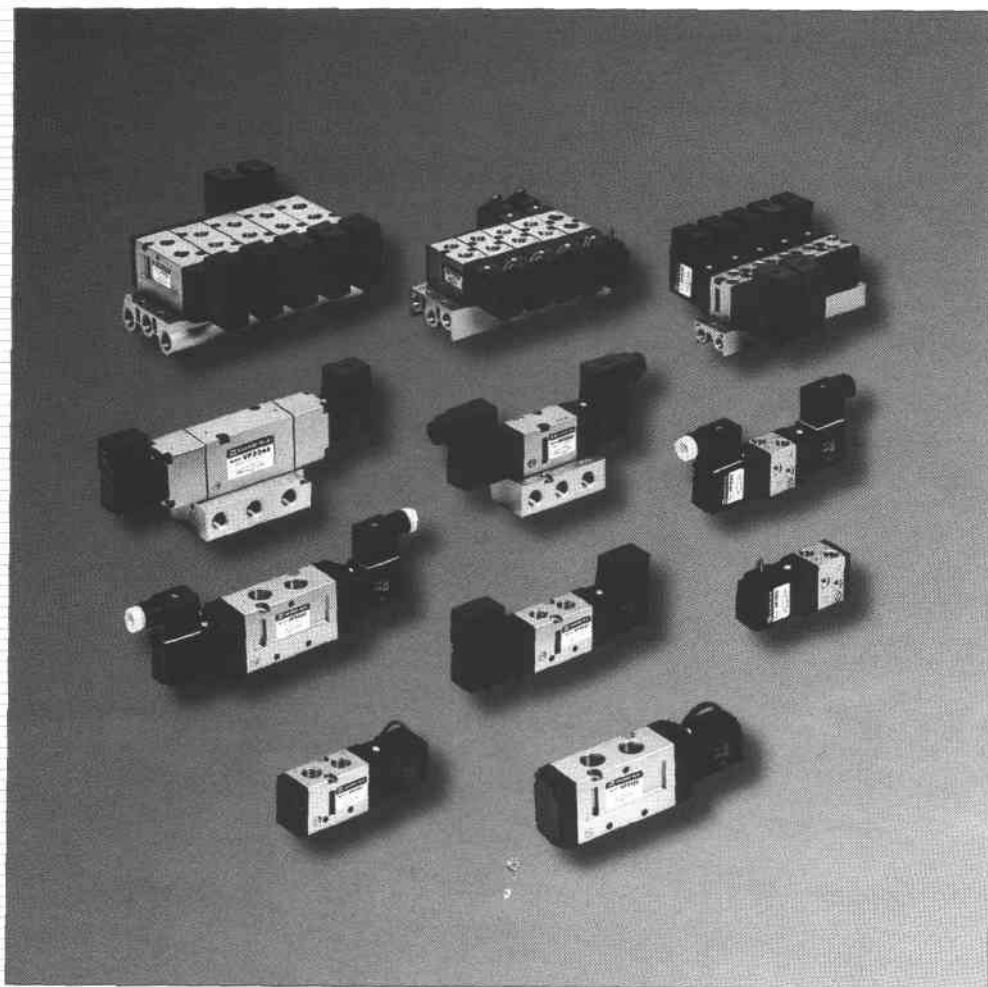




4 Way • 5 Port

NVF 3000/5000 Series

Rubber Seal • Pilot Solenoid Valve



Compact Size/Large Flow - Cv 1.0 ~ 2.5
Body Ported/Base Mounted Configurations
Wide Array of Electrical Entries
Low Power Consumption: 1.8 WDC

NVF 3000, 5000 Index

Series NVF3000	4
Series NVF3000 Manifold	7
Series NVF5000	14
Series NVF5000 Manifold	16

5 Port Pilot Type Solenoid Valve Series NVF

Large flow capacity, compact size.

Low power consumption/1.8WDC

Many variations available

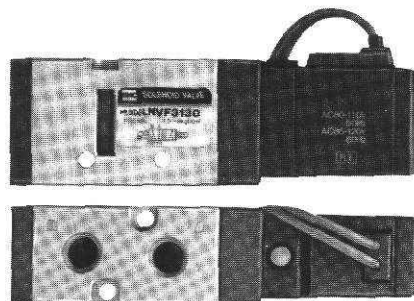
In-line or subbase porting

3 types of manual override

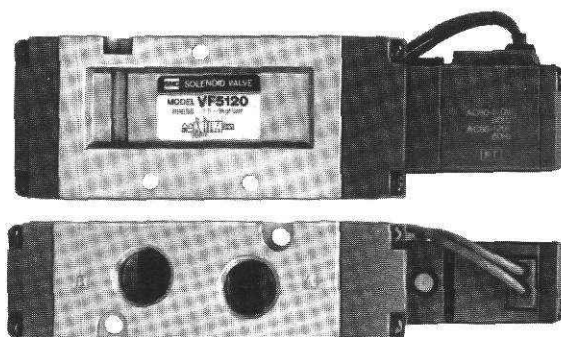
6 styles of electrical entry

Common exhaust for the main and pilot valve is available.

NVF3000/Cv1.0 1.04inch Wide



NVF5000/Cv2.5 1.26inch Wide



Many combinations available to fit your needs.

Series/Port Size

NVF3000


1/8NPTF


1/4NPTF

Type of Actuation

NVF3000

2 position single

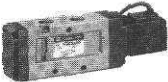

2 position double

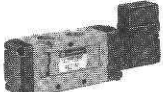

3 position closed center


3 position exhaust center


3 position pressure center


NVF5000


1/4NPTF


3/8NPTF

NVF5000

2 position single


2 position double


3 position closed center

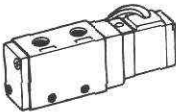

3 position exhaust center

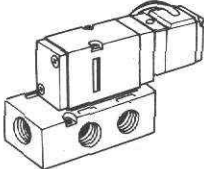

3 position pressure center


Piping

Body ported
NVF3000
NVF5000

Base mounted
NVF3000
NVF5000
(with sub-plate)



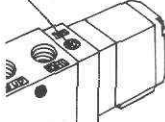


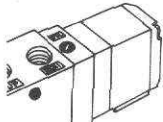
(Illustration: NVF3000)

Pilot Exhaust

Individual for pilot valve
(Standard)

Common exhaust for main valve and pilot valve
(NVF3000)



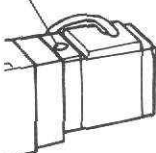


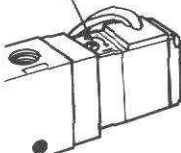
Manual Override

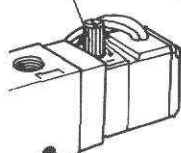
Non-locking push type

Slotted locking type

Knob locking type







Voltages

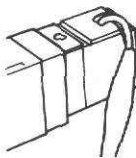
AC
110V, 220V
12V, 24V, 48V
100V, 200V, 240V

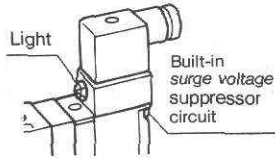
DC
12V, 24V
6V, 48V, 100V, 110V

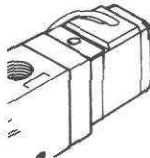
Surge Voltage Suppressor Circuit/Indicator Light

Surge voltage suppressor circuit
(Grommet type)

Indicator light and surge voltage suppressor circuit
(Grommet terminal)
(DIN connector)
(Conduit terminal)







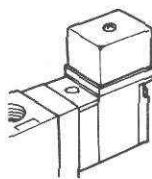
Electrical Entry

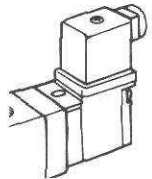
Grommet (G)

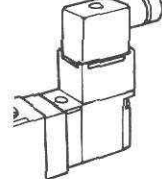
Grommet terminal (E)

Conduit terminal (T)

DIN connector (D)



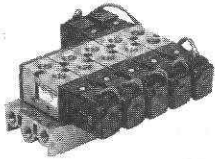


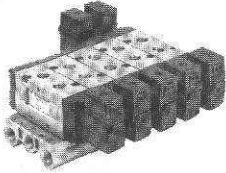


Manifold

NVF3000

NVF5000


NVV5F3-30


NVV5F5-20

Type	CYL port	Exhaust
B mount	Valve	Common, Individual

Type	A, B port	Exhaust
B mount	Valve	Common

SMC 5 Port Pilot Type/Rubber Seal Series NVF3000

Compact size and light weight

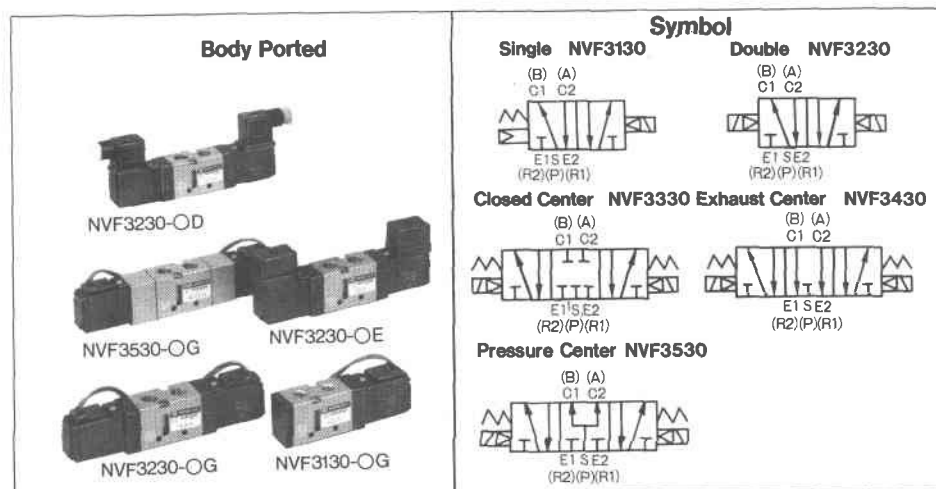
—— 1.04inch wide

Large flow capacity

—— Cv1.0 (1/4)

Low power consumption

—— 1.8WDC



Specifications

Fluid—— Air

Operating pressure range 2 position single —— 20 ~ 129 PSI S(1.5 ~ 9kgf²)

2 position double —— 15 ~ 128 PSI (1 ~ 9kgf/cm²)

Ambient and fluid temperature —— Max. 120°F(Max. 50°C)

Response time 2 position single/double —— 20ms or less at 75 PSI (5kgf/cm²)

3 position —— 40ms or less at 75 PSI (5kgf/cm²)

Max. operating cycle 2 position single/double —— 600 cpm

3 position —— 180 cpm

Lubrication —— Not required

Manual override —— Non-locking push type, Slotted locking type, Knob locking type

Mounting position —— Free

Impact/Vibration resistance —— 30G/5G (8.3 ~ 2000Hz)

Enclosure —— Dust proof

Pilot exhaust —— Individual exhaust, Common exhaust for main valve and pilot valve

Solenoid Specifications

Electrical entry —— Grommet, Grommet terminal, Conduit terminal, DIN connector

Voltages AC —— 110, 220, 12, 24, 48, 240V 50/60Hz

DC —— 24, 6, 12, 48, 100, 110V

Voltage allowance —— - 15 ~ + 10% of rated voltage

Insulation —— Class B or equivalent

Power consumption AC Inrush —— 5.6VA(50Hz), 5.0VA(60Hz)

Holding —— 3.4VA(50Hz), 2.3VA(60Hz)

DC —— 1.8W/2W (With LED)

Indicator light. Surge voltage suppressor circuit AC —— ZNR(Varistor), Neon lamp(LED 100V or less)

DC —— Diode, LED (Neon lamp 100V or more)

Accessories/Options

Description	Model	Application
Silencer	NAN110-N01	1/8NPTF

Model

Piping	Model (1)	Position/Type	Port ⁽²⁾ size	Cv factor			Weight ⁽³⁾ lbs(kgf)
				1/8NPTF	1/4NPTF	3/8NPTF	
Body ported (May be mounted on 30 type manifold)	NVF3130-00-01T	2/Single	1/8 • 1/4 NPTF	0.8	1.0	—	0.46(0.21)
	NVF3230-00-01T	2/Double		0.8	1.0	—	0.64(0.29)
	NVF3330-00-01T	3/Closed center		0.65	0.8	—	0.97(0.44)
	NVF3430-00-01T	3/Exhaust center		0.8	1.0	—	0.97(0.44)
	NVF3530-00-01T	3/Pressure center		0.8 0.55 ⁽⁴⁾	0.9 0.6 ⁽⁴⁾	—	0.97(0.44)

Note (1) If exhaust for main valve and pilot valve is common, model number will be NVF3033.

