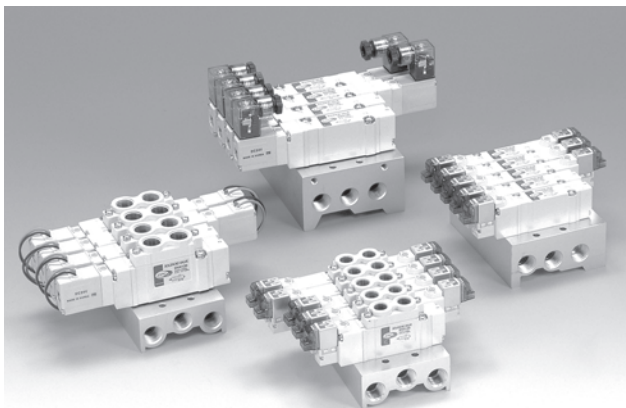


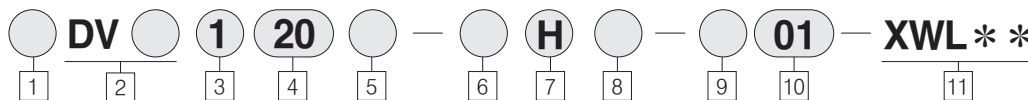
Series DV1000 · 3000 · 4000

5port Pilot Solenoid Valve



- **QUICK RESPONSE TIME & LARGE FLOW CAPACITY**
 - Response time is less than 12ms (DR1000)
 - Increase of CV factor (2.5 times larger than conventional valve with the same body width)
 - Low power consumption : 0.6W (Current draw : 25mA at 24V DC)
- **HIGH RELIABILITY**
 - Long life
 - Wear Ring → To prevent spool abrasion
 - U Packing → To minimize frictional resistance
 - Piston return type at retraction
- **PRODUCT FEATURES**
 - Easy wiring
 - Nickel plated (Copper free) application as standard
 - Built-in LED for grommet type as standard

How to Order



1 Series

Blank : Rc(PT)
U : NPT

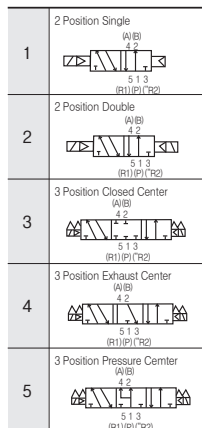
2 DV Valve Series

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

3 Configuration

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

Standard Circuit Diagram



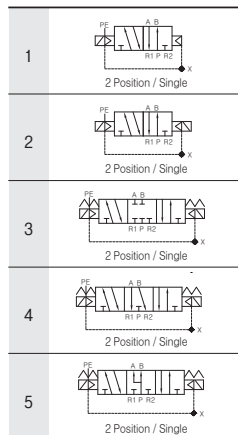
4 Manifold Specifications

20 : Body Ported
40 : Base Mounted
※ Interior fitting type is just for body ported type

5 Pilot Configuration

Blank : Internal Pilot
P : External Pilot
※ External pilot is possible only to the one with sub plate

External Pilot Valve Circuit Diagram



6 Voltage

5 : DC24V 1 : AC100V
6 : DC12V 2 : AC220V
※ G, D, DZ types are only available for DC24V

7 Electrical Entry

H : Horizontal Connector (Impossible AV Voltage)
V : Vertical Connector
G : Grommet Type (Basic Option Lamp)
D : Din Terminal Type (Without Lamp)
DZ : Din terminal Type (With Lamp)—only, 24VDC
※ For coil ass'y refer to p.702, DR100, How to Order
※ AC110V, AC220V are only for horizontal type

8 PCB Type

Blank : Basic Type (Lamp Type)
D : Non-Polar Type : Lamp Type
S : Power Saving Type (0.85→0.45W)
※ Applicable range of D, S is only for VH type of DC

9 Blank : Rc(PT)

G : Rc(PF)

10 Port Size

Blank : Without Sub Plate
M5 : M5×0.8 (Series DV1000)
10 : 10-32UNF (Series UDV1000)
01 : Rc(PT) 1/8 (Series DV3000)
02 : Rc(PT) 1/4 (Series DV4000)

