

Vacuum switching unit which is lightweight and compact in appearance and has a high-cycle vacuum system

# VSXP Series

RoHS

## Specifications

Item	VSXP
Working fluid	Air
Working pressure MPa	0.3 to 0.7
Ambient/fluid temperatures °C	5 to 50
Vacuum pressure kPa	0 to -101

## Solenoid valve specifications

### ●Pilot valve

Item	Vacuum supply valve		Vacuum break valve	
Valve and operation	Direct acting poppet valve			
Rated voltage V	24 DC	100 AC	24 DC	100 AC
Voltage fluctuation rangeV	24 DC±10%	100 AC±10%	24 DC±10%	100 AC±10%
Surge suppressor	Varistor	Bridge diode	Varistor	Bridge diode
Power consumption	1.2W (with LED)	1.5 VA (with LED)	1.2W (with LED)	1.5 VA (with LED)
Manual operation	Non-locking push type			
Operation display	At coil excitation operation: Red LED lights			
Connection	Connector: 500 mm			
	Red: 24 VDC Black: COM	Blue	Red: 24 VDC Black: COM	Blue

### ●Switching valve 2-way valve specifications VSXP-D

Item	Vacuum supply valve
Valve and operation	Direct acting poppet valve
Proof pressure MPa	1.05
Valve	Normally Closed
Lubrication	Not required
Effective cross-sectional area mm <sup>2</sup>	Air supply port size ø4: 3.5
	Air supply port size ø6: 4.5

### ●Switching valve 3-way valve specifications VSXP-T

Item	Vacuum generating valve
Valve and operation	Direct acting poppet valve
Proof pressure MPa	1.05
Valve	Normally Closed
Lubrication	Not required
Effective cross-sectional area mm <sup>2</sup>	Vacuum supply port size ø4: 3.0
	Vacuum supply port size ø6: 3.6

### Vacuum pressure switch specifications

Item	With digital display		Without display
	With 2-point switch output (-DW)	With analog output (-DA)	Analog output only (-A0)
Default pressure kPa	-50 (SW1), -10 (SW2)	-50	-
Current consumption mA	40 or less		15 or less
Pressure sensitive element	Diffused semiconductor pressure switch		
Working pressure kPa	-100 to 0		
Set pressure kPa	-99 to 0		-
Proof pressure Force MPa	0.2		
Storage temperature °C	-20 to 80 (atmospheric pressure, humidity 60% RH or less)		
Operating temperature °C	0 to 50 (no freezing)		
Operating humidity	35 to 85% RH (No condensation)		
Power supply voltage V	12 to 24 DC $\pm 10\%$ ripple (P-P) 10% or less		
Degree of protection	IEC standards IP40 or equivalent		
Output No. of points	2	1	-
Repeat Accuracy	$\pm 3\%$ F.S. max. (at Ta=25°C)		-
Hysteresis	Fixed (2% F.S. or less)	Variable (Approx. 0 to 15% F.S.)	-
Switch output	NPN Transistor/Open collector output 30 V 80mA or less Residual voltage 0.8V or less		-
Analog output	Output voltage V	1 to 5	
	Zero point voltage V	$1 \pm 0.1$	
	Span voltage V	$4 \pm 0.1$	
	Output current mA	1 or less (load resistance 5 k $\Omega$ or more)	
	Linearity/hysteresis	$\pm 0.5\%$ F.S. max.	$\pm 0.5\%$ F.S. max.
Display kPa	0 to -99 (2-digit red LED display)		-
Display frequency	Approx. 4 cycles/second		-
Display accuracy	$\pm 3\%$ F.S. $\pm 2$ digit		-
Resolution	1 digit		-
Operation display	SW1: Red LED lights at set pressure and over	Red LED lights at set pressure and over	-
	SW2: Green LED lights at set pressure and over		
Function	1. MODE change-over switch (ME or S1 or S2)	1. MODE change-over switch (ME or SW)	-
	2. S1 set trimmer (2/3 rotation trimmer)	2. SW set trimmer (2/3 rotation trimmer)	-
	3. S2 set trimmer (2/3 rotation trimmer)	3. HYS set trimmer (Approx. 0 to 15% F.S.)	-

### Vacuum break function specifications

#### ● 2-way valve specifications VSXP-D

Valve	Burst air flow rate $\ell/\text{min}$ (ANR)
Normally Closed	0 to 11.0

\*1: Value at supply pressure of 0.5 MPa.

