

3 Port Solenoid Valve

Rubber Seal, Body Ported/Base Mounted

Series VZ500

How to Order

Body ported VZ5 **1** **2** **5** **L** **01**

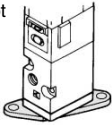
Base mounted VZ5 **1** **4** **5** **L**

Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

Option

F: With foot bracket



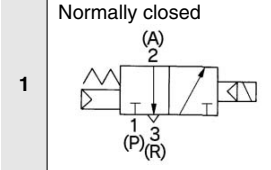
Note) • Bracket is not mounted.
• Except external pilot.

Port size

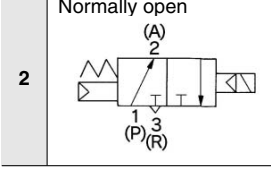
01 1/8

Type of actuation

1 Normally closed (A) 2 (P) 3 (R)

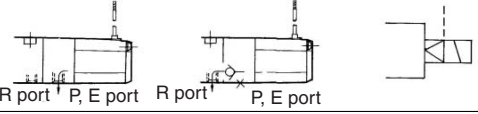


2 Normally open (A) 2 (P) 3 (R)



Body option

Nil: Individual pilot exhaust type M: Common exhaust for the pilot and main valve R: External pilot type (Note)



Note) VZ5□2R is for manifold only.

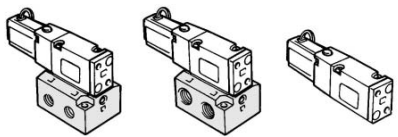
Rated voltage

1	100 VAC, 50/60 Hz
2	200 VAC, 50/60 Hz
3*	110 VAC, 50/60 Hz
4*	220 VAC, 50/60 Hz
5	24 VDC
6*	12 VDC
9*	Other

* Option

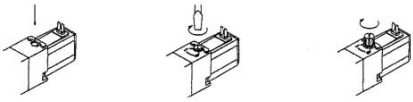
Port size

01: With sub-plate 1/8 02: With sub-plate 1/4 Nil: Without sub-plate



Manual override

Nil: Non-locking push type B: Locking type B (Slotted) C: Locking type C (Manual)



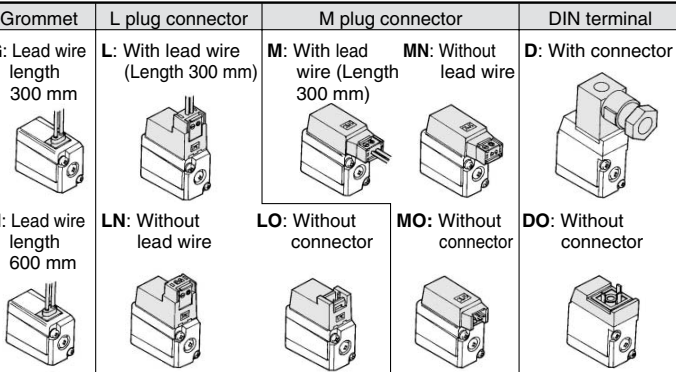
Light/Surge voltage suppressor

Nil	None
Z*	With light/surge voltage suppressor
S	With surge voltage suppressor

* Not available for "GZ", "HZ" and "DOZ"

Electrical entry

Grommet	L plug connector	M plug connector		DIN terminal
G: Lead wire length 300 mm	L: With lead wire (Length 300 mm)	M: With lead wire (Length 300 mm)	MN: Without lead wire	D: With connector
H: Lead wire length 600 mm	LN: Without lead wire	LO: Without connector	MO: Without connector	DO: Without connector



- V100
- SY
- SYJ
- VK
- VZ**
- VT
- VP
- VG
- VP
- S070
- VQ
- VKF
- VQZ
- VZ
- VS
- VFN

Series VZ500

**Low power consumption:
1.8 W DC**

**Applicable for vacuum use
-100 kPa**

500R: External pilot type

**Exhausting equipment for
pilot valve not required.**

500M: Central exhaust type

It is not necessary to take exhaust
measures for the pilot valve for
environmental protection.