※ Included fittings type is only for body ported 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	

11 Lenth of Lead Wire

Blank : 300mm (Standard)
XLW 01 : 100mm
XLW 02 : 200mm
:

20 : 2000mm

※ Contact us for non standard length

※ When using a TPC valve be sure to use the TPC gasket
※ It is standard to attach the LAMP/SURGE voltage protection circuit. (Products without a LAMP or SURGE voltage protection circuit should be contacted separately)

DW

DR100

DR200

RS1000,
2000

RS4000

SI UNIT

DV1000
DV3000
DV4000

DS300

DS3000

DS5000

DS2000

DS6000

DX1,DX2

DX1(2)R

DH

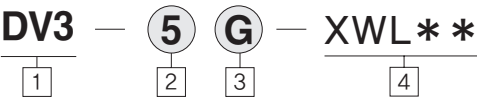
DP300
DP3000
DP5000

DM

DT220

Series DV1000

PILOT Valve ASS'Y(G, D, DZ)



- 1 DV Series Pilot Valve Ass'y
(for DV3000, DV4000)

2 Voltage
5 : DC24V

3 Electrical Entry
G : Grommet type(Lamp)
D : Din Terminal type(No Lamp)
DZ : Din Terminal type(Lamp)
- 4 Length of Lead Wire
Blank : 300mm(Basic)
XWL 01 : 100mm
02 : 200mm
:
20 : 2000mm

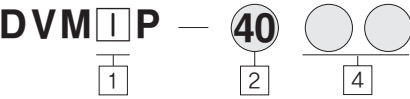
PORT PLUG ASS'Y



- 1 DV Series
1 : DV1000 Series
3 : DV3000 Series
4 : DV4000 Series
- 2 Port Connector Diameter

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	DV4000
T8	Ø8 One Touch Fitting	
T10	Ø10 One Touch Fitting	

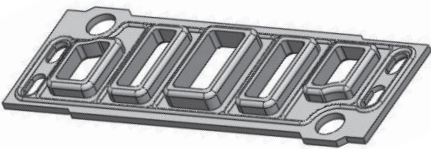
Mainfold



- 1 1 : DV1 000 Series(Exterior Pilot Type Valve(Mainfold))
3 : DV 3000 Series(Exterior Pilot Type Valve(Mainfold))

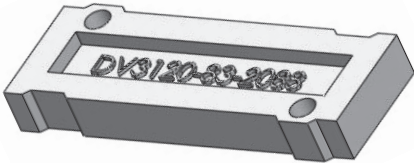
2 Manifold Specification
40 : Base Mount
- 3 Base Station Number
1~20 : Station
※ Note(Station 1 has Sub Plate)

Manifold Gasket



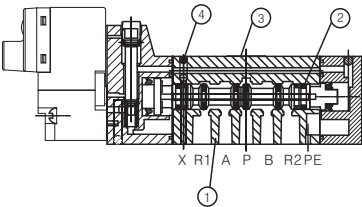
DV Manifold Gasket	
Series	Number
DV1000	DV1140-52-2083
DV3000	DV3140-52-2093
DV4000	DV4140-52-2107

Blank Plate



DV Blank Plate			
Series	Number	Name	Note
DV1000	DV1120-83-2078	DV1000 Blank Plate	
DV3000	DV3120-83-2088	DV3000	Rubber
DV4000	DV4120-83-2102	DV4000	

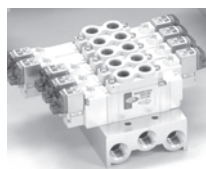
Constrution



No.	Part Number	Part Name	Qty	Note
①	DV1140P-02-2178	Valve Body(For External Pilot Valve)	1	
②	RS1140-27-2208	Spool O-Ring	2	RS1000
③	DV1140P-42-2178	Name Plate	1	(Singel)
④	Standard Part	Steel Ball	2	Ø1.7

Note) Parts not in the below list are same as standard parts for internal pilot valve.

