5 Port Solenoid Valve
Body Ported
Series VZ3000

How to Order

Body ported **VZ3** [1] [2] [0] [5] [L] [ ] [ ] [M5] [ ]

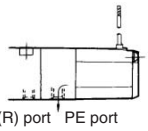
Type of actuation | Body option | Rated voltage | Electrical entry | Light/Surge voltage suppressor | Manual override | 4(A)/2(B) port size | Option

Type of actuation

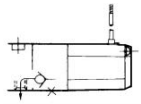
1	2 position single
2	2 position double
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center

Body option

0: Individual exhaust for the pilot valve



3: Common exhaust type for main and pilot valve



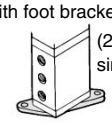
Rated voltage

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 (2 position single type only)



U: With silencer

K: With foot bracket and silencer (2 position single only)

Note) The bracket and silencer are not assembled.

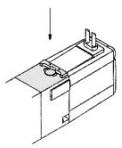
4(A), 2(B) port size

M5	M5 x 0.8
C4	One-touch fitting for ø4
C6	One-touch fitting for ø6

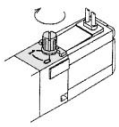
Note) 1(P), 5(R1), 3(R2) port: M5 x 0.8

Manual override

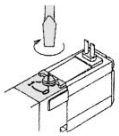
Nil: Non-locking push type



C: Locking type C (Manual)



B: Locking type B (Slotted)

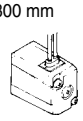
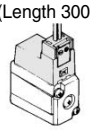
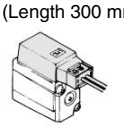
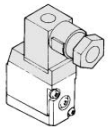
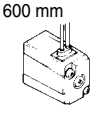
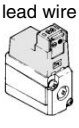
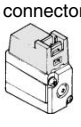
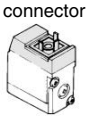


Light/Surge voltage suppressor

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

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

Electrical entry

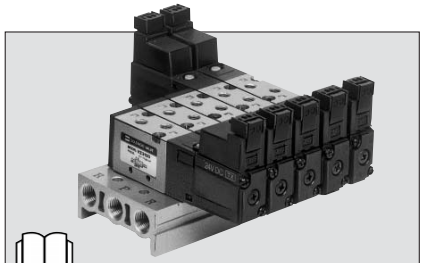
Grommet	L plug connector	M plug connector		DIN terminal
G: Lead wire length 300 mm 	**L**: With lead wire (Length 300 mm) 	**M**: With lead wire (Length 300 mm) 	**MN**: Without lead wire 	**D**: With connector 
H: Lead wire length 600 mm 	**LN**: Without lead wire 	**LO**: Without connector 	**MO**: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

* Type "LN", "MN": With 2 sockets.

Applicable for cylinder actuation (up to ø40).

Compact size (Width: 15 mm)

Low power consumption: 1.8 W DC



Refer to pages 3-3-24 to 3-3-27 for manifold use.

Made to Order Specifications (For details, refer to page 3-3-85.)

Specifications

Fluid		Air
Operating pressure range (MPa)	2 position single	0.15 to 0.7
	2 position double	0.1 to 0.7
	3 position	0.15 to 0.7
Ambient and fluid temperature (°C)		–10 to 50°C (No freezing. Refer to page 3-13-4.)
Response time (ms) (1) (at the pressure of 0.5 MPa)	2 position single, double	20 or less
	3 position	35 or less
Max. operating frequency (Hz)	2 position single, double	10
	3 position	3
Effective area		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
Impact/Vibration resistance (m/s^2) (3)		300/50
Enclosure		Dustproof

Note 1) Based on dynamic performance test, JIS B 8375-1981. (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)	AC 50/60 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) [Current mA]	DC		1.8 (With indicator light 2.1) [24 VDC: 75 (With indicator light 87.5)]
Apparent power (VA) Note) [Current mA]	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

Option

Description	Part no.	Note
With foot bracket	DXT170-34-1B	For VZ312$^{0}_{3}$
Silencer	AN120-M5	Noise reduction: 21dB or more (ø8 x 17 mm)

Flow Characteristics/Weight

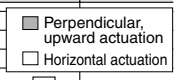
Valve model	Type of actuation		Port size 1, 5, 3 (P, EA, EB)	Port size 4, 2 (A, B)	Flow characteristics Note) 1 → 4/2 (P → A/B) C [dm³/(s·bar)]	b	Cv	4/2 → 5/3 (A/B → EA/EB) C [dm³/(s·bar)]	b	Cv	Weight (g) Grommet
VZ3□20-□-M5	2 position	Single	M5 x 0.8	M5 x 0.8	0.47	0.41	0.13	0.47	0.41	0.13	75
		Double									120
	3 position	Closed center			0.49	0.44	0.13	0.44	0.40	0.12	130
		Exhaust center			0.46	0.37	0.12	0.47 [0.39]	0.43 [0.35]	0.13 [0.10]	
		Pressure center			0.49 [0.39]	0.51 [0.38]	0.14 [0.10]	0.45	0.42	0.12	
VZ3□20-□-C4	2 position	Single	M5 x 0.8	C4 (One-touch fitting for ø4)	0.69	0.39	0.18	0.44	0.39	0.12	75
		Double									120
	3 position	Closed center			0.69	0.40	0.19	0.43	0.40	0.12	130
		Exhaust center			0.56	0.40	0.15	0.41 [0.41]	0.37 [0.37]	0.10 [0.11]	
		Pressure center			0.57[0.41]	0.4 [0.37]	0.15 [0.10]	0.41	0.37	0.10	
VZ3□20-□-C6	2 position	Single	M5 x 0.8	C6 (One-touch fitting for ø6)	0.70	0.36	0.19	0.47	0.40	0.12	75
		Double									120
	3 position	Closed center			0.72	0.37	0.19	0.44	0.34	0.12	130
		Exhaust center			0.67	0.54	0.19	0.41 [0.41]	0.38 [0.38]	0.11 [0.11]	
		Pressure center			0.82 [0.44]	0.41 [0.39]	0.23 [0.12]	0.41	0.36	0.11	

Note) [ ]: Denotes the normal position. Exhaust center: 4/2 → 5/3, Pressure center: 1 → 4/2

Cylinder Speed Chart

Use as a guide for selection.
Please confirm the actual conditions with SMC Sizing Program.

Series	Average speed (mm/s)	Bore size: Series CJ2, Pressure 0.5 MPa, Load factor 50%, Stroke 60 mm			Series CM2, Pressure 0.5 MPa, Load factor 50%, Stroke 300 mm			
		ø6	ø10	ø16	ø20	ø25	ø32	ø40
VZ3120-M5	800							
	700							
	600							
	500							
	400							
	300							
	200							
	100							
	0							



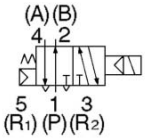
∗ It is when the cylinder is extending that is meter-out controlled by speed controller which is directly connected with cylinder, and its needle valve with being fully open.
∗ The average velocity of the cylinder is what the stroke is divided by the total stroke time.
∗ Load factor: ((Load weight x 9.8)/Theoretical force) x 100%

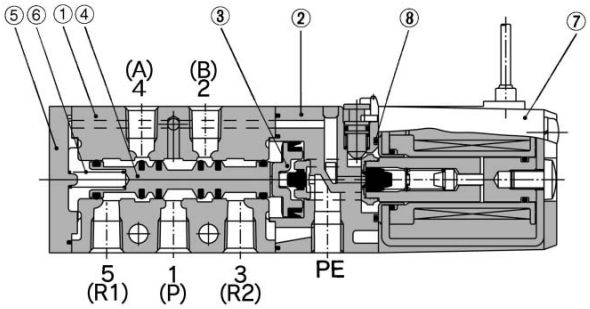
Conditions

Body ported		Series CJ2	Series CM2	Series MB
SZ3120-M5	Tube bore x Length	ø4 x 1 m	ø6 x 1 m	ø8 x 1 m
	Speed controller	AS1301F-04	AS3301F-06	AS3301F-08
	Silencer	AN120-M5	AN110-01	

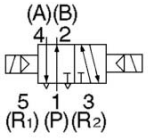
Construction

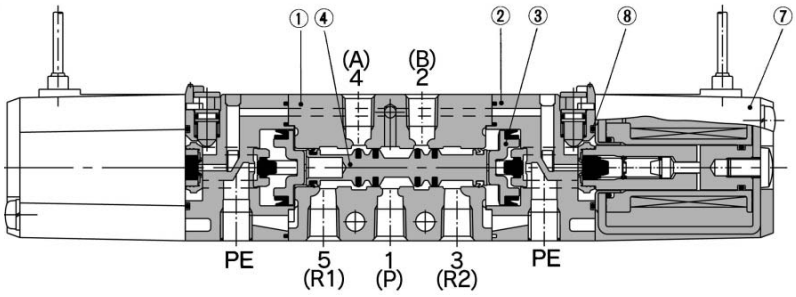
2 position single



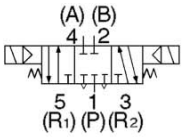


2 position double

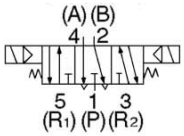




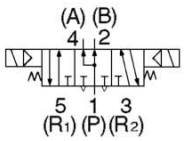
3 position closed center



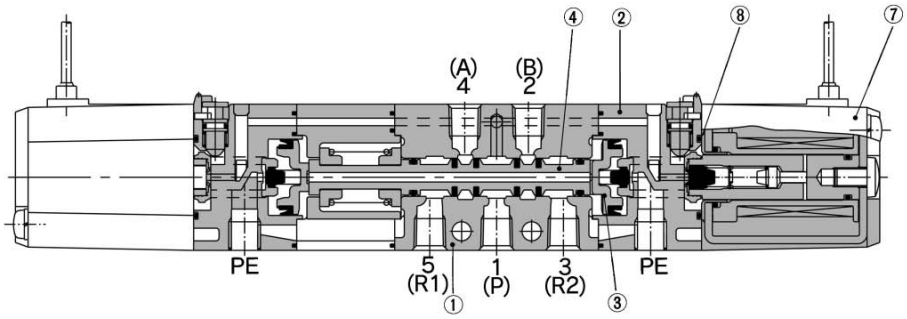
3 position exhaust center



3 position pressure center



3 position closed center/exhaust center/pressure center



(This figure shows a closed center type.)

Component Parts

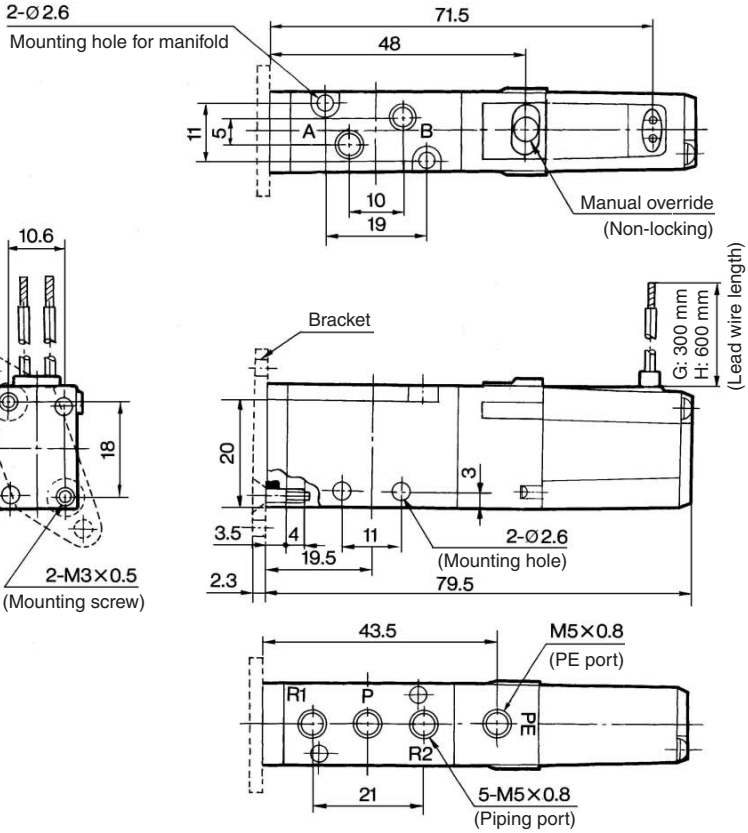
No.	Description	Material	Note
①	Body	Aluminum die-casted	Platinum silver
②	Piston plate	Resin	Black
③	Piston	Resin	
④	Spool valve	Aluminum, HNBR	
⑤	End cover	Resin	
⑥	Spool spring	Stainless steel	

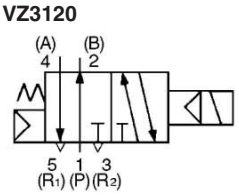
Replacement Parts

No.	Description	Material	Part no.	Note
⑦	Solenoid assembly	Epoxy/Stainless steel	DXT170-C-□□□	
⑧	O-ring	NBR	13 x 11 x 1	Common with Series VZ$\frac{1}{5}$000

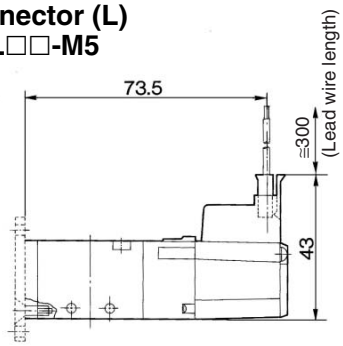
2 Position Single

Grommet (G), (H)
VZ3120-□$^{G}_{H}$□□-M5

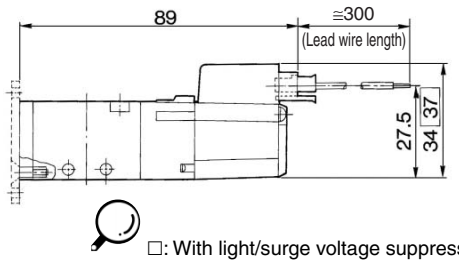




L plug connector (L)
VZ3120-□L□□-M5

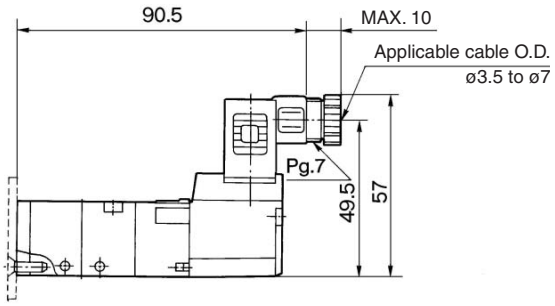


M plug connector (M)
VZ3120-□M□□-M5

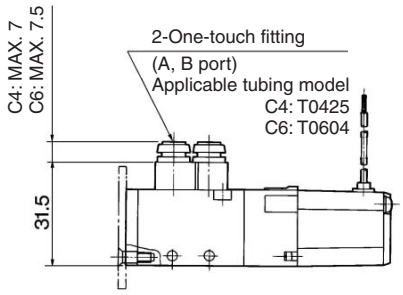


□: With light/surge voltage suppressor

DIN terminal (D)
VZ3120-□D□□-M5



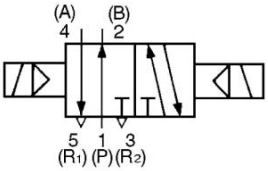
Built-in One-touch fittings
VZ3120-□□□□-$^{C4}_{C6}$

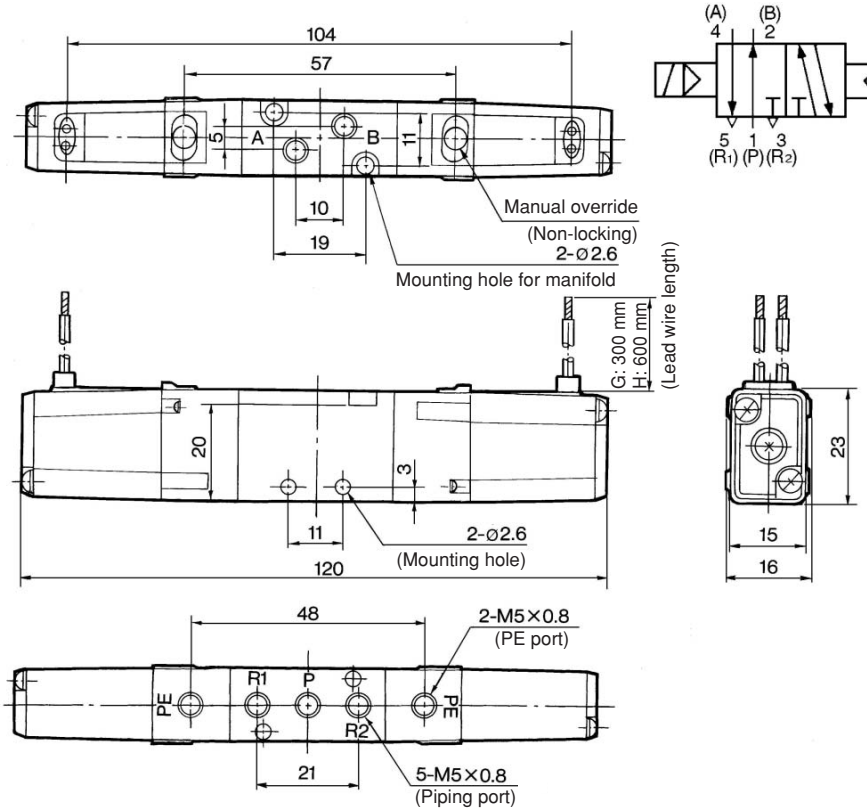


2 Position Double

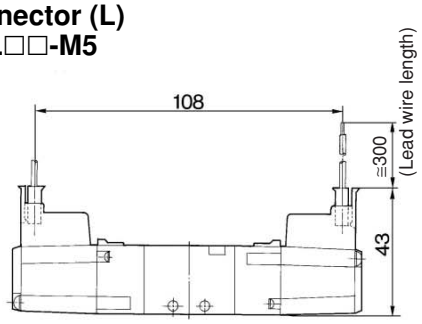
Grommet (G), (H)
VZ3220-□$^{G}_{H}$□□-M5

VZ3220

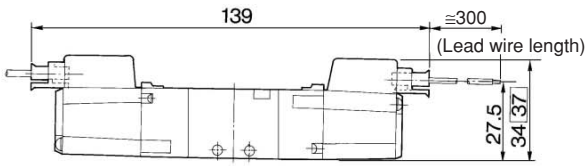




L plug connector (L)
VZ3220-□L□□-M5

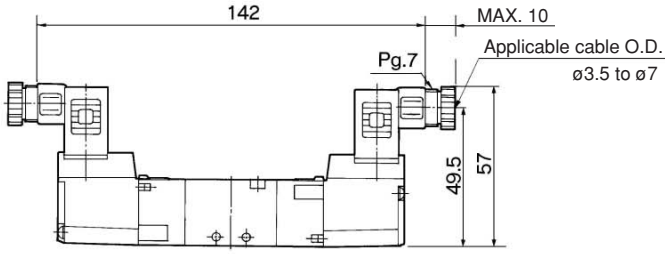


M plug connector (M)
VZ3220-□M□□-M5

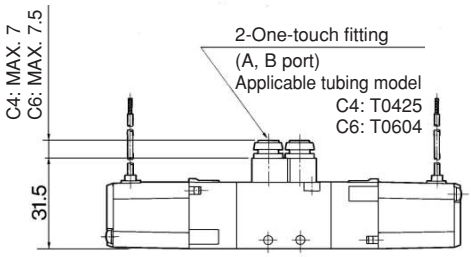


□: With light/surge voltage suppressor

DIN terminal (D)
VZ3220-□D□□-M5

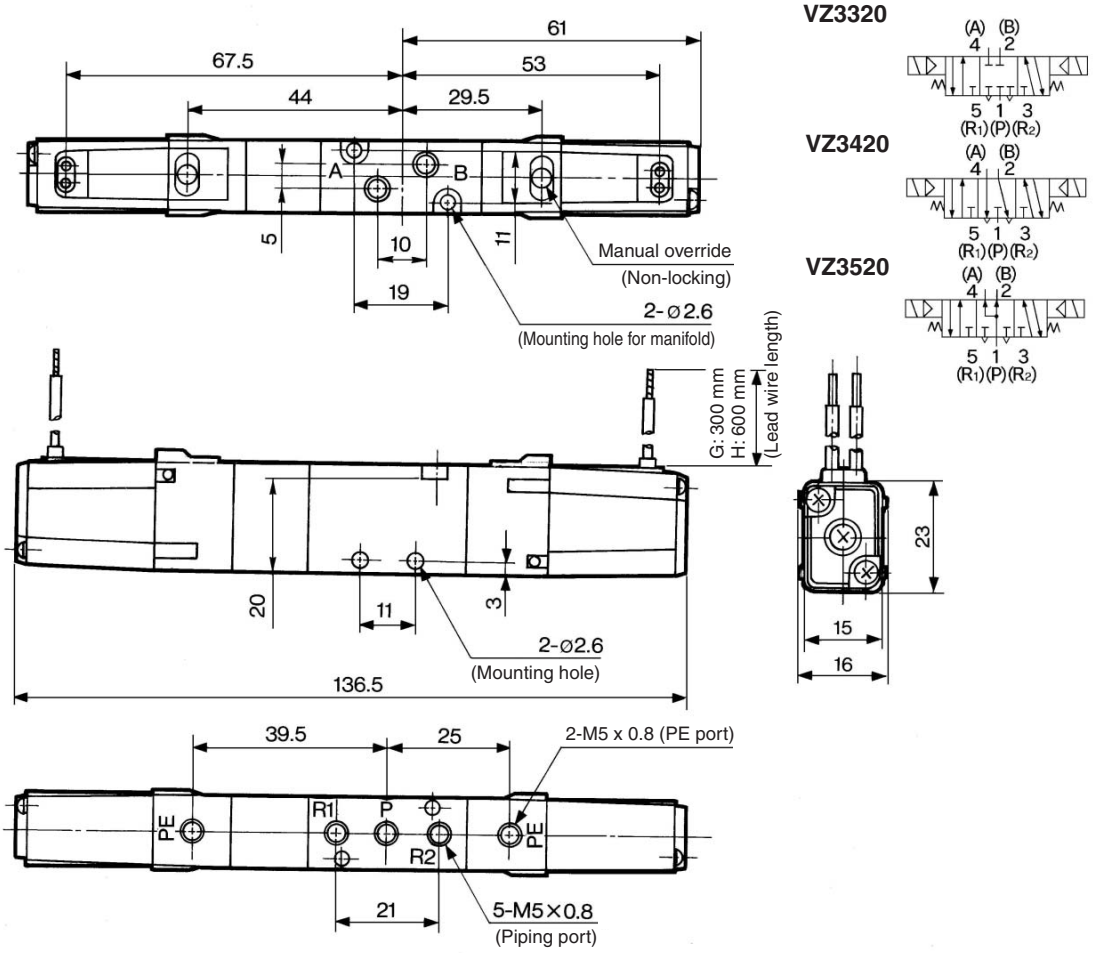


Built-in One-touch fittings
VZ3220-□□□□-$^{C4}_{C6}$

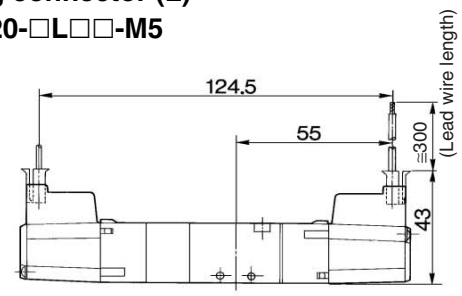


3 Position Closed Center/Exhaust Center/Pressure Center

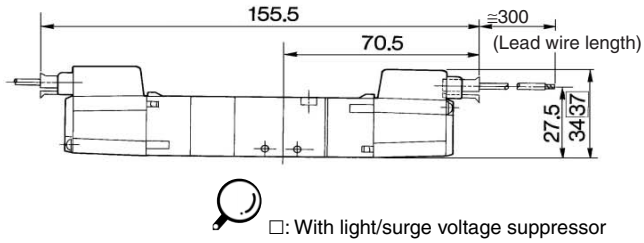
Grommet (G), (H)
VZ3$^{3}_{5}$20-□$^{G}_{H}$□□-M5



