

4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G GMF
PV5 GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP NVP
4G*0EJ
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending



Discrete valve/body piping
Pilot operated 5-port pneumatic valve

4F0/1/2/3 Series

● Cylinder bore size: ø16 to ø100



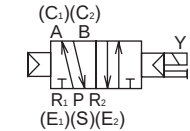
Refer to the Ending for details.



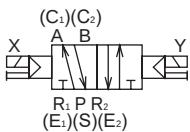
JIS symbol

● 5-port valve

2-position single

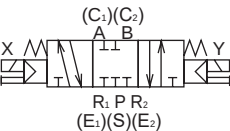


2-position double

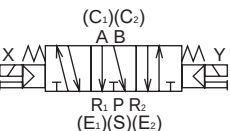


3-position

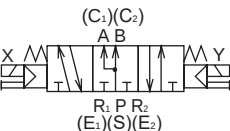
all ports closed



3-position A/B/R connection



3-position P/A/B connection



Common specifications

Item	Description
Valve and operation	Pilot operated soft spool valve
Working fluid	Compressed air
Max. working pressure MPa	1.0 (≈150 psi, 10 bar)
Min. working pressure MPa	Refer to Individual specifications listed below
Proof pressure MPa	1.5 (≈220 psi, 15 bar)
Ambient temperature °C *1	-10 (14°F) to 60 (140°F) (no freezing)
Fluid temperature °C	5 (41°F) to 60 (140°F)
Lubrication	Not required (use turbine oil ISO VG32 if lubrication is necessary)
Degree of protection	Dust-proof
Vibration resistance m/s ²	50 or less
Shock resistance m/s ²	300 or less
Atmosphere	Cannot be used in corrosive gas environment.

*1: The ambient temperature indicates the temperature for storage and upon installation, which will differ from the fluid temperature during operation.

Electrical specifications

Item			(A)4F0 to 1	4F2/3
Rated voltage V	AC		100, 200, 110, 220 (50 / 60 Hz)	
	DC		12,24	
Voltage fluctuation range			±10%	
Starting current A	AC	100 V	0.056 / 0.044	0.170 / 0.140
		200 V	0.034 / 0.026	0.090 / 0.070
		110 V	0.051 / 0.040	0.150 / 0.130
		220 V	0.031 / 0.024	0.080 / 0.060
	DC	12 V	0.150	0.500
		24 V	0.075	0.250
Holding current A	AC	100 V	0.028 / 0.022	0.100 / 0.080
		200 V	0.017 / 0.013	0.050 / 0.040
		110 V	0.025 / 0.020	0.090 / 0.070
		220 V	0.015 / 0.012	0.050 / 0.040
	DC	12 V	0.150	0.500
		24 V	0.075	0.250
Power consumption W	AC	100 V	1.8 / 1.4	5.0 / 4.0
		200 V	2.1 / 1.6	5.0 / 4.0
		110 V	1.8 / 1.4	5.0 / 4.0
		220 V	2.1 / 1.6	5.0 / 4.0
	DC	12 V	1.8	6.0
		24 V	1.8	6.0
Thermal class			B (molded coil)	

Reference: Rated voltage 100 VAC 50/60Hz can be used at 110 VAC 60Hz, and 200 VAC 50/60Hz at 220 VAC 60Hz.

Individual specifications

1 MPa = 10 bar

Item			(A)4F0 *1		4F1		4F2		4F3	
Min. working pressure MPa	2-position	Single	0.15		0.15 (≈22 psi)		0.10		0.10	
		Double	(≈22 psi)		0.10 (≈15 psi)		(≈15 psi)		(≈15 psi)	
	3-position	All ports closed	-		0.20		0.15		0.15 (≈22 psi)	
		A/B/R connection			(≈29 psi)		(≈22 psi)			
		P/A/B connection			-		-			
Port size			M5	Rp1/8 NPT1/8 G1/8	Rp1/8 NPT1/8 G1/8	Rp1/4 NPT1/4 G1/4	Rp1/4 NPT1/4 G1/4	Rp1/4 NPT1/4 G1/4	Rp3/8 NPT3/8 G3/8	

*1: With the single type, (A) is A4F010.

Performance/characteristics by model

Item	(A)4F0	4F1	4F2	4F3
Response time *2 ms	30	30	50	50

*2: The response time is the value at 0.5 MPa working pressure, with no lubrication, and with the power ON. It depends on the pressure and the lubricant quality.

Weight

Item			(A)4F0	4F1	4F2	4F3	
Weight	kg	2-position	Single	0.14	0.20	0.60	0.69
			Double	0.19	0.26	0.93	1.01
		3-position	-	0.33	1.06	1.20	

Flow characteristics

Model No.	Solenoid position		Port size	C[dm ³ /(s·bar)]	b
(A)4F0 *2	2-position	Single	M5	0.61	0.35
		Double			
		Single	Rp1/8 NPT1/8 G1/8	0.74	0.27
		Double			
4F1	2-position	Single	Rp1/8,Rp1/4 NPT1/8,NPT1/4 G1/8,G1/4	2.0	0.33
		Double			
	3-position	All ports closed		1.5	0.31
		A/B/R connection		1.6	0.29
4F2	2-position	Single	Rp1/4 NPT1/4	3.0	0.33
		Double			
	3-position	All ports closed	G1/4	2.5	0.43
		A/B/R connection			
4F3	2-position	Single	Rp1/4 NPT1/4 G1/4	3.9	0.42
		Double			
	3-position	All ports closed		4.0	0.35
		A/B/R connection		4.5	0.42
		P/A/B connection		4.0	0.35
	2-position	Single	Rp3/8 NPT3/8 G3/8	5.8	0.42
		Double			
	3-position	All ports closed		4.4	0.42
		A/B/R connection		5.1	0.46
		P/A/B connection		4.4	0.42

*1: Effective cross-sectional area S and sonic conductance C are converted as $S \approx 5.0 \times C$.

*2: With the single type, (A) is A4F010.

CE marking specifications

** - Voltage - **ST**

- Standard voltage of 24 VDC or less is CE marking-compatible even if the model No. is not indicated with "ST".

Copper and PTFE free specifications

- Copper- and PTFE-based materials are not used in the flow path.

** - Voltage - **P6**

(4F0 is not available.)

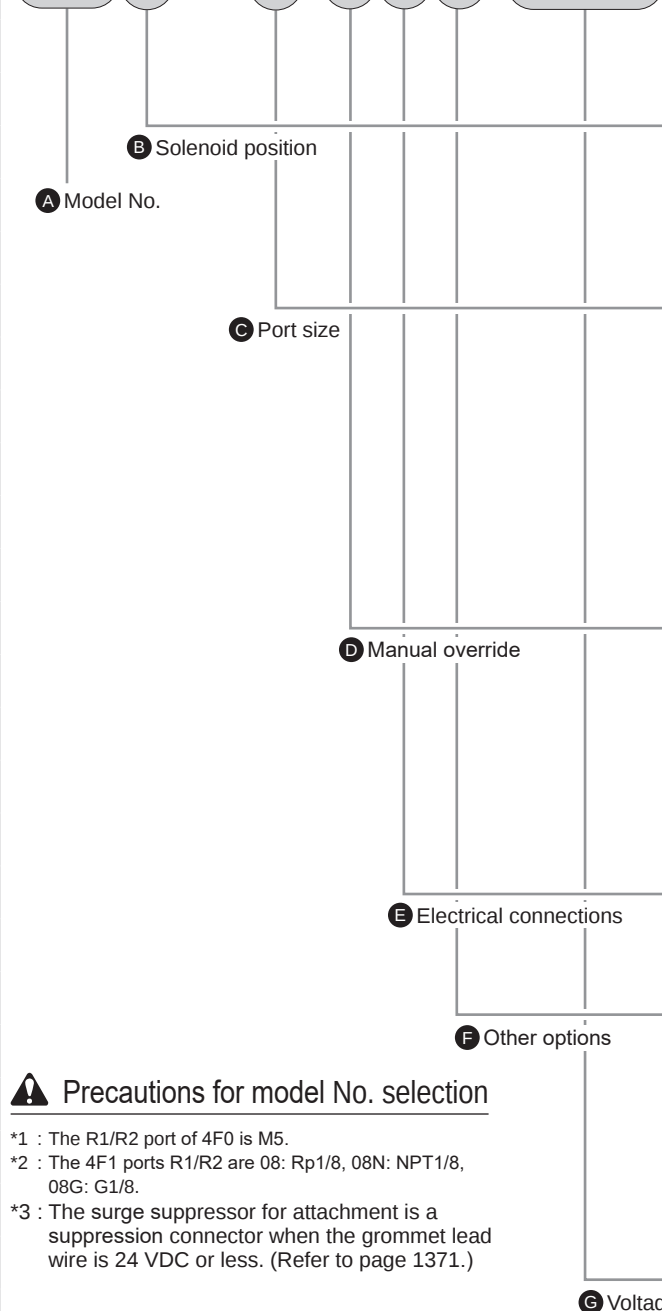
4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

4F0 to 3 Series

Discrete valve; body piping

How to order discrete valve/body piping

4F3 **1** **0** - **08** - **M2** **L** - **AC100V**



⚠ Precautions for model No. selection

- *1 : The R1/R2 port of 4F0 is M5.
- *2 : The 4F1 ports R1/R2 are 08: Rp1/8, 08N: NPT1/8, 08G: G1/8.
- *3 : The surge suppressor for attachment is a suppression connector when the grommet lead wire is 24 VDC or less. (Refer to page 1371.)

[Example of model No.]

4F340-08-M2P1-AC100V

- A** Model: 4F3 : 4F3
- B** Solenoid position : 3-position A/B/R connection
- C** Port size : Rp1/4
- D** Manual override : Non-locking
- E** Electrical connections : Blank for DIN terminal box (Pg11)
- F** Other options : Installation feet
- G** Voltage : 100 VAC

A Model No.

(A) 4F0	4F1	4F2	4F3
---------	-----	-----	-----

Code	Description	(A) 4F0	4F1	4F2	4F3
B Solenoid position					
1	2-position single	●	●	●	●
2	2-position double	●	●	●	●
3	3-position all ports closed		●	●	●
4	3-position A/B/R connection		●	●	●
5	3-position P/A/B connection				●

C Port size					
M5	M5	●			
06	Rp 1/8 (*1)	●	●		
08	Rp 1/4 (*2)		●	●	●
10	Rp 3/8				●
06N	NPT 1/8 (*1)	●	●		
08N	NPT 1/4 (*2)		●	●	●
10N	NPT 3/8				●
06G	G 1/8 (*1)	●	●		
08G	G 1/4 (*2)		●	●	●
10G	G 3/8				●

D Manual override					
M1	Locking	●	●		
Blank	Locking			●	●
Blank	Non-locking	●	●		
M2	Non-locking			●	●
M3	Locking with manual lever			●	●
M4	Dust cover equipped non-locking	●	●		
M6	Non-locking upward direction	●	●		
R	Position change of manual override	●	●	●	●

E Electrical connections					
Refer to the next page for electrical connections.					

F Other options					
Blank	No option	●	●	●	●
P	Installation feet (L-bracket) (for 2-position single)	●	●	●	●
P1	Installation feet (U-bracket)	●	●	●	●
S	Surge suppressor (varistor) included (*3)	●	●	●	●
H	With check valve (applicable: 3-position all ports closed)			●	●
N	Plug attached (for 3-port valve)	●	●	●	●
NC	3-way valve used plug assembly (C1 (A), E1 (R1) assembly)	●	●	●	●
NO	3-way valve used plug assembly (C2(B), E2(R2) assembly)	●	●	●	●

G Voltage					
AC100V	100 VAC 50/60 Hz	●	●	●	●
AC200V	200 VAC 50/60 Hz	●	●	●	●
DC12V	12 VDC	●	●	●	●
DC24V	24 VDC	●	●	●	●
AC110V	110 VAC 50/60 Hz	●	●	●	●
AC220V	220 VAC 50/60 Hz	●	●	●	●

* Other custom order products					
AC24V		●	●		
AC48V		●	●		
DC6V		●	●		
DC48V		●	●	●	●
DC100V				●	●
DC110V				●	●

[Electrical connection list]

		(A) Model No.			
		4F0	4F1	4F2	4F3
E Electrical connections					
Compact terminal box					
B	Without lead wire	●			
Blank	Without lead wire		●		
L	Without lead wire, with lamp (*4)	●	●		
DIN terminal box					
Blank	DIN terminal box (Pg11)			●	●
L	DIN terminal box (Pg11)/with lamp (*4)			●	●
F	DIN terminal box (G1/2)			●	●
C-connector (lead wire lateral direction)					
C	Lead wire length (300 mm)	●	●		
C00	Lead wire length (500 mm)	●	●		
C01	Lead wire length (1000 mm)	●	●		
C02	Lead wire length (2000 mm)	●	●		
C03	Lead wire length (3000 mm)	●	●		
C1	Without lead wire	●	●		
C2	Lead wire length (300 mm) with surge suppressor and indicator lamp	●	●		
C20	Lead wire length (500 mm) with surge suppressor and indicator lamp	●	●		
C21	Lead wire length (1000 mm) with surge suppressor and indicator lamp	●	●		
C22	Lead wire length (2000 mm) with surge suppressor and indicator lamp	●	●		
C23	Lead wire length (3000 mm) with surge suppressor and indicator lamp	●	●		
C3	Without lead wire with surge suppressor and indicator lamp	●	●		
D-connector (lead wire upward direction)					
D	Lead wire length (300 mm)	●	●		
D00	Lead wire length (500 mm)	●	●		
D01	Lead wire length (1000 mm)	●	●		
D02	Lead wire length (2000 mm)	●	●		
D03	Lead wire length (3000 mm)	●	●		
D1	Without lead wire	●	●		
D2	Lead wire length (300 mm) with surge suppressor and indicator lamp	●	●		
D20	Lead wire length (500 mm) with surge suppressor and indicator lamp	●	●		
D21	Lead wire length (1000 mm) with surge suppressor and indicator lamp	●	●		
D22	Lead wire length (2000 mm) with surge suppressor and indicator lamp	●	●		
D23	Lead wire length (3000 mm) with surge suppressor and indicator lamp	●	●		
D3	Without lead wire with surge suppressor and indicator lamp	●	●		
Grommet lead wire					
Blank	Grommet lead wire	●			
E	Grommet lead wire		●	●	●
E1	Conduit lead wire (CTC19)			●	●
E2	Conduit lead wire (G1/2)			●	●
B1	Conduit lead wire round terminal box (G3/4)			●	●
B	Conduit lead wire round terminal box (G1/2)			●	●
BL	Conduit lead wire round terminal box (G1/2) with lamp (*5) (*6)			●	●
G	Conduit lead wire round terminal box gland (A-15a)			●	●
GL	Conduit lead wire round terminal box gland (A-15a) with lamp (*5) (*6)			●	●

*4 : The DC of L has a built-in surge suppressor.

(Refer to page 1371 for the circuit diagram with a surge suppressor/lamp.)

*5 : 12 VDC models are not available for BL and GL.

*6 : The DC type of BL and GL has a built-in surge suppressor.

4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

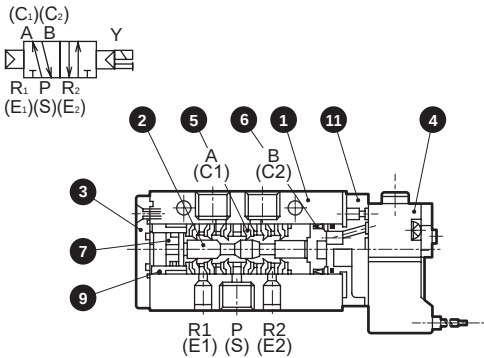
4F0/4F1 Series

Discrete valve; body piping

Internal structure and parts list

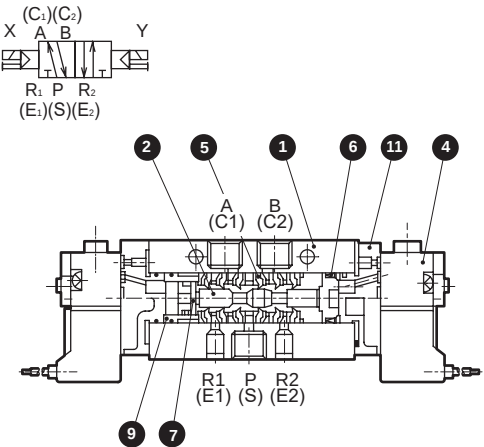
4F010

● 2-position single



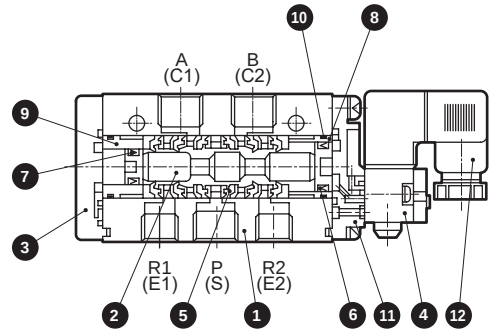
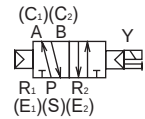
4F020

● 2-position double



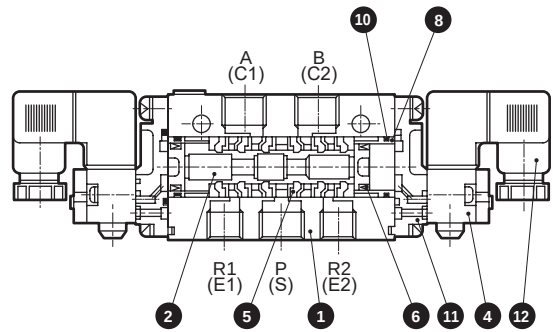
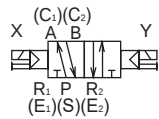
4F110

● 2-position single



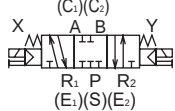
4F120

● 2-position double



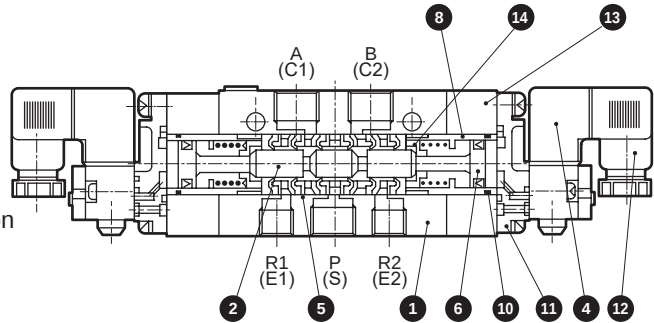
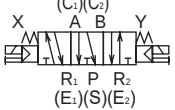
4F130

● 3-position
All ports closed



4F140

A/B/R connection



Main parts list

No.	Part name	Material
1	Body	Aluminum die-casting
2	Valving element (spool)	Aluminum
3	Cap	Aluminum die-casting
4	Coil assembly (solenoid valve)	-
5	Sealant assembly	-
6	Piston (A) assembly (large)	-
7	Piston (B) assembly (small)	-
8	Cylinder A (large)	Aluminum
9	Cylinder B (small)	Aluminum
10	O-ring	Nitrile rubber
11	Pilot valve body	Aluminum die-casting
12	Compact terminal box	-
13	Body block	Aluminum die-casting
14	Spring base	Stainless steel

Repair parts list

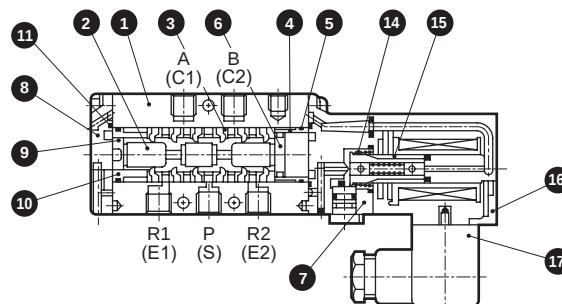
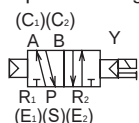
No./part name	5	6	7	5	6	7	4
Model No.	Repair parts kit	Sealant assy	Piston (A) large assy	Piston (B) small assy	Coil assembly *		
A4F010	A4F010-K	4F9-126	4F9-124	4F9-125	4F9 - miniature pneumatic valve single model No. (Std 4F9-P5132-MOE-voltage)		
4F020	4F020-K		4F9-112	4F9-110	4F9-111	4F9 - miniature pneumatic valve single model No. (Basic P5132-MOB-voltage)	
4F110	4F110-K	-					
4F120	4F120-K	4F9-159		-			
4F130	4F130-K			-			
4F140				-			

*: Repair parts are in stock as kits. It is not possible to purchase individual components. (The kits include sealant assembly and piston (A), (B) assembly. The coil assembly is not included.)

