

3 Port Solenoid Valve Rubber Seal, Body Ported Series VZ100

How to Order

Body ported VZ1 1 0 5 L [] M5 []

Type of actuation

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

Regarding VZ120, R port is a supply port.

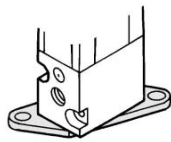
Rated voltage

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

Option

F: With foot bracket



Note) Bracket is not mounted.

Port size


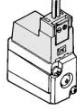


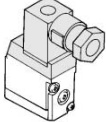

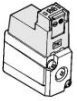
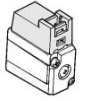

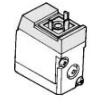
M5	M5 x 0.8
----	----------

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 VZ100

Low power consumption:
1.8 W DC

Applicable for vacuum use
-100 kPa



For manifold use, refer to the pages 4-6-8 to 4-6-11.



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

Option

Description	Part no.	Note
With foot bracket	DXT170-34-1A	Mounting screw (M3 x 6)
Silencer	M5 AN120-M5 (ø8 x 17ℓ)	For valve unit (R port), Noise reduction: 21 dB or more, Effective area 5 mm ²

Specifications

Fluid	Air
Operating pressure range	Refer to the table below.
Ambient and fluid temperature (°C)	-10 to 50 (No freezing. Refer to page 4-18-4.)
Response time (ms) ⁽¹⁾	15 or less
Max. operating frequency (Hz)	15
Flow Characteristics	Refer to the table below.
Manual override	Non-locking push type
Lubrication	Not required
Mounting orientation	Unrestricted
Shock/Vibration resistance (m/s ²) ⁽²⁾	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) 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) Note)	DC	1.8 (With indicator light 2.1)	
[Current mA]		[24 VDC: 75 (With indicator light 87.5)]	
Apparent power (VA) 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]
[Current mA]	AC	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

Operating Pressure

Model	Type of actuation	Operating pressure range (MPa)	Vacuum specifications (MPa)		Port size	Weight (g) Note)
			1 (P) port	R port		
Body ported	VZ110	N.C.	0 to 0.7	-27 kPa to 0.6	M5 x 0.8	70
	VZ120	N.O.	0 to 0.5	-100 kPa to 0		



Note) Weight stands for grommet type

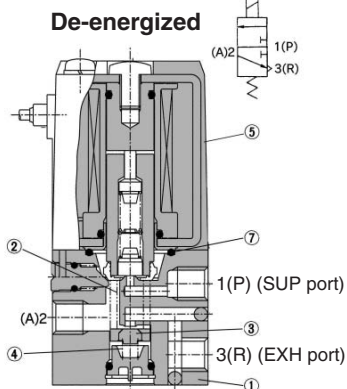
Flow Characteristics

Model	Type of actuation	Port size	Flow characteristics						
			Supply side			Exhaust side			
			N.C.: 1 → 2 (P → A)	N.O.: 3 → 2 (R → A)		N.C.: 2 → 3 (A → R)	N.O.: 2 → 1 (A → P)		
			C [dm ³ /(s·bar)]	b	Cv	C [dm ³ /(s·bar)]	b	Cv	
Body ported	VZ110	N.C.	M5 x 0.8	0.11	0.026	0.023	0.19	0.071	0.042
	VZ120	N.O.		0.19	0.071	0.042	0.13	0.18	0.031

Construction

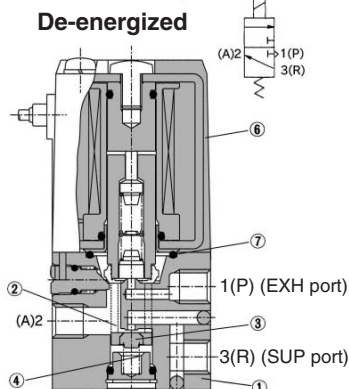
VZ110 (N.C.)

JIS Symbol



VZ120 (N.O.)