L plug connector (L)
VZ3$^{3}_{5}$20-□L□□-M5

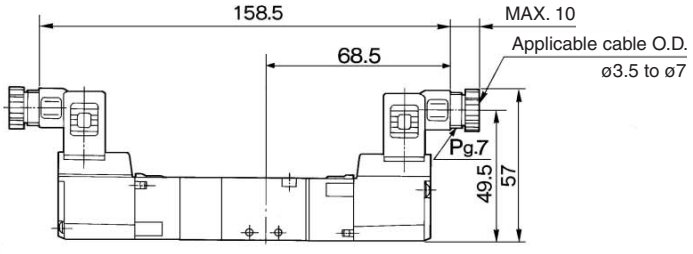


M plug connector (M)
VZ3$^{3}_{5}$20-□M□□-M5

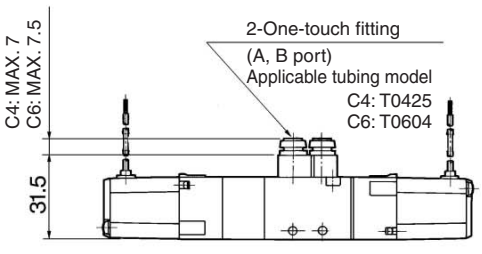


□: With light/surge voltage suppressor

DIN terminal (D)
VZ3$^{3}_{5}$20-□D□□-M5

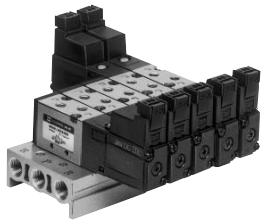


Built-in One-touch fittings
VZ3$^{3}_{5}$20-□□□□-$^{C4}_{C6}$



Series VZ3000/Body Ported
Manifold Specifications

Manifold Standard



Manifold Specifications

Model		Type 20
Manifold type		Single base/B mount
P(SUP)/R(EXH)		Common SUP/Common EXH
Valve stations		2 to 20 stations
4(A), 2(B) port location		Valve
Port size	1(P), 3/5(R) port	Rc 1/8
	4(A), 2(B) port	M5 x 0.8, C4, C6

Flow Characteristics

Manifold			Port size		Flow characteristics					
			1(P), 5/3(R) port	2(B), 4(A) port	1 → 4/2 (P → A/B)			4/2 → 5/3 (A/B → R)		
					C [dm³/(s·bar)]	b	Cv	C [dm³/(s·bar)]	b	Cv
Body ported For internal pilot	**Type VV5Z3-20**	**VZ3□2□**	1/8	M5 x 0.8	0.46	0.39	0.12	0.75	0.32	0.19
			1/8	C4	0.62	0.33	0.16	0.83	0.27	0.20
			1/8	C6	0.79	0.36	0.21	0.91	0.36	0.24

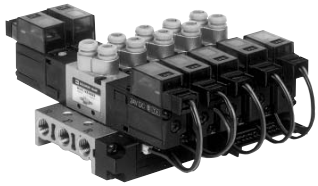
Note) Value at manifold base mounted, 2 position single operating

How to Order Manifold

Instruct by specifying the valves and blanking plate assembly to be mounted on the manifold along with the manifold base model no.
(Example) VV5Z3-20-031..... 1 pc. (Manifold base)
∗VZ3120-5G-M5..... 2 pcs. (Valve)
∗DXT192-13-1A ..... 1 pc. (Blanking plate assembly)
└→ The asterisk denotes the symbol for assembly. Prefix it to the part nos. of the solenoid valve, etc.

Flat Ribbon Cable Manifold

- **One-touch wiring to consolidate connection of external wires.**
- **Clean appearance**
  The flat cable provides wiring on a printed circuit board to the individual valves at the manifold base, enabling the consolidation of external wiring at a touch through a 26 pins MIL connector.



Flat Ribbon Cable Manifold Specifications

Model		Type 20P
Manifold type		Single base/B mount
P(SUP), R(EXH)		Common SUP/Common EXH
Valve stations		3 to 12 stations
4(A), 2(B) port location		Valve
Port size	1(P), 3/5(R) port	Rc 1/8
	4(A), 2(B) port	M5 x 0.8, C4, C6
Applicable flat ribbon cable connector		Socket: 26 pins MIL, with strain relief (Conforming to MIL-C-83503)
Internal wiring		+ COM (For – COM specifications, specify them separately.)
Applicable valve model		VZ3□23-$^{1}_{3}_{5}_{6}$MOZ□-$^{M5}_{C4}_{C6}$
Rated voltage		100 VAC 50/60 Hz, 110 VAC 50/60 Hz, 24 VDC, 12 VDC

Note) Withstand voltage specifications of wiring unit part is equivalent to JIS C 0704 class 1.

Flow Characteristics

Manifold			Port size		Flow characteristics					
			1(P), 5/3(R) port	2(B), 4(A) port	1 → 4/2 (P → A/B)			4/2 → 5/3 (A/B → R)		
					C [dm³/(s·bar)]	b	Cv	C [dm³/(s·bar)]	b	Cv
Body ported For internal pilot	**Type VV5Z3-20P**	**VZ3□23**	1/8	M5 x 0.8	0.46	0.39	0.12	0.75	0.32	0.19
			1/8	C4	0.62	0.33	0.16	0.83	0.27	0.20
			1/8	C6	0.79	0.36	0.21	0.91	0.36	0.24

Note) Value at manifold base mounted, 2 position single operating

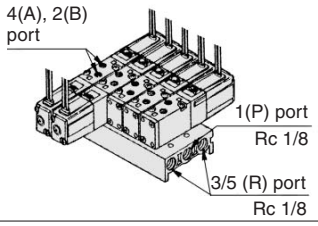
How to Order Manifold

Instruct by specifying the valves, blanking plate assembly and connector assembly to be mounted on the manifold along with the manifold base model no.
(Example) VV5Z3-20P-07..... 1 pc. (Manifold base)
∗VZ3123-5MOZ-C4..... 3 pcs. (Valve)
∗VZ3223-5MOZ-C4..... 3 pcs. (Valve)
∗DXT192-13-3A..... 1 pc. (Blanking plate assembly)
∗DXT192-52-1-4A..... 3 pcs. (Connector assembly)
∗DXT192-52-2-4A..... 3 pcs. (Connector assembly)
└→ The asterisk denotes the symbol for assembly. Prefix it to the part nos. of the solenoid valve, etc.

Common SUP/Common EXH

Type 20
How to Order

VV5Z3 − 20 − 05 1 − ☐



Stations

02	2 stations
⋮	⋮
20	20 stations

P, R port thread type

Nil	Rc
00F	G
00N	NPT
00T	NPTF

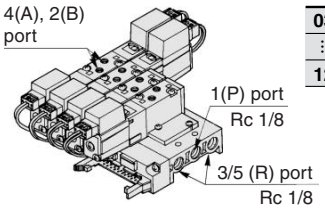
Applicable solenoid valve

VZ3□2□-□ G/L/M/D □□- M5/C4/C6

Applicable blanking plate assembly
DXT192-13-1A
Individual EXH spacer assembly
DXT192-21-1A
Individual SUP spacer assembly
DXT192-40-2A

Flat Ribbon Cable Type 20P
How to Order

VV5Z3 − 20P − 05 ☐



Stations

03	3 stations
⋮	⋮
12	12 stations

P, R port thread type

Nil	Rc
00F	G
00N	NPT
00T	NPTF

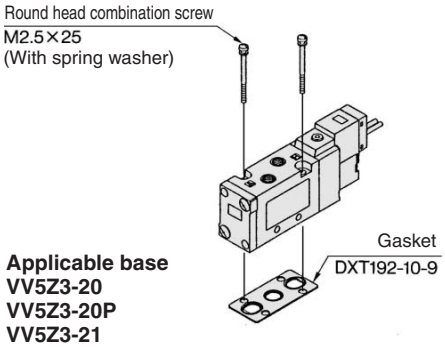
Applicable solenoid valve

VZ3□23- 1/3/5/6 MOZ□- M5/C4/C6

Applicable blanking plate assembly
DXT192-13-3A
Applicable connector assembly
DXT192-52-1-⊠A
(For 2 position single)
DXT192-52-2-⊠A
(For 2 position double, 3 position)
Refer to the page 3-10-33 regarding how to order applicable connector assemblies. (1: 100 VAC, 3: 110 VAC, 4: DC).

Option

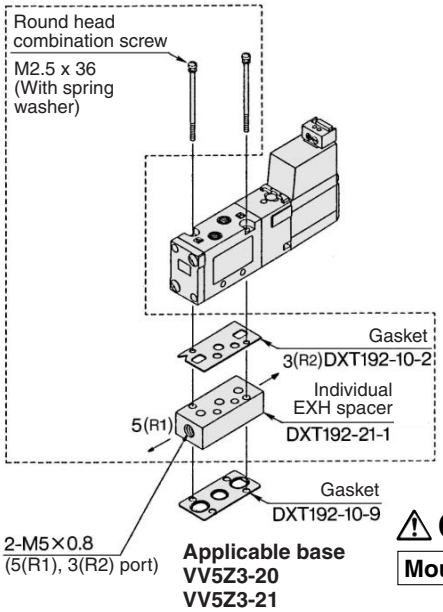
Combinations of Solenoid Valve, Gasket and Manifold Base



Applicable base
VV5Z3-20
VV5Z3-20P
VV5Z3-21

Individual EXH Spacer Assembly

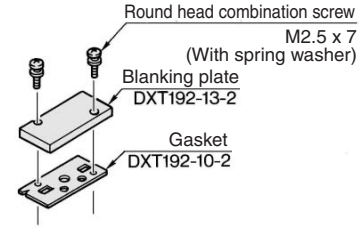
DXT192-21-1A



Applicable base
VV5Z3-20
VV5Z3-21

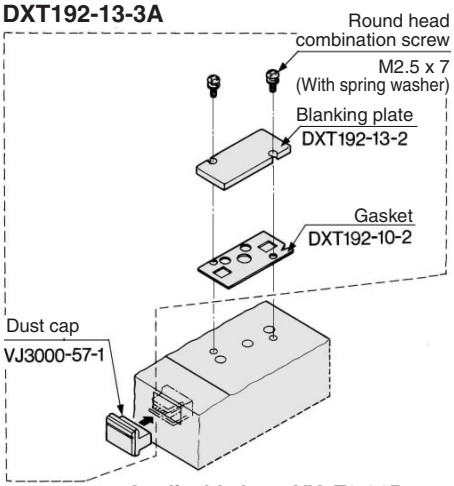
Blanking Plate Assembly

DXT192-13-1A



Applicable base
VV5Z3-20
VV5Z3-21

DXT192-13-3A



Applicable base VV5Z3-20P

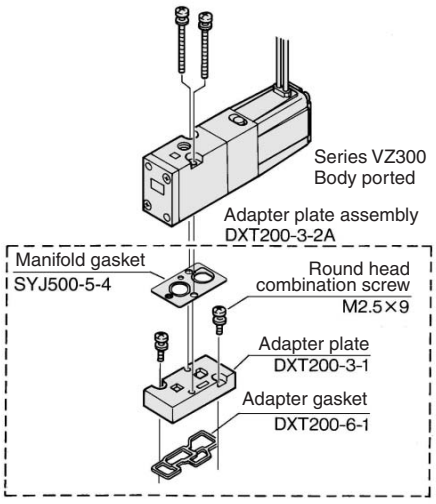
Note) Please contact SMC when using an individual SUP spacer assembly, an individual EXH spacer assembly, or an adapter plate assembly on type 20P.

Option

Installation of the VZ300 Valve on the VZ3000 Manifold

- Use of an adaptor plate makes it possible to mount Series VZ300 on the manifold base of Series VZ3000.
- The mounting direction is shown in the diagram below. Mount the solenoid so that it will be on the same side as the single solenoid of the Series VZ3000.

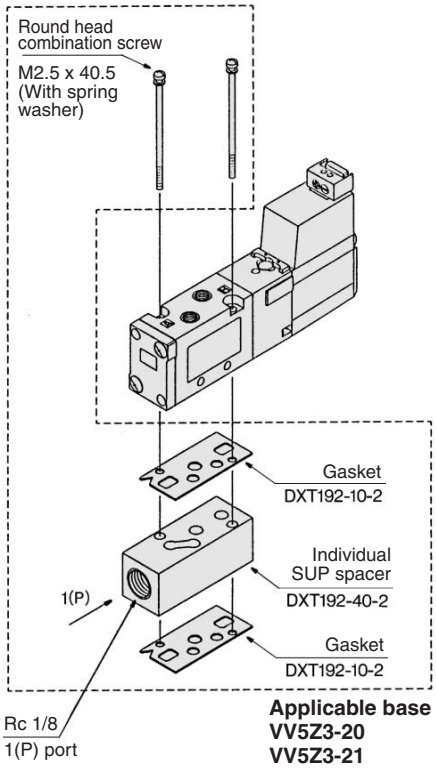
Adapter plate assembly
DXT200-3-2A



Applicable base
VV5Z3-20
VV5Z3-21

Individual SUP Spacer Assembly

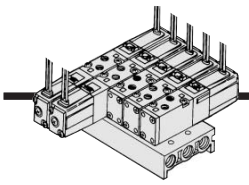
DXT192-40-2A



Applicable base
VV5Z3-20
VV5Z3-21

⚠ Caution

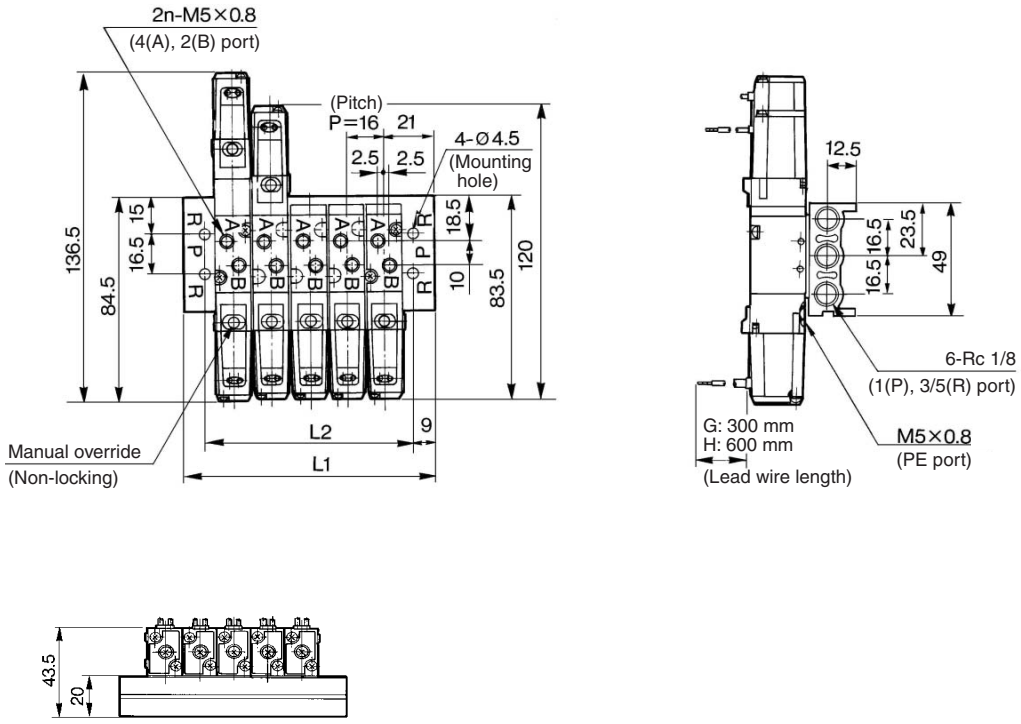
Mounting Screw Tightening Torques **M2.5: 0.45 N·m**



Type 20 Manifold

VV5Z3-20- Station 1

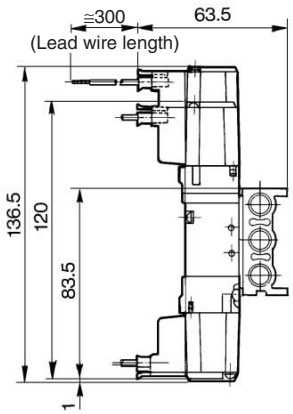
Grommet (G), (H)



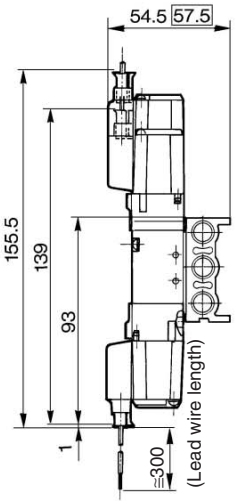
(mm)

Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L_1	58	74	90	106	122	138	154	170	186	202	218	234	250	266	282	298	314	330	346
L_2	40	56	72	88	104	120	136	152	168	184	200	216	232	248	264	280	296	312	328

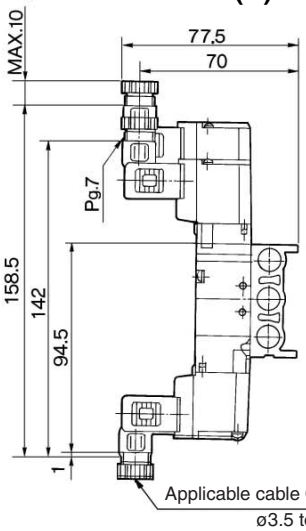
L plug connector (L)



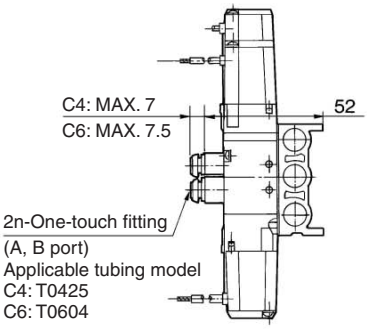
M plug connector (M)



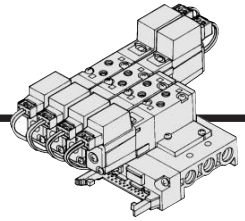
DIN terminal (D)