Internal structure and parts list

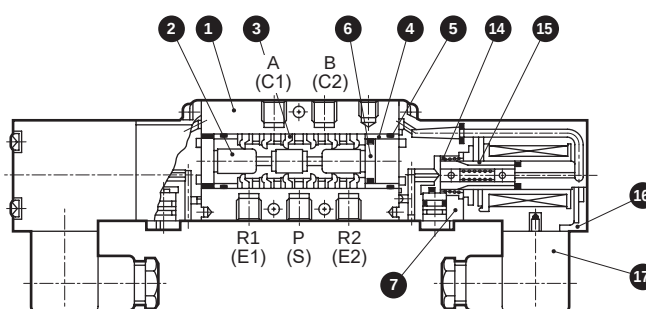
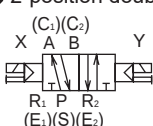
4F210/4F310

● 2-position single



4F220/4F320

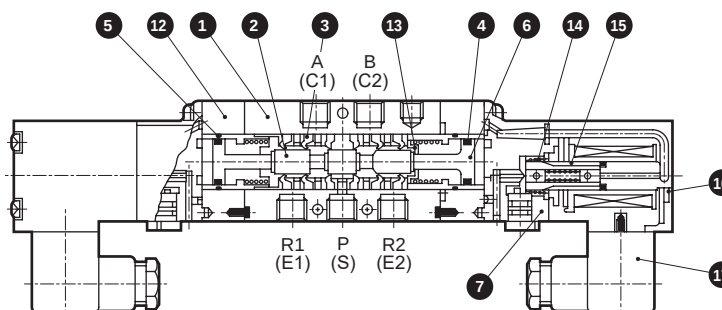
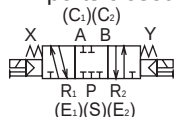
● 2-position double



4F230/4F330

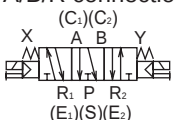
● 3-position

All ports closed



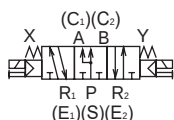
4F240/4F340

A/B/R connection



4F350

P/A/B connection



Main parts list

No.	Part name	Material
1	Body	Aluminum die-casting
2	Valving element (spool)	Aluminum
3	Sealant assembly	-
4	Cylinder A (large)	Aluminum
5	O-ring	Nitrile rubber
6	Piston (A) assembly (large)	-
7	Pilot valve body	Aluminum die-casting
8	Cap	Aluminum die-casting
9	Piston (B) assembly (small)	-
10	Cylinder B (small)	Aluminum
11	Gasket	Nitrile rubber
12	Body block	Aluminum die-casting
13	Spring base	Stainless steel
14	Plunger spring	-
15	Plunger	-
16	Coil assembly	-
17	DIN terminal box	-

Repair parts list

No./part name	3	6	9	16
Model No.	Repair parts kit	Sealant assy	Piston (A) large assy	Piston (B) small assy
4F210	4F210-K	4F9-105	4F9-101	4F9-102
4F220	4F220-K		4F9-113	-
4F230	4F230-K		4F9-104	4F9-103
4F240	4F310-K	4F9-106	4F9-114	-
4F310	4F320-K		-	-
4F320	4F330-K		-	-
4F330	4F340	-	-	-
4F340	4F350	-	-	-

*: Repair parts are in stock as kits. It is not possible to purchase individual components. (The kits include sealant assembly and piston (A), (B) assembly. The coil assembly is not included.)

*: The plunger assembly is an attachment of the coil assembly.

4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

(A)4F0 Series

Discrete valve; body piping

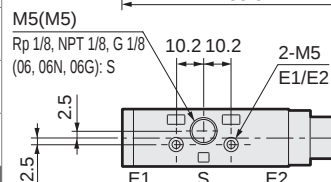
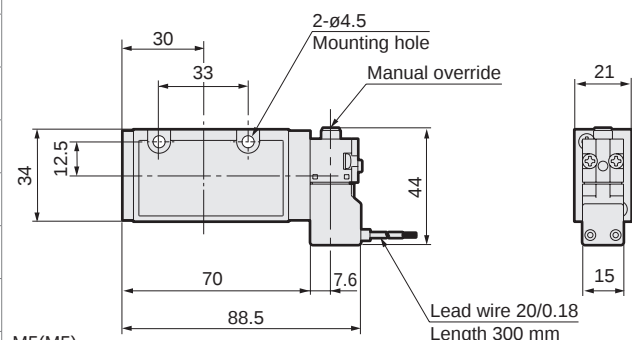
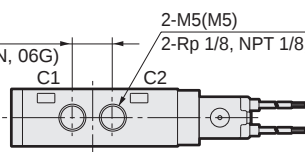
Dimensions

A4F010



● 2-position single: (grommet lead wire)

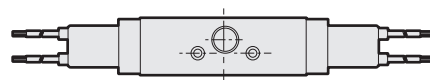
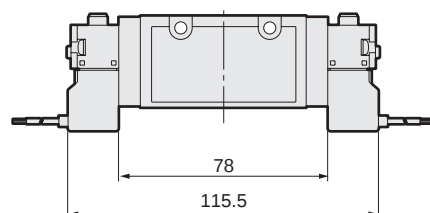
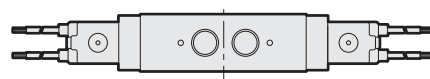
10.4(M5)
15(06, 06N, 06G) 2-M5(M5)
2-Rp 1/8, NPT 1/8, G 1/8(06, 06N, 06G): C1/C2



4F020



● 2-position double solenoid: (grommet lead wire)

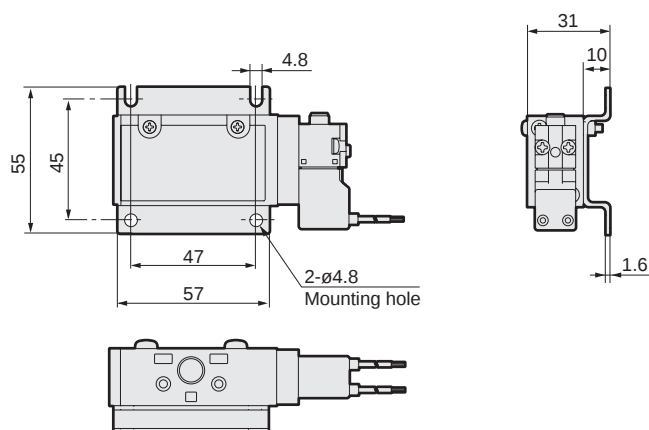
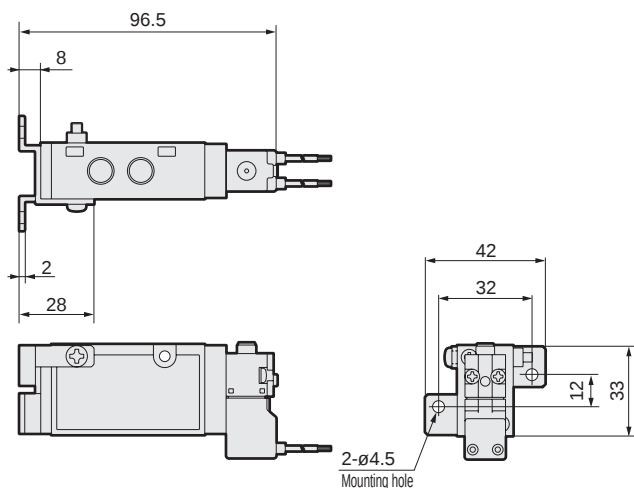


● Installation feet: (P: dedicated for 2-position single)

Material: Cold-rolled steel plates
Zinc plated

● Installation feet: (P1)

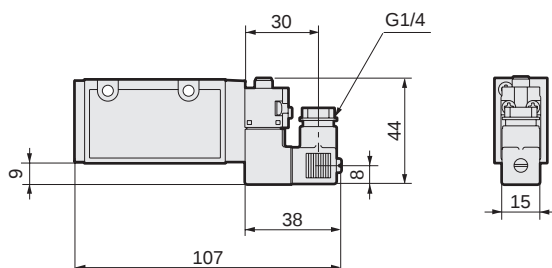
Material: Cold-rolled steel plates
Zinc plated



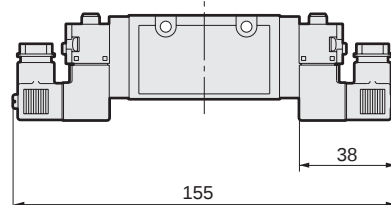
Dimensions

②2-position single

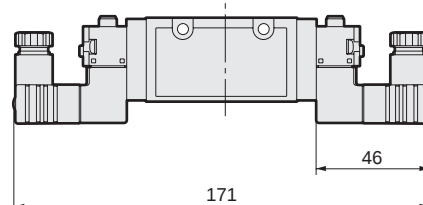
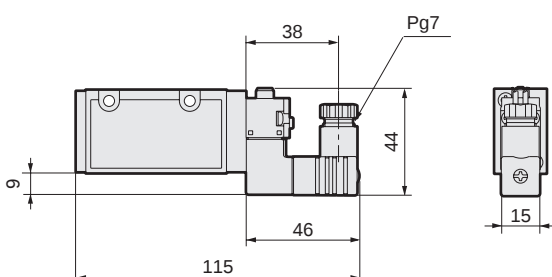
- Compact terminal box: (B)



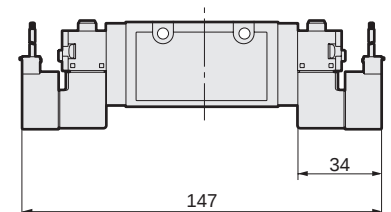
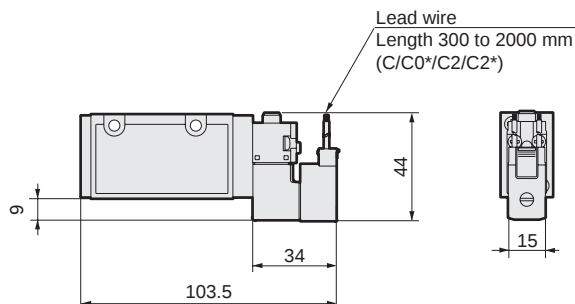
②2-position double



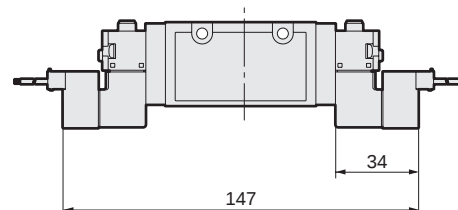
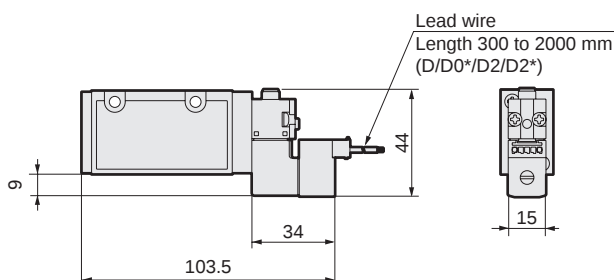
- Compact terminal box with lamp: (L)



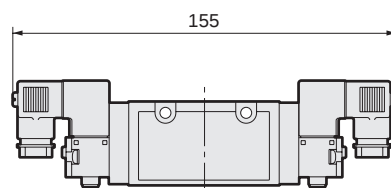
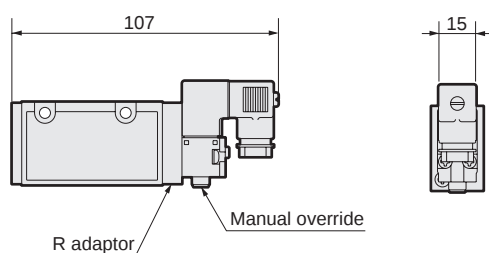
- C-connector: (C/C0*/C1/C2/C2*/C3)



- D-connector: (D/D0*/D1/D2/D2*/D3)



- Position change of manual override: (R)



4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

4F1 Series

Discrete valve; body piping

Dimensions

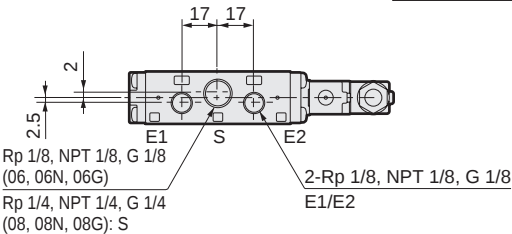
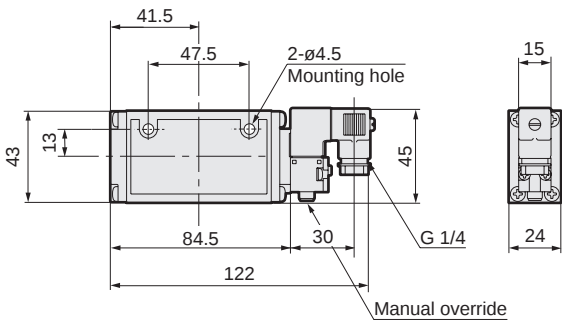
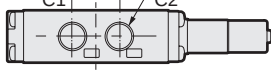
4F110



● 2-position single: compact terminal box

20(06, 06N, 06G)
22(08, 08N, 08G)

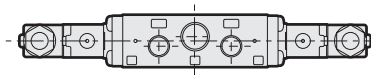
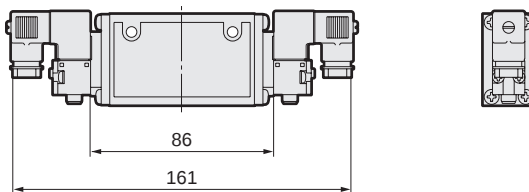
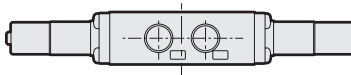
2-Rp 1/8, NPT 1/8, G 1/8(06, 06N, 06G)
2-Rp 1/4, NPT 1/4, G 1/4(08, 08N, 08G): C1/C2



4F120



● 2-position double solenoid: compact terminal box

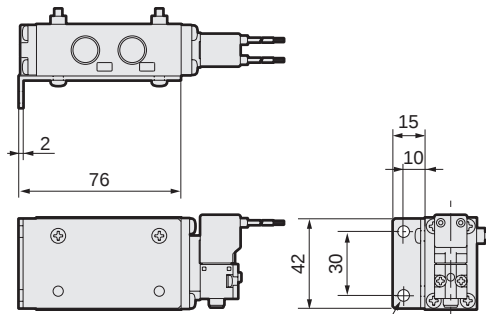


4F1³₄ 0

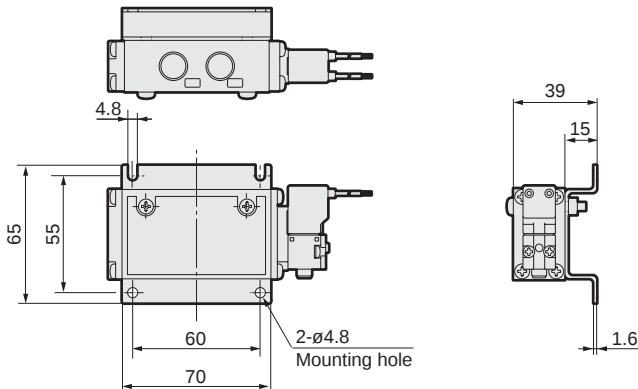


● 3-position double solenoid: compact terminal box

● Installation feet: (P: dedicated for 2-position single)
Material: Cold-rolled steel plates
Zinc plated



● Installation feet: (P1)
Material: Cold-rolled steel plates
Zinc plated

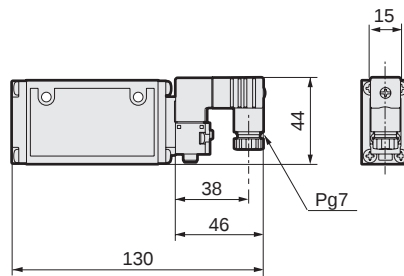


4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

Dimensions

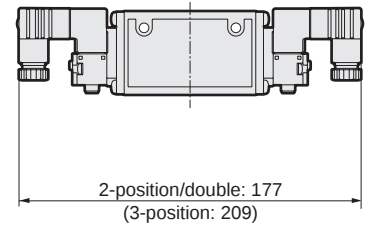
- Compact terminal box with lamp: (L)

① 2-position single

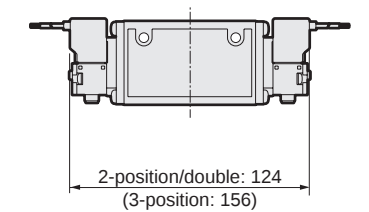
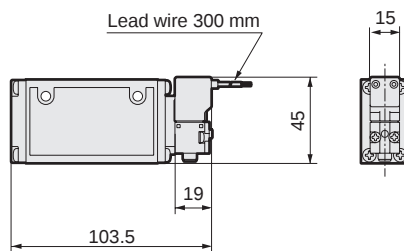


② 2-position double solenoid/3 position

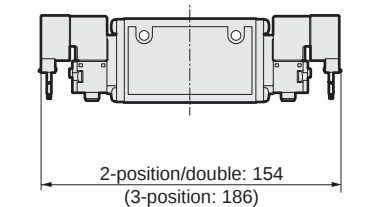
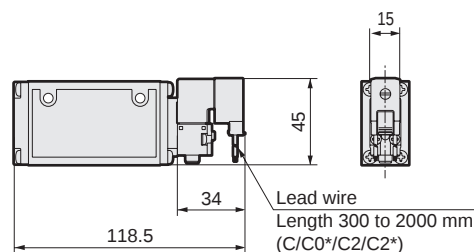
* 2-position double solenoid shown in image.



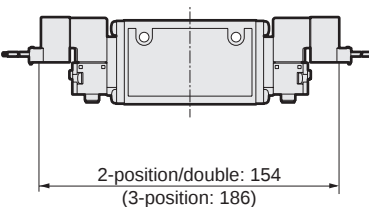
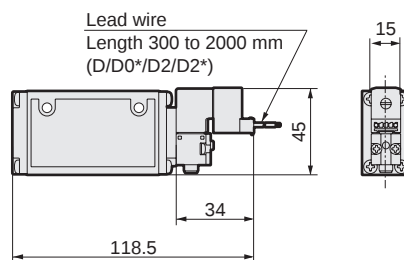
- Grommet lead wire: (E)



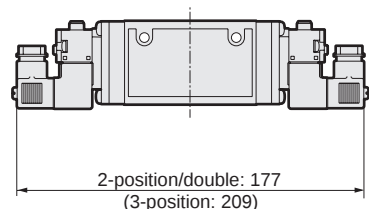
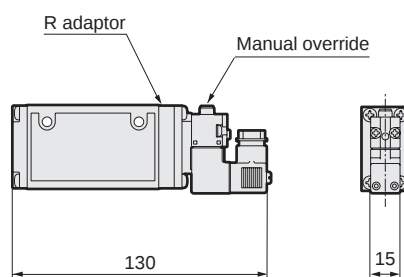
- C-connector: (C/C0*/C1/C2/C2*/C3)



- D-connector: (D/D0*/D1/D2/D2*/D3)



- Position change of manual override: (R)



4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

4F2 Series

Discrete valve; body piping

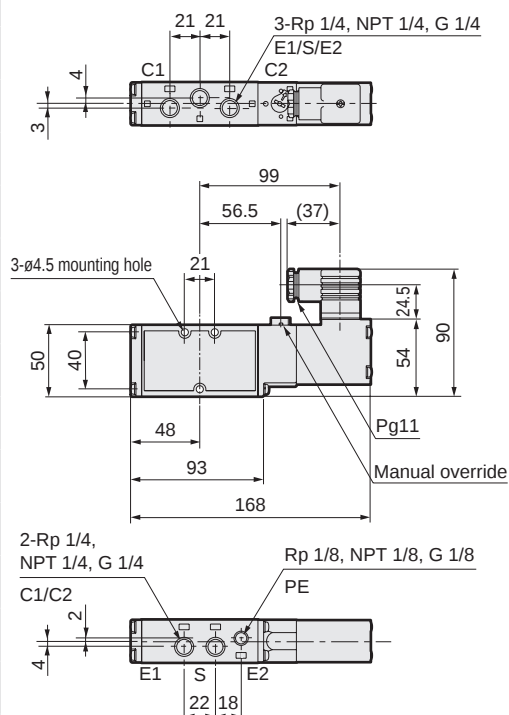
Dimensions

4F210



- 2-position single: DIN terminal box

DIN terminal box/with lamp (L)

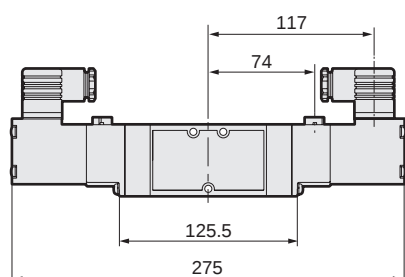
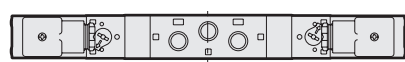


4F210



- 3-position: DIN terminal box

DIN terminal box/with lamp (L)

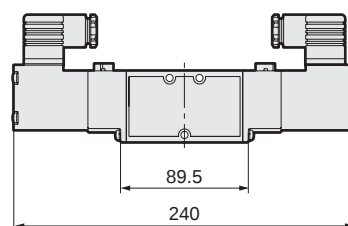


4F220



- 2-position double solenoid: DIN terminal box

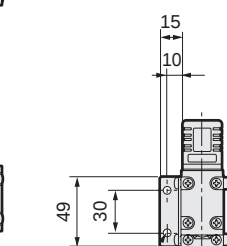
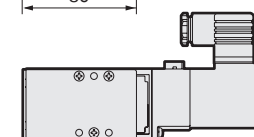
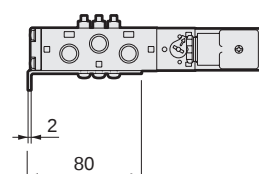
DIN terminal box/with lamp (L)



- Installation feet: (P: dedicated for 2-position single)

Material: Cold-rolled steel plates

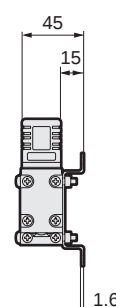
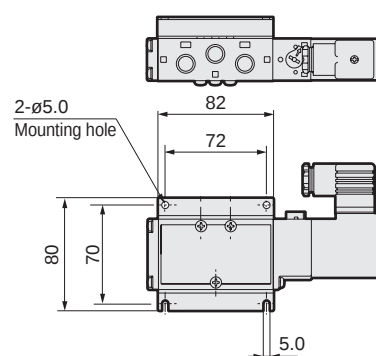
Zinc plated



- Installation feet: (P1)

Material: Cold-rolled steel plates

Zinc plated

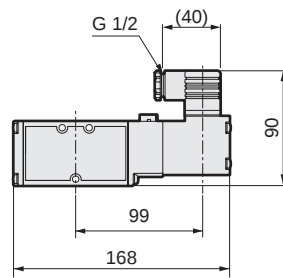


* Refer to page 1446 for details about check valves.

