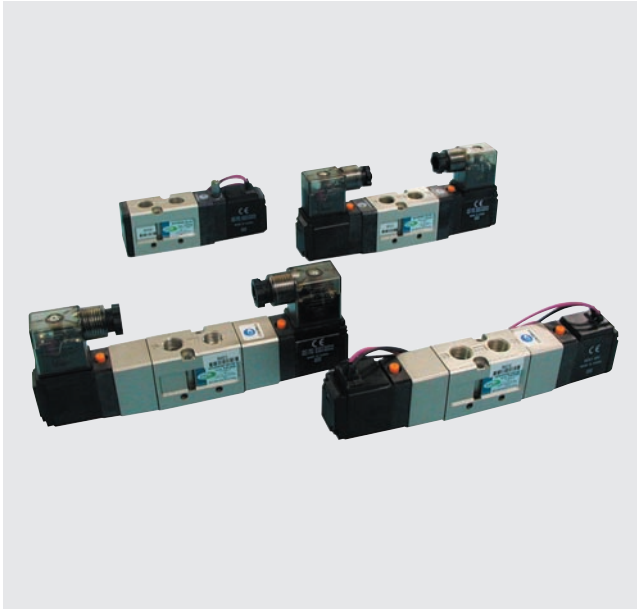


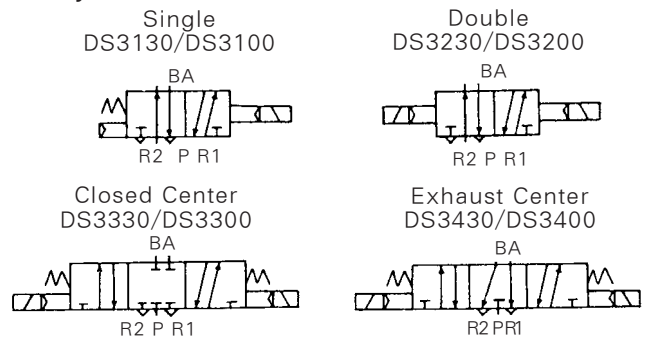
Series **DS3000**

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



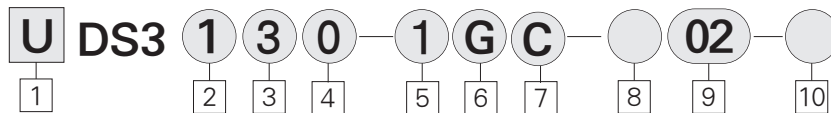
- COMPACT SIZE AND LIGHT WEIGHT
- LARGE FLOW CAPACITY
- LOW POWER CONSUMPTION
- DESIGNED FOR NON-LUBRICATED SERVICE

Symbol



How to Order

Valve



1 Series DS3000

Blank : Metric (PT)
U : NPT (UNF)

2 Type of Actuation

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

3 Body Type

3 : Body Ported type
o : Base Ported type

4 Body option

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

5 Voltage

1 : AC100V, 50/60Hz
2 : AC200V, 50/60Hz
3 : AC120V, 50/60Hz
4 : AC240V, 50/60Hz
5 : DC24V
6 : DC12V
7 : DC6V

8 : Others (DC100V/AC24V)

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 Connector

7 Manual Override

Blank : Non-locking Push type
C : Knob locking type

8 Blank: Rc (PT) G : Rc (PF)

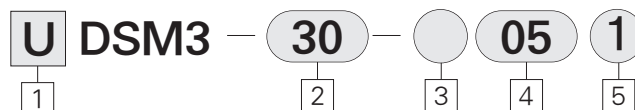
9 Port Size (SUP., CYL.)

01 : 1/8"
02 : 1/4"
(Exhaust Port: 1/8")

10 Special Option

Blank : Standard type
XC16 : Copper-free

Manifold



1 Manifold for DS3000 series

Blank : Metric (PT)
U : NPT (UNF)

2 Manifold Specifications

Code : 30-For Body ported Valves
Port location for CYL. port : Valve
Port size for EXH. : 1/4"
Applicable : DS3030
Note : Please order the appropriate Valve and / or Blanking plate assembly with Manifold base.