Built-in One-touch fittings

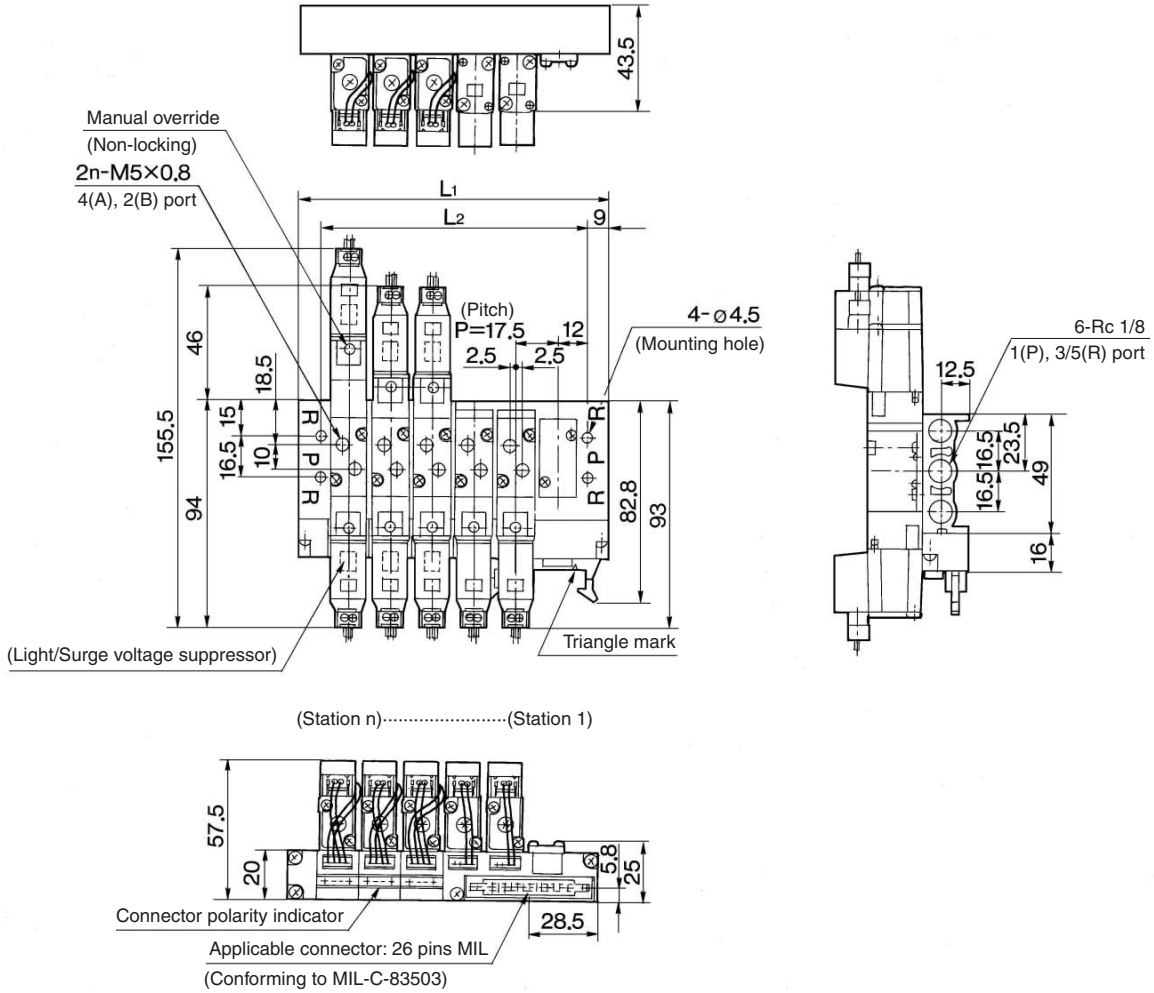


□: With light/surge voltage suppressor



Type 20P Flat Ribbon Cable Manifold

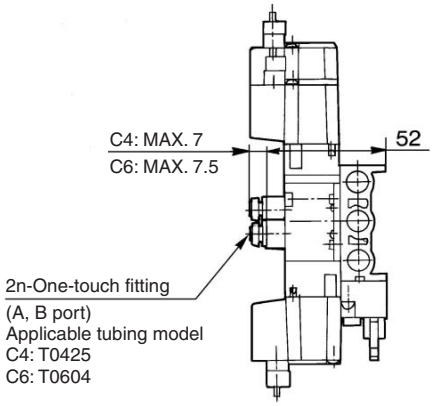
VV5Z3-20P-Station



(mm)

Stations	3	4	5	6	7	8	9	10	11	12
L_1	77	94.5	112	129.5	147	164.5	182	199.5	217	234.5
L_2	59	76.5	94	111.5	129	146.5	164	181.5	199	216.5

Built-in One-touch fittings



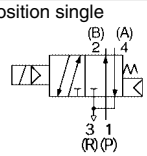
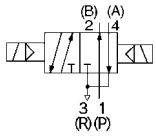
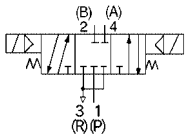
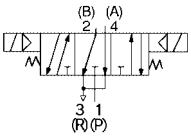
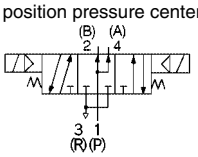
5 Port Solenoid Valve
Base Mounted
Series VZ3000

How to Order

Note) Please contact SMC in the case of without indicator light.

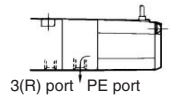
		Type of actuation	Body option	Rated voltage	Electrical entry	Light/Surge voltage suppressor	Manual override	Port size	Thread type
Plug-in	VZ3	1	4 3	5	F	Z Note)			
Non plug-in	VZ3	1	4 0	5	L				

Type of actuation

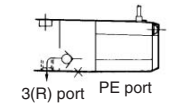
1	2 position single	
2	2 position double	
3	3 position closed center	
4	3 position exhaust center	
5	3 position pressure center	

Body option

0: Individual exhaust for the pilot valve



3: Common exhaust type for main and pilot valve

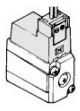
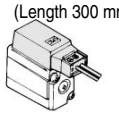
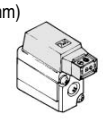
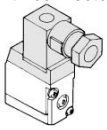
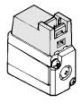
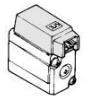


Rated voltage

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

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
				

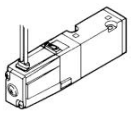
* Type "LN", "MN": With 2 sockets.

Thread type

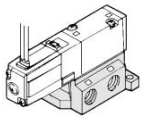
Nil	Rc
F	G
N	NPT
T	NPTF

Port size

Nil: Without sub-plate

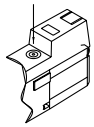


01: Rc 1/8 With sub-plate

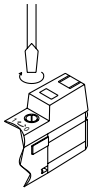


Manual override/Plug-in type

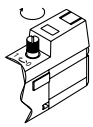
Nil: Non-locking push type



B: Locking type B (Slotted)



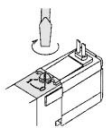
C: Locking type C (Manual)



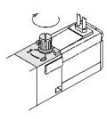
Manual override/Non plug-in type

Nil: Non-locking push type

B: Locking type B (Slotted)



C: Locking type C (Manual)



Light/Surge voltage suppressor

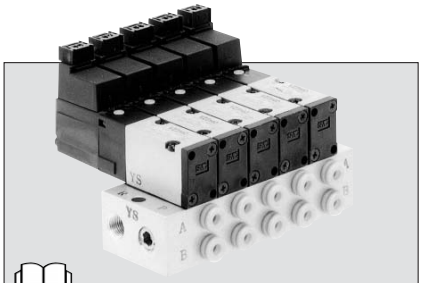
Nil	None
Z*	With light/surge voltage suppressor
S	With surge voltage suppressor

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

Applicable for cylinder actuation (up to ø40).

Compact size (Width: 15 mm)

Low power consumption: 1.8 W DC



Refer to pages 3-3-37 to 3-3-52 for manifold use.

Made to Order **Made to Order Specifications (For details, refer to page 3-3-85.)**

Specifications

Fluid		Air
Operating pressure range (MPa)	2 position single	0.15 to 0.7
	2 position double	0.1 to 0.7
	3 position	0.15 to 0.7
Ambient and fluid temperature (°C)		–10 to 50°C (No freezing. Refer to page 3-13-4.)
Response time (ms) (1) (at the pressure of 0.5 MPa)	2 position single, double	20 or less
	3 position	35 or less
Max. operating frequency (Hz)	2 position single, double	10
	3 position	3
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
Impact/Vibration resistance (m/s^2) (3)		300/50
Enclosure		Dustproof

Note 1) Based on dynamic performance test, JIS B 8375-1981. (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)

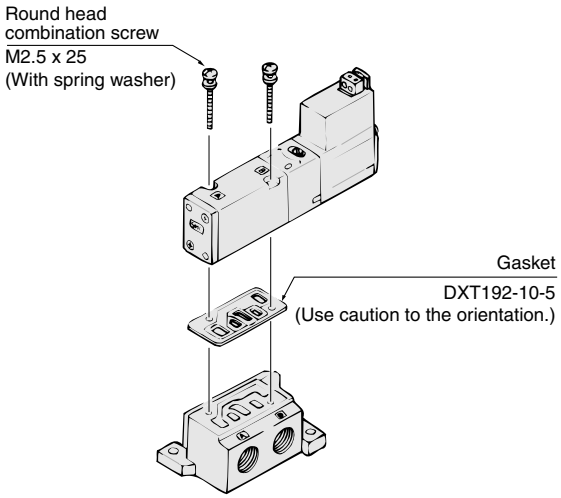
Solenoid Specifications

∗ Option

Electrical entry			Grommet (G)/(H), L plug connector (L), M plug connector (M), DIN terminal (D)
Coil rated voltage (V)	AC 50/60 Hz		100, 200, 24∗, 48∗, 110∗, 220∗
	DC		24, 6∗, 12∗, 48∗
Allowable voltage fluctuation (%)			–15 to +10% of rated voltage
Power consumption (W) (1) [Current mA]	DC		1.8 (With indicator light 2.1) [24 VDC: 75 (With indicator light 87.5)]
Apparent power (VA) (1) [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, 15/60 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 (2)
Indicator light			DC: LED (Red), AC: Neon bulb

Note 1) At rated voltage
Note 2) Plug-in should be ZNR.

Combinations of Solenoid Valve and Gasket



Flow Characteristics/Weight

Valve model	Type of actuation		Port size 1, 5, 3 (P, EA, EB)	Port size 4, 2 (A, B)	Flow characteristics (1) 1 → 4/2 (P → A /B) C [dm³/(s·bar)]	b	Cv	4/2 → 5/3 (A/B → EA/EB) C [dm³/(s·bar)]	b	Cv	Weight (g) Grommet
VZ3□40-□-01	2 position	Single	Rc 1/8	Rc 1/8	0.79	0.21	0.19	0.83	0.32	0.21	125 (75)
		Double									170 (120)
	3 position	Closed center			0.80	0.28	0.18	0.86	0.34	0.20	180 (130)
		Exhaust center			0.71	0.26	0.18	1.1 [0.60]	0.24 [0.44]	0.26 [0.18]	
		Pressure center			0.99 [0.47]	0.29 [0.38]	0.24 [0.12]	0.72	0.38	0.18	

Note 1) [ ]: Denotes the normal position. Exhaust center: 4/2 → 5/3, Pressure center: 1 → 4/2
Note 2) ( ): Without sub-plate.

Cylinder Speed Chart

Use as a guide for selection.
Please confirm the actual conditions with SMC Sizing Program.

Series	Average speed (mm/s)	Bore size: Series CM2, Pressure 0.5 MPa, Load factor 50%, Stroke 300 mm	ø20	ø25	ø32	ø40
VZ314□-□□□□-01□ (Piping: ø4 x 1 m)	800 / 700 / 600 / 500 / 400 / 300 / 200 / 100	Perpendicular, upward actuation / Horizontal actuation				
Speed controller/Silencer			AS2301F-□01-04□/AN110-01			

VZ314□-□□□□-01□ (Piping: ø6 x 1 m)	800 / 700 / 600 / 500 / 400 / 300 / 200 / 100	Perpendicular, upward actuation / Horizontal actuation				
Speed controller/Silencer			AS3301F-□02-06□/AN110-01			

Series	Average speed (mm/s)	Bore size: Series CA1, Pressure 0.5 MPa, Load factor 50%, Stroke 400 mm	ø40	ø50	ø63	ø80	ø100
VZ314□-□□□□-01□ (Piping: ø6 x 1 m)	800 / 700 / 600 / 500 / 400 / 300 / 200 / 100	Perpendicular, upward actuation / Horizontal actuation					
Speed controller/Silencer			AS3301F-□02-06□/AN110-01				

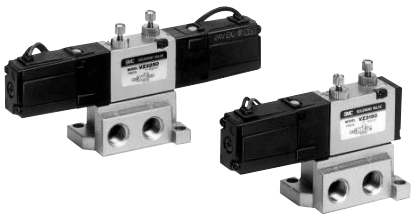
VZ314□-□□□□-01□ (Piping:ø8 x 1 m)	800 / 700 / 600 / 500 / 400 / 300 / 200 / 100	Perpendicular, upward actuation / Horizontal actuation				
Speed controller/Silencer			AS3301F-□02-08□/AN110-01			

∗ It is when the cylinder is extending that is meter-out controlled by speed controller which is directly connected with cylinder, and its needle valve with being fully open.
∗ The average velocity of the cylinder is what the stroke is divided by the total stroke time.
∗ Load factor: ((Load weight x 9.8)/Theoretical force) x 100%

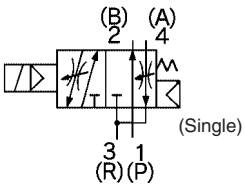
Built-in Speed Controllers

VZ3□5□

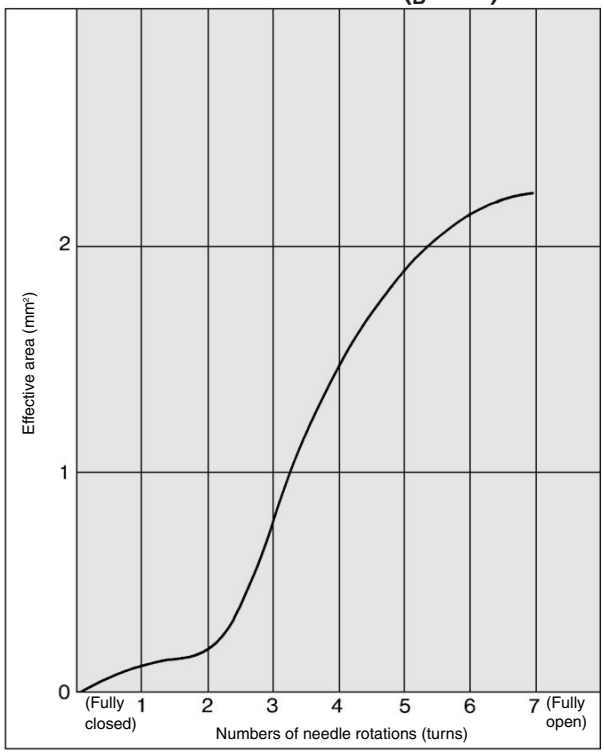
- An exhaust throttle valve is built into the solenoid valve itself, enabling a simple speed adjustment of the cylinder.
- If it is mounted on a manifold base, the exhaust air will converge in the common EXH port at the manifold base, thus simplifying the handling of the exhaust air.



JIS Symbol



Throttle Valve Characteristics ($\frac{A}{B}$ → R)



Note) • To use the VZ3□53, open the throttle valve one turn or more from the fully closed position.
• To adjust the throttle valve apply torque of 0.3 N·m or less.
• Be careful not to open the throttle valve excessively as this could cause the throttle valve to fly out.

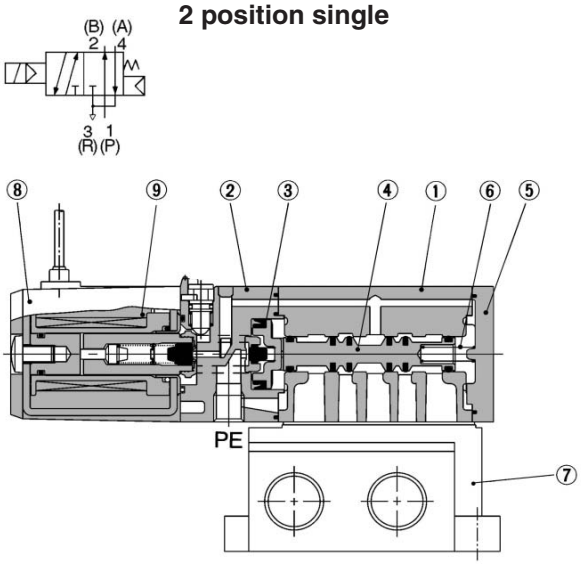
How to Order Valve with Built-in Speed Controller

Non plug-in **VZ3 □ 5 □ □ □ □ □ □**

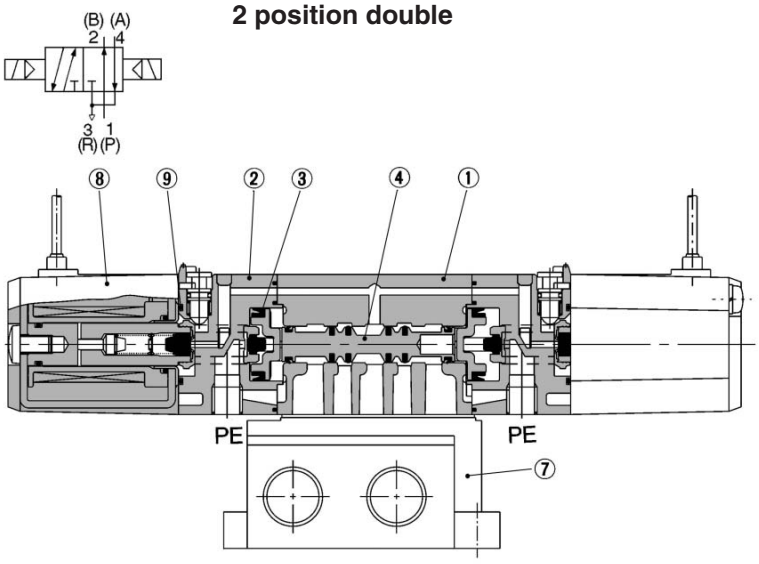
- Type of actuation
- Body option
- Rated voltage
- Electrical entry
- Light/Surge voltage suppressor
- Manual override
- Port size
- Thread type

Construction

2 position single

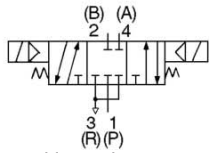


2 position double

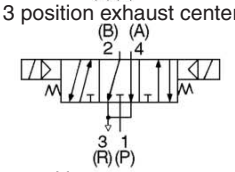


3 position closed center/exhaust center/pressure center

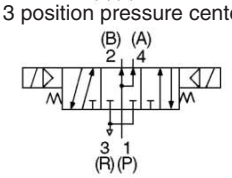
3 position closed center

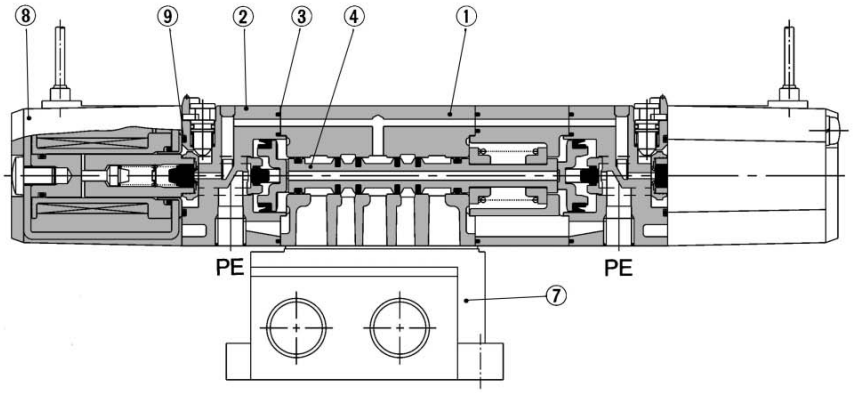


3 position exhaust center



3 position pressure center





(This figure shows a closed center type.)

