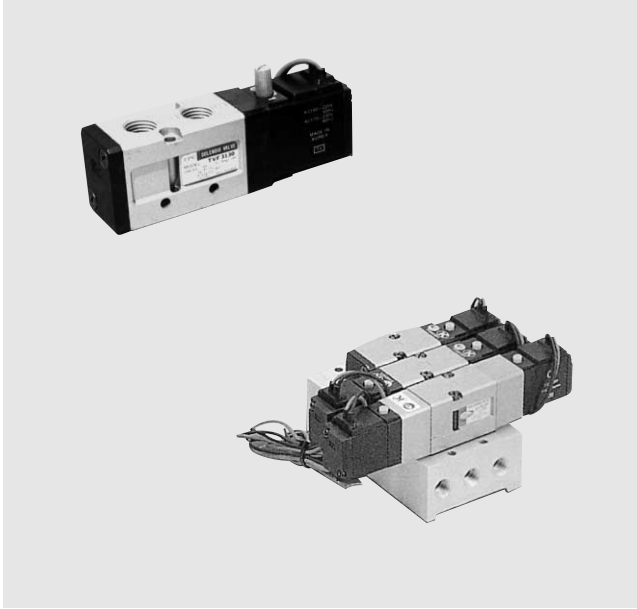


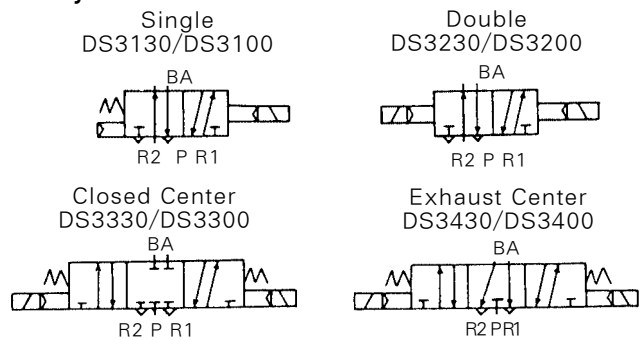
Series DS3000

5 Port Pilot Solenoid Valve/Body Ported Type • Base Ported Type



- COMPACT SIZE AND LIGHT WEIGHT
- LARGE FLOW CAPACITY
- LOW POWER CONSUMPTION
- DESIGNED FOR NON-LUBRICATED SERVICE

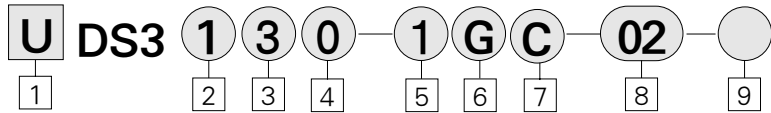
Symbol



DV1000 · 3000 · 4000
DV2000
DS2000
DS3000
DS5000
DS6000
DX2
DV100
DS300
DW
DP300 · 3000 · 5000
DM
DH

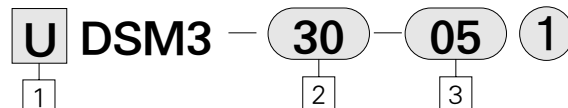
How to Order - Body Ported Type

Valve



- | | | | |
|--|--|---|---|
| <p>1 Series DS3000
Blank : Metric (PT)
U : NPT (UNF)</p> <p>2 Type of Actuation
1 : 2 Position/Single Solenoid
2 : 2 Position/Double Solenoid
3 : 3 Position/Closed Center
4 : 3 Position/Exhaust Center</p> <p>3 Body Type
3 : for 30 type Manifold, Body Ported</p> | <p>4 Body option
0 : Standard
3 : Common Exhaust for Main and Pilot Valve</p> <p>5 Voltage
1 : AC100V, 50/60Hz
2 : AC200V, 50/60Hz
3 : AC120V, 50/60Hz
4 : AC240V, 50/60Hz
5 : DC24V
6 : DC12V</p> | <p>7 : DC6V
8 : AC24V, 50/60Hz
9 : Other</p> <p>6 Electrical Entry/Indicator Light and Surge Suppressor
G : Grommet (Lead wire length 12inch)
DZ : DIN Connector With Indicator light and Surge suppressor
D : DIN Type Terminal</p> | <p>7 Manual Override
Blank : Non-locking Push type
C : Knob locking type</p> <p>8 Port Size (SUP., CYL.)
01 : 1/8"
02 : 1/4"
(Exhaust Port: 1/8")</p> <p>9 Special Option
Blank : Standard type
XC16 : Copper-free</p> |
|--|--|---|---|