(2) Exhaust (EXH) port is only 1/8NPTF.

(3) Weight is for Grommet type.

(4) In center position the flow P→A.B is as shown

Series NVF3000

How to Order

NVF3 1 3 0 1 G O2T

Type of actuation •

- 1 2 position / single solenoid
- 2 2 position / double solenoid
- 3 3 position, closed center / double solenoid
- 4 3 position, exhaust center / double solenoid
- 5 3 position, pressure center / double solenoid

Body type •

- 3 Body ported (or type 30 manifold)
- 4* Subbase mounted
- * Special order

Body option •

- 0 Individual exhaust for the pilot and main valve
- 3 Common exhaust for main valve and pilot valve
- * Special order

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

• Port size (SUP.,CYL.)

- 01T 1/8 NPTF
- 02T 1/4 NPTF
- 02T* 1/4 NPTF (subbase)
- 03T* 3/8 NPTF (subbase)
- * Special order. Only for NVF3040 type.

• Manual override

- Non-locking push type
- B Slotted locking type
- C Knob locking type

• Electrical entry / Indicator light and surge voltage suppressor

G	Grommet (Lead wire length 12 inch (300 mm))
GS★	Grommet (Lead wire length 12 inch (300mm)) with surge voltage suppressor
H★	Grommet (Lead wire length 24 inch (600mm))
HS★	Grommet (Lead wire length 24 inch (600mm)) with surge suppressor
E★	Grommet terminal
EZ★	Grommet terminal with indicator light and surge voltage suppressor
T★	Conduit terminal
TZ★	Conduit terminal with indicator light and surge voltage suppressor
D	DIN Connector
DZ★	DIN connector with indicator light and surge voltage suppressor
L	L-type plug connector with lead
LZ	L-type plug connector with lead with indicator light and surge voltage suppressor
LO	L-type plug without connector
LOZ	L-type plug without connector with indicator light and surge voltage suppressor
M	M-type plug connector with lead
MZ	M-type plug connector with lead with indicator light and surge voltage suppressor
MO	M-type plug without connector
MOZ	M-type plug without connector with indicator light and surge voltage suppressor

How to Order Pilot Valve Assembly

SF4 3 DZ 50

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

• Manual override

- Non-locking push type

• Electrical entry / Indicator light and surge voltage suppressor

G	Grommet (Lead wire length 12 inch (300mm))
GS★	Grommet (Lead wire length 12 inch (300mm)) with surge voltage suppressor
H★	Grommet (Lead wire length 24 inch (600mm))
HS★	Grommet (Lead wire length 24 inch (600mm)) with surge suppressor
E★	Grommet terminal
EZ★	Grommet terminal with indicator light and surge voltage suppressor
T★	Conduit terminal
TZ★	Conduit terminal with indicator light and surge voltage suppressor
D	DIN connector
DZ★	DIN connector with indicator light and surge voltage suppressor

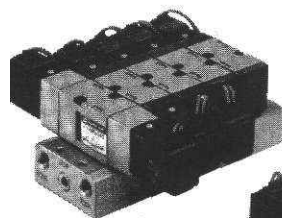
★ Special order

Specifications

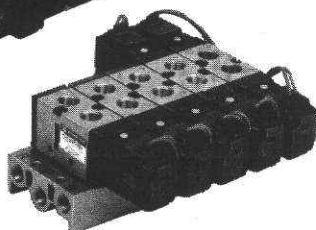
Applicable plug connector assembly for L&M type plug connector
 Connector assembly: DXT170-80-★A-★
 Connector assembly with cover: DXT170-123-A-★

L	L-type plug connector with lead
LZ	L-type plug connector with lead with indicator light and surge voltage suppressor
LO	L-type plug without connector
LOZ	L-type plug without connector with indicator light and surge voltage suppressor
M	M-type plug connector with lead
MZ	M-type plug connector with lead with indicator light and surge voltage suppressor
MO	M-type plug without connector
MOZ	M-type plug without connector with indicator light and surge voltage suppressor

Manifold



NVV5F3-40



NVV5F3-50

Manifold Specifications

Manifold type	B mount (Barstock Type)	
Exhaust	Common	Individual
Maximum stations	20 stations*	

* If there are more than 8 stations supply air to both sides and exhaust from both sides of manifold ports.

Manifold type	Model	Exhaust*	Piping/Port location			Port size			Applicable valve
			SUP.	EXH.	CYL.	SUP.	EXH.	CYL.	
B mount	NVV5F3-30	Common	Side/ Base	Side/ Base	Top/ Valve	1/4NPTF	1/4NPTF	1/8NPTF 1/4NPTF	NVF3030 NVF3033

* Supply is always common.

Accessories

Description	Model No.
EXH relocation spacer	DXT155-17-1TA
Blanking plate	DXT031-38-1A
Subplate Gasket	DXT031-30-2

How To Order Manifold Base

NVV5F3-30-051-00T

Series

NVF3000 manifold

Manifold specifications

Code	Port location for CYL. port	Port size for EXH.	Applicable valve
30	Valve	1/4NPTF	NVF3030 NVF3033

* Special order

Component symbol

Code	Passage		Piping	Applicable manifold type
	SUP.	EXH.	CYL.	
1	Common	Common	Top (Side)	30

Stations

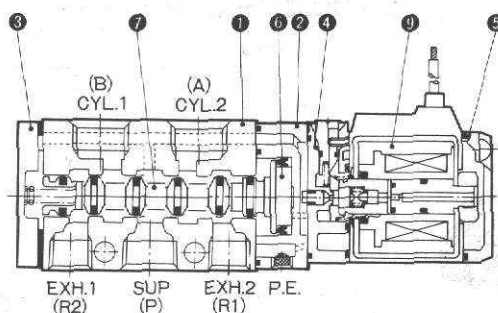
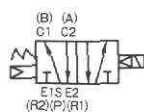
02 — 2 stations
 ...
 20 — 20 stations

Series NVF3000

Construction/Parts List

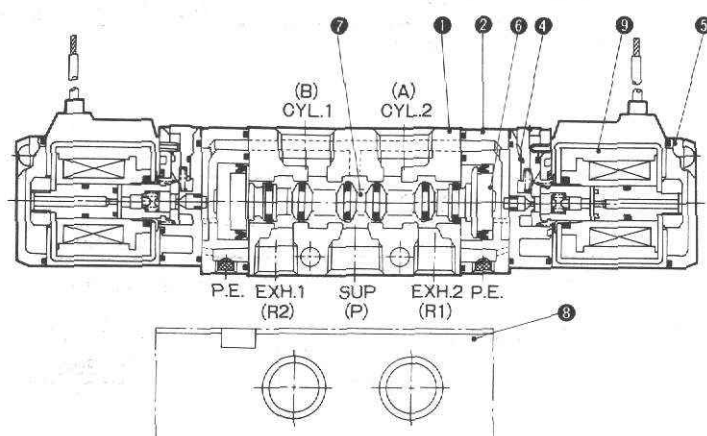
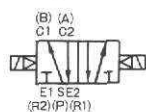
Single Solenoid

Symbol



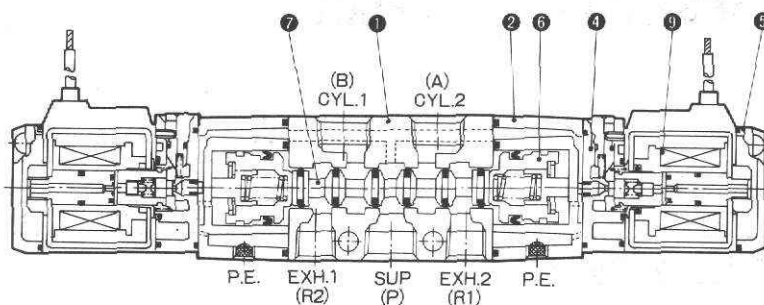
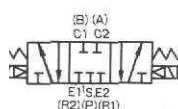
Double Solenoid

Symbol



3 Position Closed Center

Symbol



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

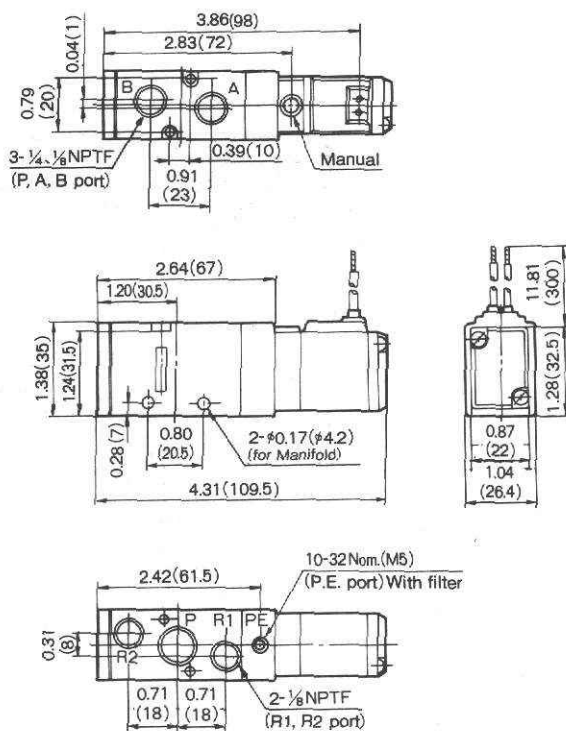
*3 position: Metallic paint

Spare Parts

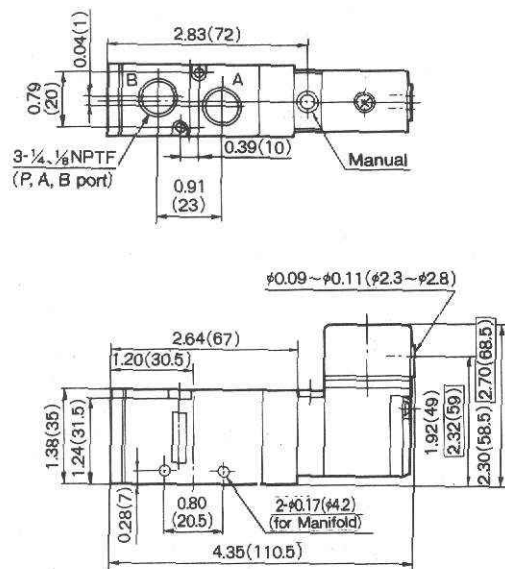
Description	Part No.
1/4" NPTF Subplate	DXT031-41-4TP
3/8" NPTF Subplate	DXT031-41-3TP

