

# 3 Port Solenoid Valve

## Rubber Seal, Body Ported/Base Mounted

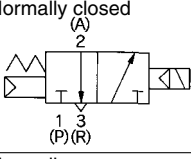
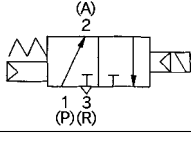
# Series VZ300

### How to Order

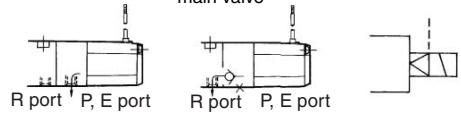
**Body ported** VZ3 1 2 [ ] 5 L [ ] [ ] M5 [ ]

**Base mounted** VZ3 1 4 [ ] 5 L [ ] [ ] [ ] [ ]

**Type of actuation**

1 Normally closed (A)  
  
 2 Normally open (A)  


**Body option**

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


Note) VZ3□2R is for manifold only.

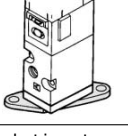
**Rated voltage**

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**  
M5: M5 x 0.8

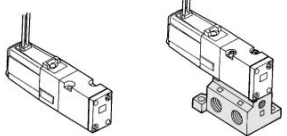
**Option**

F: With foot bracket  
  
 Note) • Bracket is not mounted.  
 • Except external pilot.

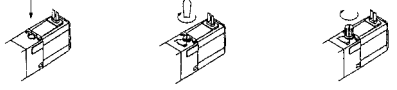
**Thread type**

Nil	Rc
F	G
N	NPT
T	NPTF

**Port size**

Nil: Without sub-plate  
 O1: With sub-plate 1/8  


**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 

\* "LN", "MN" type: With 2 sockets.

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

# Series VZ300

**Low power consumption:  
1.8 W DC**

**Applicable for vacuum use  
-100 kPa**

VZ300R: External pilot type

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

VZ300M: 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**

VZ300R: External pilot type

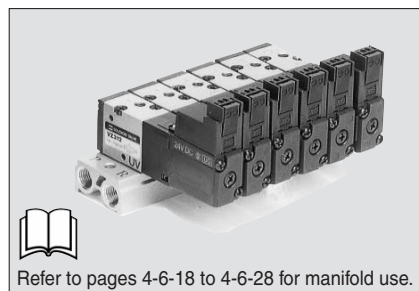
Can be used for universal porting.



Body ported



Base mounted



Refer to pages 4-6-18 to 4-6-28 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) <sup>(1)</sup>		20 or less
Max. operating frequency (Hz)		10
Flow characteristics		Refer to the table below.
Manual override <sup>(2)</sup>		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 <sup>2</sup> ) <sup>(3)</sup>		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 1000 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)]		
		AC	Inrush	4.5/50 Hz, 4.2/60 Hz
Holding	3.5/50 Hz, 3/60 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 <sup>Note)</sup> (g)	
			1 → 2 (P → A)			2 → 3 (A → R)				
			C [dm <sup>3</sup> /(s·bar)]	b	Cv	C [dm <sup>3</sup> /(s·bar)]	b	Cv		
Body ported	VZ312	N.C.	M5	0.53	0.45	0.14	0.47	0.39	0.12	75
	VZ322	N.O.		0.66	0.45	0.18	0.66	0.45	0.18	
Base mounted (With sub-plate)	VZ314	N.C.	1/8	1.2	0.41	0.32	1.1	0.46	0.32	105 (Without sub-plate: 75)
	VZ324	N.O.		1.3	0.37	0.33	1.2	0.48	0.34	



Note) Weight stands for grommet type.

## Option

Description	Part no.	Note
Foot bracket	DXT170-34-1B	With screw (For VZ3□2)



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

# 3 Port Solenoid Valve Rubber Seal, Body Ported/Base Mounted **Series VZ300**

## External Pilot

### VZ300R

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

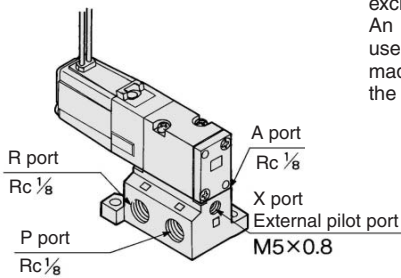
Applicable model	Base mounted (VZ314R/324R)	
Operating pressure range (MPa)	Main pressure	-100 kPa to 0.7
	External pilot pressure	0.15 to 0.7



Note 1) For manifold base, refer to page 4-6-18.

