

Vacuum switching units with lightweight, compact designs that enable high-cycle vacuum systems

VSXP Series



VSXP Series Specifications

Specifications

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

Solenoid Valve Specifications

●Pilot 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)	DC 24 ±10%	DC 24 ±10%
Surge Suppressor	Varistor	Varistor
Power Consumption	1.2 W (with LED)	1.2 W (with LED)
Manual Operation	Non-locking push type	
Operation Indicator	At coil excitation operation: Red LED lights	
Wiring Method	Connector: 500 mm	
	Red: 24 VDC	Red: 24 VDC
	Black: COM	Black: COM

●Switching valve 2-way valve specifications VSXP-D

Item	Vacuum Supply Valve
Valve Type and Operation Method	Direct acting poppet valve
Proof Pressure MPa	1.05
Valve Type	Normally Closed
Lubrication	Not required
Effective Area (mm ²)	Air Supply Port Size ø4: 3.5
	Air Supply Port Size ø6: 4.5

Vacuum Pressure Switch Specifications

Item	With Digital Display Type		Without Display Type
	With 2-point Switch Output (-DW)	With Analog Output (-DA)	Analog Output Only (-A0)
Shipment default Pressure kPa	-50 (SW1), -10 (SW2)	-50	-
Current Consumption MA	≤ 40		≤ 15
Pressure Sensing Element	Diffused Semiconductor Pressure Switch		
Operating Pressure kPa	-100 to 0		
Set Pressure kPa	-99 to 0		-
Proof pressure ForceMPa	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 condensation)		
Power Supply Voltage V	DC 12 to 24 ±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.)	Variable (Approx. 0 to 15% F.S.)	
Switch Output	NPN Transistor Open Collector Output ø30 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.
Notation kPa	0 to -99 (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	Red LED lights up at or above set pressure	
	SW2: Green LED lights up at or above set pressure	-	
Functions	1. MODE Switch (ME or S1 or S2)	1. MODE Switch (ME or SW)	
	2. S1 Setting Trimmer (2/3 turn trimmer)	2. SW Setting Trimmer (2/3 turn trimmer)	
	3. S2 Setting Trimmer (2/3 turn trimmer)	3. HYS Setting Trimmer (Approx. 0 to 15% F.S.)	

Vacuum Breaking Function Specifications

●2-way valve specifications VSXP-D

Valve Type	Break Air Flow Rate L/min (ANR)
Normally Closed	0 to 11.0

*1: Value at 0.5 MPa supply pressure.

*2: Break air flow rate varies depending on the diameter and length (piping resistance, etc.) of the vacuum side piping.

Vacuum Filter Specifications

Item	Vacuum Filter
Element Material	Polyvinyl formal
Filtration Rating μm	10
Filtration area mm ²	502

For details,



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

P4 Series

Compatibility table by variation

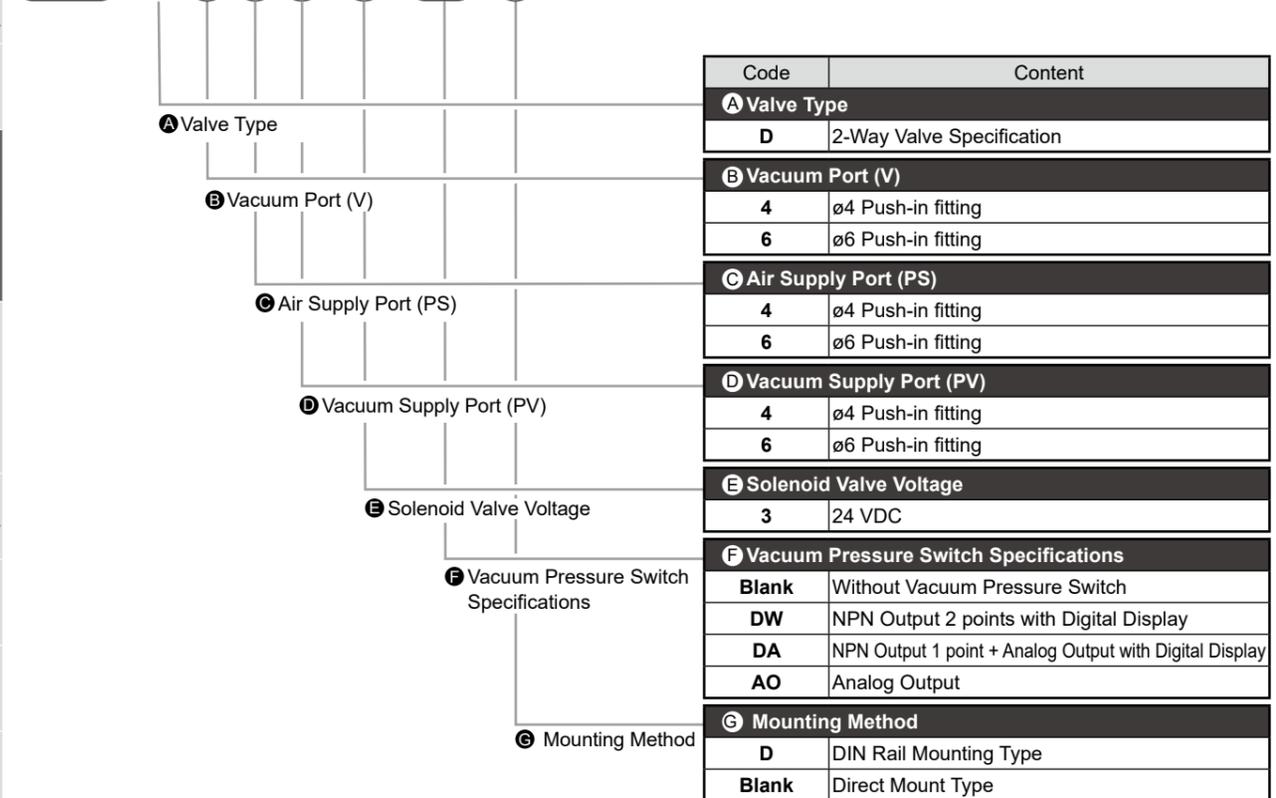
	VSXP	VSXPM
Connection Port Size	ø4, ø6	ø4, ø6, ø8, ø10
P4	●	●