Body Ported/Dimensions inch(mm) NVF3130

Grommet/NVF3130-OG

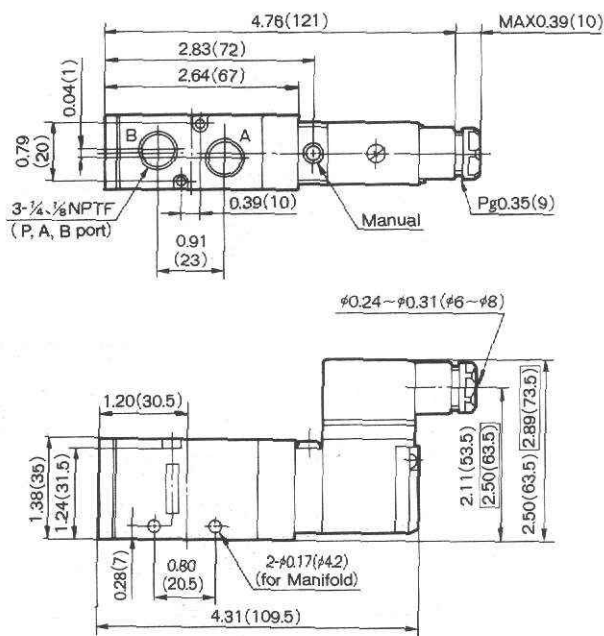


Grommet Terminal/ NVF3130-OE

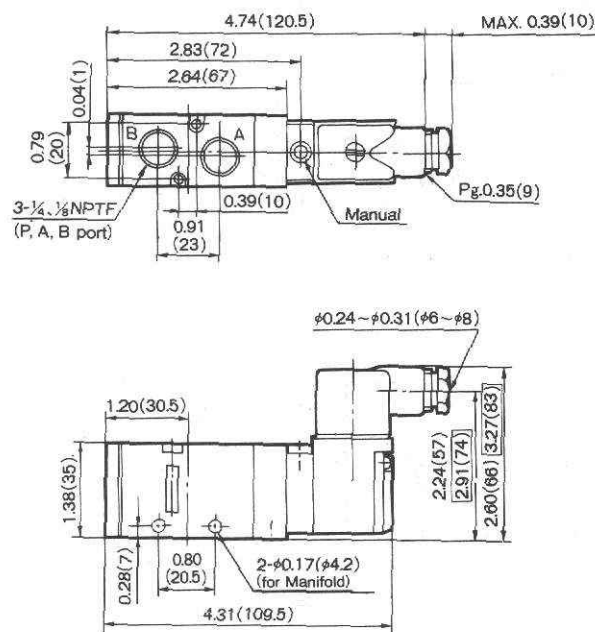


□: with indicator light and surge voltage suppressor

Conduit Terminal/ NVF3130-OT



DIN Connector/ NVF3130-OD



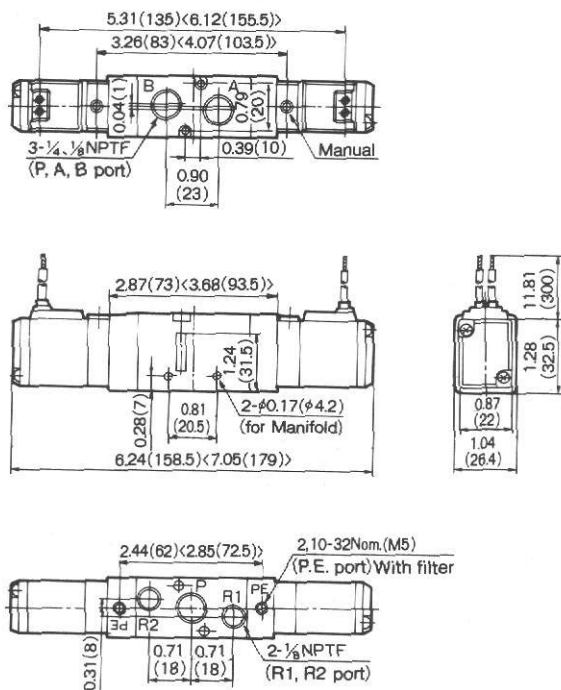
□: with indicator light and surge voltage suppressor

□: with indicator light and surge voltage suppressor

Series NVF3000

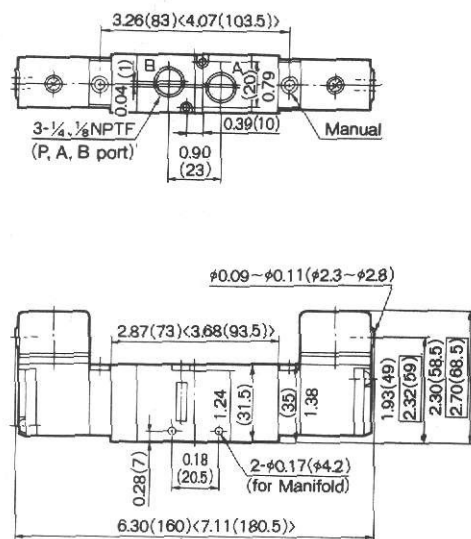
Body Ported/Dimensions inch (mm) NVF3230, NVF3330, NVF3430, NVF3530

Grommet/NVF3230-○G, NVF3330-○G, NVF3430-○G, NVF3530-○G



< >: 3 position

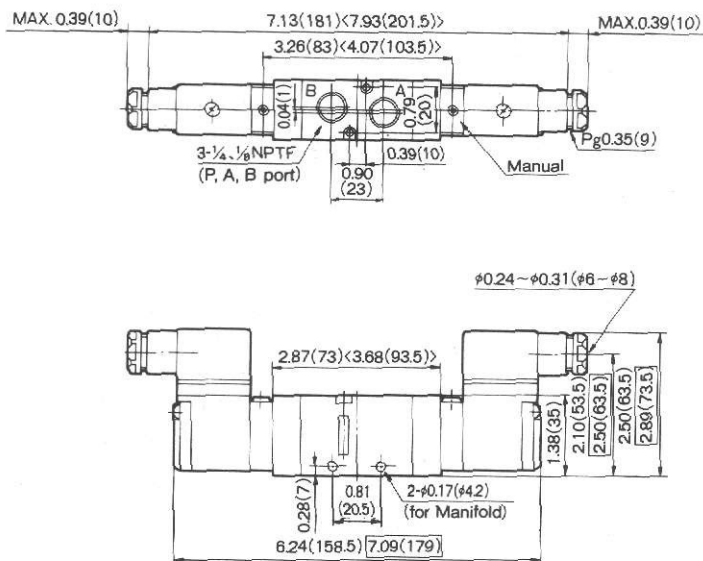
Grommet Terminal/NVF3230-○E, NVF3330-○E, NVF3430-○E, NVF3530-○E



< >: 3 position

□: with indicator light and surge voltage suppressor

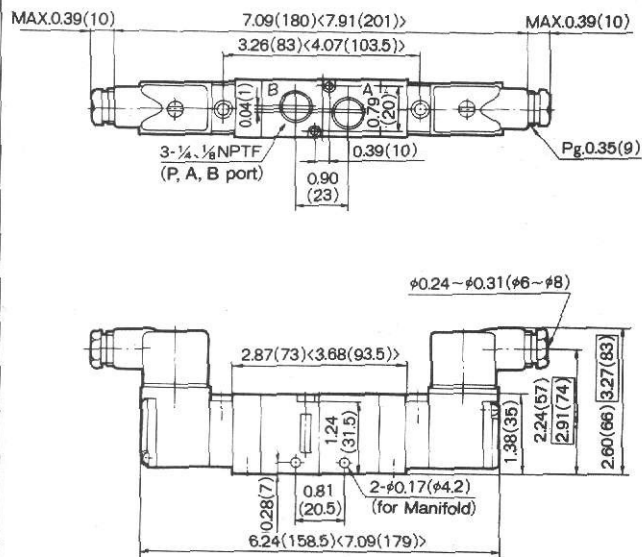
Conduit Terminal/NVF3230-○T, NVF3330-○T, NVF3430-○T, NVF3530-○T



< >: 3 position

□: with indicator light and surge voltage suppressor

DIN Connector/NVF3230-○D, NVF3330-○D, NVF3430-○D, NVF3530-○D

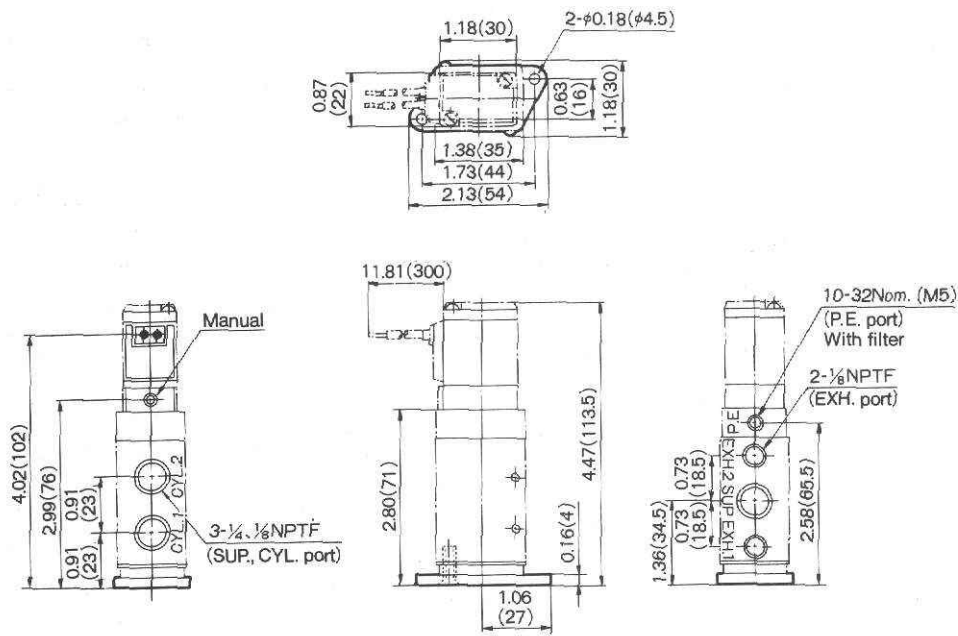


< >: 3 position

□: with indicator light and surge voltage suppressor

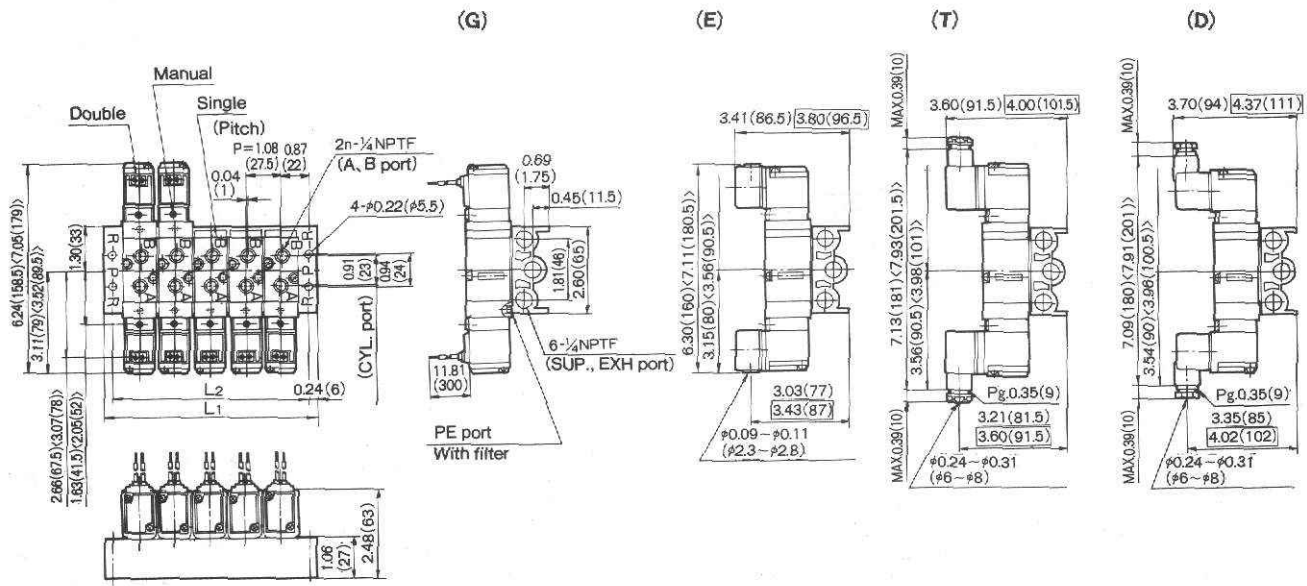
Bracket/Dimensions inch(mm)

(NVF3122-OG-02-F)



