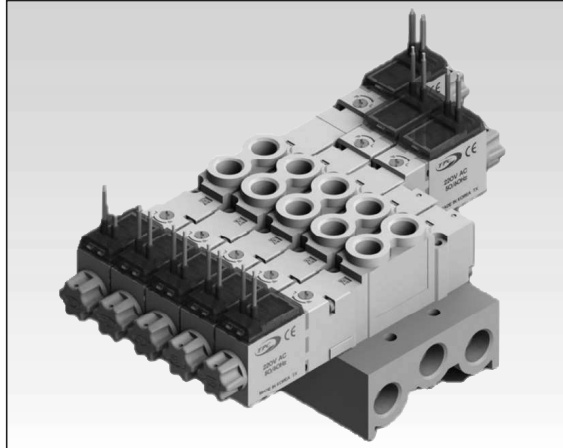


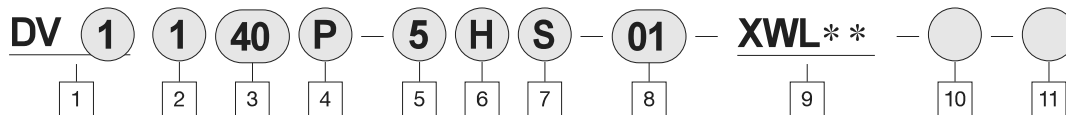
DV1000·3000·4000 Series

5 Port pilot type solenoid valve



- **Quick response time & large flow capacity**
 - Response time is less than 12ms (DV 1000)
 - Increased CV factor (2.5 times larger than conventional valve)
 - Low power consumption: 0.85W (24V DC, 41mA)
- **High reliability**
 - Long lifespan
 - Wear Ring → prevents spool abrasion
 - U Packing → minimizes frictional resistance
 - Piston return type at retraction
- **Variety of features**
 - Common exhaust type as standard option
 - Option for built-in fitting is available (body-ported type)
 - Implemented an external pilot type (DV1000, 3000, 4000)

How to order



1 DV Valve Series

- 1 : DV1000 Series
 3 : DV3000 Series
 4 : DV4000 Series

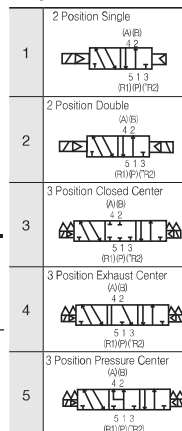
2 Configuration

- 1 : Single Solenoid
 2 : Double Solenoid
 3 : Closed Center
 4 : Exhaust Center
 5 : Pressure Center

3 Manifold specifications

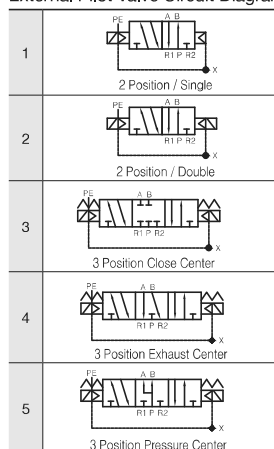
- 40 : Base ported
 ※ Built-in fitting type is only available with body ported type

Standard Circuit Diagram



4 Pilot configuration

- Blank: Internal pilot
 P: External pilot (only applicable to base-mounted type)
 External Pilot Valve Circuit Diagram



5 Voltage

- 5 : DC24V 1 : AC110V
 6 : DC12V 2 : AC220V

6 Electrical entry

- V: Vertical connector (AV voltage not available)
 H: Horizontal connector
 G: Grommet type (Lamp as standard option)
 D: Din terminal type (Without lamp)
 DZ: Din terminal type (With lamp)
 ※ G, D, and DZ types are only available with DV3000 and DV4000 series

7 PCB Type

- Blank: Basic type (Lamp, surge protection circuit type)
 D: Non-polar type (Lamp, surge protection circuit type)
 N: No lead wire
 S: Power saving PCB Type (0.45W/DC24V)
 ※ Option D only applies to DC voltage with V or H option
 ※ Option S only applies to DC voltage with V, H, or G option

8 Port size

- ※ Sub Plate attachment (only for base piping)
 Blank: Without sub plate
 M5 : M5x0.8 (DV1000 Series)
 01 : Rc(PT)1/8 (DV3000 Series)
 02 : Rc(PT)1/4 (DV4000 Series)

9 Length of lead wire

- Blank : 400mm (Standard)
 XWL 01 : 100mm
 XWL 02 : 200mm
 :
 20 : 2000mm

10 Series

- Blank: Standard type XC16: Copper-free type
 ※ Fitting built-in specification (Direct piping type)

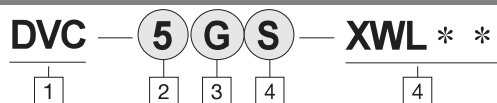
Symbol	Content	Application series
Blank	Blank: Built-in fitting	All series
T4	T4 O4 One touch Fitting	DV1000 Series
T6	T6 O6 One touch Fitting	DV3000 Series
T4	T4 O4 One touch Fitting	DV3000 Series
T6	T6 O6 One touch Fitting	DV3000 Series
T8	T8 O8 One touch Fitting	DV4000 Series
T8	T8 O8 One touch Fitting	DV4000 Series
T10	T10 O10 One touch Fitting	DV4000 Series

11 OPTION

- Blank: No bracket
 FB: Foot bracket
 SB: Side bracket
 Note 1) FOOT type is only for single type.
 Note 2) The bracket is not assembled and shipped.
 Note 3) Bracket option is available for DV 1000, DV 3000 only.