Component Parts

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

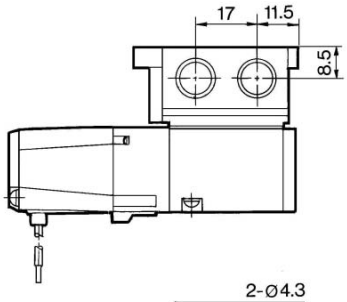
Replacement Parts

No.	Description	Material	Part no.	Note
⑦	Sub-plate	Aluminum die-casted	DXT192-14-1∗P	Platinum silver
⑧	Solenoid assembly	Epoxy/Stainless steel	DXT170-C-□□□	
⑨	O-ring	NBR	13 x 11 x 1	Common with Series VZ$\frac{1}{5}$000

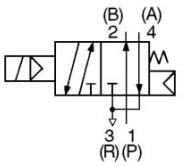
∗ Thread type
Nil: Rc
F: G
N: NPT
T: NPTF

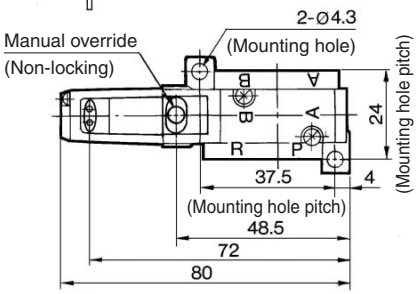
2 Position Single

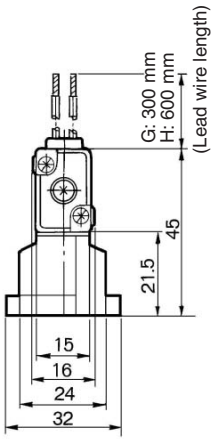
Grommet (G), (H)
VZ3140-□ G H □□-01

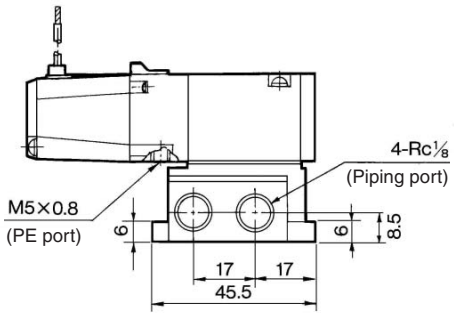


VZ3140

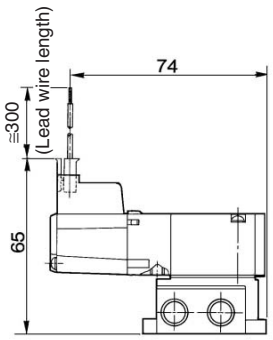




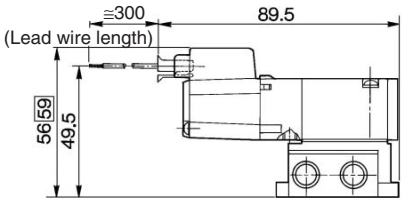




L plug connector (L)
VZ3140-□L□□-01

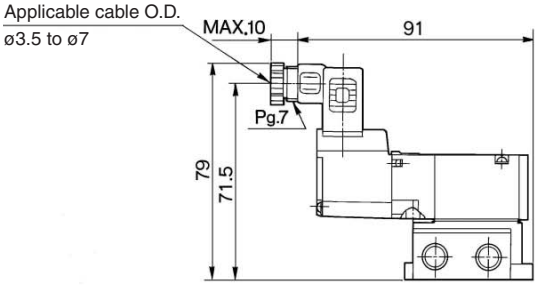


M plug connector (M)
VZ3140-□M□□-01

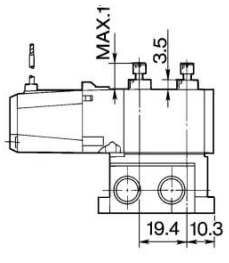


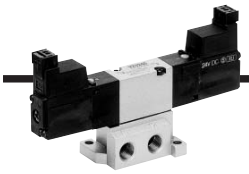
□: With light/surge voltage suppressor

DIN terminal (D)
VZ3140-□D□□-01



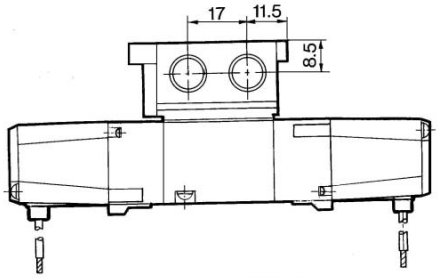
Built-in speed controllers
VZ3150-□□□□

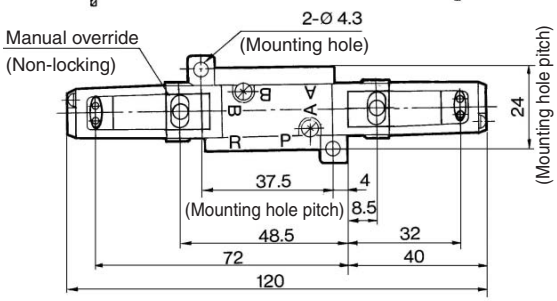


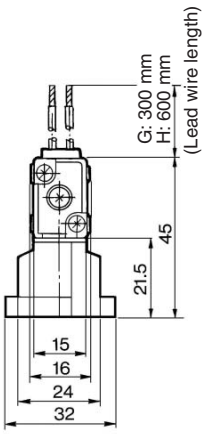


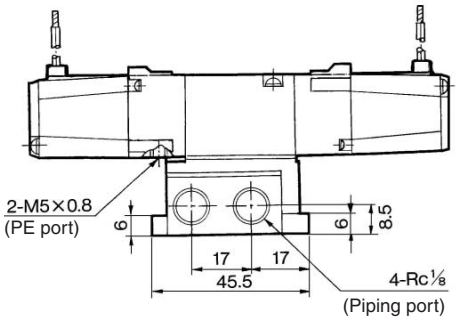
2 Position Double

Grommet (G), (H)
VZ3240-□$^{G}_{H}$□□-01

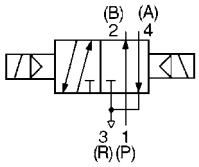




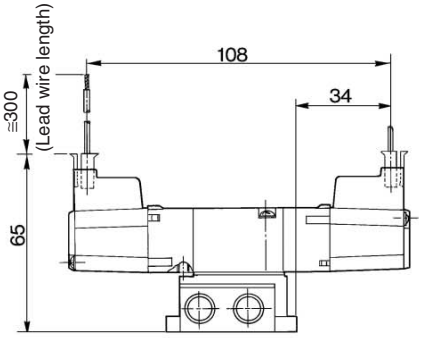




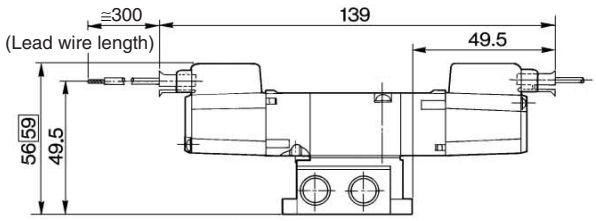
VZ3240



L plug connector (L)
VZ3240-□L□□-01

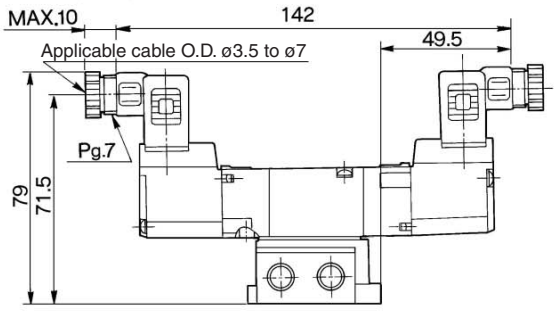


M plug connector (M)
VZ3240-□M□□-01

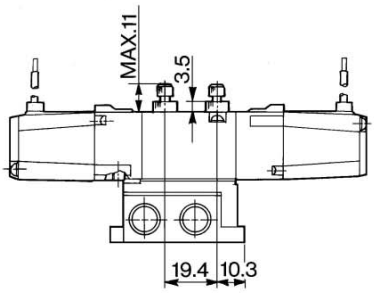


□: With light/surge voltage suppressor

DIN terminal (D)
VZ3240-□D□□-01

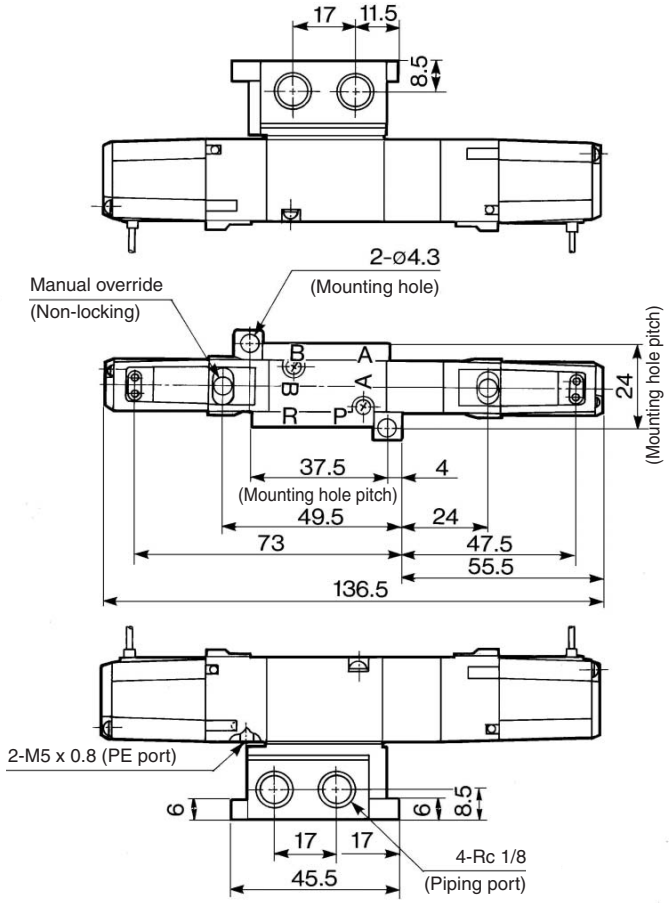


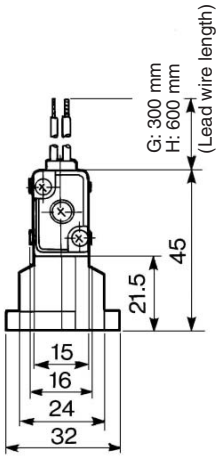
Built-in speed controllers
VZ3250-□□□□



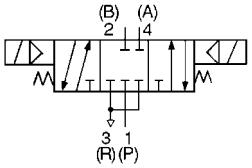
3 Position Closed Center/Exhaust Center/Pressure Center

Grommet (G), (H)
VZ3$^{3}_{5}$20-□$^{G}_{H}$□□-01

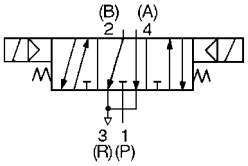




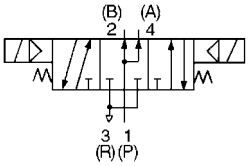
VZ3340



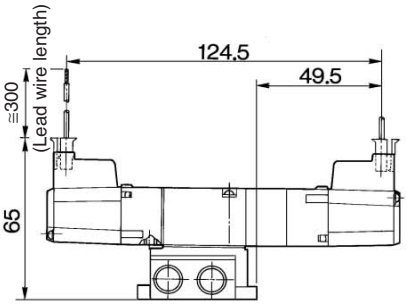
VZ3440



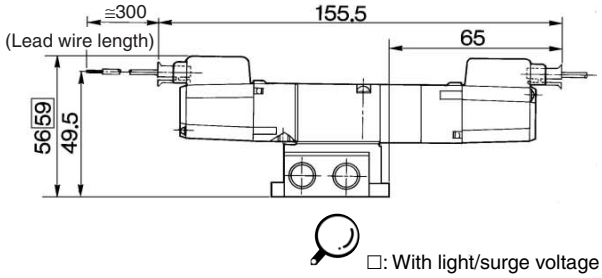
VZ3540



L plug connector (L)
VZ3$^{3}_{5}$40-□L□□-01

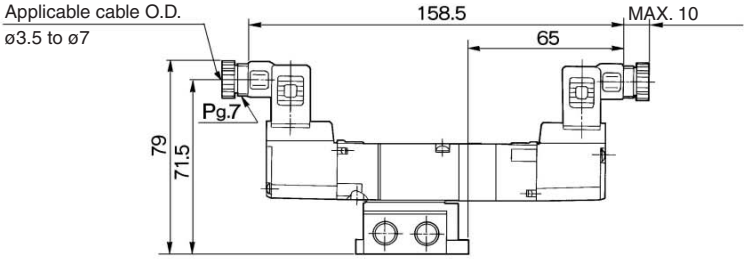


M plug connector (M)
VZ3$^{3}_{5}$40-□M□□-01

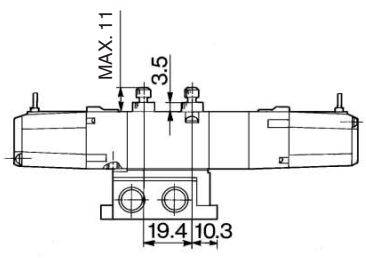


□: With light/surge voltage suppressor

DIN terminal (D)
VZ3$^{3}_{5}$40-□D□□-01



Built-in speed controllers
VZ3$^{3}_{5}$50-□□□□



Series VZ3000/Base Mounted
Manifold Specifications

Manifold Standard

Manifold Specifications

Model		Type 40	Type 41	Type 42	Type 43
Manifold type		Single base/B mount			
P(SUP)/R(EXH)		Common SUP/Common EXH			
Valve stations		2 to 20 stations			
4(A), 2(B) port Porting specifications	Position	Base	Base		
	Direction	Bottom	Side		
Port size	1(P), 3/5(R) port	Rc 1/8		Rc 1/4	Rc 1/8
	4(A), 2(B) port	M5 x 0.8		Rc 1/8 C6 (One-touch fitting for ø6) B7 (One-touch fitting for 1/4")	C4 (One-touch fitting for ø4) B3 (One-touch fitting for 5/32")

Flow Characteristics

Manifold		Port size 1(P), 5/3(R) port	Port size 2(B), 4(A) port	Flow characteristics 1 → 4/2 (P → A/B) C [dm³/(s·bar)]	b	Cv	Flow characteristics 4/2 → 5/3 (A/B → R) C [dm³/(s·bar)]	b	Cv
VV5Z3-40	**VZ3□4□**	1/8	M5 x 0.8	0.55	0.35	0.15	0.64	0.26	0.16
VV5Z3-41		1/8	M5 x 0.8	0.59	0.35	0.16	0.68	0.23	0.17
VV5Z3-42-01		1/4	1/8	0.74	0.22	0.18	0.82	0.31	0.21
VV5Z3-42-C6		1/4	C6	0.71	0.24	0.17	0.80	0.29	0.20
VV5Z3-43		1/8	C4	0.55	0.29	0.14	0.74	0.32	0.19

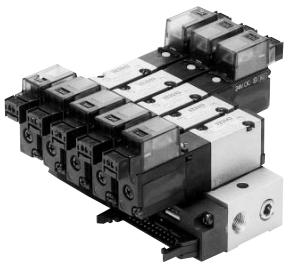
Note) Value at manifold base mounted, 2 position single operating

How to Order Manifold

Instruct by specifying the valves and blanking plate assembly to be mounted on the manifold along with the manifold base model no.
(Example) VV5Z3-40-031-M5·····1 pc. (Manifold base)
∗VZ3140-5G-M5·····2 pcs. (Valve)
∗DXT192-13-1A·····1 pc. (Blanking plate assembly)
VV5Z3-43-031-C4·····1 pc. (Manifold base)
∗VZ3140-5LZ·····1 pc. (Valve)
∗VZ3240-5LZ·····1 pc. (Valve)
∗DXT192-13-1A·····1 pc. (Blanking plate assembly)
→The asterisk denotes the symbol for assembly. Prefix it to the part nos. of the solenoid valve, etc.

Flat Ribbon Cable Manifold

- **One-touch wiring to consolidate connection of external wires.**
- **Clean appearance**
  The flat cable provides wiring on a printed circuit board to the individual valves at the manifold base, enabling the consolidation of external wiring at a touch through a 26 pins MIL connector.



Flat Ribbon Cable Manifold Specifications

Model		Type 41P	Type 43P
Manifold type		Single base/B mount	
P(SUP), R(EXH)		Common SUP/Common EXH	
Valve stations		3 to 12 stations	
4(A), 2(B) port location	Position	Base	
	Direction	Side	
Port size	1(P), 3/5(R) port	Rc 1/8	Rc 1/8
	4(A), 2(B) port	M5 x 0.8	C4 (One-touch fitting for ø4)
Applicable flat ribbon cable connector		Socket: 26 pins MIL, with strain relief (Conforming to MIL-C-83503)	
Internal wiring		+COM specifications (For –COM specifications, specify them separately.)	
Applicable valve model		VZ3□43-$\frac{1}{3}\frac{3}{5}\frac{}{6}$MOZ□-VZ3□53-$\frac{1}{3}\frac{3}{5}\frac{}{6}$MOZ□	
Rated voltage		100 VAC 50/60 Hz, 110 VAC 50/60 Hz, 24 VDC, 12 VDC	

Note) Withstand voltage specifications of wiring unit part is equivalent to JIS C 0704 class 1.

Flow Characteristics

Manifold		Port size 1(P), 5/3(R) port	Port size 2(B), 4(A) port	Flow characteristics 1 → 4/2 (P → A/B) C [dm³/(s·bar)]	b	Cv	Flow characteristics 4/2 → 5/3 (A/B → R) C [dm³/(s·bar)]	b	Cv
VV5Z3-41P	**SYJ5□43**	1/8	M5 x 0.8	0.59	0.35	0.16	0.68	0.23	0.17
VV5Z3-43P		1/8	C4	0.59	0.29	0.14	0.74	0.32	0.19

Note) Value at manifold base mounted, 2 position single operating

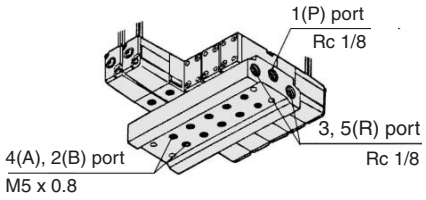
How to Order Manifold

Instruct by specifying the valves, blanking plate assembly and connector assembly to be mounted on the manifold along with the manifold base model no.
(Example) VV5Z3-43P-07-C4·····1 pc. (Manifold base)
∗VZ3143-5MOZ····· 3 pcs. (Valve)
∗VZ3243-5MOZ····· 3 pcs. (Valve)
∗DXT192-13-3A····· 1 pc. (Blanking plate assembly)
∗DXT192-52-1-4A····· 3 pcs. (Connector assembly)
∗DXT192-52-2-4A····· 3 pcs. (Connector assembly)
→The asterisk denotes the symbol for assembly. Prefix it to the part nos. of the solenoid valve, etc.

Common SUP/Common EXH

Note) For more than 8 stations, supply air to both sides of 1(P) port and exhaust air from both sides of 3/5(R) port.

Type 40



How to Order

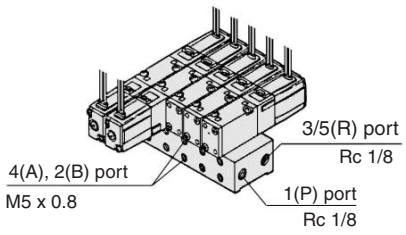
VV5Z3 − 40 − 05 2 − M5 □

Stations	
02	2 stations
⋮	⋮
20	20 stations

4(A), 2(B) port size	
M5	M5 x 0.8

1(P), 3/5(R) port thread type	
Nil	Rc
F	G
N	NPT
Z	NPTE

Type 41



How to Order

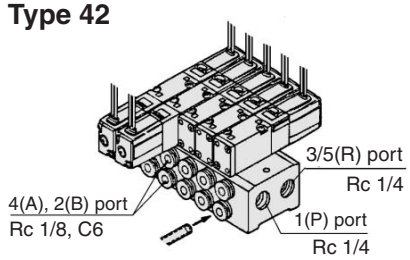
VV5Z3 − 41 − 05 1 − M5 □

Stations	
02	2 stations
⋮	⋮
20	20 stations

4(A), 2(B) port size	
M5	M5 x 0.8

1(P), 3/5(R) port thread type	
Nil	Rc
F	G
N	NPT
Z	NPTE

Type 42



How to Order

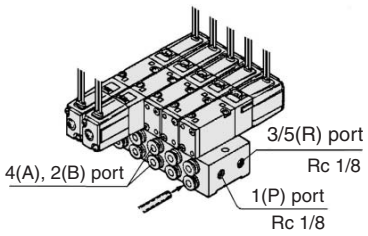
VV5Z3 − 42 − 05 1 − C6 □

Stations	
02	2 stations
⋮	⋮
20	20 stations

4(A), 2(B) port size	
01	Rc 1/8
C6	One-touch fitting for ø6
B7	One-touch fitting for 1/4"

1(P), 3/5(R) port thread type	
Nil	Rc
F	G
N	NPT
Z	NPTE

Type 43



How to Order

VV5Z3 − 43 − 05 1 − C4 □

Stations	
02	2 stations
⋮	⋮
20	20 stations

4(A), 2(B) port size	
C4	One-touch fitting for ø4
B3	One-touch fitting for 5/32"

1(P), 3/5(R) port thread type	
Nil	Rc
F	G
N	NPT
Z	NPTE

Applicable solenoid valve

VZ3□4□-□ G L M D □□

VZ3□5□-□ G L M D □□

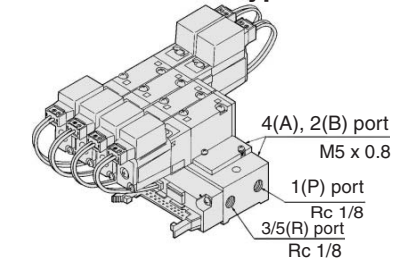
Applicable blanking plate assembly
DXT192-13-1A

Applicable individual EXH spacer assembly
DXT192-21-1A

Applicable individual SUP spacer assembly
(Except VV5Z3-40 type)
DXT192-40-1A

Applicable interface regulator
ARBZ3000-00-P

Flat ribbon cable type 41P



How to Order

VV5Z3 − 41P − 05 − M5 □

Stations	
03	3 stations
⋮	⋮
12	12 stations

4(A), 2(B) port size	
M5	M5 x 0.8

1(P), 3/5(R) port thread type	
Nil	Rc
F	G
N	NPT
Z	NPTE

Applicable solenoid valve

VZ3□43- 1 3 5 6 MOZ□

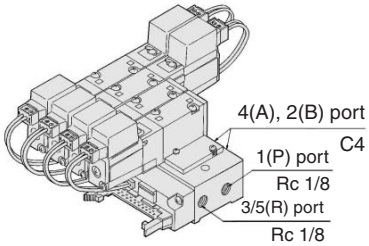
VZ3□53- 1 3 5 6 MOZ□

Applicable blanking plate assembly
DXT192-13-3A

Applicable connector assembly
DXT192-52-1-∗A
(For 2 position single)
DXT192-52-2-∗A
(For 2 position double, 3 position)
∗ 1: 100 VAC, 3: 110 VAC, 4: DC

For "How to order applicable connector assemblies", refer to page 3-3-7.