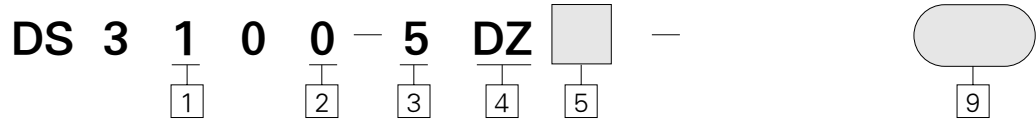
Manifold



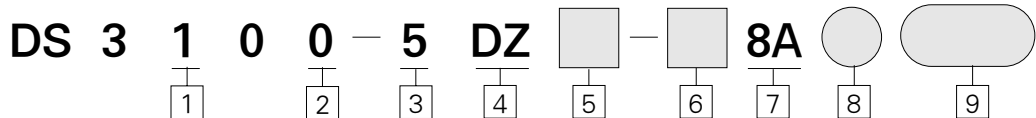
- | | | |
|--|---|---|
| <p>1 Manifold for DS3000 series
Blank : Metric (PT)
U : NPT (UNF)</p> | <p>2 Manifold Specifications
Code : 30
Port location for CYL. port : Valve
Port size for EXH. : 1/4"
Applicable : DS3030
Note : Please order the appropriate Valve and / or Blanking plate ass'y with Manifold base.</p> | <p>3 Stations
02 : 2 stations
: :
20 : 20 stations</p> |
|--|---|---|

How To Order – Base Ported Type

Valve (Including Gasket & Bolt)



Valve+Sub Base



1 Type of Actuation

- 1 : 2 Position/Single Solenoid
- 2 : 2 Position/Double Solenoid
- 3 : 3 Position/Closed Center
- 4 : 3 Position/Exhaust Center

2 Body Option

- 0 : Standard
- 3 : Common Exhaust for Main and Pilot Valve

3 Voltage

- 1 : AC110V, 50/60Hz
- 2 : AC220V, 50/60Hz
- 3 : AC120V, 50/60Hz
- 4 : AC240V, 50/60Hz
- 5 : DC24V
- 6 : DC12V
- 7 : DC6V
- 8 : AC24V(50/60Hz)
- 9 : Other

4 Electronic Entry/Indicator

- Light and Surge Suppressor
- G : Grommet
(Lead wire length 300mm)
- DZ : DIN Connector with Indicator light and Surge Suppressor
- N : DIN Connector

5 Manual Override

- Blank : Non-locking PushType
- L : Knob locking Type

6 Thread

- Blank : Rc(PT)
- U : NPT

7 Port Size (Sup., CYL)

- Blank : Valve Body Only
(without sub Plate)
- 8A : Rc(PT)1/4, NPT1/4
(with sub Plate)

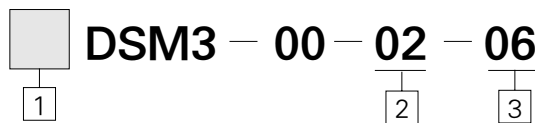
8 One-Touch Fitting

- Blank : Without one-Touch Fitting
- 06φ : φ6 One-Touch Fitting
- 08φ : φ8 One-Touch Fitting

9 Special Option

- Blank : Standard Type
- XC16 : Copper-Free

Manifold



1 Thread

- Blank : Rc(PT)
- U : NPT

2 Stations

- 01 : 1 Station
- 02 : 2 Stations
- 03 : 3 Stations
- 04 : 4 Stations
- 05 : 5 Stations
- 06 : 6 Stations
- 07 : 7 Stations
- 08 : 8 Stations
- 09 : 9 Stations
- 10 : 10 Stations

3 One-Touch Fitting

- 06 : φ6 One-Touch Fitting
- 08 : φ8 One-Touch Fitting

Blanking Plate (Including Gasket & Bolt)

DSB 3 — 00

Din Terminal Box How to Order

TVF3130-61-2005-

1

1 Symbol

Symbol	Voltage
1	AC 100V
2	AC 200V
3	AC 120V
4	AC 240V
5	DC 24V
6	DC 12V
7	DC 6V
8	AC 24V
9	Other

Specifications

Fluid		Air	
Operating Pressure Range	2 Position Single · 3 Position	21~128 PSI {0.15~0.9MPa}	
	2 Position Double	14~128 PSI {0.1~0.9MPa}	
Ambient and Fluid Temperature		Max. 122°F (50°C)	
Response Time	2 Position Single/Double	30 ms or less {0.5 MPa}	
	3 Position	40 ms or less {0.5 MPa}	
Max. Operating Frequency	2 Position Single/Double	5 Hz	
	3 Position	3Hz	
Lubrication		If Required	
Manual Override		Non-lock Push Type, Knob Lock type	
Mounting Position		Free	
Impact/Vibration Resistance		30 G/5 G(8.3~2000 Hz)	
Enclosure		Dust Proof	
Pilot Exhaust		Individual exhaust, Common exhaust for main valve and pilot valve	
Electrical entry		Grommet, DIN connector	
Coil Voltages	AC 50/60Hz	100 VAC, 200 VAC, 120 VAC, 240 VAC, AC24V	
	DC	6 VDC, 12 VDC, 24 VDC	
Allowable Voltage		-15~+10% of rated voltage	
Power Consumption	AC	Inrush	5.6 VA (50 Hz), 5.0 VA (60 Hz)
		Holding	3.4 VA (50Hz), 2.3 VA (60 Hz)
	DC		1.8W/2W(With LED)
Indicator Light/Surge Suppressor Circuit	AC	LED, Varistor	
	DC	LED, Varistor	

