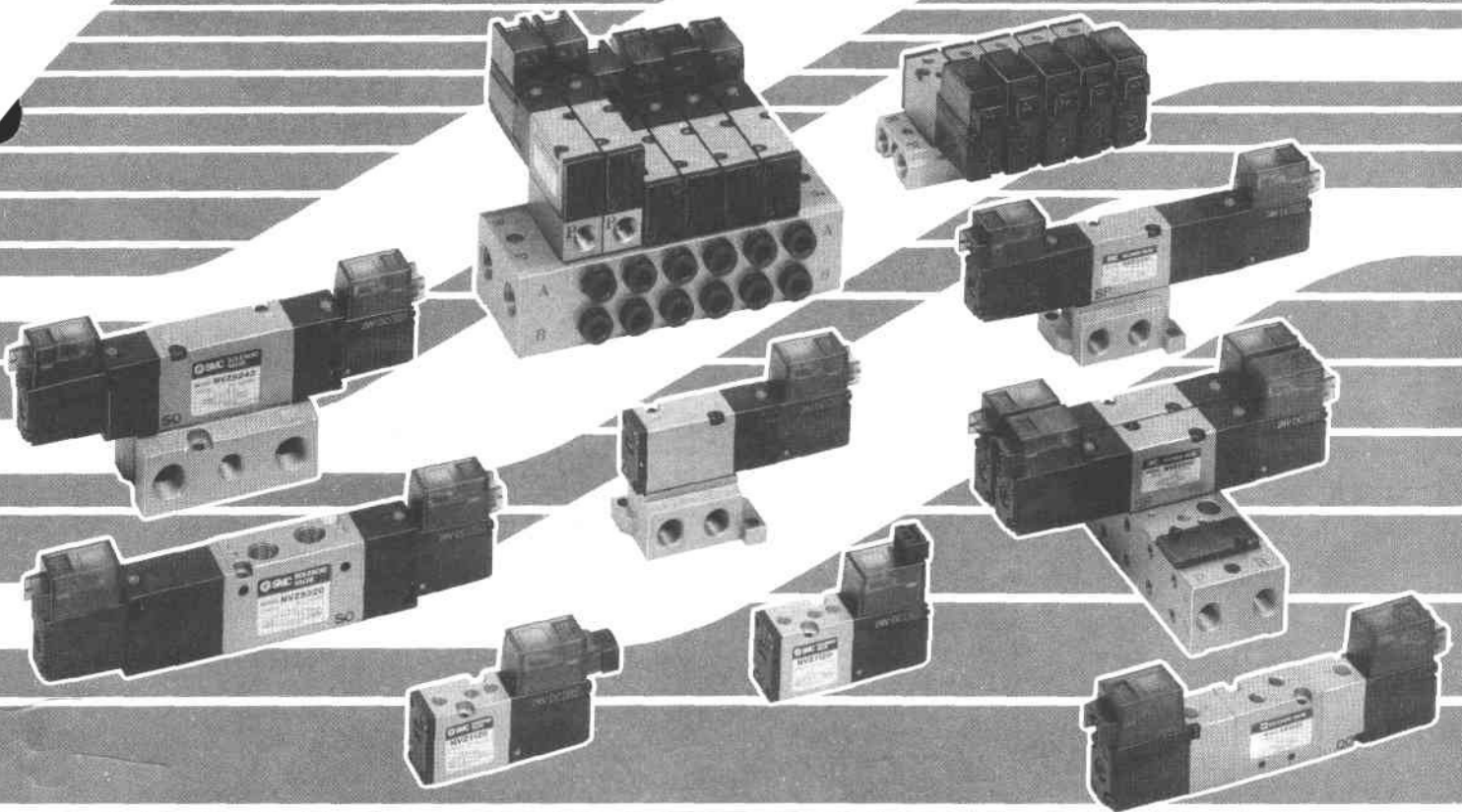


 **SMC**[®]
SMC Pneumatics, Inc.

NVZ1000/3000/5000

4 • 5 Port Solenoid Valve / Rubber Seal Type

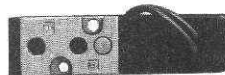


4.5 Ports Solenoid Valve NVZ1000/3000/5000

NVZ1000

Cv0.05

width 0.6" (15mm)



NVZ3000

Cv0.25

width 0.6" (15mm)

(Body ported type Cv0.2)

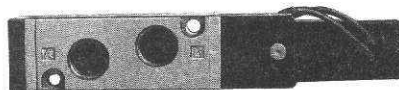
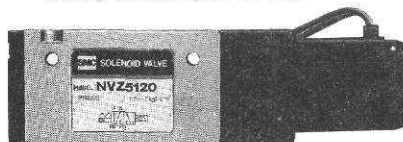


NVZ5000

Cv0.7

width 0.71" (18mm)

(Body ported type Cv0.6)



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NVZ1000

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NVZ3000

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How to Order P ⑫

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(Base Mounted type) P ⑰ ~ ⑱

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(Body Ported type) P ㉚ ~ ㉜

Dimensions

(Base Mounted type) P ㉝ ~ ㉞

Manifold Dimensions P ㉟ ~ ㊱

■ **Power Consumption 1.8WDC**
(w/LED 2.1WDC)

■ **Response Time**

(2 position) 20ms or less

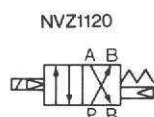
(3 position) 35ms or less : NVZ3000

50ms or less : NVZ5000

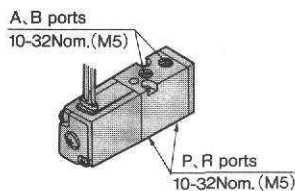
Variations of Series NVZ

NVZ1000

Symbol



Body ported type



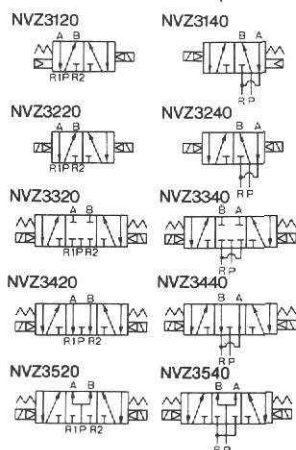
Cv0.05

PAGE 3 ~ 8

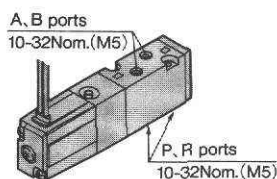
NVZ3000

Symbol

Body ported type Base mounted type with subplate



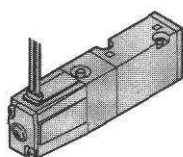
Body ported type



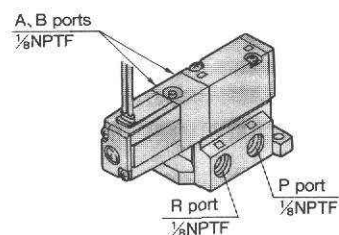
Cv0.25

PAGE 9 ~ 24

Base mounted type



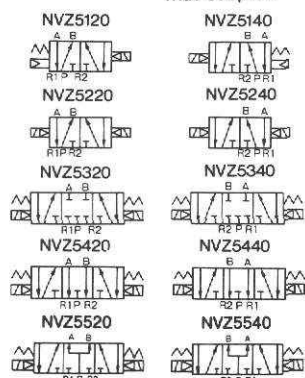
With Subplate



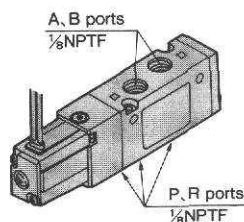
NVZ5000

Symbol

Body ported type Base mounted type with subplate



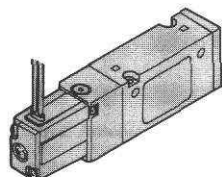
Body ported type



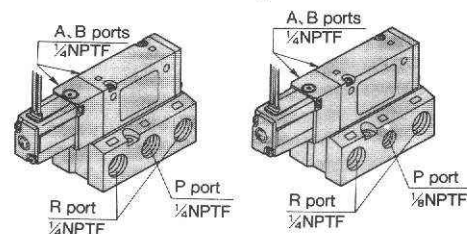
Cv0.7

PAGE 25 ~ 40

Base mounted type

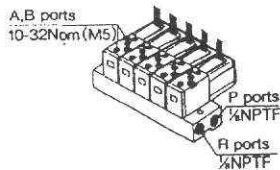


With Subplate



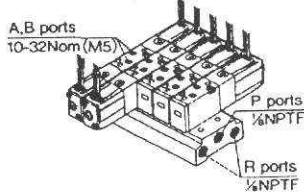
Manifold

Top ported Type 20



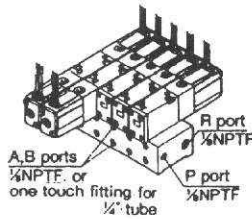
Built-in One Touch fitting manifolds
available for NVZ3000 and NVZ5000

Top ported Type 20

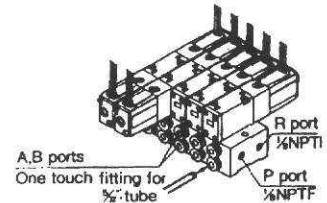


Side ported

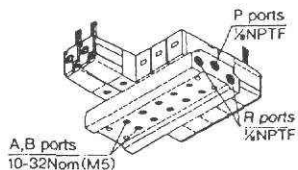
Type 41



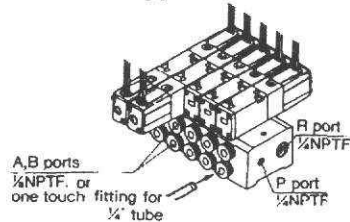
Type 43



Bottom ported Type 40

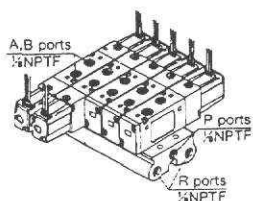


Type 42

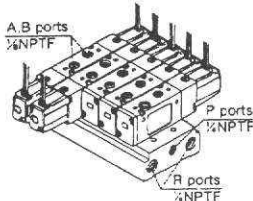


Type 20

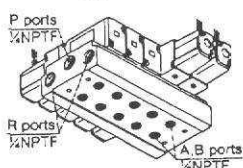
Top ported



Type 21

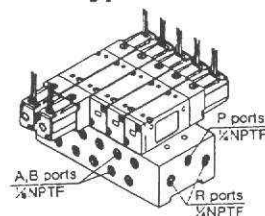


Bottom ported Type 40

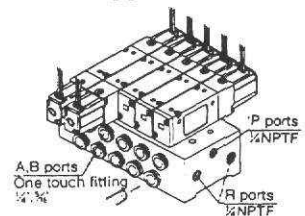


Type 41

Side ported



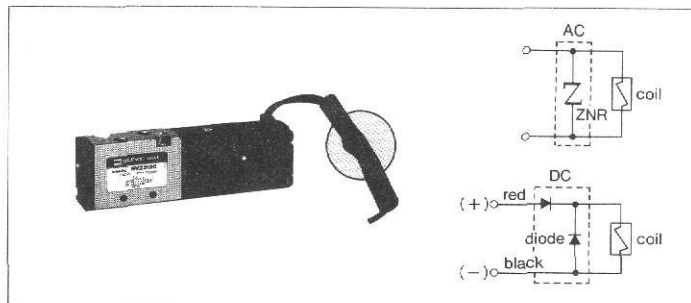
Type 42



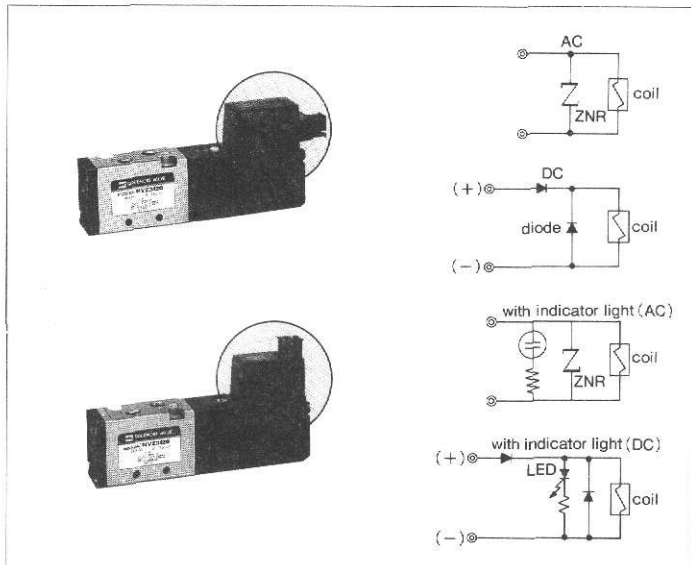
Notes for NVZ1000, 3000, 5000

Surge Voltage Protection Circuit

① Grommet type



② Plug connector type

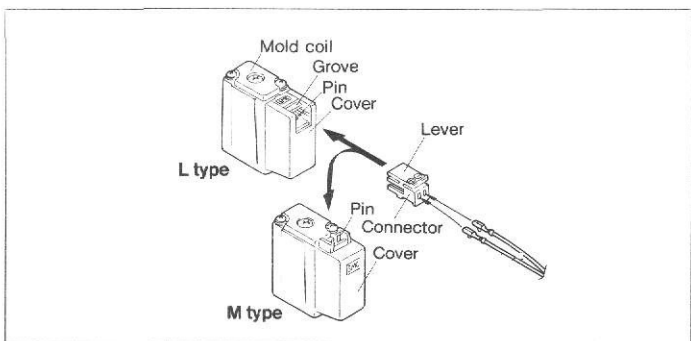


In applications where the supply voltage is DC, correctly connect the lead wires to $\oplus$ (plus) and $\ominus$ (minus) indications on the connector or to the markings $+$ $\leftarrow$ $\rightarrow$ $-$. For those on which the lead wires have been pre-wired, the plus side is red and minus side is black. Cover of indicator light is made of polycarbonate, therefore avoid contact with any substance that may attack polycarbonate, such as organic solvents.

Connection/Disconnection Of Plug

① Connection — Push the connector straight on to the pins of the solenoid, making sure the lip of the lever is securely positioned in the groove on the solenoid cover.

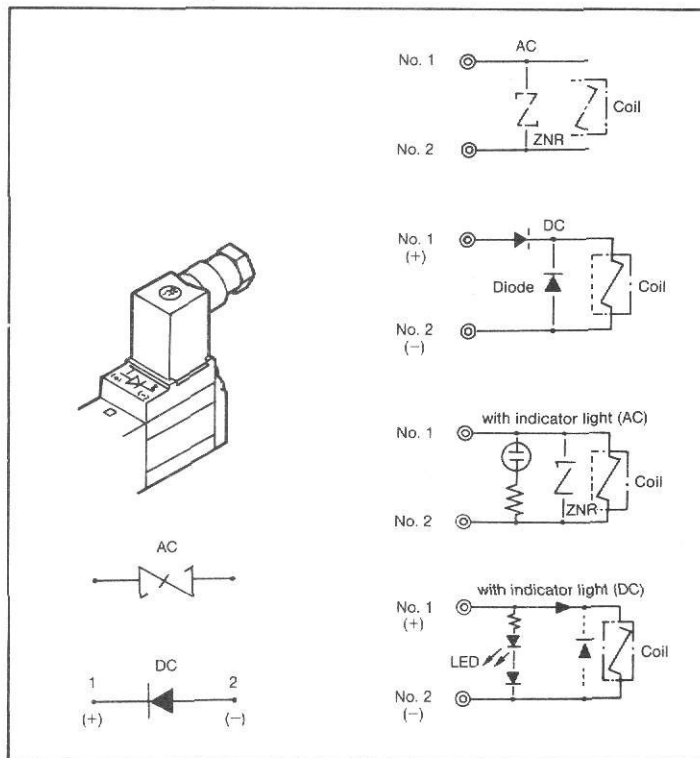
② Disconnection — Pinch the lever against the connector and pull connector away from the solenoid.



DIN Connector

Based on international standard, IP65 (DIN 40050).

② DIN connector type



Common Exhaust For Main Valve & Pilot Valve

NVZ3003 and NVZ5003 valves are available with a common exhaust for the pilot valve exhaust and the main valve exhaust.

Exhaust air from the pilot valve will flow to the main valve exhaust port. Exhaust air from the main valve will not enter the pilot valve side due to a check valve.

Applications

- Elimination of air contamination which pilot exhaust would create.
- Elimination of pilot exhaust noise.
- Prevention of dust entry into valve when used in extremely dusty environments.

Common exhaust type valves are to be used with the common type manifolds. Please install exhaust cleaner (Series NAMC) when used in this manner. Take precautions for piping so that common exhaust air does not become restricted.

Flow Control (NVZ1120)

Be sure not to install a flow control valve on NVZ1120 type. If flow control is required, install a speed controller on the cylinder.

Piping

- ▶ Make sure that chips, cutting oil, dust, etc. are cleaned up before piping.
- ▶ When using a NVZ3300 or NVZ5301 closed center type, make sure of non-leakage between the fittings and piping.
- ▶ If required to pipe on the pilot exhaust (PE) port, remove the mesh filter.
- ▶ Fastening torque

Thread	Proper fastening torque in-lbs
10-32Nom. (M5)	13~17.3
1/8NPTF	60.6~78.0
1/4NPTF	104~121.3

Quality Of Operating Fluid

- ① A filter of about 5 microns is preferred.
- ② Remove drainage from the system since large quantity of drainage can lead to product malfunction as well as environmental contamination.
- ③ When there is a large amount of carbon powder from the compressor, it causes valve malfunction.
Please change the compressor oil or install a mist separator.

Lubrication

- ① The valve has been lubricated for life at manufacture, and does not require further lubrication in service.
- ② If a lubricant is used in the system, use turbine oil type #1 (ISO /G32). If lubricant has been used in the system, do not cease to lubricate as the original lubricant applied during manufacturing will have been washed away.

Recommended Lubricants for SMC Pneumatics' Valves

Lubricant Table

Manufacturer	Lubricant
BP	THB 32
Castrol	Perfecto T32
ESSO/Exxon	TERESSO 32
Mobil	DTE Light
Shell	Turbo T32

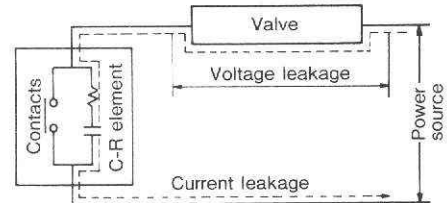
Voltage Leakage

- ① Ensure that the voltage remaining across the ends of the coil due to current leakage when the power is switched OFF is as follows: (at magnetic seal position)

AC coil: No more than 15% of the rated voltage

DC coil: No more than 2% of the rated voltage

- ② Note that when using a C-R element for contact protection, the voltage leakage may increase due to the current leakage flowing through the C-R element.



※Note that a contact-less relay is provided with a protection circuit that will allow some current leakage.

Operating Conditions

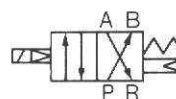
- ① Avoid applications where exposed to corrosive gas, chemical solution or vapor, seawater, etc.
- ② When installing the valve in a place which is temporarily exposed to water droplets or oil, use a protective barrier or cover.
- ③ When the unit is used in a dusty location, provision should be made to prevent dust from entering the unit by installing silencers to the EXH ports.
- ④ The valve may be used in low temperature applications down to 26°F if the air is sufficiently free of moisture. Please use an appropriate dryer to ensure dry air and prevent the valve from freezing.
- ⑤ The double solenoid valve must be energized for at 0.1 seconds or more to ensure proper operation.