Manifold



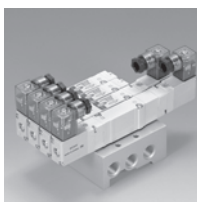
Body ported(Plug Type)



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(Vaccum is Available)		Air
Operating Pressure	2Position Single		0.25~0.7(2.5~7.1)		0.15~0.7(1.5~7.1)
	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(m/s)	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	30ms
		G,D,DZ	-	~26ms	38ms
Power	H.V		1.0(※DC24V:0.6)(Indicator Light and Surge suppressor)		
Consumption(W)	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.D.Z	
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)/NPT 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)

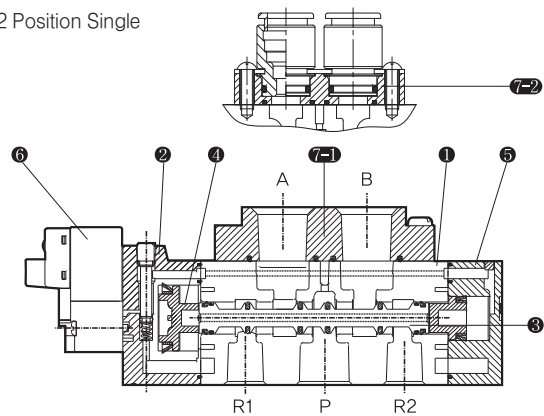
Series DV1000 · 3000 · 4000 Base Mounted Type Effective Orifice and Reponse Time

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"	Rc(PT)/NPT M5×0.8 10~32 UNF	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"	Rc(PT)/NPT 1/8	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"	Rc(PT)/NPT 1/4	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)

Series DV1000

Construction / Body Ported type

2 Position Single

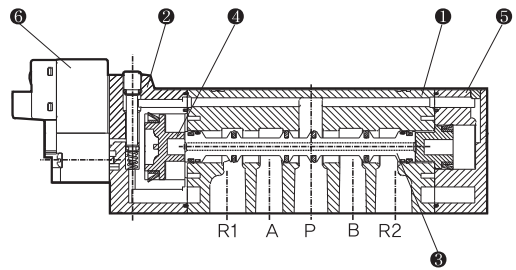


Main parts

No.	Description	Material	Note
1	Body	Aluminum die cast	(DV4000Aluminum 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

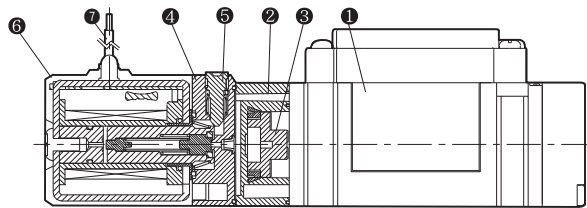
2 Position Single



Main parts

No.	Description	Material	Note
1	Body	Aluminum die cast	(DV4000Aluminum Die Cast)
2	Adapter plate	Resin	
3	Spool	Aluminum	
4	Piston	Resin	
5	End cover	Resin	
6	Solenoid ass'y	—	

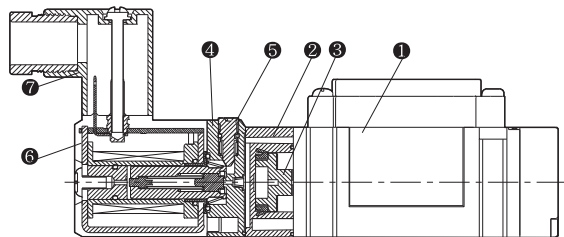
Construction / Grommet type



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



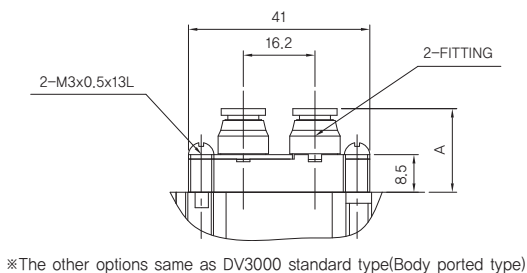
Main parts

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 DV3000

Series DV3000 / 2 Position / H: Horizontal Connector Type (Unit:mm)