Flat ribbon cable type 43P



How to Order

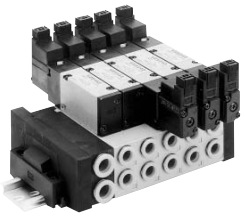
VV5Z3 − 43P − 05 − C4 □

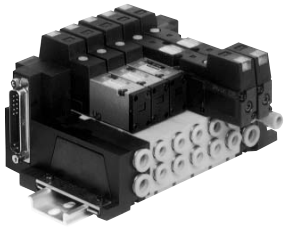
Stations	
03	3 stations
⋮	⋮
12	12 stations

4(A), 2(B) port size	
C4	One-touch fitting for ø4
B3	One-touch fitting for 5/32"

1(P), 3/5(R) port thread type	
Nil	Rc
F	G
N	NPT
Z	NPTE

DIN Rail Manifold





Manifold Specifications

Model		Type 45	Type 45F
Manifold type		Stacking type non plug-in type	Stacking type plug-in type
P(SUP), R(EXH)		Common SUP/Common EXH	
Valve stations		2 to 20 stations	
A, B port Porting specifications	Location	Base	
	Direction	Side	
Port size	1(P), 3/5(R) port	C8 (One-touch fitting for ø8)	
	4(A), 2(B) port	C4 (One-touch fitting for ø4) C6 (One-touch fitting for ø6)	
Connector		—	MIL-C-24308 Applicable for JIS-X-5101 D-sub connector
Internal wiring		—	COM Note)

Note) It is available at +COM or –COM.

Flow Characteristics

Manifold		Port size		Flow characteristics					
		1(P), 5/3(R) port	2(B), 4(A) port	1 → 4/2 (P → A/B)			4/2 → 5/3 (A/B → R)		
				C [dm³/(s·bar)]	b	Cv	C [dm³/(s·bar)]	b	Cv
VV5Z3-45	VZ3□4□	C8	C4	0.59	0.28	0.15	0.83	0.34	0.22
		C8	C6	0.76	0.23	0.18	0.86	0.29	0.22

Note) Value at manifold base mounted, 2 position single operating

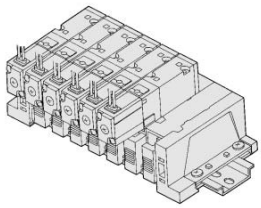
How to Order Manifold

Instruct by specifying the valves and blanking plate assembly to be mounted on the manifold along with the manifold base model no.
(Example) VV5Z3-45FD-06-C6C·· 1 pc. (Manifold base)
∗VZ3143-5FZ·····2 pcs. (Valve)
∗VZ3243-5FZ·····3 pcs. (Valve)
∗VZ3000-69-1A ·····1 pc. (Blanking plate assembly)
└▸The asterisk denotes the symbol for assembly. Prefix it to the part nos. of the solenoid valve, etc.

DIN Rail Manifold

Common SUP/Common EXH

Type 45 (Non plug-in type)



How to Order

VV5Z3 − 45 − 05 D − C6 C − [ ]

Stations

02	2 stations
⋮	⋮
20	20 stations

SUP/EXH block mounting position

U	U side: 2 to 10 stations
D	D side: 2 to 10 stations
B	Both sides: 2 to 20 stations
M ∗	Special specifications

∗ For special specifications, indicate separately by the manifold specification sheet.

4(A), 2(B) port size

C4	One-touch fitting for ø4
C6	One-touch fitting for ø6
M∗	Mixed

∗ In the case of mixed specifications (M), indicate separately on the manifold specification sheet.

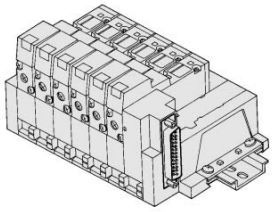
Applicable solenoid valve
VZ3□4□-□ G L M D □□
VZ3□5□-□ G L M D □□

Applicable blanking plate assembly
VZ3000-69-2A

DIN rail length specified

Nil	Standard length	
3	For 3 stations	(Specify a longer rail than the standard length.)
⋮	⋮	
20	For 20 stations	

Type 45F (Plug-in type)



How to Order

VV5Z3 −45F D − 05 [ ] − C6 C − [ ]

Connector mounting direction

U	U side: 2 to 10 stations
D	D side: 2 to 10 stations
B	Both sides: 11 to 20 stations

Stations

02	2 stations
⋮	⋮
20	20 stations

SUP/EXH block mounting position

Nil	For 2 to 10 stations : One side (Same as direction of connector mount) For 11 to 20 stations: Both sides
B	For 2 to 10 stations: Both sides
M ∗	Special specifications

∗ For special specifications, indicate separately by the manifold specification sheet.

4(A), 2(B) port size

C4	One-touch fitting for ø4
C6	One-touch fitting for ø6
M ∗	Mixed

∗ In the case of mixed specifications (M), indicate separately on the manifold specification sheet.

Applicable solenoid valve
VZ3□43-□FZ□

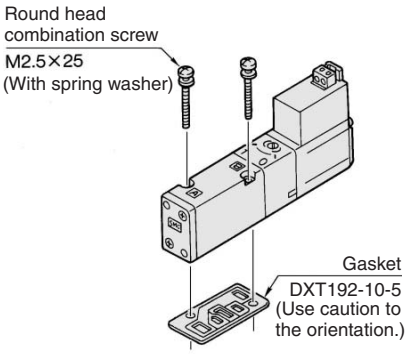
Applicable blanking plate assembly
VZ3000-69-1A

DIN rail length specified

Nil	Standard length	
3	For 3 stations	(Specify a longer rail than the standard length.)
⋮	⋮	
20	For 20 stations	

Option/Standard Manifold, Flat Ribbon Cable Manifold

Combinations of Solenoid Valve, Manifold Gasket and Manifold Base



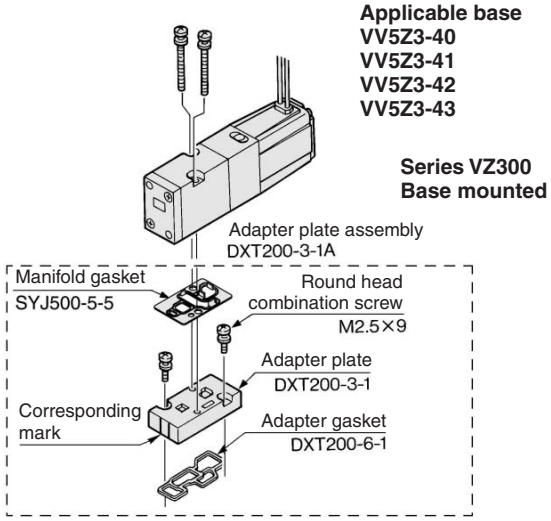
Applicable base
VV5Z3-40
VV5Z3-41
VV5Z3-42
VV5Z3-43
VV5Z3-41P
VV5Z3-43P

Installation of the VZ300 Valve on the VZ3000 Manifold

- Use of an adaptor plate makes it possible to mount Series VZ300 on the manifold base of Series VZ3000.
- The mounting direction is shown in the diagram below. Mount the solenoid so that it will be on the same side as the single solenoid of the Series VZ3000.
- 2(A) port of 3 port valve should be 2(B) port of manifold base.

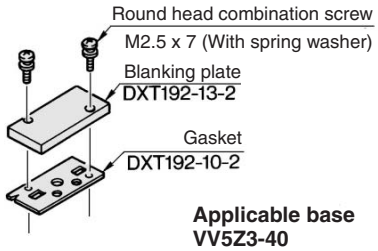
Adapter Plate Assembly DXT200-3-1A

Applicable base
VV5Z3-40
VV5Z3-41
VV5Z3-42
VV5Z3-43



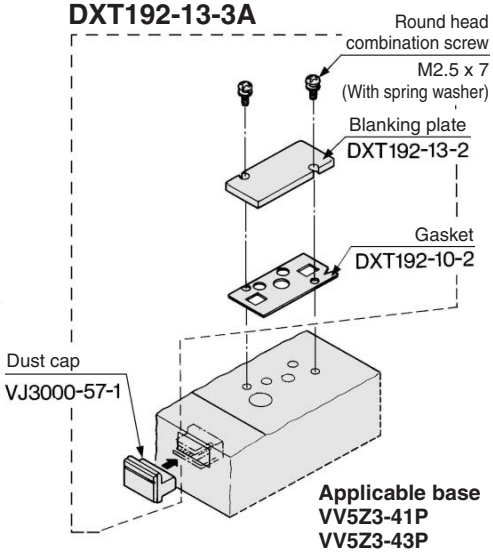
Blanking Plate Assembly

DXT192-13-1A



Applicable base
VV5Z3-40
VV5Z3-41
VV5Z3-42
VV5Z3-43

DXT192-13-3A

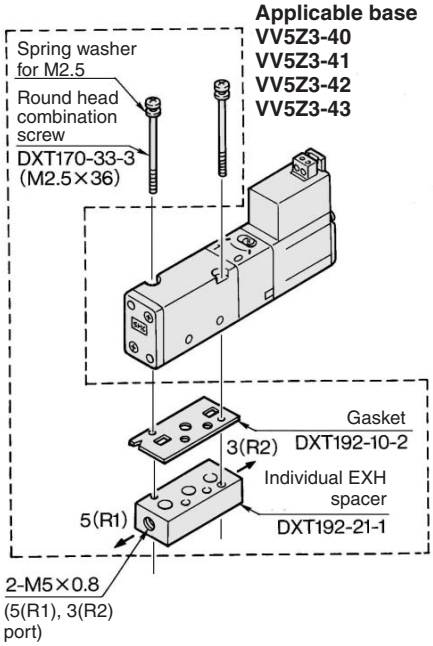


Applicable base
VV5Z3-41P
VV5Z3-43P

Individual EXH Spacer Assembly

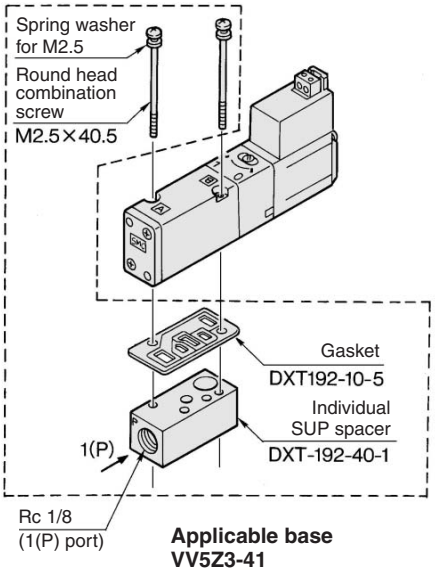
DXT192-21-1A

Applicable base
VV5Z3-40
VV5Z3-41
VV5Z3-42
VV5Z3-43



Individual SUP Spacer Assembly

DXT192-40-1A

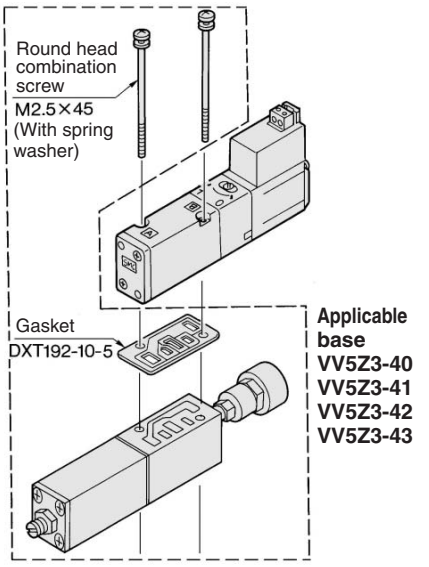


Applicable base
VV5Z3-41
VV5Z3-42
VV5Z3-43

Interface regulator (P port regulation)

Interface regulator can be placed on top of the manifold base to reduce the pressure of each of the valves.

ARBZ3000-00-P



Applicable base
VV5Z3-40
VV5Z3-41
VV5Z3-42
VV5Z3-43

Before using, refer to page 3-3-8.

Note) Please contact SMC when using an individual EXH spacer assembly, an individual SUP spacer assembly, an adapter plate assembly, or an interface regulator on 41P and 43P types.

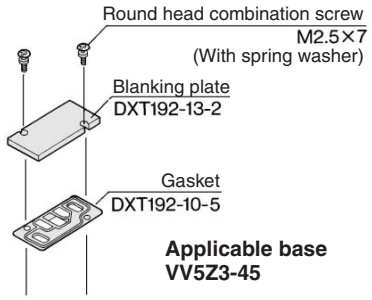
⚠ Caution

Mounting Screw Tightening Torques **M2.5: 0.45 N·m**

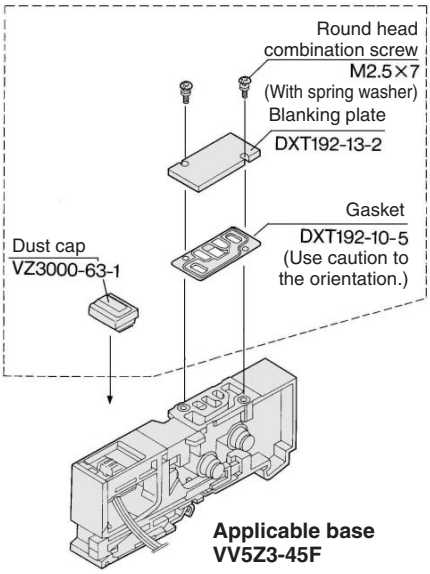
Option/DIN Rail Manifold

Blanking Plate Assembly

VZ3000-69-2A



VZ3000-69-1A

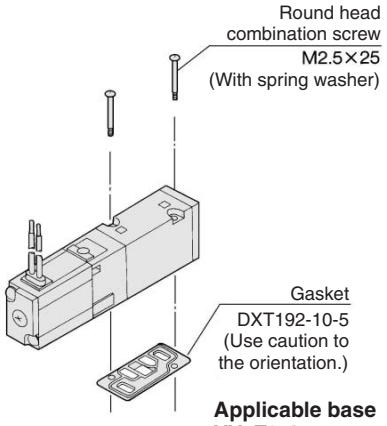


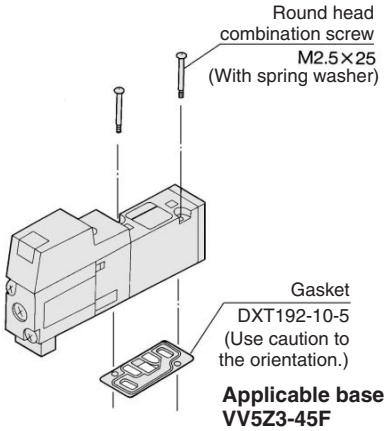
⚠ Caution

Mounting Screw Tightening Torques

M2.5: 0.32 N·m
(For stacking type manifold)

Combination of Solenoid Valve, Gasket and Manifold Base





SUP Block Disk

By installing a SUP block disk in the pressure supply passage of a manifold valve, it is possible to supply two or more different high and low pressures to one manifold.

VZ3000-79-1A

EXH Block Disk

By installing an EXH block disk in the exhaust passage of a manifold valve, it is possible to divide the valve's exhaust so that it does not affect another valve.

VZ3000-79-1A

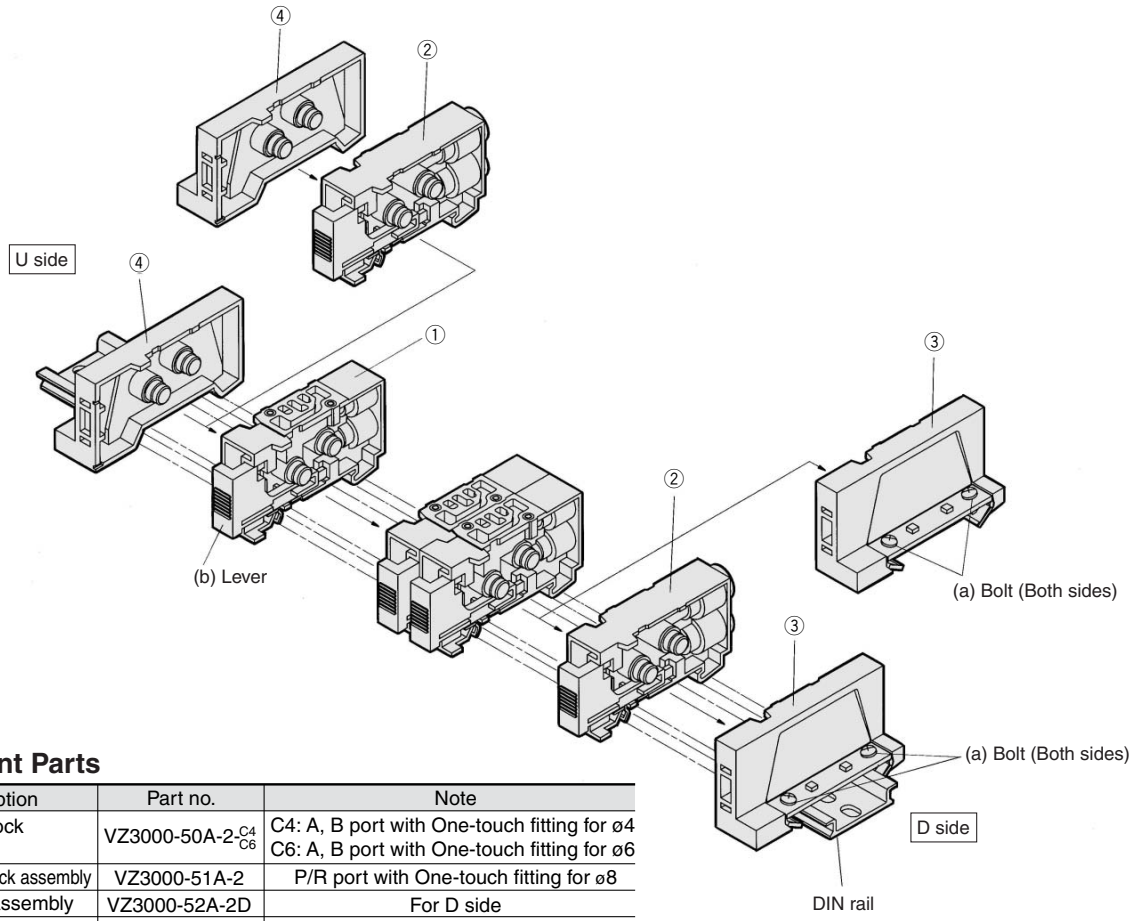
Applicable Plug Assembly (D-sub connector cable assembly)

Cable length	Assembly part no.	Component parts
1.5 m	VVZS3000-21A-1	Plug MIL standard Number of terminals: 25 Cable: 25 cores x 0.3 mm²
3 m	VVZS3000-21A-2	
5 m	VVZS3000-21A-3	
8 m	VVZS3000-21A-4	

For details, refer to page 3-3-8.

Exploded View/DIN Rail Manifold

Type 45 Manifold



Replacement Parts

No.	Description	Part no.	Note
①	Manifold block assembly	VZ3000-50A-2-$^{C4}_{C6}$	C4: A, B port with One-touch fitting for ø4 C6: A, B port with One-touch fitting for ø6
②	SUP/EXH block assembly	VZ3000-51A-2	P/R port with One-touch fitting for ø8
③	End block assembly	VZ3000-52A-2D	For D side
④	End block assembly	VZ3000-52A-2U	For U side

How to Increase Manifold Base

Station expansion is possible at any position.

(1) Loosen (both) bolts (a), which are securing the manifold onto the DIN rail, 1 to 2 turns.
(To remove the manifold base from the DIN rail, loosen the bolts 4 to 5 turns.)

(2) Press lever (b) to disconnect the manifold block assembly at the location in which you wish to place an additional manifold block assembly. (However, there are no levers between ① and ④ or between ② and ④. They can be disconnected by merely pulling them apart.)

(3) Mount additional manifold block assembly on the DIN rail as shown in the Fig. (2).

(4) Press the block assemblies and tighten the bolts (a) to fix them to the DIN rail.

Note) When there are 10 or fewer manifold block assemblies, and more are added to make a total of 11 or more, a supply/exhaust block assembly must also be added.