JIS Symbol



Component Parts

No.	Description	Material	Note
①	Body	ZDC	Platinum silver
②	Push rod	Resin	
③	EXH poppet	NBR	
④	N.C. Back up spring	Stainless steel	
	N.O. Poppet spring		

Replacement Parts

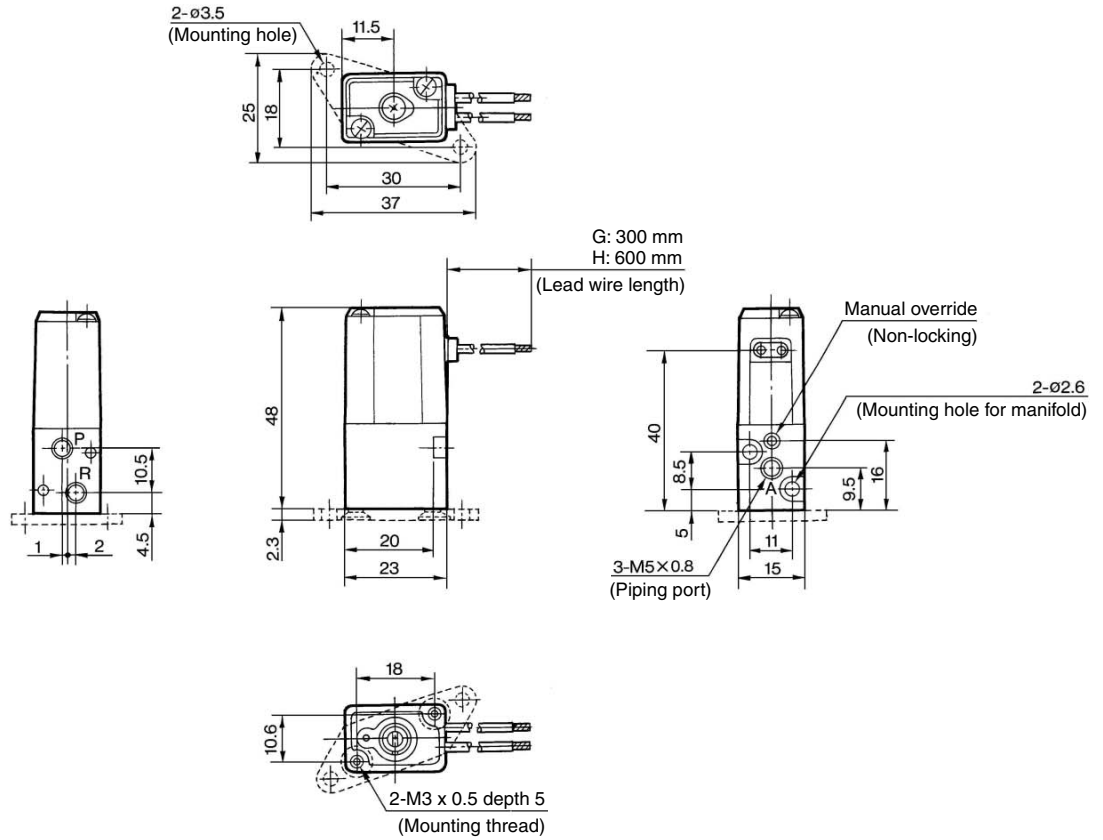
No.	Description	Part no.	Material	Note
⑤	Solenoid assembly	DXT170-A-□□□	Epoxy Stainless steel	VZ110
⑥	Solenoid assembly	DXT170-E-□□□	Epoxy Stainless steel	VZ120
⑦	O-ring	13 x 11 x 1	NBR	Common with Series VZ ₃ 00