Cv0.05

4 Port Solenoid Valve NVZ1000



Symbol
NVZ1120



Model

Body	Type of actuation	Model	Cv factor	Port size	Weight lbs (gf)
Body Ported type	2 Position	Single NVZ1120--M5	P→A 0.034	10-32Nom. (M5)	0.2 (90)
			B→R 0.083		
			P→B 0.056		
			A→R 0.05		

Specifications

Fluid	Air, Inert gases
Operating Pressure range	20~100PSI (1.5~7kgf/cm ²)
Ambient and fluid temperature	Max. 120°F (50°C)
Response time	15 ms or less (at 70PSI)
Max.operating frequency	900 cpm
Manual override	Non-locking type
Lubrication	Not required (Use turbine oil ISO VG32 if lubrication is required.)
Mounting position	Free
Impact/vibration resistance	15G/5G (45~1000Hz)
Enclosure	Dust proof

Solenoid Specifications

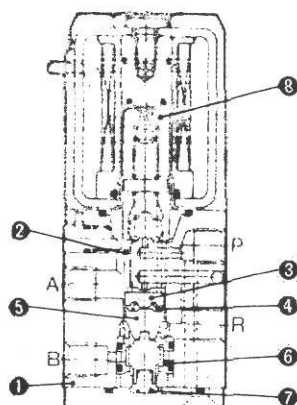
Electrical entry			Grommet (G) (H) Plug connector (L) (M)
Voltage	AC		110V 50% Hz, 220V 50% Hz
			100V 50%Hz, 200V 50%Hz 24V 50%Hz, 48V 50%Hz
	DC		6V, 12V, 24V, 48V
Allowable voltage			-15 ~ +10% of rated voltage
Coil insulation			Class E or equivalent (250°F)
Temperature rise			81°F or less
Power consumption	DC		1.8W/2.1W (W/LED)
Apparent power	AC	Inrush	4.2VA/60Hz 4.5VA/50Hz
		Holding	3VA/60Hz 3.5VA/50Hz
Surge voltage suppressor			DC : Diode, AC : ZNR
Indicator light			DC:LED (Red), AC:Neon Lamp

Options

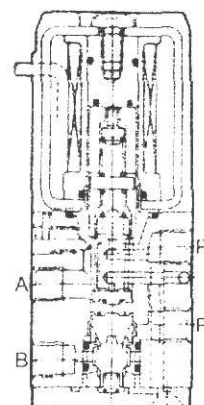
Description	Part number	Notes
Foot Bracket w/screws	DXT170-34-1B	NVZ1120 4 port
Silencer	10-32 (NOM)	For R port of valve body Noise reduction: 18 dB or more, Cv factor Cv 0.28
	1/8NPTF	For R port of manifold base Noise reduction: 21 dB or more, Cv factor 1.94

Construction/Parts List

De-energized



Energized



in Parts

Description	Material	Notes
Body	Zinc diecast	Metallic paint
Push rod	Polyacetal	
EXH. poppet	NBR	
Back up spring	Stainless Steel	
V packing	NBR	
Retainer ass'y	Brass, NBR	
Poppet spring	Stainless Steel	

Spare Parts

No.	Description	Parts number	Notes
8	Solenoid ass'y *	—	DXT170-A-○○○

※Including armature ass'y.

ow To Order Solenoid Ass'y

Solenoid ass'y	DXT170-A-3G
-------------------	-------------

Voltage●

1*	100VAC ^{50/60} Hz
2*	200VAC ^{50/60} Hz
3	110VAC ^{50/60} Hz
4	220VAC ^{50/60} Hz
5	24VDC
6	12VDC
9*	Others

※ Special Order.

●Indicator light and surge voltage suppressor

—	None
Z*	With Indicator light and surge voltage suppressor
S†	With surge voltage suppressor

※ Except grommet type.

† Special order

●Electrical entry

G	Grommet	Lead wire length 12" (300mm)
H*	Grommet	Lead wire length 24" (600mm)
L	L type plug connector	With lead wire
LO		Without connector
M	M type plug connector	With lead wire
MO		Without connector

* Special Order Only.

NVZ1000

How To Order : NVZ1000

Voltage

1*	100VAC $50_{\pm 50}$ Hz
2*	200VAC $50_{\pm 50}$ Hz
3	110VAC $50_{\pm 50}$ Hz
4	220VAC $50_{\pm 50}$ Hz
5	24V DC
6	12V DC
9*	Others

* Special order.

Indicator light and surge voltage suppressor

—	None
Z*	With Indicator light and surge voltage suppressor
S†	With surge voltage suppressor

* Grommet type not avail. with 'Z'.
† Special order.

Surge voltage suppressor
of grommet type



Body Ported

NVZ1120—

5

L

M5—

Electrical entry

G: Grommet (std.)



Lead wire
length
: 12 inch
(300mm)



Lead wire
length
: 24 inch
(600mm)

L: L type plug
connector
with lead wire



Lead wire
length
: 12 inch
(300mm)

M: M type plug
connector
with lead wire



Lead wire
length
: 12 inch
(300mm)

LO: L type plug
connector
without connector



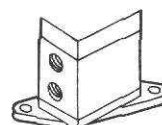
MO: M type plug
connector
without connector



* Special order.

Optional accessory

F: Foot bracket



Port Size

M5	10-32Nom. (M5 × 0.8)
----	----------------------

How To Order/ Connector Ass'y

DXT170—80—

A—

20

Lead wire color

1*	Blue/Blue
2*	Red/Red
3	Gray/Gray
4	Red/Black

* Special order.

Type 3 — Std. AC use.
Type 4 — Std. DC use.

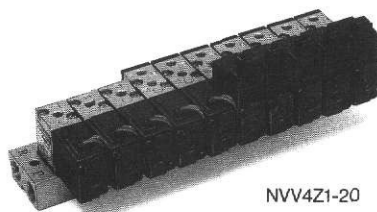
Lead wire length

—	12 inch (300mm)
6	24 inch (600mm)
10	40 inch (1000mm)
15	60 inch (1500mm)
20	80 inch (2000mm)
25	100 inch (2500mm)
30	120 inch (3000mm)

When order the valve and non-standard
connector ass'y, include both the valve and
connector ass'y product numbers.
(Example) in case of 80 inch lead wire
length:

NVZ1120—5MO—M5
DXT170—80—4A—20

Manifold



NVV4Z1-20

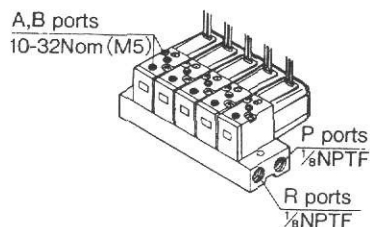
Specifications

P(SUP) • R(EXH) type	Common SUP and EXH type
Valve stations	2 ~ 20 stations
Optional accessory	Blanking plate ass'y : DXT170-25-1A SUP relocation ass'y : DXT170-44-1A EXH relocation ass'y : DXT170-48-1A

Note: If there are more than 10 stations, supply air to both sides of manifold and exhaust from both sides of manifold.

How To Order/ NVV4Z1 Manifold

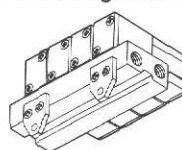
NVV4Z1—20—03 1—



Stations •	
02	2 stations
⋮	⋮
20	20 stations

•Optional accessory

— : None
F : Mounting brackets



Manifold Mounting Of VVZ100 And NVZ1000

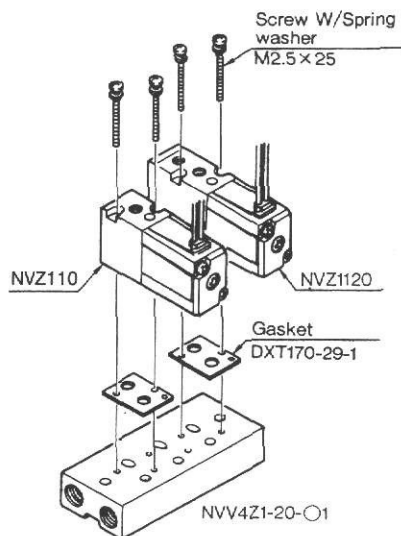
Relocation Spacer Ass'y For Exhaust/Supply

Blank Station Plate Ass'y

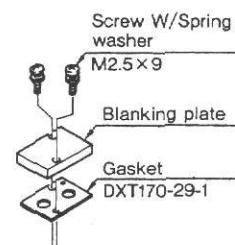
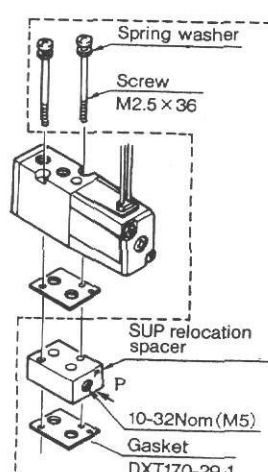
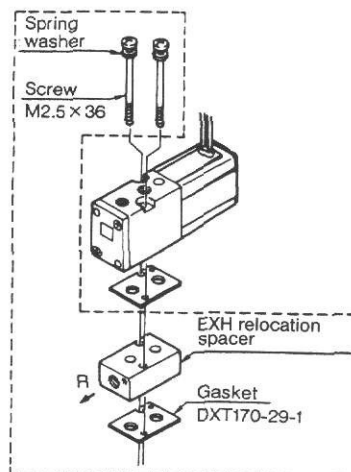
Spacer ass'y for
individual exhaust
DXT170-48-1A

Spacer ass'y for
individual supply
DXT170-44-1A

DXT170-25-1A



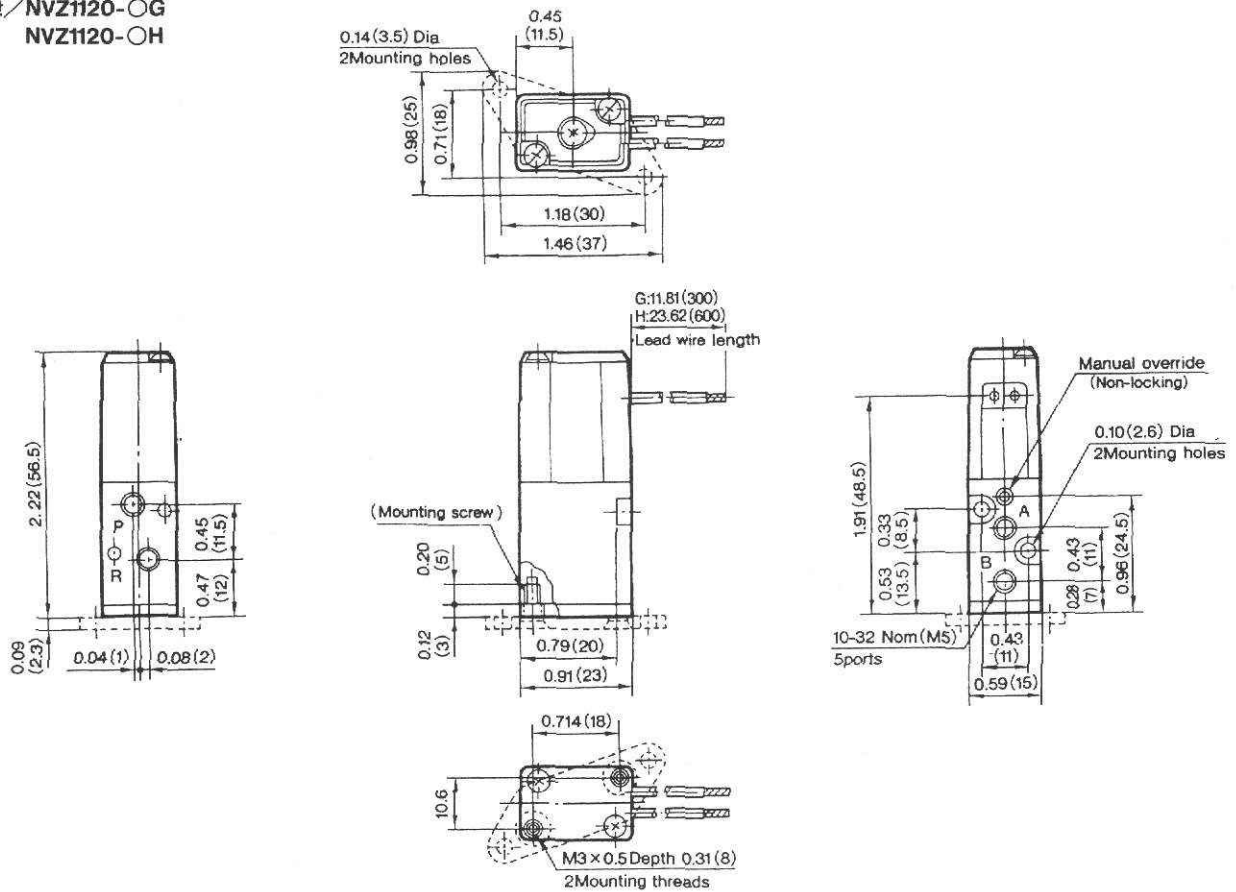
VVZ120 cannot be used on the
NVV4Z1-20-01 with NVZ1120.



Body Ported Type

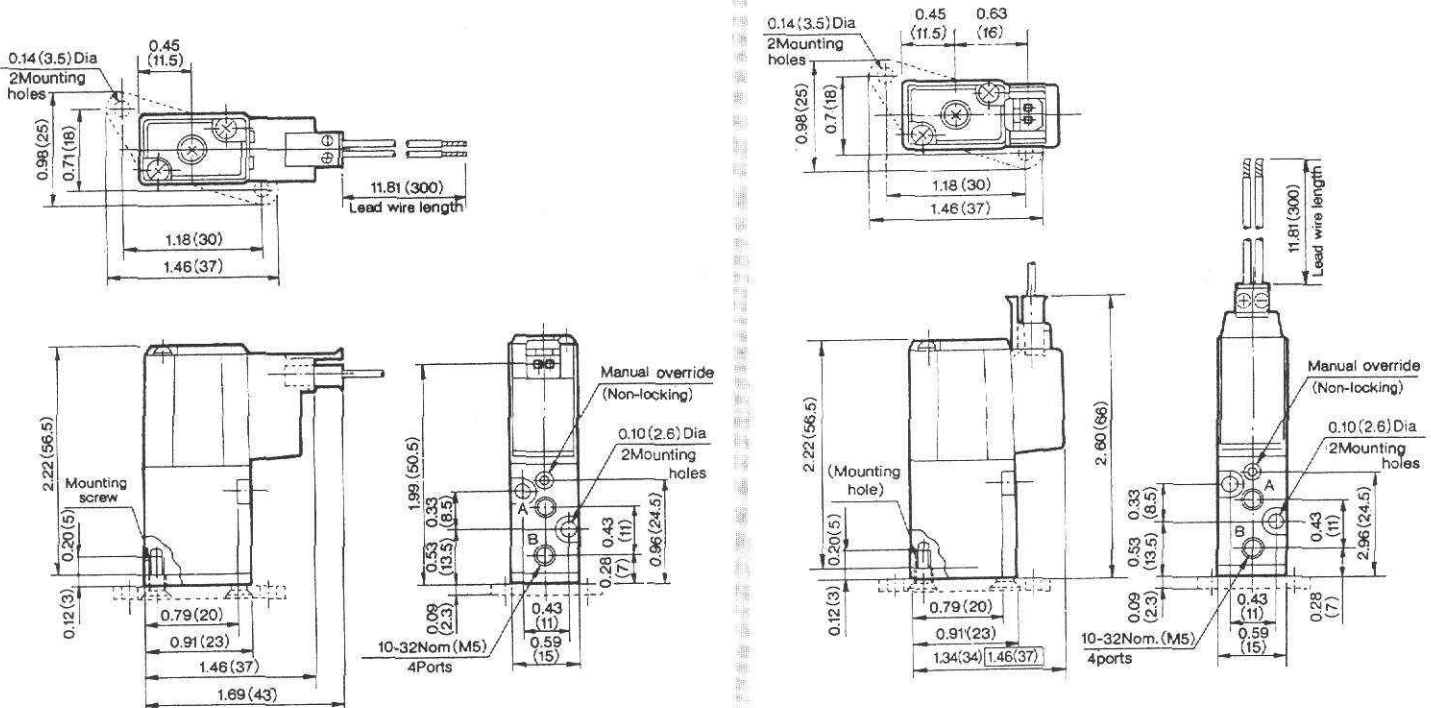
inch (mm)

Grommet / NVZ1120-OG
NVZ1120-OH



L type plug connector / NVZ1120-OL

M type plug connector / NVZ1120-OM

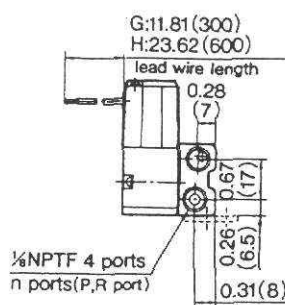
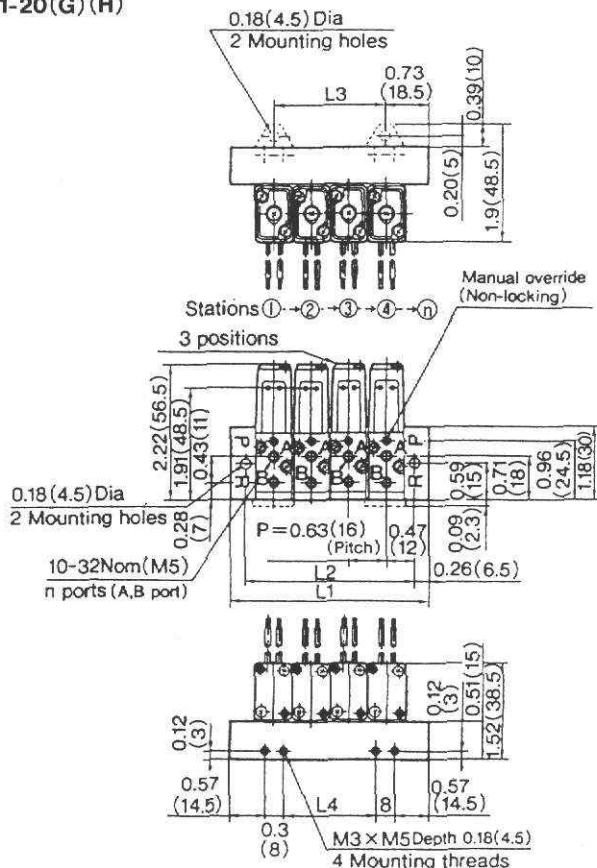


□ With indicator light and surge voltage suppressor.