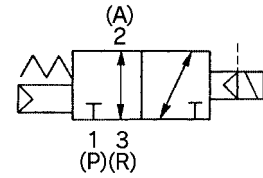
Note 2) In the case of the body ported type, the pilot type (VZ3□2R) is used exclusively on a manifold.

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.

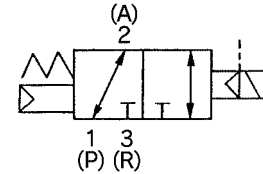


### JIS Symbol

VZ31□R

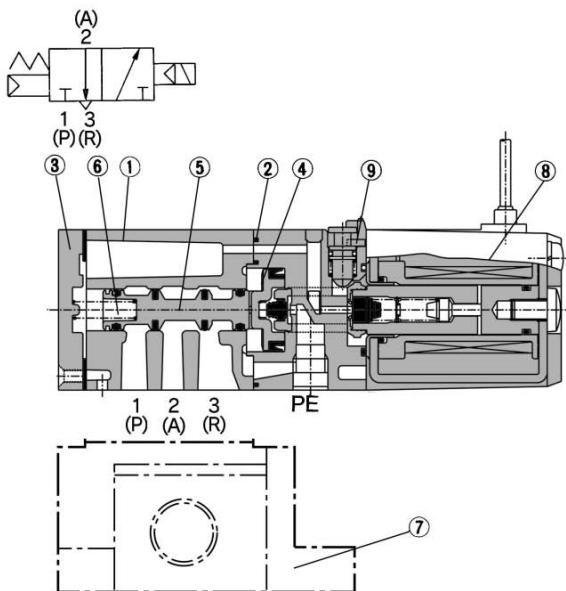


VZ32□R

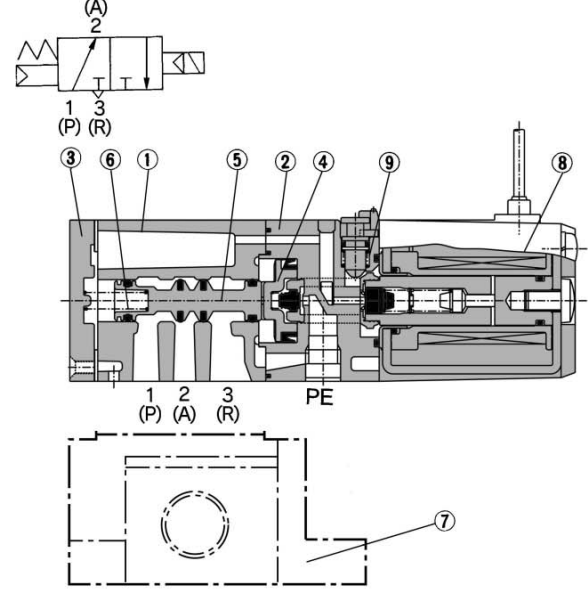


## Construction

N.C.



N.O.



### 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	DXT200-13-1□P	
⑧	Solenoid assembly	Epoxy/Stainless steel	DXT170-C-□□□□	
⑨	O-ring	NBR	13 x 11 x 1	Common with VZ100