Fig. (1)

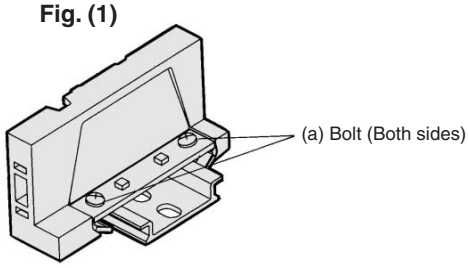
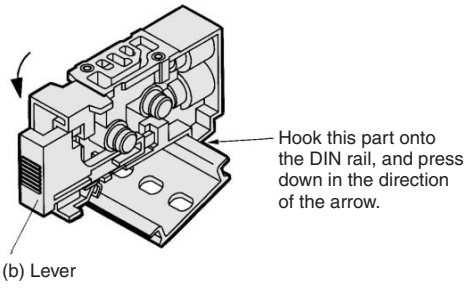
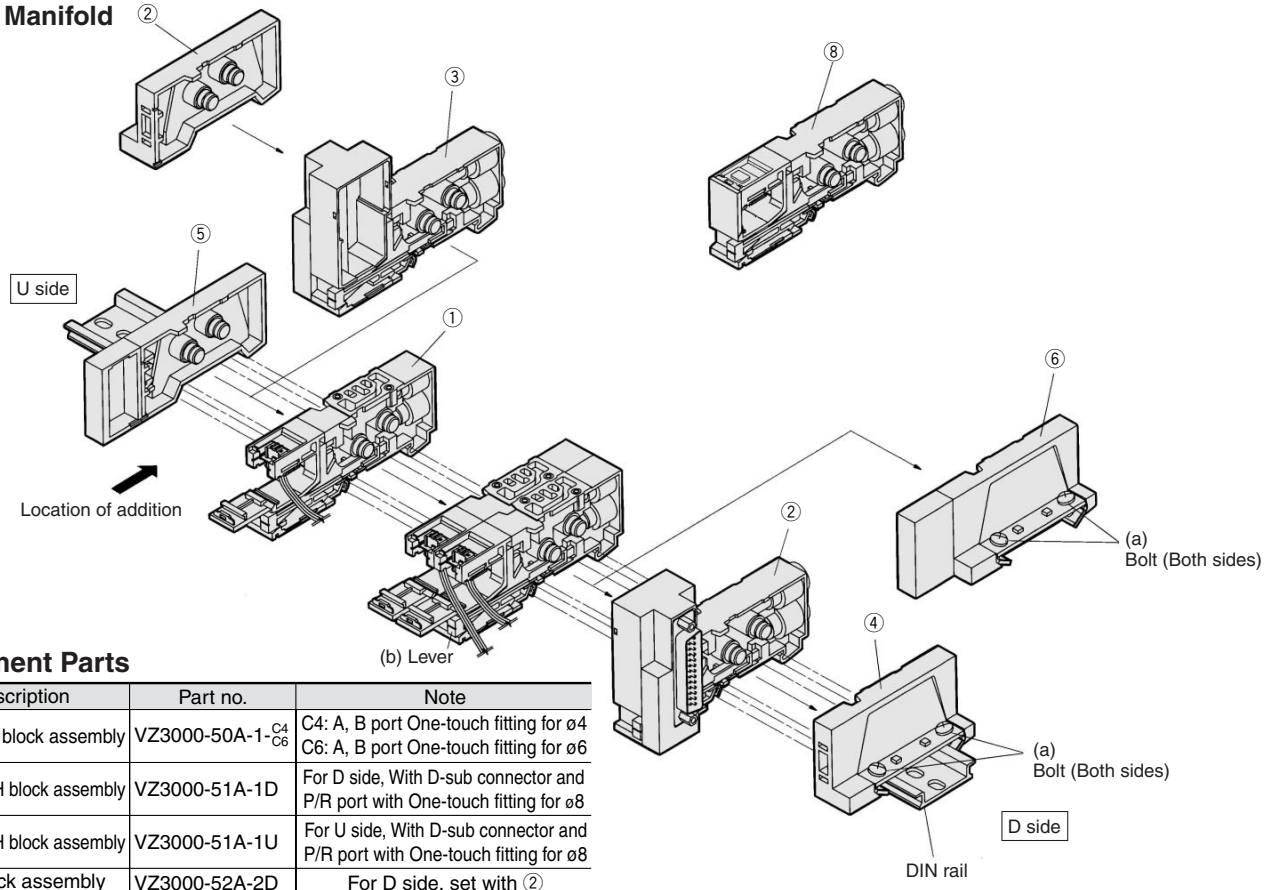


Fig. (2)



Exploded View/DIN Rail Manifold

Type 45F Manifold



Replacement Parts

No.	Description	Part no.	Note
①	Manifold block assembly	VZ3000-50A-1-$^{C4}_{C6}$	C4: A, B port One-touch fitting for ø4 C6: A, B port One-touch fitting for ø6
②	SUP/EXH block assembly	VZ3000-51A-1D	For D side, With D-sub connector and P/R port with One-touch fitting for ø8
③	SUP/EXH block assembly	VZ3000-51A-1U	For U side, With D-sub connector and P/R port with One-touch fitting for ø8
④	End block assembly	VZ3000-52A-2D	For D side, set with ②
⑤	End block assembly	VZ3000-52A-1U	For U side
⑥	End block assembly	VZ3000-52A-1D	For D side
⑦	End block assembly	VZ3000-52A-2U	For U side, set with ③
⑧	SUP/EXH block assembly	VZ3000-51A-1M	Without D-sub connector For indicated location

How to Increase Manifold Base

To add a manifold block assembly, add it to the U side so that the terminal number of the D-sub connector and the valve link position will be in accordance with the circuit diagram.

(1) Loosen (both) bolts (a), which are securing the manifold onto the DIN rail, 1 to 2 turns.
(To remove the manifold base from the DIN rail, loosen the bolts 4 to 5 turns.)

(2) Using a flat screwdriver, press lever (b) to disengage the link of the manifold block assembly on the U side or the D side from the SUP/EXH block assembly or from the end block assembly. (However, there are no levers between ⑤ and ①. They can be disconnected by merely pulling them apart.)

(3) Remove the housing cover from the D-sub connector portion of the SUP/EXH block assembly. (Refer to Fig. (1).)

(4) Following the procedure shown in Fig. (2), mount the manifold block assembly to be added onto the DIN rail. As shown in Fig. (3), insert the pin of the lead wire assembly into the D-sub connector, and attach the round crimped terminal to the screw that connects the wires.

(5) Press the block assemblies and tighten the bolts (a) to fix them to the DIN rail.

Note) When there are 10 or fewer manifold block assemblies, and more are added to make a total of 11 or more, a supply/exhaust block assembly must also be added.

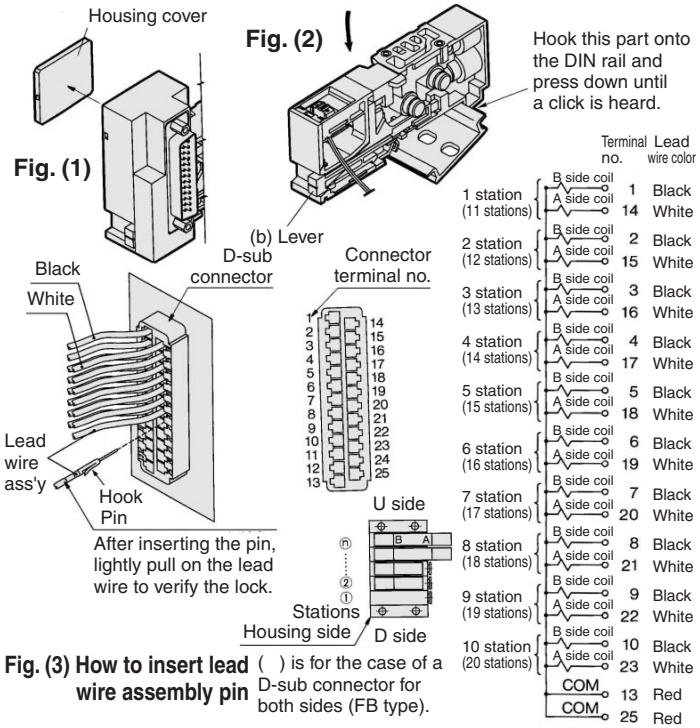
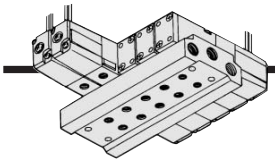


Fig. (3) How to insert lead wire assembly pin

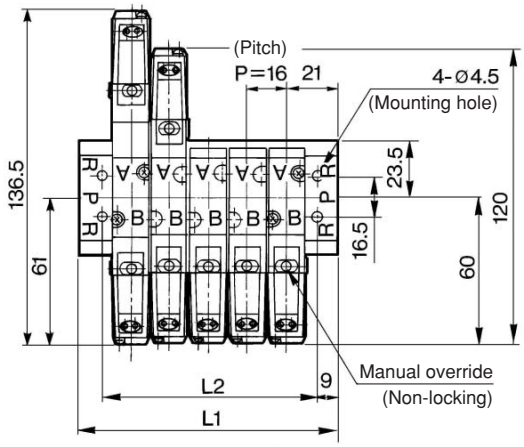
( ) is for the case of a D-sub connector for both sides (FB type).

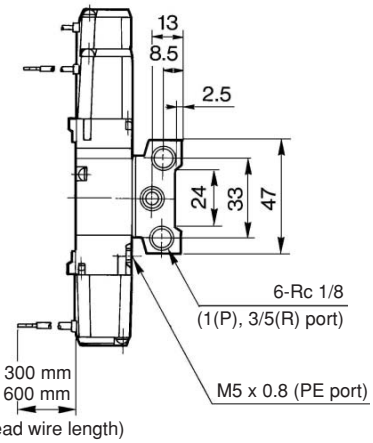


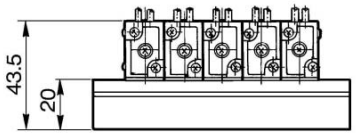
Type 40 Manifold: Bottom Ported

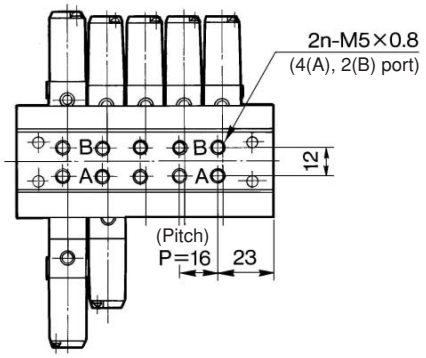
VV5Z3-40- Station **2-M5**

Grommet (G), (H)





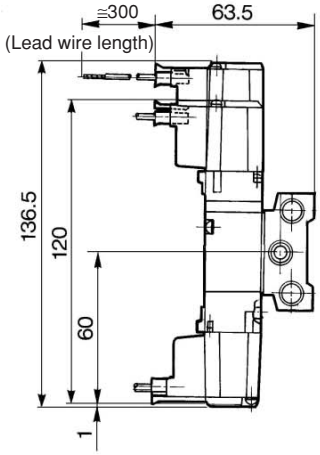




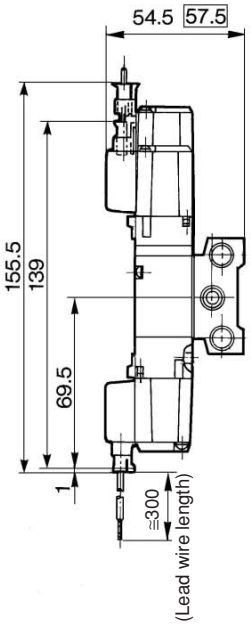
(mm)

Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L_1	58	74	90	106	122	138	154	170	186	202	218	234	250	266	282	298	314	330	316
L_2	40	56	72	88	104	120	136	152	168	184	200	216	232	248	264	280	296	312	328

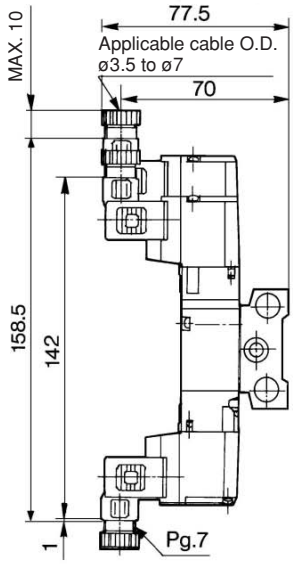
L plug connector (L)



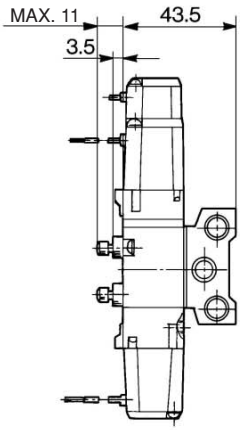
M plug connector (M)



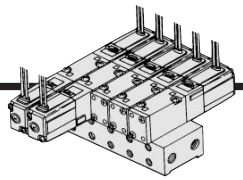
DIN terminal (D)



Built-in speed controllers



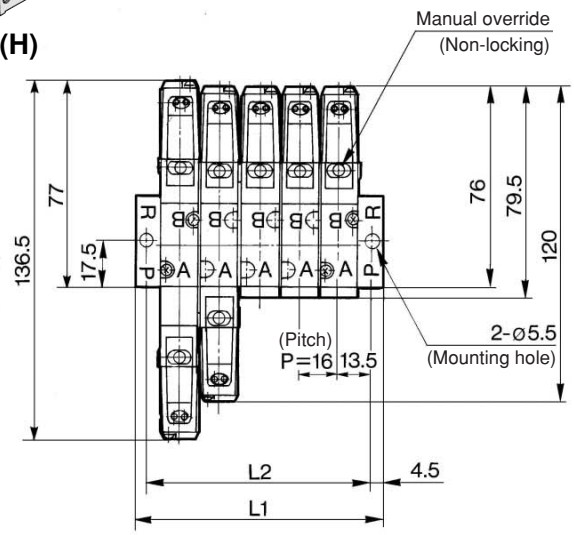
□: With light/surge voltage suppressor

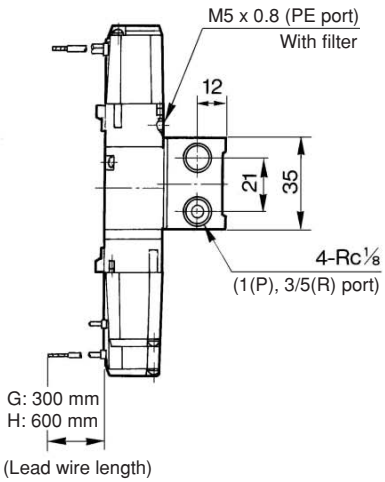


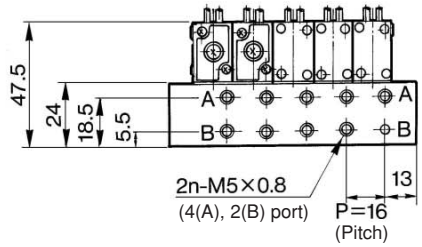
Type 41 Manifold: Side Ported

VV5Z3-41-Station 1-M5

Grommet (G), (H)



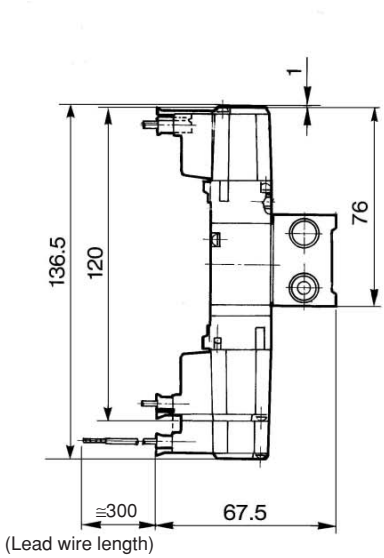




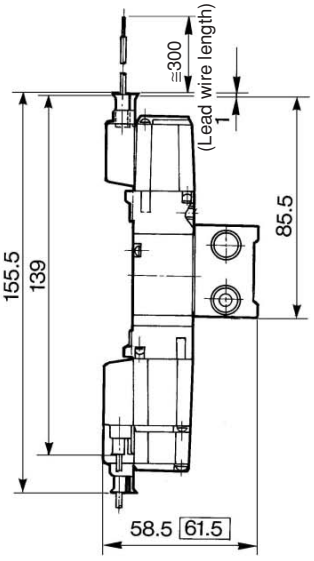
(mm)

Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L_1	52	68	84	100	116	132	148	164	180	196	212	228	244	260	276	292	308	324	340
L_2	43	59	75	91	107	123	139	155	171	187	203	219	235	251	267	283	299	315	331

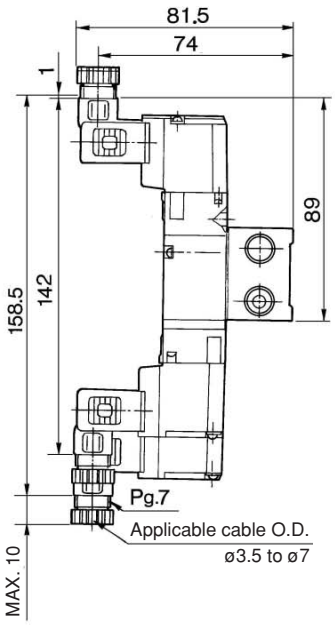
L plug connector (L)



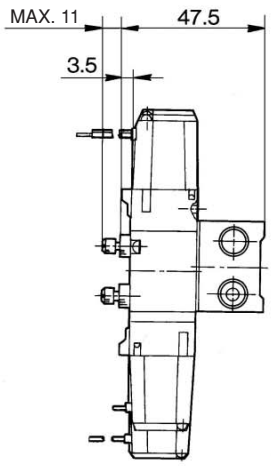
M plug connector (M)



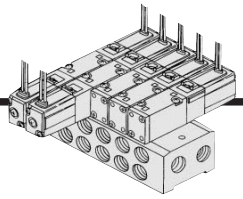
DIN terminal (D)



Built-in speed controllers



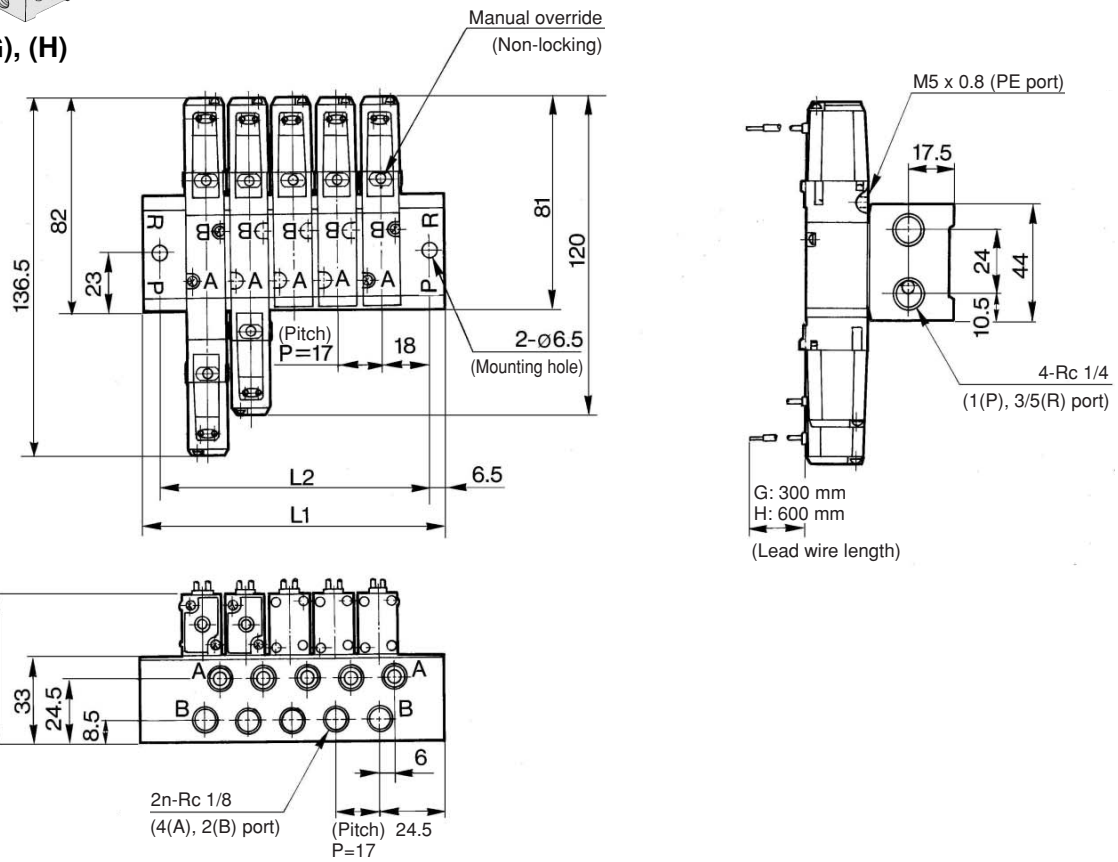
□: With light/surge voltage suppressor



Type 42 Manifold: Side Ported

VV5Z3-42-Station 1-01

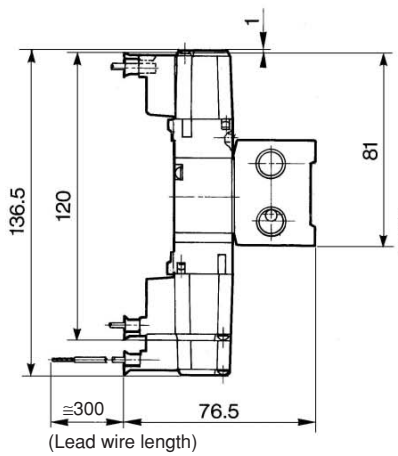
Grommet (G), (H)