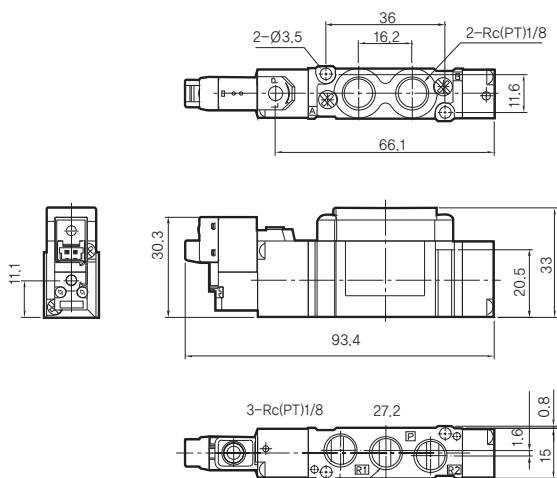
DV3000 Fitting Included Dimension Drawing(Body Ported Type)



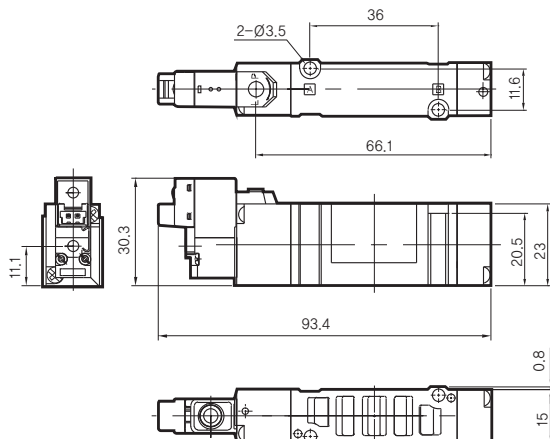
※The other options same as DV3000 standard type(Body ported type)

