

# 5 Port Solenoid Valve/Direct Poppet Rubber seal Series **VK3000**

**Cv0.15**

Compact/Width 18 X Length 68 (mm)

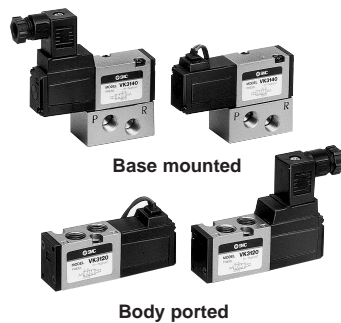
**Low power consumption**

4W DC (Standard)

2W DC (Energy saver)

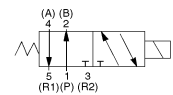
**Standard copper free specification**

All the parts in contact with fluid are non-copper materials

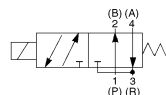


JIS Symbol

Body ported



Base mounted



## Mounting with VK300

VK300 series can be mounted on the same manifold base VV5K3 of VK3000 series. Refer to the p.1.4-4 for the details.

## Usage as 3 port valve

VK3000 series can be used as 3 port valve, as a N.C. or N.O. type, by plugging either "A" or "B" cylinder port "R". Make sure not to plug the exhaust port "R".

Plug position	B port	A port
Type	N.C.	N.O.
JIS Symbol		

## Model

Valve model		Operating pressure range (MPa)	Port size	Effective area (mm <sup>2</sup> ) (Cv factor)	Weight (g) (Grommet)
Body ported	VK3120	0 to 0.7	M5 X 0.8	2.7(0.15)	90
	VK3120Y (Low wattage 2W DC)		Rc(PT) 1/8	3.1(0.17)	
			M5 X 0.8	1.8(0.1)	
	Base mounted (with sub-plate)		VK3140Y (Low wattage 2W DC)	Rc(PT) 1/8	
Rc(PT) 1/8		2.5(0.14)			
			Rc(PT) 1/8	2.0(0.11)	



\* Value for unit. In case of manifolds, it varies depending on operating conditions.

## Specifications

Style	Single, 2 position, single solenoid
Fluid	Air
Ambient and operating fluid temperature	50°C max.
Response time at 0.5MPa (1)	10ms or less (Standard), 15ms or less (Low wattage)
Manual override	Non-locking push style
Lubrication	Not required (If required, use turbin oil class 1 ISO VG32)
Mounting orientation	Free
Impact/Vibration resistance (2)	300/50m/s <sup>2</sup>
Protective construction	Dust proof



Note 1) According to Dynamic performance test JIS B8375-1981.

(Coil temperature 20°C, at rated voltage, without surge suppressor)

Note 2) Impact resistance:

No malfunction from test using drop impact tester, to axis and right angle direction of main valve and armature, each one time when energized and de-energized.

Vibration resistance:

No malfunction from test with 8.3 to 2000 Hz 1 sweep, to axis and right angle direction of main valve and armature, each one time when energized and de-energized. (Valve in the initial Stage.)

## Solenoid Specifications

Electrical entry		Grommet (G), DIN terminal (D)
Rated voltage	AC	100V, 110V, 200V, 220V, 240V
	DC	6V, 12V, 24V, 48V
Allowable voltage		±10% of rated voltage
Phase voltage(AC)*	Inrush	9.5VA/50Hz, 8VA/60Hz
	Holding	7VA/50Hz, 5VA/60Hz
Power consumption(DC)*	W/o light	4W (Standard), 2W (Low wattage)
	W/ light	4.3W (Standard), 2.3W (Low wattage)
Surge voltage suppressor	AC	Varistor
	DC	Diode (12V DC or less: Varistor)
Indicator light	AC	Neon light
	DC	LED



\* At the rated voltage

SY

SYJ

SX

VK

VZ

VF

VFR

VP7

VP4

VQ

VQ4

VQZ

VQD

VZS

VFS

VS

VS7

# VK3000

## How to Order

**Electrical entry**

<b>G-Grommet</b> 300mm lead wire	<b>H-Grommet</b> 600mm lead wire	<b>D-DIN terminal</b>	<b>DO-DIN terminal</b> Without connector
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\* Refer to p.2.3-10 for connector part number.

**Rated voltage**

1	100V AC 50/60Hz
2	200V AC 50/60Hz
3*	110V AC 50/60Hz
4*	220V AC 50/60Hz
5	24V DC
6*	12V DC
7*	240V AC 50/60Hz
9	Others

\* Option

**Port size (P, A and B ports)**

<b>M5</b>	M5 X 0.8
<b>01</b>	Rc(PT) 1/8

\* R1, R2: M5

**Option**

—	None
F	With bracket (Not assembled)

**Option Part No.**

Description	Part No.	Note
Bracket	VK300-43-2A	With screw
Manifold gasket	VK3000-6-1A	With screw for body ported
	VK3000-6-2A	With screw for base mounted

**Body ported** VK3120 [ ] 1 G [ ] M5 [ ]

**Base mounted** VK3140 [ ] 1 G [ ] 01 [ ]

**Valve option**

—	Standard
Y*	Low wattage (2W DC)

\* Option

**Port size**

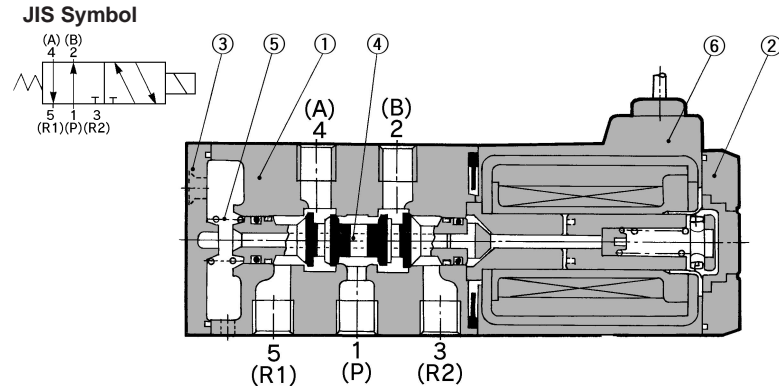
01	Rc(PT) 1/8 (With sub-plate)
—	Without sub-plate

**Light and surge voltage suppressor**

—	None
S	With surge voltage suppressor
Z*	With light and surge voltage suppressor (Available only for "D" type.)

\* Light is built in the connector, thus is not available for "DO" type.

## Construction



### Component Parts

No.	Description	Material	Note
①	Body	Aluminum die cast	Platinum silver paint
②	Cover	Resin	Black
③	End cover	Resin	Black
④	Spool valve ass'y	Alluminum, NBR	
⑤	Return spring	Stainless steel	
⑥	Molded coil	Resin	Black