Series NVF3000 Manifold B Mount Type/Dimensions inch(mm) NVV5F3-30

Common Exhaust/NVV5F3-30-001



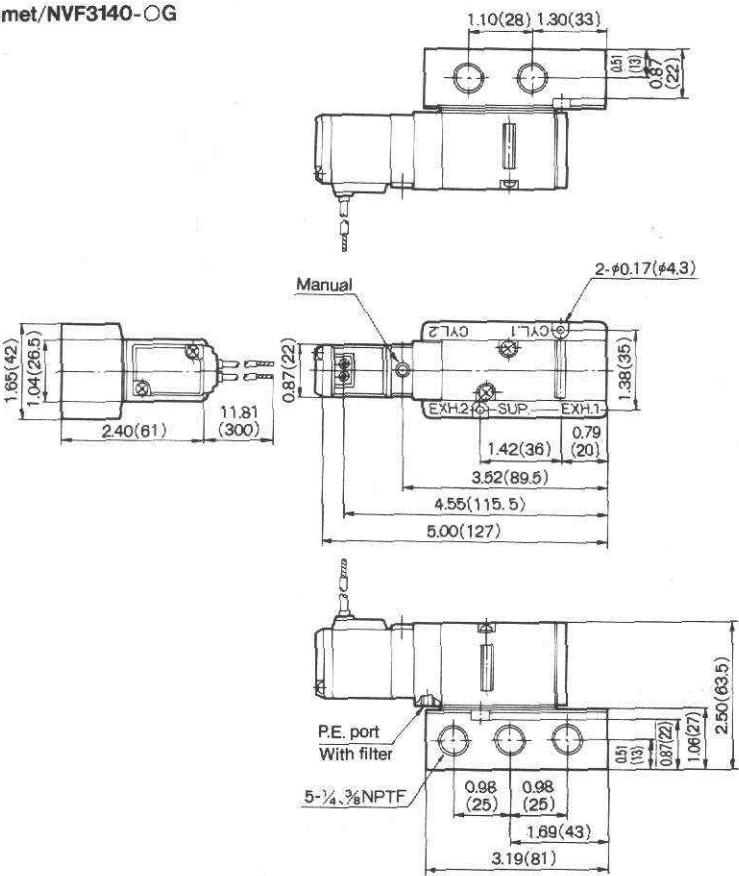
< >: 3 position
□: with indicator light and surge voltage suppressor

L: Dimensions inch (mm) n: Stations

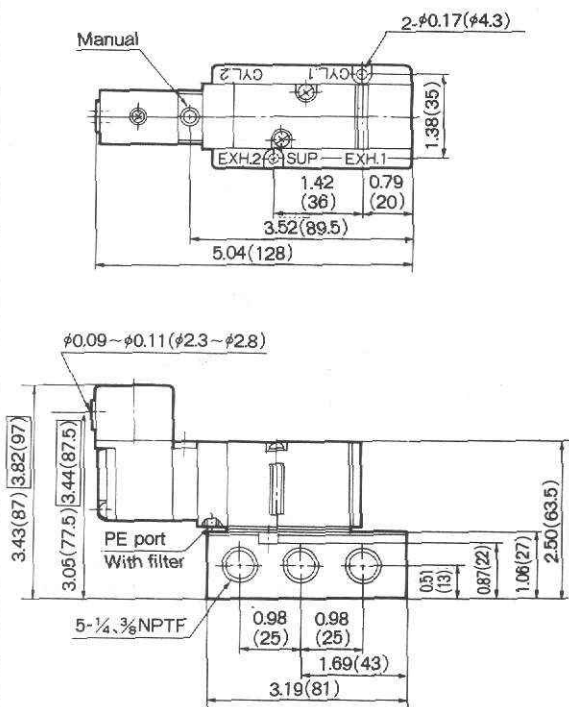
L	n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	19	19	20
L ₁		3.29 (83.5)	4.37 (111)	5.45 (138.5)	6.54 (166)	7.62 (193.5)	8.70 (221)	9.78 (248.5)	10.87 (276)	11.95 (303.5)	13.03 (331)	14.11 (358.5)	15.20 (386)	16.28 (413.5)	17.36 (441)	18.44 (468.5)	19.53 (496)	20.61 (523.5)	21.69 (551)	22.78 (578.5)
L ₂		2.81 (71.5)	3.90 (99)	4.98 (126.5)	6.06 (154)	7.15 (181.5)	8.23 (209)	9.31 (236.5)	10.39 (264)	11.48 (291.5)	12.56 (319)	13.64 (346.5)	14.72 (374)	15.81 (401.5)	16.89 (429)	17.97 (456.5)	19.06 (484)	20.14 (511.5)	21.22 (539)	22.30 (566.5)

Sub-Base Mounted/Dimensions inch(mm) NVF3140

Grommet/NVF3140-OG

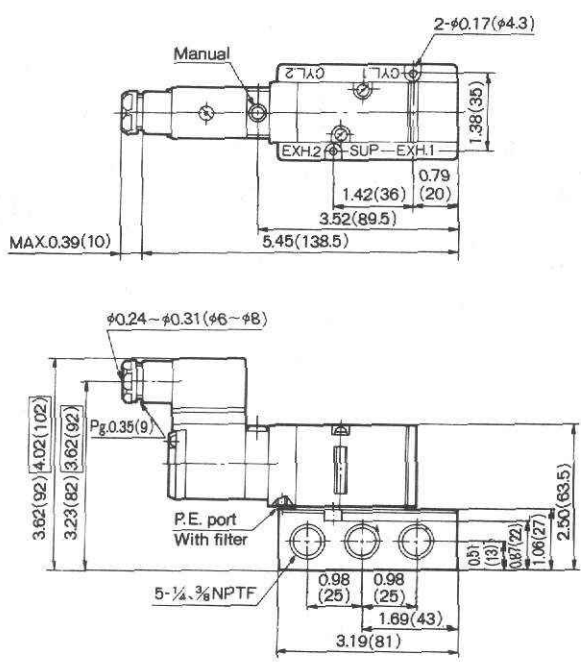


Grommet Terminal/NVF3140-OE



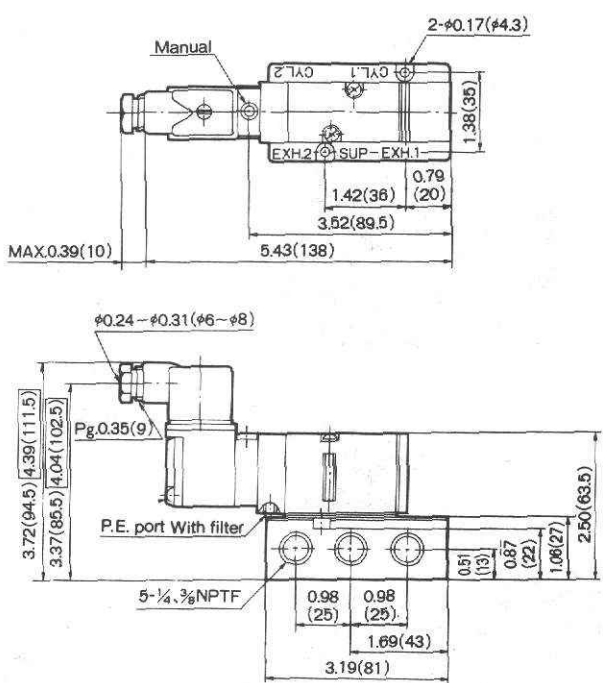
□:with indicator light and surge voltage suppressor

Conduit Terminal/NVF3140-OT



□:with indicator light and surge voltage suppressor

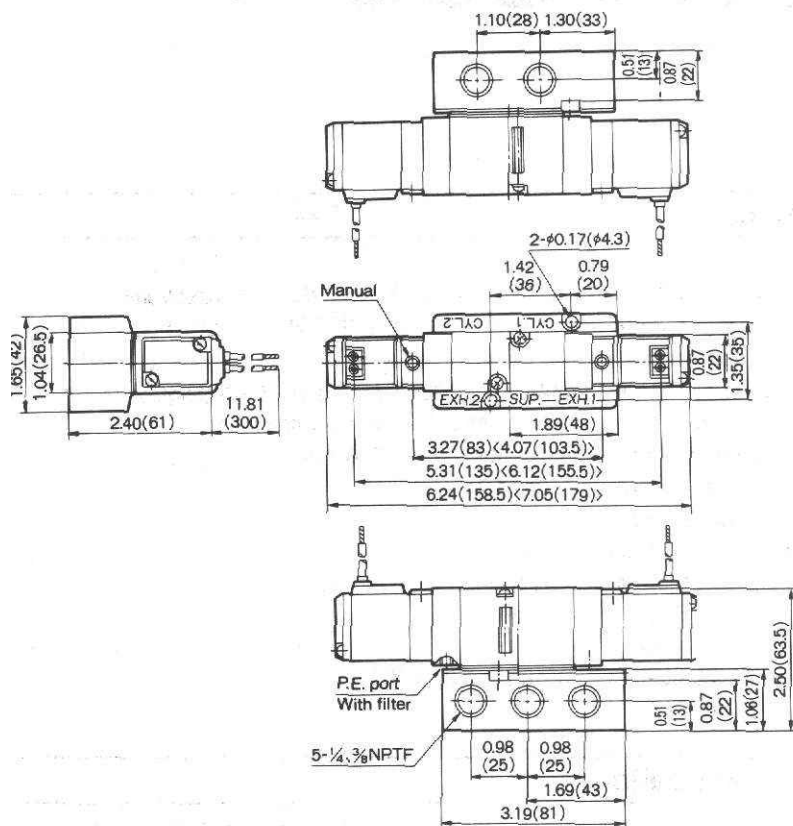
DIN Connector/NVF3140-OD



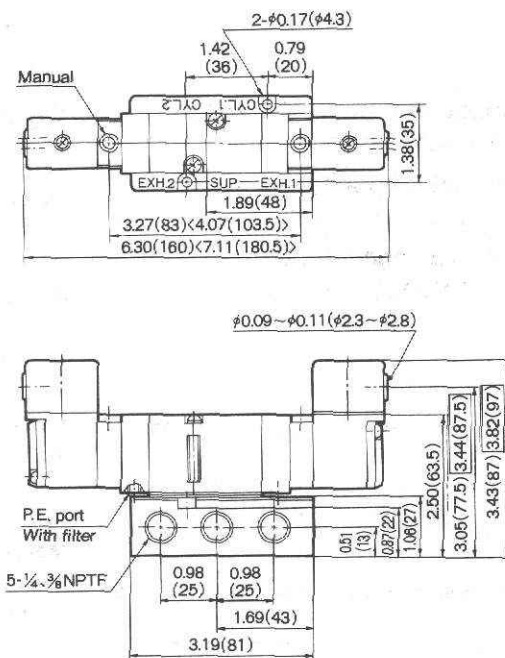
□:with indicator light and surge voltage suppressor