Series	Applicable Fitting Size	A	Note
DV3000	Ø4	18.9	
	Ø6	24	
	Ø8	24.8	

DV3120 Single / Body Ported Type

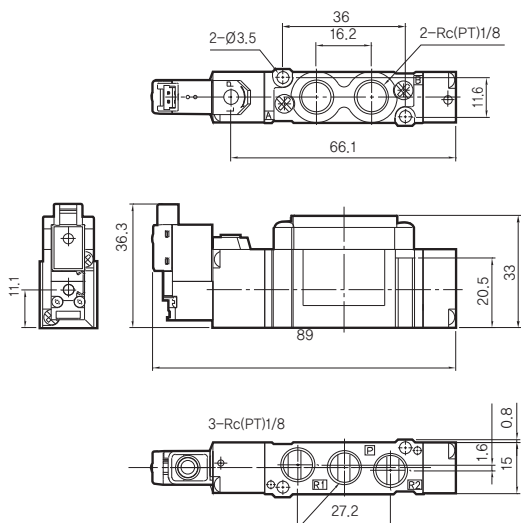


DV3140 Single / Base Mounted Type

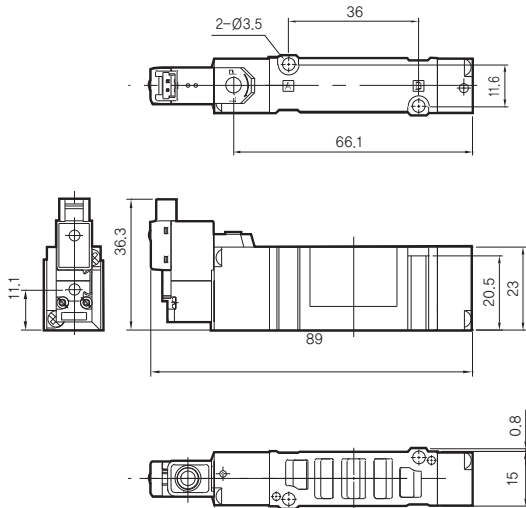


Series DV3000 / 2 Position / V: Vertical Connector Type

DV3120 Single / Body Ported Type



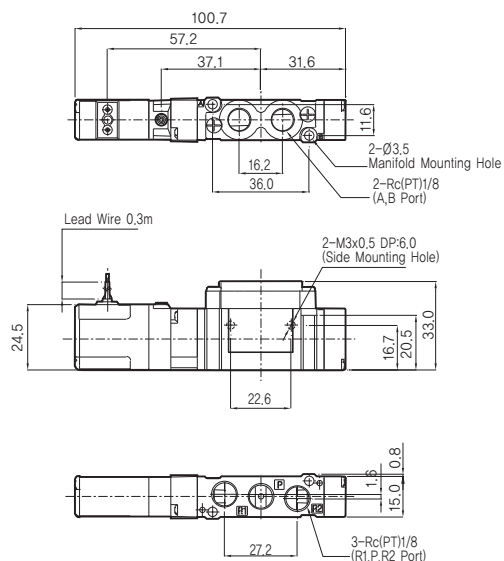
DV3140 Single / Base Mounted Type



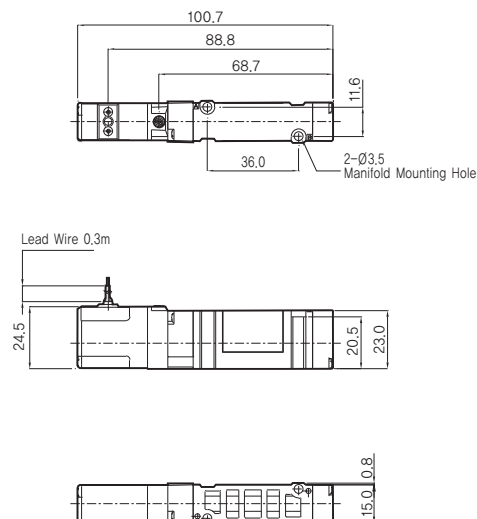
Series DV3000 / 2 Position / Grommet Type

(Unit:mm)

DV3120 Single / Body Ported Type



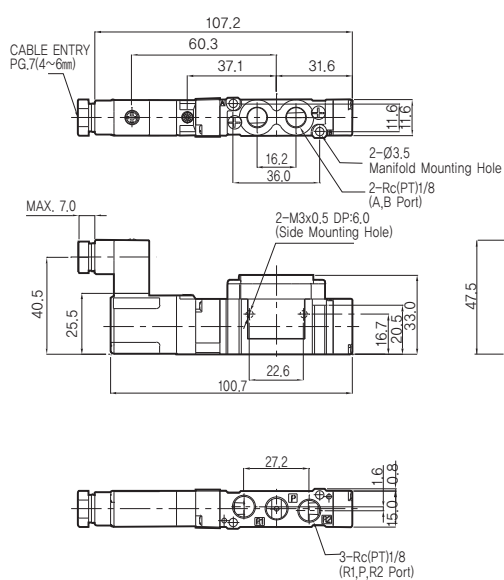
DV3140 Single / Base Mounted Type



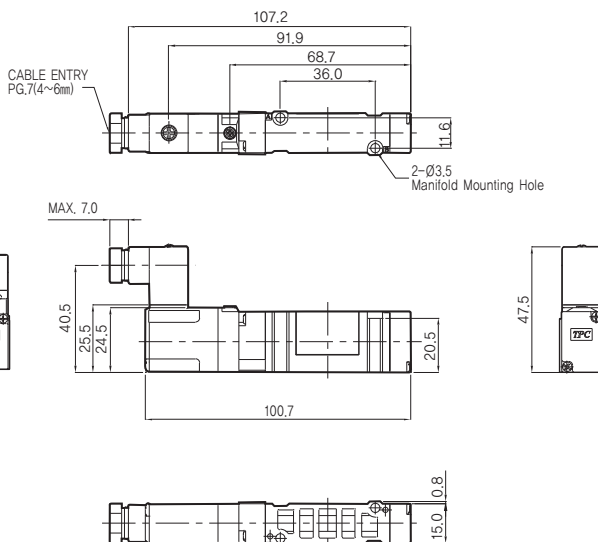
Series DV3000 / 2 Position / Din Terminal Type