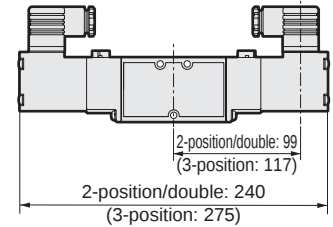
Dimensions

● DIN terminal box: (F)

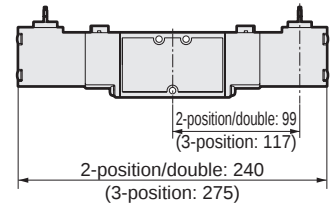
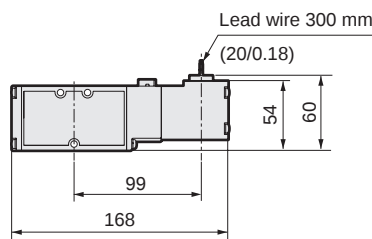
② 2-position single



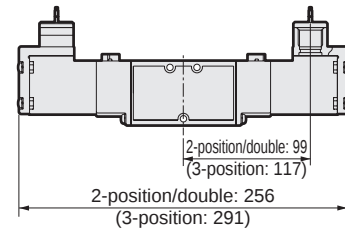
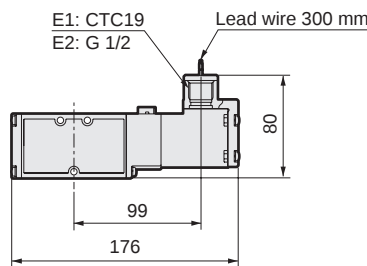
② 2-position double solenoid/3 position
* 2-position double solenoid shown in image.



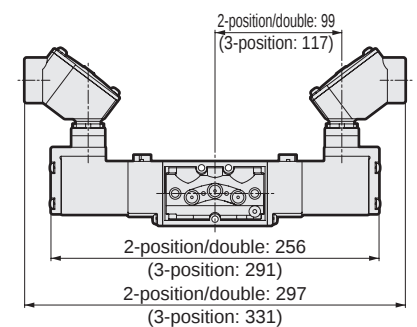
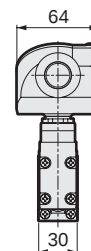
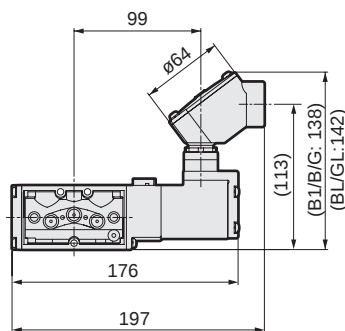
● Grommet lead wire: (E)



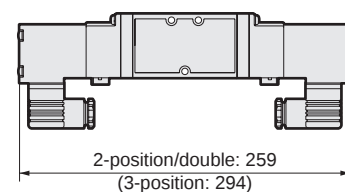
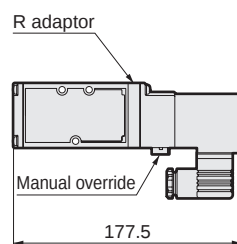
● Conduit lead wire: (E1/E2)



● Round terminal box: (B1/B/BL/G/GL)



● Position change of manual override: (R)



4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

4F3 Series

Discrete valve; body piping

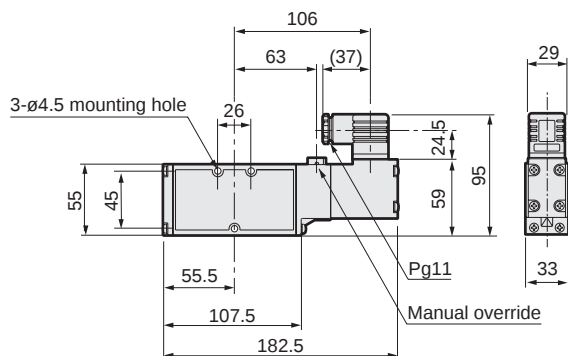
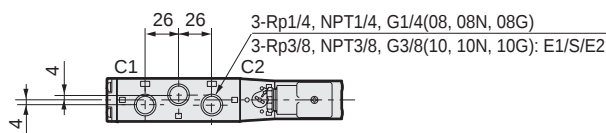
Dimensions

4F310



- 2-position single: DIN terminal box

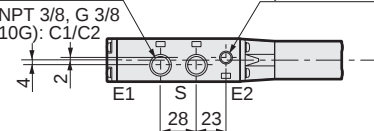
DIN terminal box/with lamp (L)



2-Rp 1/4, NPT 1/4, G 1/4 (08, 08N, 08G)

2-Rp 3/8, NPT 3/8, G 3/8 (10, 10N, 10G): C1/C2

Rp1/8, NPT1/8, G1/8: PE

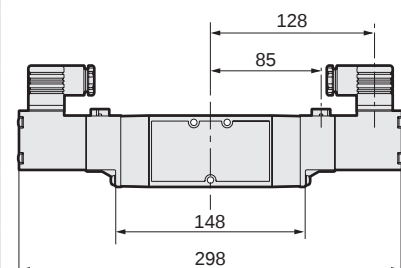
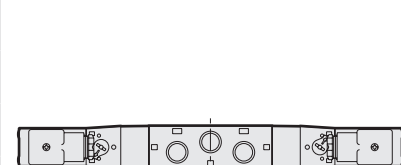


4F340



- 3-position: DIN terminal box

DIN terminal box/with lamp (L)

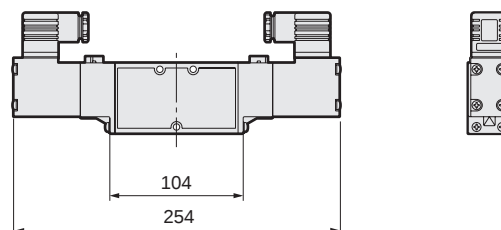


4F320



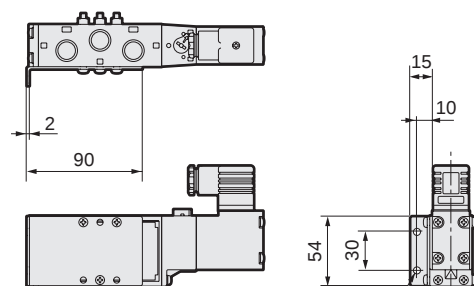
- 2-position double solenoid: DIN terminal box

DIN terminal box/with lamp (L)



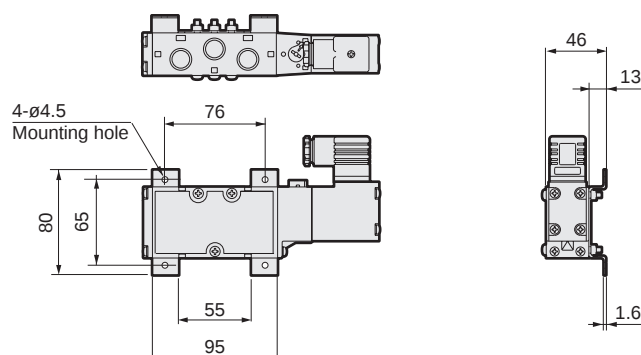
- Installation feet: (P: dedicated for 2-position single)

Material: Cold-rolled steel plates
Zinc plated



- Installation feet: (P1)

Material: Cold-rolled steel plates
Zinc plated

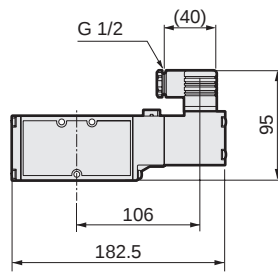


* Refer to page 1446 for details about check valves.

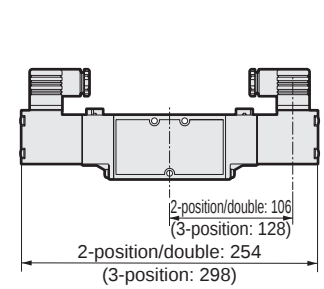
Dimensions

- DIN terminal box: (F)

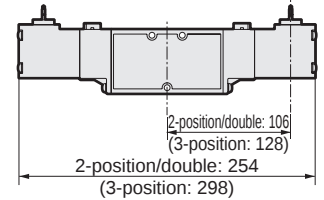
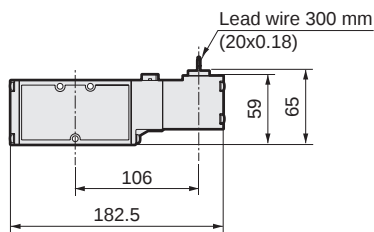
⬇ 2-position single



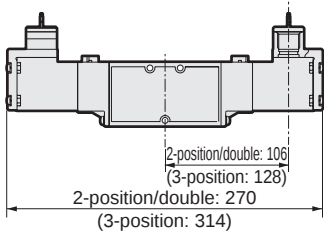
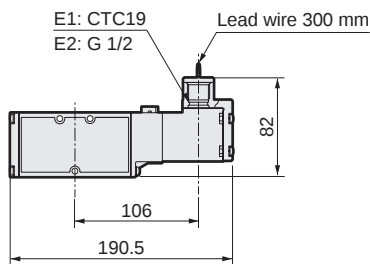
⬇ 2-position double solenoid/3 position
* 2-position double solenoid shown in image.



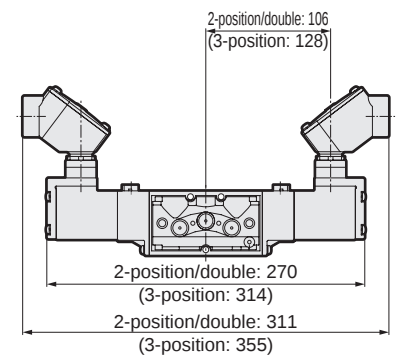
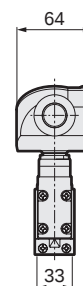
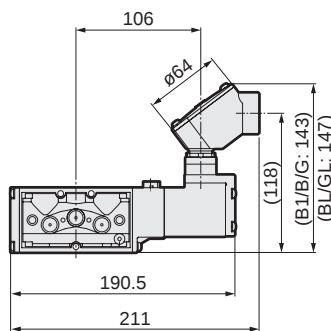
- Grommet lead wire: (E)



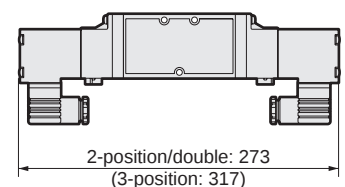
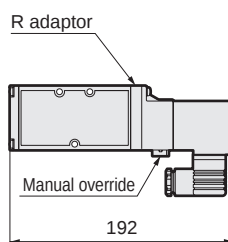
- Conduit lead wire: (E1/E2)



- Round terminal box: (B1/B/BL/G/GL)



- Position change of manual override: (R)



4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending



Discrete valve/sub-plate piping
Pilot operated 5-port pneumatic valve

4F4/5/6/7 Series

● Cylinder bore size: $\varnothing 63$ to $\varnothing 250$



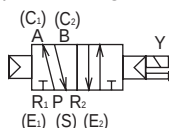
Refer to the Ending for details.



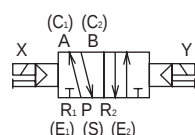
JIS symbol

● 5-port valve

2-position single

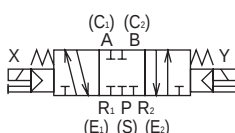


2-position double

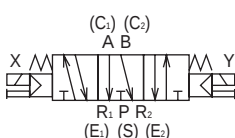


3-position

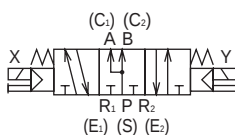
all ports closed



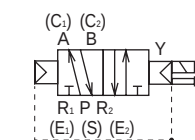
3-position A/B/R connection



3-position P/A/B connection



● External pilot



(Code indicates 2-position single)

Common specifications

Item	Description
Valve and operation	Pilot operated soft spool valve
Working fluid	Compressed air
Max. working pressure MPa	1.0 (≈ 150 psi, 10 bar)
Min. working pressure MPa (*2)	Refer to Individual specifications listed below
Proof pressure MPa	1.5 (≈ 220 psi, 15 bar)
Ambient temperature $^{\circ}\text{C}$ (*1)	-10 (14°F) to 60 (140°F) (no freezing)
Fluid temperature $^{\circ}\text{C}$	5 (41°F) to 60 (140°F)
Lubrication	Not required (turbine oil ISO VG32 if necessary for lubrication)
Degree of protection	Dust-proof
Vibration resistance m/s^2	50 or less
Shock resistance m/s^2	300 or less
Atmosphere	Cannot be used in corrosive gas environment.

*1: The ambient temperature indicates the temperature for storage and upon installation, which will differ from the fluid temperature during operation.

*2: The working pressure range is 0 to 1.0 MPa when the external pilot (option code: K) is selected. Set the external pilot pressure between 0.15 and 1.0 MPa.

Electrical specifications

Item	4F4 to 7
Rated voltage	AC 100, 200, 110, 220 (50/60 Hz)
V	DC 12, 24
Voltage fluctuation range	$\pm 10\%$
Starting current	AC 100 V 0.170/0.140 200 V 0.090/0.070 110 V 0.15/0.13 220 V 0.08/0.06 DC 12 V 0.500 24 V 0.250
Holding current	AC 100 V 0.100/0.080 200 V 0.050/0.040 110 V 0.09/0.07 220 V 0.05/0.04 DC 12 V 0.500 24 V 0.250
Power	AC 100 V 5.0/4.0 200 V 5.0/4.0 110 V 5.0/4.0 220 V 5.0/4.0 DC 12 V 6.0 24 V 6.0
Thermal class	B (molded coil)

Reference: Rated voltage 100 VAC 50/60Hz can be used at 110 VAC 60Hz, and 200 VAC 50/60Hz at 220 VAC 60Hz.

Individual specifications

1 MPa = 10 bar

Item	4F4	4F5	4F6	4F7
Min. working pressure MPa	0.10 (≈ 15 psi)	0.10 (≈ 15 psi)	0.15 (≈ 22 psi, 1.5 bar)	0.15 (≈ 22 psi, 1.5 bar)
Port size	Rc1/4 NPT1/4 G1/4	Rc3/8 NPT3/8 G3/8	Rc3/8 NPT3/8 G3/8	Rc1/2 NPT1/2 G1/2

Performance/characteristics by model

Item	4F4	4F5	4F6	4F7
Response time *1 ms	60	70	200	300

*1: The response time is the value at 0.5 MPa working pressure, with no lubrication, and with the power ON. It depends on the pressure and the lubricant quality.

Weight

Item	4F4	4F5	4F6	4F7
Weight kg				
2-position				
Single	1.01	1.26	1.92	3.46
Double	1.29	1.58	2.26	3.78
3-position	1.45	1.84	2.56	4.80

Flow characteristics

Model No.	Solenoid position	Port size	C[dm ³ /(s·bar)]	b	S(mm ²)
4F4	2-position	Single	Rc1/4, Rc3/8 NPT1/4, NPT3/8 G1/4, G3/8	5.0	0.21
		Double			
	3-position	All ports closed		4.7	0.24
		A/B/R connection		5.3	0.29
		P/A/B connection		5.3	0.29
4F5	2-position	Single	Rc3/8, Rc1/2 NPT3/8, NPT1/2 G3/8, G1/2	10.0	0.32
		Double			
	3-position	All ports closed		9.7	0.28
		A/B/R connection		9.8	0.25
		P/A/B connection			
4F6	2-position	Single	Rc1/2, Rc3/4 NPT1/2, NPT3/4 G1/2, G3/4	18.0	0.31
		Double			
	3-position	All ports closed		15.0	0.23
		A/B/R connection			
		P/A/B connection			
4F7	2-position	Single	Rc3/4, Rc1 NPT3/4, NPT1 G3/4, G1	-	-
		Double			
	3-position	All ports closed			
		A/B/R connection			
		P/A/B connection			

*1: Effective cross-sectional area S and sonic conductance C are converted as $S \approx 5.0 \times C$.

CE marking specifications

** - Voltage - **ST**

• Standard voltage of 24 VDC or less is CE marking-compatible even if the model No. is not indicated with "ST".

Copper and PTFE free specifications

● Copper- and PTFE-based materials are not used in the flow path.

** - Voltage - **P6**

4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

4F4 to 7 Series

Discrete valve; sub-plate piping

How to order single valve/sub-plate piping

4F4 1 0 -08-M2 L - AC100V

● Discrete solenoid valve Discrete

4F4 1 9 -00-M2 L - AC100V (4F4.5.6.7)

A Model No. **B** Solenoid position

C Port size

D Manual override

E Electrical connections

⚠ Precautions for model No. selection

- *1 : The DC of the DIN terminal box with lamp (L) has a built-in surge suppressor.
(Refer to page 1371 for the circuit diagram with surge suppressor/lamp.)
- *2 : Contact CKD when using a vacuum with the external pilot (K) and exhaust pressurizing.
- *3 : 12 VDC models are not available for BL and GL.
- *4 : The DC type of BL and GL has a built-in surge suppressor.
- *5 : The surge suppressor for attachment is a suppression connector when the grommet lead wire is 24 VDC or less.
(Refer to page 1371.)

[Model No. example]

4F440-08-M2P-AC100V

- A** Model : 4F4
- B** Solenoid position : 3-position A/B/R connection
- C** Port size : Rc1/4
- D** Manual override : Non-locking
- E** Electrical connections : Blank for DIN terminal box (Pg11)
- F** Other options : Installation feet
- G** Voltage : 100 VAC

G Voltage

A Model No.