3 Thread

Blank : Rc (PT)
G : Rc (PF)

4 Stations

02 : 2 stations
: :
20 : 20 stations

5 Component symbol

Codo : 1
Passage
P (SUP) : Common
P (EXH) : Common
Piping
A, B (CYL) : Top
Applicable Manifold type : 30

DW

DV100

DV1000 -
3000 - 4000

DS300

DS3000

DS5000

DS2000

DX2R

DP300 -
3000 - 5000

DS6000

DX2

DM

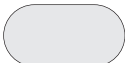
DH

DT220

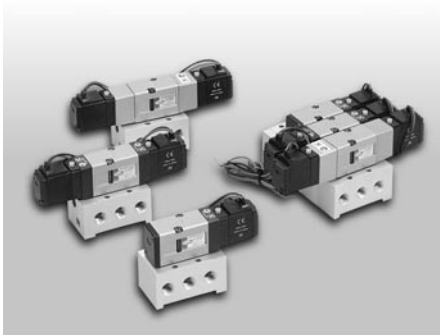
DC

How To Order

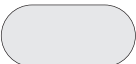
Valve
(Including Gasket & Bolt)

DS 3 1 0 0 — 5 DZ  — 



Valve+Sub Base

DS 3 1 0 0 — 5 DZ  —  8A  

- 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 Voltage
1 : AC100V, 50/60Hz
2 : AC200V, 50/60Hz
3 : AC120V, 50/60Hz
4 : AC240V, 50/60Hz
5 : DC24V
6 : DC12V
7 : DC6V
- 8 : Others (DC100V/AC24V)

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 Threads
Blank : Rc(PT)
U : NPT
G : Rc(PF)
- 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
06 ϕ : ϕ 6 One-Touch Fitting
08 ϕ : ϕ 8 One-Touch Fitting

9 Special Option
Blank : Standard Type
XC16 : Copper-Free

Manifold

 DSM3 — 00 — 02 — 06

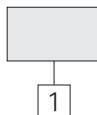
- 1 Thread**
Blank : Rc(PT)
U : NPT
- 2 Stations**
01 : 1 Station 06 : 6 Stations
02 : 2 Stations 07 : 7 Stations
03 : 3 Stations 08 : 8 Stations
04 : 4 Stations 09 : 9 Stations
05 : 5 Stations 10 : 10 Stations
- 3 One-Touch Fitting**
06 : ϕ 6 One-Touch Fitting
08 : ϕ 8 One-Touch Fitting

Blanking Plate
(Including Gasket & Bolt)

DSB 3 — 00

Din Terminal Box How to Order

DS3130-61-2005-



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	Others (DC100V/AC24V)

Specifications

Fluid		Air
Operating Pressure Range	2 Position Single · 3 Position	0.15~0.9MPa (21~128 PSI)
	2 Position Double	0.1~0.9MPa (14~128 PSI)
Ambient and Fluid Temperature		Max. 50℃ (122°F)
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 C/S
	3 Position	3 C/S
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	AC	LED, Varistor
Suppressor Circuit	DC	LED, Varistor

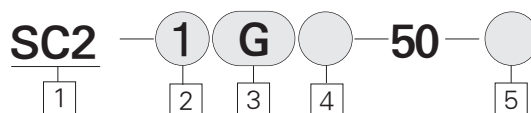
Model

Piping	Type	Position/Solenoid	Port Size NPT/Rc(PT) (SUP,CYL..)	Effective orifice mm ² (Cv factor)		Weight kgf(lbs)
				1/8"	1/4"	
Body Ported	DS3130-00-01/02	2 Single Solenoid	1/8"	14.4(0.8)	18(1.0)	0.21(0.46)
	DS3230-00-01/02	2 Double Solenoid	1/8"	14.4(0.8)	18(1.0)	0.29(0.64)
	DS3330-00-01/02	3Position Closed Center	1/4"	11.7(0.65)	14.4(0.8)	0.44(0.97)
	DS3430-00-01/02	3Position Exhaust Center	1/4"	14.4(0.8)	18(1.0)	0.44(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 DS 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 : Others (DC100V/AC24V)

3 Electrical Entry/Indicator Light and Surge Suppressor

- G : Grommet(Lead wire

- length 300mm (12 inch)
- DZ : DIN connector
- With Indicator light and Surge suppressor
- D : DIN Connector

4 Manual override

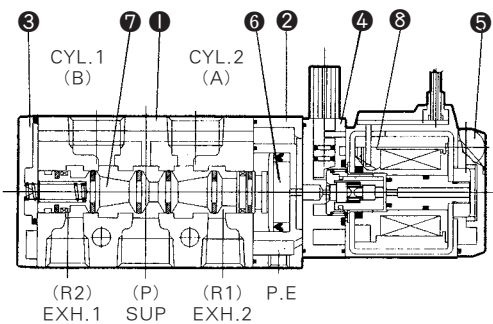
- Blank : Non-Lock Push type
- C : Knob locking type

5 Special Option

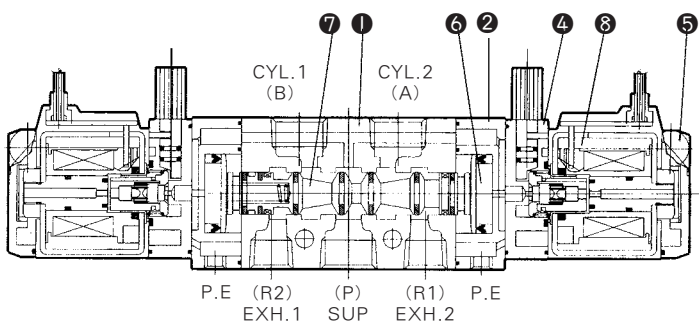
- Blank : Standard Type
- XC16 : Copper-Free

