

Integrated Type Vacuum Switching Units with Blow-off Air Flow Rate & Relief Pressure Adjusting Needle

# VSJP Series



# VSJP Series Specifications

P4 Series

P4 Series

## Specifications

Item	VSJP
Operating Fluid	Air
Operating Pressure MPa	0.3 to 0.7
Ambient/Fluid Temperatures (°C)	5 to 50
Vacuum pressure kPa	-100 to 0

## Valve (for Vacuum Generation, Vacuum Breaking) Specifications

●Pilot solenoid valve

Item	Vacuum Supply Valve	Vacuum Breaking Valve
Valve Type and Operation Method	Direct acting poppet valve	
Rated Voltage (V)	24 VDC	24 VDC
Voltage Fluctuation Range (V)	24 DC ±10%	24 DC ±10%
Surge Protection Circuit	Varistor	Varistor
Power Consumption	1.2 W (with LED)	1.2 W (with LED)
Manual Override	Push type non-locking type	
Operation Indicator	At coil excitation operation: Red LED lights	
	Connector type (Cable length: 500 mm)	
Wiring Method	Red: 24 VDC Black: COM	Red: 24 VDC Black: COM

●Main valve

Item	Vacuum Supply Valve	Vacuum Breaking Valve
Valve Type and Operation Method	Pilot operated poppet valve	
Proof Pressure MPa	1.05	
Valve Type	Self-holding, Normally Closed, Normally Open	Normally Closed
Lubrication	Not required	
Effective Area (mm <sup>2</sup> )	Air Supply (PS) Port Size	1
	ø4: 3.5	
	ø6: 5	

## Vacuum Pressure Switch with LED Display Specifications

Item	With 2-point Switch Output (-W)	With Analog Output (-A)
Factory Set Value (kPa)	-50 (SW1), -10 (SW2)	-50
Current Consumption (mA)	≤ 40	
Pressure Sensing Element	Diffused Semiconductor Pressure Switch	
Working pressure kPa	-100 to 0	
Set Pressure (kPa)	-99 to 0	
Proof Pressure MPa	0.2	
Storage Temperature (°C)	-20 to 80 (Atmospheric pressure, ≤ 60% RH humidity)	
Operating Temperature (°C)	0 to 50 (However, no freezing)	
Operating Humidity	35 to 85% RH (no freezing)	
Power Supply Voltage (V)	12 to 24 DC ±10% Ripple (P-P) ≤ 10%	
Protection Structure	Equivalent to IEC Standard IP40	
Number of Output Points	2	1
Repeatability	±3% F.S. max (at Ta=25°C)	
Differential	Fixed (2% F.S. max.)	Variable (Approx. 0 to 15% of set value)
Switch Output	NPN Transistor Open Collector Output ≤ 30 V 80 mA Residual Voltage ≤ 0.8 V	
Analog Output	Output Voltage (V)	1 to 5
	Zero Point Voltage (V)	1±0.1
	Span Voltage (V)	4±0.1
	Output Current (mA)	≤ 1 (Load resistance ≥ 5 kΩ)
	Linearity/Hysteresis	±0.5% F.S. max.
Response time ms	2 max.	
Display kPa	-99 to 0 (2-digit Red LED display)	
Display Update Rate	Approx. 4 times/1 second	
Display Accuracy	±3% F.S. ±2 digit	
Resolution	1 digit	
Operation Indicator	SW1: Red LED lights up at or above set pressure SW2: Green LED lights up at or above set pressure	Red LED lights up at or above set pressure
Functions	1. MODE Switch (ME or S1 or S2) 2. S1 Setting Trimmer (2/3 turn trimmer) 3. S2 Setting Trimmer (2/3 turn trimmer)	1. MODE Switch (ME or SW) 2. SW Setting Trimmer (2/3 turn trimmer) 3. HYS Setting Trimmer (Approx. 0 to 15% of set value)

## Vacuum Breaking Function Specifications

Item	Vacuum Breaking Function
Break Air Flow Rate L/min (ANR)	0 to 50 (at 0.5 MPa supply pressure)
Breaking Air Relief Valve Structure	Elastomer seal, poppet valve
Relief Pressure Setting Range (kPa)	-25 to 25

## Vacuum Filter Specifications

Item	Vacuum Filter
Element Material	Polyvinyl formal
Filtration Rating μm	10
Filtration area mm <sup>2</sup>	1,130

For details,



Click!

CKD components Products website (<https://www.ckd.co.jp/kiki/en/>) → Refer to "Model No."