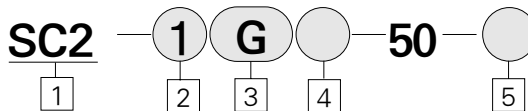
Model

Piping	Type	Position/Solenoid	⁽¹⁾ Port Size (SUP,CYL.)	Effective orifice mm ² (Cv factor)		Weight (lbs)
				1/8"	1/4"	
Body Ported	DS3130-○○- ⁰¹ / ₀₂	2 Single Solenoid	1/8"	14.4(0.8)	18(1.0)	0.46
	DS3230-○○- ⁰¹ / ₀₂	2 Double Solenoid		14.4(0.8)	18(1.0)	0.64
	DS3330-○○- ⁰¹ / ₀₂	3Position Closed Center	1/4"	11.7(0.65)	14.4(0.8)	0.97
	DS3430-○○- ⁰¹ / ₀₂	3Position Exhaust Center		14.4(0.8)	18(1.0)	0.97

(1)Body Ported Valve can be directly mounted on Manifold, type B, Common exhaust

(2)In case of Body Ported, Exhaust Port is only 1/8".

Pilot Valve Assembly



1 For UDS 3000 series Valve Ass'y

2 Voltage

- 1 : AC100V, 50/60Hz
- 2 : AC200V, 50/60Hz
- 3 : AC120V, 50/60Hz
- 4 : AC240V, 50/60Hz
- 5 : DC24V

- 6 : DC12V
- 7 : DC6V
- 8 : AC24V, 50/60Hz
- 9 : Other

3 Electrical Entry/Indicator Light and Surge Suppressor

- G : Grommet(Lead wire length 12 inch)
- DZ : DIN connector With Indicator light and Surge suppressor