Construction

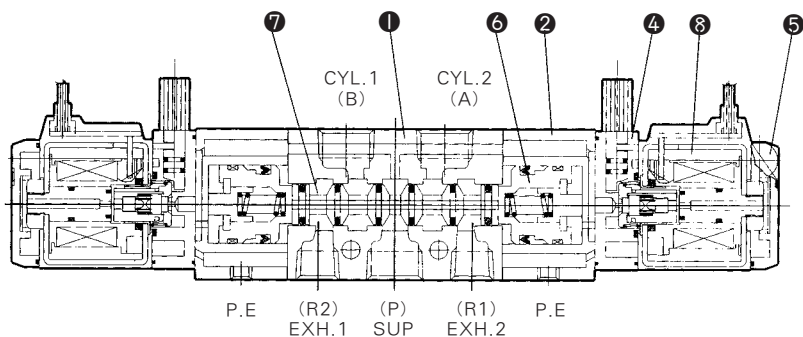
Single Solenoid



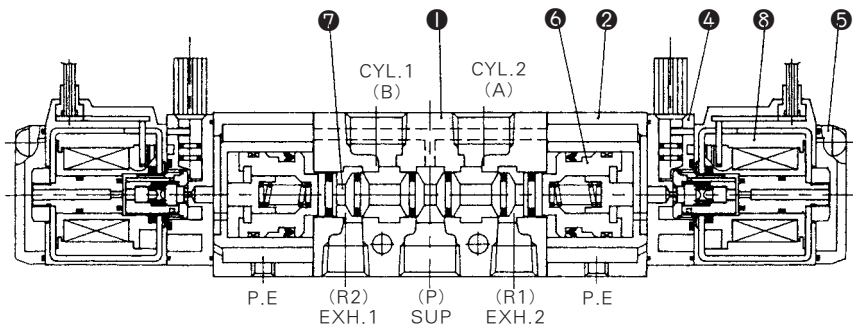
Double Solenoid



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

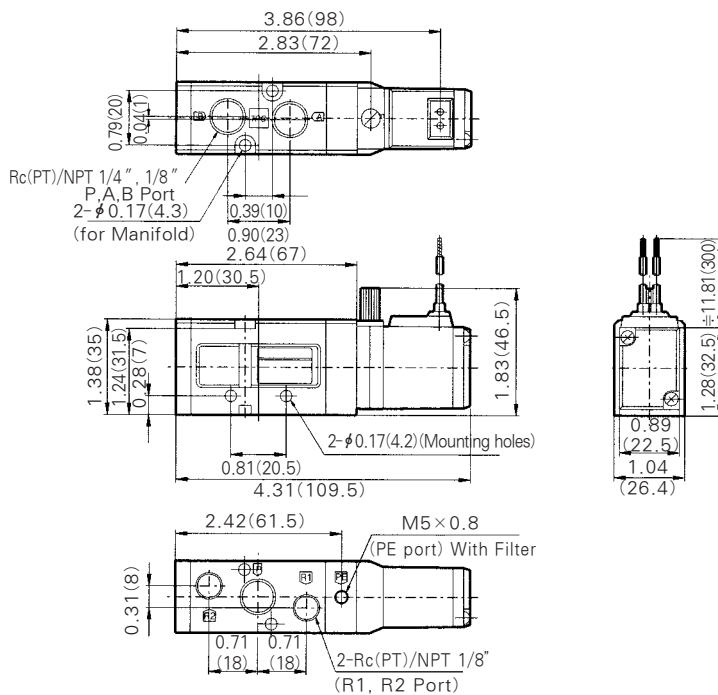
Spare Parts

No.	Description	Material	Notes
⑧	Pilot Valve Assembly	-	-

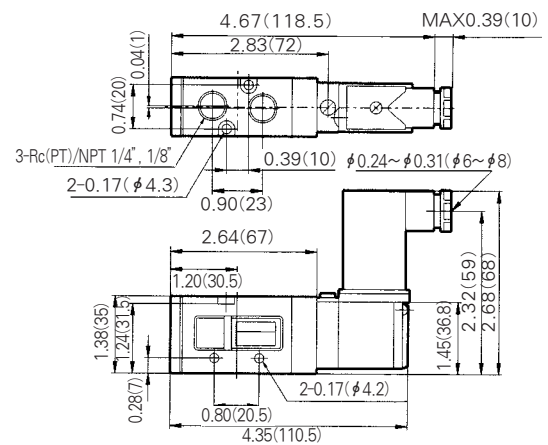
Body Ported/2 Position Single Solenoid

inch(mm)

