

Model Selection Table

Self-contained Type

Model	ZSE30 ISE30	ZSE40(F) ISE40	ISE70	ISE75 ISE75H	ZSE80(F) ISE80(H)	ZSE50F ISE50	ZSE60F ISE60	ZSE3 ISE3	ZSE1 ISE1	ZSE2 ISE2	ZSP1	PS1000 PS1100	ISA2	ISA		
Fluid	General pneumatic			General fluids				General pneumatic								
Calibration method	Push-button calibration						Trimmer calibration									
Set pressure range	-101 to 101 kPa -0.1 to 1 MPa	-100 to 100 kPa 10 to -101.3 kPa -0.1 to 1 MPa	0 to 1 MPa	0.4 to 10 MPa 0.5 to 15 MPa	-110 to 110 kPa 10 to -111 kPa -0.105 to 1.1 MPa -0.105 to 2.2 MPa	-100 to 100kPa -0.1 to 1MPa		0 to 98 kPa 0 to 0.98 MPa 0 to -101 kPa	0 to 100 kPa 0 to 1 MPa 0 to -101 kPa	-20 to -101 kPa	-0.1 to 0.45 MPa -0.1 to 0.4 MPa	30 to 200 kPa (Detection distance 0.01 to 0.25 mm) 50 to 200 kPa (Detection distance 0.03 to 0.50 mm)	0.1 to 0.2 MPa (Detection distance 10 to 300 μm)			
Power supply voltage	12 to 24 VDC±10% (Ripple ±10% or less)															
Temperature characteristics (based on 25°C)	±2% F.S. or less (0 to 50°C)			±3% F.S. or less (0 to 50°C)				±3% F.S. or less (0 to 60°C)				±3% F.S. or less (0 to 60°C)	±0.01 mm or less (0 to 60°C) (Including repeatability)	±10 μm (0 to 60°C) (Including repeatability)		
Repeatability	ZSE30: ±0.2% F.S. ± 2 digit or less ISE30: ±0.2% F.S. ± 1 digit or less	±0.2% F.S. ±1 digit or less	±0.5% F.S.		±0.2% F.S.±1 digit or less			±1% F.S. or less							±0.01 mm or less (Including temperature characteristics)	±10 μm (Including temperature characteristics)
Hysteresis	Hysteresis mode: Variable Window comparator mode: Variable	Hysteresis mode: Variable Window comparator mode: Fixed (3 digits) Digit is min. calibration unit.	Hysteresis mode: Variable Window comparator mode: Variable		Hysteresis mode: Variable Window comparator mode: Fixed (3 digits) Digit is min. calibration unit.			Variable 1 to 10% Fixed 3% F.S. or less	Fixed 3% F.S. or less	Fixed 0.5 kPa	Fixed 4% F.S.	0.01 mm or less	10 μm or less			
Output	NPN/PNP open collector Analog voltage output Analog current output	NPN/PNP open collector Analog voltage output	1 setting NPN/PNP 2 settings NPN/PNP open collector PNP open collector		NPN/PNP open collector Analog voltage output Analog current output	NPN/PNP open collector Analog voltage output		NPN open collector Analog voltage output	NPN/PNP open collector Analog voltage output	NPN/PNP open collector	NPN open collector	2-wire type	NPN/PNP open collector			
Display (Resolution)	2-color LCD display (0.1%)	LED display (0.1%)	2-color LCD display (1%)		2-color LCD display (0.1%)	LED display (0.1%)		LCD display (1%)					LED level meter			
Enclosure	IP40	IP65	IP67		IP65			IP40				IP40	IP66			
Note	Panel mounting possible Selectable pressure unit Anti-chattering function Display calibration function	Panel mounting possible Selectable pressure unit Anti-chattering function Auto shift function Compound pressure	Selectable pressure unit Anti-chattering function Display calibration function		R thread, URJ, TSJ Panel mounting possible Selectable pressure unit Anti-chattering function Auto shift function Display calibration function Eco mode	R thread Panel mounting possible Selectable pressure unit Anti-chattering function Auto shift function	URJ TSJ Panel mounting possible Selectable pressure unit Anti-chattering function Auto shift function	For use with ZX ejector Self-diagnostic function Failure diagnostic output function Peak hold Bottom hold	For use with ZM ejector	For use with ZX or ZR ejector	Small diameter nozzles Adsorption confirmation For use with ZX ejector		Seating confirmation 6-station manifold available			
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Electronic Pressure Switch Series (Remote Type)