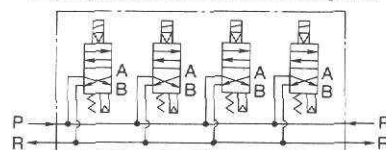
type 20 Manifold/ Top Ported

inch(mm)

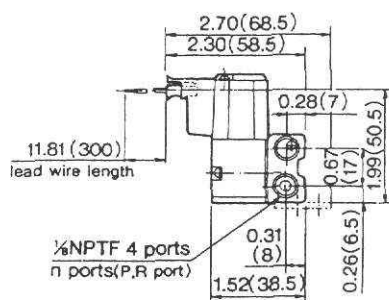
ommet/NVV4Z1-20(G)(H)



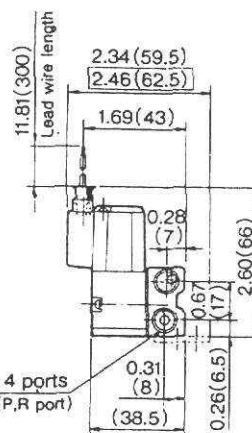
Example pneumatic circuit diagram



type plug connector/NVV4Z1-20(L)



M type plug connector/NVV4Z1-20(M)

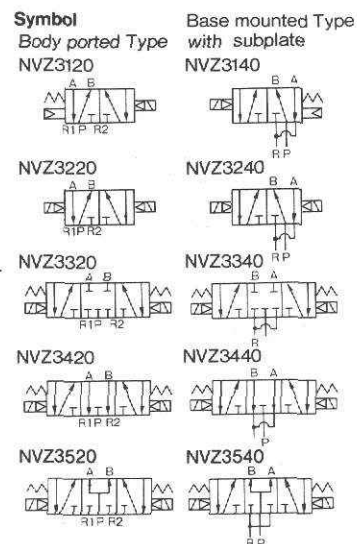
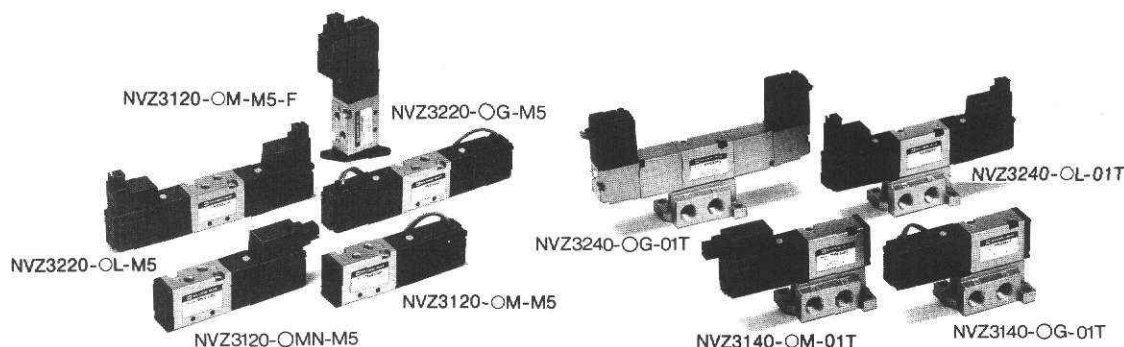


□ : With indicator light and surge voltage suppressor

ations (n)	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L ₁	2.09 (53)	2.72 (69)	3.35 (85)	3.98 (101)	4.61 (117)	5.24 (133)	5.87 (149)	6.50 (165)	7.13 (181)	7.76 (197)	8.39 (213)	9.02 (229)	9.65 (245)	10.28 (261)	10.91 (277)	11.54 (293)	12.17 (309)	12.80 (325)	13.43 (341)
L ₂	1.57 (40)	2.20 (56)	2.83 (72)	3.46 (88)	4.09 (104)	4.72 (120)	5.35 (136)	5.98 (152)	6.61 (168)	7.24 (184)	7.87 (200)	8.50 (216)	9.13 (232)	9.76 (248)	10.39 (264)	11.02 (280)	11.65 (296)	12.28 (312)	12.91 (328)
L ₃	0.63 (16)	1.26 (32)	1.89 (48)	2.52 (64)	3.15 (80)	3.78 (96)	4.41 (112)	5.04 (128)	5.67 (144)	6.30 (160)	6.93 (176)	7.56 (192)	8.19 (208)	8.82 (224)	9.45 (240)	10.08 (256)	10.71 (272)	11.34 (288)	11.97 (304)
L ₄	0.31 (8)	0.94 (24)	1.57 (40)	2.20 (56)	2.83 (72)	3.46 (88)	4.09 (104)	4.72 (120)	5.35 (136)	5.98 (152)	6.61 (168)	7.24 (184)	7.87 (200)	8.50 (216)	9.13 (232)	9.76 (248)	10.39 (264)	11.02 (280)	11.65 (296)

Cv0.25

5 Port Solenoid Valve NVZ3000



Model

Body type	Type of actuation		Model	Cv factor	Port size	Weight lbs (gf)
Body Ported type	2 position	Single	NVZ3120-00-M5	0.2	10-32 Nom. (M5)	0.17 (75)
		Double	NVZ3220-00-M5	0.2		0.26 (120)
	3 position	Closed center	NVZ3320-00-M5	0.18		0.43 (195)
		Exhaust center	NVZ3420-00-M5	0.15		0.43 (195)
		Pressure center	NVZ3520-00-M5	0.22		0.43 (195)
Base mounted type with subplate	2 position	Single	NVZ3140-00-01T	0.25	1/8 NPTF	0.28 (125)
		Double	NVZ3240-00-01T	0.25		0.37 (170)
	3 position	Closed center	NVZ3340-00-01T	0.19		0.54 (245)
		Exhaust center	NVZ3440-00-01T	0.15		0.54 (245)
		Pressure center	NVZ3540-00-01T	0.22		0.54 (245)

Specifications

Fluid	Air, Inert gases	
Operating pressure range	2position single, 3position	20~100PSI (1.5~7kgf/cm ²)
	2position double	15~100PSI (1.0~7kgf/cm ²)
Ambient and fluid temperature	Max. 120°F (50°C)	
Response time	2position : 20ms or less, 3position : 35ms or less (70PSI)	
Max. operating frequency	2position : 10c/s 3position : 3c/s	
Manual override	Non-locking push type, Slotted locking type, Knob locking type	
Pilot exhaust	Individual, Common	
Lubrication	Not required (Use turbine oil ISO VG32 if lubrication is required.)	
Mounting position	Free	
Impact/vibration resistance	30G/5G(8.3~2000Hz)	
Enclosure	Dust proof	

Options

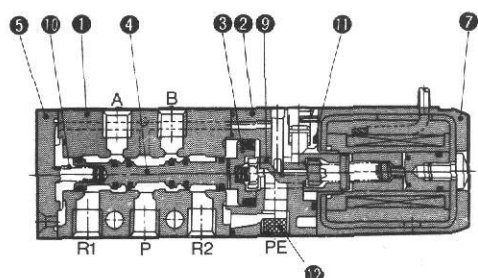
Description	Parts number	Notes
Foot bracket with screws	DXT170-34-1B	NVZ3120
Silencer	10-32UNF	NAN120-M5 18dB or more
	1/8NPTF	NAN110-N01 21dB or more

Solenoid Specifications

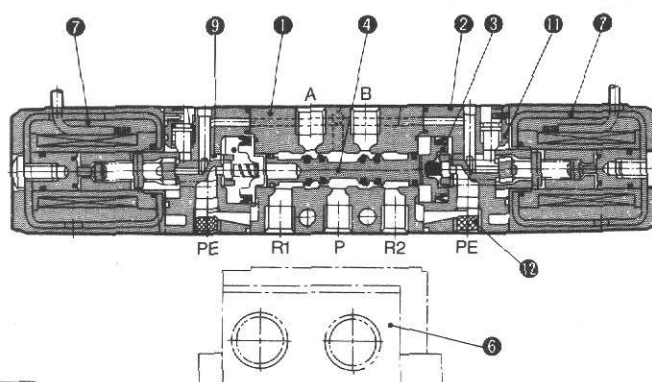
Electrical entry		Grommet (G) (H); Plug connector (L) (M) DIN connector (D)
Voltage	AC	110V ^{5%} Hz, 220V ^{5%} Hz
	DC	24V ^{5%} Hz
Allowable voltage	-15~10% of rated voltage	
Coil insulation	Class E or equivalent (250°F)	
Temperature rise	81°F or less	
Power consumption	DC	1.8W/2.1W (W/LED)
Apparent power	AC	Inrush 4.2VA/60Hz, 4.5VA/50Hz
		Holding 3VA/60Hz, 3.5VA/50Hz
Surge voltage suppressor	DC : Diode, AC : ZNR	
Indicator light	DC : LED (Red), AC : Neon Lamp	

Construction/Parts List

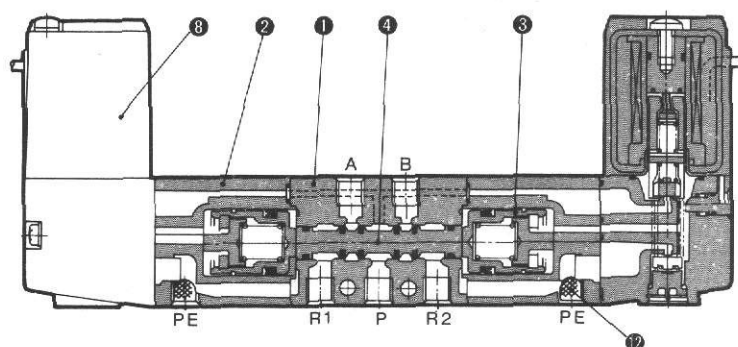
Single Solenoid



Double Solenoid



3 Position Closed Center



Main Parts

No.	Description	Material	Notes
1	Body	Aluminum die cast	Metallic paint
2	Piston plate	Polyacetal *	
3	Piston	Polyacetal **	
4	Spool Ass'y	Aluminum + NBR	
5	End cover	PBT	
6	Sub plate	Aluminum die cast	Metallic paint

Zinc die cast is used on 3position
* Aluminum is used on 3position

Spare Parts

No.	Description	Material	Parts number
7	Solenoid ass'y*	—	DXT170-C-○○○
8	Pilot valve ass'y	—	VZ111-○○○
9	Push rod	Polyacetal	DXT192-32-1
10	Spool spring	Stainless steel	DXT192-7-1
11	O ring	NBR	13×11×1
12	Filter	Stainless	AXT500-17

* Including armature ass'y

How To Order

or 2 position valve

Solenoid ass'y	DXT170-C-3-G-S
----------------	----------------

or 3 position valve

Pilot Valve ass'y	VZ111-3-G-S
-------------------	-------------

Voltage *	Electrical entry	
* 100VAC 50/60 Hz	G	Grommet Lead wire length 12" (300mm)
* 200VAC 50/60 Hz	H*	Grommet Lead wire length 24" (600mm)
110VAC 50/60 Hz	L	L type plug connector With lead wire
220VZC 50/60 Hz	LO	L type plug connector Without connector
24V DC	M	M type plug connector With lead wire
12V DC	MO	M type plug connector Without connector
* Others	D	DIN connector With DIN top
	DO†	DIN connector Without DIN top

Special Order.

* Special Order Only.

† DOZ is not available.

Indicator light and surge voltage suppressor

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

* Plug connector type only

How To Order/Connector Ass'y

DXT170-80-3-A-6

Lead wire color *	Lead wire length *
1* Blue/Blue	— 12 inch (300mm)
2* Red/Red	6 24 inch (600mm)
3 Gray/Gray	10 40 inch (1000mm)
4 Red/Black	15 60 inch (1500mm)
	20 80 inch (2000mm)
	25 100 inch (2500mm)
	30 120 inch (3000mm)

* Special Order.
std. AC : '3'
std. DC : '4'

When ordering valve without standard connector ass'y, include both the valve and connector ass'y product numbers. (Example) in case of 80 inch lead wire length,

NVZ3120-4LO-M5
DXT170-80-3A-20

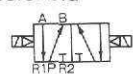
How To Order : NVZ3000

Position

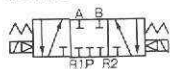
1: 2 position single solenoid



2: 2 position double solenoid



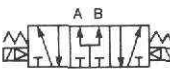
3: 3 position closed center



4: 3 position exhaust center



5: 3 position pressure center



Voltage

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

* Special Order.

Indicator light and surge voltage suppressor

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

* Not avail. for grommet type.

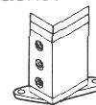
† Special order.

Port size

M5	10-32Nom. (M5×0.8)
----	-----------------------

Optional accessory

F: Foot bracket



Surge voltage suppressor of grommet type.



For type 20 manifold



Body Ported

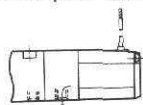
NVZ3 1 2 0 5 L — — M5 —

Base mounted

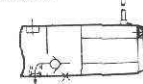
NVZ3 1 4 0 5 L — — —

Body option

0: Individual pilot exhaust



3: Common exhaust for main and pilot valve



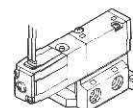
The pilot exhaust is connected to the main exhaust port via a check valve

For type 40, 41, 42, 43 manifold

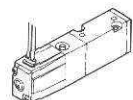


Port size

01T: With 1/8NPTF subplate



—: Without subplate



Electrical entry

G: Grommet (std.)



Lead wire length : 12 inch (300mm)

H: Grommet*



Lead wire length : 24 inch (600mm)

L: L type plug connector



With lead wire

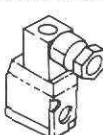
Lead wire length : 12 inch (300mm)

LO: L type plug connector



Without connector

D: DIN connector



M: M type plug connector



With lead wire

Lead wire length : 12 inch (300mm)

MO: M type plug connector

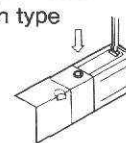


Without connector

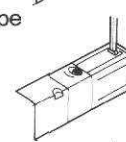
* Special Order

Manual override

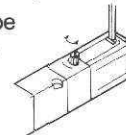
—: Non-locking push type manual override



B: Slotted locking type manual override



C*: Knob locking type manual override



* Special order

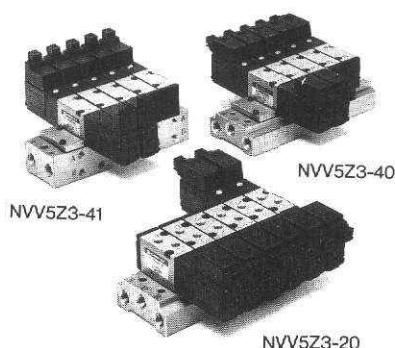
Manifold

Specifications

Type P(SUP), R(EXH)	Common SUP, EXH type
Valve stations	2 ~ 20 stations
Options	Blanking plate ass'y EXH/SUP Relocation spacer ass'y

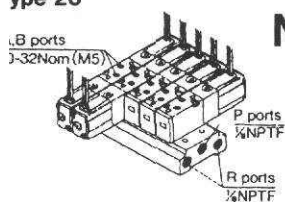
Note: If there are more than 8 stations, supply air and exhaust from both sides of manifold.

When using a NVZ3400 with a manifold, use a EXH relocation spacer ass'y because the exhaust of other solenoid valves may cause actuator malfunction.
Please order the appropriate valves and/or blanking plate ass'y with manifold base.



Type And How To Order

type 20



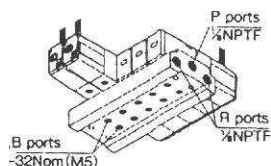
NVV5Z3-20-05 1-00T

Stations •	
02	2 stations
⋮	⋮
20	20 stations

Applicable valves
NVZ312○-○○○-M5
NVZ322○-○○○-M5
NVZ332○-○○○-M5
NVZ342○-○○○-M5
NVZ352○-○○○-M5

Options —
Blank plate ass'y: DXT192-13-1A
EXH Relocation Spacer ass'y:
DXT192-21-1A

type 40



NVV5Z3-40-05 2-M5

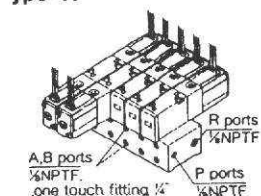
Stations •	
02	2 stations
⋮	⋮
20	20 stations

•Size of A, B port	
M5	10-32 Nom. (M5)

Applicable valves
NVZ314○-○○○
NVZ324○-○○○
NVZ334○-○○○
NVZ344○-○○○
NVZ354○-○○○

Options —
Blank plate ass'y: DXT192-13-1A
EXH Relocation Spacer ass'y:
DXT192-21-1A
SUP Relocation Spacer ass'y:
(only for type 41, 42, 43):
DXT192-40-1TA
Interface regulator
(only for type 41, 42, 43):
NARBZ3000-00-P

type 41

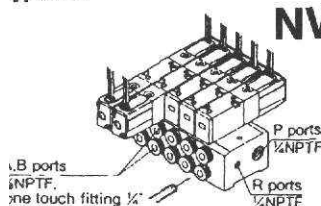


NVV5Z3-41-05 1-M5

Stations •	
02	2 stations
⋮	⋮
20	20 stations

•Size of A, B port	
M5	10-32 Nom. (M5)

type 42

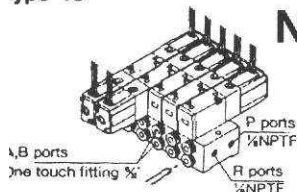


NVV5Z3-42-05 1-01T

Stations •	
02	2 stations
⋮	⋮
20	20 stations

•Size of A, B port	
01T	1/8 NPTF
B7T	One touch fitting for 1/4" tube

type 43

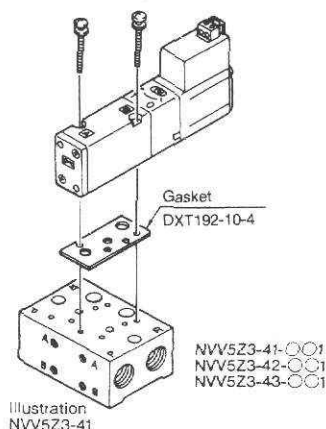
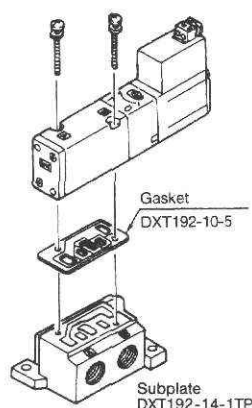
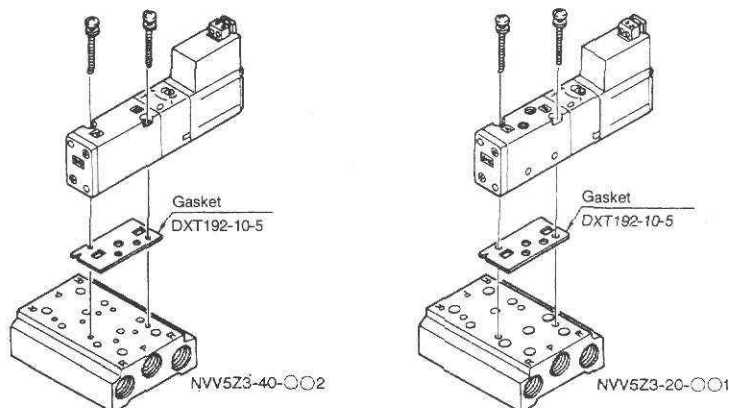


NVV5Z3-43-03 1-B3T

Stations •	
02	2 stations
⋮	⋮
20	20 stations

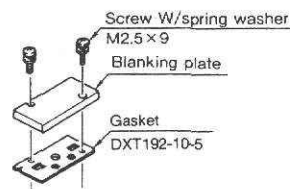
•Size of A, B port	
B3T	One touch fitting for 3/8" tube

Proper Combinations of Solenoid Valve, Gasket, Manifold / Subplate Base



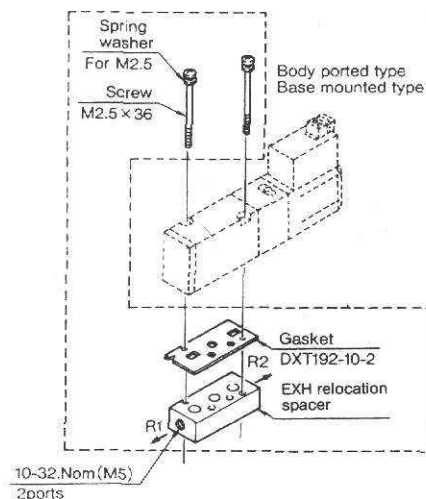
Blank Plate Ass'y

DXT192-13-1A



EXH Relocation Spacer Ass'y

DXT192-21-1A

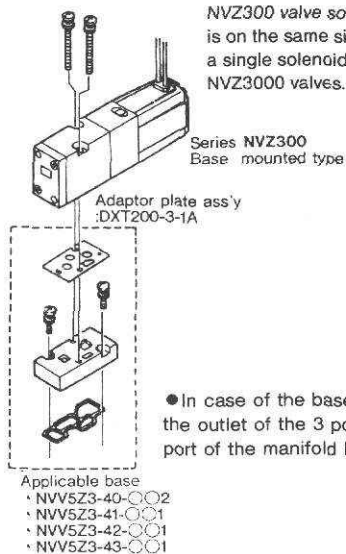
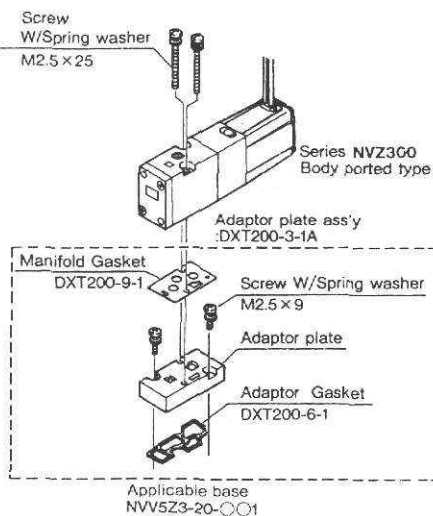


Manifold Mounting of Series NVZ300 And NVZ3000

Adaptor plate ass'y / DXT200-3-1A

● Assemble according to the illustration.

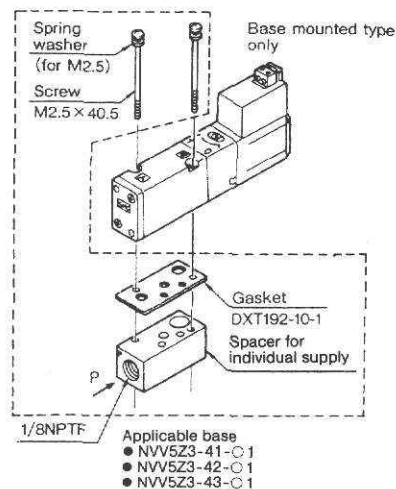
Mount such that the series NVZ300 valve solenoid is on the same side as a single solenoid series NVZ3000 valves.



● In case of the base mounted type, the outlet of the 3 port valve is the B port of the manifold base.