Grommet/DS3130-○OG



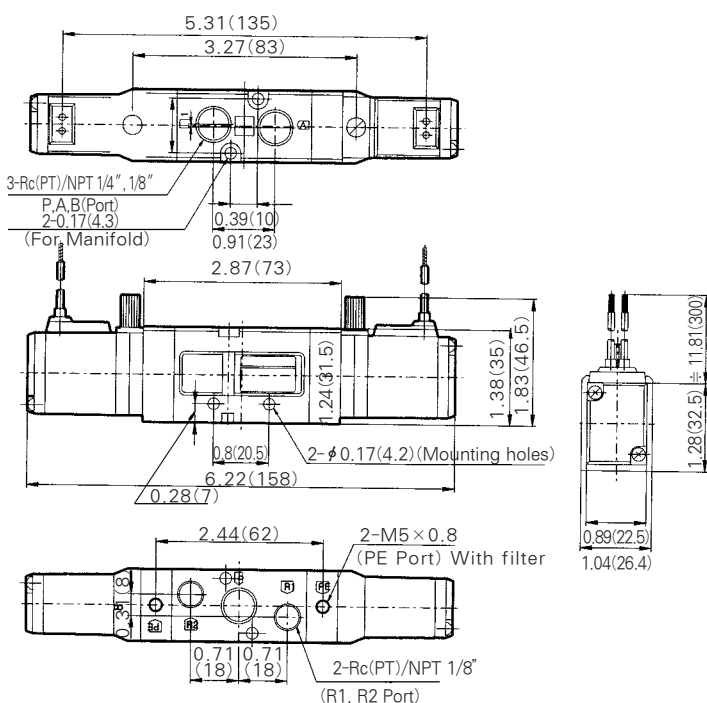
DIN Connector/DS3130-○DZ



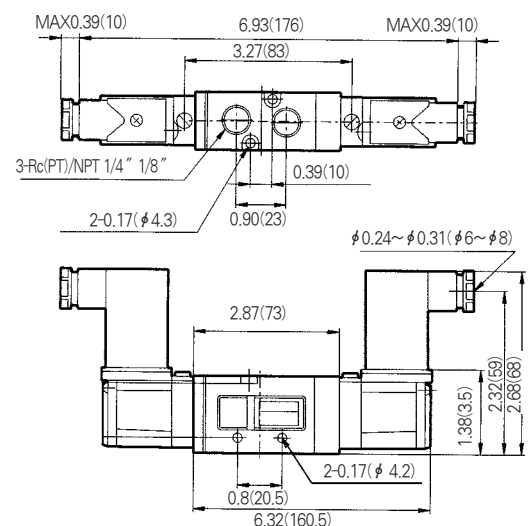
Body Port/2 Position Double Solenoid

inch(mm)