DWLN Series

How to order coil ass'y (G,D,DZ)



1 DV Valve Coil Ass'y

2 Voltage

- 1 : AC 110V
- 2 : AC 220V
- 5 : DC 24V
- 6 : DC 12V

3 Electrical entry

- G : Grommet type (With lamp)
- D : Din terminal type (Without lamp)
- DZ : Din terminal type (With lamp)

4 PCB Type

- Blank : Basic type (Lamp, surge protection circuit type)
- N : No lead wire
- S : Power saving PCB type (0.45W/DC24V)
- ※ Option S only applies to DC voltage with G option

5 Length of lead wire

- Blank : 400mm (standard)
- XWL 01 : 100mm
- 02 : 200mm
- ...
- 20 : 2000mm
- ※ Please contact us for lengths not listed above.

How to order port plug ass'y



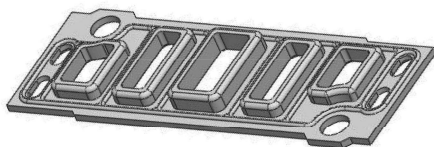
1 DV Series

- 1 : DV1000 Series
- 3 : DV3000 Series
- 4 : DV4000 Series

2 Built-in fitting options (Direct piping type)

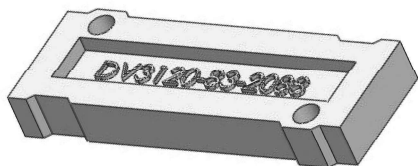
Symbol	Content	Application series
T4	Ø4 One Touch Fitting	DV1000
T6	Ø6 One Touch Fitting	
T4	Ø4 One Touch Fitting	DV3000
T6	Ø6 One Touch Fitting	
T8	Ø8 One Touch Fitting	
T8	Ø8 One Touch Fitting	DV4000
T10	Ø10 One Touch Fitting	
Blank	No fitting	All series

Part number for manifold gasket



DV1000	Body ported type	DV1120-52-2078-PL
	Base ported type	DV1140-52-2083-PL
	Bolt	M2X0,4X21 L-PL
DV3000	Body ported type	DV3120-52-2088-PL
	Base ported type	DV3140-52-2088-PL
	Bolt	M3X0,5X27L-PL
DV4000	Body ported type	DV4120-52-2102-PL
	Base ported type	DV4140-52-2107-PL
	Bolt	M4X0,7X32L-PL

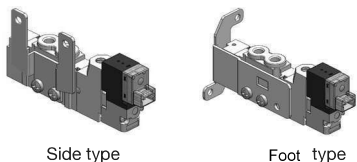
Part number for blank plate



DV1000	Body ported type	DVB1120
	Base ported type	DVB1140
DV3000	Body ported type	DVB3120
	Base ported type	DVB3140
DV4000	Body ported type	DVB4120
	Base ported type	DVB4140

※ Part number of mounting bracket
 DV1000 : DV1000-B2 DV3000 : DV3000-B

Part number for side bracket



DV1000	Foot type	DV1000-FB
	Side type	DV1000-SB
DV3000	Foot type	DV3000-FB
	Side type	DV3000-SB

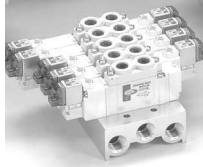
Part number for lead wire



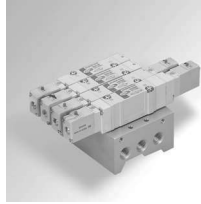
DV1000	121-803-PL
DV3000	
DV4000	

Series DV1000

Manifold



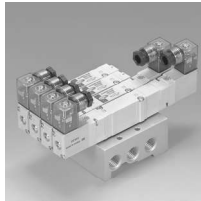
Body ported(Plug Type)



Base Mounted(Grommet Type)



Body ported(DIN Type)



Base Mounted(DIN Type)

Specifications

Series		DV1000	DV3000	DV4000
Action		5 Port Pilot Type Solenoid Valve(Rubber Seal)		
Fluid		Air (Vacuum is Available)		Air
Operating	2Position Single	0.25~0.7(2.5~7.1)		0.15~0.7(1.5~7.1)
Pressure	2Position Double	0.25~0.7(2.5~7.1)		0.1~0.7(1~7.1)
Range(MPa, kgf/cm ²)	3 Position	0.25~0.7(2.5~7.1)		0.2~0.7(2~7.1)
Main (P, A, B Port) Use Pressurer (MPa)		-100KPa ~ 0.7		-
Ambient and Fluid Temperature(°C/°F)		MAX. 50°C (122°F)		
Manual Override		Push&Lock Type		
Pilot Exhaust Type		Individual exhaust Common exhaust for main valve and pilot Valve		
		Mainfold PE Port Command Exhaust Type(Separated Piping)		-
Lubrication		Not Required		
Mounting Position		Free		
Impact/Vibration	H,V	150/30(8.3~2000Hz)		
Resistance(㎳)	G,D,DZ	300/50		
Max. Operating Frequency	2Position	10	5	5
	3 Position	3	3	3
Protection Structure		Dust Proof		
Lead Electrical Entry		Connector Mounting Type (H:Horizontal,V:Vertical), Grommet, Din Terminal Type		
Voltage		DC12, DC24V, AC110V, AC220V		
Voltage Allowance		-10(%)~+10(%) of Rated Voltage		
Polarity		Non-polar (standard) (*DC24V: Polarity type)		
Response Time(ms)	at 5kgf/cm ² (71.1psi)	H,V	~12ms	~18ms
		G,D,DZ	-	~26ms
Power Consumption(W)		H,V	1.0(*DC24V:0.6) (Indicator Light and Surge suppressor)	
		G,D,DZ	With Lamp(1.8) Without Lamp(1.6)	
Effective Orifice		Single	3.6mm ² (Cv0.2)	9.0mm ² (Cv0.5)
				16.2mm ² (Cv0.9)