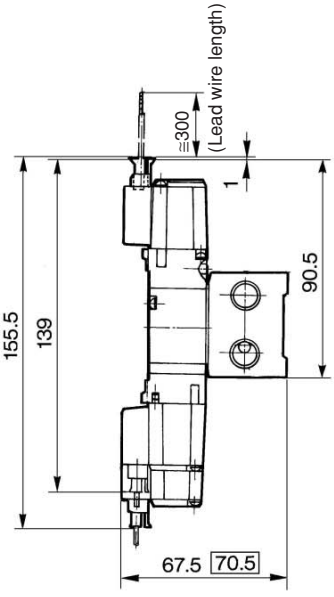
(mm)

Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L_1	66	83	100	117	134	151	168	185	202	219	236	253	270	287	304	321	338	355	372
L_2	53	70	87	104	121	138	155	172	189	206	223	240	257	274	291	308	325	342	359

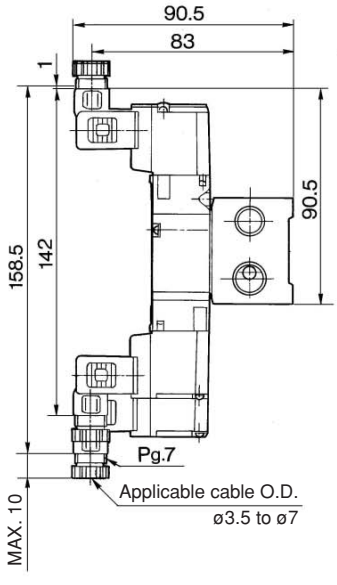
L plug connector (L)



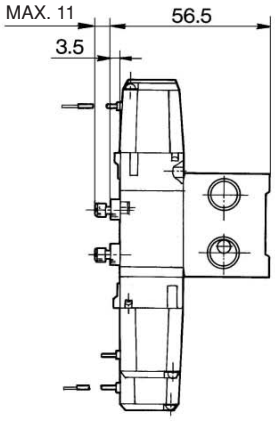
M plug connector (M)



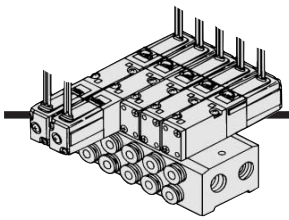
DIN terminal (D)



Built-in speed controllers



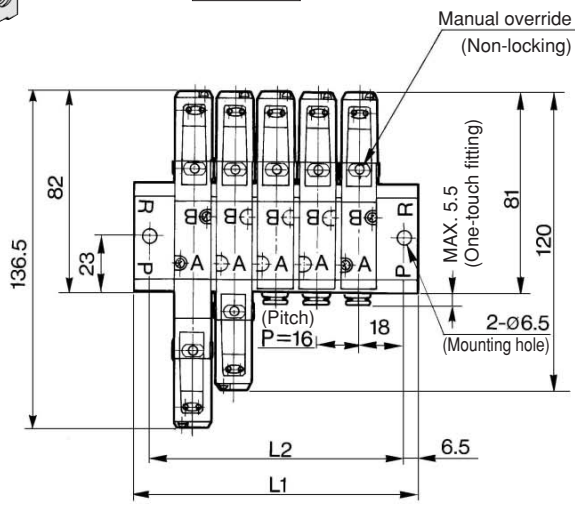
□: With light/surge voltage suppressor

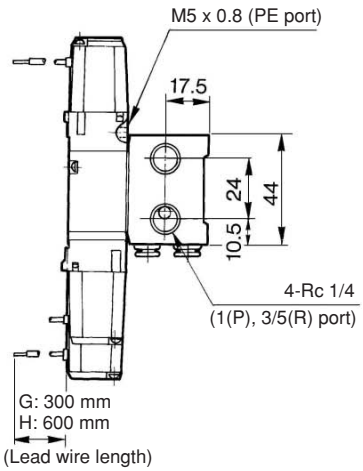


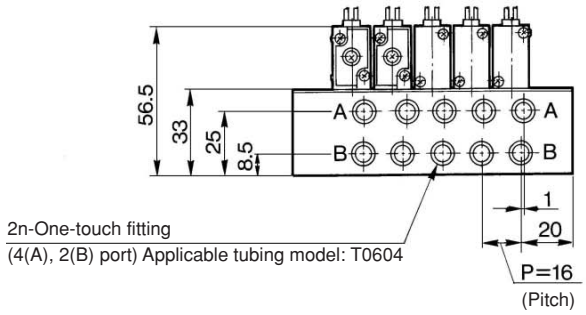
Type 42 Manifold: Side Ported

VV5Z3-42-[Station]1-C6

Grommet (G), (H)



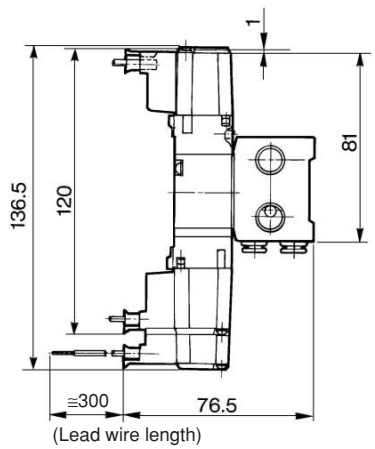




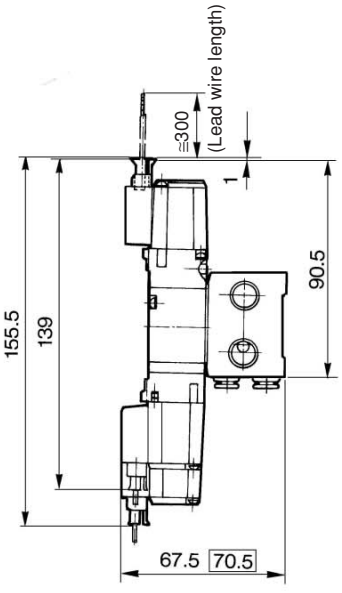
(mm)

Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L_1	65	81	97	113	129	145	161	177	193	209	225	241	257	273	289	305	321	337	353
L_2	52	68	84	100	116	132	148	164	180	196	212	228	244	260	276	292	308	324	340

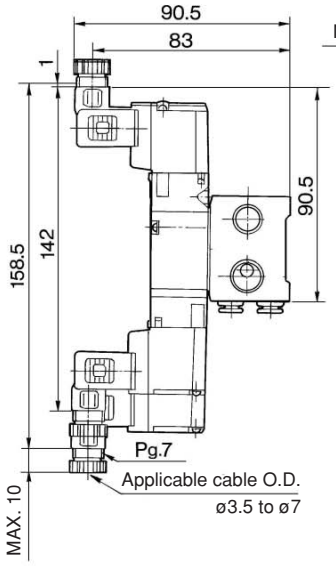
L plug connector (L)



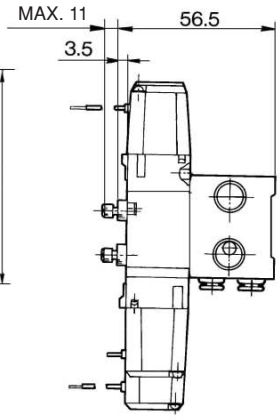
M plug connector (M)



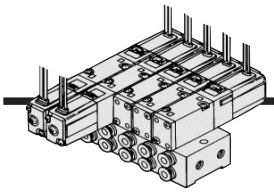
DIN terminal (D)



Built-in speed controllers



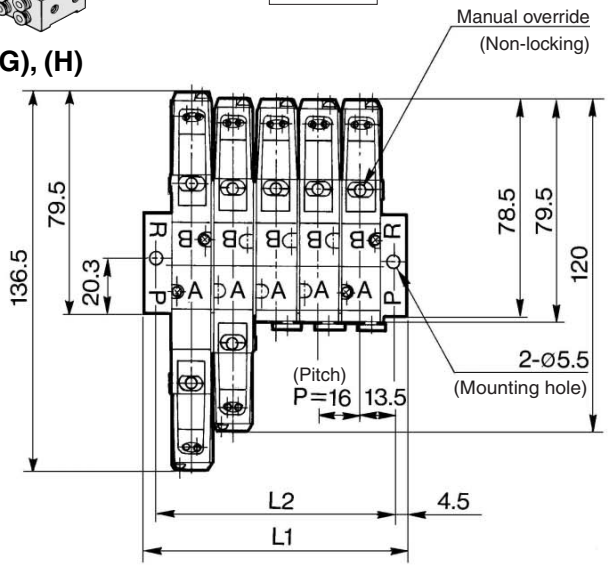
□: With light/surge voltage suppressor

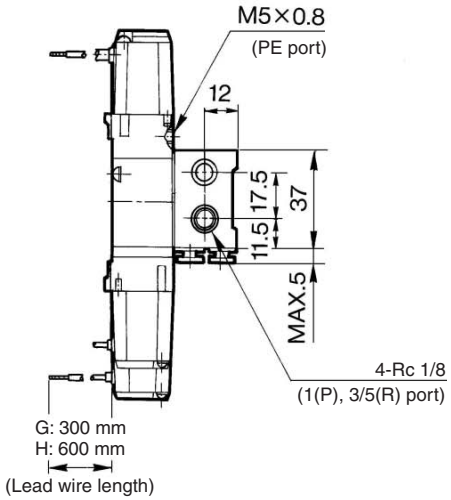


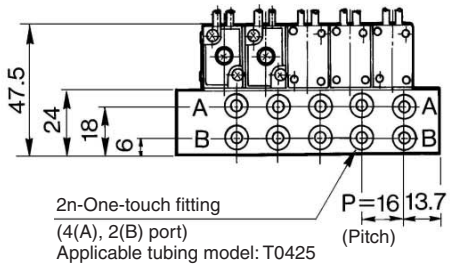
Type 43 Manifold: Side Ported

VV5Z3-43-[Station]1-C4

Grommet (G), (H)



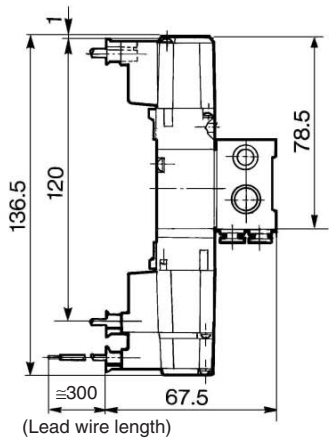




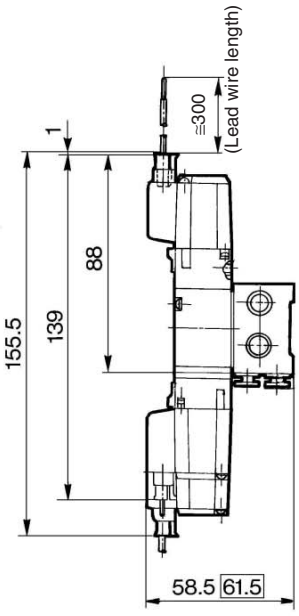
(mm)

Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L_1	52	68	84	100	116	132	148	164	180	196	212	228	244	260	276	292	308	324	340
L_2	43	59	75	91	107	123	139	155	171	187	203	219	235	251	267	283	299	315	331

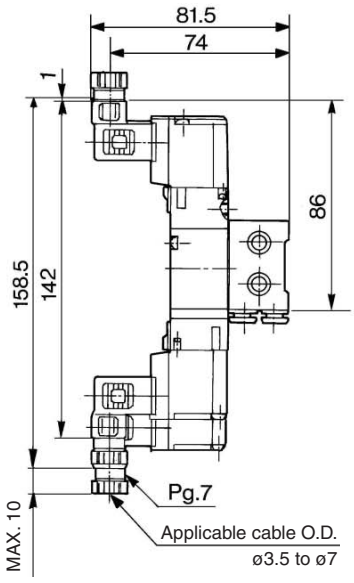
L plug connector (L)



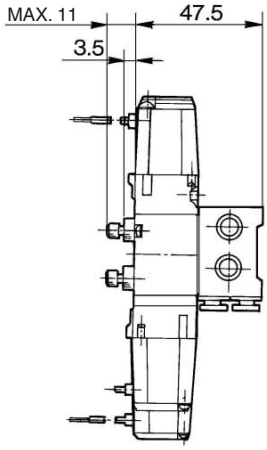
M plug connector (M)



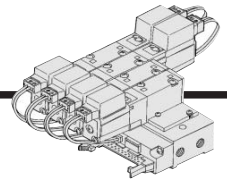
DIN terminal (D)



Built-in speed controllers

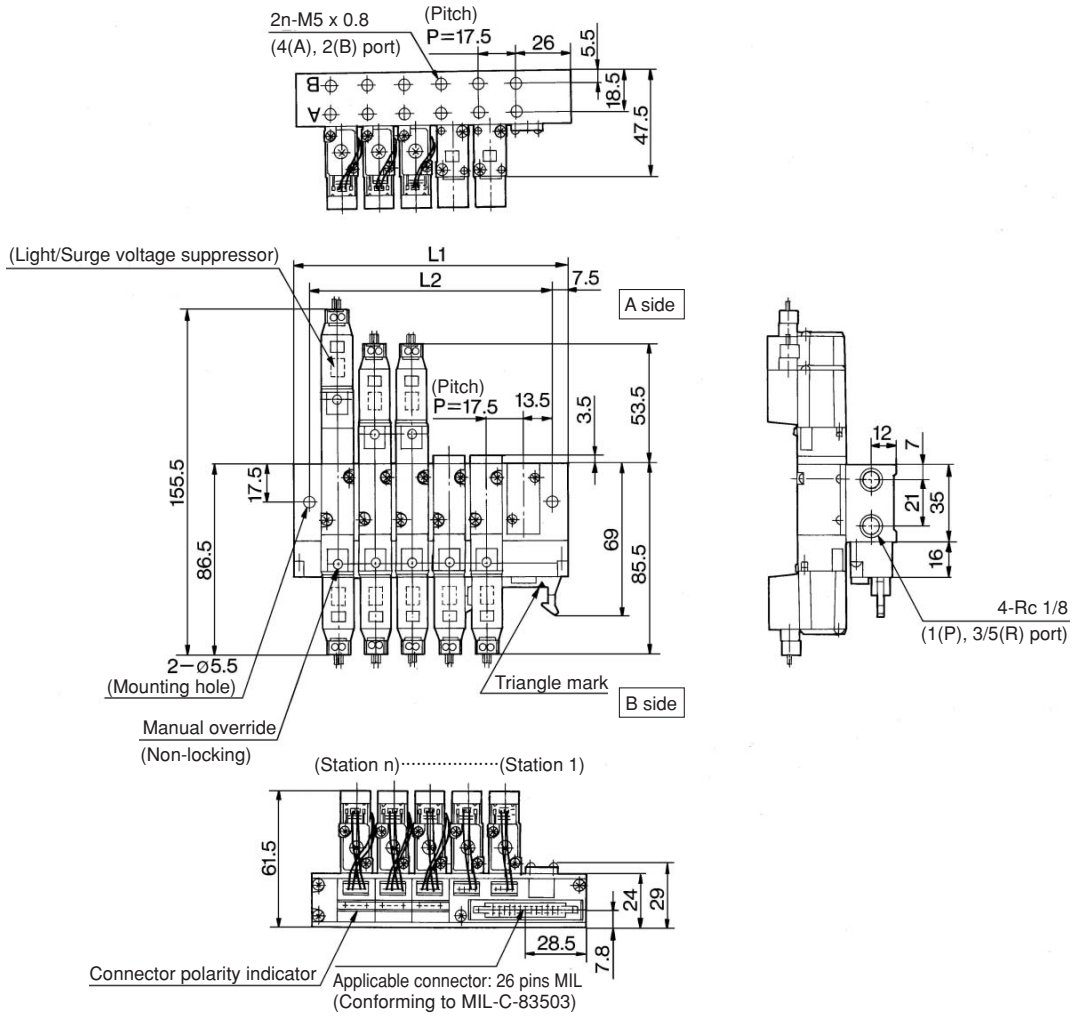


□: With light/surge voltage suppressor

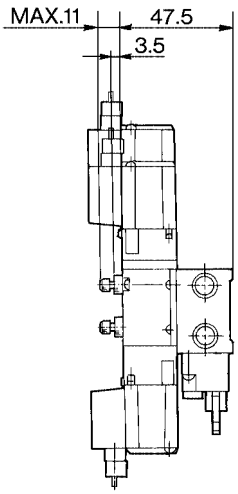


Type 41P Flat Ribbon Cable Manifold: Side Ported

VV5Z3-41P-Station-M5

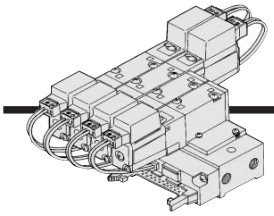


Built-in speed controllers



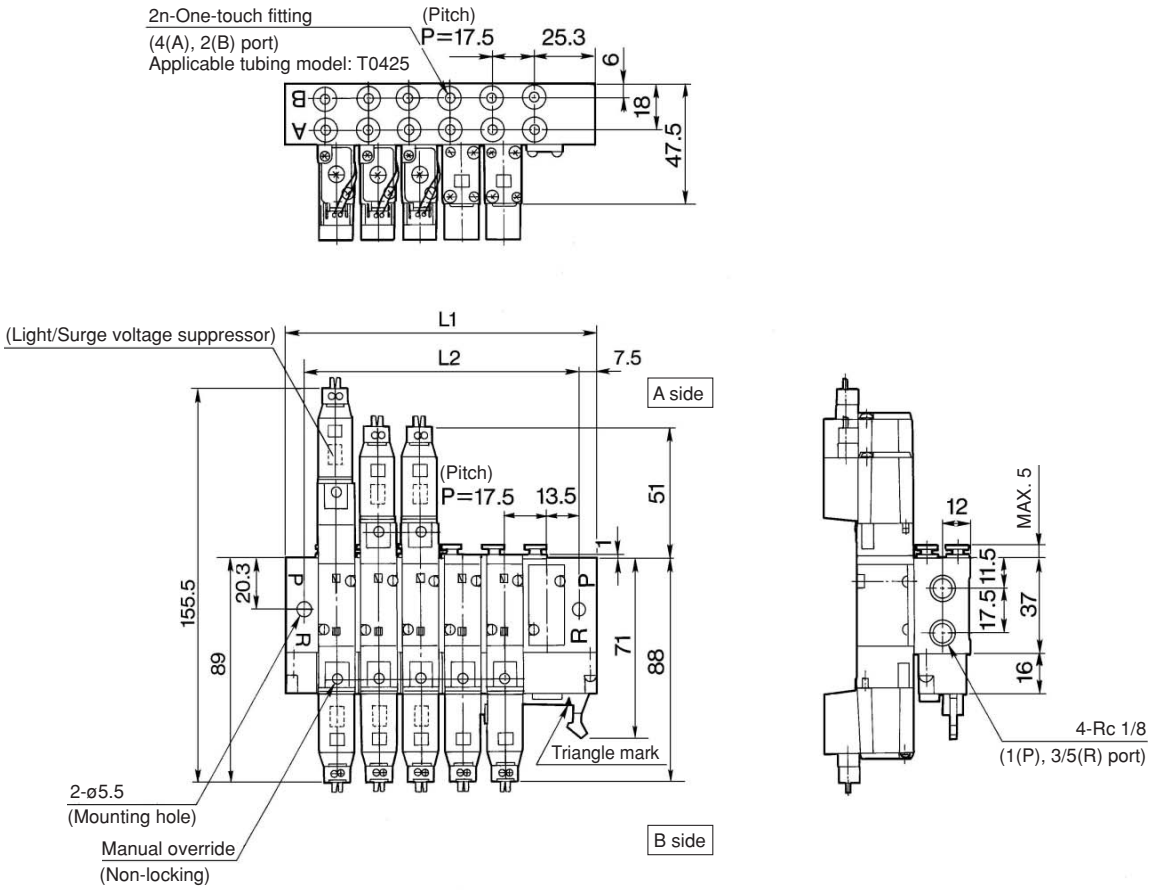
(mm)

Stations	3	4	5	6	7	8	9	10	11	12
L_1	77	94.5	112	129.5	147	164.5	182	199.5	217	234.5
L_2	62	79.5	97	114.5	132	149.5	167	184.5	202	219.5



Type 43P Flat Ribbon Cable Manifold: Side Ported

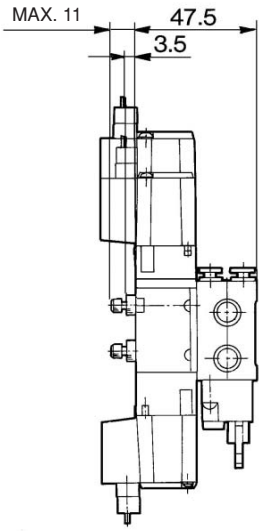
VV5Z3-43P-Station-C4

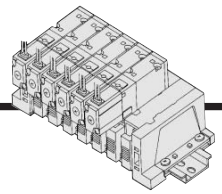


Built-in speed controllers

(mm)

Stations	3	4	5	6	7	8	9	10	11	12
L_1	77	94.5	112	129.5	147	164.5	182	199.5	217	234.5
L_2	62	79.5	97	114.5	132	149.5	167	184.5	202	219.5