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

*1: Applicable only for 2-way valve.

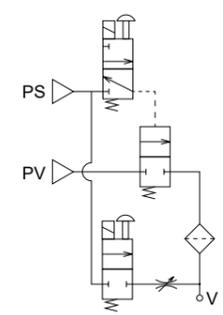
Model No. Notation Method (Single Unit Type)

●10.5 mm width integrated vacuum switching unit single unit
VSXP - D 6 6 6 - 4 - DW - D - P4



Circuit Diagram

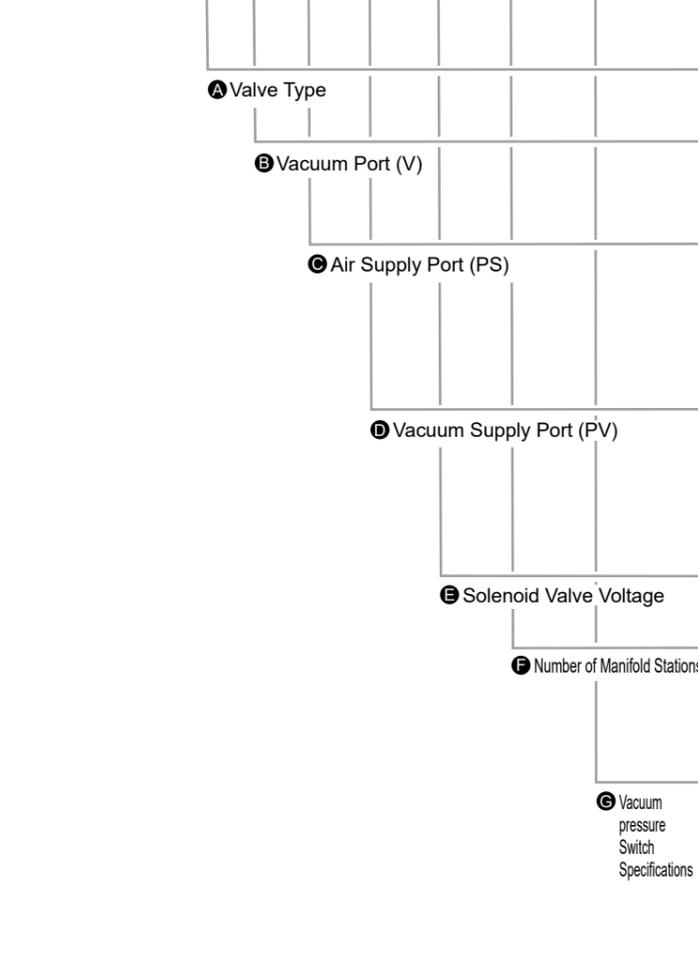
●Normally closed 2-way valve specification



P4 Series

Model No. Notation Method (Manifold Type)

●10.5 mm width integrated vacuum switching unit manifold
VSXPM - D 6 10 10 - 3 - 10 - DW - P4
●10.5 mm width integrated vacuum switching unit manifold single unit
VSXPM - D 6 - 3 - DW - P4
●10.5 mm width integrated vacuum switching unit manifold only
VSXPM - 10 10 - 10 - P4



Code	Content	Manifold	Manifold Single Unit	Manifold Only
A Valve Type				
D	2-Way Valve Specification	●	●	
B Vacuum Port (V)				
4	ø4 Push-in fitting	●	●	
6	ø6 Push-in fitting	●	●	
C Air Supply Port (PS)				
4	ø4 Push-in fitting	●		●
6	ø6 Push-in fitting	●		●
8	ø8 Push-in fitting	●		●
10	ø10 Push-in fitting	●		●
D Vacuum Supply Port (PV)				
4	ø4 Push-in fitting	●		●
6	ø6 Push-in fitting	●		●
8	ø8 Push-in fitting	●		●
10	ø10 Push-in fitting	●		●
E Solenoid Valve Voltage				
3	24 VDC	●	●	
F Number of Manifold Stations				
2	2 stations			
to	to	●	●	
10	10 stations			
G Vacuum Pressure Switch Specifications				
Blank	Without Vacuum Pressure Switch	●	●	
DW	NPN Output 2 points with Digital Display	●	●	
DA	NPN Output 1 point + Analog Output with Digital Display	●	●	
AO	Analog Output	●	●	