Grommet/DS3230-○GC



DIN Connector/DS3230-○DZ



DW

DV100

DV1000 ·
3000 · 4000

DS300

DS3000

DS5000

DS2000

DX2R

DP300 ·
3000 · 5000

DS6000

DX2

DM

DH

DT220

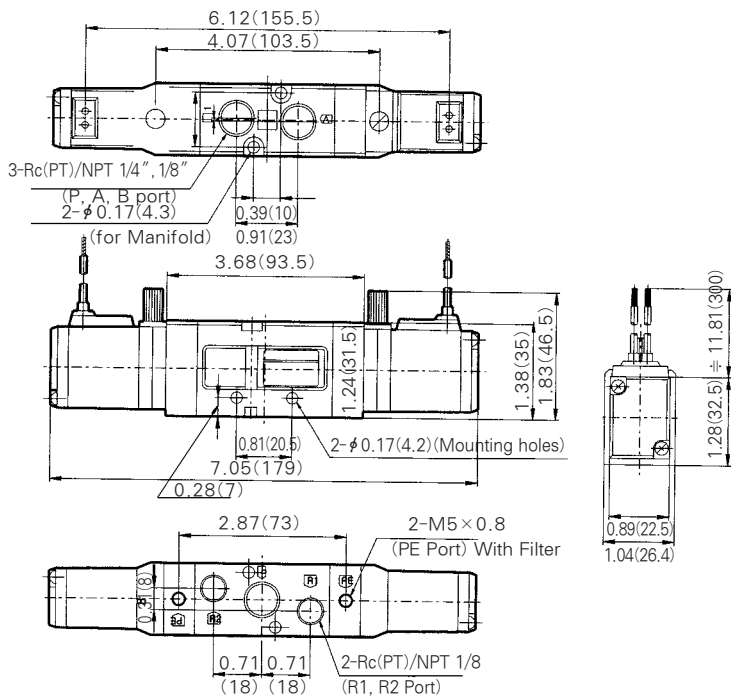
DC

Series DS3000

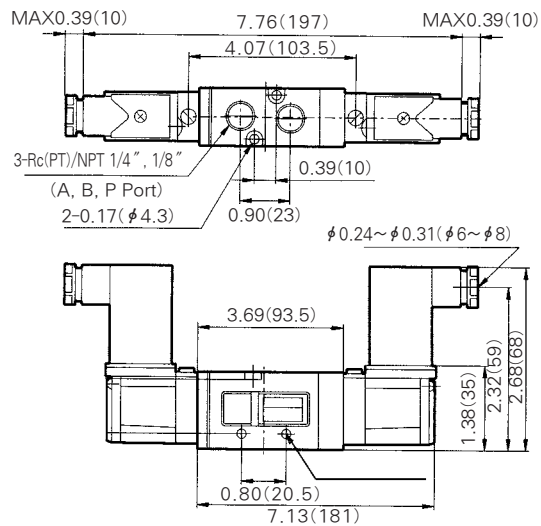
Body Ported/3 Position Double Solenoid

inch(mm)

Grommet/DS3330-○G, DS3430-○G

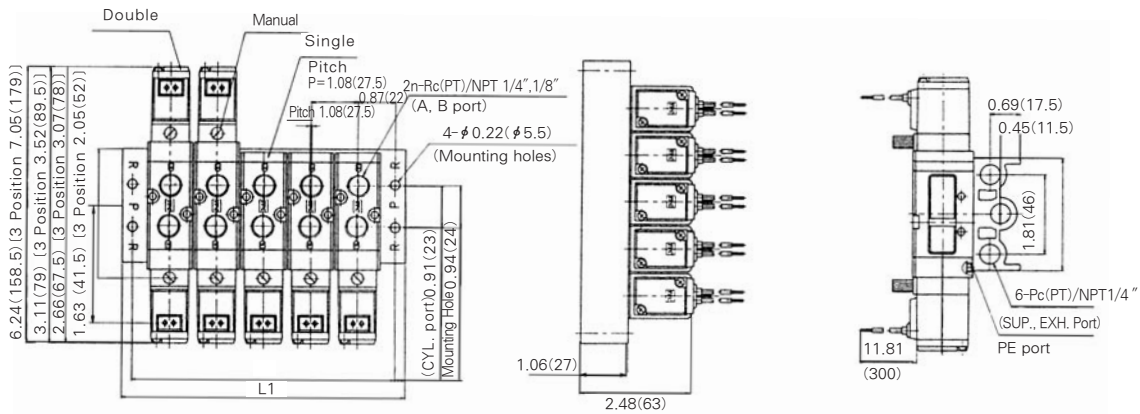


DIN Connector/DS3330-○DZ
DS3430-○DZ



B Mount Type/Dimensions DSM3-30

Common Exhaust/DSM3-30- 001



L:Size

N = Stations

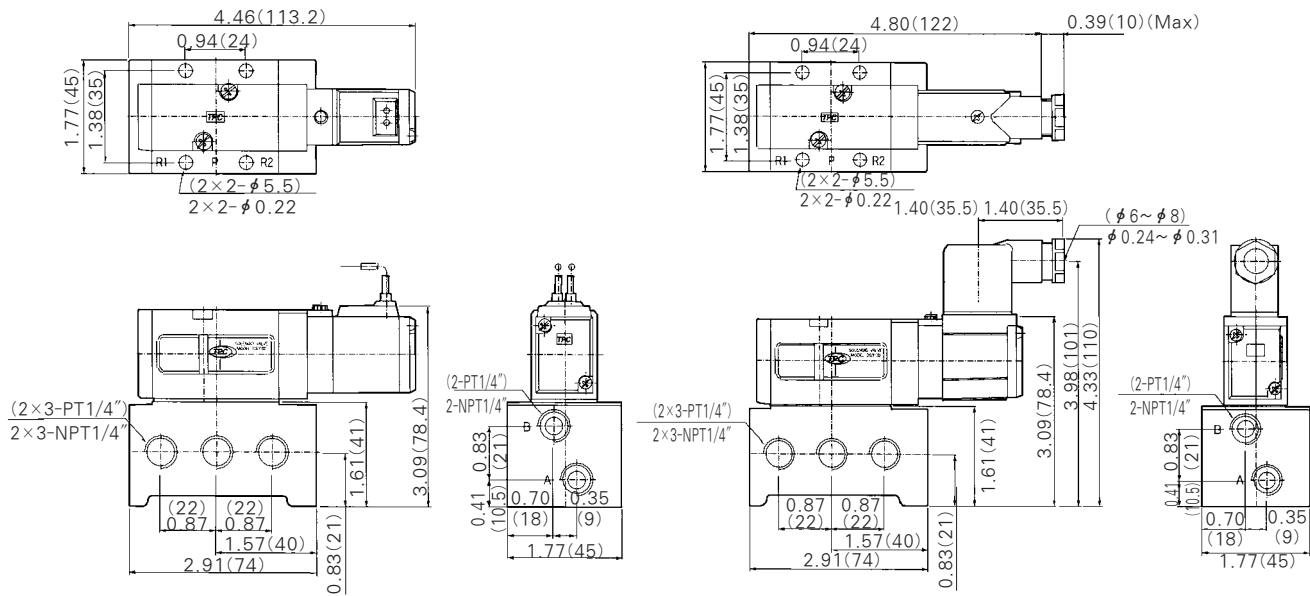
inch																			
Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L1	3.29	4.37	5.45	6.34	7.62	8.70	9.78	10.87	11.95	13.03	14.11	15.20	16.28	17.36	18.44	19.53	20.61	21.69	22.78
L2	2.81	3.90	4.98	6.06	7.15	8.23	9.31	10.39	11.48	12.56	13.64	14.72	15.81	16.89	17.97	19.06	20.14	21.22	22.30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