(Unit:mm)

DV3120 Single / Body Ported Type



DV3140 Single / 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

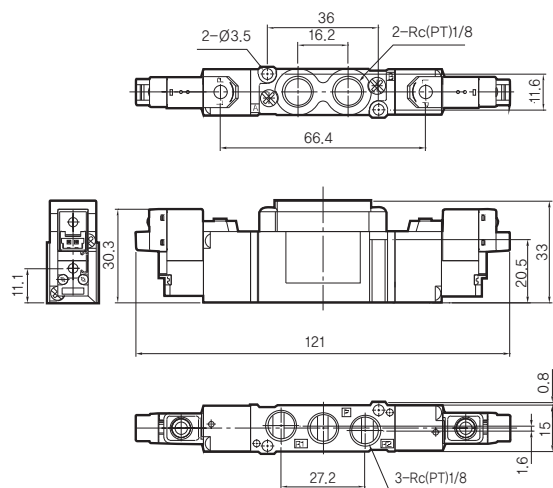
DT220

Series DV3000

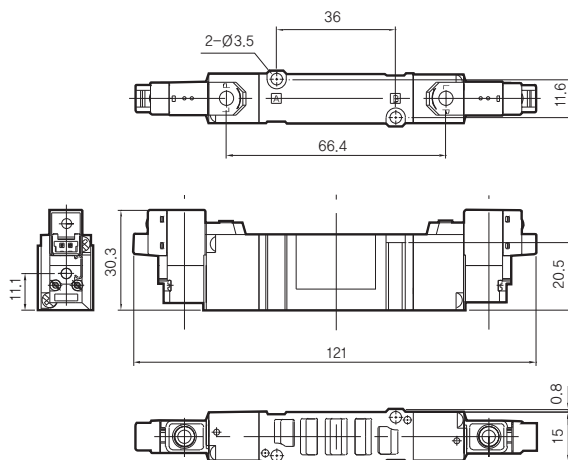
Series DV3000 / 2 Position / H: Horizontal Connector Type

(Unit:mm)

DV3220 Double / Body Ported Type



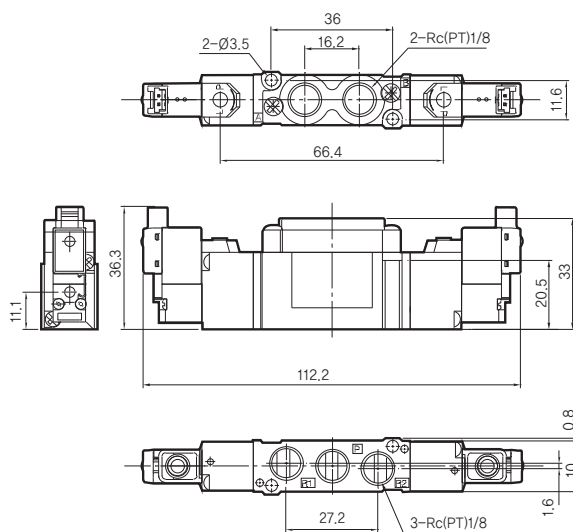
DV3240 Double / Base Mounted Type



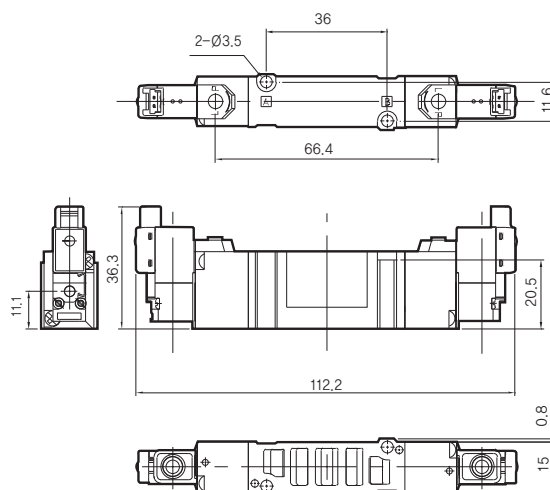
Series DV3000 / 2 Position / V: Vertical Connector Type