4 Manual override
Blank : Non-Lock Push type

- C : Knob locking type

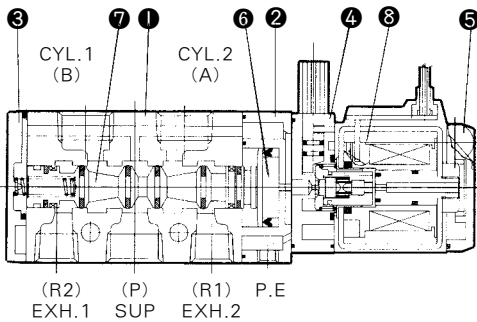
5 Special Option

- Blank : Standard Type
- XC16 : Copper-Free

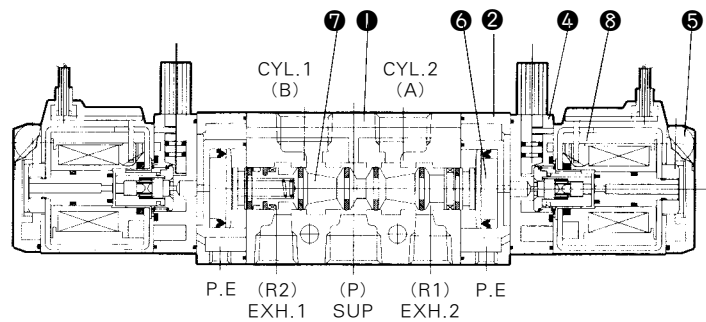
Series DS3000

Construction

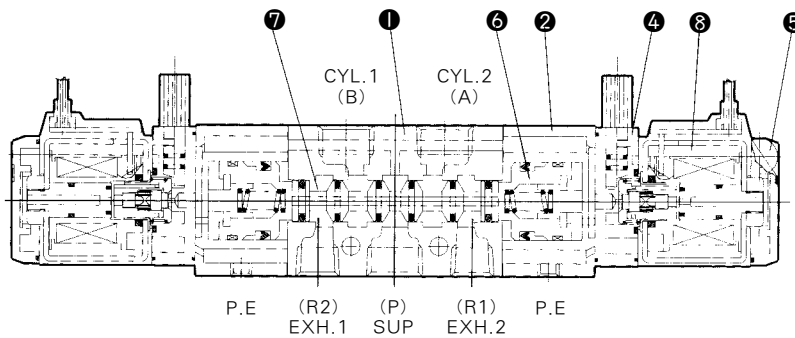
Single Solenoid



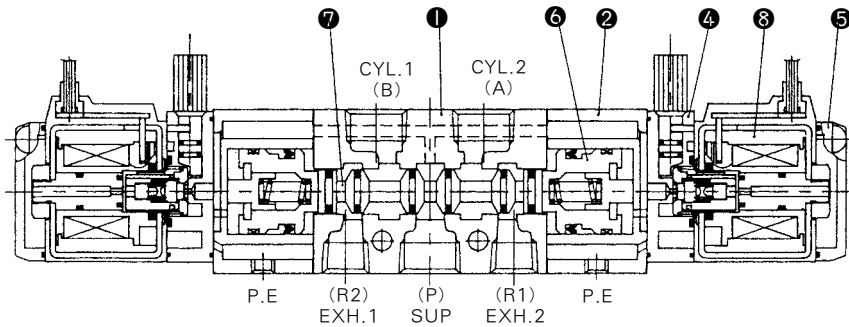
Double Solenoid



3 Position Closed Center



3 Position Exhaust Center



Main parts

No.	Description	Material	Notes
①	Body	Aluminum die casting	Metallic paint
②	Adapter Plate	Resin**	Black*
③	End Cover	Aluminum Die Casting	Black
④	Pilot Body	Polyacetal	
⑤	Pilot Cover	Polyacetal	
⑥	Piston	***Polyacetal	
⑦	Spool	Aluminum · NBR	
⑧	Sub-Plate	Aluminum Die Casting	Metallic

※ 3 Position : Aluminum ※※ 3 position : Aluminum Die Casting
 ※※※ 3 Position : Metallic Paint

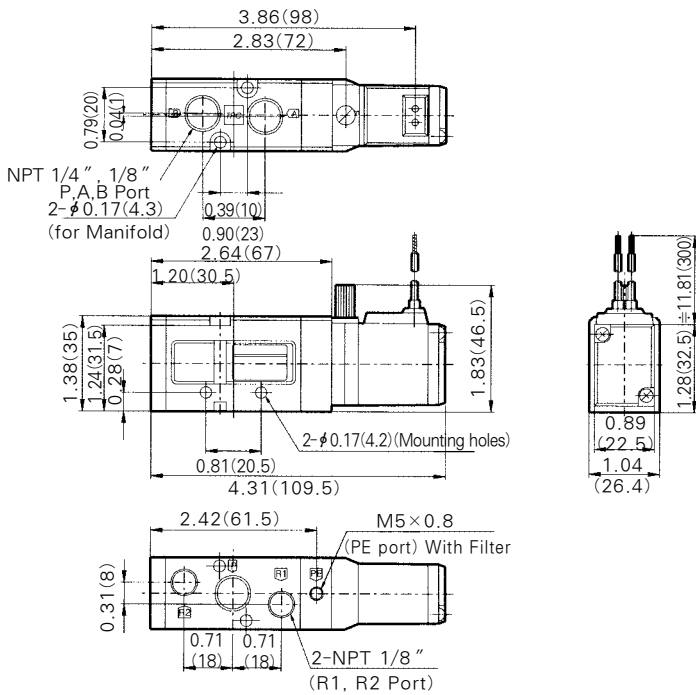
Spare Parts

No.	Description	Material	Notes
⑧	Pilot Valve Assembly	-	-

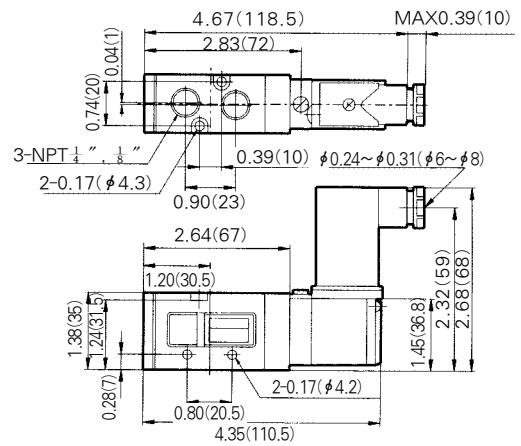
Body Ported/2 Position Single Solenoid

inch (mm)