4F4 4F5 4F6 4F7

Code	Description	4F4	4F5	4F6	4F7
B Solenoid position					
1	2-position single	●	●	●	●
2	2-position double	●	●	●	●
3	3-position all ports closed	●	●	●	●
4	3-position A/B/R connection	●	●	●	●
5	3-position P/A/B connection	●	●	●	●

C Port size					
08	Rc1/4	●			
10	Rc3/8	●	●		
15	Rc1/2		●	●	
20	Rc3/4			●	●
25	Rc1				●
08N	NPT1/4	●			
10N	NPT3/8	●	●		
15N	NPT1/2		●	●	
20N	NPT3/4			●	●
25N	NPT1				●
08G	G1/4	●			
10G	G3/8	●	●		
15G	G1/2		●	●	
20G	G3/4			●	●
25G	G1				●

D Manual override					
Blank	Locking	●	●	●	●
M2	Non-locking	●	●	●	●
M3	Locking with manual lever	●	●	●	●

E Electrical connections					
Blank	DIN terminal box(Pg11)	●	●	●	●
L	DIN terminal box(Pg11)/with lamp (*1)	●	●	●	●
F	DIN terminal box(G1/2)	●	●	●	●
E	Grommet lead wire	●	●	●	●
E1	Conduit lead wire(CTC19)	●	●	●	●
E2	Conduit lead wire(G1/2)	●	●	●	●
B1	Round terminal box (G3/4)	Conduit lead wire Assemble on (E1)	●	●	●
B	Round terminal box (G1/2)		●	●	●
BL	Round terminal box (G1/2)/with lamp (*3) (*4)		●	●	●
G	Round terminal box With gland (A-15a)		●	●	●
GL	Round terminal box (*3) (*4) With gland (A-15a)/with lamp		●	●	●

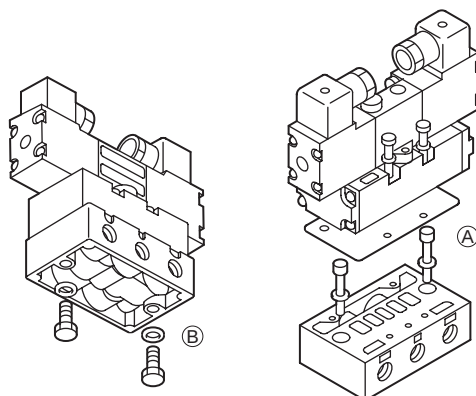
F Other options					
Blank	No option	●	●	●	●
K	External pilot (*2)	●	●	●	●
P	Installation feet (U-bracket)	●	●	●	●
S	Surge suppressor (varistor) included (*5)	●	●	●	●
H	Check valve attached (only compatible with 3-position all ports closed)	●	●	●	●
N	Plug attached (for 3-port valve)	●	●	●	●
NC	3-way valve used plug assembly (C1 (A), E1 (R1) assembly)	●	●	●	●
NO	3-way valve used plug assembly (C2(B), E2(R2) assembly)	●	●	●	●

G Voltage					
AC100V	100 VAC 50/60 Hz	●	●	●	●
AC200V	200 VAC 50/60 Hz	●	●	●	●
DC12V	12 VDC	●	●	●	●
DC24V	24 VDC	●	●	●	●
AC110V	110 VAC 50/60 Hz	●	●	●	●
AC220V	220 VAC 50/60 Hz	●	●	●	●

* Other made-to-order products					
DC48V		●	●	●	●
DC100V		●	●	●	●
DC110V		●	●	●	●

Mounting method of 4F4 to 7 single units

● Mounting



	For B	For A
4F4	M8	M6
4F5	M8	M6
4F6	M10	M8
4F7	M12	M10

4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

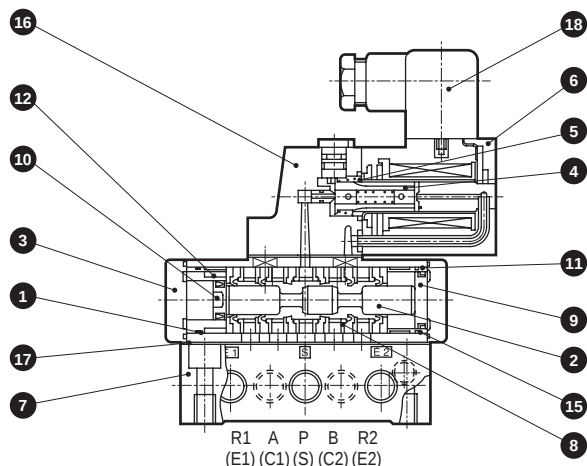
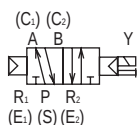
Discrete valve; sub-plate piping

Internal structure and parts list

4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G GMF
PV5 GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP NVP
4G*0EJ
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

4F410/4F510

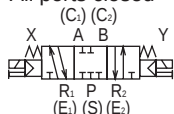
● 2-position single



4F430/4F530

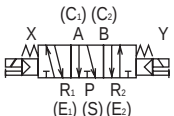
● 3-position

All ports closed



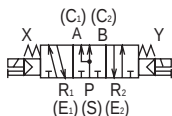
4F440/4F540

A/B/R connection



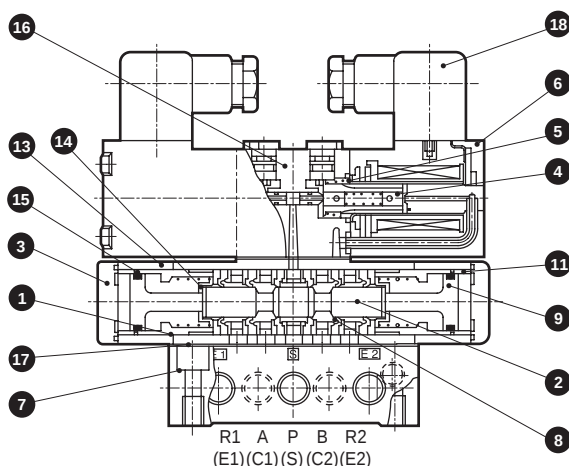
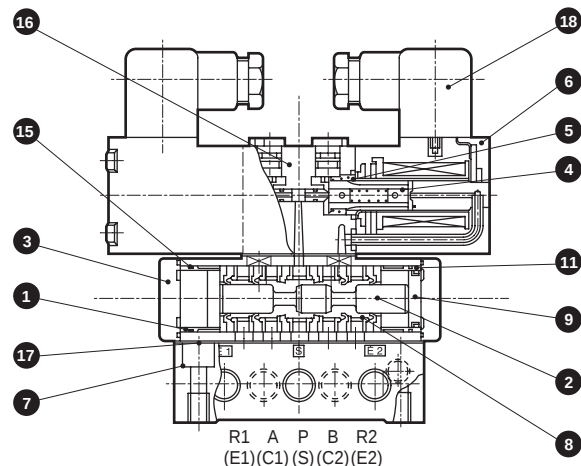
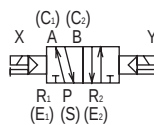
4F450/4F550

P/A/B connection



4F420/4F520

- 2-position double



Main parts list

No.	Part name	Material	No./part name	8 9 10	8	9	10	6
			Model No.	Repair parts kit	Sealant assy	Piston (A) large assy	Piston (B) small assy	Coil assembly *
1	Body	Aluminum die-casting	4F410	4F410-K	4F9-106	4F9-104	4F9-103	4F4*0-
2	Valving element (spool)	Aluminum	4F420	4F420-K			-	
3	Cap	Aluminum die-casting	4F430	4F430-K		4F9-114	-	
4	Plunger	-	4F440				-	
5	Plunger spring	-	4F450				-	
6	Coil assembly	-	4F510	4F510-K	4F9-107	4F9-108	4F9-109	4F5*0-
7	Sub-plate	Aluminum die-casting	4F520	4F520-K		-	Electrical connections - COIL-Voltage	
8	Sealant assembly	-	4F530	4F530-K		4F9-115		-
9	Piston (A) assembly (large)	-	4F540					-
10	Piston (B) assembly (small)	-	4F550				-	
11	Cylinder A (large)	Aluminum	*: Repair parts are in stock as kits. It is not possible to purchase individual components. (The kits include sealant assembly and piston (A), (B) assembly. The coil assembly is not included.) *: The plunger assembly is an attachment of the coil assembly.					
12	Cylinder B (small)	Aluminum						
13	Body block	Aluminum die-casting						
14	Spring base	Stainless steel						
15	O-ring	Nitrile rubber						
16	Pilot valve body assembly	-						
17	Sub-plate gasket	Nitrile rubber						
18	DIN terminal box	-						

Repair parts list

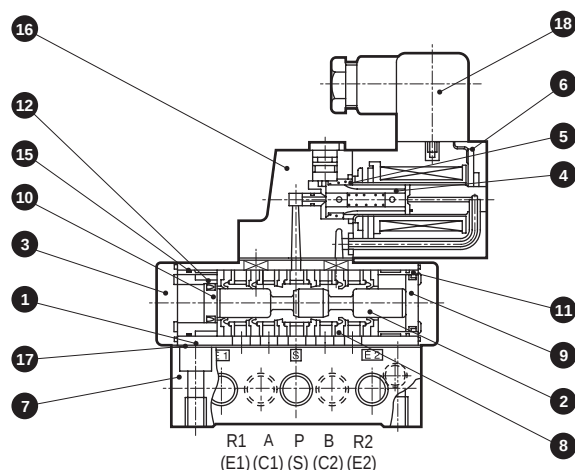
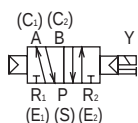
*: Repair parts are in stock as kits. It is not possible to purchase individual components. (The kits include sealant assembly and piston (A), (B) assembly. The coil assembly is not included.)

*: The plunger assembly is an attachment of the coil assembly.

Internal structure and parts list

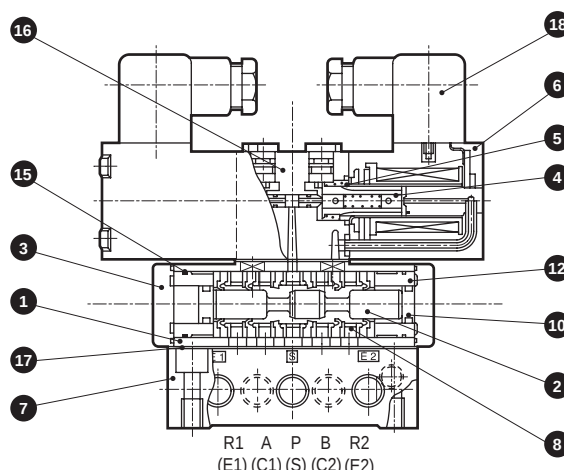
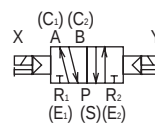
4F610/4F710

● 2-position single



4F620/4F720

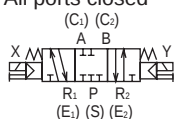
● 2-position double



4F630/4F730

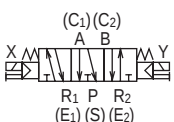
● 3-position

All ports closed



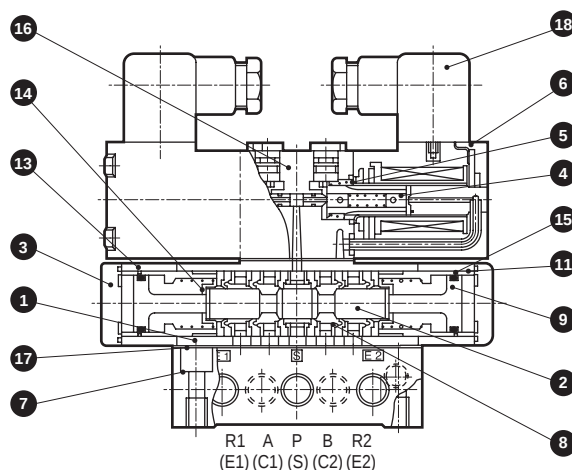
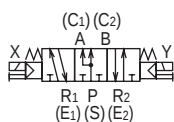
4F640/4F740

A/B/R connection



4F650/4F750

P/A/B connection



Main parts list

No.	Part name	Material	No./part name	8 9 10	8	9	10	6
			Model No.	Repair parts kit	Sealant assy	Piston (A) large assy	Piston (B) small assy	Coil assembly *
1	Body	Aluminum die-casting	4F610	4F610-K	4F9-118	4F9-117	4F9-116	4F6*0- Electrical connections - COIL-Voltage
2	Valving element (spool)	Aluminum	4F620	4F620-K		-		
3	Cap	Aluminum die-casting	4F630	4F630-K		4F9-122	-	
4	Plunger	-	4F640				-	
5	Plunger spring	-	4F650				-	
6	Coil assembly	-	4F710	4F710-K	4F9-119	4F9-121	4F9-120	4F7*0- Electrical connections - COIL-Voltage
7	Sub-plate	Aluminum die-casting	4F720	4F720-K		-		
8	Sealant assembly	-	4F730	4F730-K		4F9-123	-	
9	Piston (A) assembly (large)	-	4F740				-	
10	Piston (B) assembly (small)	-	4F750				-	
11	Cylinder A (large)	Aluminum	*: Repair parts are in stock as kits. It is not possible to purchase individual components. (The kits include sealant assembly and piston (A), (B) assembly. The coil assembly is not included.) *: The plunger assembly is an attachment of the coil assembly.					
12	Cylinder B (small)	Aluminum						
13	Body block	Aluminum die-casting						
14	Spring base	Stainless steel						
15	O-ring	Nitrile rubber						
16	Pilot valve body assembly							
17	Sub-plate gasket	Nitrile rubber						
18	DIN terminal box	-						

Repair parts list

4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G GMF
PV5 GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP NVP
4C*0EJ
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

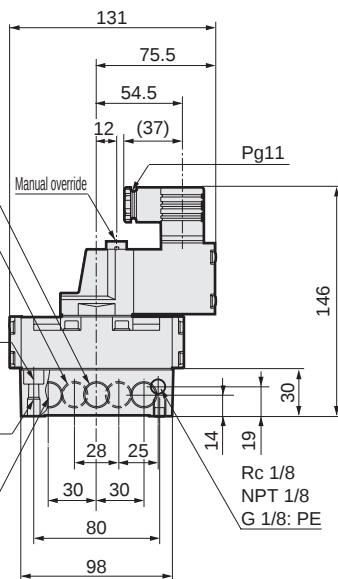
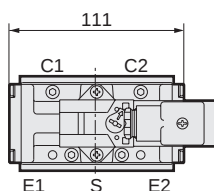
4F4 Series

Discrete valve; sub-plate piping

Dimensions

4F410

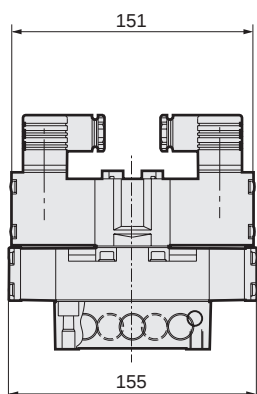
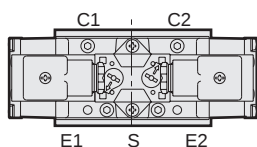
- 2-position single: DIN terminal box
DIN terminal box/with lamp (L)



- Rc 1/4 (08)
- NPT 1/4 (08N)
- G 1/4 (08G)
- Rc 3/8 (10)
- NPT 3/8 (10N)
- G 3/8 (10G): S
- 2-Rc 1/4 (08)
- NPT 1/4 (08N)
- G 1/4 (08G)
- 2-Rc 3/8 (10)
- NPT 3/8 (10N)
- G 3/8 (10G): C1/C2
- 2-Ø13 spot face
- Depth 9
- (Mounting hole)
- 2-M8 depth 11
- (prepared hole Ø7)
- 2-Rc 1/4 (08)
- NPT 1/4 (08N)
- G 1/4 (08G)
- 2-Rc 3/8 (10)
- NPT 3/8 (10N)
- G 3/8 (10G): E1/E2

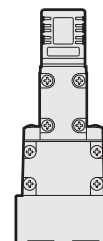
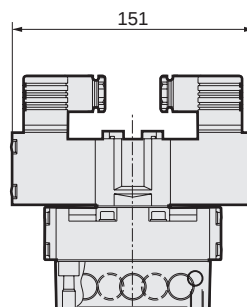
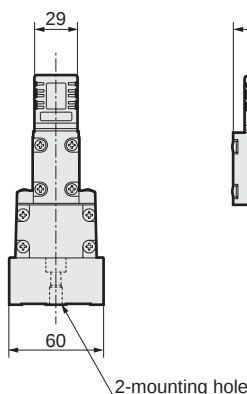
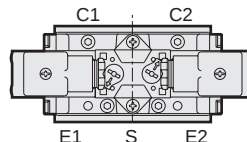
3 4F440 5

- 3-position: DIN terminal box
DIN terminal box/with lamp(L)

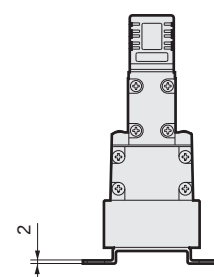
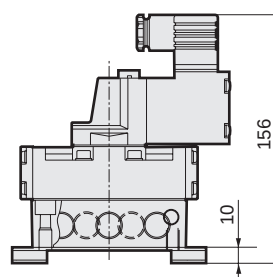
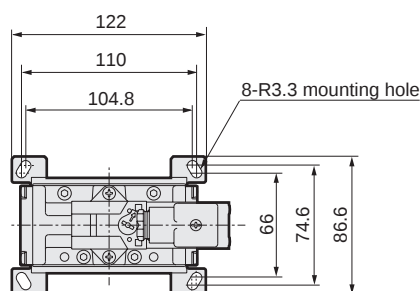


4F420

- 2-position double solenoid: DIN terminal box
DIN terminal box/with lamp (L)



- Installation feet: (P)
Material: Hot-rolled steel plates
Zinc plated

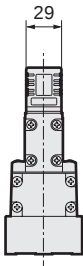
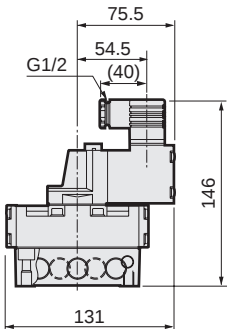


* Refer to page 1446 for details about check valves.

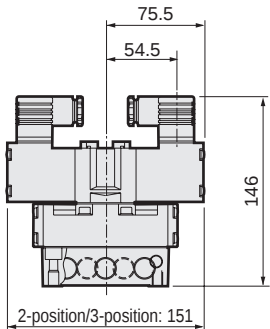
Dimensions

● DIN terminal box: (F)

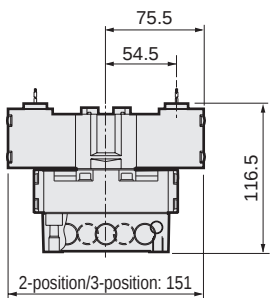
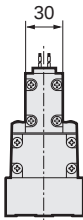
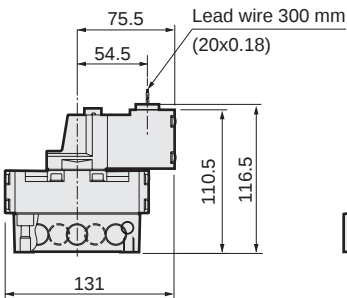
② 2-position single



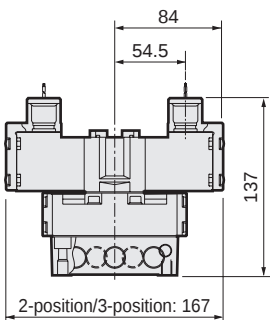
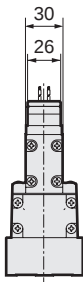
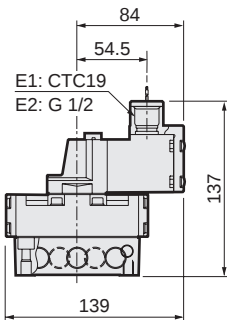
② 2-position double solenoid/3-position
* 2-position double solenoid shown in image.