SUP Relocation Spacer Ass'y

DXT192-40-1TA



Technical drawing of the front view of a rectangular component. The drawing shows a central rectangular body with rounded corners. Two vertical slots are located at the top. Dimensions are provided in inches and millimeters (in parentheses). The overall width is 0.98 (25). The overall height is 1.46 (37). The distance from the top edge to the center of the slots is 0.91 (23). The distance from the bottom edge to the center of the slots is 1.18 (30). The distance from the left edge to the center of the slots is 0.59 (15). The distance from the right edge to the center of the slots is 0.71 (18). The text 'Dia' and 'g holes' is partially visible at the bottom left, indicating the diameter of the holes.

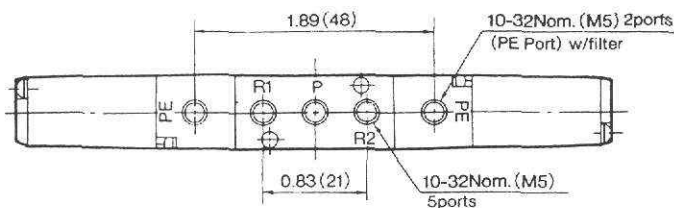
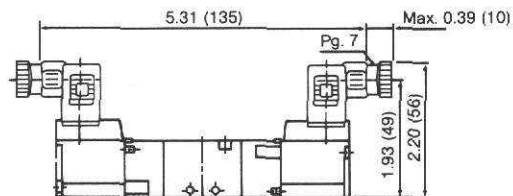
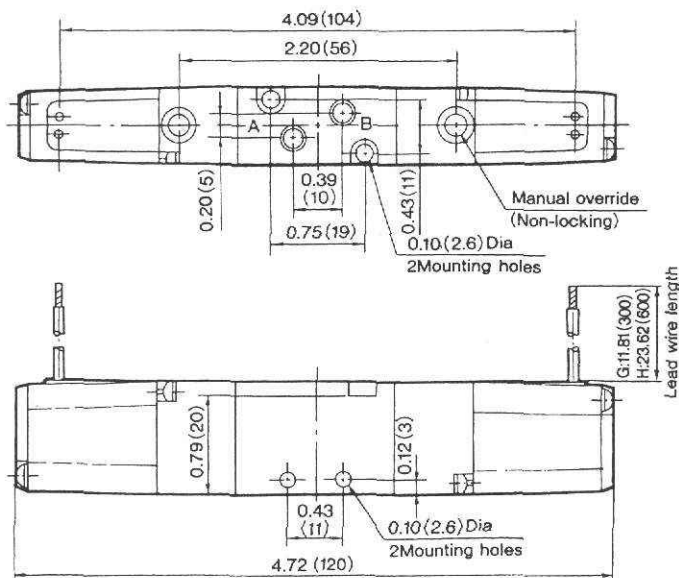
14

Body Ported Type / 2 Position Double Solenoid

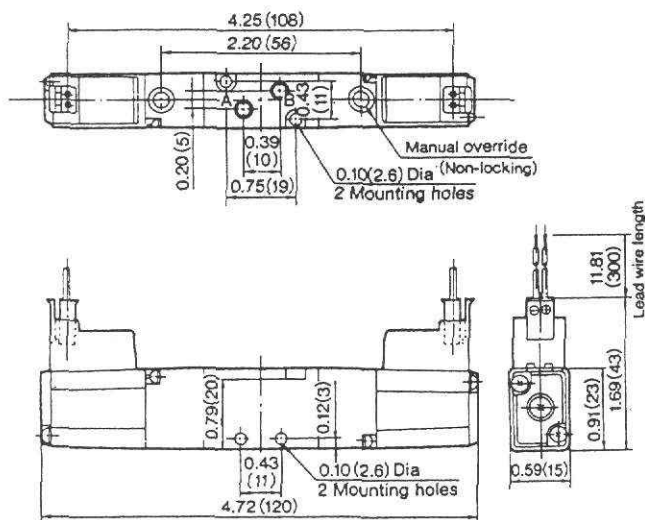
inch(mm)

Grommet/NVZ3220-○G○○-M5
NVZ3220-○H○○-M5

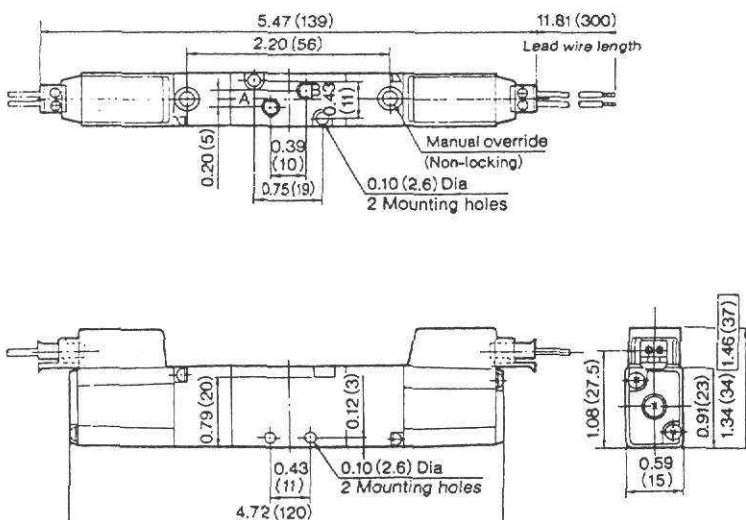
DIN connector (D)/
NVZ3220-○D○○-M5



L type plug connector/NVZ3220-○L○○-M5



M type plug connector/NVZ3220-○M○○-M5



□ : With indicator light and surge voltage suppressor

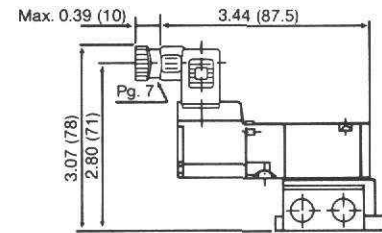
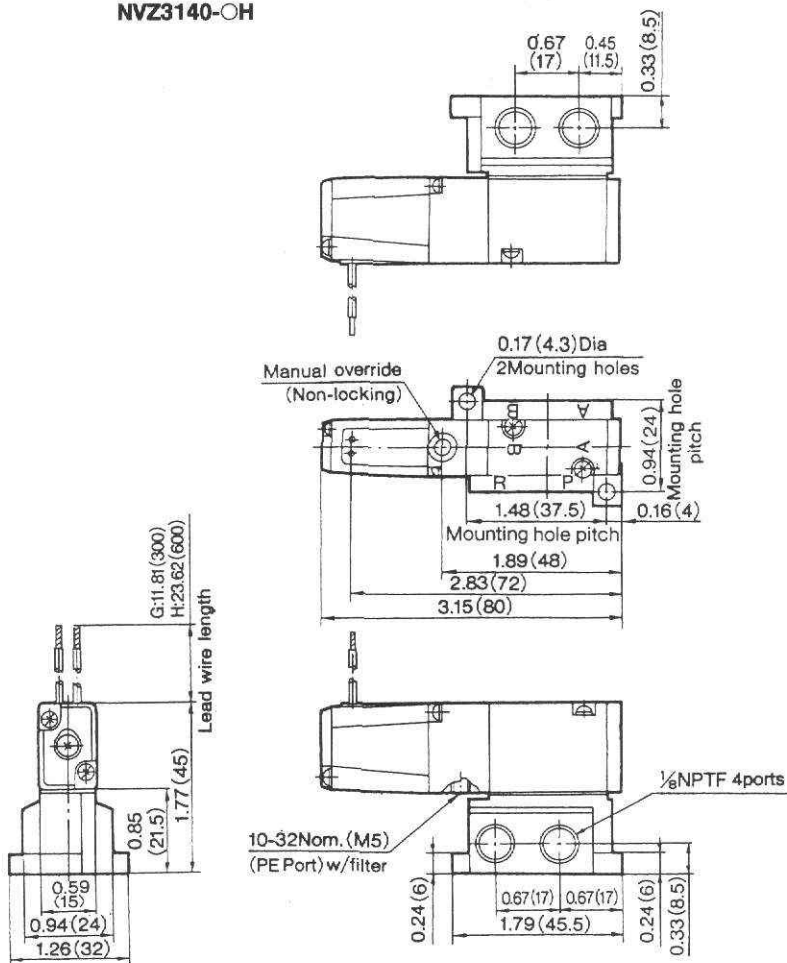
16

Base Mounted Type with Subplate / 2 Position Single Solenoid

inch (mm)

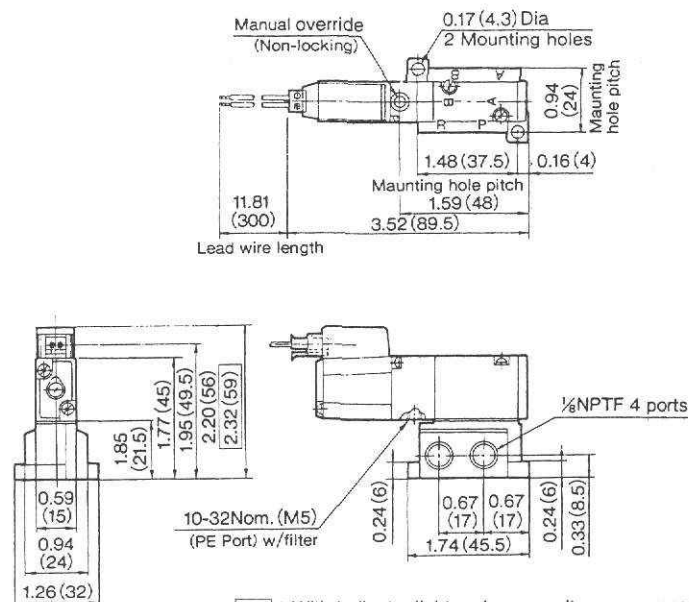
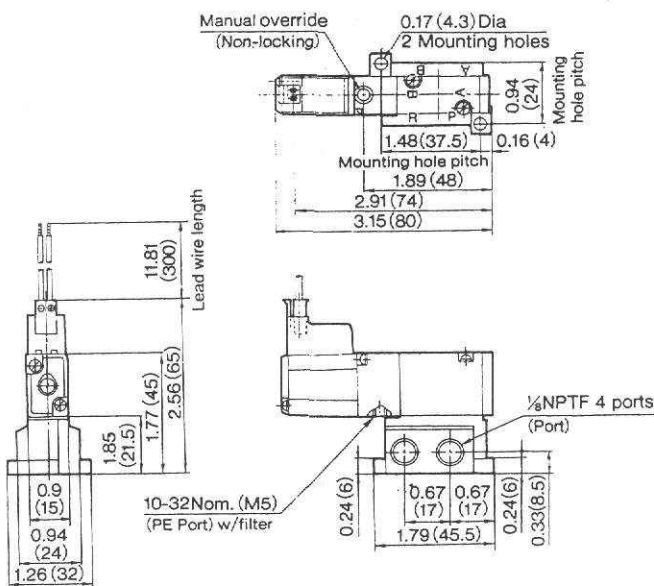
Grommet/NVZ3140-OG
NVZ3140-OH

DIN connector (D) /
NVZ3140-OD○○-01T



L type plug connector / NVZ3140-OL

M type plug connector / NVZ3140-OM



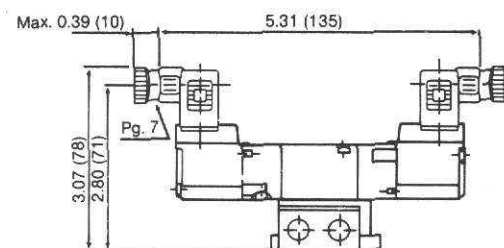
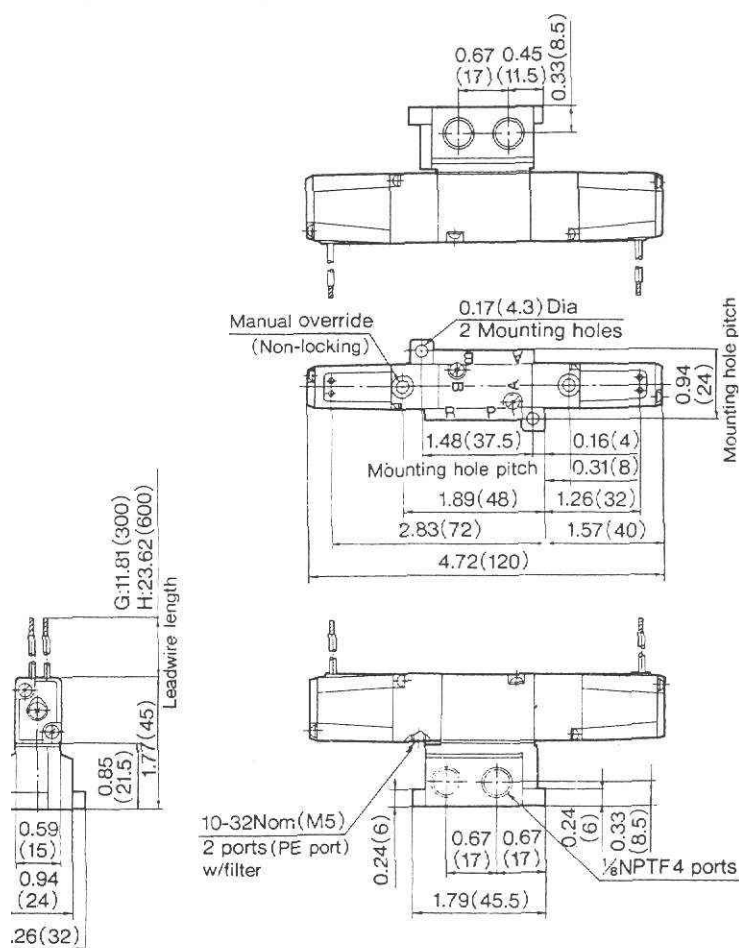
□ : With indicator light and surge voltage suppressor

Base Mounted Type with Subplate / 2 Position Double Solenoid

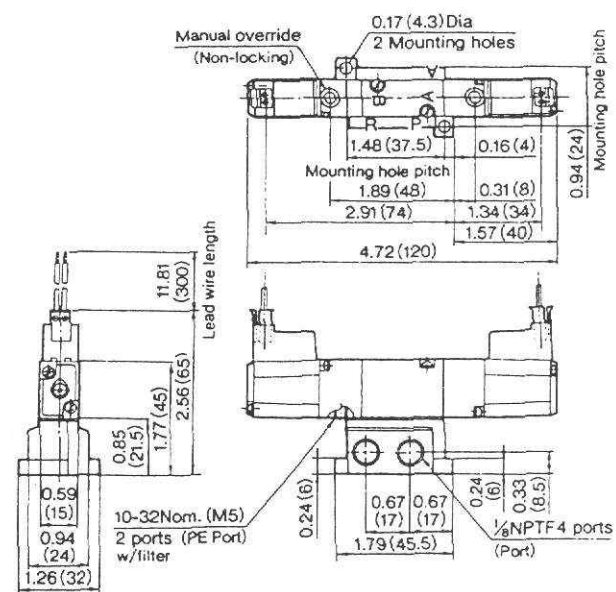
inch (mm)

Formet / NVZ3240-OG
NVZ3240-OH

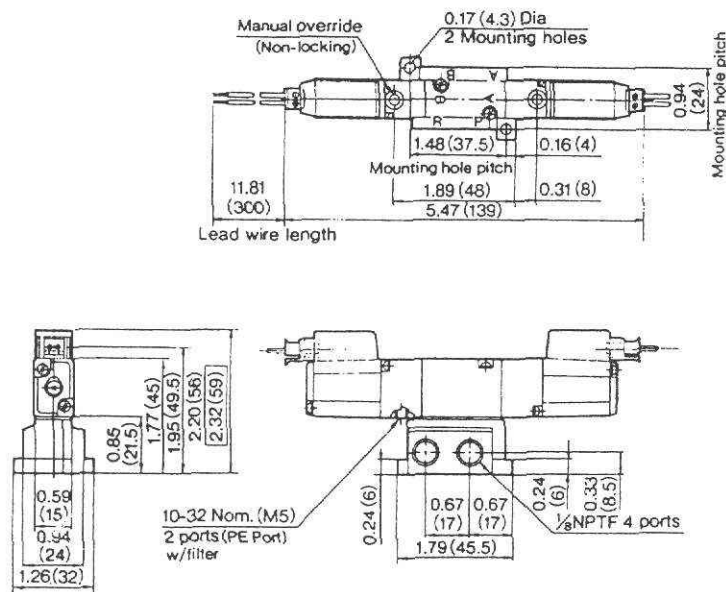
DIN connector (D) /
NVZ3240-OD○○-01T



type plug connector / NVZ3240-OL



M type plug connector / NVZ3240-OM



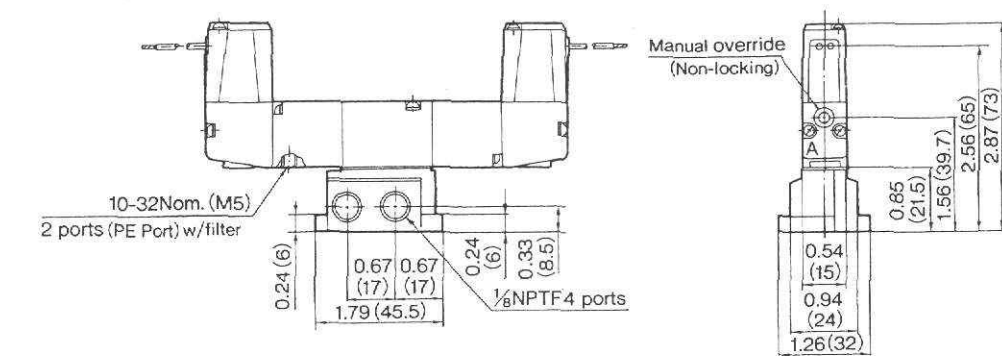
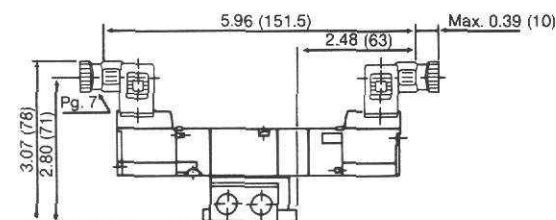
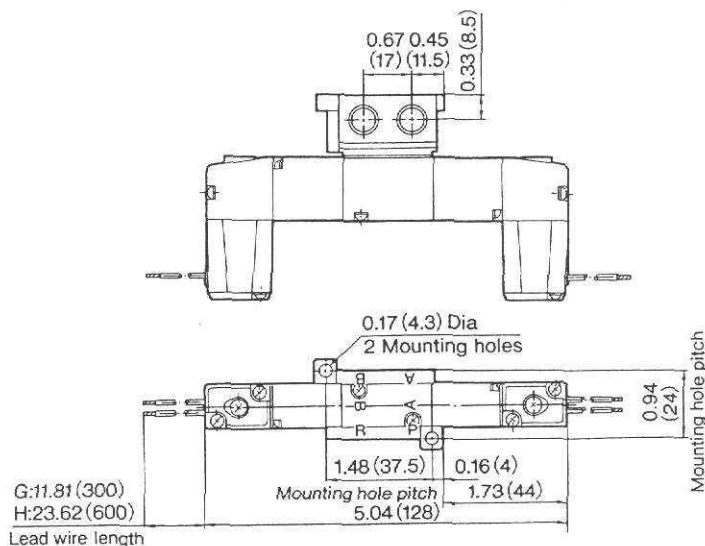
□ : With indicator light and surge voltage suppressor

Base Mounted Type with Subplate / 3 Position

inch (mm)