\*2: The vacuum break air flow rate will vary with the diameter and length (piping resistance, etc.) of the vacuum side piping.

#### ● 3-way valve specifications VSXP-T

Valve	Burst air flow rate $\ell/\text{min}$ (ANR)
Normally Closed	0 to 7.5

\*1: Value at supply pressure of 0.5 MPa.

\*2: The vacuum break air flow rate will vary with the diameter and length (piping resistance, etc.) of the vacuum side piping.

### Vacuum filter specifications

Item	Vacuum filter
Element material	PVF (Polyvinyl formal)
Filtration rating $\mu\text{m}$	10
Filtration area $\text{mm}^2$	502
Replacement filter element model No.	VSX-E

P4  
Series

Pneumatic actuator  
Pneumatic cylinders  
Chuck  
Hand/ Related products  
Cylinder Switch

Vacuum components

Pneumatic valves

Clean air components  
Speed controller

Pneumatic auxiliary components  
Fitting  
Auxiliary valve

Silencer  
Tube

Gas generator

Fluid control components

Electric actuator  
Motor  
Motorless specifications

Compatibility table by variation

	VSXP	VSXPM
Port size	ø4, ø6	ø4, ø6, ø8, ø10
P4	●	▲

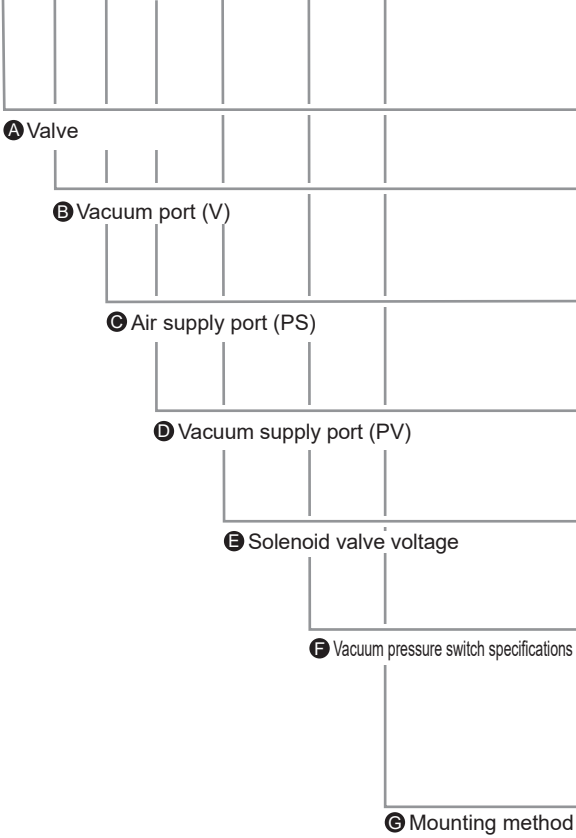
●: Applicable models ○: Semi-applicable models  
▲: Contact CKD for details. □: Not applicable

\*1: Applicable only for 2-way valve.

How to order (discrete)

●10.5mm width, integrated vacuum switching unit Discrete type

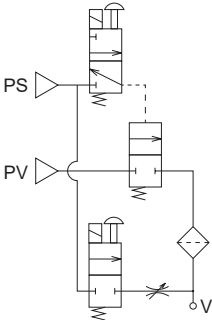
**VSXP - D 6 6 6 - 4 - DW - D - P4**



Code	Description
<b>A Valve</b>	
D	2-way valve specifications
<b>B Vacuum port (V)</b>	
4	ø4 push-in fitting
6	ø6 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>	
1	100 VAC
3	24 VDC
<b>F Vacuum pressure switch specifications</b>	
Blank	Without vacuum pressure switch
DW	With digital display, NPN output 2 points
DA	With digital display, NPN output 1 point + analog output
AO	Analog output
<b>G Mounting method</b>	
D	DIN rail mount
Blank	Direct mounting

Circuit diagram

●Normally Closed 2-way valve specification



●Normally Closed 3-way valve specification