Model Selection Table

Sensor				
Model	PSE53□	PSE54□	PSE550	PSE56□
Fluid	General pneumatic		General pneumatic	General fluids
Calibration method				
Set pressure range	0 to 1 MPa 0 to -101 kPa 0 to 101 kPa -101 to 101 kPa	0 to 1 MPa 0 to -101 kPa -100 to 100 kPa	0 to 2 kPa	0 to 1 MPa 0 to -101 kPa -100 to 100 kPa 0 to 500 kPa
Power supply voltage	12 to 24 VDC±10% (Ripple ±10% or less)			
Temperature characteristics (based on 25°C)	±2% F.S. or less (0 to 50°C)		±3% F.S. or less (0 to 50°C)	±2% F.S. or less (0 to 50°C) ±3%F.S. or less (-10 to 60°C)
Repeatability	±1% F.S. or less	±0.2% F.S. or less	±0.3% F.S. or less	±0.2% F.S. or less
Hysteresis				
Output	Analog voltage output		Analog voltage output Analog current output	
Display (Resolution)				
Enclosure	IP40		IP40	IP65
Note				
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Model Selection Table

Controller

Model	PSE200	PSE300
		
Sensor input amount	4 inputs	1 input
Calibration method	Push-button calibration	
Set pressure range	-0.1 to 1 MPa 10 to -101 kPa -101 to 101 kPa -10 to 100 kPa	-0.1 to 1 MPa -50 to 500 kPa 10 to -101 kPa -0.2 to 2 kPa -101 to 101 kPa -10 to 100 kPa
Power supply voltage	12 to 24 VDC±10% (Ripple ±10% or less)	
Temperature characteristics (based on 25°C)	±0.5% F.S. or less (0 to 50°C)	
Repeatability	±0.1% F.S. ±1 digit or less	±0.1% F.S. or less
Hysteresis	Hysteresis mode: Variable Window comparator mode: Fixed (3 digits)	Hysteresis mode: Variable Window comparator mode: Variable
Output	NPN/PNP open collector 1 CH: 2 outputs 2 to 4 CH: 1 output	NPN/PNP open collector 2 outputs Analog voltage output Analog current output
Display (Resolution)	Single-color LCD display (0.1%)	2-color LCD display (0.1%)
Enclosure	Front only IP65 The rest IP40	IP40
Note	Panel mounting possible Auto shift function Display calibration function Anti-chattering function Copy function Selectable pressure unit	Panel mounting possible DIN rail mountable Auto shift function Display calibration function Anti-chattering function Selectable pressure unit
Page	P. 840	P. 846