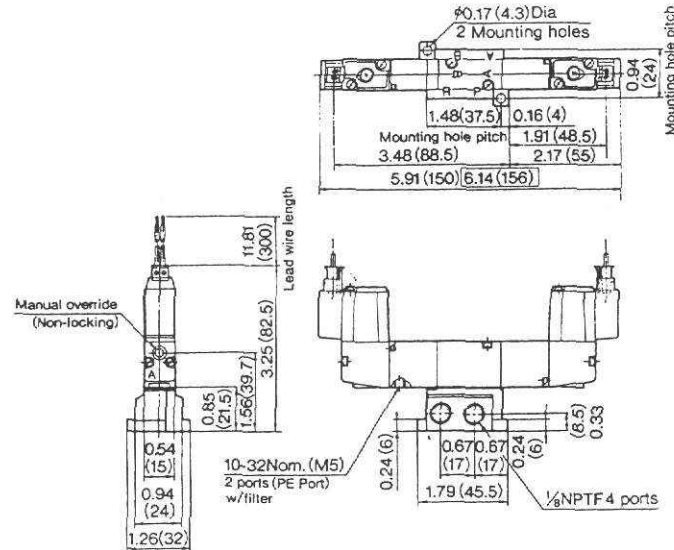
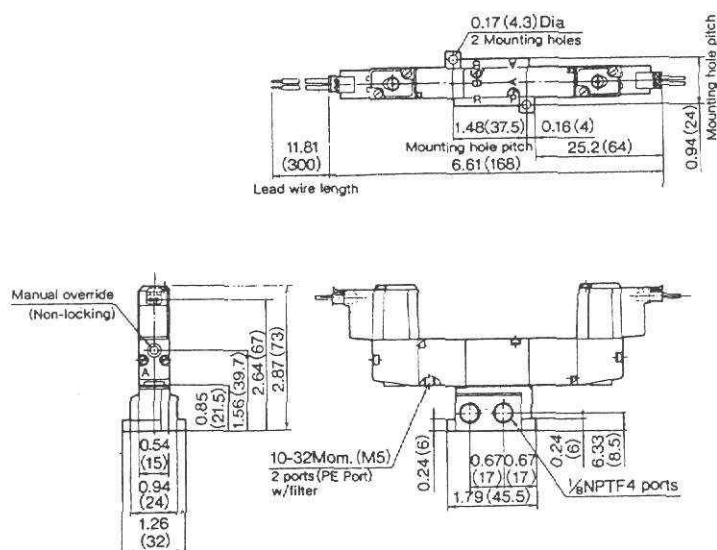
Grommet/NVZ3340-○G. NVZ3340-○H/Closed Center
NVZ3440-○G. NVZ3440-○H/Exhaust Center
NVZ3540-○G. NVZ3540-○H/Pressure Center

DIN connector (D) /
3
NVZ3440-○D○○-01T
5



L type plug connector/NVZ3340-○L/Closed Center
NVZ3440-○L/Exhaust Center
NVZ3540-○L/Pressure Center

M type plug connector/NVZ3340-○M/Closed Center
NVZ3440-○M/Exhaust Center
NVZ3540-○M/Pressure Center

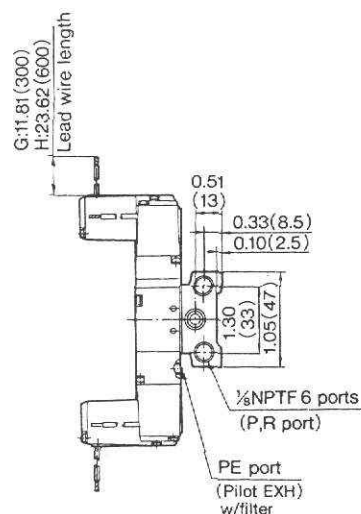
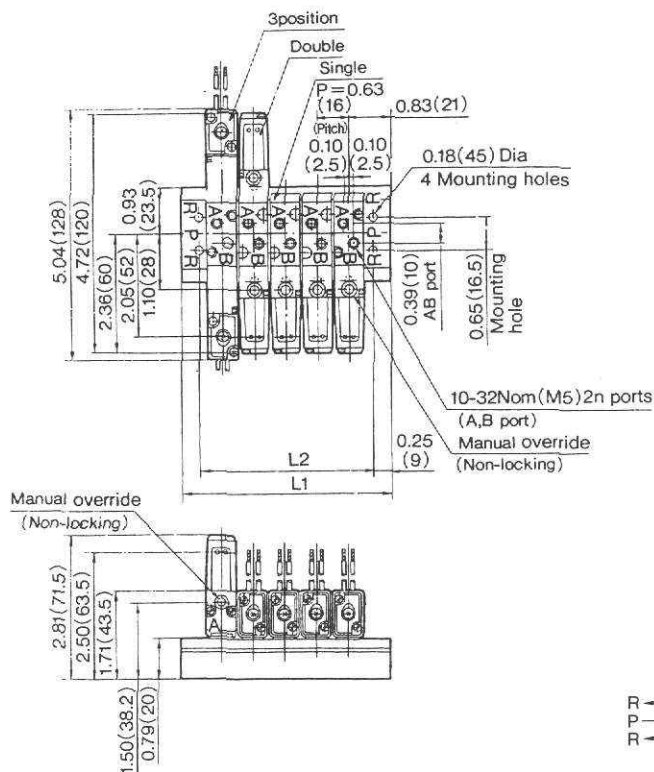


□ : With indicator light and surge voltage suppressor

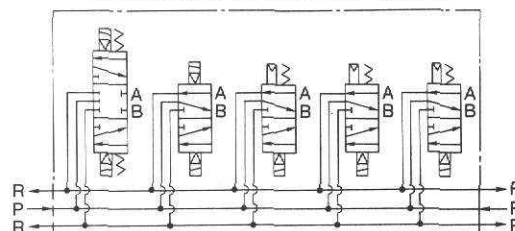
Type 20 Manifold/ Top Ported

inch (mm)

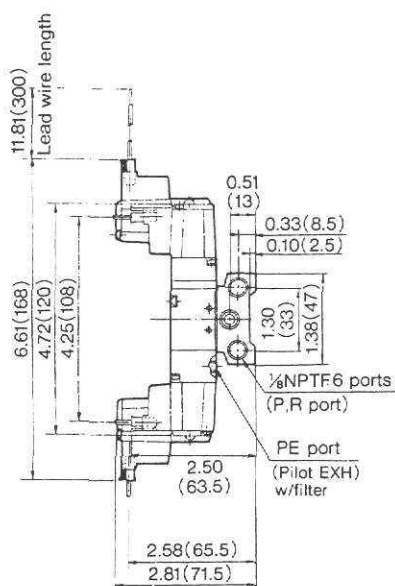
frommet (G) (H)



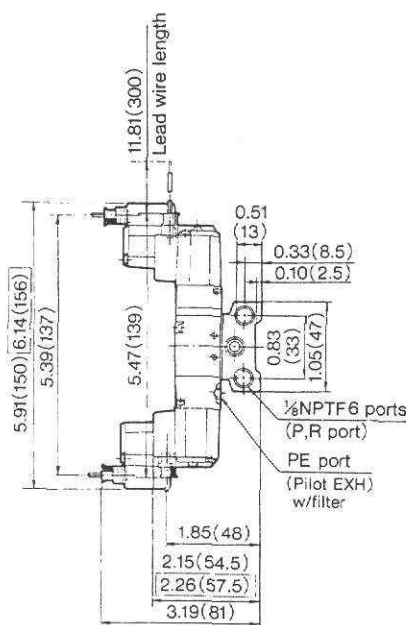
Example pneumatic circuit diagram



L type plug connector (L)



M type plug connector (M)



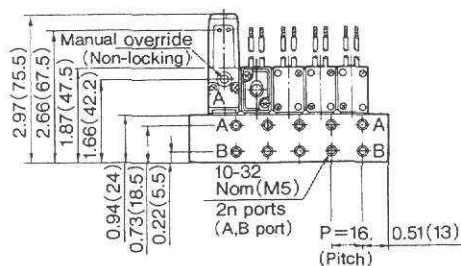
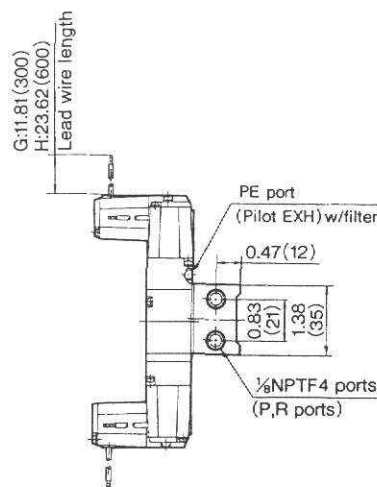
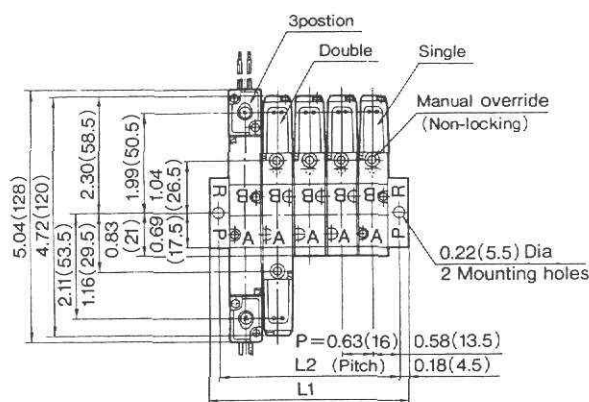
□ : With indicator light and surge voltage suppressor

Station (n)	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L ₁	2.28 (58)	2.91 (74)	3.54 (90)	4.17 (106)	4.80 (122)	5.43 (138)	6.06 (154)	6.69 (170)	7.32 (186)	7.95 (202)	8.58 (218)	9.21 (234)	9.84 (250)	10.47 (266)	11.10 (282)	11.73 (298)	12.36 (314)	12.99 (330)	13.62 (346)
L ₂	1.57 (40)	2.20 (56)	2.83 (72)	3.46 (88)	4.09 (104)	4.72 (120)	5.35 (136)	5.98 (152)	6.61 (168)	7.24 (184)	7.87 (200)	8.50 (216)	9.13 (232)	9.76 (248)	10.39 (264)	11.02 (280)	11.65 (296)	12.28 (312)	12.91 (328)

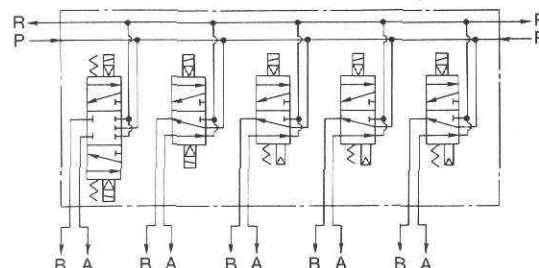
Type 41 Manifold/ Side Ported

inch (mm)

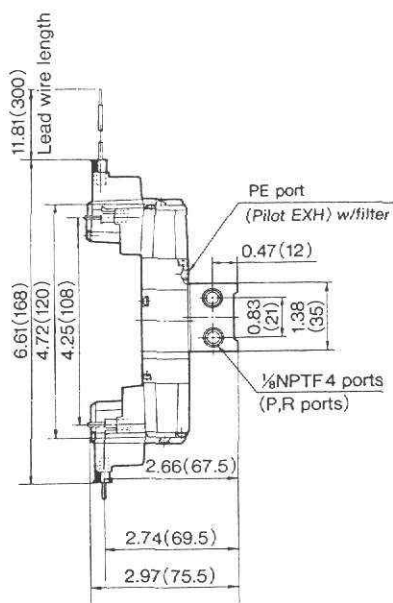
Grommet (G) (H)



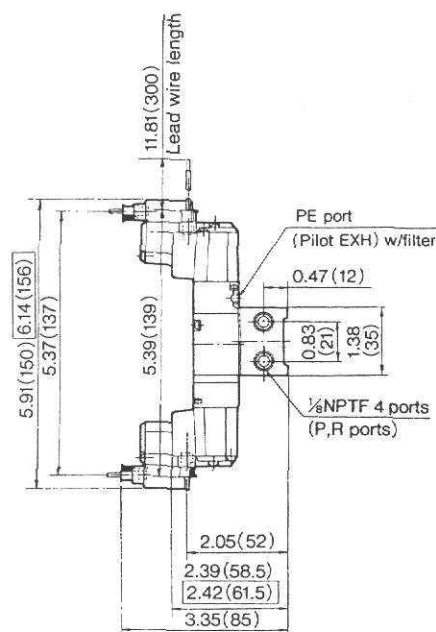
Example pneumatic circuit diagram



L type plug connector (L)



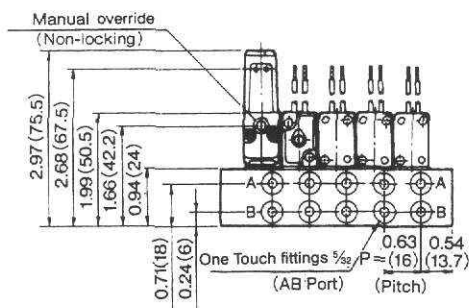
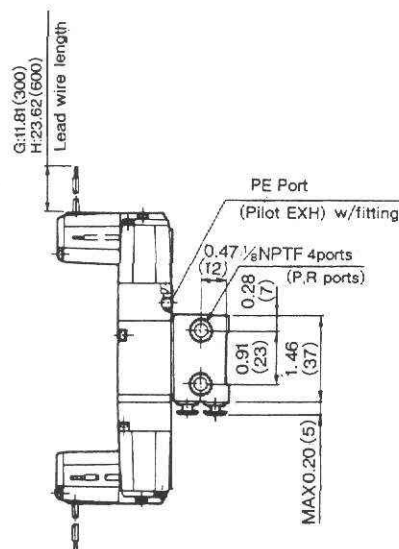
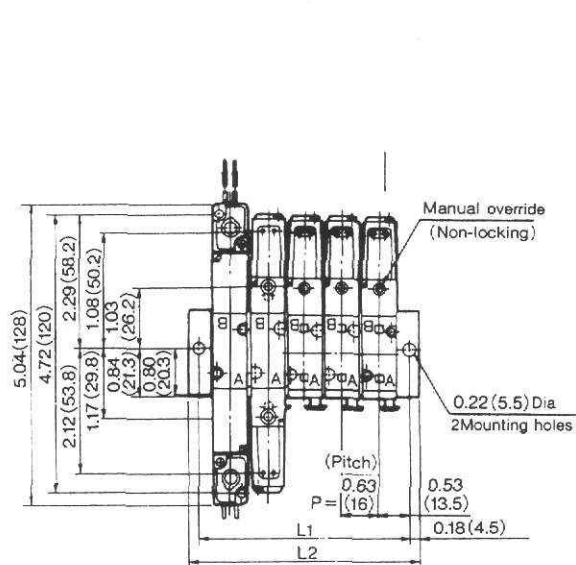
M type plug connector (M)



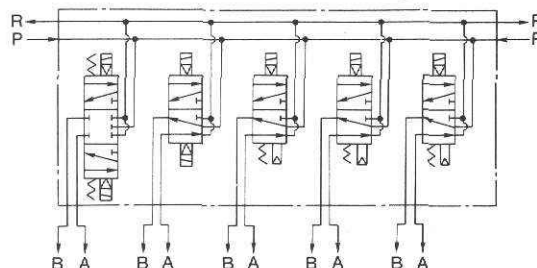
□ : With indicator light and surge voltage suppressor

Stations (n)	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L ₁	2.05 (52)	2.68 (68)	3.31 (84)	3.94 (100)	4.57 (116)	5.20 (132)	5.83 (148)	6.46 (164)	7.09 (180)	7.72 (196)	8.35 (212)	8.98 (228)	9.61 (244)	10.24 (260)	10.87 (276)	11.50 (292)	12.13 (308)	12.76 (324)	13.39 (340)
L ₂	1.69 (43)	2.32 (59)	2.95 (75)	3.58 (91)	4.21 (107)	4.84 (123)	5.47 (139)	6.10 (155)	6.73 (171)	7.36 (187)	7.99 (203)	8.62 (219)	9.25 (235)	9.88 (251)	10.51 (267)	11.14 (283)	11.77 (299)	12.40 (315)	13.03 (331)

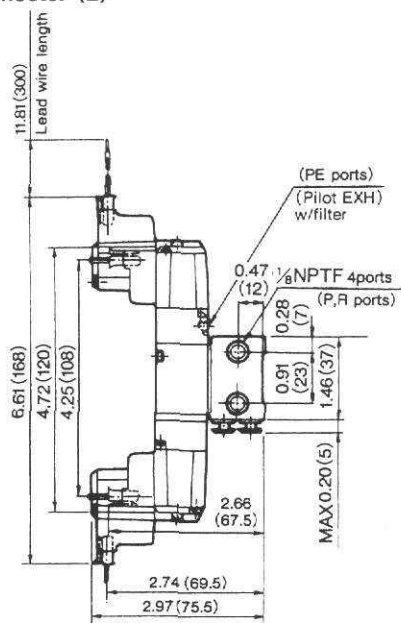
rommet (G)



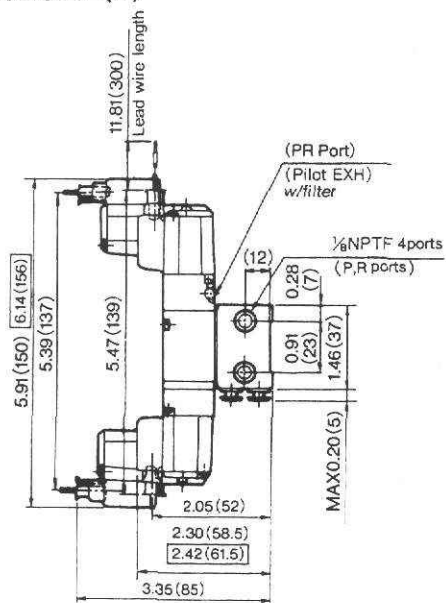
Example pneumatic circuit diagram



type plug connector (L)



M type plug connector (M)

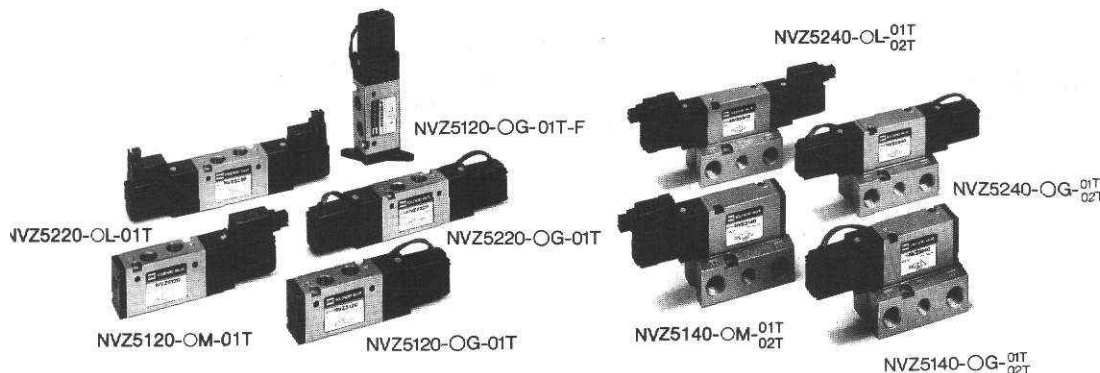


 : With indicator light and surge voltage suppressor

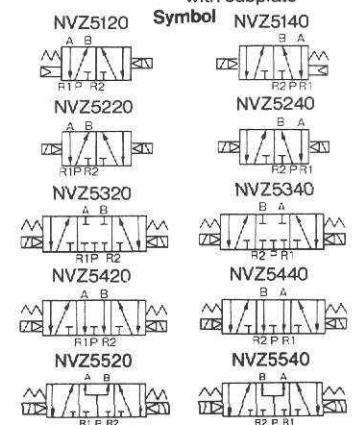
ations (n)	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L ₁	2.05 (52)	2.68 (68)	3.31 (84)	3.94 (100)	4.57 (116)	5.20 (132)	5.83 (148)	6.46 (164)	7.09 (180)	7.72 (196)	8.35 (212)	8.98 (228)	9.61 (244)	10.24 (260)	10.87 (276)	11.50 (292)	12.13 (308)	12.76 (324)	13.39 (340)
L ₂	1.69 (43)	2.32 (59)	2.95 (75)	3.58 (91)	4.21 (107)	4.84 (123)	5.47 (139)	6.10 (155)	6.73 (171)	7.36 (187)	7.99 (203)	8.62 (219)	9.25 (235)	9.88 (251)	10.51 (267)	11.14 (283)	11.77 (299)	12.40 (315)	13.03 (331)

