

5 Port Solenoid Valve Body Ported Series VZ5000



How to Order

- SY
- SYJ
- SX
- VK
- VZ**
- VF
- VFR
- VP7
- VP4
- VQ
- VQ4
- VQZ
- VQD
- VZS
- VFS
- VS
- VS7

Body ported VZ5 1 2 0 5 L 01

Configuration

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 pilot exhaust style

R port P, E port

3: Common exhaust (pilot and main valve) style

R port P, E port

Rated voltage

1	100V AC 50/60Hz
2	200V AC 50/60Hz
3*	110V AC 50/60Hz
4*	220V AC 50/60Hz
5	24V DC
6*	12V DC
9*	Other

*Option

Electrical entry

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

*LN, MN type: With socket (2pcs.)

Indicator light and surge voltage suppressor

—	None
Z*	With indicator light and surge suppressor
S	With surge voltage suppressor

*Not available for GZ, HZ and DOZ

Manual override

—: Non-locking push style

B: Locking B style (Slotted)

C: Locking C style (Lever)

A, B Port size

01	Rc(PT) 1/8
C6	ø6 One-touch fitting
C8	ø8 One-touch fitting

P, R1, R2 port: Rc(PT)1/8

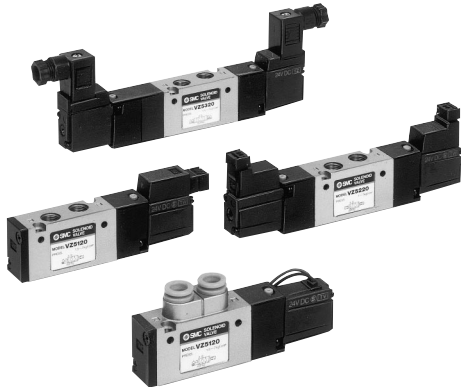
Option

F: With foot bracket (2 position single only)

If use of a foot bracket is expected, please indicate that option when placing the initial order since the standard body can not be retrofitted with a foot bracket.

VZ5000

Applicable for Cylinder Actuation (up to $\phi 50$)
Compact Size (Width: 18mm)
Low Power Consumption: 1.8W DC



Specifications

Fluid	Air	
Operating pressure (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	Max. 50 °C	
Response time (ms) (0.5MPa) ⁽¹⁾	2 position single/double	20 or less
	3 position	50 or less
Max. operating frequency (Hz)	2 position single/double	10
	3 position	3
Effective area	See below	
Manual override ⁽²⁾	Non-locking push, Locking slotted, Locking lever	
Pilot exhaust	Individual pilot exhaust, Common exhaust (pilot and main valve)	
Lubrication	Non-lube	
Mounting position	Free	
Impact/Vibration resistance (m/s ²) ⁽³⁾	300/50	
Protection function	Dust proof	



Note 1) According to dynamic performance test of JIS B8375-1981.

(Coil temperature 20°C, rated voltage, without surge voltage suppressor)

Note 2) When operating the locking style manually, apply torque of 0.2Nm or less.

Note 3) Impact resistance: No malfunction from test using drop impact tester, to axis and right angle directions of main valve and armature, each one time when energized and de-energized. (Value in the initial stage.)

Vibration resistance: No malfunction from test with 8.3 to 2000Hz 1 sweep, to axis and right angle directions of main valve and armature, each one time when energized and de-energized. (Value in the initial stage.)