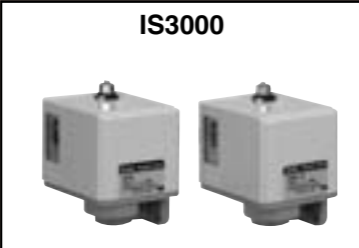




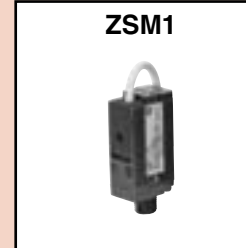
ZSE
ISE
ZSP
PS
ISA
PSE
IS
ISG
ZSM

6

Mechanical Pressure Switch Series

Series Variations

Model Selection Table

	Positive Pressure				Negative Pressure		
Model							
Fluid	General pneumatic			General fluids			General pneumatic
Calibration method	Pressure adjusting screw						
Set pressure range	0.1 to 0.4 MPa	0.1 to 0.7 MPa	0.02 to 0.3 MPa	0.05 to 0.7 MPa	0.1 to 1.0 MPa	-10 to -100 kPa	-27 to -80 kPa
Voltage	to 100 VDC to 100 VAC	24 to 125 VDC 100 to 250 VAC		24 to 220 VDC 100 to 550 VAC			4.5 to 28 VDC (ZSM1-115) ----- 100 VAC/DC or less (ZSM1-121)
Repeatability	±0.05 MPa	±0.05 MPa	±3% F.S.	±3% F.S.			±10% F.S.
Hysteresis (Calibration range of ISG)	0.08 MPa or less	0.05 MPa or less	0.01 to 0.2 MPa	0.02 to 0.35 MPa (Without pointer scale)	0.03 to 0.4 MPa (Without pointer scale)	7 to 53 kPa	15 kPa or less (ZSM1-115)
				0.02 to 0.45 MPa (With pointer scale)	0.03 to 0.6 MPa (With pointer scale)		20 kPa or less (ZSM1-121)
Contacts	1a	1ab		1a1b			NPN open collector (ZSM1-115) ----- 1a (ZSM1-121)
Drip-proof type				Possible with ISG2□□ (Equivalent to IP44)			
Note	Set pressure range 0.1 to 0.6 MPa (-X202)	Micro-load type available Available indicator light		• 2ab contact type (Option) • With light (Refer to Series IS2761.)			Compliant with ZM ejector
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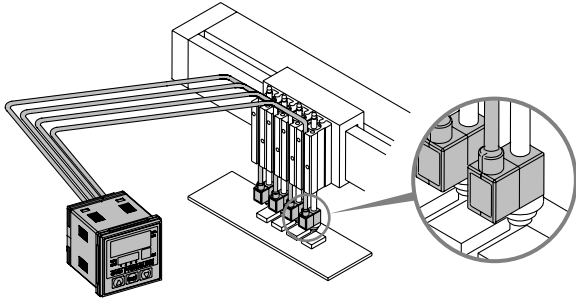
Pressure Switch Application Example

When selecting a model, please thoroughly review and confirm beforehand, that the model will meet the necessary specification.

Adsorption Confirmation

1 Sensor installed close to the pad (No. 1)

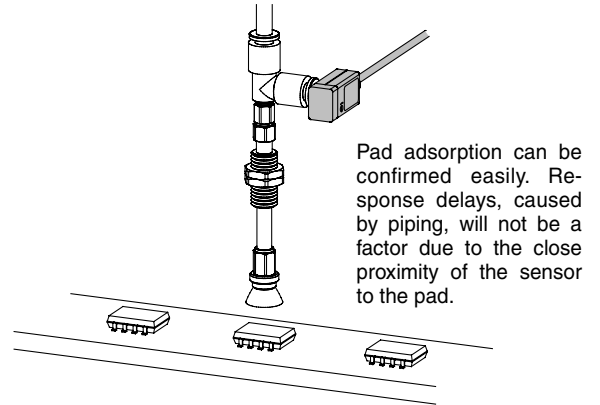
Series PSE54□ + PSE200



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

2 Sensor installed close to the pad (No. 2)

Series PS1100

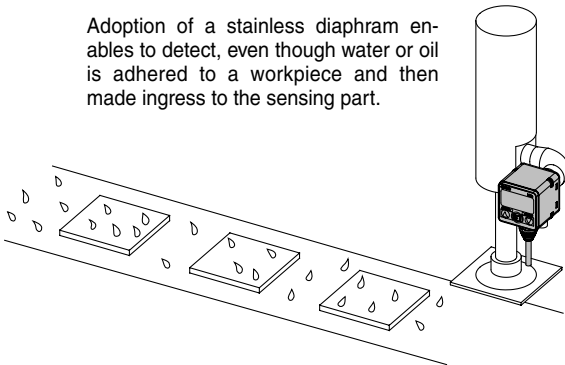


Pad adsorption can be confirmed easily. Response delays, caused by piping, will not be a factor due to the close proximity of the sensor to the pad.