(Unit:mm)

DV3220 Double / Body Ported Type



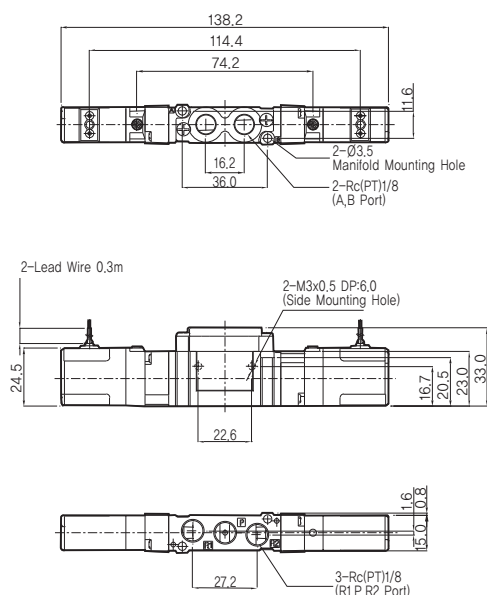
DV3240 Double / Base Mounted Type



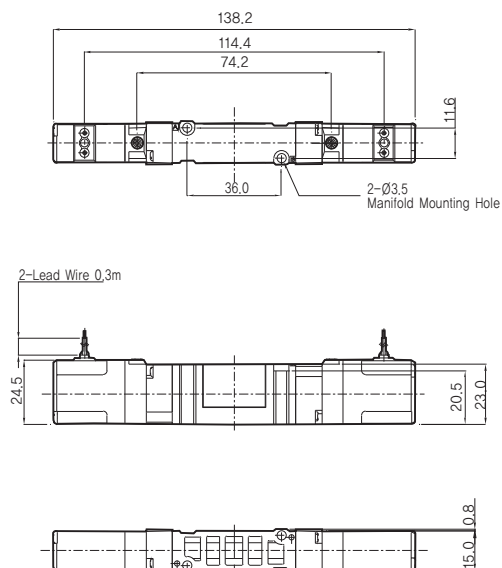
Series DV3000 / 2 Position / Grommet Type

(Unit:mm)

DV3220 Double / Body Ported Type



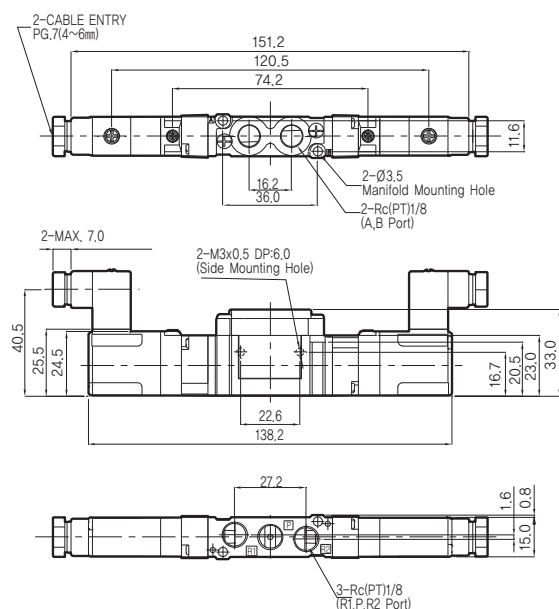
DV3240 Double / Base Mounted Type



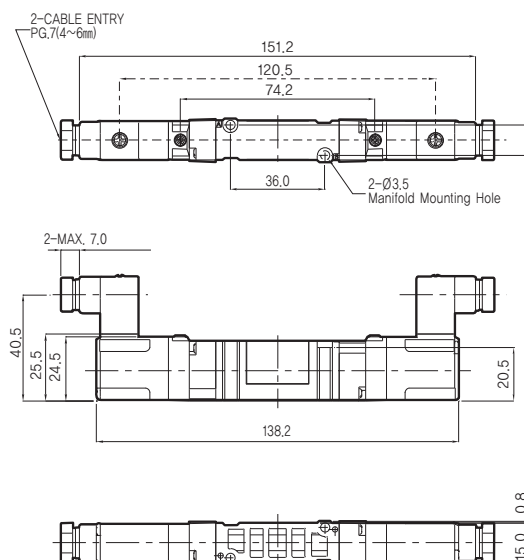
Series DV3000 / 2 Position / Din Terminal Type