**Possible to use as either a
selector or divider valve**

500R: External pilot type

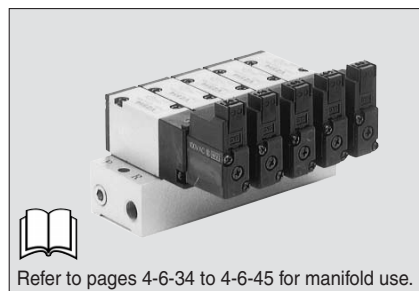
Can be used for universal porting.



Body ported



Base mounted



Refer to pages 4-6-34 to 4-6-45 for manifold use.

Specifications

Fluid	Air	
Operating pressure range (MPa)	Internal pilot	0.15 to 0.7
Ambient and fluid temperature (°C)	-10 to 50 (No freezing. Refer to page 4-18-4.)	
Response time (ms) (at the pressure of 0.5 MPa) ⁽¹⁾	20 or less	
Max. operating frequency (Hz)	10	
Flow characteristics	Refer to the table below.	
Manual override ⁽²⁾	Non-locking push type Locking slotted type, Locking lever type	
Pilot exhaust method	Individual pilot exhaust type, Common exhaust (pilot and main valve) type	
Lubrication	Not required	
Mounting orientation	Unrestricted	
Shock/Vibration resistance (m/s ²) ⁽³⁾	300/50	
Enclosure	Dustproof	



Note 1) Based on dynamic performance test, JIS B 8374-1981. (Coil temperature: 20°C, at rated voltage, without surge suppressor)

Note 2) When operating the locking type manually, apply torque of 0.2 N·m or less.

Note 3) Impact resistance: No malfunction occurred when it is tested with a drop tester in the axial direction and at the right angles to the main valve and armature in both energized and de-energized states every once for each condition. (Values at the initial period)

Vibration resistance: No malfunction occurred in a one-sweep test between 45 and 2000 Hz. Test was performed at both energized and de-energized states in the axial direction and at the right angles to the main valve and armature. (Values at the initial period)

Solenoid Specifications

* Option

Electrical entry	Grommet (G)/(H), L plug connector (L), M plug connector (M), DIN terminal (D)		
Coil rated voltage (V)	AC50/60 Hz	100, 200, 24*, 48*, 110*, 220*	
	DC	24, 6*, 12*, 48*	
Allowable voltage fluctuation (%)	-15 to +10% of rated voltage		
Power consumption (W) [Current mA] Note)	DC	1.8 (With indicator light 2.1) [24 VDC: 75 (With indicator light 87.5)]	
Apparent power (VA) [Current mA] Note)	AC	Inrush	4.5/50 Hz, 4.2/60 Hz [100 VAC: 45/50 Hz, 42/60 Hz 200 VAC: 22.5/50 Hz, 21/60 Hz]
		Holding	3.5/50 Hz, 3/60 Hz [100 VAC: 35/50 Hz, 30/60 Hz 200 VAC: 17.5/50 Hz, 15/60 Hz]
Surge voltage suppressor	DC: Diode, AC: ZNR		
Indicator light	DC: LED (Red), AC: Neon bulb		



Note) At rated voltage

Flow Characteristics/Weight

Model	Type of actuation	Port size	Flow characteristics						Weight (g) Note)	
			1 → 2 (P → A)			2 → 3 (A → R)				
			C [dm ³ /(s·bar)]	b	Cv	C [dm ³ /(s·bar)]	b	Cv		
Body ported	VZ512	N.C.	1/8	2.8	0.43	0.77	2.5	0.51	0.76	110
	VZ522	N.O.		2.7	0.38	0.72	2.4	0.42	0.69	
Base mounted (With sub-plate)	VZ514	N.C.	1/8	2.9	0.32	0.71	2.7	0.34	0.69	160 (Without sub-plate: 110)
	VZ524	N.O.		2.8	0.21	0.71	2.3	0.45	0.63	
	VZ514	N.C.	1/4	3.0	0.31	0.74	2.6	0.33	0.66	
	VZ524	N.O.		2.7	0.31	0.68	2.3	0.48	0.64	



Note) Weight stands for grommet type.

Option

Description	Part no.	Note
Foot bracket	DXT201-19-1A	With screw (For VZ5□2)

Made to Order Made to Order Specifications
(For details, refer to page 4-6-46.)