3 Adsorption confirmation of a workpiece absorbed with water/oil

Series ZSE50F

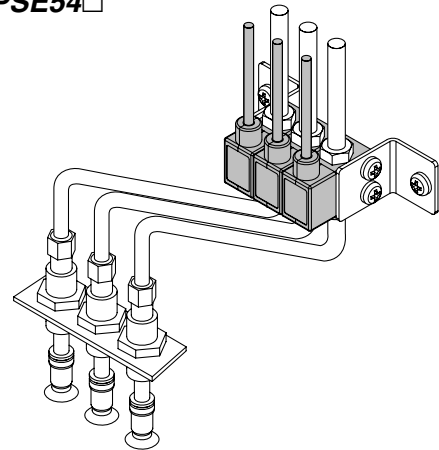
Adoption of a stainless diaphragm enables to detect, even though water or oil is adhered to a workpiece and then made ingress to the sensing part.



Note) When vacuum is released, take precautions to avoid water collision with rush inertia. (Parts to prevent water collision with rush inertia (ZS-31-X175, X186) are available.)

4 Installation of a group of sensors as a manifold style at the same site

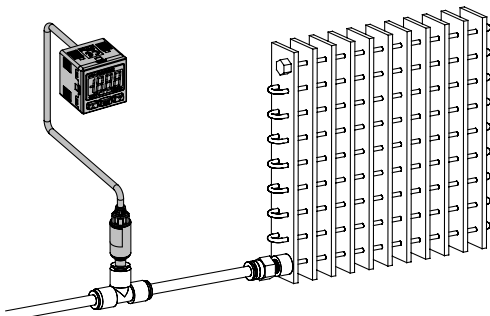
Series PSE54□



Leak Test

5 Inspection of a radiator

Series PSE532 + PSE300



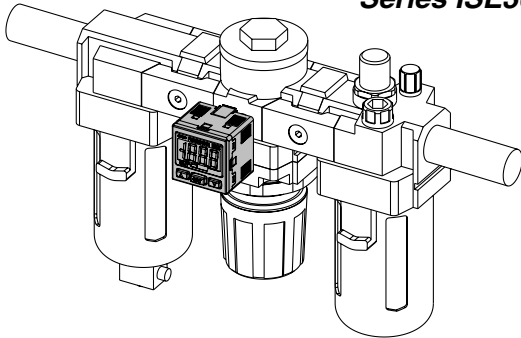
Low pressure sensor (PSE532-□) is used to detect minute differentiations. Auto shift function reduces influence of fluctuations in the supply pressure.

Pressure Switch Application Example

Confirmation of Supply Pressure

6 Confirmation of supply pressure in air line

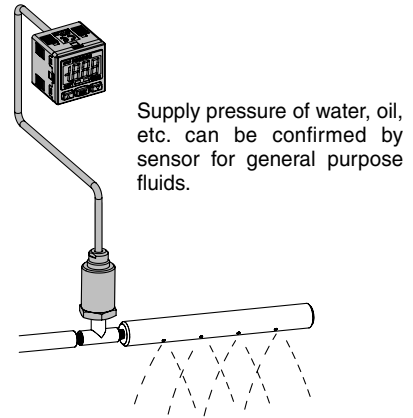
Series ISE30



Line pressure can be adjusted by monitoring the digital readout. Visual verification of the operating pressure. Output can be programmed to respond to supply pressure drops, etc.

7 Confirmation of supply pressure in washing line

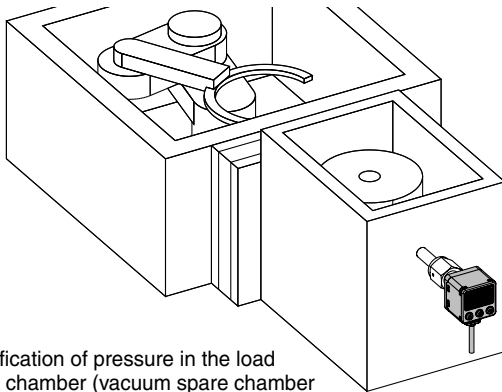
Series PSE560 + PSE300



Supply pressure of water, oil, etc. can be confirmed by sensor for general purpose fluids.