* The other options same as standard type(Body ported type DV1000, 3000)

Series DV1000 · 3000 · 4000 Body Ported Type Effective Orifice and Reponse Time

Type	Valve Model	Port Size Rc(PT)/NPT	Configuration		Operating Pressure Range Mpa(psi)	Effective Orifice (mm ²) (Cv)	Response Time(ms)		Weight · g(oz)
							H,V	G,D,DZ	
DV1120-O-M5	DV 1120	M5/ 10~32 UNF	2	Single	0.15~0.70 (20~100)	3.6 (0.20)	~12	-	52(1.83)
DV1220-O-M5	DV 1220			Double	0.10~0.70 (14~100)	3.6 (0.20)	~10	-	64(2.26)
DV1320-O-M5	DV 1320		3	Closed Center	0.20~0.70 (27~100)	3.3 (0.18)	~16	-	68(2.4)
DV1420-O-M5	DV 1420			Exhaust Center	0.20~0.70 (27~100)	3.3 (0.18)	~16	-	68(2.4)
DV1520-O-M5	DV 1520			Pressure Center	0.20~0.70 (27~100)	3.6 (0.20)	~16	-	68(2.4)
DV3120-O-M5	DV 3120	Rc(PT)/NPT 1/8"	2	Single	0.15~0.70 (20~100)	9.0 (0.50)	~18	~26	120(4.23)
DV3220-O-M5	DV 3220			Double	0.10~0.70 (14~100)	9.0 (0.50)	~18	~22	134(4.72)
DV3320-O-M5	DV 3320		3	Closed Center	0.20~0.70 (27~100)	7.2 (0.40)	~32	~38	142(5.01)
DV3420-O-M5	DV 3420			Exhaust Center	0.20~0.70 (27~100)	7.2 (0.40)	~32	~38	142(5.01)
DV3520-O-M5	DV 3520			Pressure Center	0.20~0.70 (27~100)	9.5 (0.53)	~32	~38	142(5.01)
DV4120-O-M5	DV 4120	Rc(PT)/NPT1 1/4"	2	Single	0.15~0.70 (20~100)	16.2 (0.90)	~30	~38	124(4.37)
DV4220-O-M5	DV 4220			Double	0.10~0.70 (14~100)	16.2 (0.90)	~30	~30	136(4.8)
DV4320-O-M5	DV 4320		3	Closed Center	0.20~0.70 (27~100)	10.8 (0.60)	~50	~56	144(5.08)
DV4420-O-M5	DV 4420			Exhaust Center	0.20~0.70 (27~100)	10.8 (0.60)	~50	~56	144(5.08)
DV4520-O-M5	DV 4520			Pressure Center	0.20~0.70 (27~100)	17.1 (0.96)	~50	~56	144(5.08)

Series DV1000 · 3000 · 4000 Base Mounted Type Effective Orifice and Reponse Time

Type	Valve Model	Port Size		Configuration	Operating Pressure Range Mpa(psi)	Effective Orifice (mm ²) (Cv)	Response Time(ms)		Weight · g(oz)
		P, R1, R2	A, B				H,V	G,D,DZ	
DV1140-O-M5	DV 1140	Rc(PT)/NPT 1/8"	2	Single	0.15~0.70 (20~100)	4.0 (0.22)	~12	-	46(1.62)
DV1240-O-M5	DV 1240			Double	0.10~0.70 (14~100)	4.0 (0.22)	~10	-	58(2.05)
DV1340-O-M5	DV 1340		3	Closed Center	0.20~0.70 (27~100)	3.6 (0.20)	~16	-	62(2.19)
DV1440-O-M5	DV 1440			Exhaust Center	0.20~0.70 (27~100)	3.6 (0.20)	~16	-	62(2.19)
DV1540-O-M5	DV 1540			Pressure Center	0.20~0.70 (27~100)	3.8 (0.21)	~16	-	62(2.19)
DV3140-O-M5	DV 3140	Rc(PT)/NPT 1/4"	2	Single	0.15~0.70 (20~100)	9.5 (0.53)	~18	~26	92(3.24)
DV3240-O-M5	DV 3240			Double	0.10~0.70 (14~100)	9.5 (0.53)	~18	~22	106(3.74)
DV3340-O-M5	DV 3340		3	Closed Center	0.20~0.70 (27~100)	7.2 (0.40)	~32	~38	114(4.02)
DV3440-O-M5	DV 3440			Exhaust Center	0.20~0.70 (27~100)	7.2 (0.40)	~32	~38	114(4.02)
DV3540-O-M5	DV 3540			Pressure Center	0.20~0.70 (27~100)	10.0 (0.55)	~32	~38	114(4.02)
DV4140-O-M5	DV 4140	Rc(PT)/NPT 3/8"	2	Single	0.15~0.70 (20~100)	16.2 (0.90)	~30	~38	80(2.8)
DV4240-O-M5	DV 4240			Double	0.10~0.70 (14~100)	16.2 (0.90)	~30	~30	96(3.4)
DV4340-O-M5	DV 4340		3	Closed Center	0.20~0.70 (27~100)	10.8 (0.60)	~50	~56	104(3.67)
DV4440-O-M5	DV 4440			Exhaust Center	0.20~0.70 (27~100)	10.8 (0.60)	~50	~56	104(3.67)
DV4540-O-M5	DV 4540			Pressure Center	0.20~0.70 (27~100)	17.1 (0.96)	~50	~56	104(3.67)