3 Port Solenoid Valve Rubber Seal, Body Ported/Base Mounted Series VZ500

External Pilot

VZ500R

Pilot valve pressure is supplied separately from the main valve pressure through the use of a separate supply port. It can be used in the vacuum (up to -100 kPa) or low pressure line with 0.15 MPa or less.

Specifications

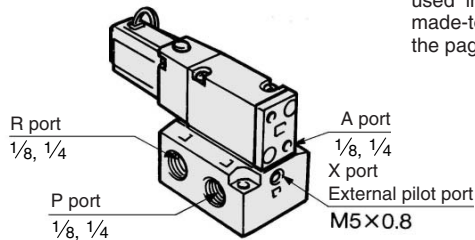
Applicable model	Base mounted (VZ314R, VZ324R)	
Operating pressure range (MPa)	Main pressure	-100 kPa to 0.7
	External pilot pressure	0.15 to 0.7



Note 1) For manifold base, refer to page 4-6-34.

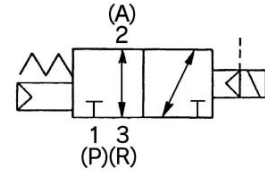
Note 2) In the case of the body ported type, the pilot type (VZ5□2R) is used exclusively on a manifold.

An external pilot style that can be used individually is available as a made-to-order. For details, refer to the page 4-6-46.

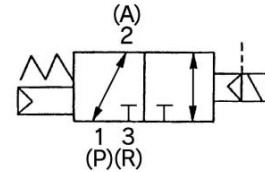


JIS Symbol

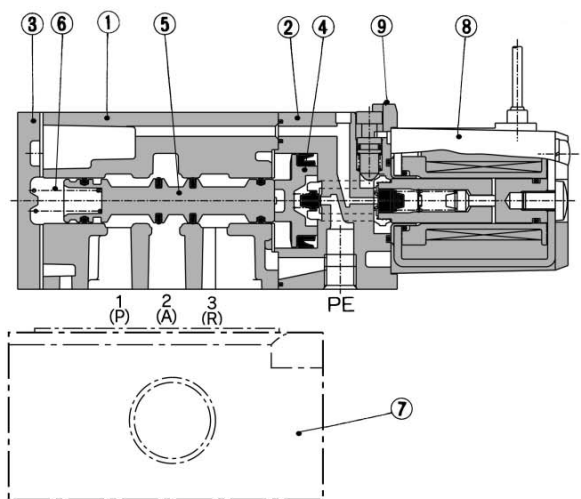
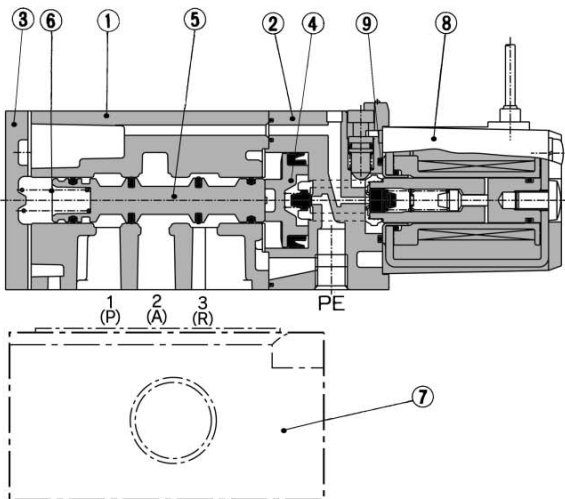
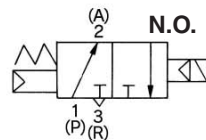
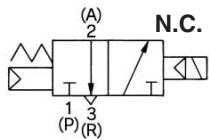
VZ51□R



VZ52□R



Construction



Component Parts

No.	Description	Material	Note
①	Body	Aluminum die-casted	Platinum silver
②	Piston plate	Resin	Black
③	End cover	Aluminum die-casted	Black
④	Piston	Resin	—
⑤	Spool valve assembly	—	—
⑥	Spool spring	Stainless steel	—

Replacement Parts

No.	Description	Material	Part no.	Note
⑦	Sub-plate	Aluminum die-casted	DXT201-2-1□P DXT201-2-2□P	1/8 1/4
⑧	Solenoid assembly	Epoxy/Stainless steel		
⑨	O-ring	NBR	13 x 11 x 1	Common with VZ100