Sub-Base Mounted/Dimensions inch(mm) NVF3240,NVF3340,NVF3440,NVF3540

Grommet/NVF3240-○G,NVF3340-○G,NVF3440-○G,NVF3540-○G

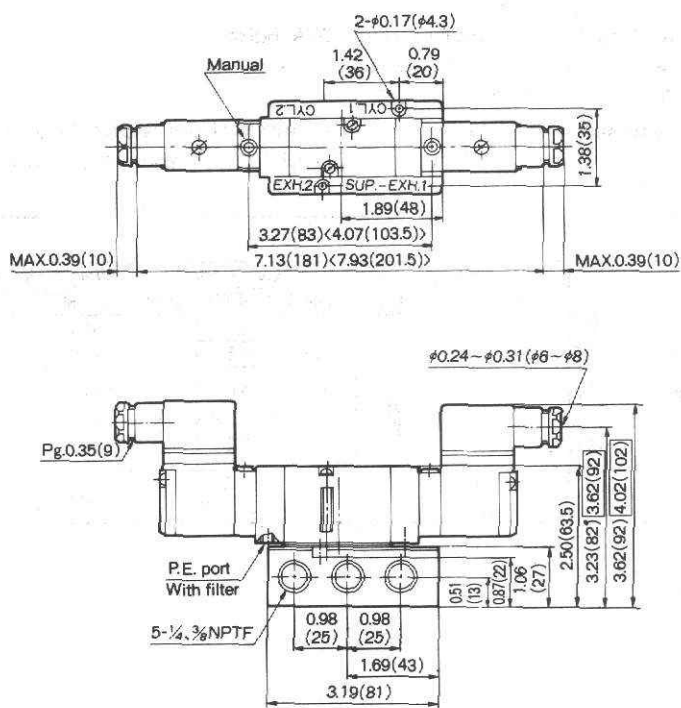


Grommet Terminal/NVF3240-○E,NVF3340-○E,NVF3440-○E,NVF3540-○E



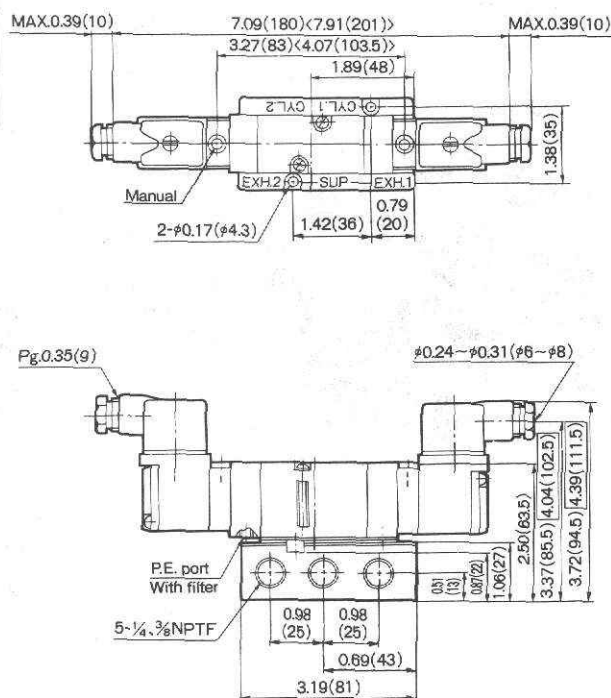
() : 3 position
 □ : with indicator light and surge voltage suppressor

Conduit Terminal/NVF3240-○T,NVF3340-○T,NVF3440-○T,NVF3540-○T



() : 3 position
 □ : with indicator light and surge voltage suppressor

DIN Connector/NVF3240-○D, NVF3340-○D, NVF3440-○D, NVF3540-○D



() : 3 position
 □ : with indicator light and surge voltage suppressor

5 Port Pilot Type/Rubber Seal Series NVF5000

Compact size and light weight
— 1.26inch width

Large flow capacity
— Cv2.5 ($\frac{3}{8}$)

Low power consumption
— 1.8W (DC)

Symbol

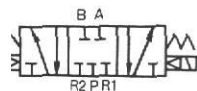
Single NVF5120



Double NVF5220



Closed Center NVF5320



Exhaust Center NVF5420



Pressure Center NVF5520



Body Ported



Specifications

Fluid — Air

Operating pressure range 2 position single — 20~130 PSI S(1.5~9kgf/cm²)
2 position double — 15~130 PSI (1~9kgf/cm²)

Ambient and fluid temperature — Max. 120°F(Max. 50°C)

Response time 2 position single/double — 30ms or less at 75 PSI (5kgf/cm²)
3 position — 50ms or less at 75 PSI (5kgf/cm²)

Max. operating cycle 2 position single/double — 300 cpm
3 position — 180 cpm

Lubrication — Not required

Manual override — Non-locking push type
Slotted locking type
Knob locking type

Mounting position — Free

Impact/Vibration resistance — 30G/5G (8.3~2000Hz)

Enclosure — Dust proof

Solenoid Specifications

Electrical entry — Grommet, Grommet terminal, Conduit terminal, DIN connector

Voltages AC — 110, 220, 12, 24, 48 50/60Hz

DC — 24, 6, 12, 48, 100, 110V

Voltage allowance — -15~+10%, of rated voltage

Insulation — Class B or equivalent

Power consumption AC Inrush — 5.6VA (50Hz), 5.0VA (60Hz)

AC Holding — 3.4VA (50Hz), 2.3VA (60Hz)

DC — 1.8W/2W (With LED)

Indicator light. Surge voltage suppressor circuit AC — ZNR (Varistor), Neon lamp (LED 100V or less)

DC — Diode, LED (Neon lamp 100V or more)

Model

Body type	Model*	Position/ Type	Port size	Cv factor			Weight**lbs(kgf)	
				$\frac{1}{4}$ NPTF	$\frac{3}{8}$ NPTF	$\frac{1}{2}$ NPTF	$\frac{1}{4}$ NPTF	$\frac{1}{2}$ NPTF
Body Ported	NVF5120-○○- $\frac{3}{32}$ T	2/Single	$\frac{1}{4}$ NPTF $\frac{3}{8}$ NPTF	1.9	2.5	—	0.84(0.38)	—
	NVF5220-○○- $\frac{3}{32}$ T	2/Double		1.9	2.5	—	0.99(0.45)	—
	NVF5320-○○- $\frac{3}{32}$ T	3/Closed center		1.7	2.0	—	1.23(0.56)	—
	NVF5420-○○- $\frac{3}{32}$ T	3/Exhaust center		1.8	2.3	—	1.23(0.56)	—
	NVF5520-○○- $\frac{3}{32}$ T	3/Pressure center		2.0 0.8 ⁽¹⁾	2.0 0.85 ⁽¹⁾	—	1.23(0.56)	—

* Body ported valves can be mounted on manifold directly.

** Weight is for Grommet type.

(1) In center position the flow P→A, B is as shown.

How To Order

NVF5 1 20 5 G 03T

Port of actuation

- 2 position/single solenoid
- 2 position/double solenoid
- 3 position, closed center/double solenoid
- 3 position, exhaust center/double solenoid
- 3 position, pressure center/double solenoid

Body

- 20 — Body ported
- 44* — Subbase mount

* Special order.

Voltage

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

* Special order.

Port size (P,A,B)

- 02T — 1/4 NPTF
- 03T — 3/8 NPTF
- 04T* — 1/2 NPTF

Manual override

* Subbase type only.

- Non-locking push type
- B — Slotted locking type
- C — Knob locking type

Electrical entry/Indicator light and surge voltage suppressor

G	Grommet (Lead wire length 12 inch (300mm))
GS*	Grommet (Lead wire length 12 inch (300mm)) With surge voltage suppressor
H*	Grommet (Lead wire length 24 inch (600mm))
HS*	Grommet (Lead wire length 24 inch (600mm)) With surge voltage suppressor
E*	Grommet terminal
EZ*	Grommet terminal with indicator light and surge voltage suppressor
T*	Conduit terminal
TZ*	Conduit terminal with indicator light and surge voltage suppressor
D	DIN connector
DZ	DIN connector with indicator light and surge voltage suppressor

* Special Order

How To Order Pilot Valve Assembly

SF4-3 DZ 50

Voltage

- 100VAC 50/60Hz
- 200VAC 50/60Hz
- 110VAC 50/60Hz
- 220VAC 50/60Hz
- 24VDC
- 12VDC
- Others

* Special order.

Manual override

- Non-locking push type
- B — Slotted locking type
- C — Knob locking type

Electrical entry/Indicator light and surge voltage suppressor

G	Grommet (Lead wire length 12inch (300mm))
GS*	Grommet (Lead wire length 12inch (300mm)) With surge voltage suppressor
H*	Grommet (Lead wire length 24inch (600mm))
HS*	Grommet (Lead wire length 24inch (600mm)) With surge voltage suppressor
E*	Grommet terminal
EZ*	Grommet terminal with indicator light and surge voltage suppressor
T*	Conduit terminal
TZ*	Conduit terminal with indicator light and surge voltage suppressor
D	DIN connector
DZ	DIN connector with indicator light and surge voltage suppressor
DO*	DIN connector (Without connector)
DOZ*	DIN connector (Without connector) with indicator light and surge voltage suppressor

* Special Order.

Series NVF5000 Manifold

Manifold

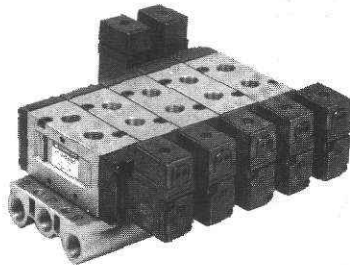
Manifold Specifications

Manifold type	B mount (Barstock Type)
Exhaust	Common
Maximum stations	10 stations

※ If there are more than 5 stations supply both sides of supply (P) port and exhaust both sides of exhaust (R) port.

Model	Exhaust port	Piping/Port location			Port size			Applicable Valve
		P	R	A,B	P	R	A,B	
NVV5F5-20	Common	Side/Base	Side/Base	Top/Valve	3/8NPTF	3/8NPTF	1/4NPTF 3/8NPTF	NVF5O20

※ Supply is all common



NVV5F5-20

Accessories/Options

Description	Model No.	Applicable manifold
EXH relocation spacer	DXT 156-20-1TA	NVV5F5-20
Blanking plate	DXT 156-19-1A	NVV5F5-20
Subplate Gasket	DXT 156-9-1	NVV5F5-20

* Spacer is used when it is necessary to exhaust from certain valves individually.

How To Order Manifold Base

NVV5F5-20-051-00T

Series NVF5000 Manifold •
Manifold specifications •

Code	Port location for CYL. port	Port size for EXH.	Applicable valve
20	Valve	3/8NPTF	NVF5O20

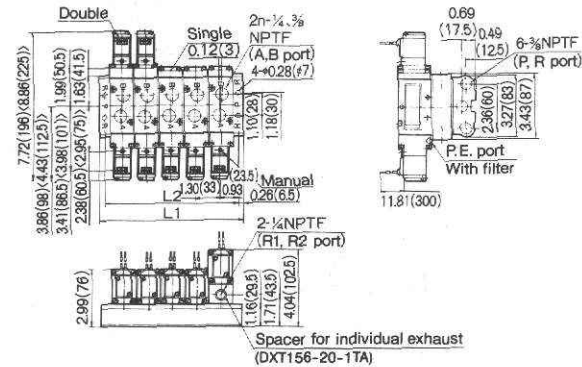
• Stations
02 — 2 stations
10 — 10 stations

• Component symbol

Code	Passage			Applicable manifold type
	SUP	EXH	CYL	
1	Common	Common	Top	20

Manifold w/EXH Reolcation Spacer/Dimensions inch (mm)

Applicable Model:NVV5F5-20

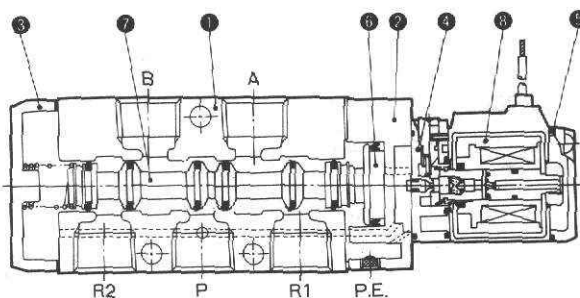


< >:3position L:Dimensions inch (mm) n:Stations

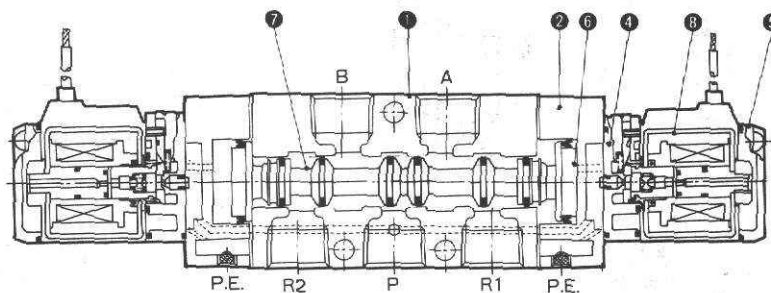
L \ N	2	3	4	5	6	7	8	9	10
L1	3.66 (93)	4.96 (126)	6.26 (159)	7.56 (192)	8.86 (225)	10.16 (258)	11.46 (291)	12.76 (324)	14.06 (357)
L2	3.15 (80)	4.45 (113)	5.75 (146)	7.05 (179)	8.35 (212)	9.65 (245)	10.94 (278)	12.24 (311)	13.54 (344)