DW

DR100

DR200

RS1000,
2000

RS4000

SI UNIT

DV1000
DV3000
DV4000

DS300

DS3000

DS5000

DS2000

DS6000

DX1,DX2

DX1(2)R

DH

DP300
DP3000
DP5000

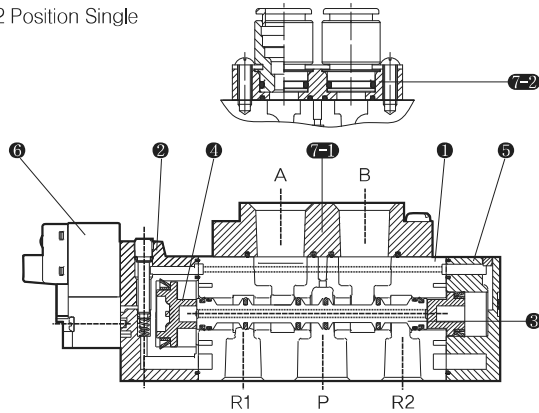
DM

DT220

Series DV1000

Construction / Body Ported type

2 Position Single

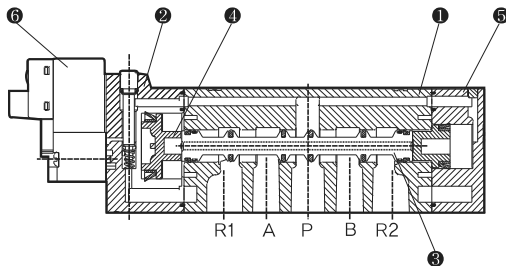


Main parts

No.	Description	Material	Note
1	Body	Aluminum die cast	(DV4000) Aluminum Die Cast
2	Adapter plate	Resin	
3	Spool	Aluminum	
4	Piston	Resin	
5	End cover	Resin	
6	Solenoid ass'y	—	
7-1	Port Plug Ass'y	—	Standard
7-2			Fitting Type

Construction / Base mounted type

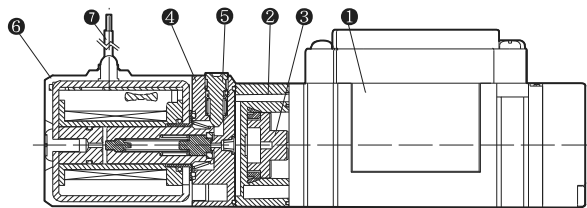
2 Position Single



Main parts

No.	Description	Material	Note
1	Body	Aluminum die cast	(DV4000) Aluminum Die Cast
2	Adapter plate	Resin	
3	Spool	Aluminum	
4	Piston	Resin	
5	End cover	Resin	
6	Solenoid ass'y	—	

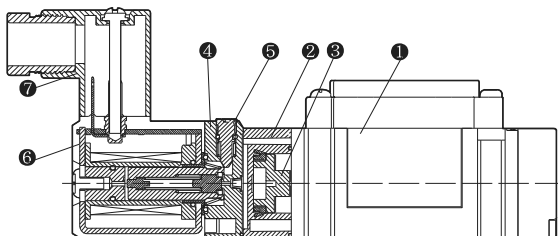
Construction / Grommet type



Main parts

No.	Description	Material	Note
1	Body	—	DV3000/DV4000 SERIES
2	Adapter plate	Resin	
3	Piston	Resin	
4	Pilot body	Resin	
5	Manual	Resin	
6	Solenoid coil	—	
7	Lead wire	—	

Construction / Din terminal type



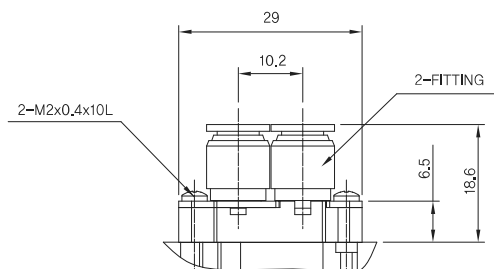
Main parts

No.	Description	Material	Note
1	Body	—	DV3000/DV4000 SERIES
2	Adapter plate	Resin	
3	Piston	Resin	
4	Pilot body	Resin	
5	Manual	Resin	
6	Solenoid coil	—	
7	Din connector ass'y	—	mpm

Series DV1000

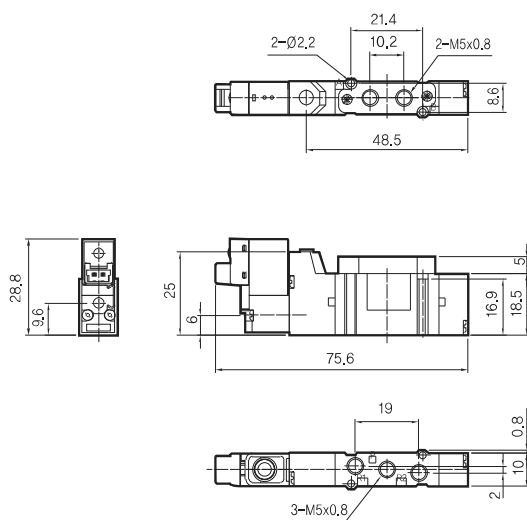
Series DV1000 / 2 Position / H: Horizontal Connector Type