Cv0.7

5 Port Solenoid Valve NVZ5000



Body ported Type Base mounted Type with subplate



Model

Body type	Type of actuation		Model	Cv factor	Port size	Weight lbs (gf)
Body Ported type	2	Single	NVZ512○-○○-01T	0.6	1/8 NPTF	0.26 (120)
		Double	NVZ522○-○○-01T			0.35 (160)
	3	Closed center	NVZ532○-○○-01T	0.3		0.70 (320)
		Exhaust center	NVZ542○-○○-01T	0.2		0.70 (320)
		Pressure center	NVZ552○-○○-01T	0.4		0.70 (320)
Base mounted type with subplate	2	Single	NVZ514○-○○-01T/02T	0.7	P, A, B : 1/8, 1/4 NPTF R1, R2 : 1/4 NPTF	0.44 (200)
		Double	NVZ524○-○○-01T/02T			0.53 (240)
	3	Closed center	NVZ534○-○○-01T/02T	0.3		0.88 (400)
		Exhaust center	NVZ544○-○○-01T/02T	0.2		0.88 (400)
		Pressure center	NVZ554○-○○-01T/02T	0.4		0.88 (400)

Specifications

Fluid	Air, Inert gases	
Operating pressure range	2position Single, 3position	20~100 PSI (1.5~7kgf/cm ²)
	2position double	15~100 PSI (1.0~7kgf/cm ²)
Ambient and fluid temperature	Max. 120°F (50°C)	
Response time	2position : 20 ms or less 3position : 50 ms or less (70 PSI)	
Max. Operating frequency	2position : 10 c/s 3position : 3c/s	
Manual override	Non-locking push type, Slotted locking type, Knob locking type	
Pilot exhaust	Individual, Common	
Lubrication	Not required (Use turbine oil 1 ISO VG32 if lubrication is required.)	
Mounting position	Free	
Impact/vibration resistance	30G/5G (8.3~2000Hz)	
Enclosure	Dust proof	

Solenoid Specifications

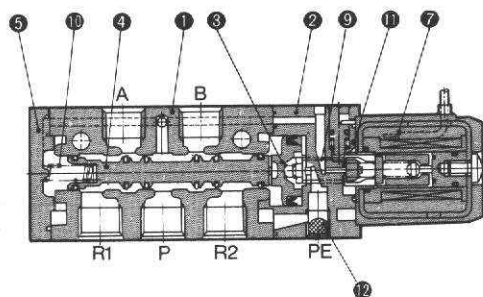
Electrical entry		Grommet (G) (H); Plug connector (L) (M); DIN connector (D)	
voltage	AC	110V 50%Hz, 220V 50%Hz, 24V 50%Hz, 48V 50%Hz	
	DC	6V, 12V, 24V, 48V	
Allowable voltage range		-15 ~ +10%	
Coil insulation		Class E or equivalent (250°F)	
Temperature rise		81°F or less	
Power consumption	DC	1.8W / 2.1W (W/LED)	
Apparent power	AC	Inrush	4.2VA/60Hz 4.5VA/50Hz
		Hording	3VA/60Hz 3.5VA/50Hz
Surge voltage suppressor		DC : Diode AC : ZNR	
Indicator light		DC : LED AC : Neon Lamp	

With Foot Bracket

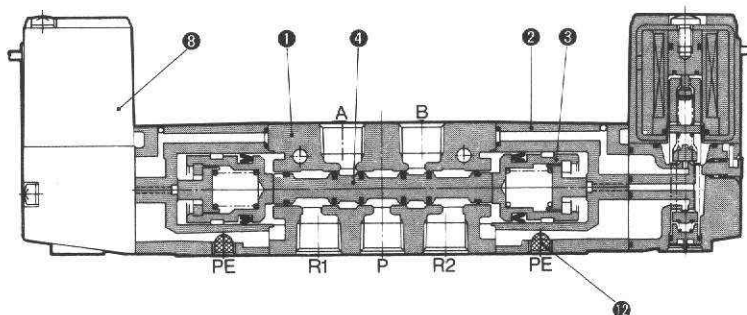
Valve model number	NVZ5120-○○-01T-F NVZ5123-○○-01T-F
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Construction/Parts List

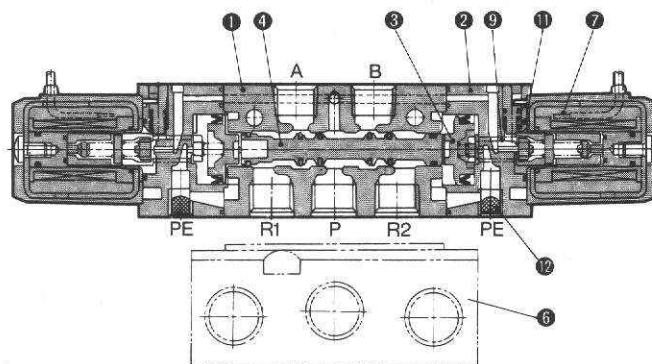
Single Solenoid



3 position Closed Center



Double Solenoid



Main Parts

No.	Description	Material	Notes
1	Body	Aluminum die cast	Metallic paint
2	Piston plate	Polyacetal *	
3	Piston	Polyacetal **	
4	Spool Ass'y	Aluminum and NBR	
5	End cover	Zinc die cast	
6	Sub plate	Aluminum die cast	Metallic paint

Zinc die cast is used on 3position
*Aluminum is used on 3position

Spare Parts

No.	Description	Material	Parts number
7	Solenoid ass'y *	Stainless steel NBR	DXT170-C-〇〇
8	Pilot valve ass'y	—	VZ111-〇〇〇
9	Push rod	Polyacetal	DXT192-32-1
10	Spool spring	Stainless steel	DXT199-16-1
11	O ring	NBR	13×11×1
12	Filter	Stainless	AXT500-17

*Including armature ass'y

How To Order

For 2 position valve

Solenoid ass'y	DXT170-C-3 G S
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For 3 position valve

Pilot Valve ass'y	VZ111-3 G S
-------------------	-------------

Voltage	Electrical entry	Indicator light and surge voltage suppressor
100VAC 50/60 Hz	G Grommet	— None
200VAC 50/60 Hz	H* Grommet	*Z With indicator light and surge voltage suppressor
110VAC 50/60 Hz	L L type plug connector	S With surge voltage suppressor
220VZC 50/60 Hz	LO M type plug connector	
24V DC	M M type plug connector	
12V DC	MO DIN connector	
Others	D DIN connector	
	DO†	

Special Order.

* Special Order Only. † DOZ is not available.

How To Order/Connector Ass'y

DXT170-80-〇A-〇

Lead wire color	Lead wire length
1* Blue/Blue	— 12 inch (300mm)
2* Red/Red	6 24 inch (600mm)
3 Gray/Gray	10 40 inch (1000mm)
4 Red/Black	15 60 inch (1500mm)
	20 80 inch (2000mm)
	25 100 inch (2500mm)
	30 120 inch (3000mm)

* Special Order.
std. AC : '3'
std. DC : '4'

When ordering the valve with non-standard connector ass'y include both the valve and connector ass'y product numbers. (Example) in case of 80 inch lead wire

NVZ5140-5MO-02T
DXT170-80-4A-20

* Plug connector type only

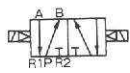
How To Order : NVZ5000

Position

1: 2 position single solenoid



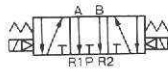
2: 2 position double solenoid



3: 3 position closed center



4: 3 position exhaust center



5: 3 position pressure center



For type 20, 21 manifold



Voltage

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

* Special Order.

Indicator light and surge voltage suppressor

—	None
Z*	With Indicator light and surge voltage suppressor
S†	With surge voltage suppressor

* Not avail. for grommet type.
† Special order.

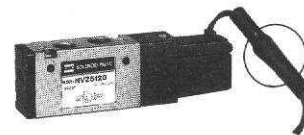
Optional accessory

F: If use of a foot bracket is expected, indicate that option when placing the initial order. Standard body cannot be retrofitted with a foot bracket.



(Special order only)

Surge voltage suppressor of grommet type.



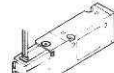
Body ported

NVZ5 1 2 0 5 L — — — 01T —

Base mounted

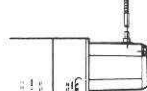
NVZ5 1 4 0 5 L — — — 01T

For type 40, 41, 42 manifold

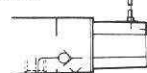


Body option

O: Individual pilot exhaust



3: Common exhaust for main and pilot valve

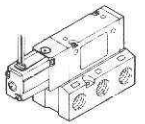
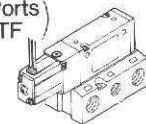


Plugged

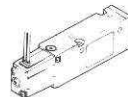
The pilot exhaust is connected to the main exhaust port via a check valve

Port size

01T: With 1/8NPTF subplate (R1, R2 Ports : 1/8NPTF)



— : Without subplate



Electrical entry

G: Grommet



Lead wire length : 12 inch (300mm)

H*: Grommet



Lead wire length : 24 inch (600mm)

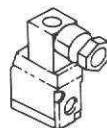
L: L type plug connector With lead wire



LO: L type plug connector Without connector
Lead wire length : 12 inch (300mm)



D: DIN connector



M: M type plug connector With lead wire

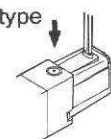


MO: M type plug connector Without connector
Lead wire length : 12 inch (300mm)

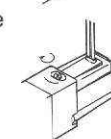


Manual

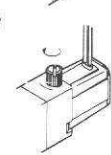
— : Non-locking push type manual override



B: Slotted locking type manual override



C*: Knob locking type manual override



* Special Order.

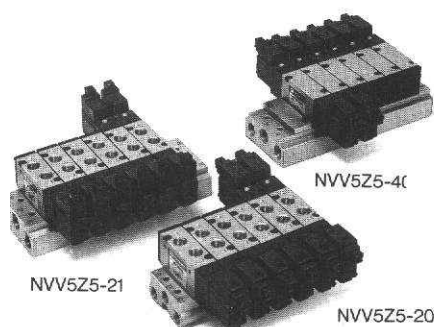
* Special order

Manifold

Specifications

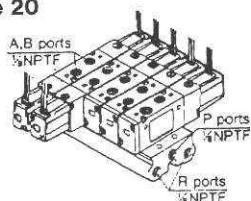
Type P(SUP), R(EXH)	Common SUP, EXH type
Valve stations	2~20 stations (Type 20 : 2~15 stations)
Options	Blank plate ass'y EXH/SUP Relocation Spacer Ass'y

Note: When using a NVZ5400 with a manifold, use a spacer ass'y because the exhaust of other solenoid valves may cause actuator malfunction.
Please order the appropriate valves and/or blank plate ass'y with manifold base.



Type And How To Order

pe 20



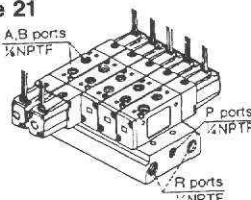
NVV5Z5-20-05 1-00T

Stations

02	2 stations
...	...
15	15 stations

If there are more than 6 stations, supply air and exhaust from both sides of manifold.

pe 21



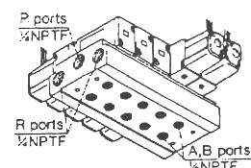
NVV5Z5-21-05 1-00T

Stations

02	2 stations
...	...
20	20 stations

If there are more than 10 stations, supply air and exhaust from both sides of manifold.

pe 40



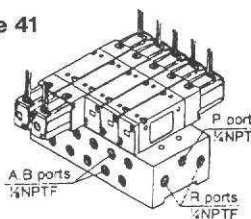
NVV5Z5-40-05 2-01T

Stations

02	2 stations
...	...
20	20 stations

If there are more than 10 stations, supply air and exhaust from both sides of manifold.

pe 41



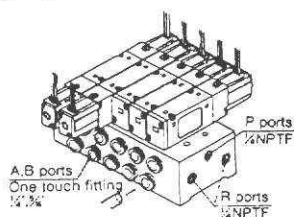
NVV5Z5-41-05 1-01T

Stations

02	2 stations
...	...
20	20 stations

If there are more than 10 stations, supply air and exhaust from both sides of manifold.

pe 42



NVV5Z5-42-05 1-B7T

Stations

02	2 stations
...	...
20	20 stations

If there are more than 10 stations, supply air and exhaust from both sides of manifold.

Size of A, B port

B7T	One touch fitting for 1/4 tube
B9T	One touch fitting for 3/8 tube

Applicable valves

NVZ5120-000-01T
NVZ5220-000-01T
NVZ5320-000-01T
NVZ5420-000-01T
NVZ5520-000-01T

Optional accessory

Blank plate ass'y: DXT199-22-1A
EXH Relocation Spacer ass'y:
DXT199-29-2TA

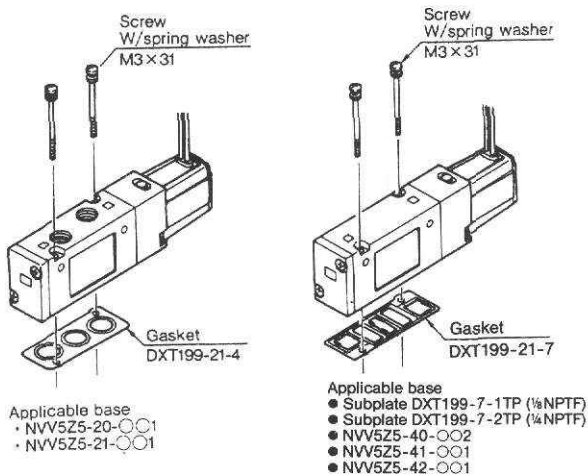
Applicable valves

NVZ5140-000
NVZ5240-000
NVZ5340-000
NVZ5440-000
NVZ5540-000

Optional accessory

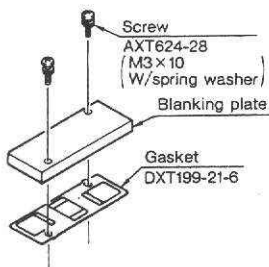
Blank plate ass'y: DXT199-22-1A
EXH Relocation Spacer:
DXT199-29-2TA
SUP Relocation Spacer:
(only for type 41, 42, 43):
DXT199-35-1TA

Proper Combinations of Solenoid Valve, Gasket, Manifold / Subplate



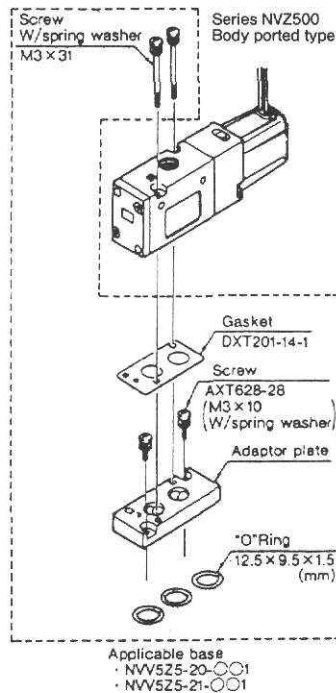
Blank Plate Ass'y

DXT199-22-1A

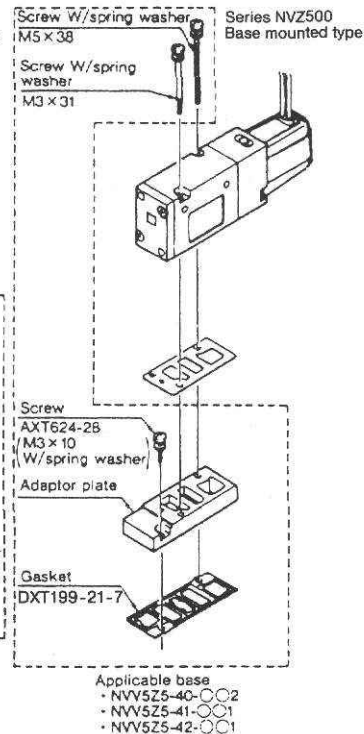


Manifold Mounting of NVZ500 And NVZ5000

Adaptor plate ass'y
DXT201-3-1A



Adaptor plate ass'y
DXT201-3-2A

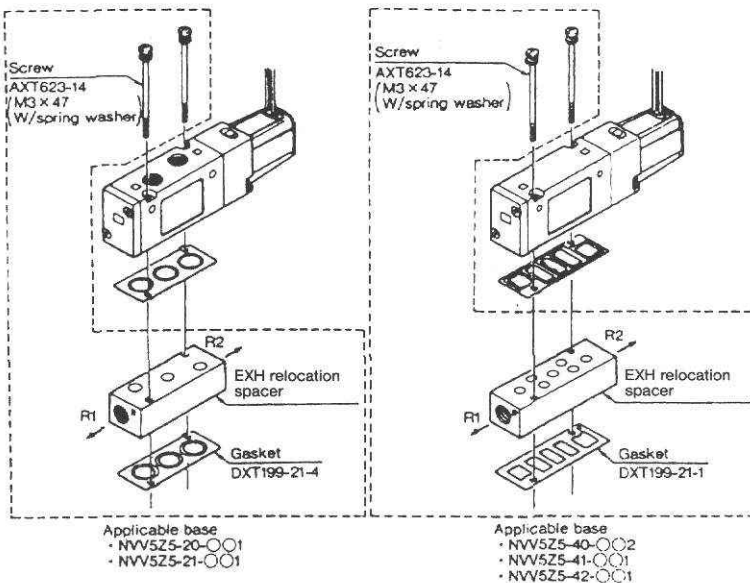


● If the base mounted type NVZ500 valve is mounted such that the solenoid is on the same side as a single solenoid series NVZ5000 valve, the outlet of the 3 port valve is the B port of the manifold base.

EXH Relocation Spacer Ass'y

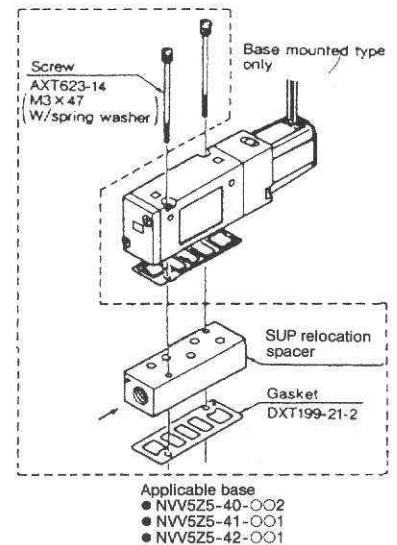
DXT199-29-1TA

DXT199-29-2TA



SUP Relocation Spacer Ass'y

DXT199-35-1TA

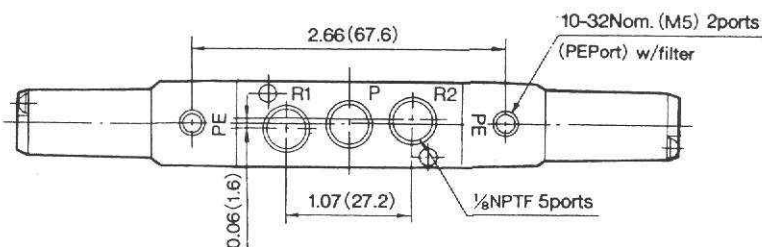
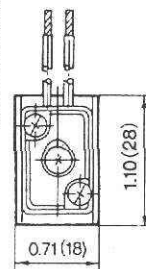
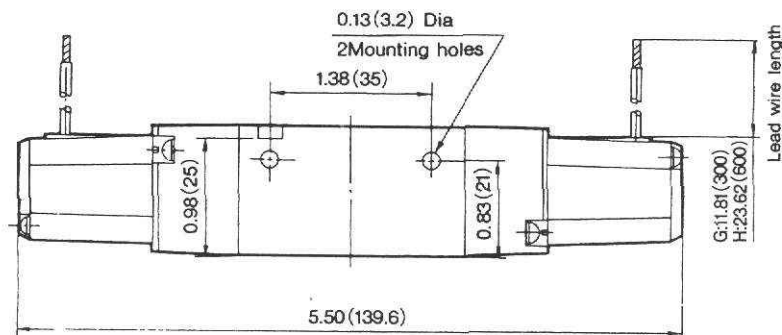
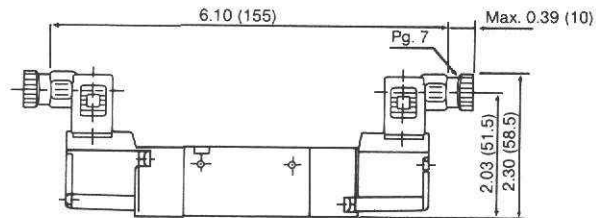
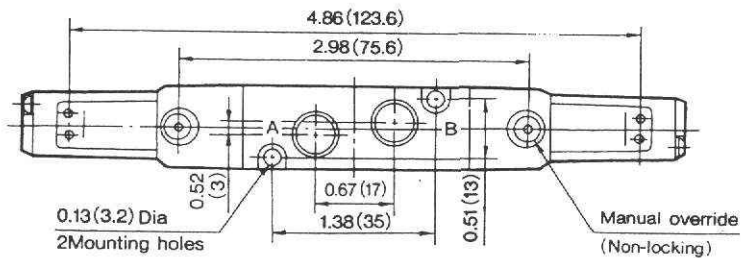