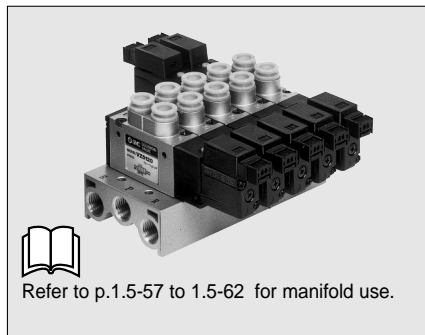
Solenoid Specifications

* Option

Electrical entry	Grommet (G)/(H), L plug connector (L), M plug connector (M), DIN terminal (D)		
Coil rated voltage (V)	AC50/60Hz	100, 200, 24*, 48*, 110*, 220*	
	DC	24, 6*, 12*, 48*	
Allowable voltage (%)	-15 to +10% of rated voltage		
Power consumption W ⁽¹⁾ [Current mA]	DC	1.8 (with light 2.1)[24V DC: 75 (with light 87.5)]	
Apparent power (VA) ⁽¹⁾ [Current mA]	AC	Inrush	4.5/50Hz, 4.2/60Hz [100V AC: 45/50Hz, 42/60Hz 200V AC: 22.5/50Hz, 21/60Hz]
		Holding	3.5/50Hz, 3/60Hz [100V AC: 35/50Hz, 30/60Hz 200V AC: 17.5/50Hz, 15/60Hz]
Surge voltage suppressor	DC: Diode, AC: ZNR		
Indicator light	DC: LED (red), AC: Neon light		



Note 1) At rated voltage



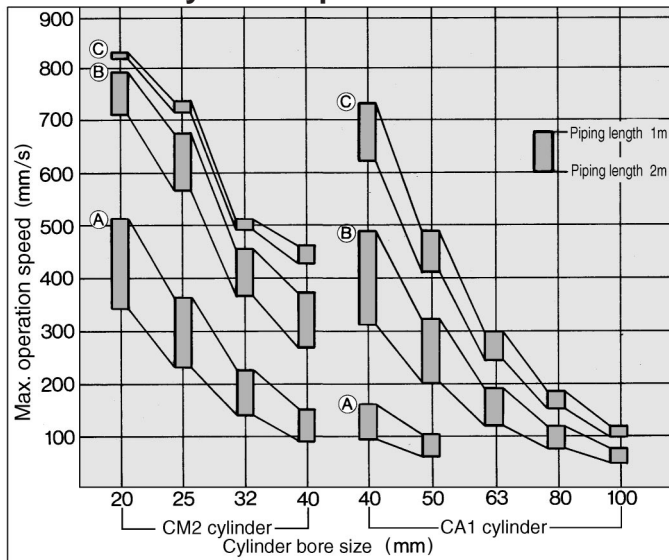
P.1.5-80 to 1.5-88

Effective Area and Weight

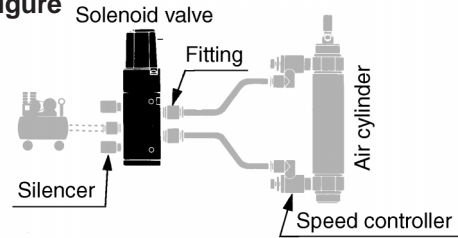
Valve model	Configuration		Port size	Effective area (mm ²) (Cv) ⁽¹⁾	Weight (g)
VZ5□20-□-01	2 position	Single	Rc(PT)1/8	11 (0.6)	120
		Double		11 (0.6)	160
	3 position	Closed center		8.5 (0.47)	160
		Exhaust center		9 (0.5)[6.5 (0.36)]	
		Pressure center		P→A,B: 13.5 (0.75) [7 (0.39)] A, B→R1, R2: 7 (0.39)	
VZ5□20-□-C6	2 position	Single	A, BPort : C6 (ø6 One-touch fitting) P, R port : Rc(PT)1/8	8.6 (0.48)	120
		Double		8.6 (0.48)	160
	3 position	Closed center		7.1 (0.39)	160
		Exhaust center		8.4 (0.47)[6.2 (0.34)]	
		Pressure center		P→A, B: 7.7 (0.42) [5.5 (0.3)] A, B→R1, R2: 7.1 (0.39)	
VZ5□20-□-C8	2 position	Single	A, BPort : C8 (ø6 One-touch fitting) P, R port : Rc(PT)1/8	9.9 (0.55)	120
		Double		9.9 (0.55)	160
	3 position	Closed center		8.2 (0.46)	160
		Exhaust center		9.7 (0.54)[6.7 (0.37)]	
		Pressure center		P→A, B: 9.3 (0.52) [5.6 (0.3)] A, B→R1, R2: 7.6 (0.42)	