DIN Connector/DS3100-○DZ

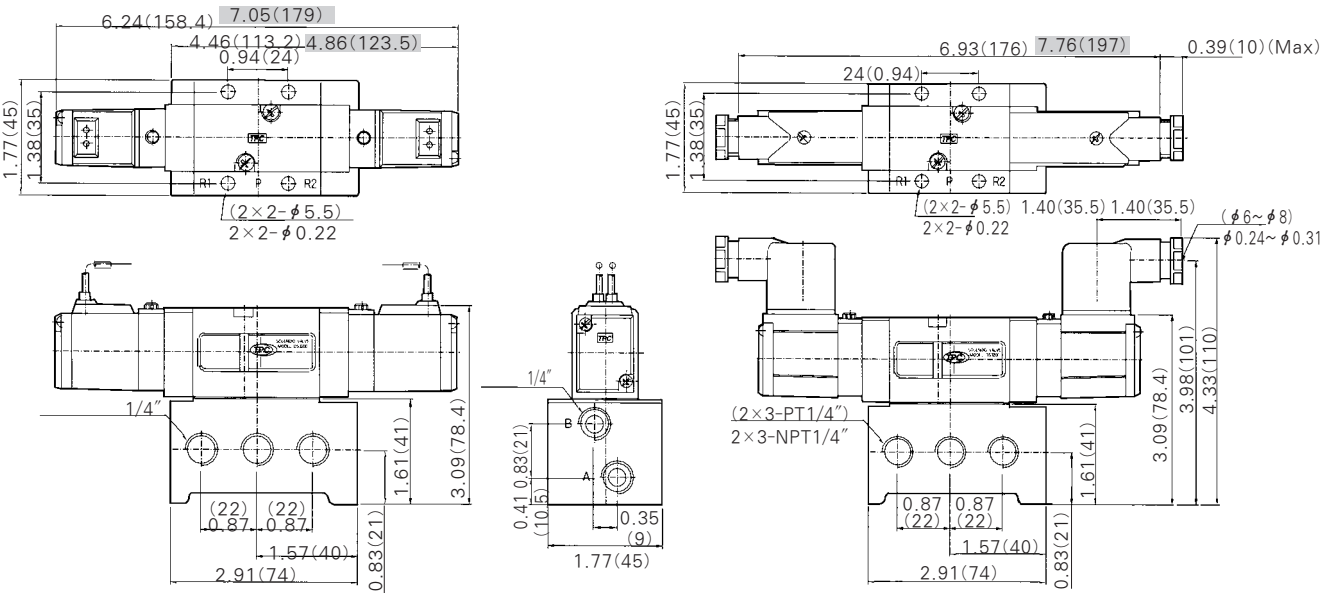


Dimensions/2 Position Double Solenoid · 3 Position Closed Center · Exhaust Center

inch(mm)