Construction/Parts List

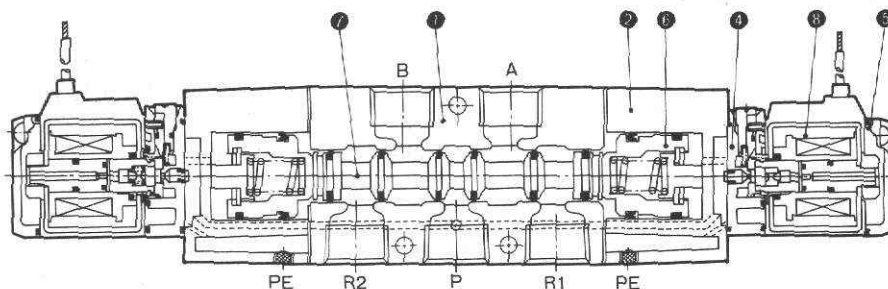
Single Solenoid Symbol



Double Solenoid Symbol



3 Position Closed Center Symbol



Main Parts

No.	Description	Material	Notes
1	Body	Aluminum die casting	Metallic paint
2	Adapter plate	Aluminum die casting	Black**
3	End cover	Aluminum die casting	Black
4	Pilot body	Polyacetal	
5	Pilot cover	Polyacetal	
6	Piston	Polyacetal*	
7	Spool	Aluminum·NBR	

3 position: Aluminum

**3 position: Metallic paint

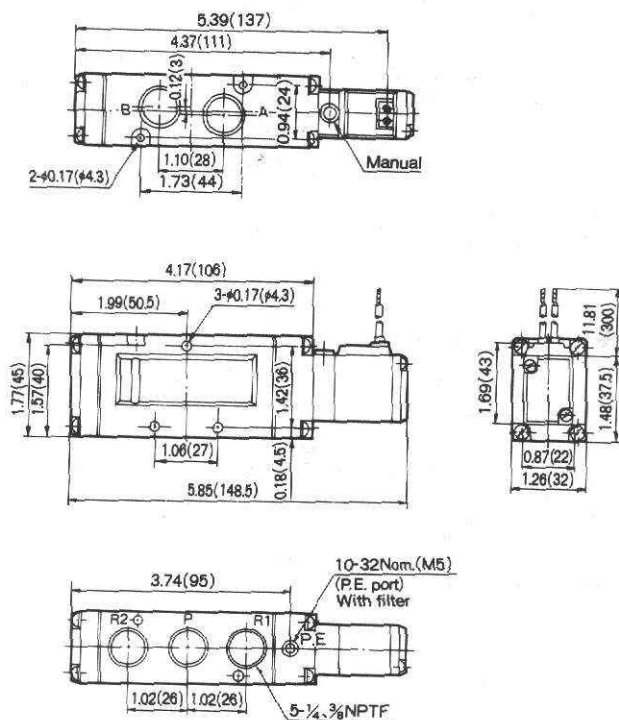
Spare Parts

Description	Part No.
1/4" NPTF Subplate	DXT156-24-1TP
3/8" NPTF Subplate	DXT156-24-2TP
1/2" NPTF Subplate	DXT156-24-3TP

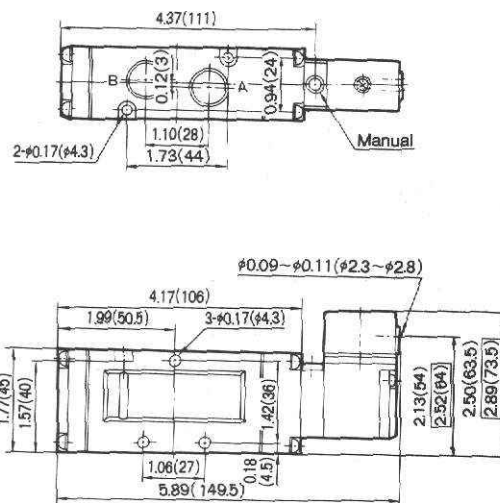
Series NVF5000

Body Ported/Dimensions inch(mm) NVF5120

Grommet/NVF5120-OG

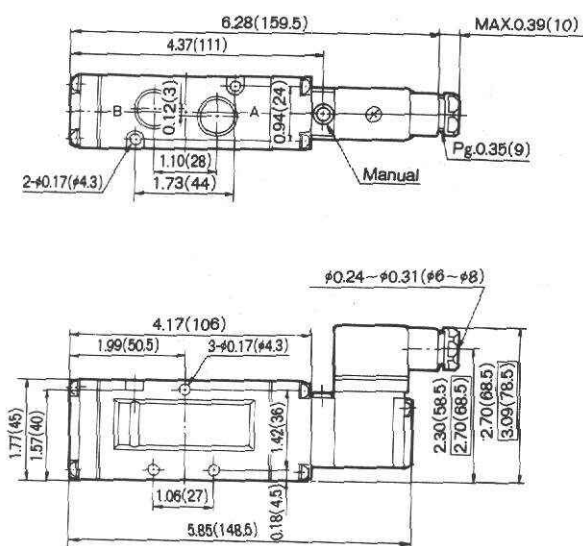


Grommet Terminal/NVF5120-OG

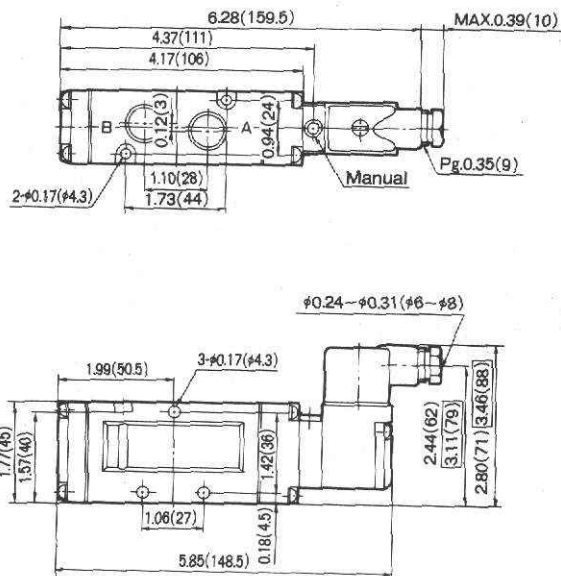


□: with indicator light and surge voltage suppressor

Conduit Terminal/NVF5120-OT



DIN Connector/NVF5120-OD

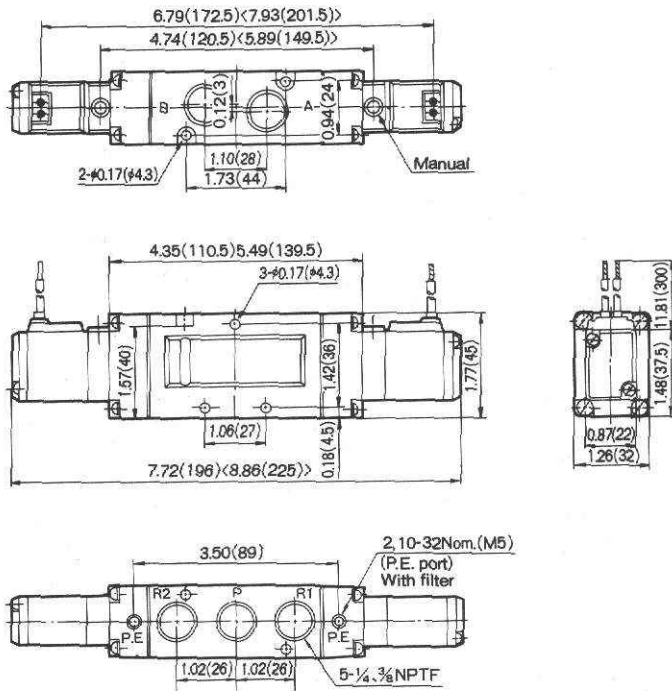


□: with indicator light and surge voltage suppressor

□: with indicator light and surge voltage suppressor

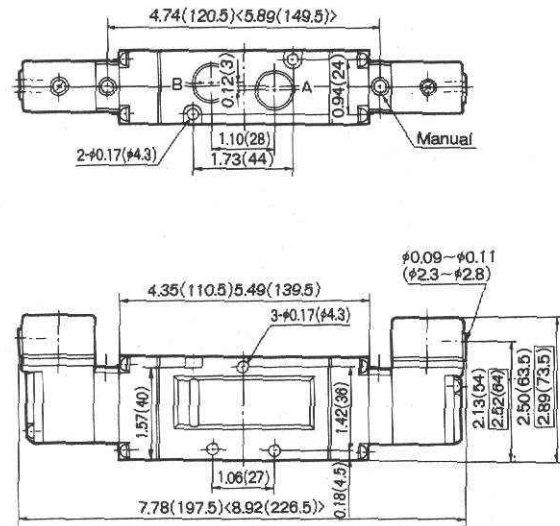
Body Ported/Dimensions inch(mm) NVF5220,NVF5320,NVF5420,NVF5520

Grommet/NVF5220-OG,NVF5320-OG,NVF5420-OG,NVF5520-OG



< > : 3 position

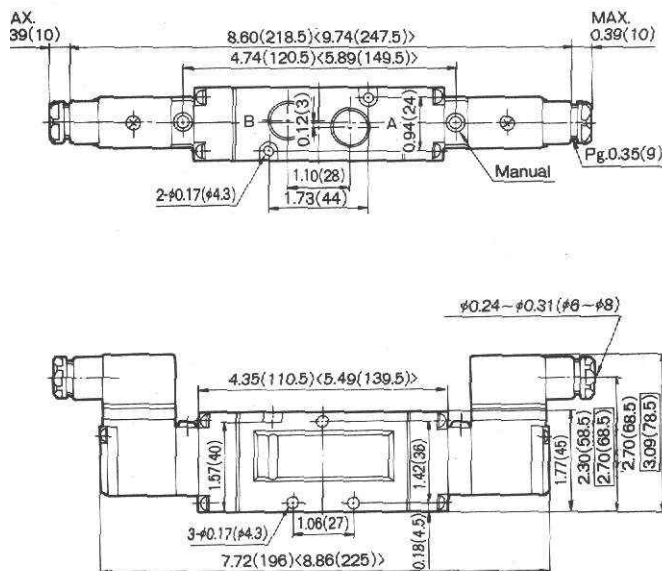
Grommet Terminal/NVF5220-OE,NVF5320-OE,NVF5420-OE,NVF5520-OE



< > : 3 position

□ : with indicator light and surge voltage suppressor

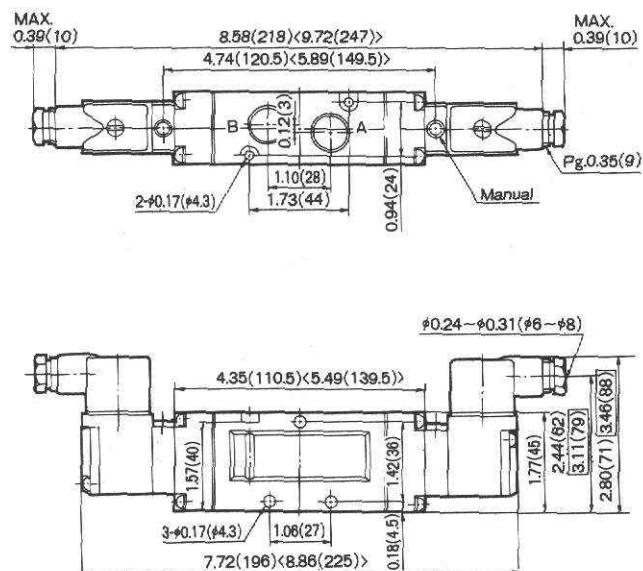
Conduit Terminal/NVF5220-OT,NVF5320-OT,NVF5420-OT,NVF5520-OT