(Unit:mm)

DV3220 Double / Body Ported Type



DV3240 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

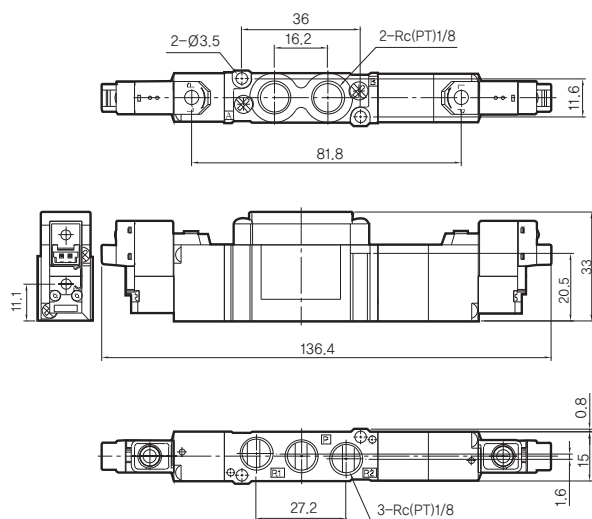
DT220

Series DV3000

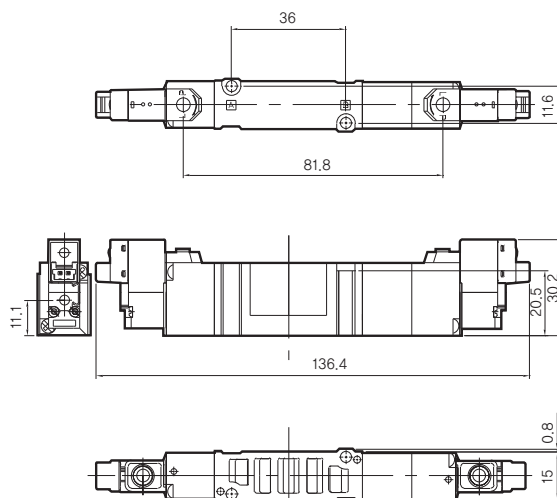
Series DV3000 / 3 Position / H: Horizontal Connector Type

(Unit:mm)

DV3320/3420/3520 3 Position / Body Ported Type



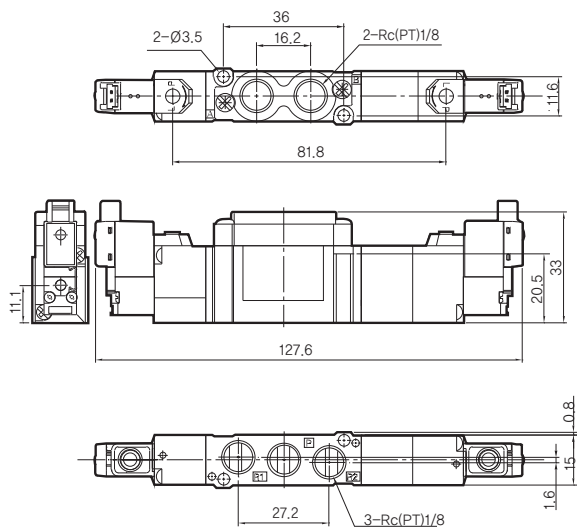
DV3340/3440/3540 3 Position / Base Mounted Type



Series DV3000 / 3 Position / V: Vertical Connector Type

(Unit:mm)

DV3320/3420/3520 3 Position / Body Ported Type



DV3340/3440/3540 3 Position / Base Mounted Type