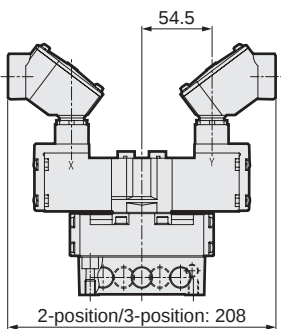
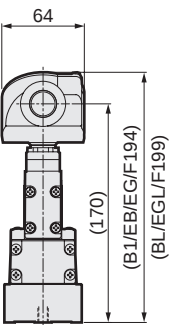
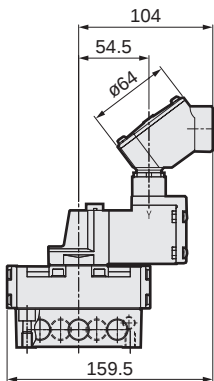
● Grommet lead wire: (E)



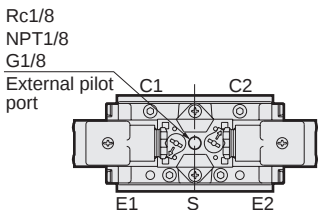
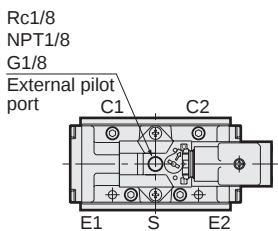
● Conduit lead wire: (E1/E2)



● Round terminal box: (B1/B/BL/G/GL)



● External pilot port: (K)



4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

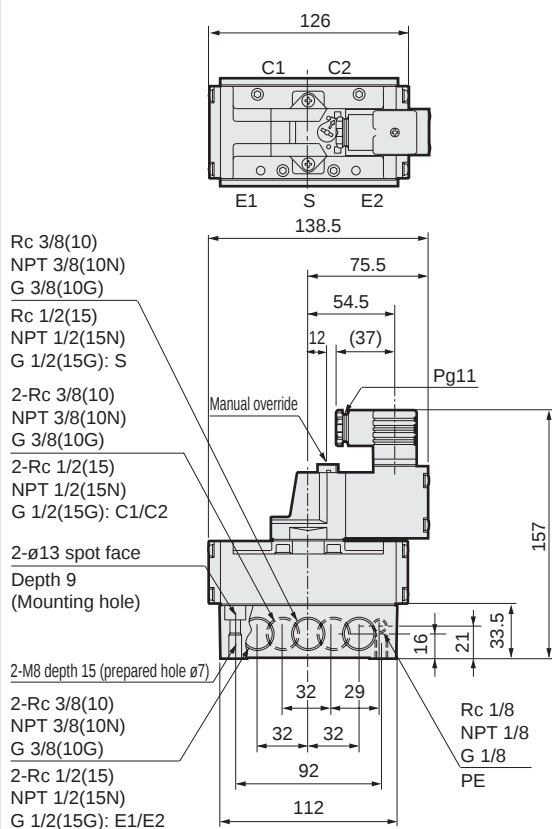
4F5 Series

Discrete valve; sub-plate piping

Dimensions

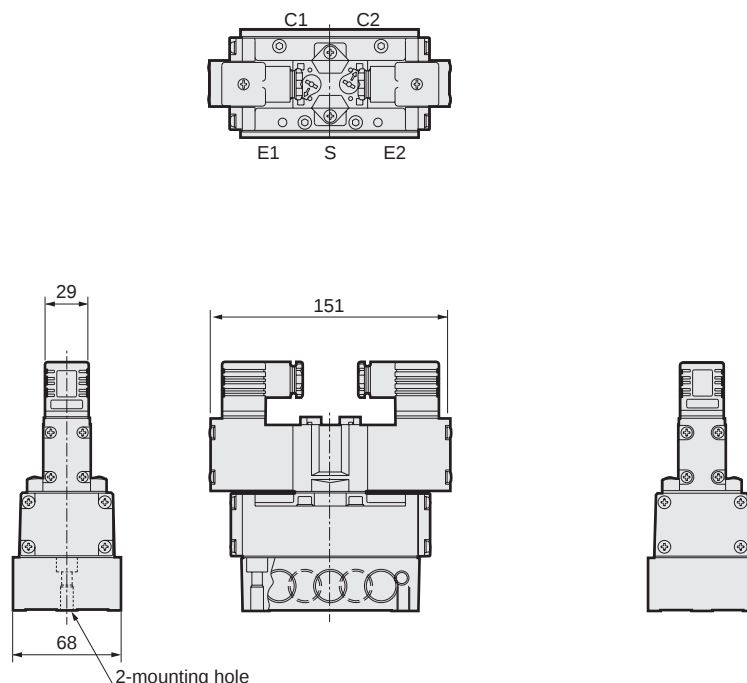
4F510

- 2-position single: DIN terminal box
DIN terminal box/with lamp (L)



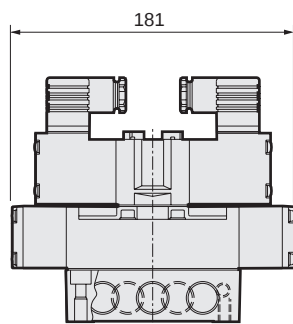
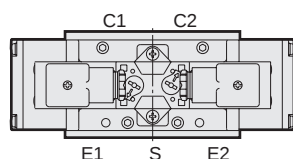
4F520

- 2-position double solenoid: DIN terminal box
DIN terminal box/with lamp (L)

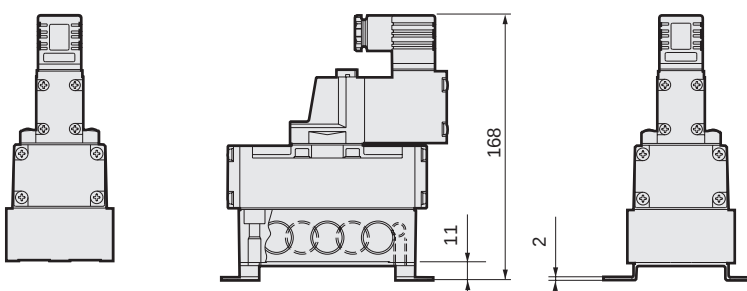
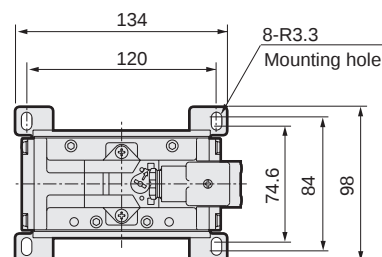


4F540

- 3-position: DIN terminal box
DIN terminal box/with lamp (L)



- Installation feet: (P)
Material: Hot-rolled steel plates
Zinc plated

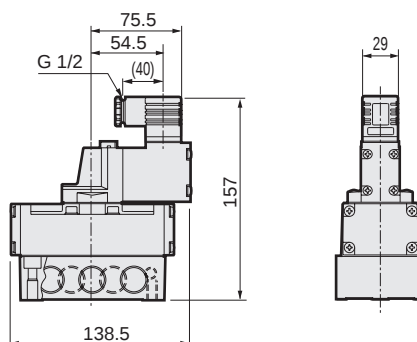


* Refer to page 1446 for details about check valves.

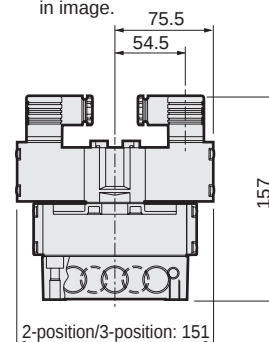
Dimensions

● DIN terminal box: (F)

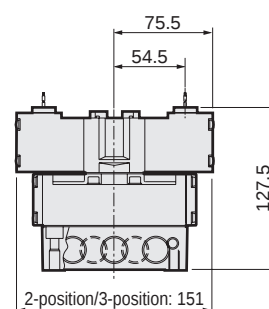
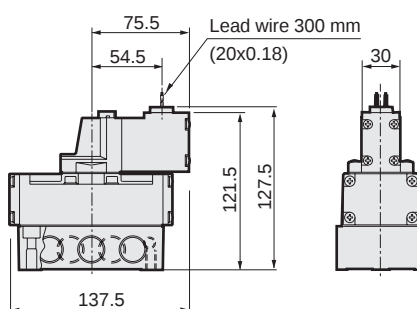
④ 2-position single



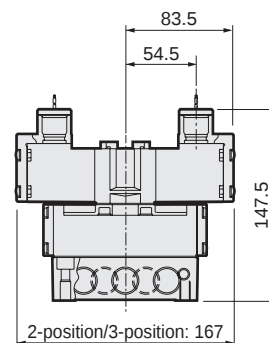
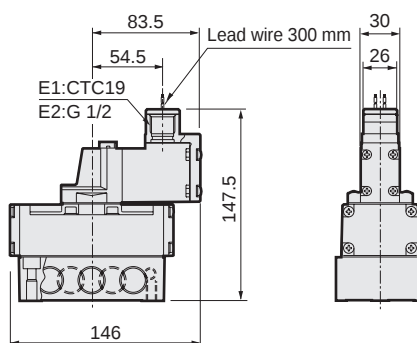
④ 2-position double solenoid/3-position * 2-position double solenoid shown in image.



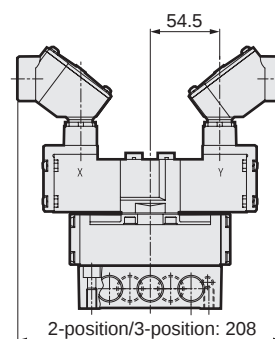
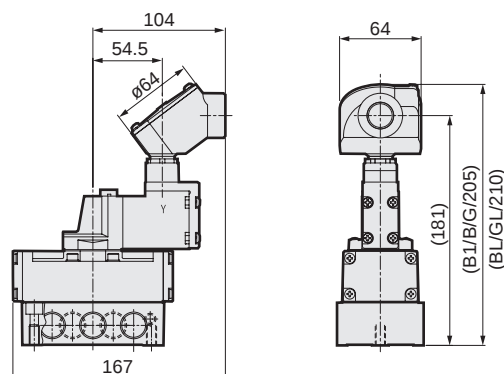
● Grommet lead wire: (E)



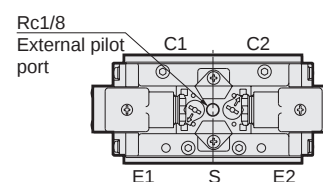
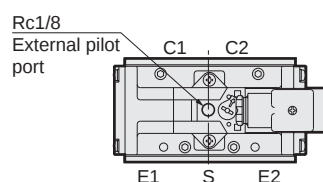
● Conduit lead wire: (E1/E2)



● Round terminal box: (B1/B/BL/G/GL)



● External pilot port: (K)



4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

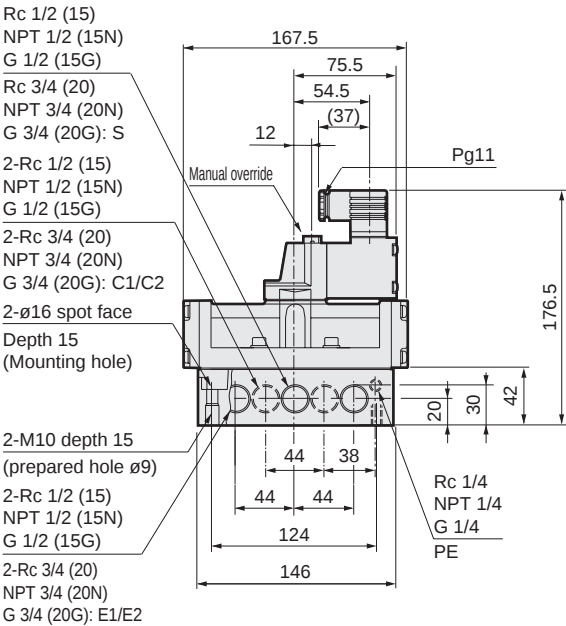
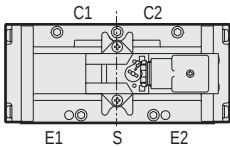
4F6 Series

Discrete valve; sub-plate piping

Dimensions

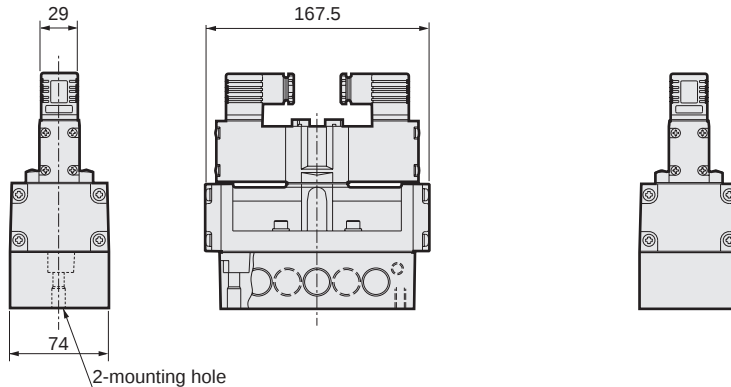
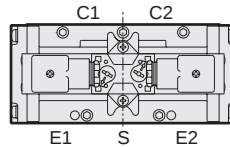
4F610

- 2-position single: DIN terminal box
DIN terminal box/with lamp (L)



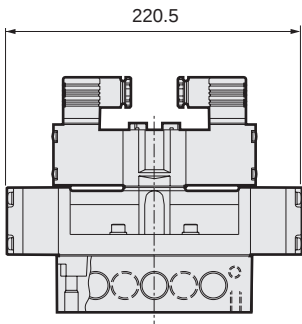
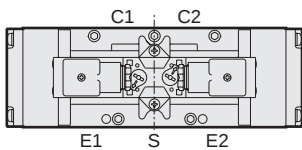
4F620

- 2-position double solenoid: DIN terminal box
DIN terminal box/with lamp (L)

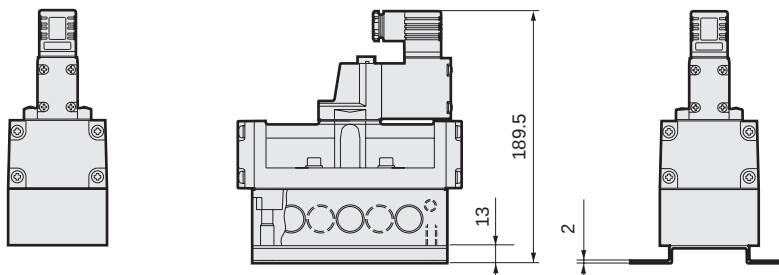
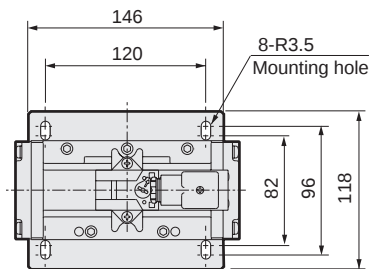


4F640

- 3-position: DIN terminal box
DIN terminal box/with lamp (L)



- Installation feet: (P)
Material: Cold-rolled steel plates
Zinc plated

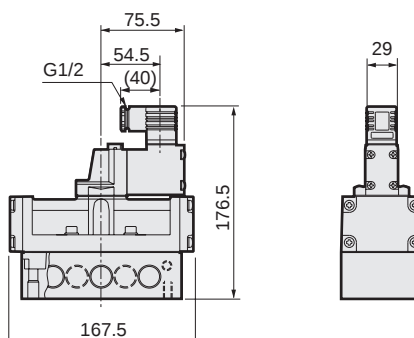


* Refer to page 1446 for details about check valves.

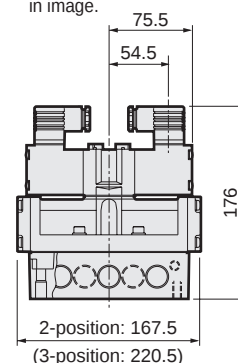
Dimensions

- DIN terminal box: (F)

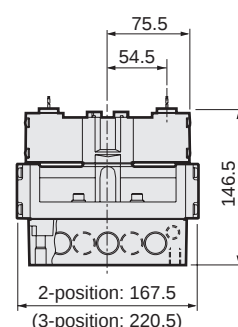
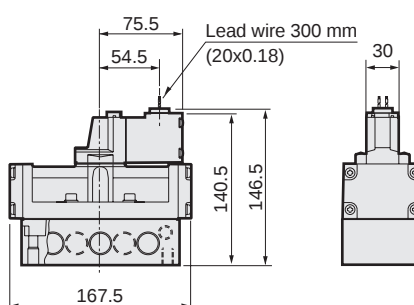
① 2-position single



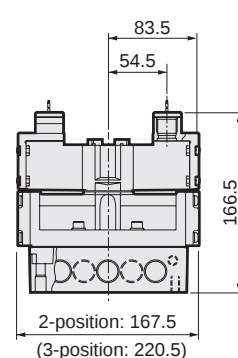
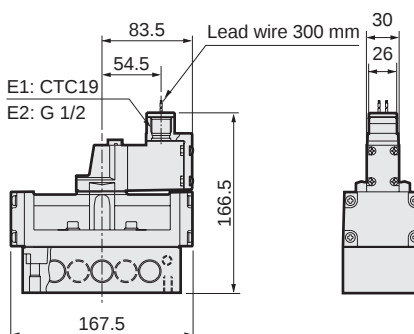
② 2-position double solenoid/3-position
* 2-position double solenoid shown in image.



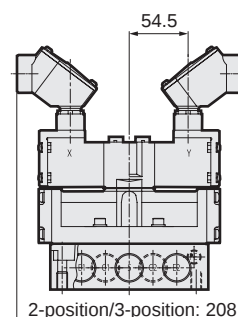
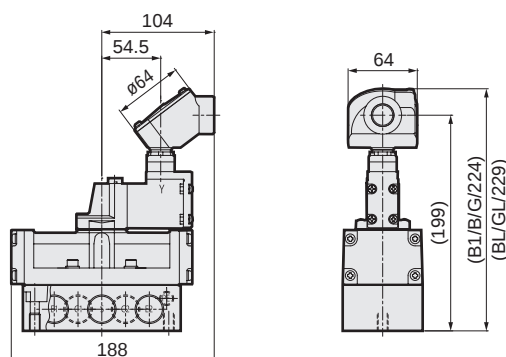
- Grommet lead wire: (E)



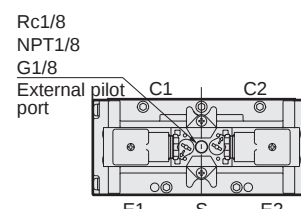
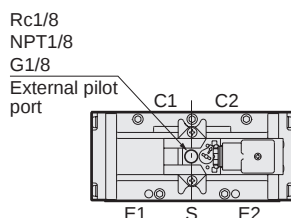
- Conduit lead wire: (E1/E2)



- Round terminal box: (B1/B/BL/G/GL)



- External pilot port: (K)



4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

4F7 Series

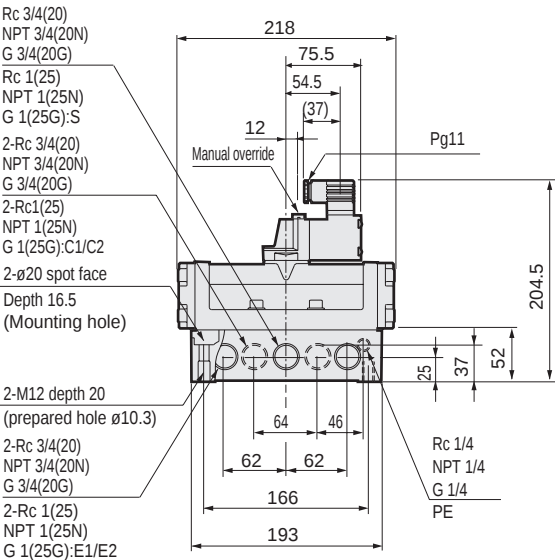
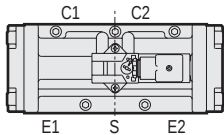
Discrete valve; sub-plate piping

Dimensions

4F710



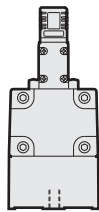
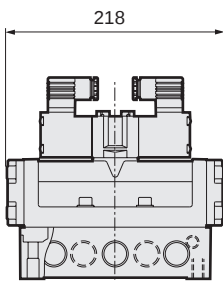
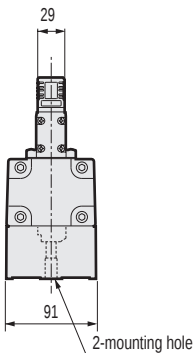
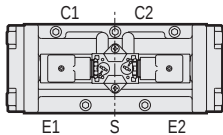
- 2-position single: DIN terminal box
DIN terminal box with lamp(L)



4F720



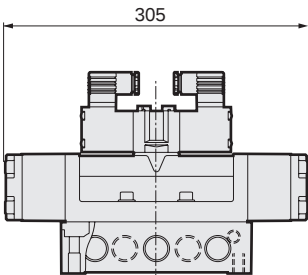
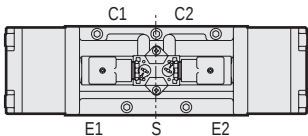
- 2-position double solenoid: DIN terminal box
DIN terminal box with lamp(L)



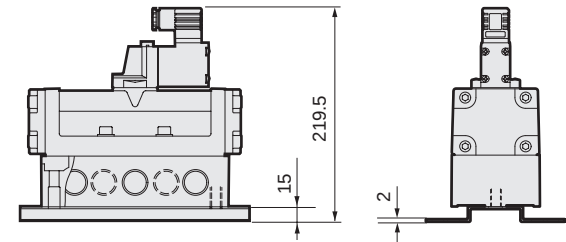
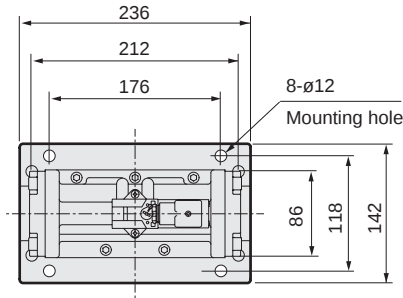
4F740