Grommet/DS3130-OG



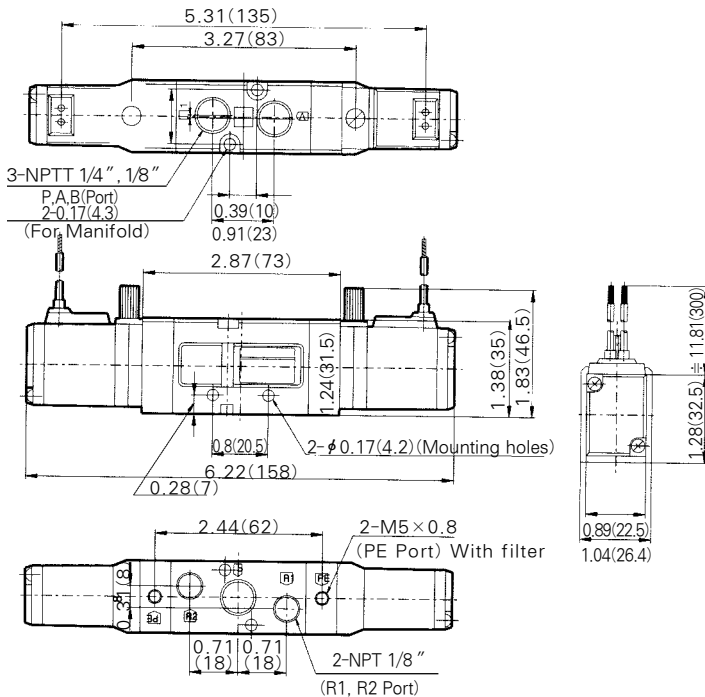
DIN Connector/DS3130-ODZ



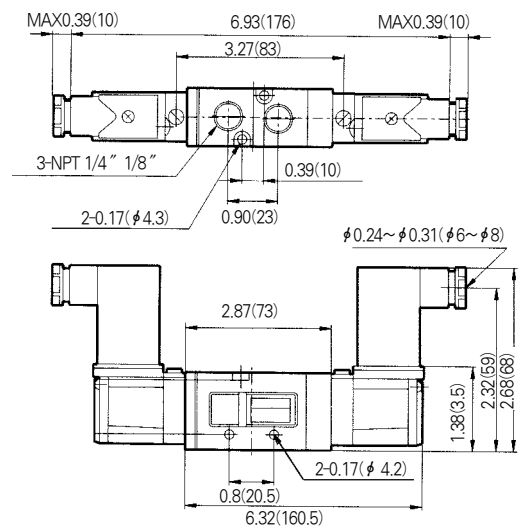
Body Port/2 Position Double Solenoid

inch (mm)

Grommet/DS3230-OGC



DIN Connector/DS3230-ODZ



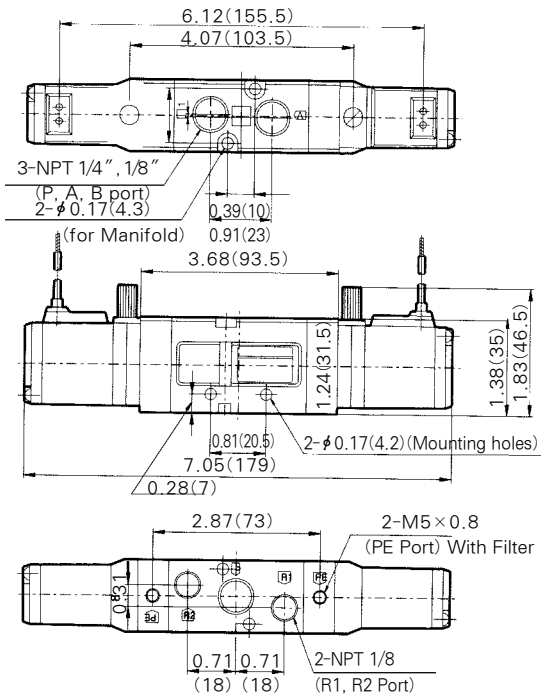
DV1000 · 3000 · 4000
DV2000
DS2000
DS3000
DS5000
DS6000
DX2
DV100
DS300
DW
DP300 · 3000 · 5000
DM
DH

Series DS3000

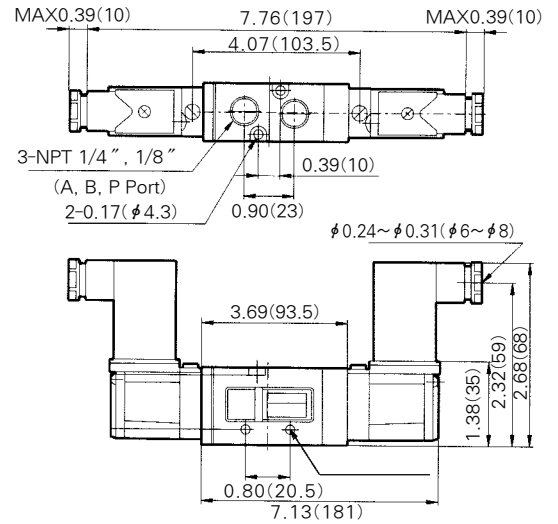
Body Ported/3 Position Double Solenoid

inch(mm)