Body Ported Type / 2 Position Single Solenoid

inch (mm)

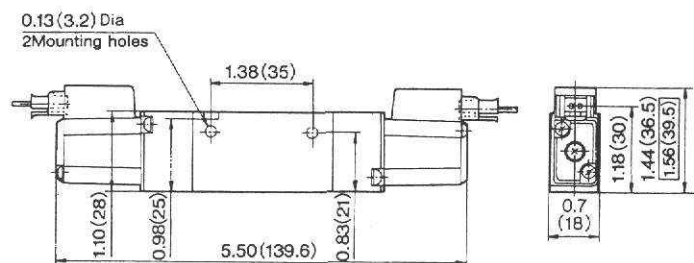
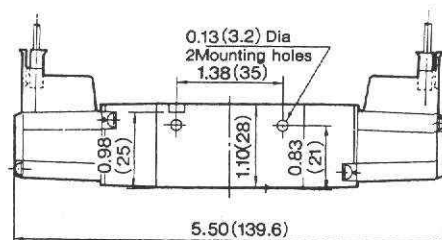
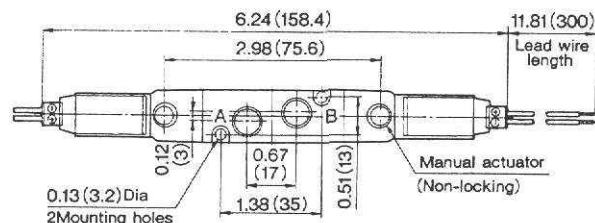
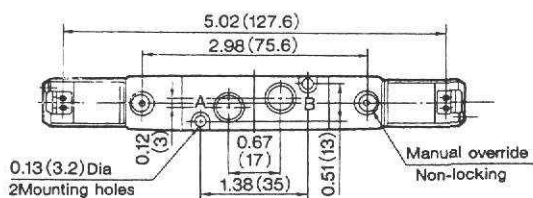
Grommet/NVZ5220-OG00-01T
NVZ5220-OH00-01T

DIN connector (D)/
NVZ5220-OD00-01T



L type plug connector/NVZ5220-OL00-01T

M type plug connector/NVZ5220-OM00-01T



□ : With indicator light and surge voltage suppressor

Body Ported Type / 3 Position

inch (mm)

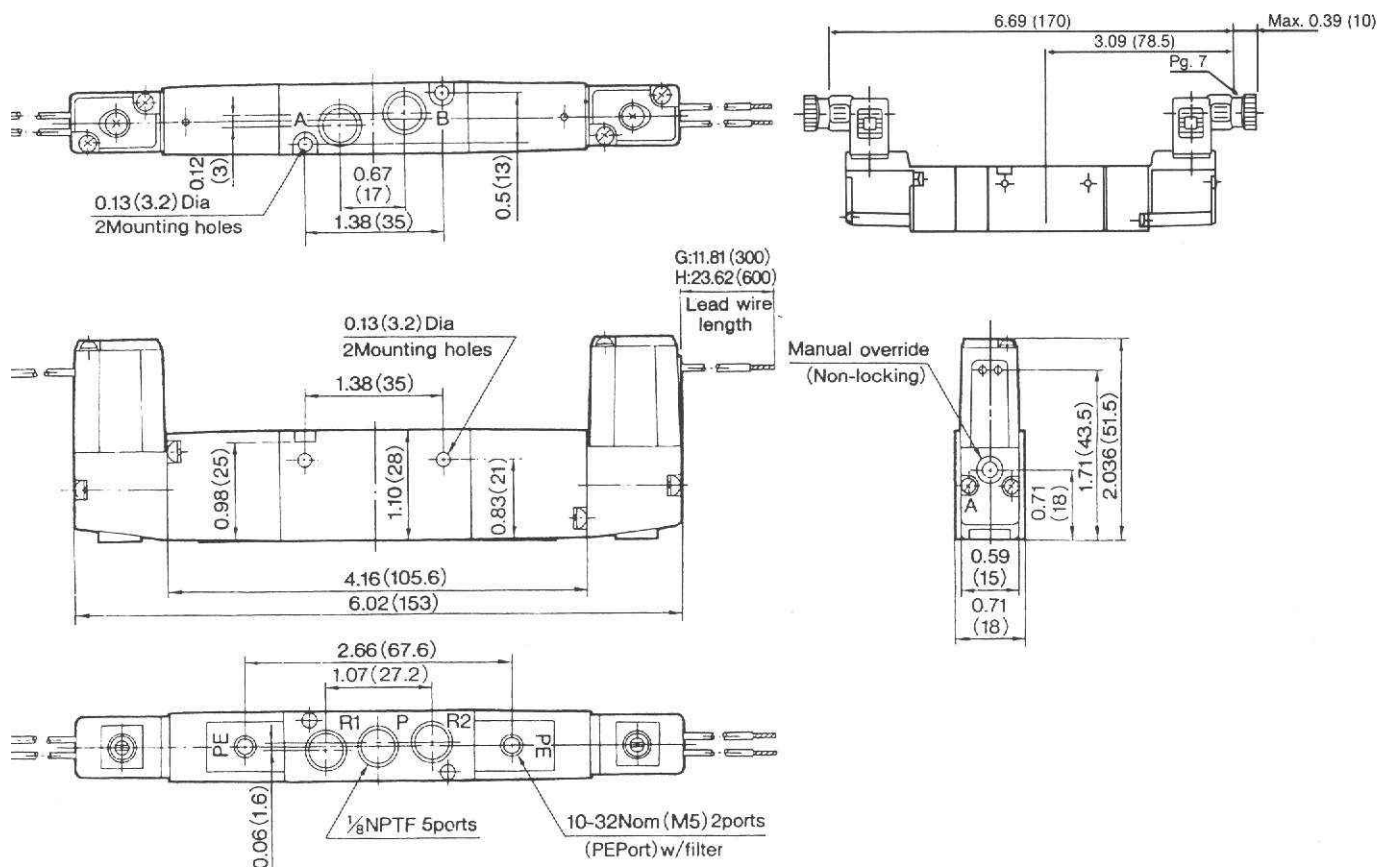
Common / NVZ5320-OG. NVZ5320-OH/Closed center
 NVZ5420-OG. NVZ5420-OH/Exhaust center
 NVZ5520-OG. NVZ5520-OH/Pressure center

DIN connector (D)/

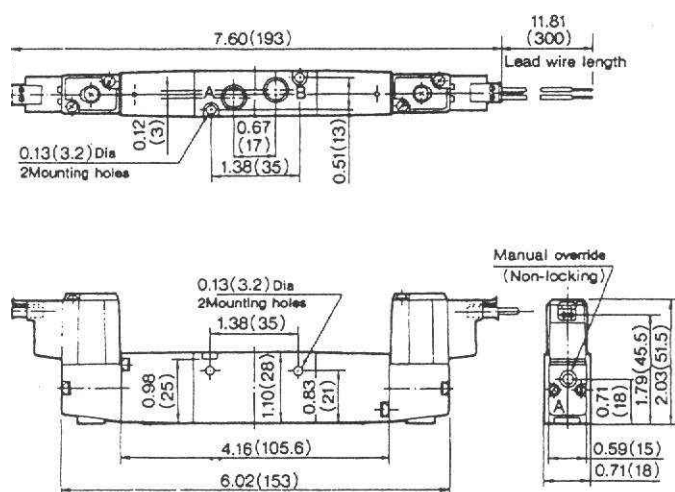
3

NVZ5420-OD-01T

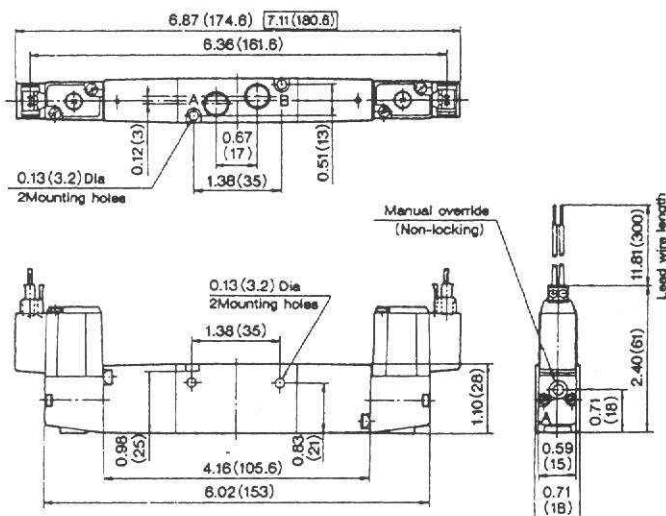
5



type plug connector / NVZ5320-OL/Closed center
 NVZ5420-OL/Exhaust center
 NVZ5520-OL/Pressure center



M type plug connector / NVZ5320-OM/Closed center
 NVZ5420-OM/Exhaust center
 NVZ5520-OM/Pressure center



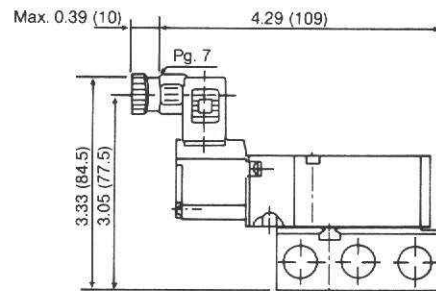
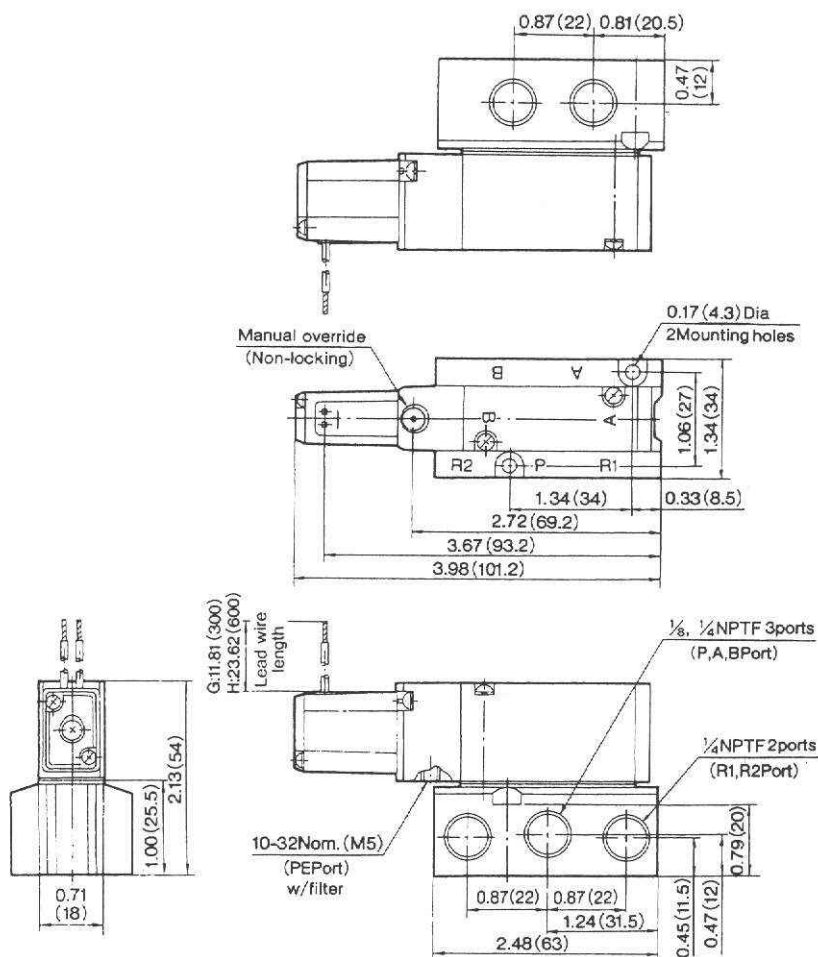
□ : With indicator light and surge voltage suppressor

Base Mounted Type with Subplate / 2 Position Single Solenoid

inch (mm)

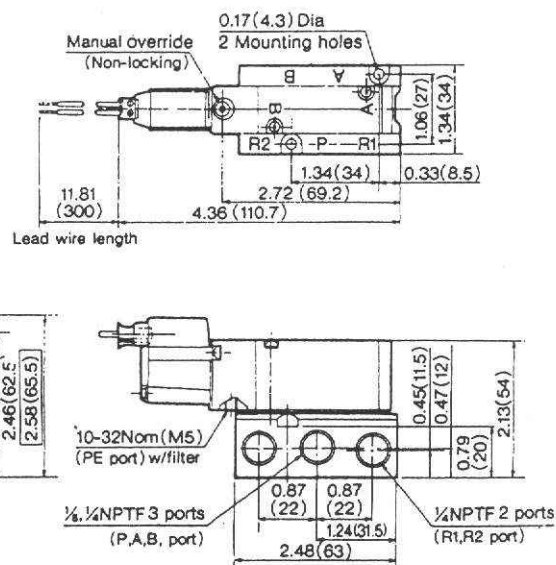
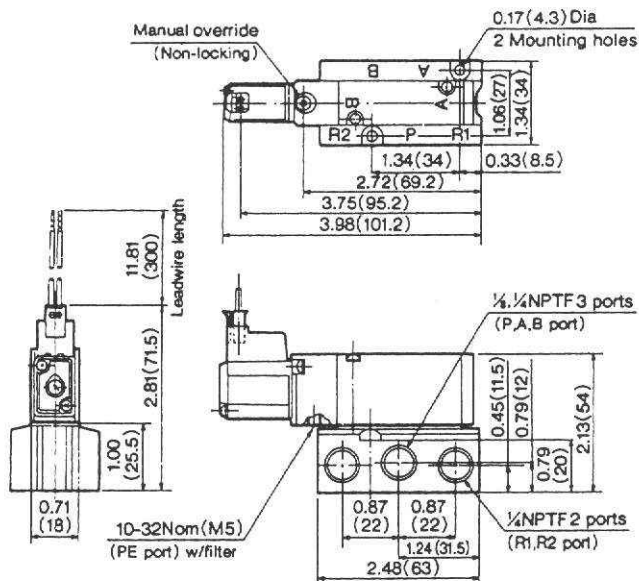
Grommet / NVZ5140-OG
NVZ5140-OH

DIN connector (D) /
NVZ5140-OD-01T
02T



L type plug connector / NVZ5140-OL

M type plug connector / NVZ5140-OM



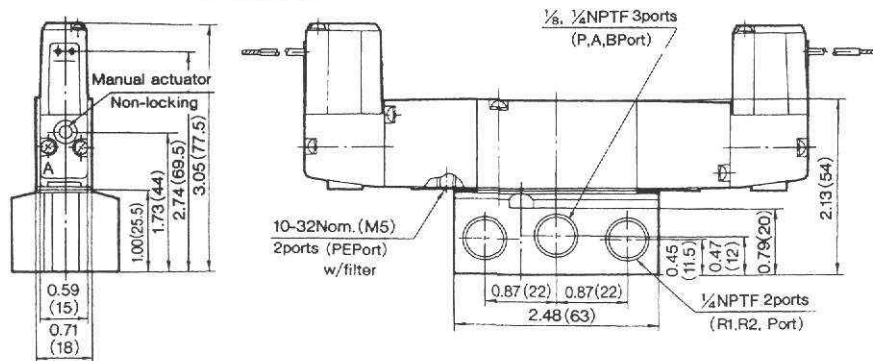
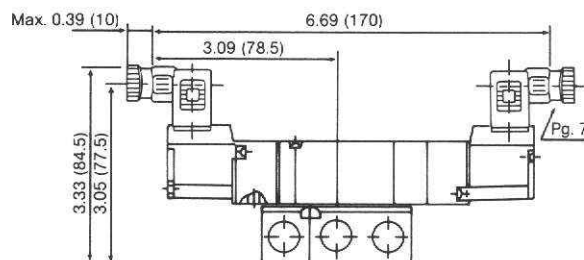
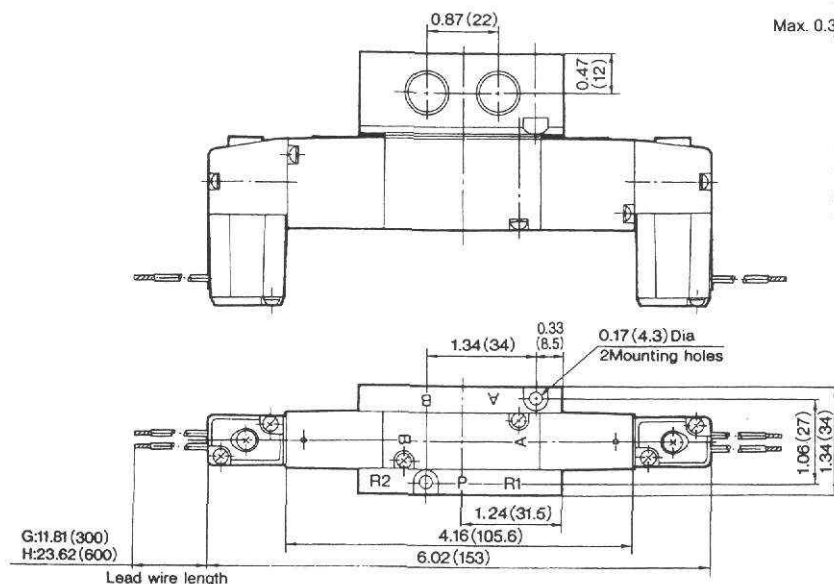
□ : With indicator light and surge voltage suppressor

Base Manifold Type with Subplate / 3 Position

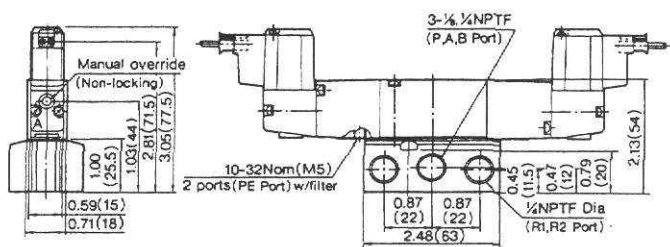
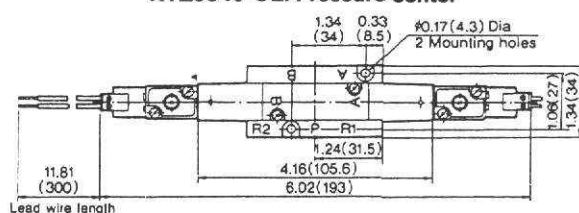
inch (mm)

Grommet/NVZ5340-○G. NVZ5340-○H/Closed center
NVZ5440-○G. NVZ5440-○H/Exhaust center
NVZ5540-○G. NVZ5540-○H/Pressure center

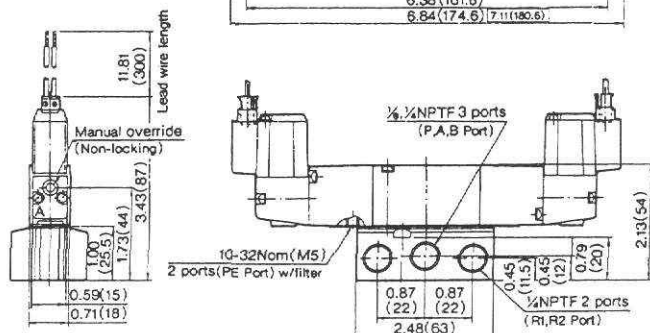
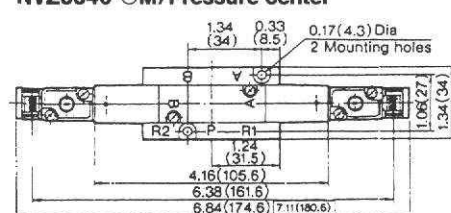
DIN connector (D)/
3
NVZ5440-○D○-01T
5