P4 Series

Compatibility table by variation

	VSJP	VSJPM
Connection Port Size	ø4, ø6, ø8	ø4, ø6, ø8, ø10
P4	●	●

●:Applicable Models ○:Semi-Applicable models  
▲:Please inquire □:Not applicable

Model No. Notation Method (Single Unit Type)

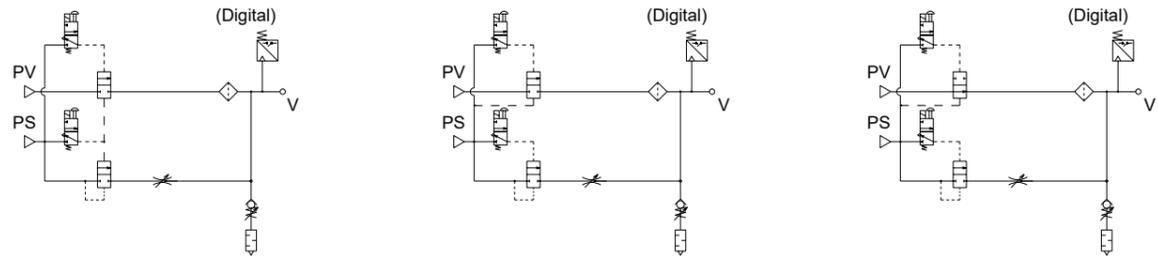
●20 mm width integrated vacuum switching unit single unit

VSJP - A 6 6 6 - 3 - W - P4

Code	Content
<b>A Valve Type</b>	
A	Normally Open Type
B	Normally Closed Type
D	Self-holding Type
<b>B Vacuum Port (V)</b>	
4	ø4 Push-in fitting
6	ø6 Push-in fitting
8	ø8 Push-in fitting
<b>C Air Supply Port (PS)</b>	
4	ø4 Push-in fitting
6	ø6 Push-in fitting
<b>D Vacuum Supply Port (PV)</b>	
4	ø4 Push-in fitting
6	ø6 Push-in fitting
<b>E Solenoid Valve Voltage</b>	
3	24 VDC
<b>F Vacuum Pressure Switch Specifications</b>	
Blank	Without Vacuum Pressure Switch
W	NPN Output 2 points with Digital Display
A	NPN Output 1 point + Analog Output with Digital Display

Circuit Diagram

●Self-holding Type      ●Normally Closed Type      ●Normally Open Type

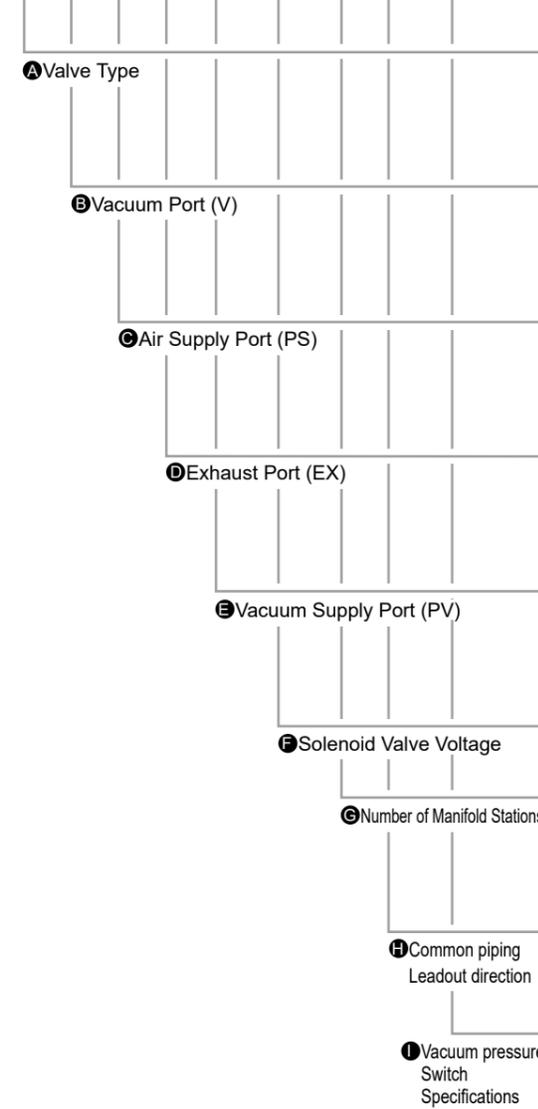


P4 Series

Model No. Notation Method (Manifold Type)

●20 mm width integrated vacuum switching unit manifold

VSJPM - D 6 10 10 10 - 3 - 10 A - W - P4



Code	Content
<b>A Valve Type</b>	
A	Normally Open Type
B	Normally Closed Type
D	Self-holding Type
<b>B Vacuum Port (V)</b>	
4	ø4 Push-in fitting
6	ø6 Push-in fitting
8	ø8 Push-in fitting
<b>C Air Supply Port (PS)</b>	
6	ø6 Push-in fitting
8	ø8 Push-in fitting
10	ø10 Push-in fitting
<b>D Exhaust Port (EX)</b>	
6	ø6 Push-in fitting centralized exhaust
8	ø8 Push-in fitting centralized exhaust
10	ø10 Push-in fitting centralized exhaust
<b>E Vacuum Supply Port (PV)</b>	
6	ø6 Push-in fitting
8	ø8 Push-in fitting
10	ø10 Push-in fitting
<b>F Solenoid Valve Voltage</b>	
3	24 VDC
<b>G Number of Manifold Stations</b>	
2	2 stations
to	to
10	10 stations
<b>H Centralized Piping Outlet Direction</b>	
A	Vacuum Port Side
B	Supply Port Side
<b>I Vacuum Pressure Switch Specifications</b>	
Blank	Without Vacuum Pressure Switch
W	NPN Output 2 points with Digital Display
A	NPN Output 1 point + Analog Output with Digital Display