Grommet/DS3330-○G, DS3430-○G



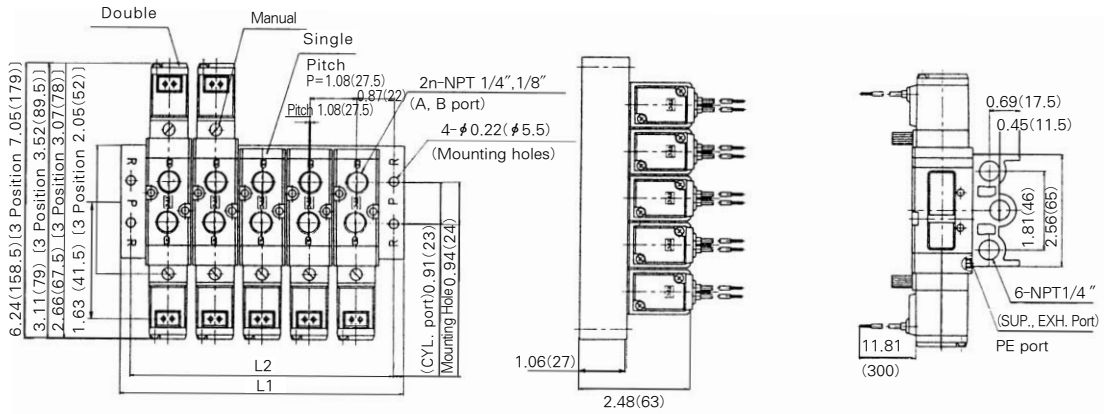
DIN Connector/DS3330-○DZ
DS3430-○DZ



B Mount Type/Dimensions DSM3-30

inch(mm)

Common Exhaust/DSM3-30-○○1



L: Size

N = Stations

	inch																			
Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
L1	3.29	4.37	5.45	6.34	7.62	8.70	9.78	10.87	11.95	13.03	14.11	15.20	16.28	17.36	18.44	19.53	20.61	21.69	22.78	
L2	2.81	3.90	4.98	6.06	7.15	8.23	9.31	10.39	11.48	12.56	13.64	14.72	15.81	16.89	17.97	19.06	20.14	21.22	22.30	

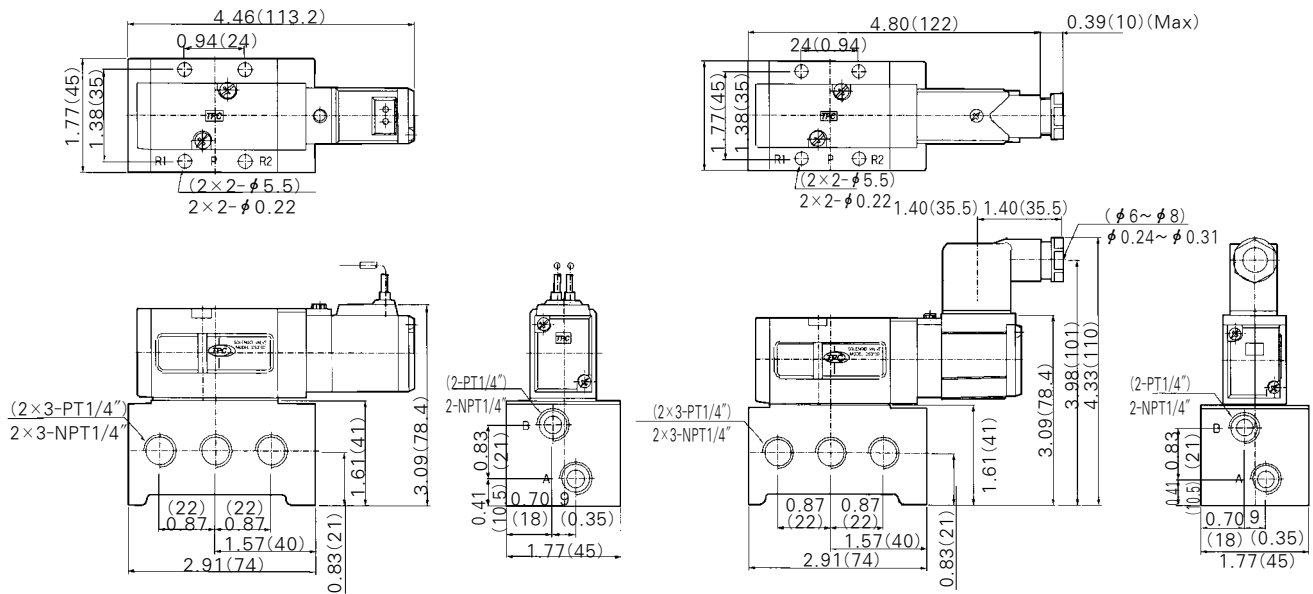
	mm																			
Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
L1	83.5	111	138.5	166	193.5	221	248.5	276	303.5	331	358.5	386	413.5	441	468.5	496	523.5	551	578.5	
L2	71.5	99	126.5	154	181.5	209	236.5	264	291.5	319	346.5	374	401.5	429	456.5	484	511.5	539	566.5	