Note 1) [] normal position: Exhaust center A, B → R1, R2, Pressure center P → A, B

Maximum Cylinder Speed



System figure



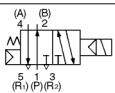
Conditions: Pressure 0.5MPa, Load 50%

(w/ extended cylinder) Cylinder stroke CM2: 300mm
CA1: 500mm

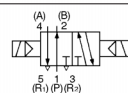
System construction

System	Solenoid valve	Speed controller	Silencer	Fitting (tube O.D.X connecting screw)
(A)	VZ5□20-1 Rc(PT)1/8 (S=11mm ²)	AS2301F-01-04	AN110-01 (S=35mm ²)	ø4 X 1/8
(B)		AS3301F-02-06		ø6 X 1/8
(C)		AS3301F-02-08		ø8 X 1/8

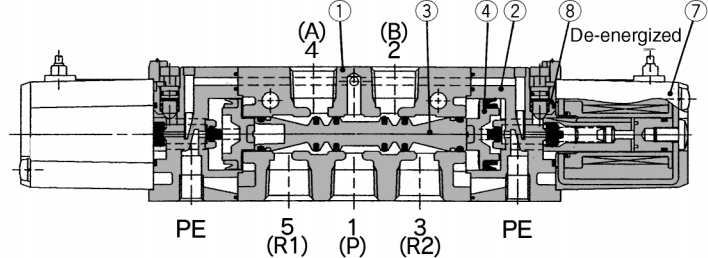
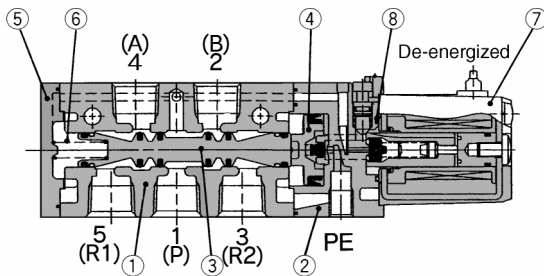
Construction



2 position single

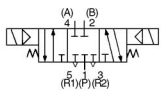


2 position double

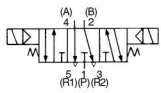


3 position closed center/exhaust center/pressure center

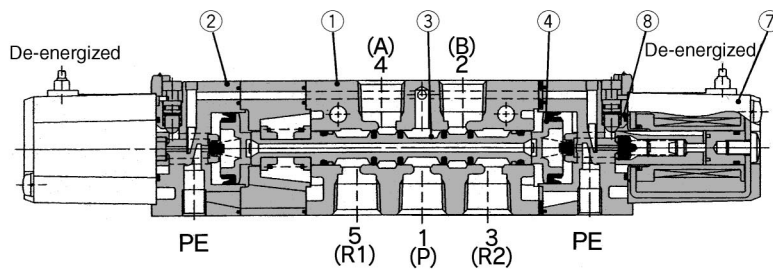
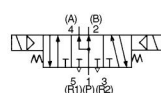
3 position closed center



3 position exhaust center



3 position pressure center



(This figure is closed center.)

Component Parts

No.	Description	Material	Remark
①	Body	Die cast aluminum	Platinum silver
②	Piston plate	Resin	Black
③	Spool valve	Aluminum/NBR	
④	Piston	Resin	
⑤	End cover	Die cast aluminum	Black painted
⑥	Spool spring	Stainless steel	

Replacement Parts

No.	Description	Material	Parts No.	Remark
⑦	Solenoid assembly	Epoxy/Stainless steel	DXT170-C-□□□	
⑧	O ring	NBR	13 X 11 X 1	Common with series VZ 1/1000