Sub-plate part no.: DXT201-2- $\frac{1}{2}$ □P

Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

V100

SY

SYJ

VK

VZ

VT

VP

VG

VP

S070

VQ

VKF

VQZ

VZ

VS

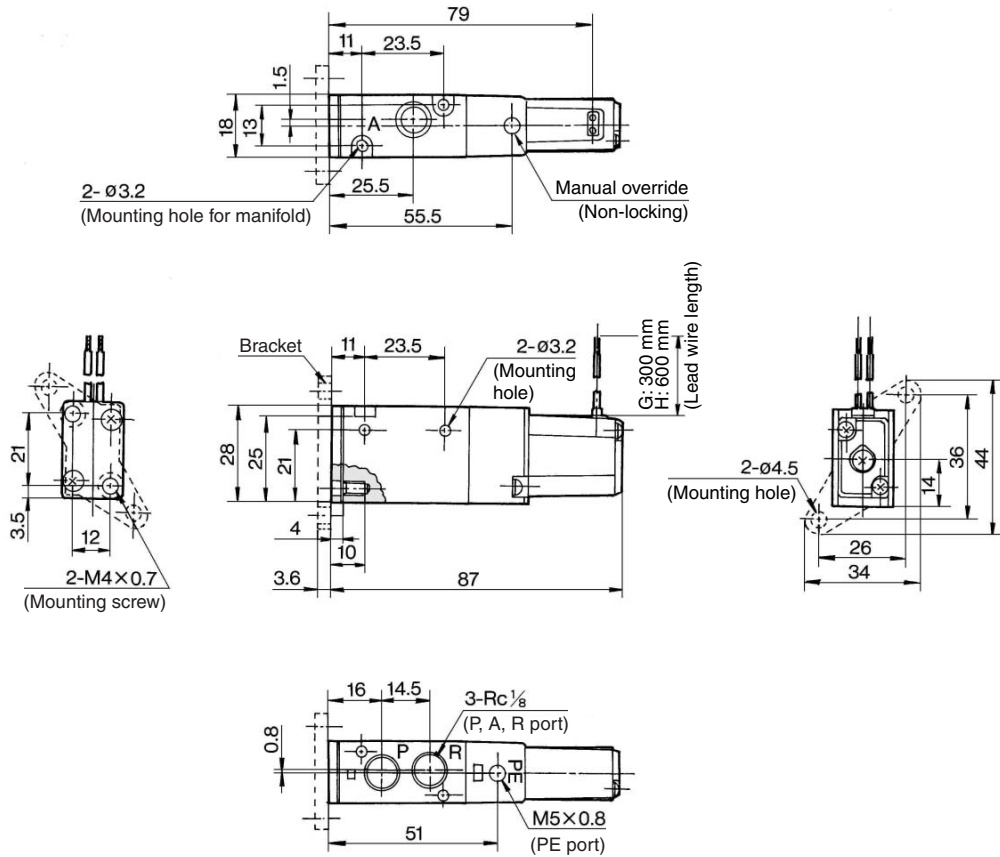
VFN

Series VZ500



Body Ported

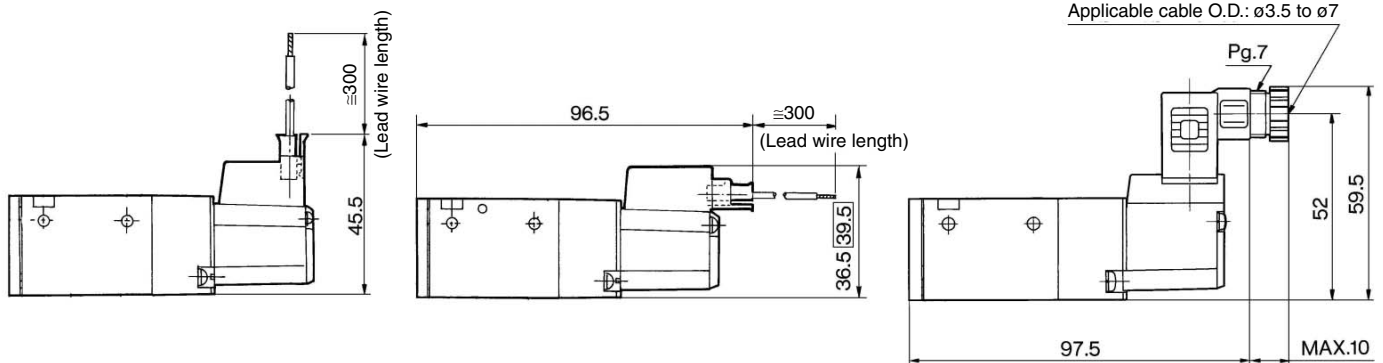
Grommet (G), (H) VZ5□2-□^G□□-01(-F)