- 3-position: DIN terminal box
DIN terminal box with lamp(L)

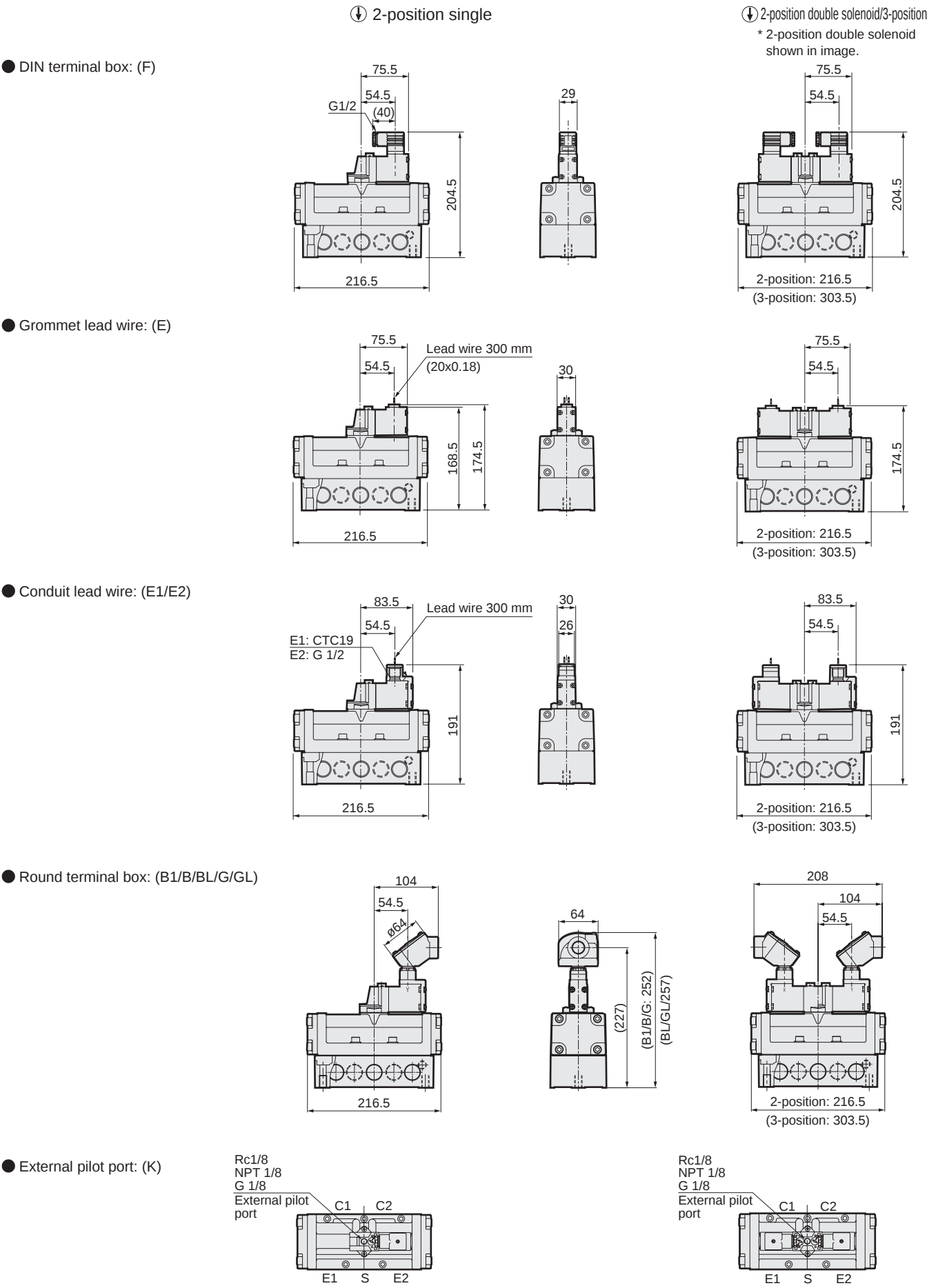


- Installation feet: (P)
Material: Cold-rolled steel plates
Zinc plated



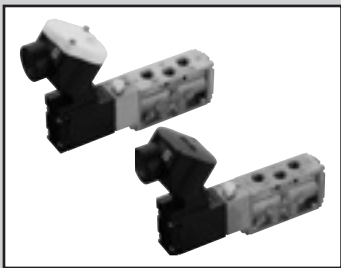
* Refer to page 1446 for details about check valves.

Dimensions



4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G GMF
PV5 GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP NVP
4G*0EJ
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending



Discrete valve/body piping
Pilot operated 5-port pneumatic valve

4F2/3 Series

Outdoor options

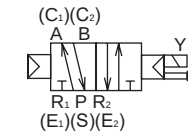
● Cylinder bore size: ø40 to ø100



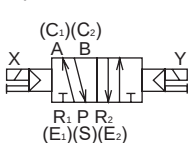
JIS symbol

● 5-port valve

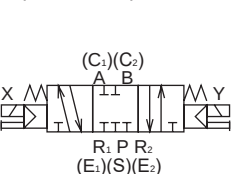
2-position single



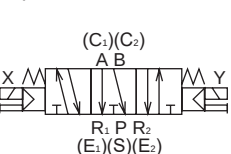
2-position double



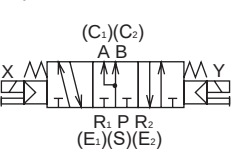
3-position all ports closed



3-position A/B/R connection



3-position P/A/B connection



Common specifications

Item	Description	
Valve and operation	Pilot operated soft spool valve	
Working fluid	Compressed air	
Max. working pressure	MPa	1.0 (≈150 psi, 10 bar)
Min. working pressure	2-position	0.1 (≈15 psi, 1 bar)
	3-position	0.15 (≈22 psi, 1.5 bar)
Proof pressure	MPa	1.5 (≈220 psi, 15 bar)
Ambient temperature	°C	-10 (14°F) to 60 (140°F) (*1)
Fluid temperature	°C	5 (41°F) to 60 (140°F)
Lubrication	Not required (*2)	
Degree of protection	IP65	
Vibration resistance	m/s ²	50 or less
Shock resistance	m/s ²	300 or less
Atmosphere	Corrosive gas environment prohibited	
Weight		

*1: The ambient temperature indicates the temperature for storage and upon installation, which will differ from the fluid temperature during operation.

*2: Use turbine oil ISO VG32 for lubrication.

Electrical specifications

Item		Description
Rated voltage	AC	100, 200, 110, 220 (50/60 Hz)
	V DC	12.24
Voltage fluctuation range		±10%
Starting current	AC	100 V 0.170/0.140
		200 V 0.090/0.070
		110 V 0.150/0.130
		220 V 0.080/0.060
	DC	12 V 0.500
		24 V 0.250
Holding current	AC	100 V 0.100/0.080
		200 V 0.050/0.040
		110 V 0.090/0.070
		220 V 0.050/0.040
	DC	12 V 0.500
		24 V 0.250
Power consumption	AC	100 V 5.0/4.0
		200 V 5.0/4.0
		110 V 5.0/4.0
		220 V 5.0/4.0
	DC	12 V 6.0
		24 V 6.0
Thermal class		B (molded coil)

Reference: Rated voltage 100 VAC 50/60Hz can be used at 110 VAC 60Hz, and 200 VAC 50/60Hz at 220 VAC 60Hz.

Individual specifications

Item			4F2	4F3
Weight	kg	2-position Single	0.82	0.92
		Double	1.37	1.48
	3-position		1.50	1.67

Performance/characteristics by model

Item	4F2	4F3
Response time	ms 50	50

*1: The response times are values with working pressure of 0.5 MPa, without lubrication, and with the power ON. They depend on the pressure and the lubricant quality.

Flow characteristics

Model No.	Solenoid position		Port size	Sonic conductance C[dm ³ /(s.bar)]	Critical pressure ratio b
4F2	2-position	Single	Rp1/4 NPT1/4 G1/4	3.0	0.33
		Double			
	3-position	All ports closed A/B/R connection		2.5	0.43
4F3	2-position	Single	Rp1/4 NPT1/4 G1/4	3.9	0.42
		Double			
	3-position	All ports closed		4.0	0.35
		A/B/R connection		4.5	0.42
		P/A/B connection		4.0	0.35
		P/A/B connection		4.0	0.35
	2-position	Single	Rp3/8 NPT3/8 G3/8	5.8	0.42
		Double			
	3-position	All ports closed		4.4	0.42
		A/B/R connection		5.1	0.46
		P/A/B connection		4.4	0.42

*4: Effective cross-sectional area S and sonic conductance C are converted as S ≈ 5.0 x C.

4F2/4F3 Series (outdoor specification)

Discrete valve/body piping

How to order

4F2 1 0 - 08 - M2 B W - AC100V

A Model No.

B Solenoid position

C Port size

D Manual override

E Electrical connections

F Other options

G Voltage

Precautions for model No. selection

*1: When using the unit in a complete outdoor exposure environment, select the non-locking manual override M2 (metal).

Further, as a metal locking manual override is available as a custom order, contact CKD for details.

*2: 12 VDC models are not available for BL with lamp and GL.

*3: Support with a manifold is not available.

*4: 4F4 to 7 outdoor is available as a custom order.

[Example of model No.]

4F210-08-M2BW-AC100V

- A Model : 4F2
- B Solenoid position : 2-position single
- C Port size : Rp1/4
- D Manual override : Non-locking
- E Electrical connections : Round terminal box (G1/2)
- F Other options : No option
- G Voltage : 100 VAC

Code	Description	4F2	4F3
A Model No.			
4F2	4F2 Series	●	
4F3	4F3 Series		●
B Solenoid position			
1	2-position single	●	●
2	2-position double	●	●
3	3-position all ports closed	●	●
4	3-position ABR connection	●	●
5	3-position PAB connection		●
C Port size			
08	Rp1/4	●	●
10	Rp3/8		●
08N	NPT1/4	●	●
10N	NPT3/8		●
08G	G1/4	●	●
10G	G3/8		●
D Manual override *1			
Blank	Locking (resin)	●	●
M2	Non-locking (metal)	●	●
M3	Locking with manual lever (resin)	●	●
R	Position change of manual override	●	●
E Electrical connections			
B1	Round terminal box (G3/4)	●	●
B	Round terminal box (G1/2)	●	●
BL	Round terminal box (G1/2)/with lamp (*2)	●	●
G	Round terminal box (G1/2) With gland (A-15a)	●	●
GL	Round terminal box (G1/2) with lamp (*2) Gland (A-15a) attached	●	●
F Other options			
Blank	No option	●	●
S	Surge suppressor (varistor) included	●	●
H	With check valve (applicable: 3-position all ports closed)	●	●
N	Plug attached (for 3-port valve)	●	●
NC	3-port valve specs plug assembly (C1 (A), E1 (R1))	●	●
NO	3-port valve specs plug assembly (C2 (B), E2 (R2))	●	●
G Voltage			
AC100V	100 VAC 50/60 Hz	●	●
AC200V	200 VAC 50/60 Hz	●	●
AC110V	110 VAC 50/60 Hz	●	●
AC220V	220 VAC 50/60 Hz	●	●
DC12V	12 VDC (*2)	●	●
DC24V	24 VDC	●	●
* Other custom order products			
DC48V		●	●
DC100V		●	●
DC110V		●	●

4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/INAP
NVP
4G*0EJ
4F*0EX
4F*0E
HNV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

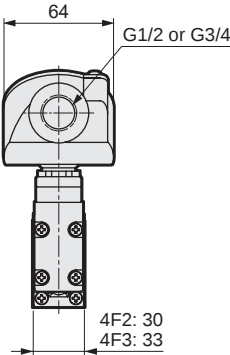
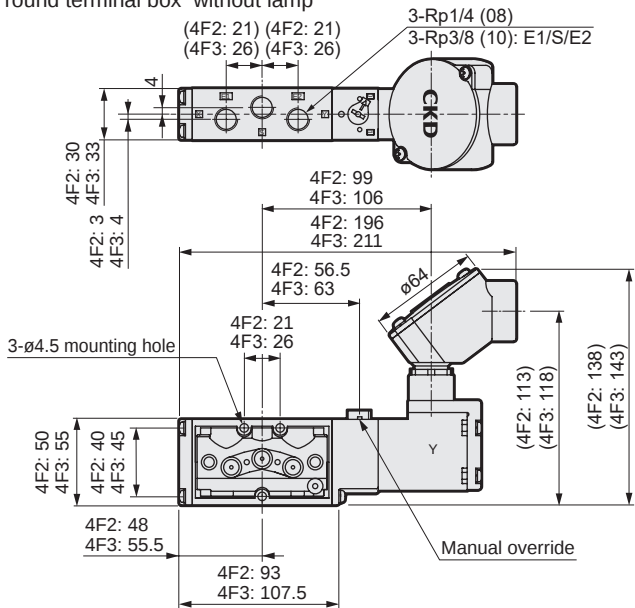
4F2/4F3 Series (outdoor specification)

4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G GMF
PV5 GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP NVP
4G*0EJ
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

Dimensions

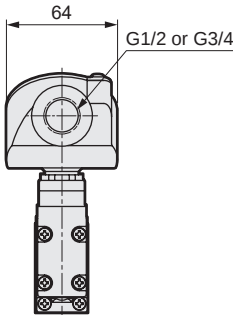
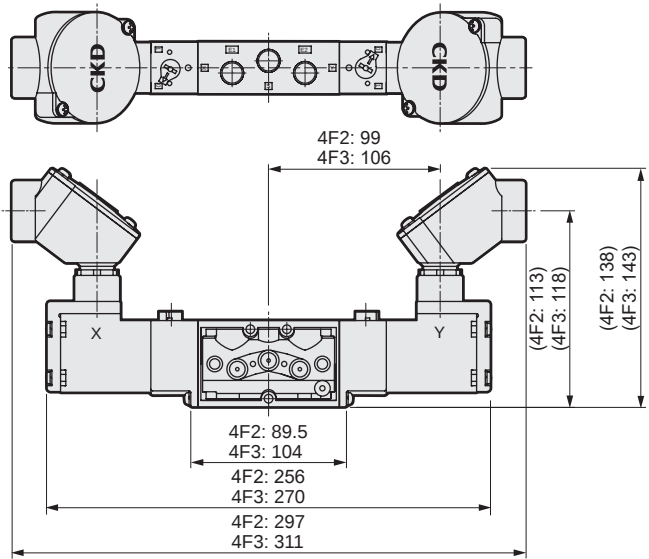
4F210/4F310

● 2-position single: round terminal box without lamp



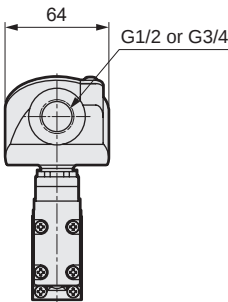
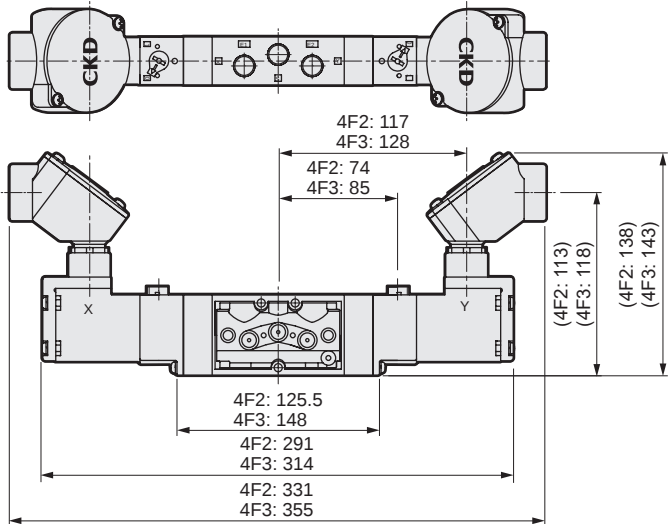
4F220/4F320

● 2-position double solenoid: round terminal box without lamp



4F2³₄/4F3³₅

● 3-position: round terminal box without lamp



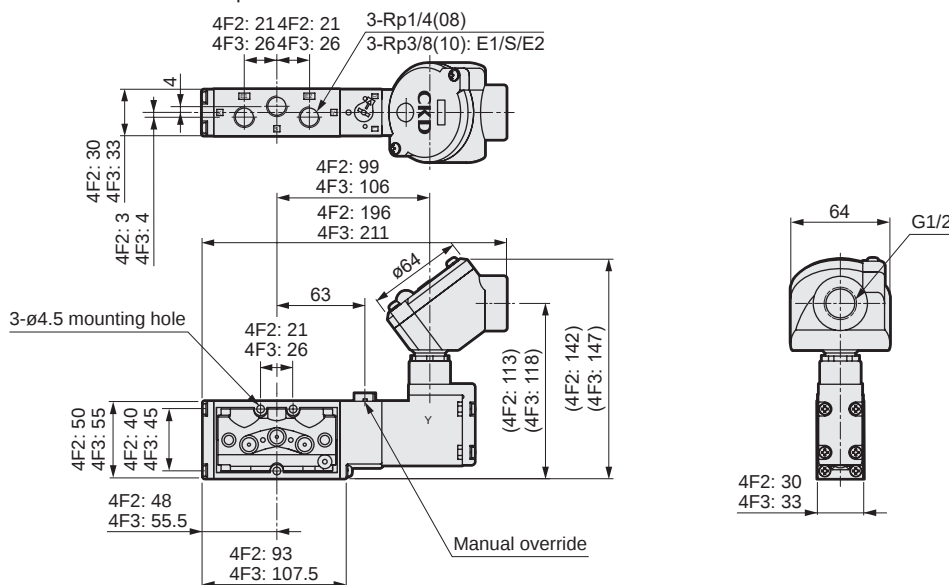
4F2/4F3 Series (outdoor specification)

Discrete valve/body piping

Dimensions

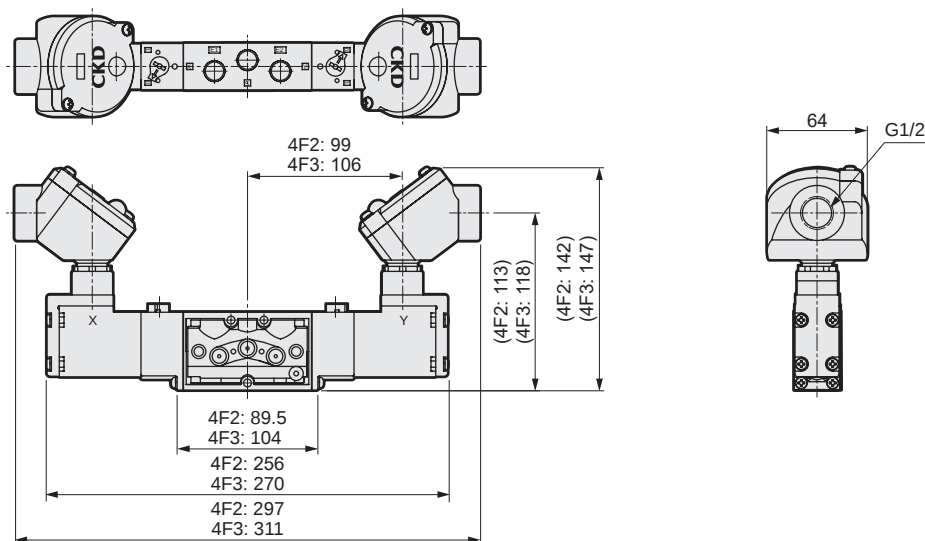
4F210/4F310

- 2-position single: round terminal box with lamp



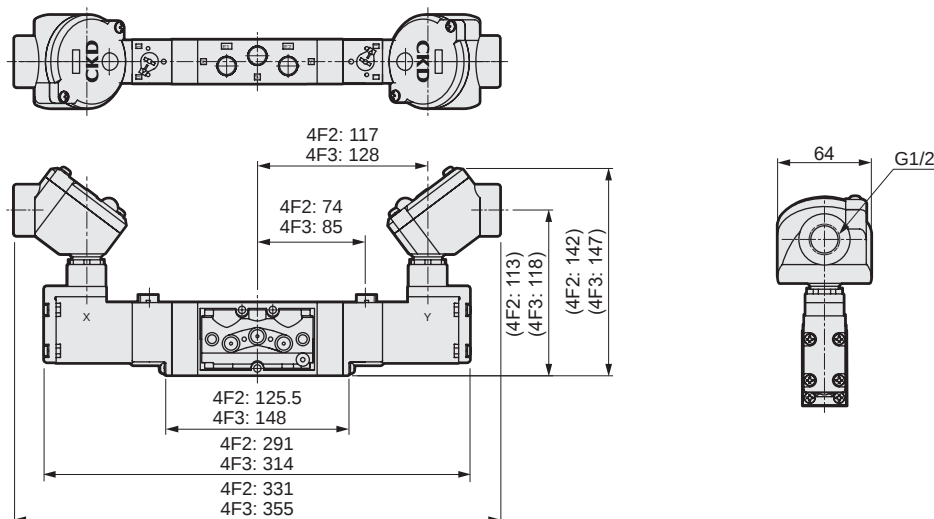
4F220/4F320

- 2-position double solenoid: round terminal box with lamp



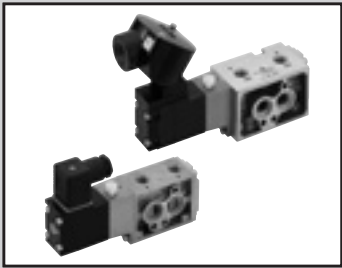
4F2³/₄0/4F3³/₅0

- 3-position: round terminal box with lamp



4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

4GA/B
M4GA/B
MN4GA/B
4GA/B
(master)
4GB
With sensor
4GD/E
M4GD/E
MN4GD/E
4GA/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B
(master)
4F
4F
(master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
Silencer
TotAirSys
(Total Air)
TotAirSys
(Gamma)
Ending



Discrete valve/body piping
Pilot operated 5-port pneumatic valve

4F1/3-NM Series

NAMUR standards option



Common specifications

1 MPa ≈ 145.0 psi, 1 MPa = 10 bar

Item	Description
Valve and operation	Pilot operated soft spool valve
Working fluid	Compressed air
Max. working pressure MPa	1.0 (≈145 psi, 10 bar)
Min. working pressure MPa	0.1 (≈15 psi, 1 bar)
Proof pressure MPa	1.5 (≈217 psi, 15 bar)
Ambient temperature °C	-10 (14°F) to 60 (140°F) *1
Fluid temperature °C	5 (41°F) to 60 (140°F)
Lubrication	Not required (use turbine oil ISO VG32 if necessary for lubrication)
Degree of protection	Dust-proof, IP65 (with round terminal box)
Vibration resistance m/s ²	50 or less
Impact resistance m/s ²	300 or less
Atmosphere	Cannot be used in corrosive gas environments

*1: The ambient temperature indicates the temperature for storage and upon installation, which will differ from the fluid temperature during operation.