Dimensions/2 Position Single Solenoid

inch(mm)

Grommet/DS3100-OG

DIN Connector/DS3100-ODZ

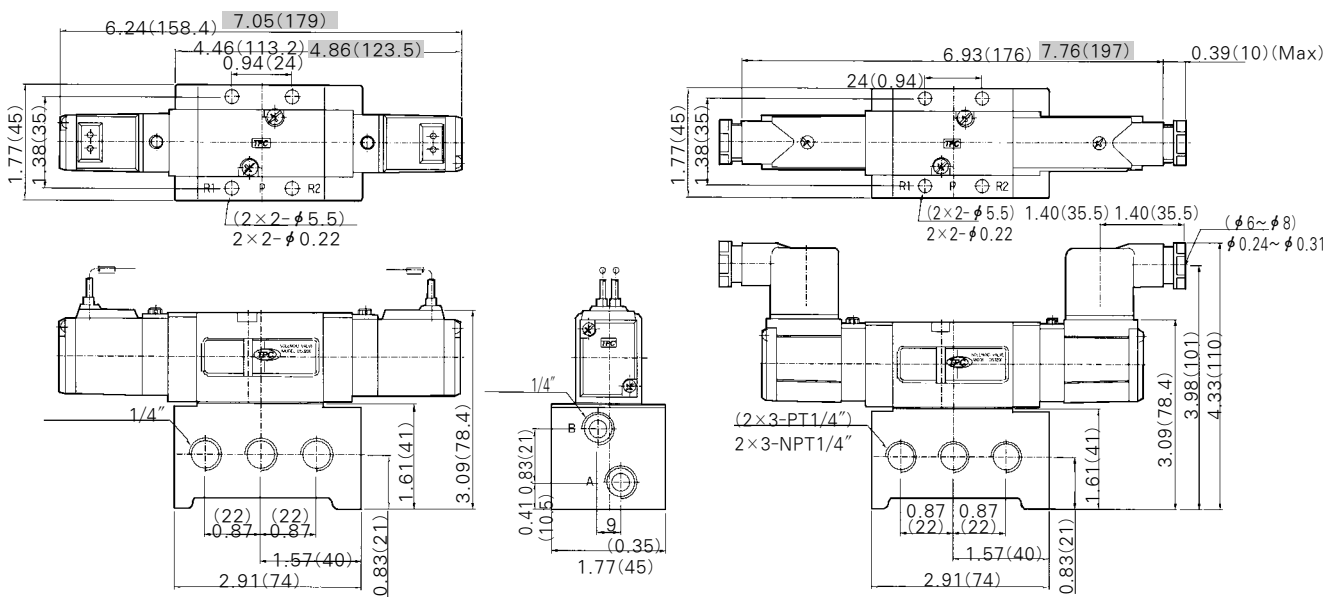


Dimensions/2 Position Double Solenoid · 3 Position Closed Center · Exhaust Center

inch(mm)

Grommet/DS3200, 3300, 3400-OG

DIN Connector/DS3200, 3300, 3400-ODZ



※ :3Position

DV1000 ·
3000 · 4000

DV2000

DS2000

DS3000

DS5000

DS6000

DX2

DV100

DS300

DW

DP300 ·
3000 · 5000

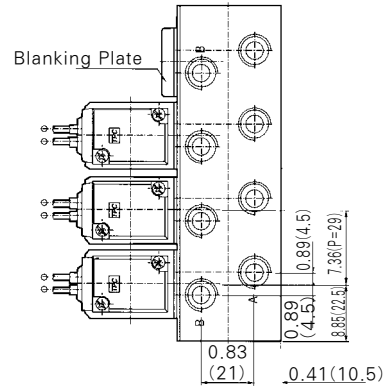
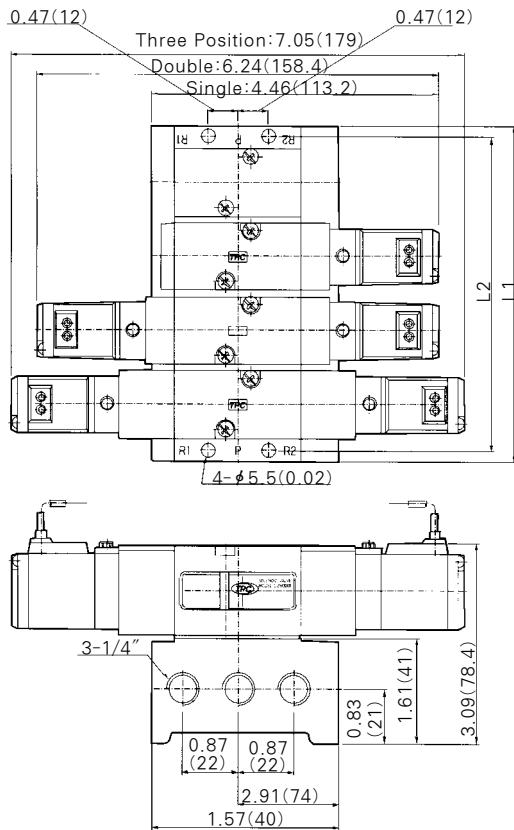
DM