L type plug connector/NVZ5340-○L/Closed center
NVZ5440-○L/Exhaust center
NVZ5540-○L/Pressure center



M type plug connector/NVZ5340-○M/Closed center
NVZ5440-○M/Exhaust center
NVZ5540-○M/Pressure center

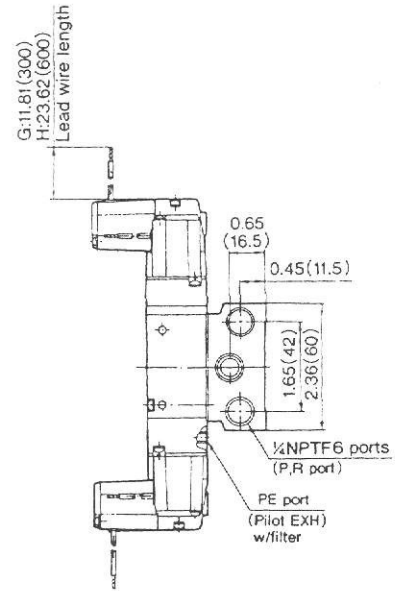
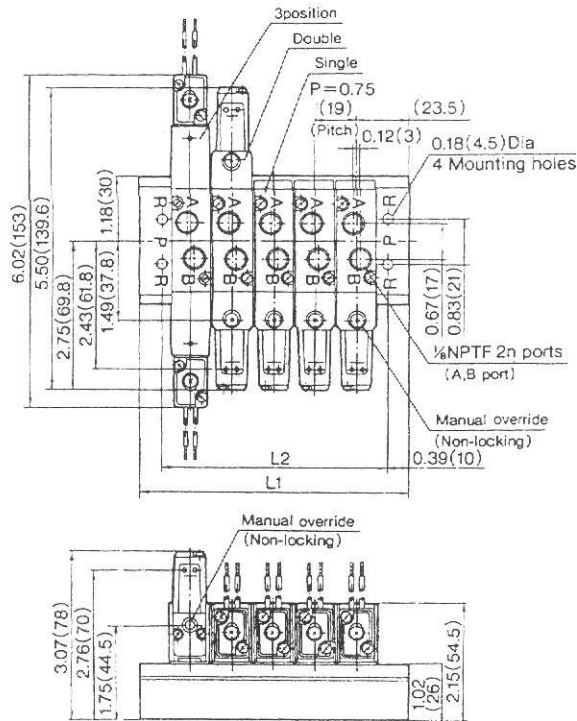


□ : With indicator light and surge voltage suppressor

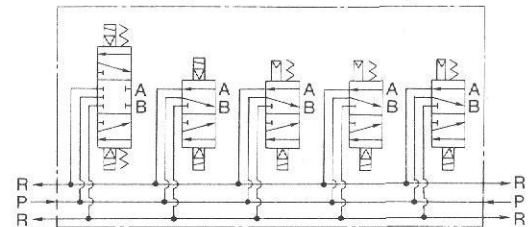
Type 21 Manifold/ Top Ported

inch (mm)

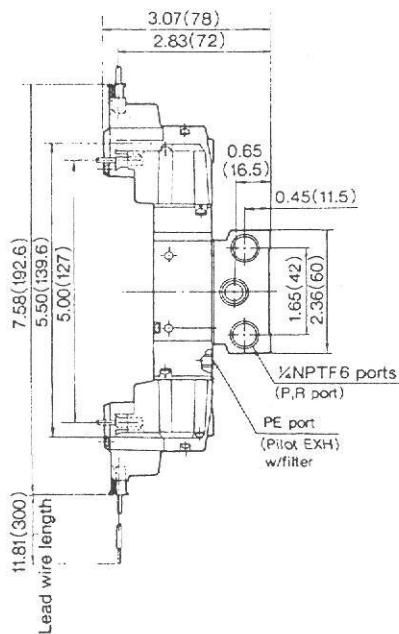
Grommet (G) (H)



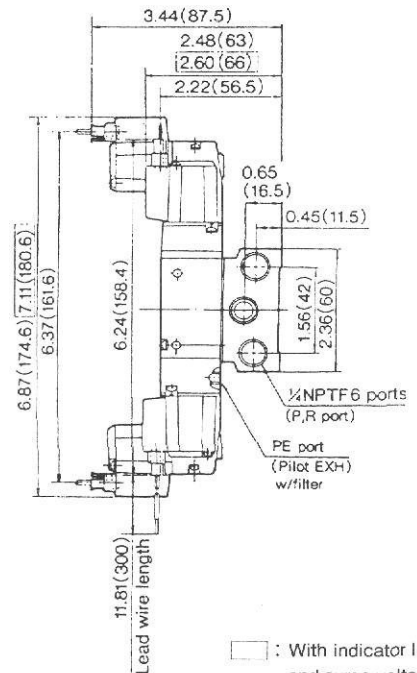
Example pneumatic circuit diagram



L type plug connector (L)



M type plug connector (M)



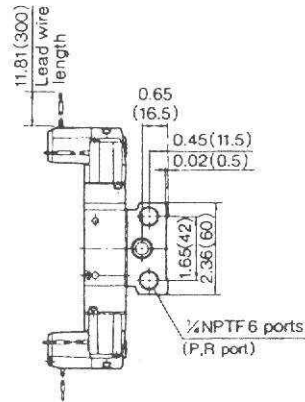
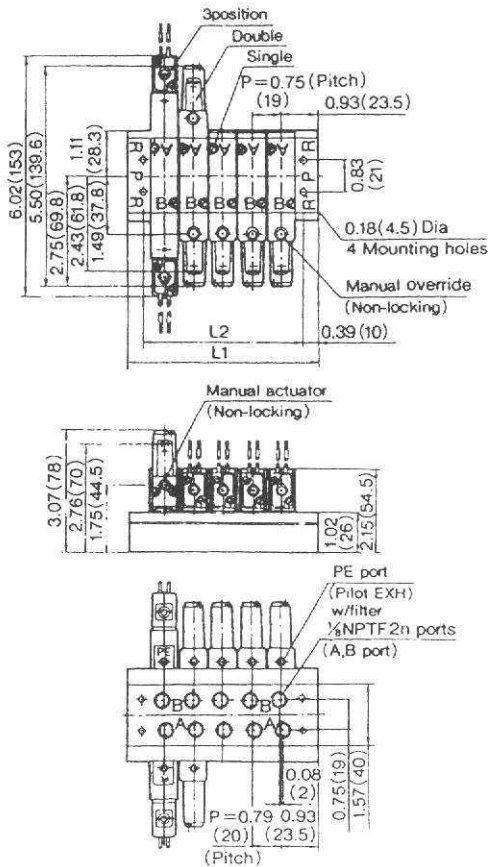
□ : With indicator light
and surge voltage suppressor

Station (n)	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L ₁	2.60 (66)	3.35 (85)	4.09 (104)	4.84 (123)	5.59 (142)	6.34 (161)	7.09 (180)	7.83 (199)	8.58 (218)	9.33 (237)	10.08 (256)	10.83 (275)	11.57 (294)	12.32 (313)	13.07 (332)	13.82 (351)	14.57 (370)	15.31 (389)	16.06 (408)
L ₂	1.81 (46)	2.56 (65)	3.31 (84)	4.06 (103)	4.80 (122)	5.55 (141)	6.30 (160)	7.05 (179)	7.80 (198)	8.54 (217)	9.29 (236)	10.04 (255)	10.79 (274)	11.54 (293)	12.28 (312)	13.03 (331)	13.78 (350)	14.53 (369)	15.28 (388)

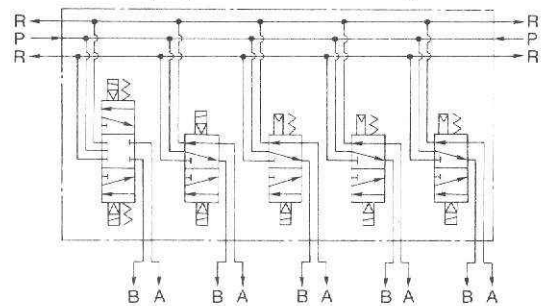
pe 40 Manifold/ Bottom Ported

inch (mm)

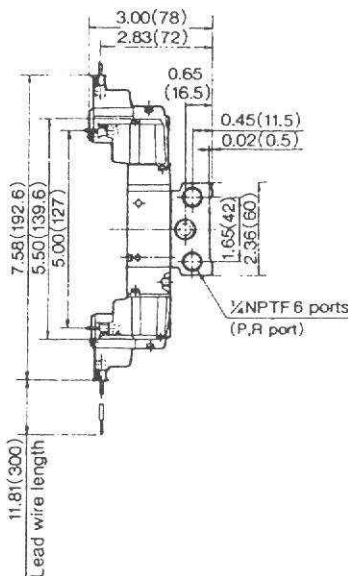
mmet (G) (H)



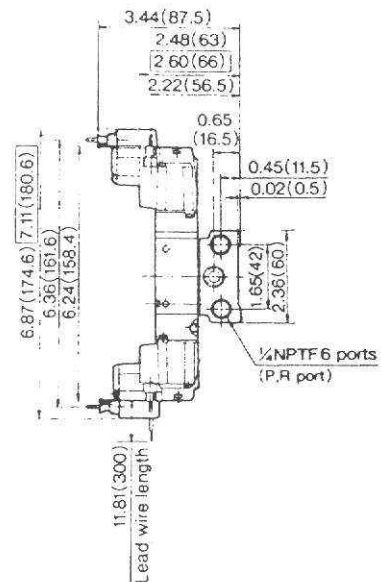
Example pneumatic circuit diagram



pe plug connector (L)



M type plug connector (M)



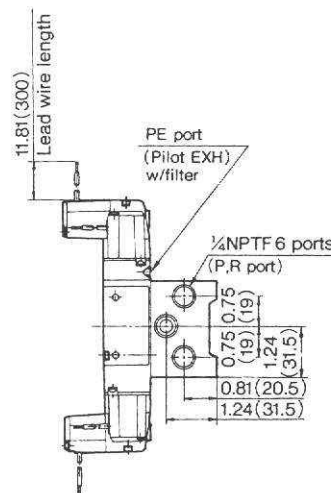
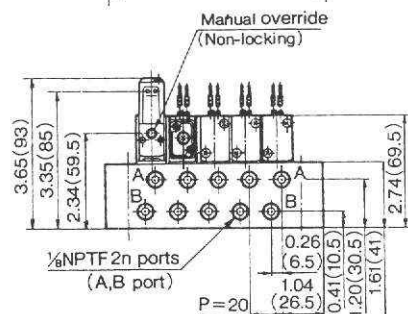
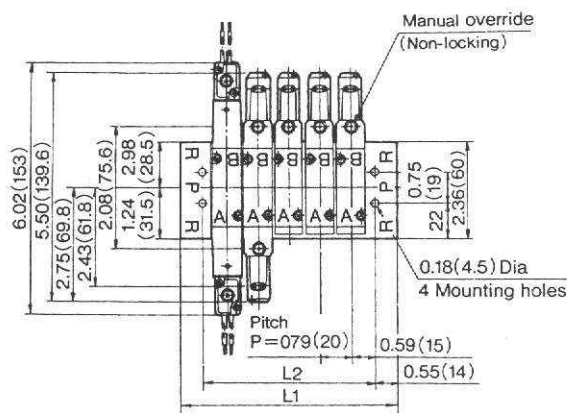
□ : With indicator light and surge voltage suppressor

Position (n)	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L ₁	2.60 (66)	3.35 (85)	4.09 (104)	4.84 (123)	5.59 (142)	6.34 (161)	7.09 (180)	7.83 (199)	8.58 (218)	9.33 (237)	10.08 (256)	10.83 (275)	11.57 (294)	12.32 (313)	13.07 (332)	13.82 (351)	14.57 (370)	15.31 (389)	16.06 (408)
L ₂	1.81 (46)	2.56 (65)	3.31 (84)	4.06 (103)	4.80 (122)	5.55 (141)	6.30 (160)	7.05 (179)	7.80 (198)	8.54 (217)	9.29 (236)	10.04 (255)	10.79 (274)	11.54 (293)	12.28 (312)	13.03 (331)	13.78 (350)	14.53 (369)	15.28 (388)

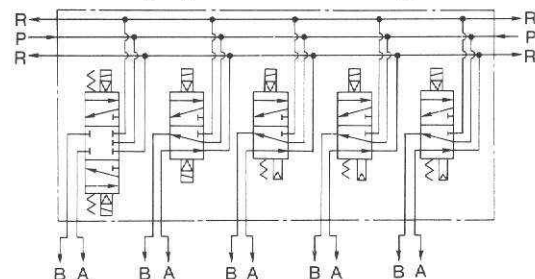
Type 41 Manifold/ Side Ported

inch (mm)

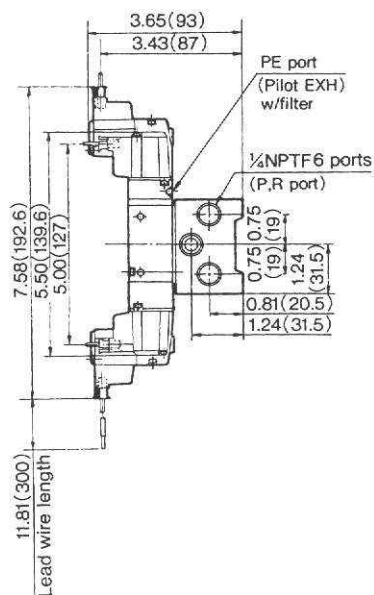
Grommet (G) (H)



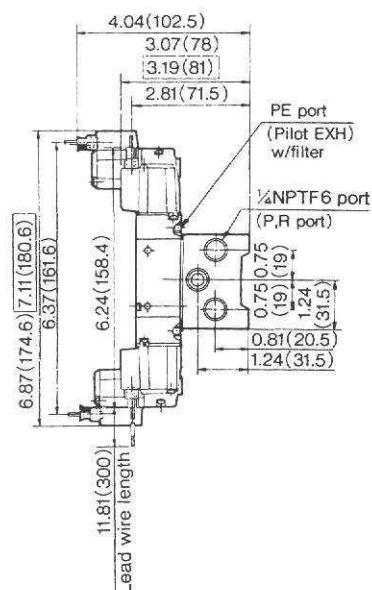
Example pneumatic circuit diagram



L type plug connector (L)



M type plug connector (M)



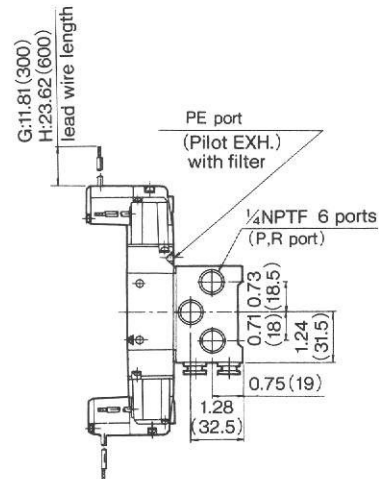
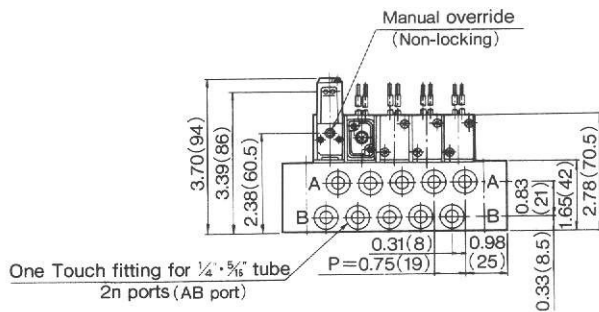
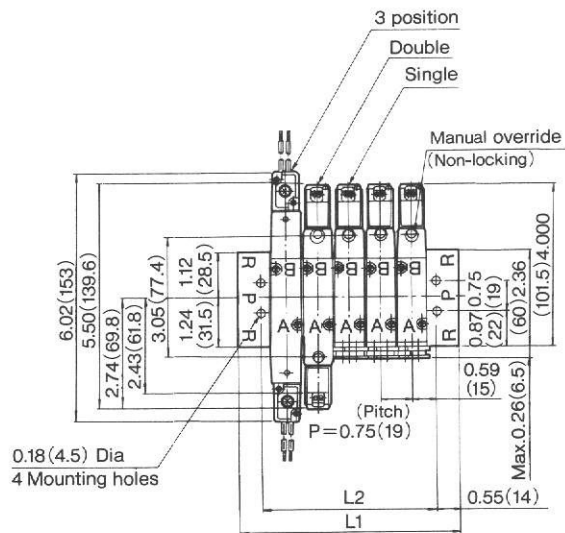
□ : With indicator light and surge voltage suppressor

Station (n)	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L ₁	3.07 (78)	3.86 (98)	4.65 (118)	5.43 (138)	6.22 (158)	7.01 (178)	7.80 (198)	8.58 (218)	9.37 (238)	10.16 (258)	10.94 (278)	11.73 (298)	12.52 (318)	13.31 (338)	14.09 (358)	14.88 (378)	15.67 (398)	16.46 (418)	17.24 (438)
L ₂	1.97 (50)	2.76 (70)	3.54 (90)	4.33 (110)	5.12 (130)	5.91 (150)	6.69 (170)	7.48 (190)	8.27 (210)	9.06 (230)	9.84 (250)	10.63 (270)	11.42 (290)	12.20 (310)	12.99 (330)	13.78 (350)	14.57 (370)	15.35 (390)	16.14 (410)

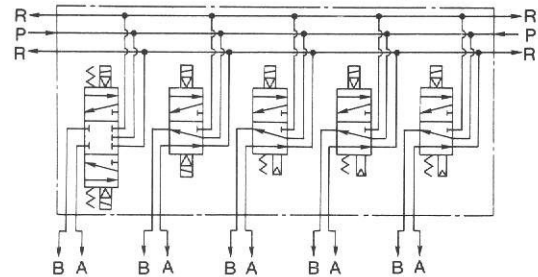
pe 42 Manifold/ Side Ported

inch (mm)

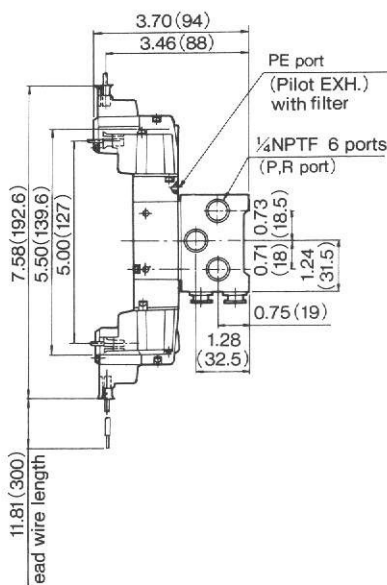
mmet (G) (H)



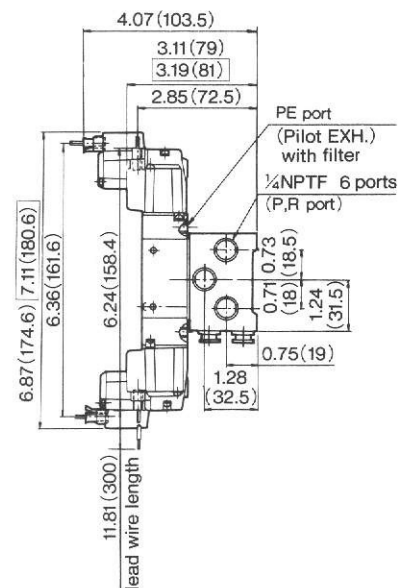
Example pneumatic circuit diagram



ype plug connector (L)



M type plug connector (M)



□ : With indicator light and surge voltage suppressor

ation (n)	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L ₁	3.03 (77)	3.78 (96)	4.53 (115)	5.28 (134)	6.02 (153)	6.77 (172)	7.52 (191)	8.27 (210)	9.02 (229)	9.76 (248)	10.51 (267)	11.26 (286)	12.01 (305)	12.76 (324)	13.50 (343)	14.25 (362)	15.00 (381)	15.75 (400)	16.50 (419)
L ₂	1.93 (49)	2.68 (68)	3.43 (87)	4.17 (106)	4.92 (125)	5.67 (144)	6.42 (163)	7.17 (182)	7.91 (201)	8.66 (220)	9.41 (239)	10.16 (258)	10.91 (277)	11.65 (296)	12.40 (315)	13.15 (334)	13.90 (353)	14.65 (372)	15.39 (391)

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