L plug connector (L) VZ5□2-□L□□-01

M plug connector (M) VZ5□2-□M□□-01

DIN terminal (D) VZ5□2-□D□□-01



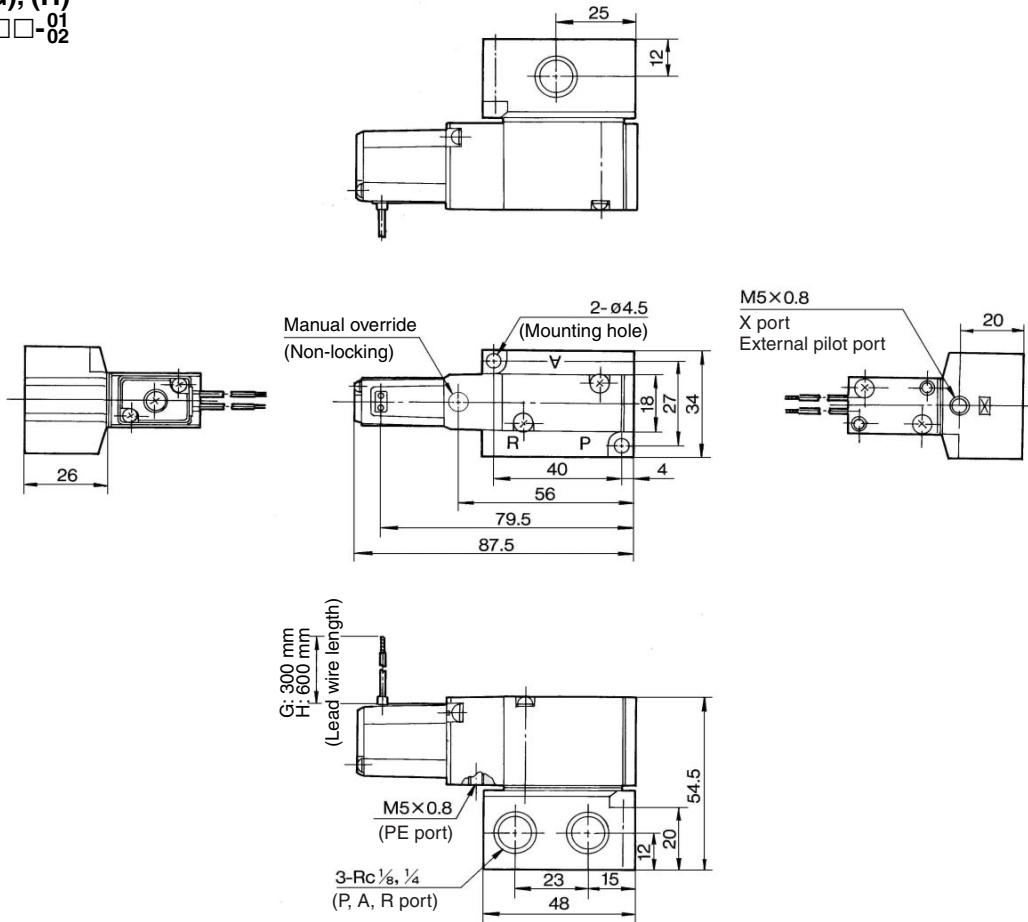
□: With light/surge voltage suppressor

3 Port Solenoid Valve Rubber Seal, Body Ported/Base Mounted **Series VZ500**



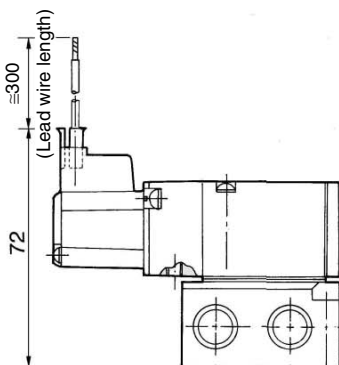
Base Mounted (With sub-plate)

