

Body Ported

Pilot Operated 5 Port Solenoid Valve

Series VF1000/3000/5000

Single Unit

How to Order Valve



Note) Only DIN and conduit terminal types are available with AC mode. Refer to the electrical entry for details.

RoHS

Body ported

VF 3 1 3 0 - 5 G 1 - 01

Series

1	VF1000
3	VF3000
5	VF5000

Type of actuation

1	2-position single
2	2-position double
3	3-position closed center
4	3-position exhaust center
5	3-position pressure center

* Only 1 and 2 are available with the VF1000.

Body model

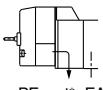
Symbol	VF1000	VF3000	VF5000
2	○	—	○
3	—	○	—

Pressure specifications

Nil	Standard (102 psi (0.7 MPa))
K	High-pressure type (145 psi (1 MPa))

Body option

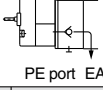
0: Pilot valve individual exhaust



PE port* EA/EB port

VF1000	VF3000	VF5000
○	○	○

3: Main/Pilot valve common exhaust



PE port EA/EB port

VF1000	VF3000	VF5000
—	○	○

* Refer to "Made to Order" (Page 14) when piping to PE port is required.

Coil specifications

Nil	Standard
T	With power saving circuit (DC only)

Note) Be sure to select the power saving circuit type when it is continuously energized for long periods of time. (Refer to page 51 for details.)

* T type is available with DC mode only. When T is selected, only Z type of light/surge voltage suppressor is available. (Note that when the electrical entry of DIN terminal type without connector is selected, only DOS and YOS are available.)

Rated voltage

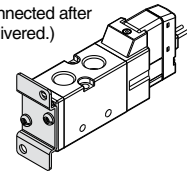
DC		AC (50/60 Hz)	
5	24 VDC	1	100 VAC
6	12 VDC	2	200 VAC
		3	110 VAC [115 VAC]
		4	220 VAC [230 VAC]
		7	240 VAC
		B	24 VAC

Bracket

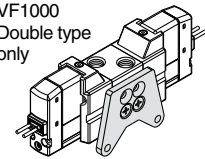
Nil	Without bracket
F	With bracket

VF1000/3000

Single type
(The bracket cannot be connected after delivered.)



VF1000
Double type only



* Not available with the VF5000.

Made to Order

Nil	—
X500	Pilot exhaust port with piping thread (M3) specification (Refer to page 14.)
X600	TRIAC output specification (Refer to page 14.)

A, B port size

Symbol	Port size	VF1000	VF3000	VF5000
M5	M5 x 0.8	○	—	—
01	1/8	○	○	—
02	1/4	—	○	○
03	3/8	—	—	○

Manual override

Nil: Non-locking push type	D: Push-turn locking slotted type	E: Push-turn locking lever type

Light/Surge voltage suppressor

Symbol	Light/Surge voltage suppressor	DC	AC
Nil	Without light/surge voltage suppressor	○	○
S	With surge voltage suppressor	○	— (Note)
Z	With light/surge voltage suppressor	○	○
R	With surge voltage suppressor (Non-polar)	○	—
U	With light/surge voltage suppressor (Non-polar)	○	—

Note) S type is not available with AC mode, since a rectifier prevents surge voltage generation.

* In the DIN terminal type, since a light is installed in the connector, DOZ, DOU, YOZ, YOU are not available.

Electrical entry

Grommet	L-type plug connector	M-type plug connector	DIN terminal	DIN (EN175301-803) terminal	Conduit terminal
G: Lead wire length 300 mm H: Lead wire length 600 mm	L: With lead wire (length 300 mm)	M: With lead wire (length 300 mm)	[IP65 compatible]	[IP65 compatible]	[IP65 compatible]
			D: With connector	Y: With connector	T: Conduit terminal
G: Lead wire length 300 mm H: Lead wire length 600 mm DC Without light/surge voltage suppressor	LN: Without lead wire	MN: Without lead wire			
	LO: Without connector	MO: Without connector	DO: Without connector	YO: Without connector	
CE compliant, AC (Note 2)	CE	CE	CE	CE	CE

* LN and MN types are with 2 sockets.