VZ5000

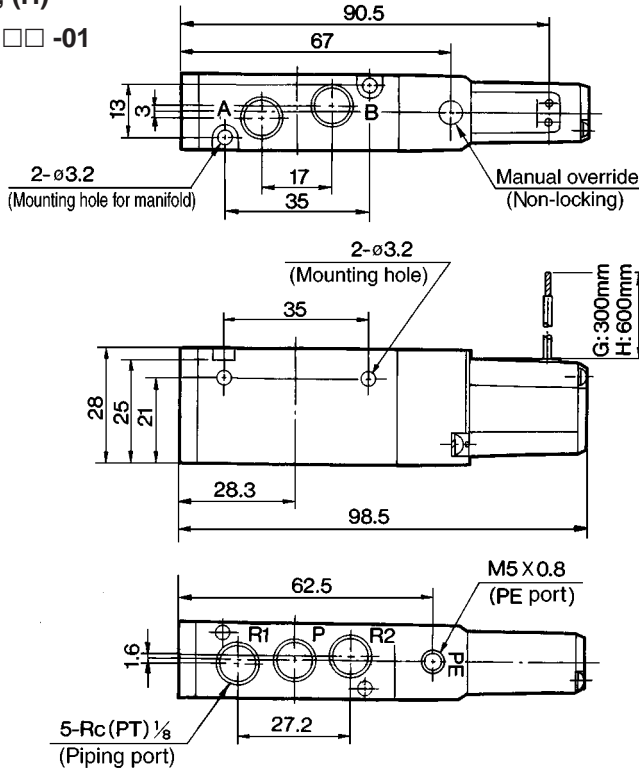


2 Position Single

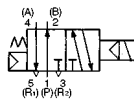


Grommet (G), (H)

VZ5120 - □ G □ □ -01

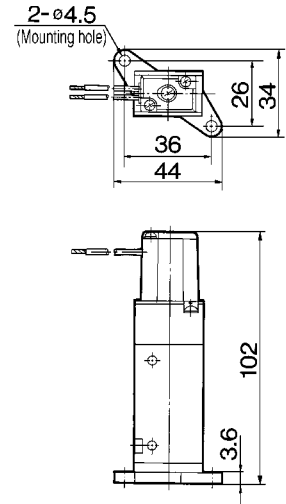


VZ5120



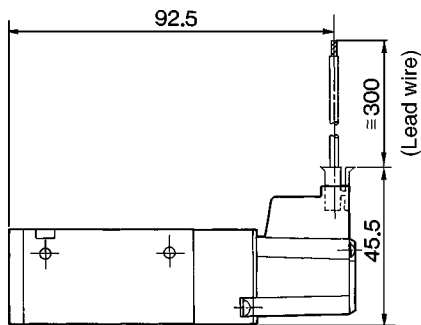
Foot bracket

VZ5120 - □ G □ □ -01-F



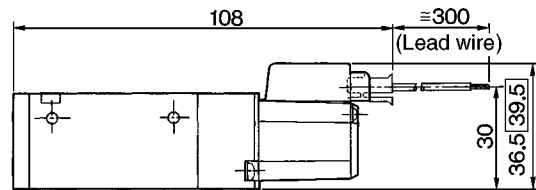
L plug connector (L)

VZ5120- □ L □ □ -01



M plug connector (M)