3 Port Solenoid Valve Rubber Seal, Body Ported **Series VZ100**

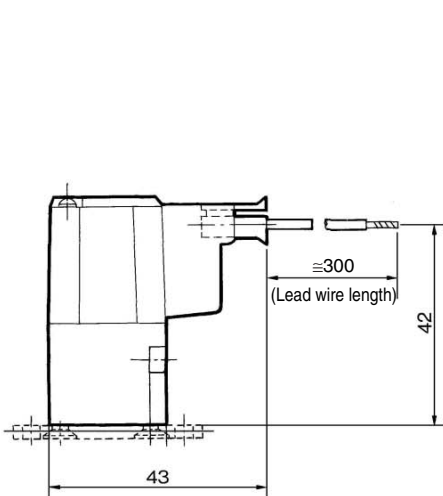


Body Ported

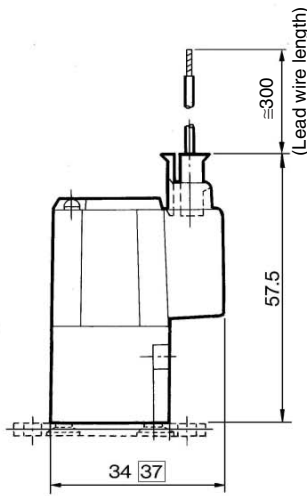
Grommet (G), (H)
VZ1□0-□^G□-M5(-F)



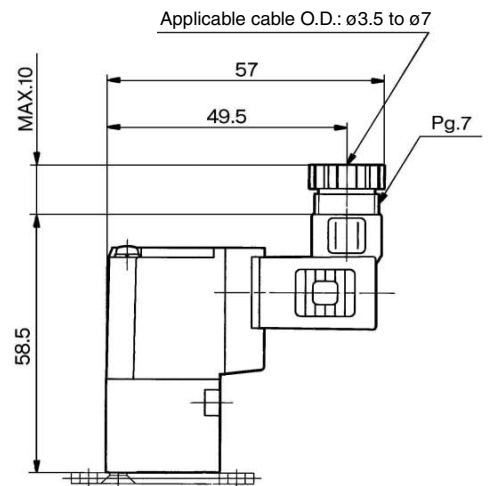
L plug connector (L)
VZ1□0-□L□-M5



M plug connector (M)
VZ1□0-□M□-M5



DIN terminal (D)
VZ1□0-□D□-M5



□: With light/surge voltage suppressor

V100

SY

SYJ

VK

VZ

VT

VP

VG

VP

S070

VQ

VKF

VQZ

VZ

VS

VFN

3/2 DIRECT ACTING SOLENOID VALVE 10-32Nom PORTED

- ✓ N/O or N/C Option
- ✓ 10-32Nom Body Ported, possible to Manifold Mount
- ✓ Cv 0.05
- ✓ Optional Lamp and Surge Voltage Suppressor
- ✓ Suitable for Pressure or Vacuum

TECHNICAL SPECIFICATIONS

Fluid	Air
Ambient and Fluid Temperature	Max 50°C / 122°F
Response Time	15ms or less
Max Operating Frequency	15c/s
Manual Override	Non-locking type
Lubrication	Not required (Use turbine oil ±1 (ISO VG32) if lubrication is provided)
Enclosure	Dust Proof

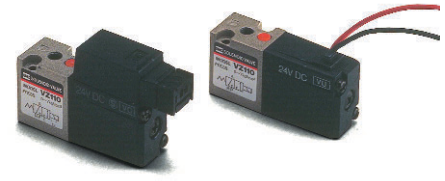
SOLENOID SPECIFICATIONS

Electrical Entry	Grommet (G), Plug connector (M)		
Voltages	AC	240V, 110V, 24V	
	DC	12V, 24V	
Allowable Voltage	-15~+10% of rated voltage		
Coil Insulation	Class E or equivalent (120°C)		
Temperature Rise	45°C or less / 113°F or less		
Power Consumption	DC	1.8W/2.1W (W/LED)	
Apparent Power	AC	Inrush	4.5VA/50Hz, 4.2VA/60Hz
		Holding	3.5VA/50Hz, 3VA/60Hz
Surge Voltage Suppressor	DC: Diode, AC: ZNR		
Indicator Light	DC: LED (Red), AC: Neon lamp		