* Refer to page 49 when different length of lead wire for L/M-type plug connector is required.

* Refer to page 50 for details on the DIN (EN175301-803) terminal.

Note 1) When using IP65, select the main/pilot valve common exhaust type. (Except VF1000)

Note 2) With the same specifications as the DC type, all electrical entries for the 24 VAC type are CE marking compliant.



Caution

When using the surge voltage suppressor type, residual voltage will remain. Refer to page 51 for details.

Series VF1000/3000/5000

Made to Order



Please contact SMC for detailed dimensions, specifications, and lead times.

1 Body Ported Pilot Exhaust Port with Piping Thread (M3) Specification

In this specification, piping to the pilot exhaust port (PE port) is available when the valve is used in an environment where the exhaust from the pilot valve is not allowable, or intrusion of ambient dust should be prevented.

Combination with low wattage specification is not possible.

How to Order Valve

VF 3 **3 0** **1** **-X500**

Series

1	VF1000
3	VF3000
5	VF5000

Type of actuation

1	2-position single
2	2-position double
3	3-position closed center
4	3-position exhaust center
5	3-position pressure center

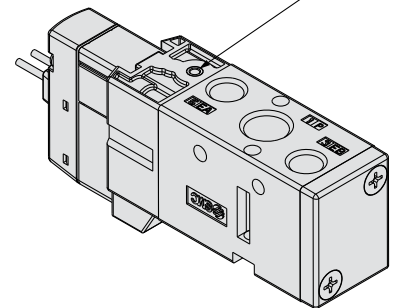
- Entry is the same as standard products. The specifications and performance are the same as those of standard products.

Body model

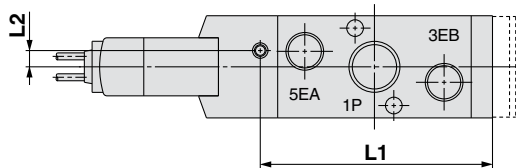
Symbol	VF1000	VF3000	VF5000
2	○	—	○
3	—	○	—

Note) Not available for the base mounted type.

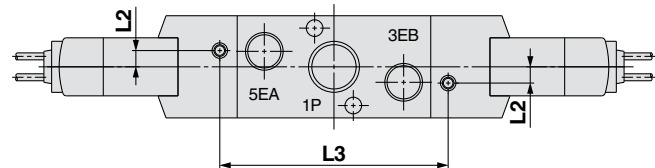
Pilot exhaust port (PE port)
M3 x 0.5



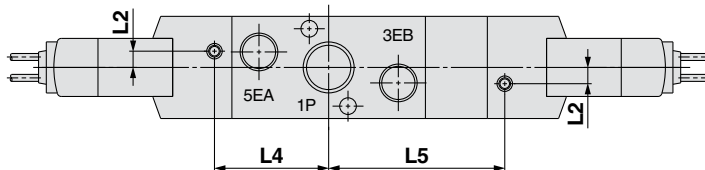
• 2-position single



• 2-position double



• 3-position closed center/exhaust center/pressure center



Series	L1	L2	L3	L4	L5
VF1000	34.5	4.2	33.4	—	—
VF3000	60	4.2	59	29.5	45.5
VF5000	95	3.45	89	44.5	63.5

2 TRIAC Output Specification

For AC type valve, use this specification when the pilot valve is not recovered even though valve power supply is turned OFF at the equipment using output unit with large leakage voltage over 8% of the rated voltage (TRIAC output such as PLC or SSR, etc.).

Combination with low wattage specification is not possible.

How to Order Valve

VF 3 **1** **-X600**

Series

1	VF1000
3	VF3000
5	VF5000

- Entry is the same as standard products.

Note) Rated voltage: AC type only

Type of actuation

1	2-position single
2	2-position double
3	3-position closed center
4	3-position exhaust center
5	3-position pressure center