Grommet/DS3200, 3300, 3400-○G

DIN Connector/DS3200, 3300, 3400-○DZ



※  : 3Position

DW

DV100

DV1000 ·
3000 · 4000

DS300

DS3000

DS5000

DS2000

DX2R

DP300 ·
3000 · 5000

DS6000

DX2

DM

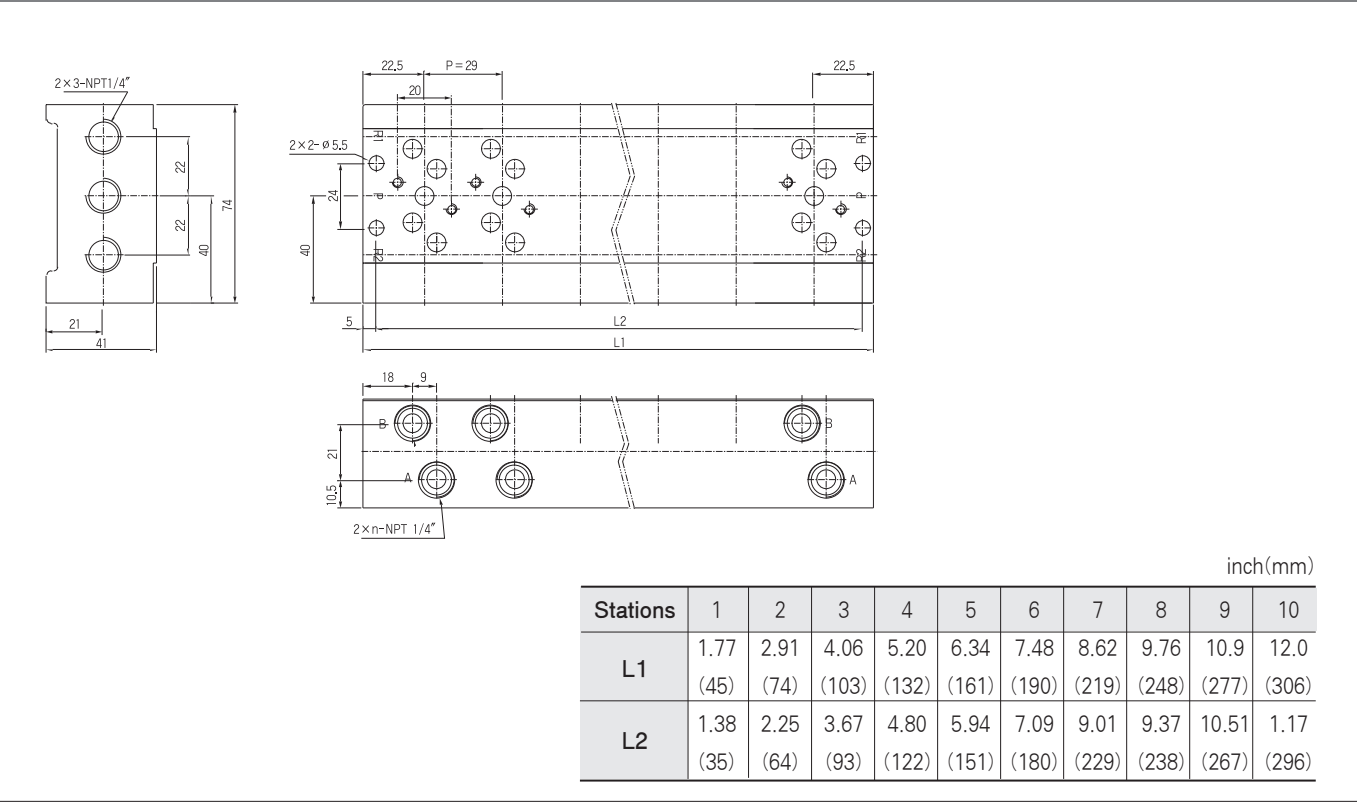
DH

DT220

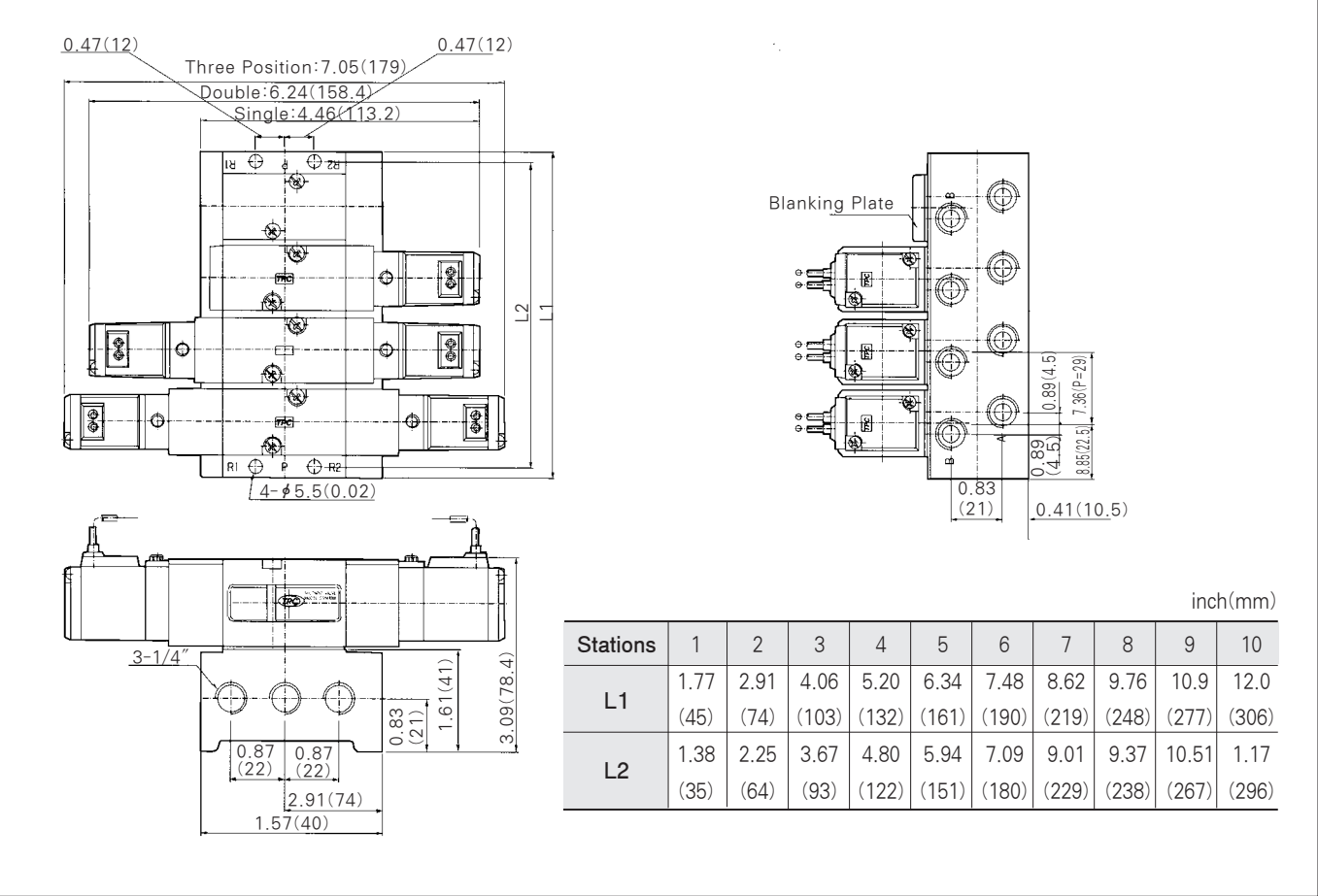
DC

Series DS3000

Dimensions / Manifold Block inch(mm)



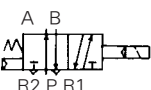
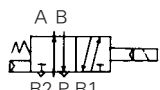
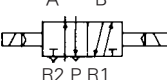
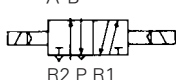
Dimensions/Manifold ASS' Y inch(mm)



Precautions

Use as a 3 Port Valve

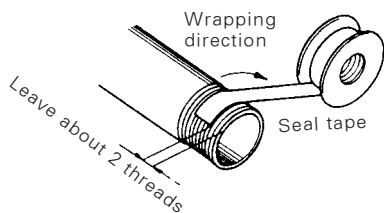
Plugging one of the Cylinder Ports (A or B) enables use as a 3 Port Valve. It should not be used in special applications such as a Non-leakage Valve. Make sure the Exhaust port is open if used as a 3 Port Valve.

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

Mounting

- Make sure that Chips, Cutting Oil, Dust, etc. are cleaned up before mounting.
- When screwing the pipe or fitting into a port, ensure that Chips or Sealing material will not get in.