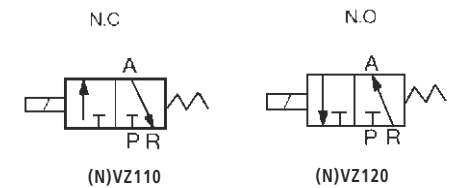
FLOW SPECIFICATIONS

Body Type	Model	Type Of Actuation	Operating Pressure Range kgf/cm ²	Vacuum Application		Effective Orifice mm ² (Cv Factor)	Port Size	Weight
				P Port	R Port			
Body Ported	(N)VZ110-**-M5	NC	0 ~ 7MPa 0 ~ 100PSI	22in-Hg 0~85PSI	VAC ~0PSI	P->A 0.6 (0.034) A->R 0.9 (0.05)	10-32Nom (M5x0.8)	0.15g
	(N)VZ110-**-M5	NO	0 ~ 5MPa 0 ~ 70PSI	22in-Hg 0~85PSI	VAC ~55PSI	R->A 0.6 (0.034) A->P 0.6 (0.034)		

Note: In case of (N)VZ120 Supply Air to 'R' Port. "P" Port will be the Exhaust Port.



SYMBOLS



ACCESSORIES

(N)VZ100 SOLENOID VALVE

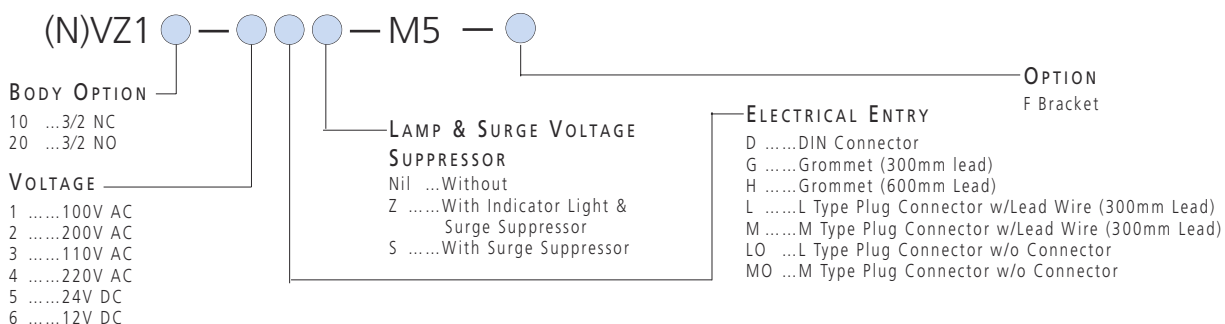
- DXT170-123-A-30 Plug with 3m lead
- DXT170-34-1A Foot bracket with screws