< > : 3 position

□ : with indicator light and surge voltage suppressor

DIN Connector/NVF5220-OD,NVF5320-OD,NVF5420-OD,NVF5520-OD



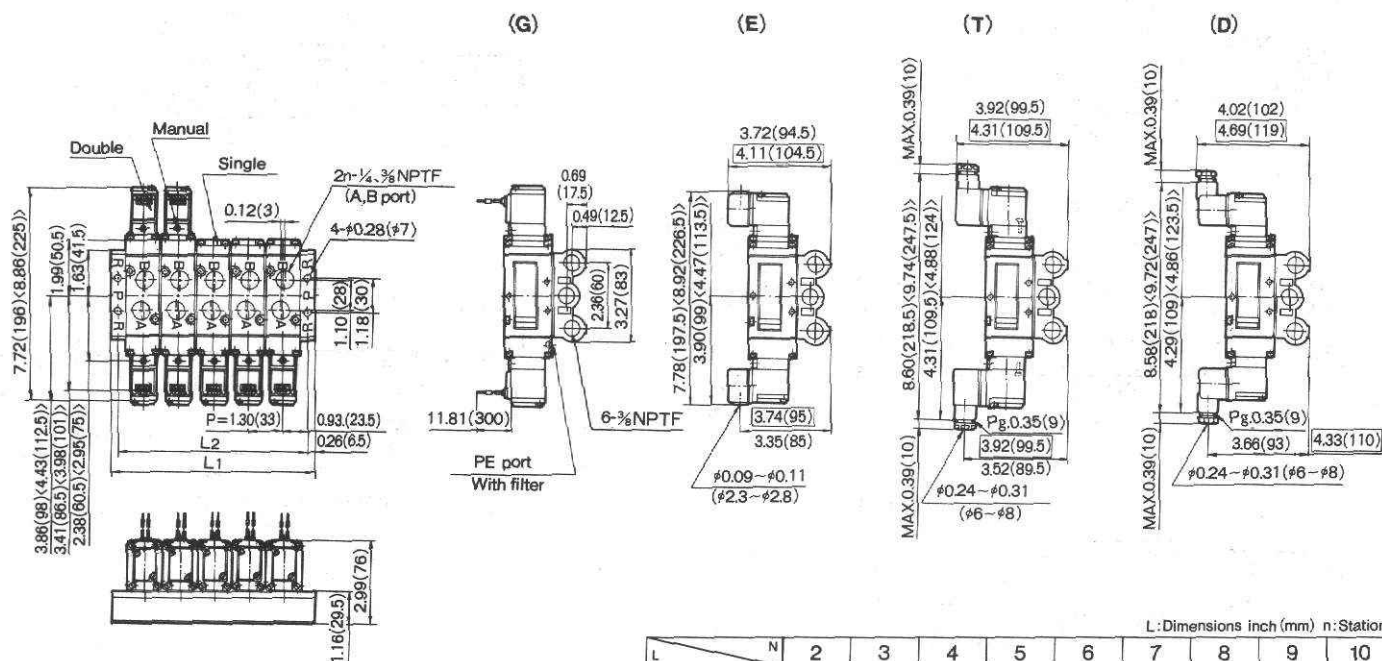
< > : 3 position

□ : with indicator light and surge voltage suppressor

Series NVF5000 Manifold

Manifold/Dimensions inch(mm) NVV5F5-20

Common Exhaust/NVV5F5-20-○○1



< >: 3 position

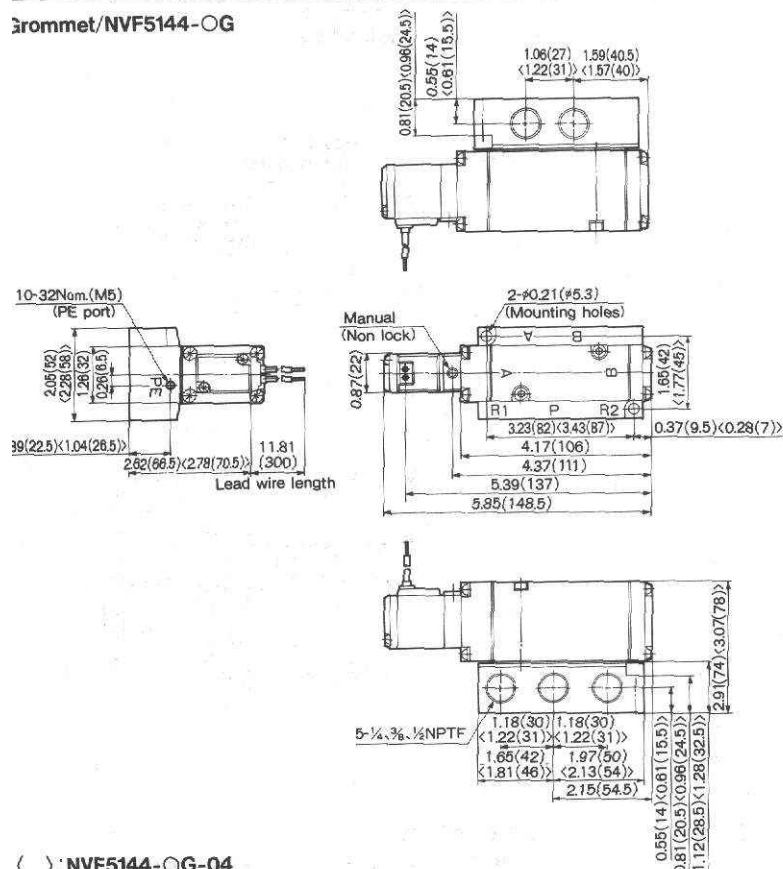
□: with indicator light and surge voltage suppressor

L: Dimensions inch (mm) n: Stations

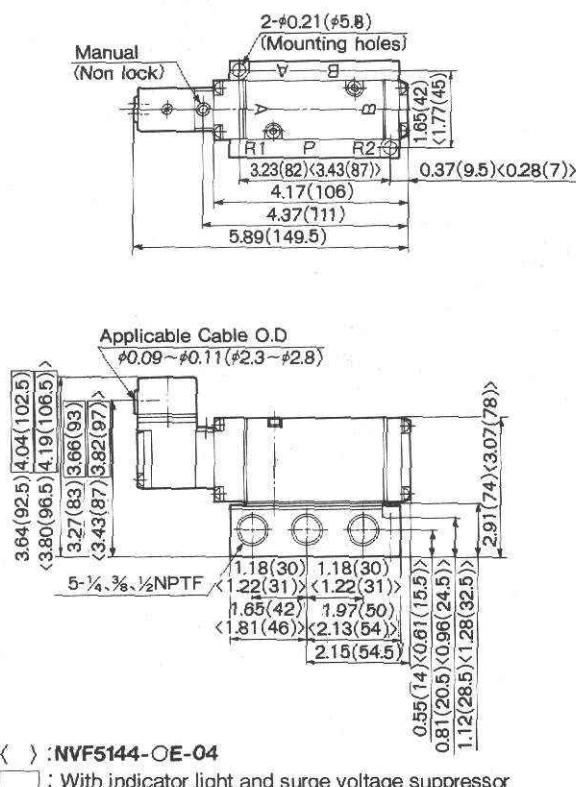
L \ N	2	3	4	5	6	7	8	9	10
L ₁	3.66 (93)	4.96 (126)	6.26 (159)	7.56 (192)	8.86 (225)	10.16 (258)	11.46 (291)	12.76 (324)	14.06 (357)
L ₂	3.15 (80)	4.45 (113)	5.75 (146)	7.05 (179)	8.35 (212)	9.65 (245)	10.94 (278)	12.24 (311)	13.54 (344)