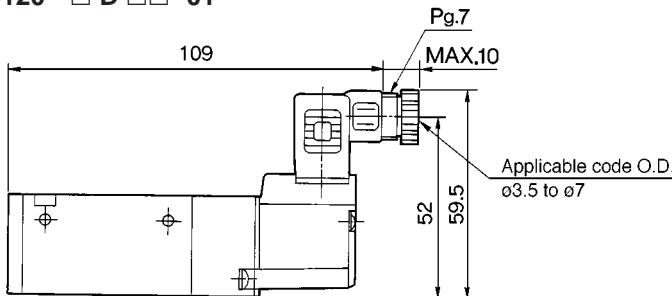
VZ5120- □ M □ □ -01



□: With indicator light and surge voltage suppressor

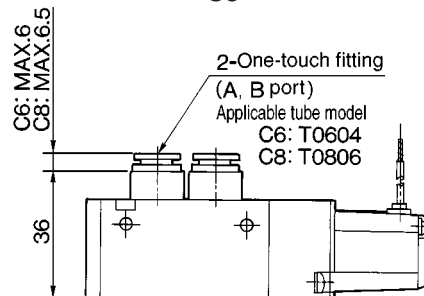
DIN terminal (D)

VZ5120 - □ D □ □ -01



Built-in One-touch fitting

VZ5120 - □ □ □ □ - C6
C8

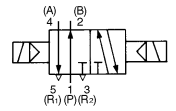


- Grommet (G), (H) ————— SV5Z51, #1
- L plug connector (L) ————— SV5Z51, #1+ (#12, #003)
- M plug connector (M) ————— SV5Z51, #1+ (#12, #004)
- DIN terminal (D) ————— SV5Z51, #1+ (#12, #005)
- Built-in One-touch fitting style — SV5Z51, #1+ (#12, #002)
- Foot bracket style ————— SV5Z51, (#12, #001)



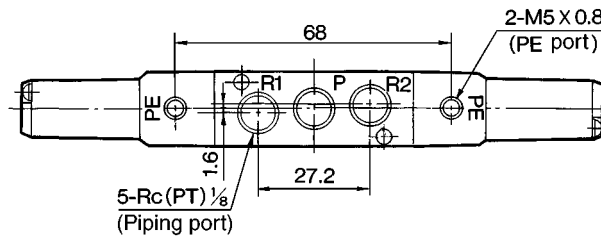
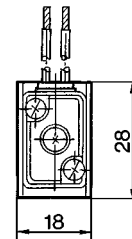
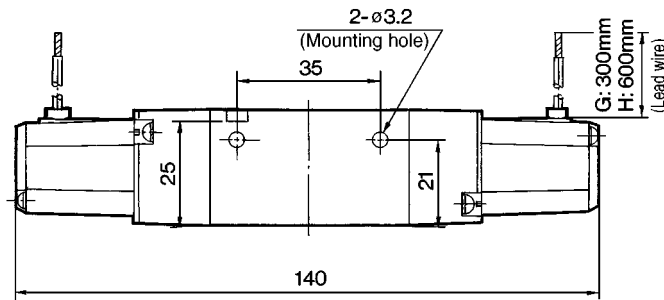
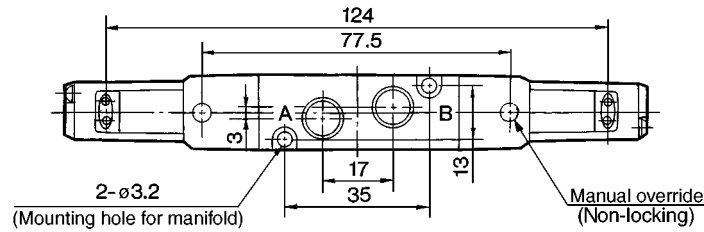
2 Position Double

VZ5220



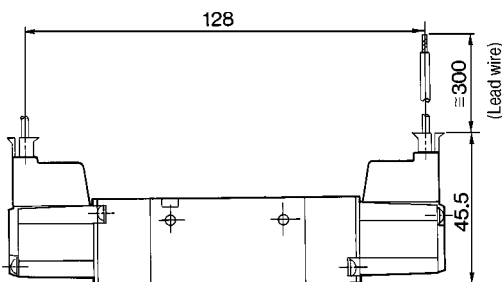
Grommet (G), (H)