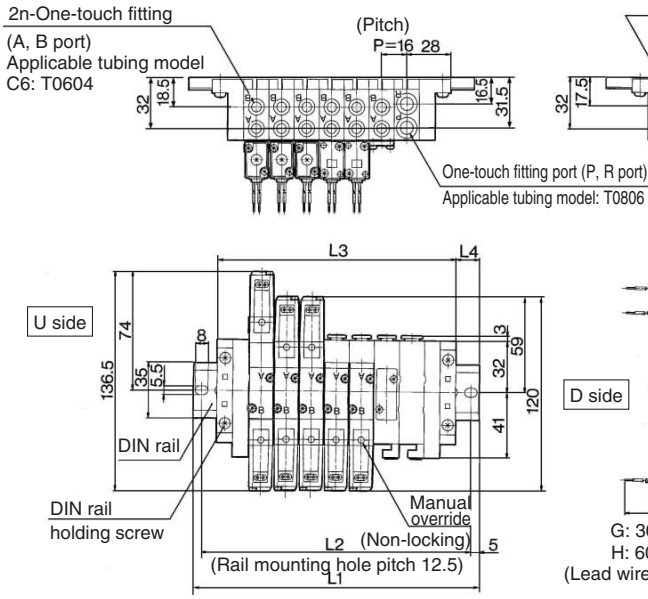


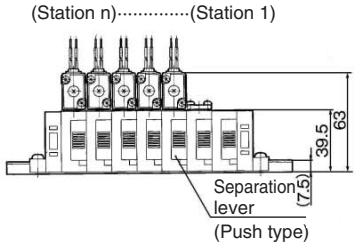


Type 45 DIN Rail Manifold (Non Plug-in): Side Ported

VV5Z3-45-[Station]D-[C4C / C6C]

Grommet (G), (H)

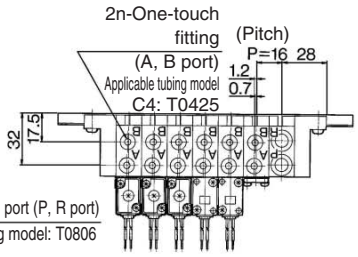




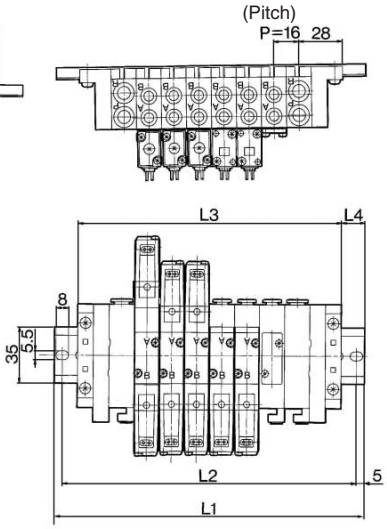
(mm)

Stations	2	3	4	5	6	7	8	9	10
L_1	110.5	135.5	148	160.5	185.5	198	210.5	223	248
L_2	100	125	137.5	150	175	187.5	200	212.5	237.5
L_3	88	104	120	136	152	168	184	200	216
L_4	11.5	16	14	12.5	17	15	13.5	11.5	16

C4



VV5Z3-45-[Station]B-[C4C / C6C]



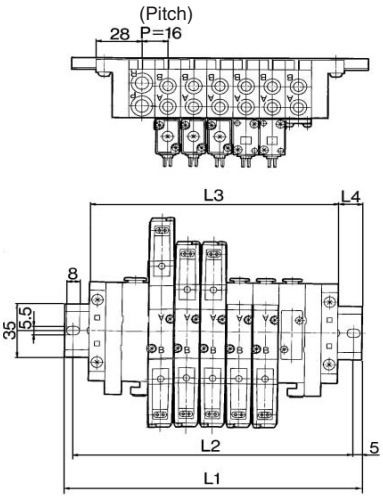
(mm)

Stations	2	3	4	5	6	7	8	9	10
L_1	135.5	148	160.5	185.5	198	210.5	223	248	260.5
L_2	125	137.5	150	175	187.5	200	212.5	237.5	250
L_3	104	120	136	152	168	184	200	216	232
L_4	16	14	12.5	17	15	13.5	11.5	16	14

(mm)

Stations	11	12	13	14	15	16	17	18	19	20
L_1	273	298	310.5	323	335.5	360.5	373	385.5	398	423
L_2	262.5	287.5	300	312.5	325	350	362.5	375	387.5	412.5
L_3	248	264	280	296	312	328	344	360	376	392
L_4	12.5	17	15.5	13.5	12	16.5	14.5	13	11	15.5

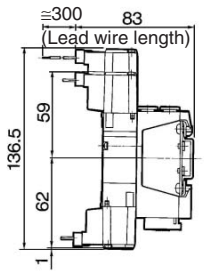
VV5Z3-45-[Station]U-[C4C / C6C]



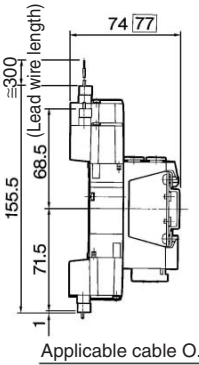
(mm)

Stations	2	3	4	5	6	7	8	9	10
L_1	110.5	135.5	148	160.5	185.5	198	210.5	223	248
L_2	100	125	137.5	150	175	187.5	200	212.5	237.5
L_3	88	104	120	136	152	168	184	200	216
L_4	11.5	16	14	12.5	17	15	13.5	11.5	16

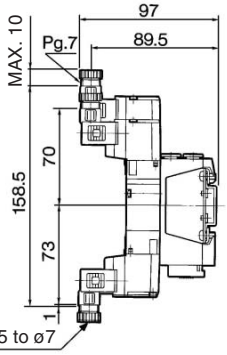
L plug connector (L)



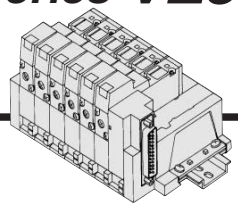
M plug connector (M)



DIN terminal (D)

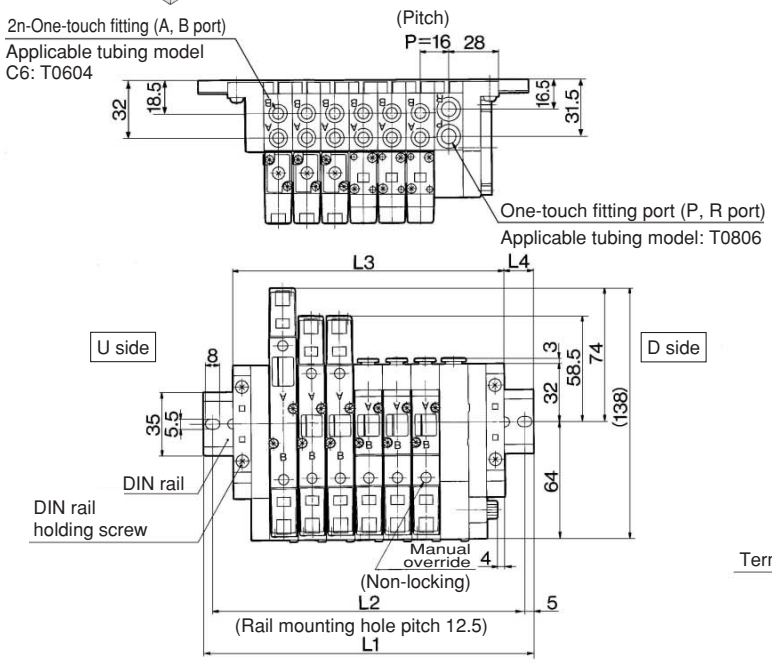


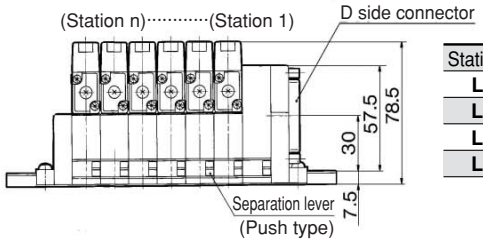
□: With light/surge voltage suppressor



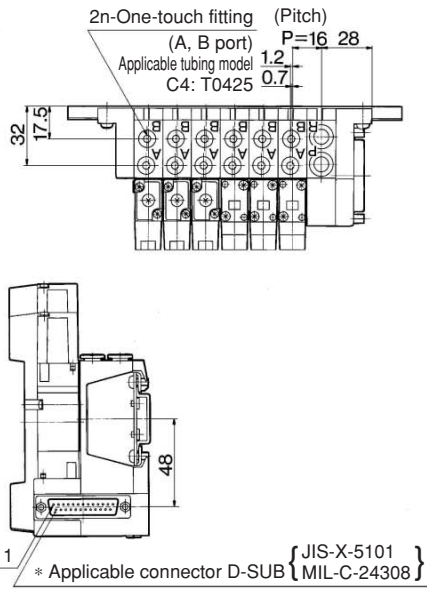
Type 45F DIN Rail Manifold (Non Plug-in): Side Ported

VV5Z3-45FD-Station-C4C/C6C





C4

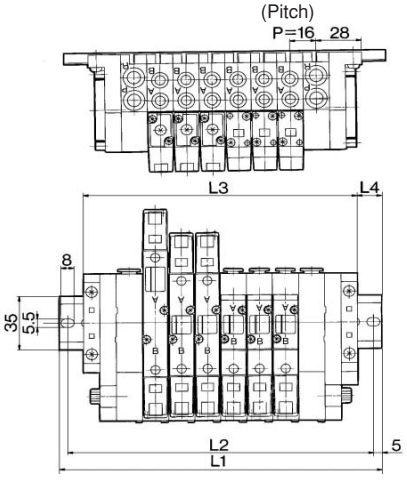


(mm)

Stations	2	3	4	5	6	7	8	9	10
L_1	110.5	135.5	148	160.5	185.5	198	210.5	223	248
L_2	100	125	137.5	150	175	187.5	200	212.5	237.5
L_3	88	104	120	136	152	168	184	200	216
L_4	11.5	16	14	12.5	17	15	13.5	11.5	16

VV5Z3-45F$^{U}_{D}$-Station B-C4C/C6C (2 to 10 stations)

VV5Z3-45FB-Station-C4C/C6C (11 to 20 stations)



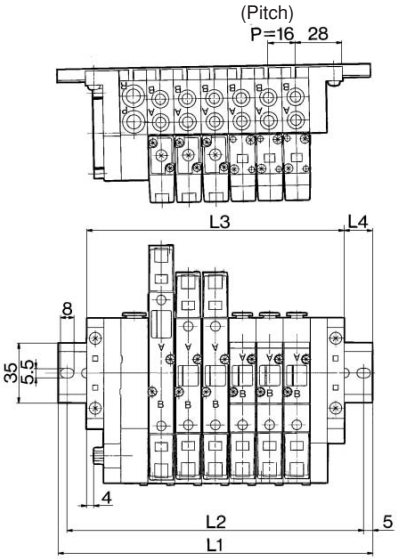
(mm)

Stations	2	3	4	5	6	7	8	9	10
L_1	135.5	148	160.5	185.5	198	210.5	223	248	260.5
L_2	125	137.5	150	175	187.5	200	212.5	237.5	250
L_3	104	120	136	152	168	184	200	216	232
L_4	16	14	12.5	17	15	13.5	11.5	16	14

(mm)

Stations	11	12	13	14	15	16	17	18	19	20
L_1	273	298	310.5	323	335.5	360.5	373	385.5	398	423
L_2	262.5	287.5	300	312.5	325	350	362.5	375	387.5	412.5
L_3	248	264	280	296	312	328	344	360	376	392
L_4	12.5	17	15.5	13.5	12	16.5	14.5	13	11	15.5

VV5Z3-45FU-Station-C4C/C6C



(mm)

Stations	2	3	4	5	6	7	8	9	10
L_1	110.5	135.5	148	160.5	185.5	198	210.5	223	248
L_2	100	125	137.5	150	175	187.5	200	212.5	237.5
L_3	88	104	120	136	152	168	184	200	216
L_4	11.5	16	14	12.5	17	15	13.5	11.5	16

Made to Order Specifications:

Please contact SMC for detailed specifications, dimensions, and delivery.

1. Solenoid Valve: External Pilot Specifications

Applicable solenoid valve series

VZ3000/5000
(Non plug-in type only)

Model no.

VZ $\frac{3}{5}$ □□ 0– □□□□□(–□) – 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

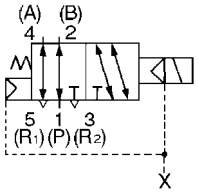
Dimensions

VZ3000: 8 mm longer
VZ5000: 8 mm longer

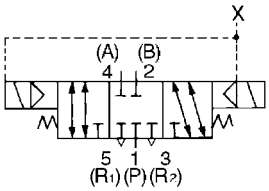
JIS Symbol

Body ported

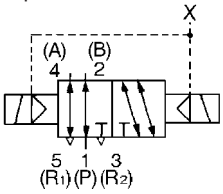
2 position single



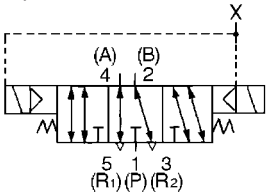
3 position closed center



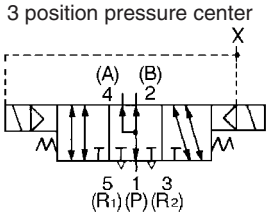
2 position double



3 position exhaust center



3 position pressure center



Made to Order Specifications:

Please contact SMC for detailed specifications, dimensions, and delivery.

2. Solenoid Valve: Special Manual Override

Applicable solenoid valve series

VZ3000
(Non plug-in type only)

Model no.

VZ3 □□□–□□□A(–□)

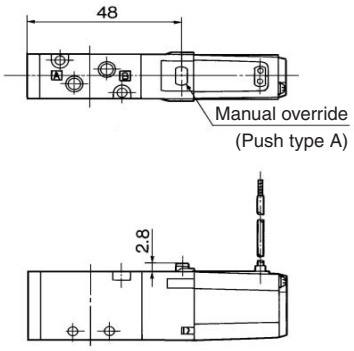
Entry is the same as standard products.

Manual override

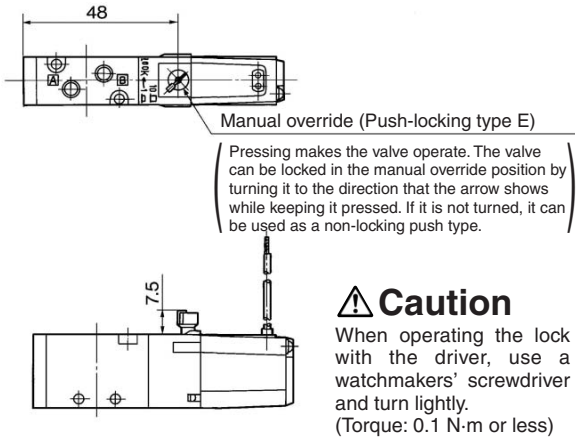
A	Push type A
E	Push-locking type E

Dimensions: Single

Push type A



Push-locking type E



⚠Caution

When operating the lock with the driver, use a watchmakers' screwdriver and turn lightly.
(Torque: 0.1 N·m or less)

Note) Because the manual override unit protrudes, the manual override could activate unintentionally if the protrusion is touched or an object falls on it. Therefore, take the proper preventative measures.

3. Solenoid Valve: Opposite Mount of Solenoid Assembly

Applicable solenoid valve series

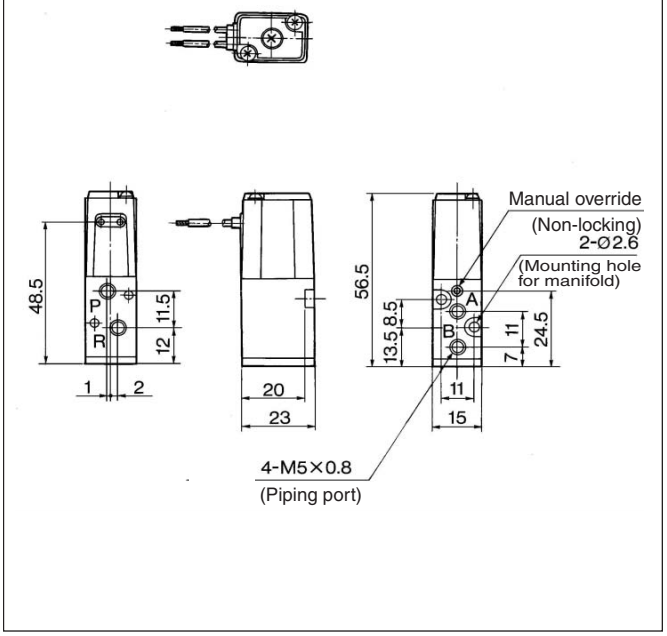
VZ1000/3000/5000
(Non plug-in type only)

Model no.

VZ1/3/5 □□□–□□□□(–□)–X1

Entry is the same as standard products.

Dimensions: VZ1120-□G-M5-X1



Made to Order Specifications:

Please contact SMC for detailed specifications, dimensions, and delivery.

4. Manifold: Common SUP/Individual EXH Type

Applicable solenoid valve series
VZ3000

Common SUP/Individual EXH type
VV5Z3-21-□3

Specification

Common SUP/Individual EXH type	
1(P) port	Rc 1/8
3/5(R) port	M5 x 0.8
4(A), 2(B) port	Valve

Model no.

VV5Z3 − 21 − 05 3 − □

Stations

02	2 stations
⋮	⋮
20	20 stations

P port thread type

Nil	Rc
00F	G
00N	NPT
00T	NPTF

Applicable solenoid valve
VZ3□2□-□ G/L/M □□- M5/C4/C6

Applicable blanking plate assembly
DXT192-13-1A

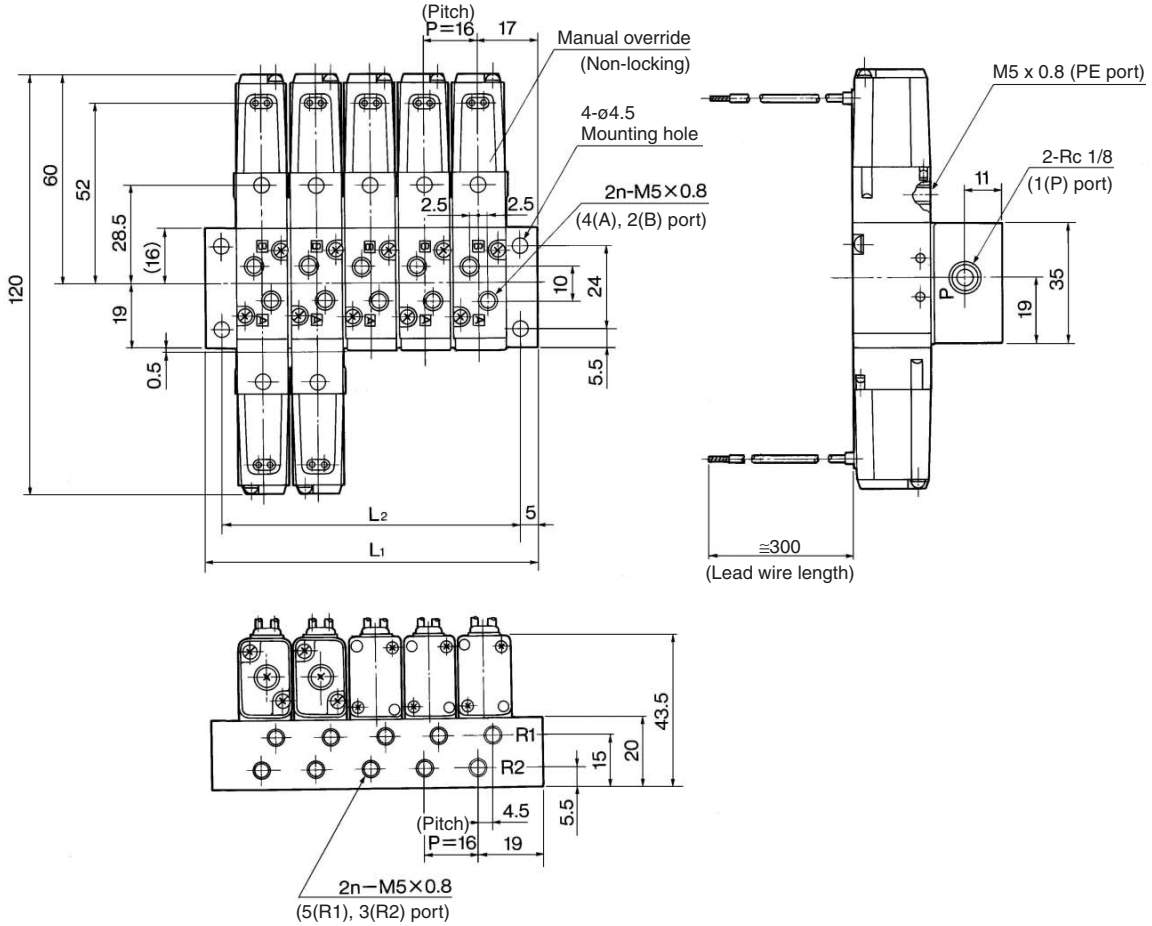
Applicable throttle valve
DXT154-34-1A

Applicable silencer
AN120-M5

Note) Refer to page 3-3-25 for manifold option.

Dimensions: Grommet Type

Note) To use the VZ3□23 with a throttle valve mounted on it, open the throttle valve one turn or more from the fully closed position.



(mm)

Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L_1	50	66	82	98	114	130	146	162	178	194	210	226	242	258	274	290	306	322	338
L_2	40	56	72	88	104	120	136	152	168	184	200	216	232	248	264	280	296	312	328