Observe Operating Pressure Ranges - see Technical Specifications for details

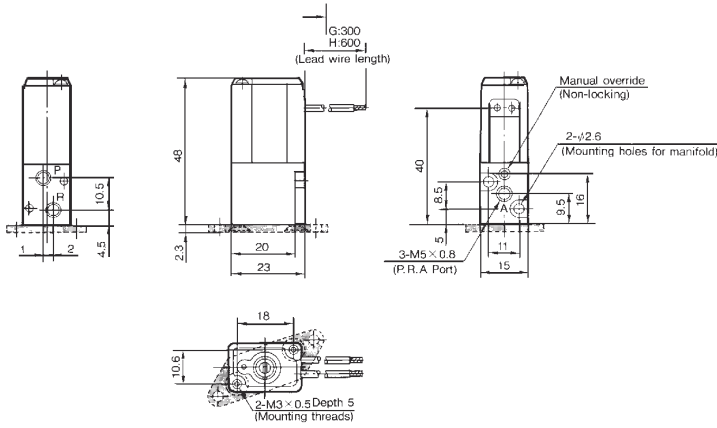
HOW TO ORDER

(N)VZ100 SOLENOID VALVE

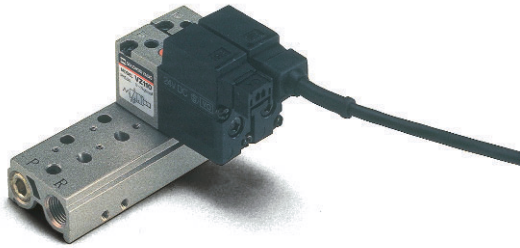
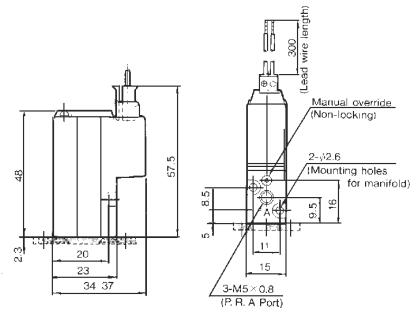


DIMENSIONS
SEE NEXT PAGE

DIMENSIONS (N)VZ100 BODY PORTED GROMMET TYPE



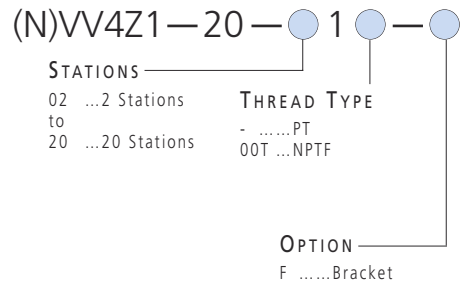
DIMENSIONS (N)VZ100 BODY PORTED MN PLUG TYPE



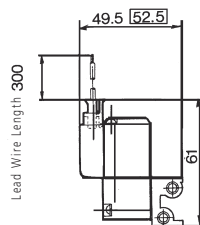
SERIES (N)VZ100 MANIFOLDS

2 - 9 station manifold with a common supply and exhaust.

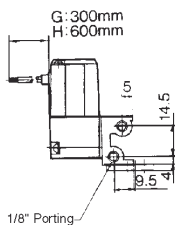
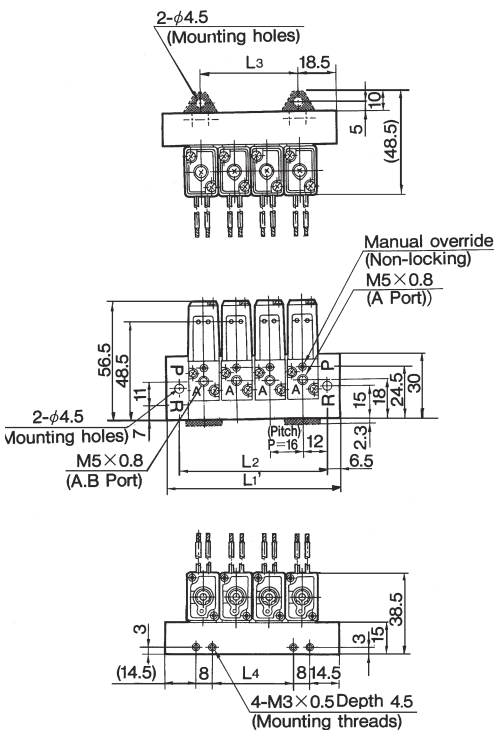
How To ORDER MANIFOLD TYPE 20 TOP PORTED



DIMENSIONS MANIFOLD TYPE 20 TOP PORTED M PLUG TYPE



DIMENSIONS MANIFOLD TYPE 20 TOP PORTED GROMMET TYPE



ACCESSORIES MANIFOLD TYPE 20 TOP PORTED

DXT170-25-1ABlanking Plate Assembly

Stations (n)	2	3	4	5	6	7	8	9	10
L1	53	69	85	101	117	133	149	165	181
L2	40	56	72	88	104	120	136	152	168
L3	16	32	48	64	80	96	112	128	144
L4	8	24	40	56	72	88	104	120	136

SEE INSIDE FRONT COVER FOR
DETAILS OF YOUR LOCAL SALES OFFICE



FOR FURTHER TECHNICAL
DETAILS ON THIS
PRODUCT REQUEST
CATALOG REFERENCE
E120