Electrical specifications

Item			Description
Rated voltage V	AC		100, 200, 110, 220 (50/60 Hz)
	DC		12, 24
Rated voltage fluctuation range			±10%
Starting current A	AC	100 V	0.170/0.140
		200 V	0.090/0.070
		110 V	0.15/0.13
		220 V	0.08/0.06
	DC	12 V	0.500
		24 V	0.250
Holding current A	AC	100 V	0.100/0.080
		200 V	0.050/0.040
		110 V	0.09/0.07
		220 V	0.05/0.04
	DC	12 V	0.500
		24 V	0.250
Power consumption W	AC	100 V	5.0/4.0
		200 V	5.0/4.0
		110 V	5.0/4.0
		220 V	5.0/4.0
	DC	12 V	6.0
		24 V	6.0
Thermal class			B molded coil

Reference: Rated voltage 100 VAC 50/60Hz can be used at 110 VAC 60Hz, and 200 VAC 50/60Hz at 220 VAC 60Hz.

Flow characteristics

Model No.	Solenoid position	Port size	Sonic conductance C[dm ³ /(s·bar)]
4F1	2-position	Single	1.6
		Double	
4F3	2-position	Single	3.1
		Double	

*1: Effective cross-sectional area S and sonic conductance C are converted as S ≈ 5.0 × C.

How to order

4F3 1 0 - NM - M2 B - AC100V

A Model No.

B Solenoid position

C Port size

D Manual override

E Electrical connections

F Other options

G Voltage

⚠ Precautions for model No. selection

- *1 : For 4F1, the repair parts, etc. of the body are 4F1 standard products. 4F3 products are used in coil assembly.
- *2 : Note that with 4F3, the repair parts of the body are dedicated parts.
- *3 : The piping port is Rc1/4 only.
The threads of port C1/C2 on the NAMUR face have not been machined.
- *4 : 12 VDC is not supported for BL with lamp or GL.
- *5 : When selecting W: Outdoor specification, only the round terminal box is available.
- *6 : For 4F1-W: Outdoor specification, the PE exhaust and breathing hole are connected to atmosphere. Install with an orientation preventing the direct ingress of rainwater, etc.

[Example of model No.]

4F310-NM-M2BW-AC100V

- A Model : 4F3
- B Solenoid position : 2-position single
- C Port size : Rc1/4
- D Manual override : Non-locking
- E Electrical connections : Round terminal box (G1/2)
- F Other options : None
- G Voltage : 100 VAC

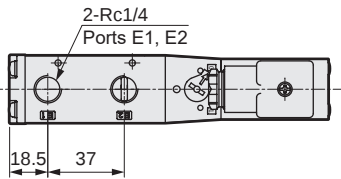
Code	Description	4F1	4F3
A Model No.			
4F1	4F1 Series	●	
4F3	4F3 Series		●
B Solenoid position			
1	2-position single	●	●
2	2-position double	●	●
C Port size			
NM	NAMUR standard (port size Rc1/4) (*3)	●	●
D Manual override			
Blank	Locking (resin)	●	●
M2	Non-locking (metal)	●	●
M3	Locking with manual lever (resin)	●	●
R	Position change of manual override	●	●
E Electrical connections			
Blank	DIN terminal box (Pg11)	●	●
L	DIN terminal box (Pg11) with lamp	●	●
F	DIN terminal box (G1/2)	●	●
E	Grommet lead wire	●	●
E1	Conduit lead wire (CTC19)	●	●
E2	Conduit lead wire (G1/2)	●	●
B1	Round terminal box (G3/4)	●	●
B	Round terminal box (G1/2)	●	●
BL	Round terminal box (G1/2) with lamp (*4)	●	●
G	Round terminal box (G1/2) With gland (A-15a)	●	●
GL	Round terminal box (G1/2) with lamp (*4) Gland (A-15a) included	●	●
F Other options			
Blank	No option	●	●
W	Outdoor specification (*5) (*6)	●	●
S	Surge suppressor (varistor) included	●	●
G Voltage			
AC100V	100 VAC 50/60 Hz	●	●
AC200V	200 VAC 50/60 Hz	●	●
AC110V	110 VAC 50/60 Hz	●	●
AC220V	220 VAC 50/60 Hz	●	●
DC12V	12 VDC (*4)	●	●
DC24V	24 VDC	●	●
* Other made-to-order products			
DC48V		●	●
DC100V		●	●
DC110V		●	●

4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

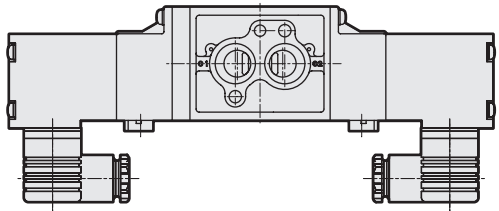
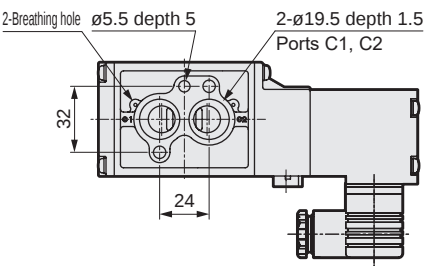
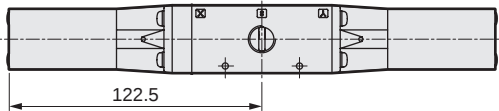
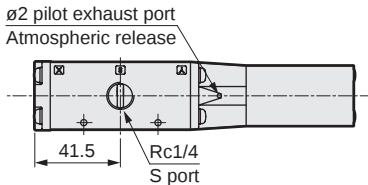
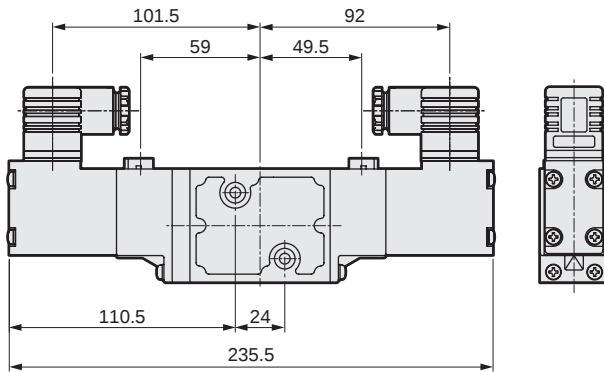
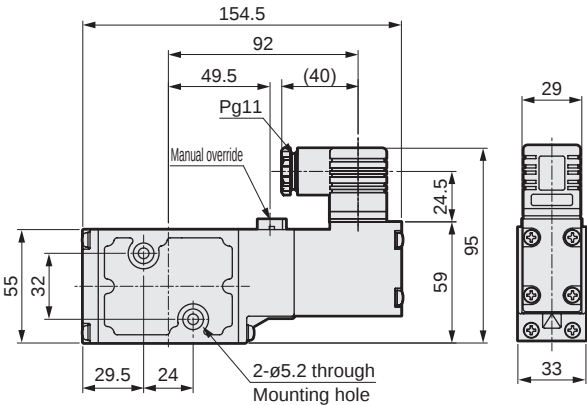
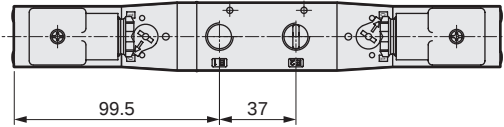
4F1/4F3-NM Series

Dimensions

- 4F110-NM
2-position single: DIN terminal box: (blank)
DIN terminal box with lamp: (L)

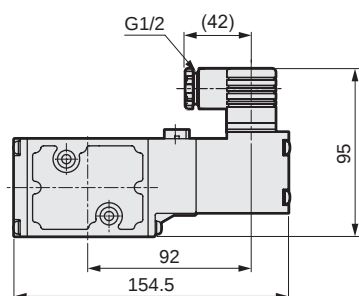


- 4F120-NM
2-position double: DIN terminal box: (blank)
DIN terminal box with lamp: (L)

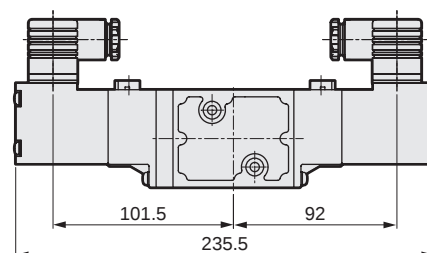


Dimensions

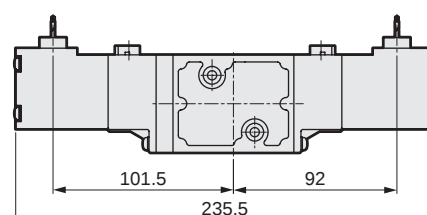
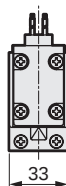
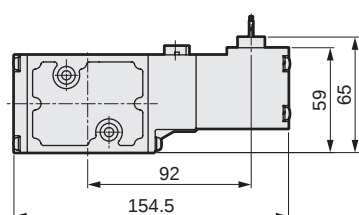
● 2-position single
DIN terminal box: (F)



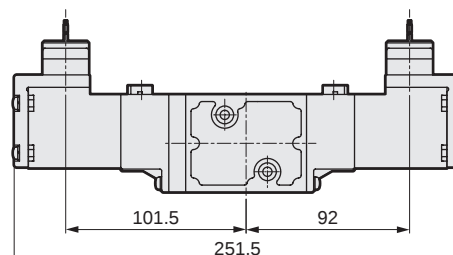
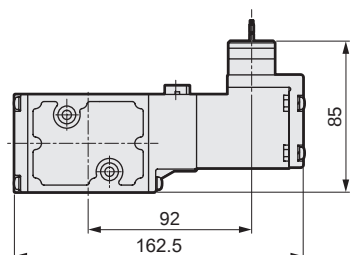
● 2-position double



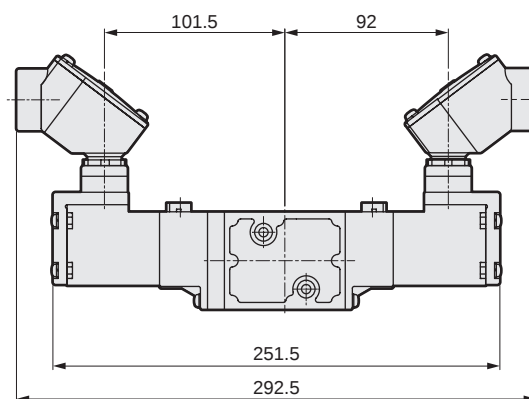
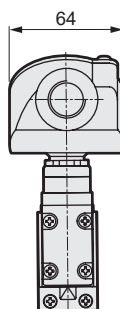
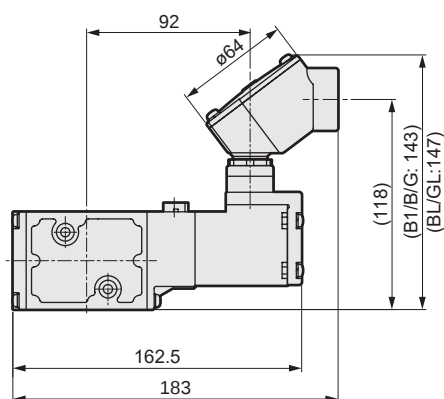
Grommet lead wire: (E)



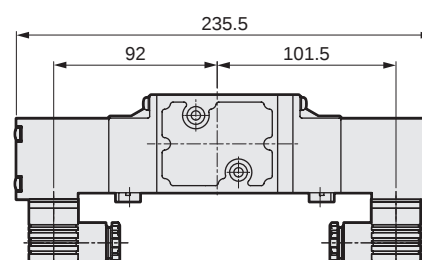
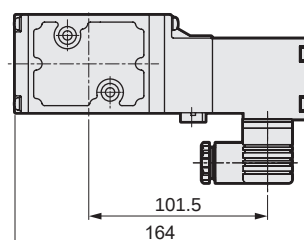
Conduit lead wire: (E1/E2)



Round terminal box: (B1/B/BL/G/GL)



Position change of manual override: (R)

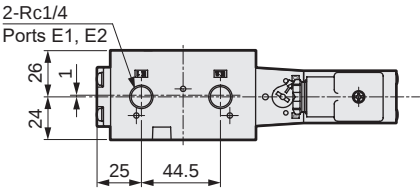


4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

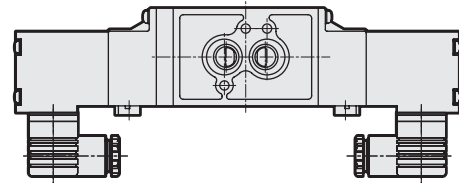
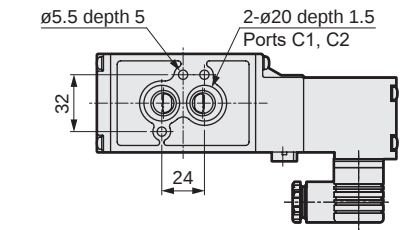
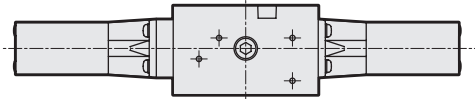
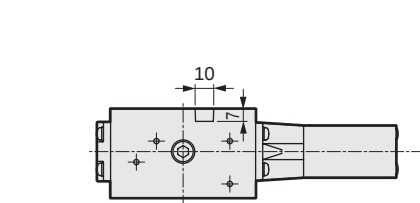
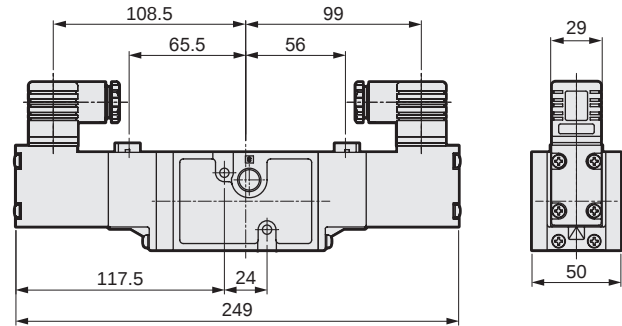
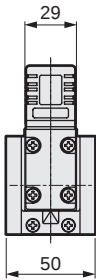
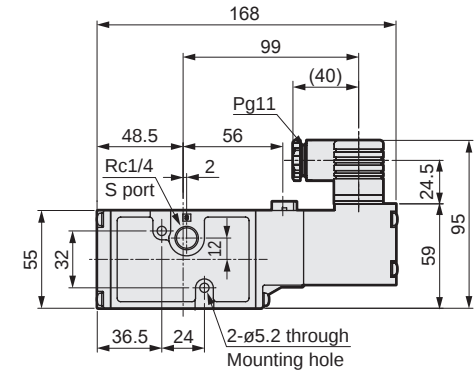
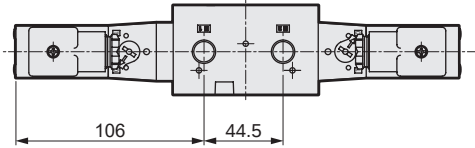
4F1/4F3-NM Series

Dimensions

- 4F310-NM
2-position single: DIN terminal box: (blank)
DIN terminal box with lamp: (L)

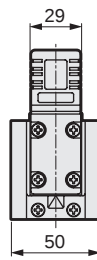
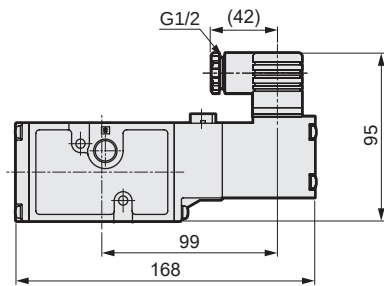


- 4F320-NM
2-position double: DIN terminal box: (blank)
DIN terminal box with lamp: (L)

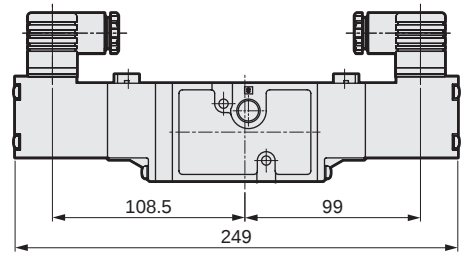


Dimensions

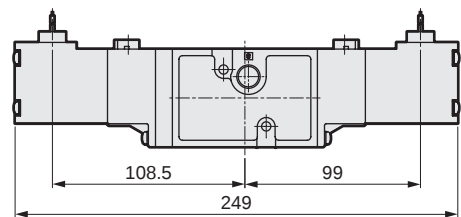
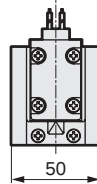
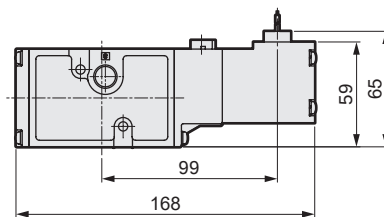
● 2-position single
DIN terminal box: (F)



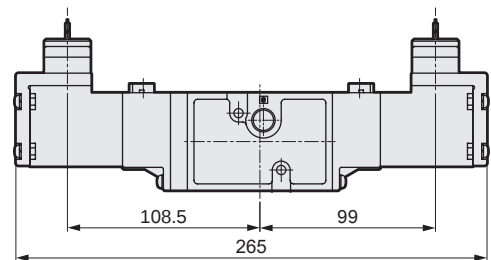
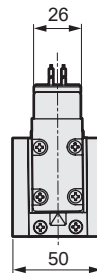
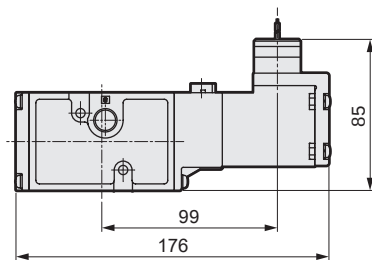
● 2-position double



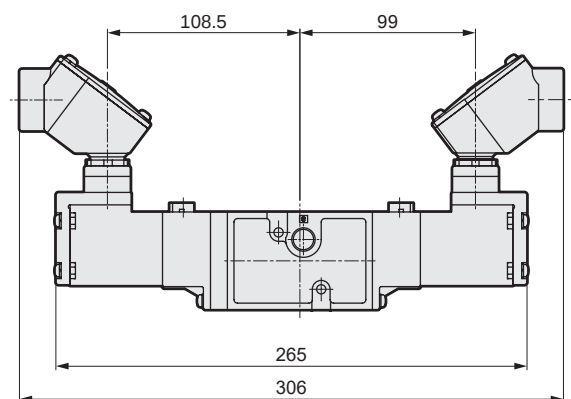
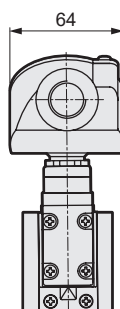
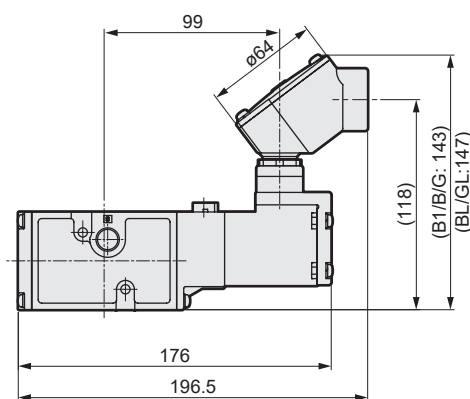
Grommet lead wire: (E)



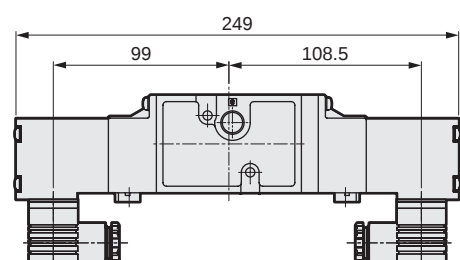
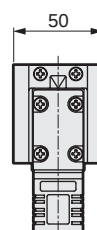
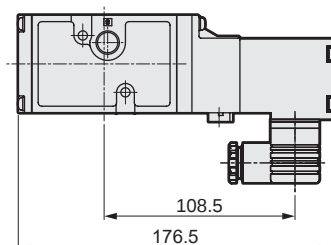
Conduit lead wire: (E1/E2)



Round terminal box: (B1/B/BL/G/GL)

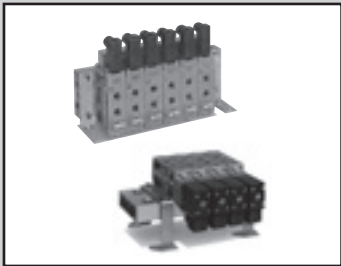


Position change of manual override: (R)



4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA/B4
MN3E MN4E
W4GA/B2
W4GB4
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G GMF
PV5 GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP NVP
4G*0EJ
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending



Individual wiring manifold/body piping
Pilot operated 5-port pneumatic valve

(A)M4F0/1/2/3 Series

● Cylinder bore size: ø16 to ø100

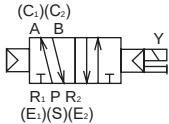


Refer to the Ending for details.