Sub-plate part no.: DXT200-13-1□P

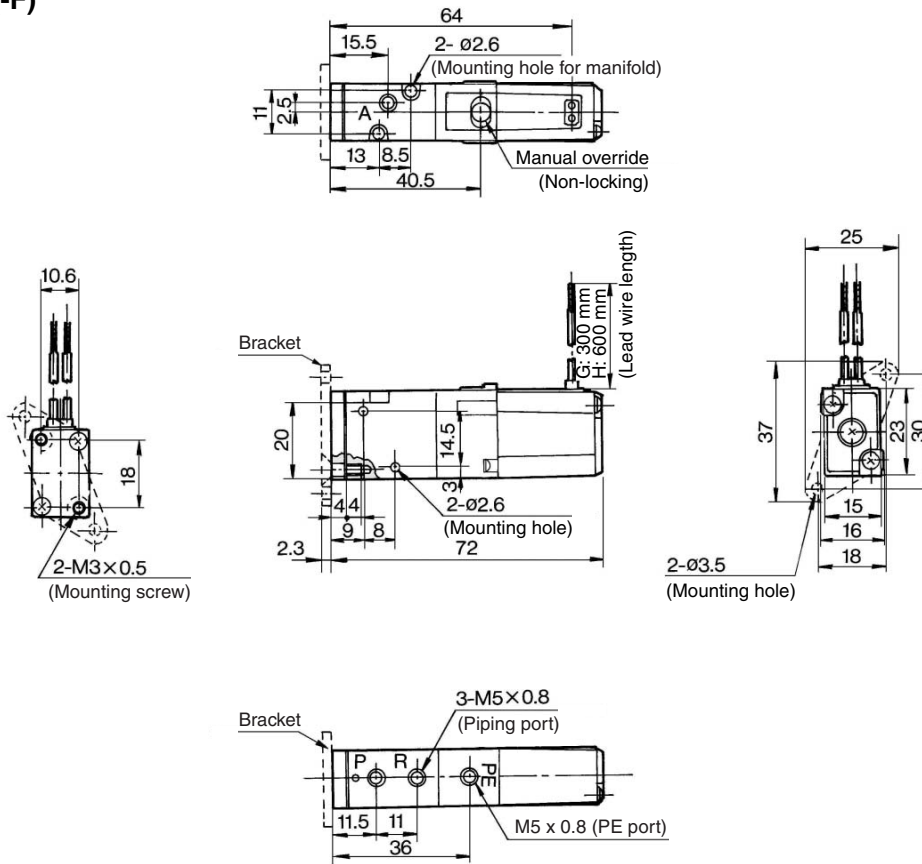
•Thread type	
Nil	Rc
F	G
N	NPT
T	NPTF

# Series VZ300

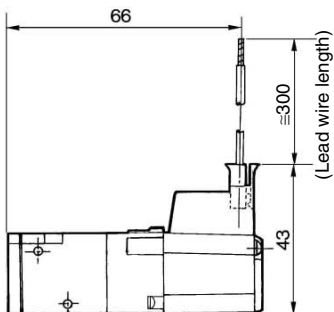


Body Ported

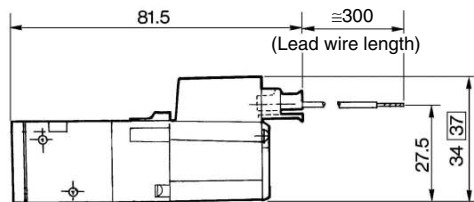
## Grommet (G), (H) VZ3□2-□G□-M5(-F)



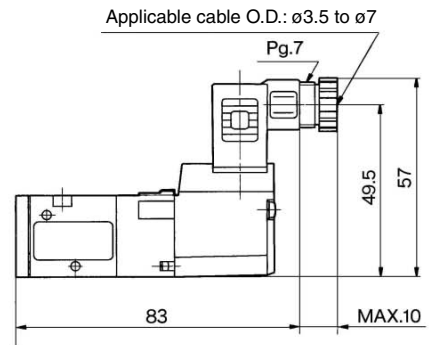
## L plug connector (L) VZ3□2-□L□□-M5



## M plug connector (M) VZ3□2-□M□□-M5



## DIN terminal (D) VZ3□2-□D□□-M5



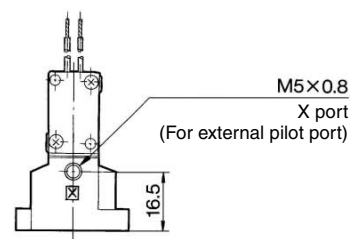
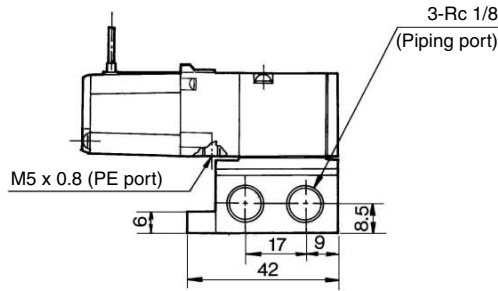
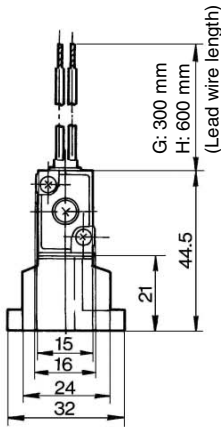
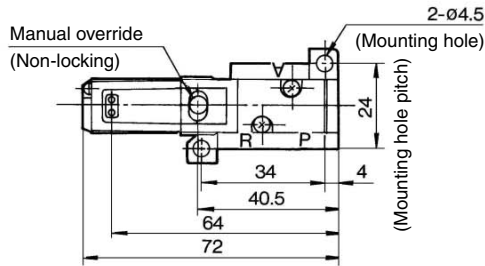
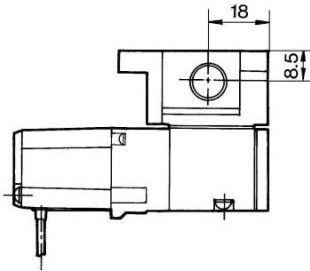
□: With light/surge voltage suppressor