- 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.
- Clamp torque of piping.

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



Use at Low Temperature

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

Lubricant

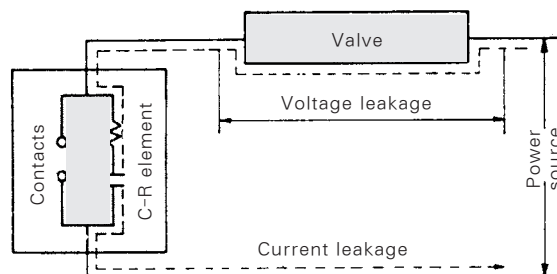
- Valves are pre-lubricated - no further lubrication is necessary.
- If a lubricant is used, please use Turbine Oil (ISO VG32).

Momentary Energizing

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

Leakage Voltage

- 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.
- When using a C-R element, it will increase the leakage voltage.



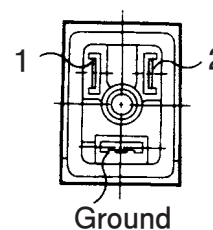
Remarks

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

Electrical Connection

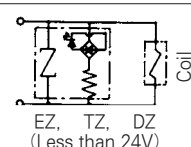
For the DIN Connection and Terminal connection (with surge voltage protection circuit), inner connections are as follows.

DIN connection



Terminal No.	1	2
DIN connection	+	-

Indicator Light/Surge Voltage Suppressor Circuit

Voltage	AC, DC
24V	
200V	