.

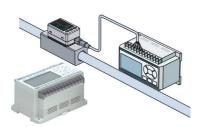


Liquid pressure control of gun drills.



#### **Flow switches**

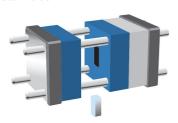
Flow control of equipment, main line and branch line.



Flow control of the air for spray painting.



Flow control for cooling water for metal molds.



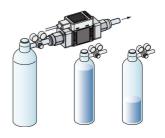
Control of purge air flow of ionizer.



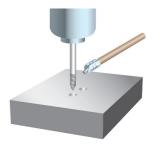
Flow control for pressurised cooling water for welding guns.



Accumulated indication shows the operating flow rate or residual amount (of  $N_2$  etc.) in a gas cylinder.



Flow control for water-soluble coolant.



## **Related products**

#### **Pressure switches**



Directly operated 2 port solenoid valve for medium vacuum/water/oil/steam VX2 Series To control the application fluid while measuring the pressure to detect possible sources of failures.



2 port solenoid valve for air VXZ2□0 Series

To control the application fluid while measuring the pressure to detect possible sources of failures.



Electro-pneumatic regulator ITV1000 Series

To precisely monitor the application pressure and control it with the electro-pneumatic regulator.



Digital flow switch for large flow. PF3A7H Series

If you are concerned about energy efficiencies, monitor main line pressure & flow precisely to detect possible pressure loses.



Digital flow switch for water PF3W Series

Add more information to your line with a flow switch.



Electromagnetic type digital flow switch LFE Series

Add more information to your line with a flow switch.



Sensor monitor PSE300AC Series Visualise the pressure sensor value with a monitor.



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.



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

Removes foreign matter from water lines.

#### **Flow switches**



Digital flow monitor PFG300 Series

Visualise the flow switch value in a panel with a monitor.



Sensor monitor PSE300AC Series

Visualise the flow switch value in a panel with a monitor.



3-screen display
Digital pressure switch
ISE20□ Series

To monitor the application pressure precisely to detect possible sources of failures.



3-screen display
High-precision digital pressure switch
ISE7□G Series

To monitor the application pressure precisely to detect possible sources of failures.



3-screen display
High-precision digital pressure switch
ISE7□ Series

To monitor the application pressure precisely to detect possible sources of failures.



Main line filter AFF□D Series High filtration of the main line filter improving the performance of the downstream products.



Mist separator AM/AMD Series Dust and oil filtration of the main line filter improving the performance of the downstream products.



Multi counter CEU5 Series

Remote control is possible with accumulated pulse.

#### **Monitors**





#### **SMC Corporation**

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