DV1000 Fitting Included Dimension Drawing(Body Ported Type)

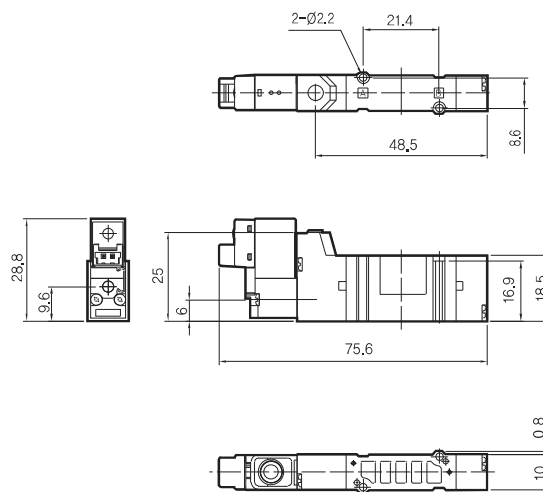


※The other options same as DV1000 standard type(Body ported type)

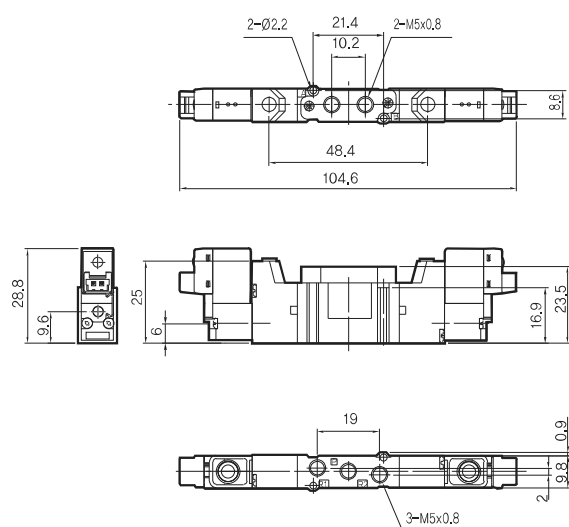
DV1120 Single / Body Ported Type



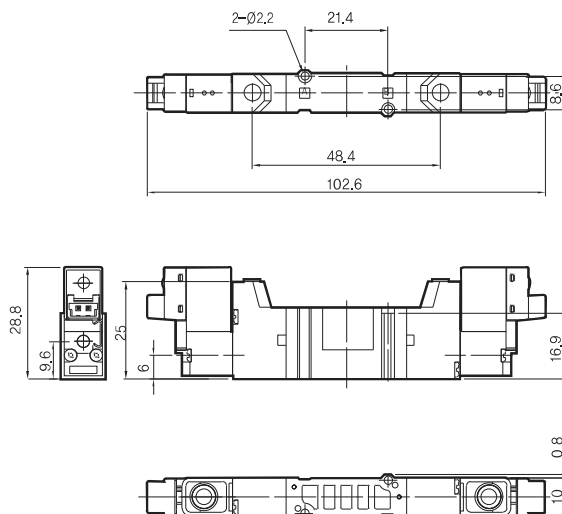
DV1140 Single / Base Mounted Type



DV1220 Double / Body Ported Type



DV1240 Double / Base Mounted Type



DW

DR100

DR200

RS1000,
2000

RS4000

SI UNIT

DV1000
DV3000
DV4000

DS300

DS3000

DS5000

DS2000

DS6000

DX1,DX2

DX1(2)R

DH

DP300
DP3000
DP5000

DM

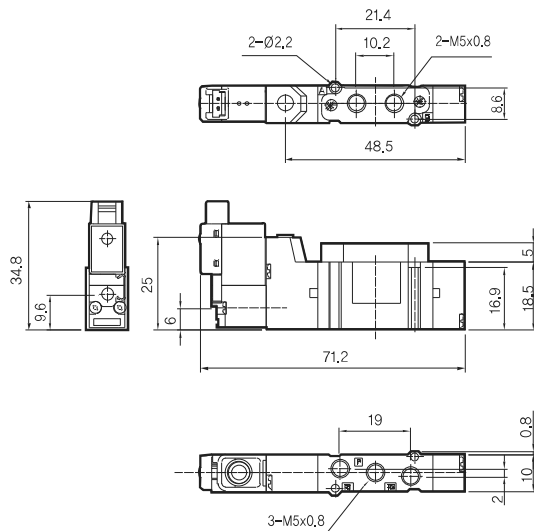
DT220

Series DV1000

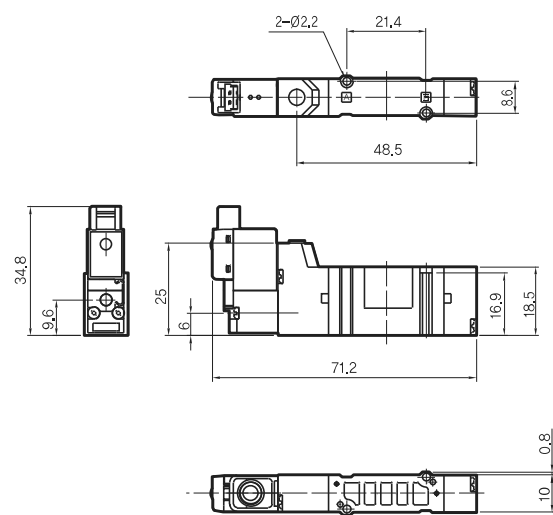
Series DV1000 / 2 Position / V: Vertical Connector Type