VZ5220 - □ G □ □ -01



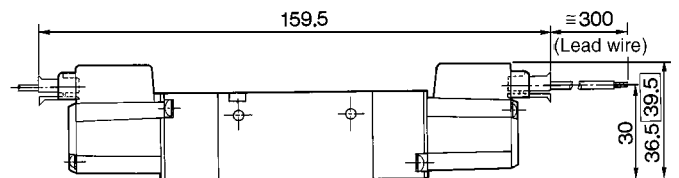
L plug connector (L)

VZ5220 - □ L □ □ -01



M plug connector (M)

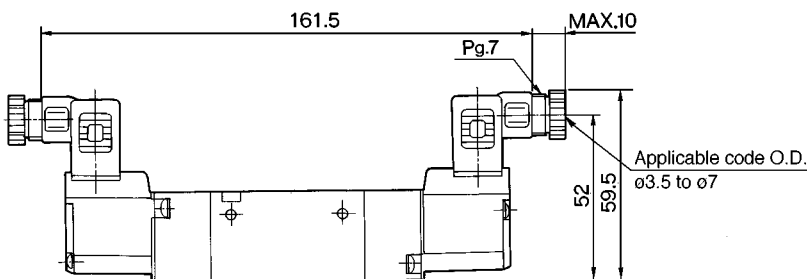
VZ5220 - □ M □ □ -01



□: With indicator light and surge voltage suppressor

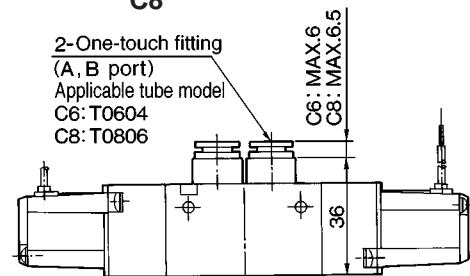
DIN terminal (D)

VZ5220 - □ D □ □ -01



Built-in One-touch fitting

VZ5220- □ □ □ □ - C6
C8



- Grommet (G), (H) ————— SV5Z51, #2
- L plug connector (L) ————— SV5Z51, #2+ (#12, #003)
- M plug connector (M) ————— SV5Z51, #2+ (#12, #004)
- DIN terminal (D) ————— SV5Z51, #2+ (#12, #005)
- Built-in One-touch fitting style — SV5Z51, #2+ (#12, #002)

SY

SYJ

SX

VK

VZ

VF

VFR

VP7

VP4

VQ

VQ4

VQZ

VQD

VZS

VFS

VS

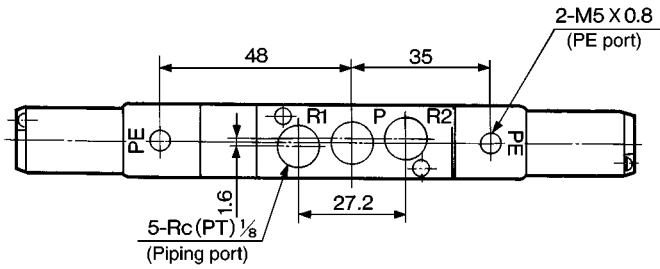
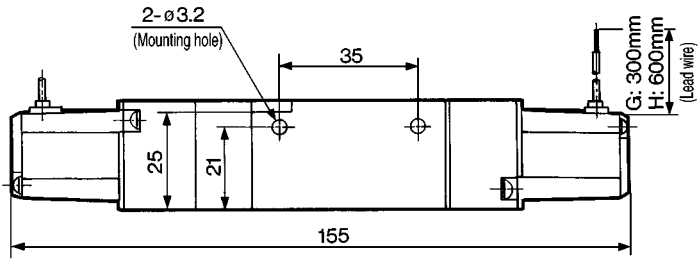
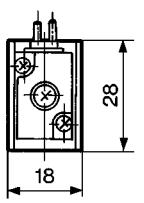
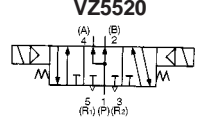
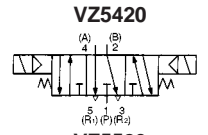
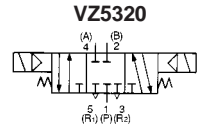
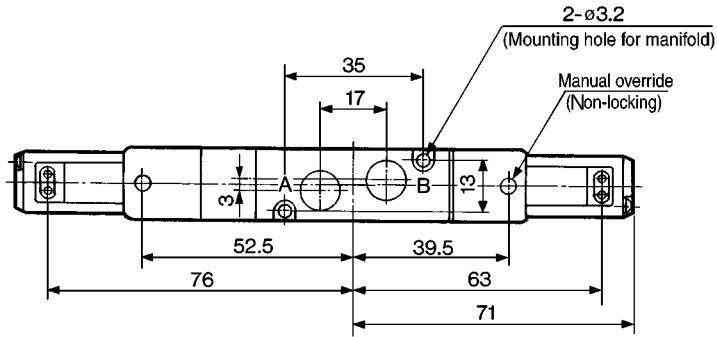
VS7