8 Confirmation of atmospheric pressure for load lock chamber

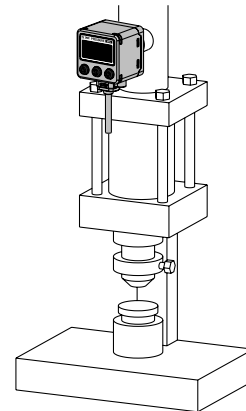
Series ZSE80F



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

9 Verifies peening of hydraulic cylinders

Series ISE80



ZSE
ISE

ZSP

PS

ISA

PSE

IS

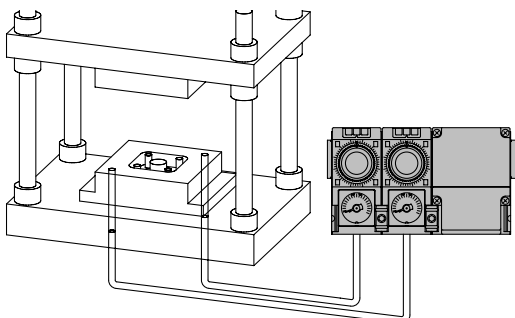
ISG

ZSM

Confirmation of Placement

10 Confirmation of correct workpiece placement

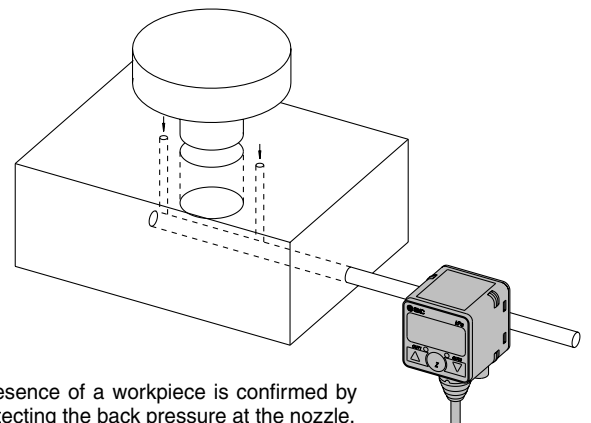
Series ISA2



Able to confirm the position easily even in a place, where the temperature is high for detecting parts like die-casting, and an environment, where a proximate sensor cannot be used.

11 Confirmation of a workpiece presence simply

Series ZSE40F



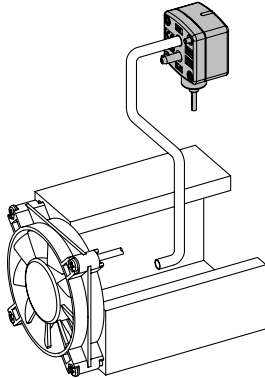
Presence of a workpiece is confirmed by detecting the back pressure at the nozzle.

Pressure Switch Application Example

Low Differential Pressure Detection

12 Flow control

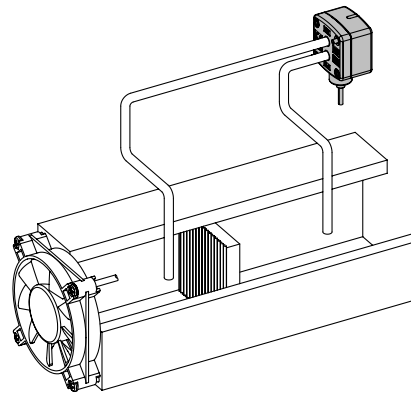
Series PSE550



Can control air flow by monitoring the flow rate inside the duct.

13 Filter clogging monitoring

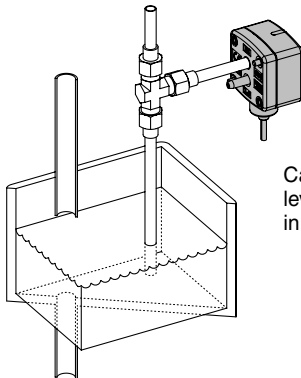
Series PSE550



Can control filtration and replacement periods by monitoring the clogging of the filter.

14 Liquid level detection

Series PSE550



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