(Unit: mm)

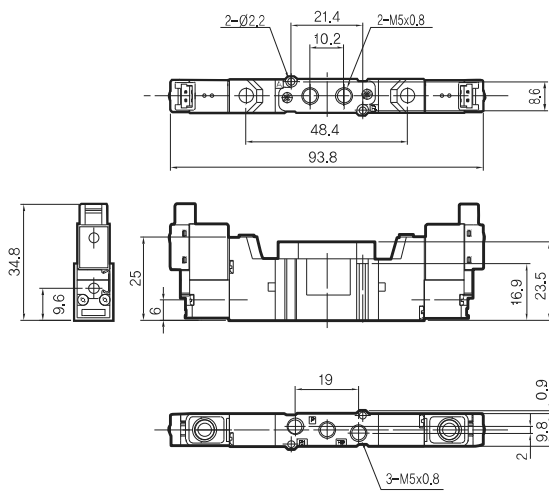
DV1120 Single / Body Ported Type



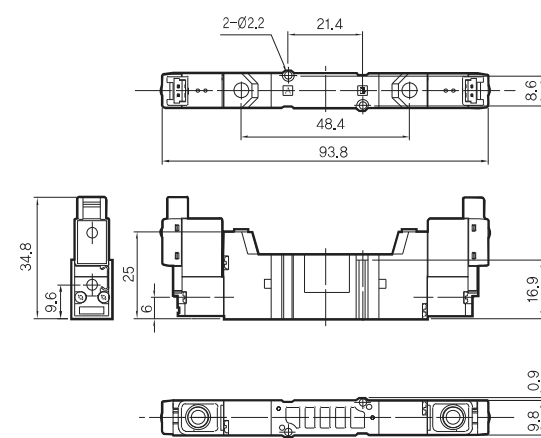
DV1140 Single / Base Mounted Type



DV1220 Double / Body Ported Type



DV1240 Double / Base Mounted Type

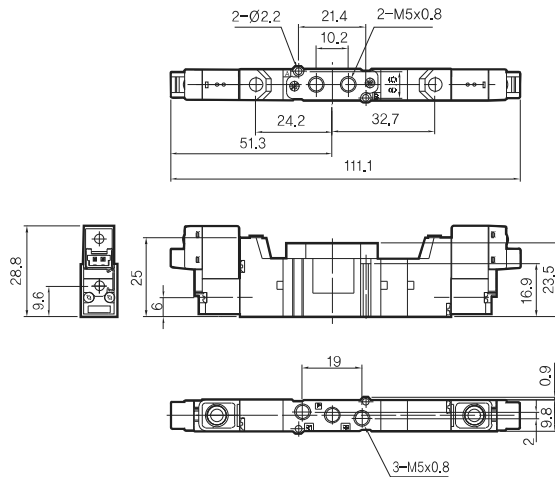


Series DV1000

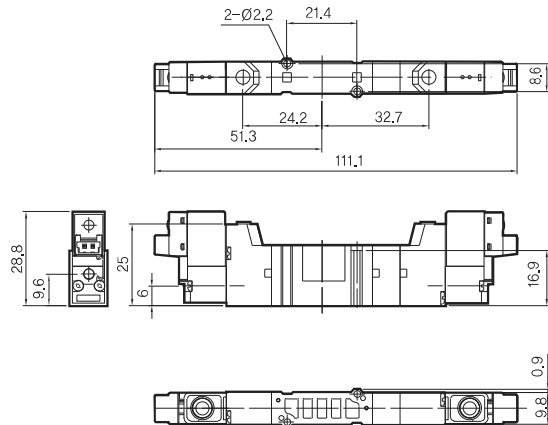
Series DV1000 / 3 Position / H: Horizontal Connector Type

(Unit:mm)

DV1320/1420/1520 3 Position / Body Ported Type



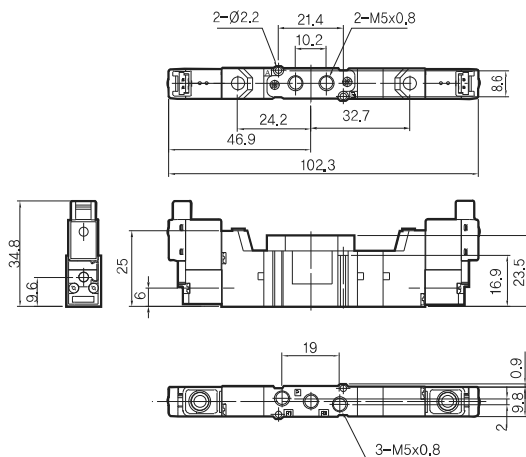
DV1340/1440/1540 3 Position / Base Mounted Type



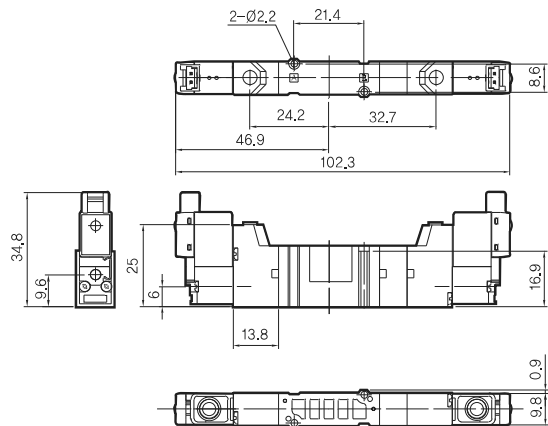
Series DV1000 / 3 Position / V: Vertical Connector Type