VZ5000

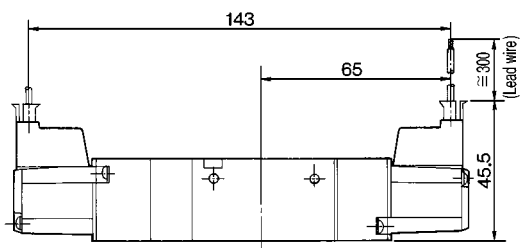


3 Position Closed Center/Exhaust Center/Pressure Center

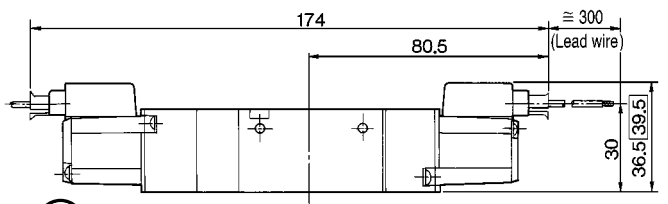
Grommet (G), (H)
VZ5 ³/₄ 20- □ G □ □ -01



L plug connector (L)
VZ5 ³/₄ 20- □ L □ □ -01

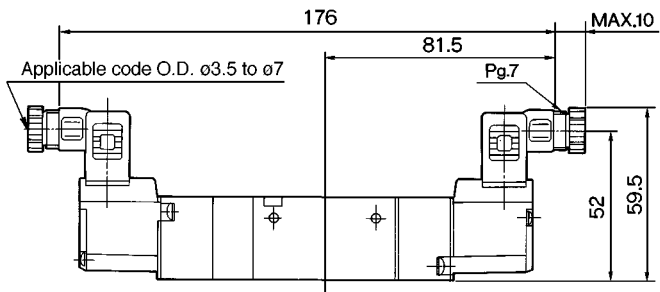


M plug connector (M)
VZ5 ³/₄ 20- □ M □ □ -01

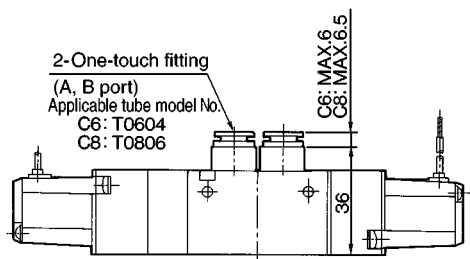


□: With indicator light and surge voltage suppressor

DIN terminal (D)
VZ5 ³/₄ 20- □ D □ □ -01



Built-in One-touch fitting
VZ5 ³/₄ 20- □ □ □ □ - C6
 C8



- Grommet (G) (H) ————— SV5Z51, #3
- L plug connector (L) ————— SV5Z51, #3+ (#12, #003)
- M plug connector (M) ————— SV5Z51, #3+ (#12, #004)
- DIN terminal (D) ————— SV5Z51, #3+ (#12, #005)
- Built-in One-touch fitting style — SV5Z51, #3+ (#12, #002)