# 3 Port Solenoid Valve Rubber Seal, Body Ported/Base Mounted Series VZ300



Base Mounted (With sub-plate)

Grommet (G), (H)  
VZ3□4-□<sup>G</sup>□□-01



V100

SY

SYJ

VK

**VZ**

VT

VP

VG

VP

S070

VQ

VKF

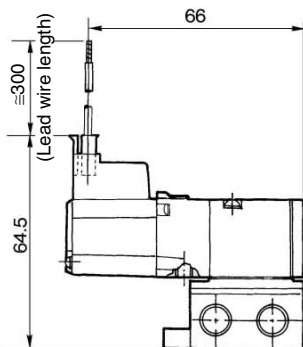
VQZ

VZ

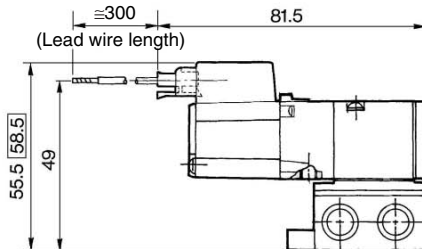
VS

VFN

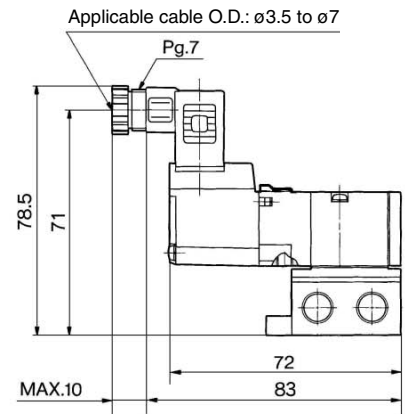
L plug connector (L)  
VZ3□4-□L□□-01



M plug connector (M)  
VZ3□4-□M□□-01



DIN terminal (D)  
VZ3□4-□D□□-01



□: 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

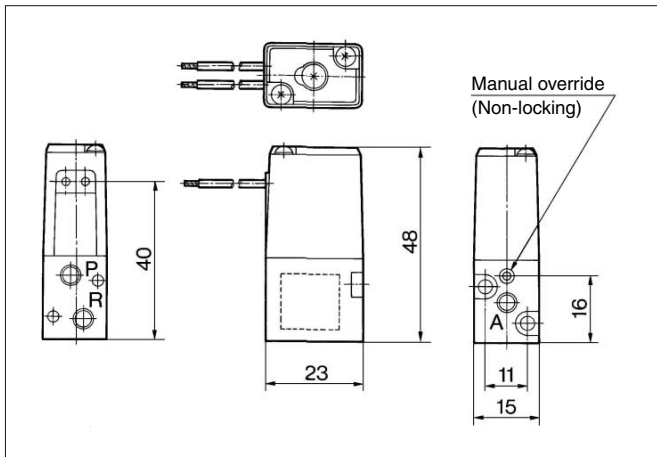
### Model no.

VZ1  0 -    (-  ) - X1

VZ<sub>5</sub><sup>3</sup>   -    (-  ) - X1

• Entry is the same as standard products.

### Dimensions: VZ110-□G-M5-X1



## 2. Solenoid Valve: External Pilot Specifications

● Applicable for individual use of body ported external pilot type

### Applicable solenoid valve series

VZ300/500

### Model no.

VZ<sub>5</sub><sup>3</sup>  2R -    (-  ) - X20

• Entry is the same as standard products.

### 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