(Unit:mm)

DV1320/1420/1520 3 Position / Body Ported Type



DV1340/1440/1540 3 Position / Base Mounted Type



DW

DR100

DR200

RS1000,
2000

RS4000

SI UNIT

DV1000
DV3000
DV4000

DS300

DS3000

DS5000

DS2000

DS6000

DX1,DX2

DX1(2)R

DH

DP300
DP3000
DP5000

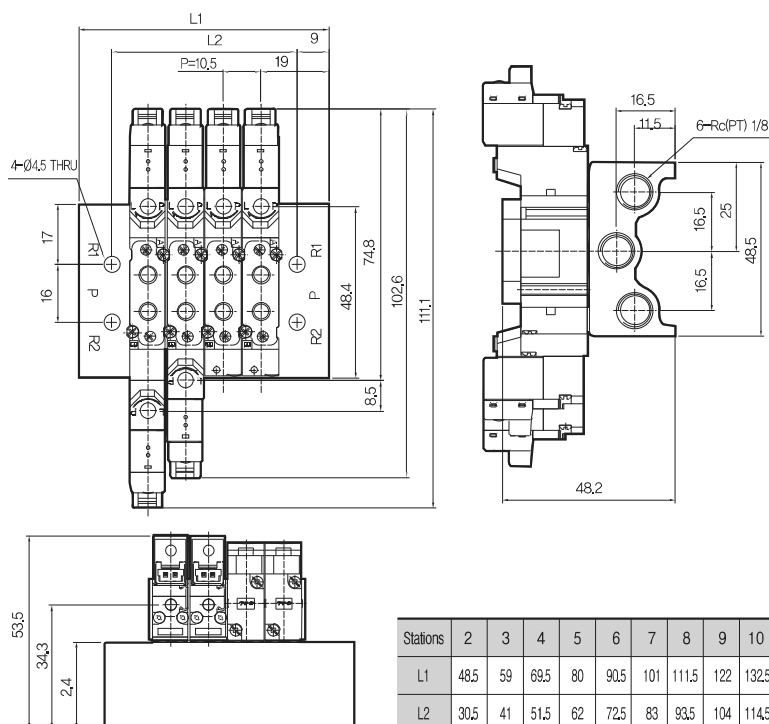
DM

DT220

Series DV1000

Manifold Dimensions / Series DV1000 (Body Ported) / H: Horizontal Connector Type

(Unit:mm)



How to order

DVM1 — **20** — **05**

1 2 3

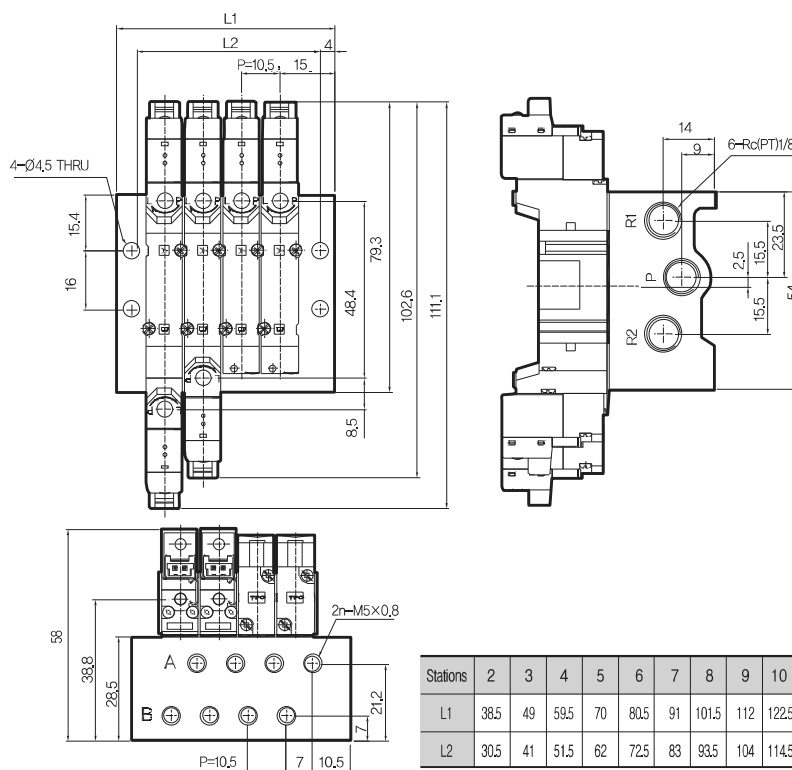
- 1 DV1000 Manifold
- 2 Body Ported Type
- 3 Stations (2~20)

Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L1	48.5	59	69.5	80	90.5	101	111.5	122	132.5	143	153.5	164	174.5	185	195.5	206	216.5	227	237.5
L2	30.5	41	51.5	62	72.5	83	93.5	104	114.5	125	135.5	146	156.5	167	177.5	188	198.5	209	219.5

(mm)

Manifold Dimensions / Series DV1000 (Base Mounted) / H: Horizontal Connector Type

(Unit:mm)



How To Order

DVM1 — **40** — **05**

1 2 3

- 1 DV1000 Manifold
- 2 Base Mounted type
- 3 Stations (2~20)