Grommet (G), (H)
VZ5□4-□^G□□-⁰¹/₀₂

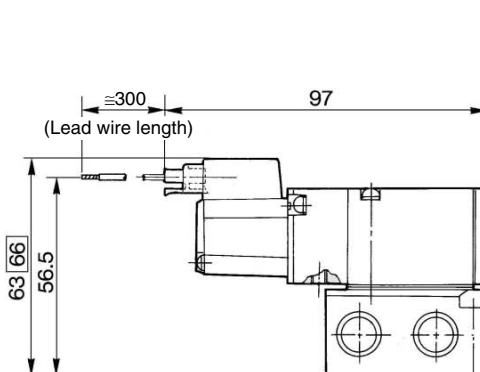


V100
SY
SYJ
VK
VZ
VT
VP
VG
VP
S070
VQ
VKF
VQZ
VZ
VS
VFN

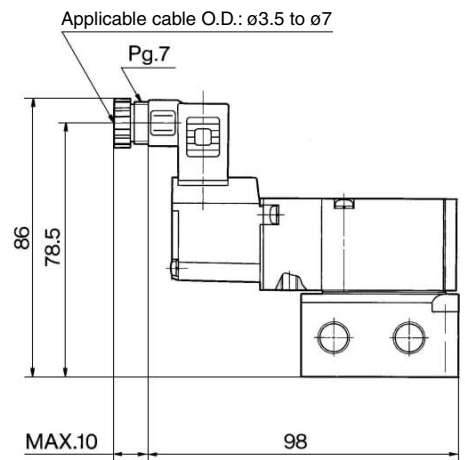
L plug connector (L)
VZ5□4-□□L□□-⁰¹/₀₂



M plug connector (M)
VZ5□4-□□M□□-⁰¹/₀₂



DIN terminal (D)
VZ5□4-□□D□□-⁰¹/₀₂



□: With light/surge voltage suppressor

Series VZ

Made to Order Specifications:

1. Solenoid Valve: Opposite Mounting of Solenoid Assembly

Applicable solenoid valve series

VZ100/300/500

Model no.

VZ1 0 () - X1

VZ₅³ () - X1

• Entry is the same as standard products.

2. Solenoid Valve: External Pilot Specifications

● Applicable for individual use of body ported external pilot type

Applicable solenoid valve series

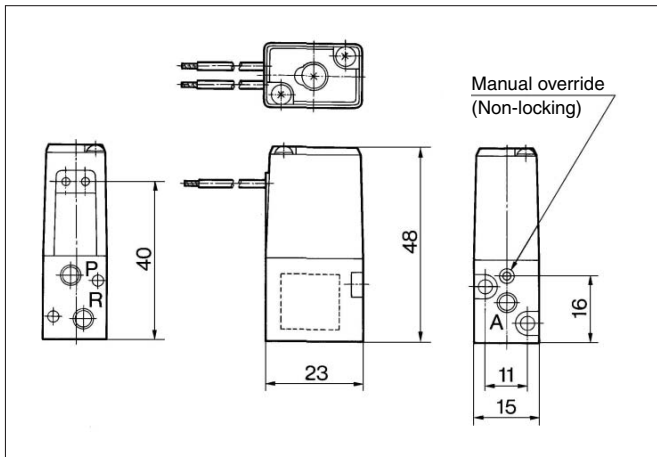
VZ300/500

Model no.

VZ₅³ 2R () - X20

• Entry is the same as standard products.

Dimensions: VZ110-□G-M5-X1



Specifications

Operating pressure range (MPa)	Main pressure	-100 kPa to 0.7
	External pilot pressure	0.15 to 0.7
Pilot exhaust method	Pilot valve individual exhaust	

Dimensions

VZ300: 8 mm longer in total length

VZ500: 8 mm longer in total length

Dimensions: VZ312R-□G-M5-X20