DH

Series DS3000

Dimensions/Manifold ASS'Y

inch(mm)



Stations	1	2	3	4	5	6	7	8	9	10
L1	1.77 (45)	2.91 (74)	4.06 (103)	5.20 (132)	6.34 (161)	7.48 (190)	8.62 (219)	9.76 (248)	10.9 (277)	12.0 (306)
L2	1.38 (35)	2.25 (64)	3.67 (93)	4.80 (122)	5.94 (151)	7.09 (180)	9.01 (229)	9.37 (238)	10.51 (267)	1.17 (296)

Use as a 3 Port Valve

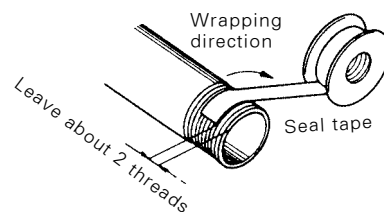
Plugging one of the Cylinder Ports (A or B) enables use as a 3 Port Valve. It should not be used in special applications such as a Non-leakage Valve. Make sure the Exhaust port is open if used as a 3 Port Valve.

Plug		A Port	B Port
Function		N.C	N.O
Sole-noid	Single	(X)Plug A B R2 P R1	(X)Plug A B R2 P R1
	Double	(X)Plug A B R2 P R1	(X)Plug A B R2 P R1

Mounting

- ① Make sure that Chips, Cutting Oil, Dust, etc. are cleaned up before mounting.
- ② When screwing the pipe or fitting into a port, ensure that Chips or Sealing material will not get in.
- ③ A Filter has already been installed to the Pilot Exhaust(P.E.) Port, so if a Silencer is to be added, first remove the Filter.
- ④ Clamp torque of piping.

Thread	Appropriate Clamp Torque kgf/cm(N · m)
1/8"	70~90(7~9)
1/4"	120~140(12~14)



Precautions

Use at Low Temperature

Available for use under 14°F(-10°C), however care should be taken to protect against freezing moisture.

Lubricant

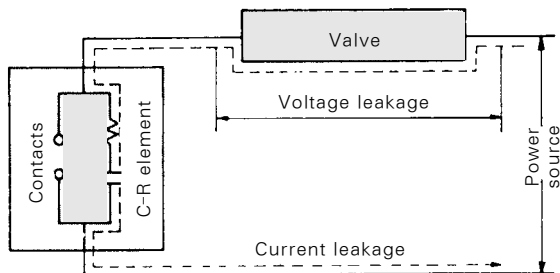
- ① Valves are pre-lubricated - no further lubrication is necessary.
- ② If a lubricant is used, please use Turbine Oil (ISO VG32).

Momentary Energizing

When using a Double Solenoid type with momentary energizing, make sure the energizing time is more than 0.05 seconds.

Leakage Voltage

- ① For the leakage current, residual leakage voltage of AC coil must be less than 20% of the rated voltage, and leakage voltage of DC coil must be less than 3% of the rated voltage when the switch is off.
- ② When using a C-R element, it will increase the leakage voltage.

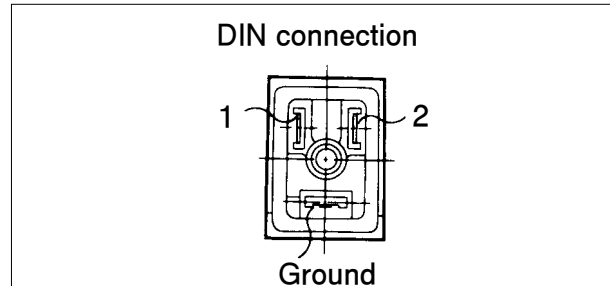


Remarks

Port	DS3000
Supply	P
Cylinder	A, B
Exhaust	R1, R2
Symbol (Single solenoid)	<p>P : SUP. B : CYL.1 A : CYL.2 R1 : EXH.1 R2 : EXH.2</p>

Electrical Connection

For the DIN Connection and Terminal connection (with surge voltage protection circuit), inner connections are as follows.



Terminal No.	1	2
DIN connection	+	-

Indicator Light/Surge Voltage Suppressor Circuit

Voltage	AC, DC
24V	<p>EZ, TZ, DZ (Less than 24V)</p>
200V	<p>Neon lamp EZ, TZ, DZ (200V or more)</p>

DV1000 ·
3000 · 4000

DV2000

DS2000

DS3000

DS5000

DS6000

DX2

DV100

DS300

DW

DP300 ·
3000 · 5000

DM

DH