Sub-Base Mounted/Dimensions inch(mm) NVF5144

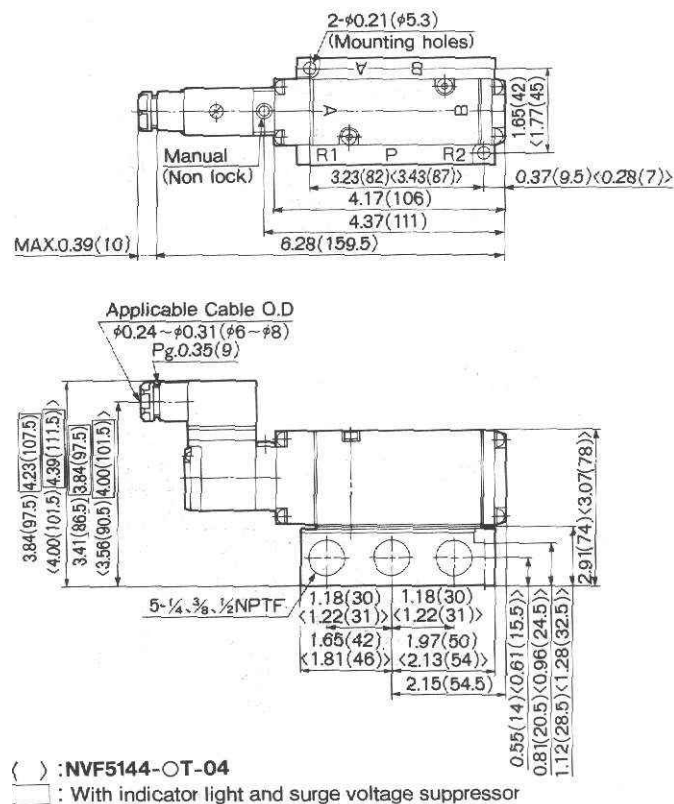
Grommet/NVF5144-OG



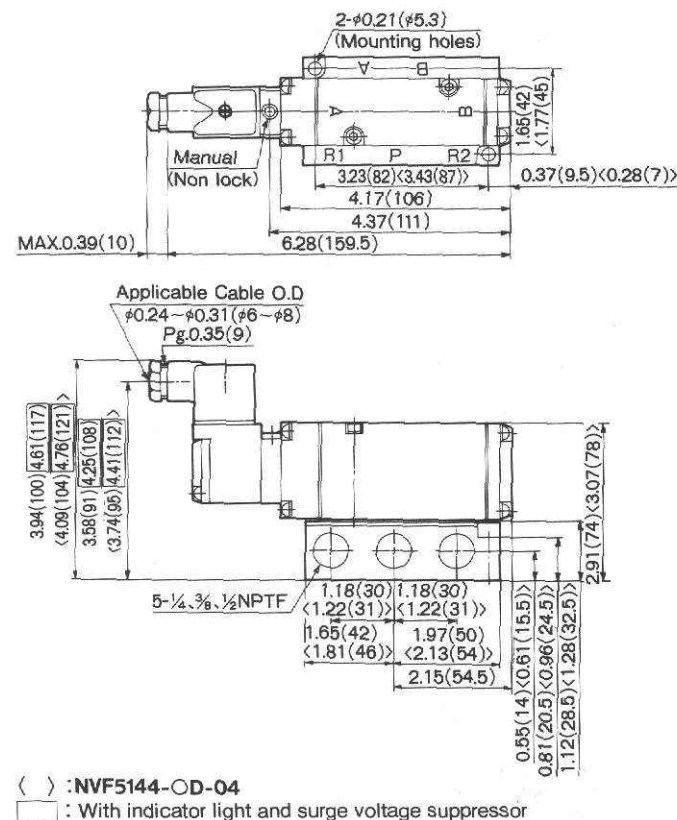
Grommet Terminal/NVF5144-OE



Conduit Terminal/NVF5144-OT



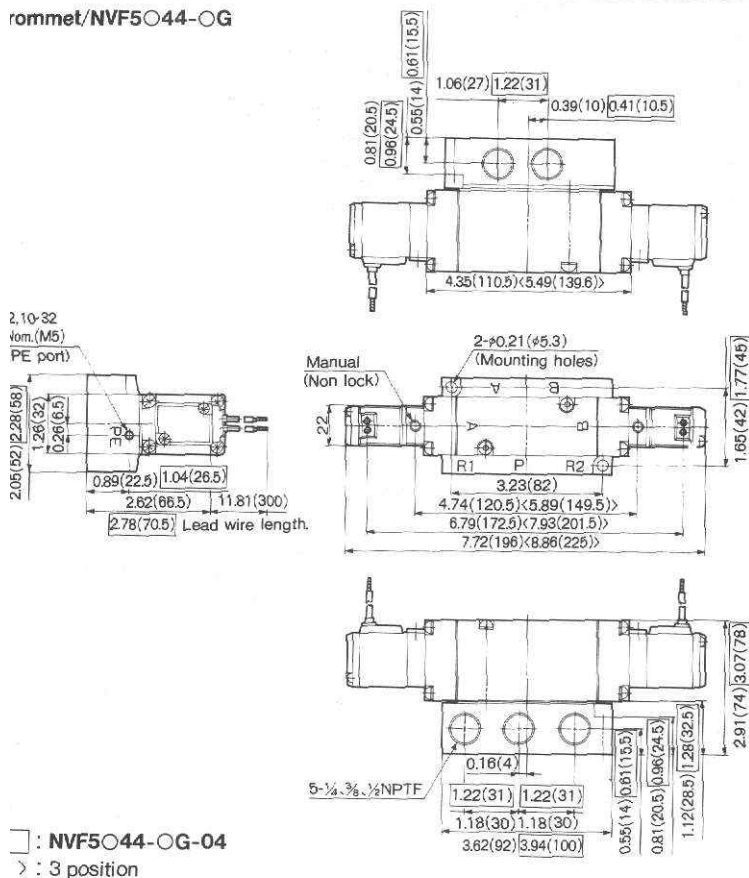
DIN Connector/NVF5144-OD



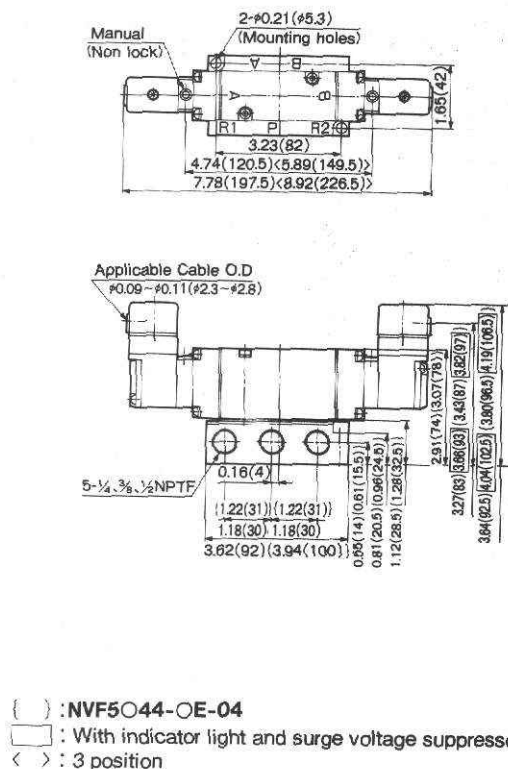
Series NVF5000

Sub-Base Mounted/Dimensions inch(mm) NVF5244,NVF5344,NVF5444,NVF5544

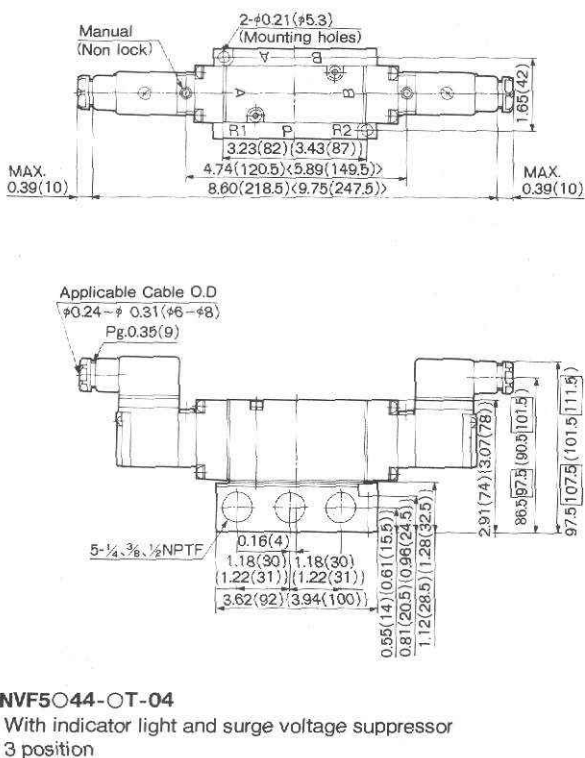
Grommet/NVF5044-OG



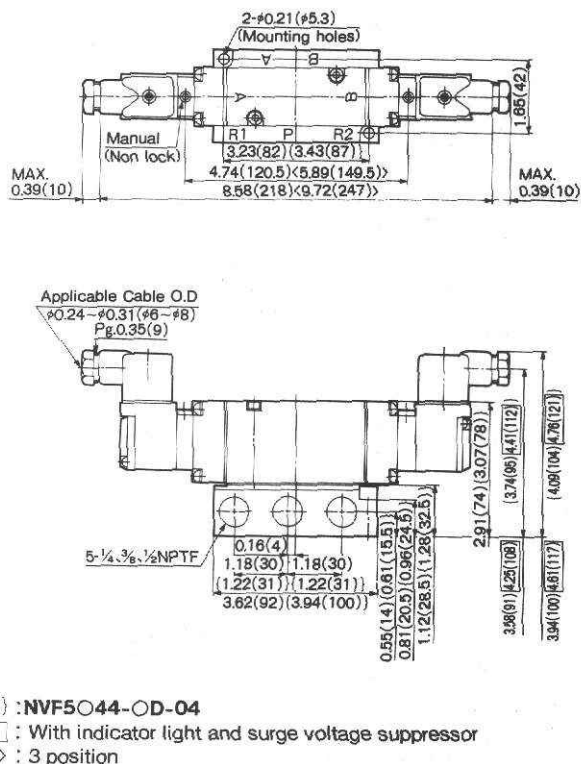
Grommet Terminal/NVF5044-OE



Induit Terminal/NVF5044-OT

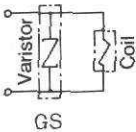
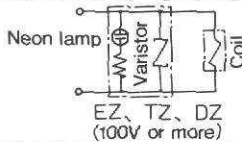
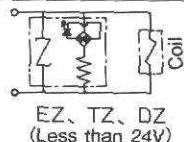
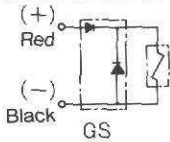
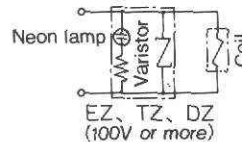
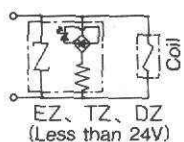


DIN Connector/NVF5044-OD



NVF 3000, 5000 Precautions

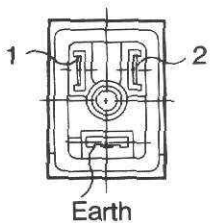
Indicator light / Surge Voltage Suppressor Circuit

Voltage	Circuit	Model	Grommet (G)	Grommet terminal (E) • Conduit terminal (T), DIN connector (D)	
AC	Surge Voltage Suppressor Circuit	S		—	
	Lamp, Surge Voltage Suppressor Circuit	Z	—	 EZ, TZ, DZ (100V or more)	 EZ, TZ, DZ (Less than 24V)
DC	Surge Voltage Suppressor Circuit	G		—	
	Lamp, Surge Voltage Suppressor Circuit	Z	—	 EZ, TZ, DZ (100V or more)	 EZ, TZ, DZ (Less than 24V)

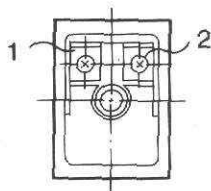
Electrical Connection

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

DIN connection



Terminal connection



Terminal No.	1	2
DIN connection	+	-
Terminal connection	+	-

Common Exhaust For Main Valve and Pilot Valve NVF3000

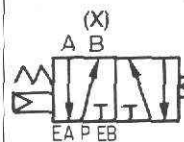
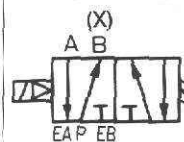
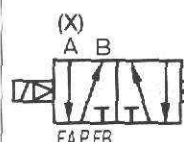
Exhaust air from pilot valve will flow to main valve exhaust port. Exhaust air from main valve will not flow to pilot valve due to a check valve.

Warnings

Common exhaust type valves are effective for use with common exhaust type manifolds, however an exhaust cleaner (series NAMC) should be installed when used in this manner. Make sure the exhaust port operates properly after installing an exhaust cleaner.

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 use as a non-leakage valve. Make sure the exhaust port is open if used as a 3 port valve.

Plug		A port (CYL. 1 port)	B port (CYL. 2 port)
Function		N.C	N.O
Solenoid	Single	 (X) A B EA P EB	 (X) A B EA P EB
	Double	 (X) A B EA P EB	 (X) A B EA P EB

(X) represents plugged port.

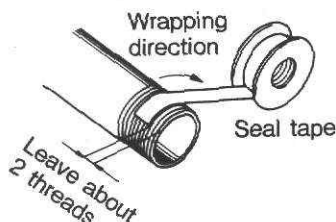
Mounting

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 inside.

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.

Use proper clamp torque of piping.



Thread	Appropriate clamp torque inch-lbs(kgf/cm)
M5	12.98~17.3(15~20)
1/8	60.55~77.85(70~90)
1/4	103.8~121.1(120~140)
3/8	190.3~207.6(220~240)
1/2	242.2~259.5(280~300)

Quality Of Fluid

Filtration to 5 microns is sufficient for operation.

Large quantity of drainage causes incorrect operation of pneumatic products as well as environmental contamination. Please control drainage.

When there is a large amount of carbon powder from the compressor, please change compressor oil or install a mist separator.

Lubricant

Valves are pre-lubricated — no further lubrication is necessary.

If a lubricant is used, please use turbine oil #1, (ISO VG32).

Use At Low Temperature

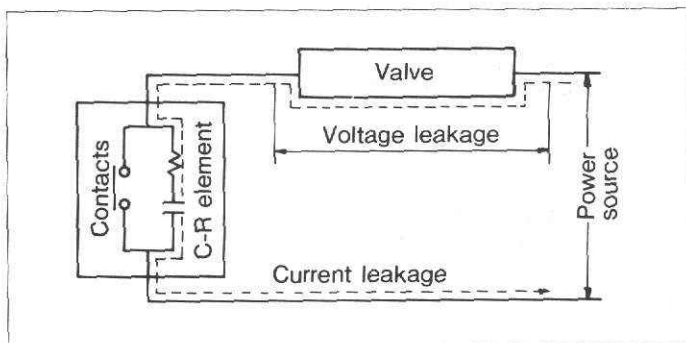
Available for use under 14°F(−10°C), however care should be taken to protect against freezing moisture.

Momentary Energizing

When using a double solenoid type with momentary energizing, make sure the pulse time is more than 0.1 seconds.

Leakage Voltage

- For the leakage current, residual leakage voltage of AC coil must be less than 20% of the rated voltage, and 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.



Environment

- Keep away from corrosive gas, chemical solutions, sea water, rain, and steam.
- Use of a protective cover is suggested when installed in a place where water or oil will splash momentarily.
- When installed in a dusty place, please install a silencer on the exhaust port.

Remarks

Port	NVF3000	NVF5000
Supply	SUP	P
Cylinder	CYL.1, CYL.2	A, B
Exhaust	EXH.1, EXH.2	R1, R2
Symbol (Single solenoid)	S: SUP. C1: CYL.1 C2: CYL.2 E1: EXH.1 E2: EXH.2	

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FAX: (770) 624-1943

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FAX: (330) 963-2730

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Tel: (512) 926-2646
FAX: (512) 926-7055

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Columbus, OH 43231
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