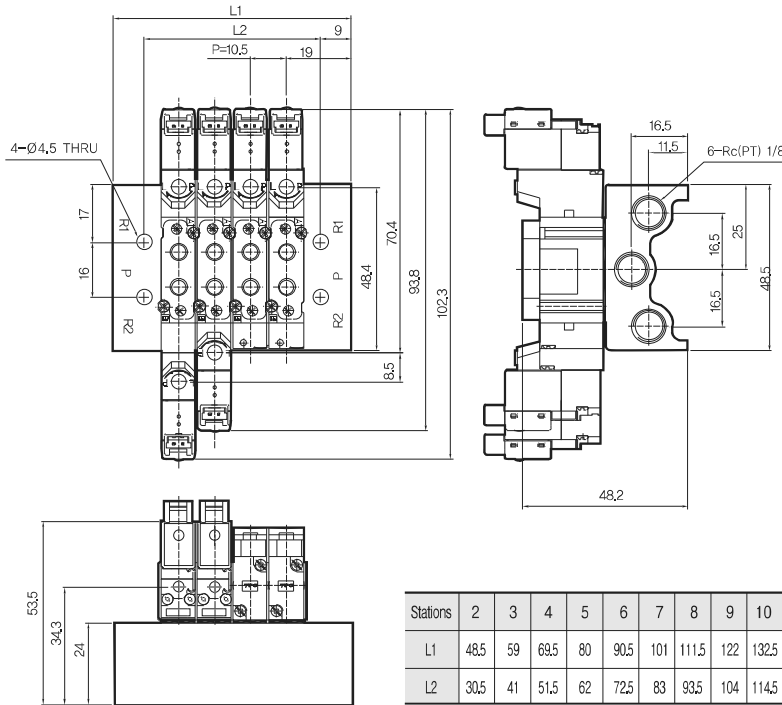
Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L1	38.5	49	59.5	70	80.5	91	101.5	112	122.5	133	143.5	154	164.5	175	185.5	196	206.5	217	227.5
L2	30.5	41	51.5	62	72.5	83	93.5	104	114.5	125	135.5	146	156.5	167	177.5	188	198.5	209	219.5

(mm)

Series DV1000

Dimensions / Series DV1000 (Body Ported) / V: Vertical Connector Type

(Unit: mm)



How To Order

DVM1 — **20** — **05**

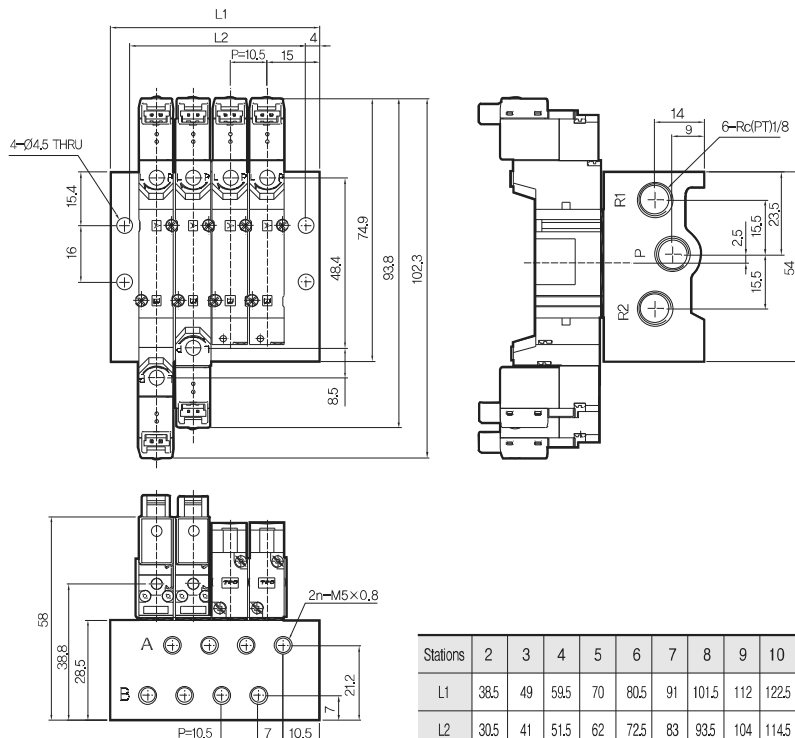
1 2 3

- 1 DV1000 Manifold
2 Body Ported Type
3 Stations (2~20)

Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L1	48.5	59	69.5	80	90.5	101	111.5	122	132.5	143	153.5	164	174.5	185	195.5	206	216.5	227	237.5
L2	30.5	41	51.5	62	72.5	83	93.5	104	114.5	125	135.5	146	156.5	167	177.5	188	198.5	209	219.5

Dimensions / Series DV1000 (Base Mounted) / V: Vertical Connector Type

(Unit: mm)



How To Order

DVM1 — **40** — **05**

1 2 3

- 1 DV1000 Manifold
2 Base Mounted type
3 Stations (2~20)

Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L1	38.5	49	59.5	70	80.5	91	101.5	112	122.5	133	143.5	154	164.5	175	185.5	196	206.5	217	227.5
L2	30.5	41	51.5	62	72.5	83	93.5	104	114.5	125	135.5	146	156.5	167	177.5	188	198.5	209	219.5

DW

DR100

DR200

RS1000,
2000

RS4000

SI UNIT

DV1000
DV3000
DV4000

DS300

DS3000

DS5000

DS2000

DS6000

DX1,DX2

DX1(2)R

DH

DP300
DP3000
DP5000

DM

DT220