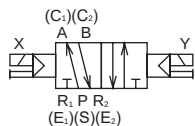


JIS symbol

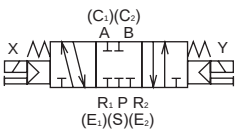
- 5-port valve
2-position single



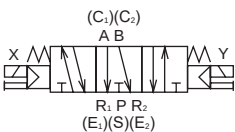
2-position double



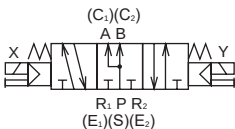
3-position all ports closed



3-position A/B/R connection



3-position P/A/B connection



Common specifications

Item	Description
Manifold method	Manifold integrated
Manifold	Common supply/common exhaust
Station No.	2 to 10 stations
Valve and operation	Pilot operated soft spool valve
Working fluid	Compressed air
Max. working pressure MPa	1.0 (≈150 psi, 10 bar)
Min. working pressure MPa	Refer to Individual specifications listed below
Proof pressure MPa	1.5 (≈220 psi, 15 bar)
Ambient temperature °C (*1)	-10 (14°F) to 60 (140°F) (no freezing)
Fluid temperature °C	5 (41°F) to 60 (140°F)
Lubrication	Not required (turbine oil ISO VG32 if necessary for lubrication)
Degree of protection	Dust-proof
Vibration resistance m/s ²	50 or less
Shock resistance m/s ²	300 or less
Atmosphere	Cannot be used in corrosive gas environment.

*1: The ambient temperature indicates the temperature for storage and upon installation, which will differ from the fluid temperature during operation.

Electrical specifications

Item		(A)4F0 to 1	4F2/3	
Rated voltage	AC	100, 200 (50/60 Hz)		
V	DC	12, 24		
Voltage fluctuation range		±10%		
Starting current	AC	100 V	0.056 / 0.044	0.170 / 0.140
		200 V	0.034 / 0.026	0.090 / 0.070
	DC	12 V	0.150	0.500
		24 V	0.075	0.250
Holding current	AC	100 V	0.028 / 0.022	0.100 / 0.080
		200 V	0.017 / 0.013	0.050 / 0.040
	DC	12 V	0.150	0.500
		24 V	0.075	0.250
Power consumption	AC	100 V	1.8 / 1.4	5.0 / 4.0
		200 V	2.1 / 1.6	5.0 / 4.0
	DC	12 V	1.8	6
		24 V	1.8	6
Thermal class		B (molded coil)		

Reference: Rated voltage 100 VAC 50/60Hz can be used at 110 VAC 60Hz, and 200 VAC 50/60Hz at 220 VAC 60Hz.

Individual specifications

1 MPa = 10 bar

Item		(A)4F0 *1	4F1	4F2	4F3
Min. working pressure MPa	2-position	Single	0.15	0.15 (≈22 psi)	0.10
		Double	(≈22 psi)	0.10 (≈15 psi)	(≈15 psi)
	3-position	All ports closed	-	0.20	0.15
		A/B/R connection		(≈29 psi)	(≈22 psi)
		P/A/B connection		-	1.5 bar)
Port size	P (S) port		Rc 1/8 NPT 1/8 G 1/8	Rc 1/4 NPT 1/4 G 1/4	Rc 3/8 NPT 3/8 G 3/8
	R ₁ (E ₁), R ₂ (E ₂) port		Rc 1/8 NPT 1/8 G 1/8	Rc 1/8 NPT 1/8 G 1/8	Rc 3/8 NPT 3/8 G 3/8
	A(C ₁), B(C ₂) port		M5 Rp 1/8 NPT 1/8 G 1/8	Rp 1/8 NPT 1/8 G 1/8	Rp 1/4 NPT 1/4 G 1/4

*1: With the single, (A) is A4F010.

Performance/characteristics by model

Item		(A)4F0	4F1	4F2	4F3
Response time *2	ms	30	30	50	50

*2: The response time is the value at 0.5 MPa supply pressure, with no lubrication, and with the power ON. It depends on the pressure and the lubricant quality.

Weight

Model No.			M4F0	M4F1		M4F2		M4F3	
Exhaust installation method			*L, *U	*L, *U	I	*L, *U	I	*L, *U	C, I
Weight calculation formula	kg	Single	0.19xn+0.19	0.29xn+0.26	0.23xn+0.14	0.82xn+0.54	0.71xn+0.36	1.04xn+0.98	0.70xn+0.45
		Double	0.24xn+0.19	0.35xn+0.26	0.29xn+0.14	1.15xn+0.54	1.04xn+0.36	1.36xn+0.98	1.02xn+0.45
(n: Station No.)		3-position	-	0.42xn+0.26	0.36xn+0.14	1.28xn+0.54	1.17xn+0.36	1.55xn+0.98	1.21xn+0.45

Flow characteristics

Model No.	Solenoid position		Port size	C[dm ³ /(s·bar)]	b
(A)4F0 *2	2-position	Single	M5	0.61	0.35
		Double			
	2-position	Single	Rp1/8 NPT1/8 G1/8	0.74	0.27
		Double			
4F1	2-position	Single	Rp1/8,Rp1/4 NPT1/8,NPT1/4 G1/8,G1/4	2.0	0.33
		Double			
	3-position	All ports closed		1.5	0.31
		A/B/R connection		1.6	0.29
4F2	2-position	Single	Rp1/4 NPT1/4	3.0	0.33
		Double			
	3-position	All ports closed	G1/4	2.5	0.43
		A/B/R connection			
4F3	2-position	Single	Rp1/4 NPT1/4 G1/4	3.9	0.42
		Double			
	3-position	All ports closed		4.0	0.35
		A/B/R connection		4.5	0.42
		P/A/B connection		4.0	0.35
	2-position	Single	Rp3/8 NPT3/8 G3/8	5.8	0.42
		Double			
	3-position	All ports closed		4.4	0.42
		A/B/R connection		5.1	0.46
		P/A/B connection		4.4	0.42

*1: Effective cross-sectional area S and sonic conductance C are converted as $S \approx 5.0 \times C$.

*2: With the single type, (A) is A4F010.

CE marking specifications

** - Voltage - **ST**

• Standard voltage of 24 VDC or less is CE marking-compatible even if the model No. is not indicated with "ST".

Copper and PTFE free specifications

● Copper- and PTFE-based materials are not used in the flow path.

** - Voltage - **P6**

(4F0 is not available.)

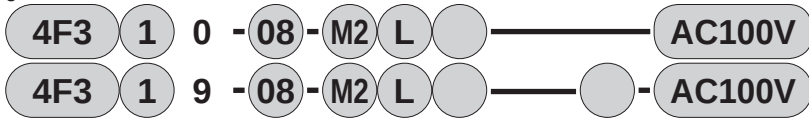
4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

(A)M4F0 to 3 Series

Individual wiring manifold; body piping

How to order individual wiring manifold, body piping

● Single solenoid valve for manifold



Refer to the following precautions.

* Be sure to fill in "Manifold specifications sheet" (pages 1448 and 1449).

● Manifold



A Model No.

B Solenoid position

C Port size

⚠ Precautions for model No. selection

Separate use of the single solenoid valve units for manifolds as listed below depending on the model.

■ For 4F0 to 4F1



When using the unit as a repair item, separately also purchase the gasket kit listed below depending on the model.

M4F0-GASKET-KIT
M4F1-GASKET-KIT
M4F1-I-GASKET-KIT

■ For 4F2/4F3

When the exhaust installation method is CL, CU, IL, IU
* Installed on the manifold.



When using the unit as a repair item, separately also purchase the gasket kit listed below depending on the model.

M4F2-GASKET-KIT
M4F3-GASKET-KIT

When the exhaust installation method is C or I
* Connect the body.



(However, when item ⑧ is C: blank, when I: write I)
The gasket kit is attached.

*1: The surge suppressor for attachment is a suppression connector when the grommet lead wire is 24 VDC or less. (Refer to page 1371.)

*2: With the single, (A) is A4F010.

[Example of model No.]

M4F340-08-M2ES-5-C-AC100V

- A Model : M4F3
- B Solenoid position : 3-position A/B/R connection
- C Port size : Rp1/4
- D Manual override : Non-locking
- E Electrical connections : Grommet lead wire
- F Other options : Surge suppressor attached
- G Station No. : 5 stations
- H Exhaust installation method: Common exhaust
- I Voltage : 100 VAC

Indicate the quantity display position of each valve function when using a mix manifold.
Refer to page 1414.

Code	Description	(2)	(A)4F0	4F1	4F2	4F3
------	-------------	-----	--------	-----	-----	-----

B Solenoid position

1	2-position single	●	●	●	●
2	2-position double	●	●	●	●
3	3-position all ports closed		●	●	●
4	3-position A/B/R connection		●	●	●
5	3-position P/A/B connection		●	●	●
8	Mix manifold (for multiple solenoid positions)	●	●	●	●

C Port size

M5	M5	●			
06	Rp1/8	●	●		
08	Rp1/4		●	●	●
10	Rp3/8				●
06N	NPT 1/8	●	●		
08N	NPT 1/4		●	●	●
10N	NPT 3/8				●
06G	G 1/8	●	●		
08G	G 1/4		●	●	●
10G	G 3/8				●

D Manual override

M1	Locking	●	●		
Blank	Locking			●	●
Blank	Non-locking	●	●		
M2	Non-locking			●	●
M3	Locking with manual lever			●	●
M4	Dust cover equipped non-locking	●	●		
M6	Non-locking upward direction	●	●		
R	Position change of manual override	●	●	●	●

E Electrical connections

Refer to the next page for electrical connections.

F Other options

Blank	No option	●	●	●	●
S	Surge suppressor (varistor) attached (*1)	●	●	●	●
N	Plug attached (for 3-port valve)	●	●	●	●
NC	3-way valve used plug assembly (C1 (A), E1 (R1) assembly)	●	●	●	●
NO	3-way valve used plug assembly (C2(B), E2(R2) assembly)	●	●	●	●

G Station No.

2	2 stations				
to	to	●	●	●	●
10	10 stations				

H Exhaust installation method

CL	Common exhaust/L-bracket (for 2-position single)	●	●	●	●
CU	Common exhaust/U-bracket	●	●	●	●
IL	Individual exhaust/L-bracket (for 2-position single)	●	●	●	●
IU	Individual exhaust/U-bracket	●	●	●	●
C	Common exhaust			●	●
I	Individual exhaust			●	●

I Voltage

AC100V	100 VAC	50/60 Hz	●	●	●	●
AC200V	200 VAC	50/60 Hz	●	●	●	●
DC12V	12 VDC		●	●	●	●
DC24V	24 VDC		●	●	●	●
AC110V	110 VAC	50/60 Hz	●	●	●	●
AC220V	220 VAC	50/60 Hz	●	●	●	●

* Other custom order products

AC24V, AC48V, DC6V	●	●			
DC48V	●	●	●	●	●
DC100V, DC110V			●	●	●

(A)M4F0 to 3 Series

Individual wiring manifold; body piping

[Electrical connection list]

		A Model No.			
		(A)4F0	4F1	4F2	4F3
E Electrical connections					
Compact terminal box					
B	Without lead wire	●			
Blank	Without lead wire		●		
L	Without lead wire, with lamp (*3)	●	●		
DIN terminal box					
Blank	DIN terminal box (Pg11)			●	●
L	DIN terminal box (Pg11)/with lamp (*3)			●	●
F	DIN terminal box (G1/2)			●	●
C-connector (lead wire lateral direction)					
C	Lead wire length (300 mm)	●	●		
C00	Lead wire length (500 mm)	●	●		
C01	Lead wire length (1000 mm)	●	●		
C02	Lead wire length (2000 mm)	●	●		
C03	Lead wire length (3000 mm)	●	●		
C1	Without lead wire	●	●		
C2	Lead wire length (300 mm) with surge suppressor and indicator lamp	●	●		
C20	Lead wire length (500 mm) with surge suppressor and indicator lamp	●	●		
C21	Lead wire length (1000 mm) with surge suppressor and indicator lamp	●	●		
C22	Lead wire length (2000 mm) with surge suppressor and indicator lamp	●	●		
C23	Lead wire length (3000 mm) with surge suppressor and indicator lamp	●	●		
C3	Without lead wire with surge suppressor and indicator lamp	●	●		
D-connector (lead wire upward direction)					
D	Lead wire length (300 mm)	●	●		
D00	Lead wire length (500 mm)	●	●		
D01	Lead wire length (1000 mm)	●	●		
D02	Lead wire length (2000 mm)	●	●		
D03	Lead wire length (3000 mm)	●	●		
D1	Without lead wire	●	●		
D2	Lead wire length (300 mm) with surge suppressor and indicator lamp	●	●		
D20	Lead wire length (500 mm) with surge suppressor and indicator lamp	●	●		
D21	Lead wire length (1000 mm) with surge suppressor and indicator lamp	●	●		
D22	Lead wire length (2000 mm) with surge suppressor and indicator lamp	●	●		
D23	Lead wire length (3000 mm) with surge suppressor and indicator lamp	●	●		
D3	Without lead wire with surge suppressor and indicator lamp	●	●		
Grommet lead wire					
Blank	Grommet lead wire	●			
E	Grommet lead wire		●	●	●
E1	Conduit lead wire (CTC19)			●	●
E2	Conduit lead wire (G1/2)			●	●

*3: The DC of L has a built-in surge suppressor
(Refer to page 1371 for the circuit diagram with a surge suppressor/lamp.)

4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

(A)M4F0 to 3 Series

Individual wiring manifold; body piping

How to order masking plate kit (gasket attached)

● M4F0 to 2

M4F0 -MP-KIT

A Model No.

A Model No.
M4F0
M4F1
M4F1-06-I(*1)
M4F1-08-I(*1)
M4F2

*1: With M4F1-I (individual exhaust)

● M4F3

M4F3-08-MP-KIT

Model No.

A Port size

A Port size	
08	Rp1/8
10	Rp3/4

*1: The model No. is the same for NPT and G threads as well.

How to order mix manifold

M 4F3 8 0 - 08 - M2 L S - 7 - CU - AC100V -

S1	S2	S3	S4	S5	MP
2	2	2	1	0	0

Mix manifold "8"

* For How to order other items, refer to the previous page.

4F3: up to S5
4F1-2: up to S4
4F0: up to S2
S1=1, 6 S2=2, 5
S3=3, 4 S4=7

* Create a manifold specifications sheet.

How to fill in form for ordering a mix manifold

- (1) List the quantity for each function (solenoid position) at the end of How to order. The functions and codes are as shown below.

Example: 2-position single → S1

Code	Function (solenoid position)
S1	2-position single
S2	2-position double
S3	3-position all ports closed
S4	3-position A/B/R connection
S5	3-position P/A/B connection
MP	Masking plate

S1	S2	S3	S4	S5	MP
2	2	2	1	0	0

List the quantity

- (2) List the function (solenoid position) and layout position in the field for remarks.

Switching position code = ○, ○th station (refer to the dimensions (pages 1416 to 1436) for how to count stations.)

Example: S1 = 1 to 6 (1st, 6th stations are 2-position single)

[Example of model No.]

For 7 stations

1	2	3	4	5	6	7		Layout position
2-position single	2-position double	3-position all ports closed	3-position all ports closed	2-position double	2-position single	3-position ABR connection		
S1	S2	S3	S3	S2	S1	S4		Code

2-position single (S1) : 2 units (1st station, 6th station)
2-position double (S2) : 2 units (2nd station, 5th station)
3-position all ports closed (S3) : 2 units (3rd station, 4th station)
3-position ABR connection (S4) : 1 pc (7th station)

↓
M4F380-08-M2LS-7-CU-AC100V -

S1	S2	S3	S4	S5	MP
2	2	2	1	0	0

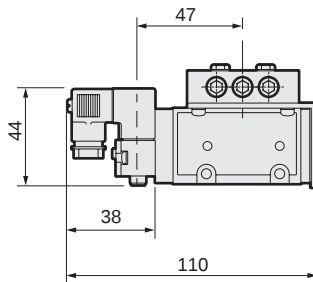
S1=1, 6 S2=2, 5 S3=3, 4 S4=7

* Create a manifold specifications sheet.

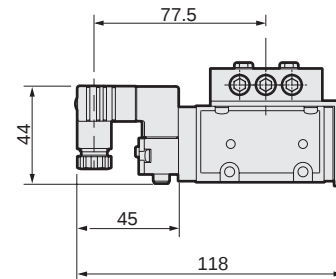
4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G GMF
PV5 GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP NVP
4G*0EJ
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

Dimensions

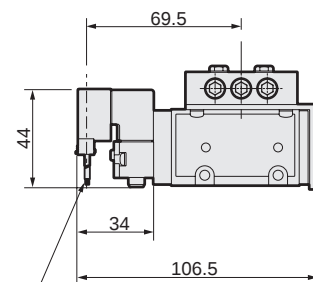
● Compact terminal box: (B)



● Compact terminal box with lamp: (L)

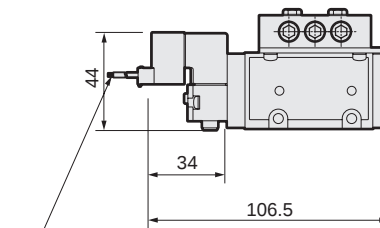


● C-connector: (C/C0*/C1/C2/C2*/C3)



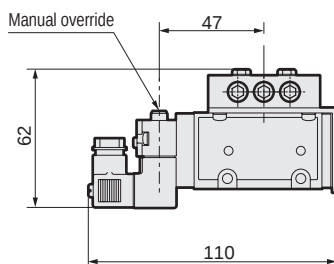
Lead wire
Length 300 to 2000 mm
(C/C0*/C2/C2*)

● D-connector: (D/D0*/D1/D2/D2*/D3)



Lead wire
Length 300 to 2000 mm
(D/D0*/D2/D2*)

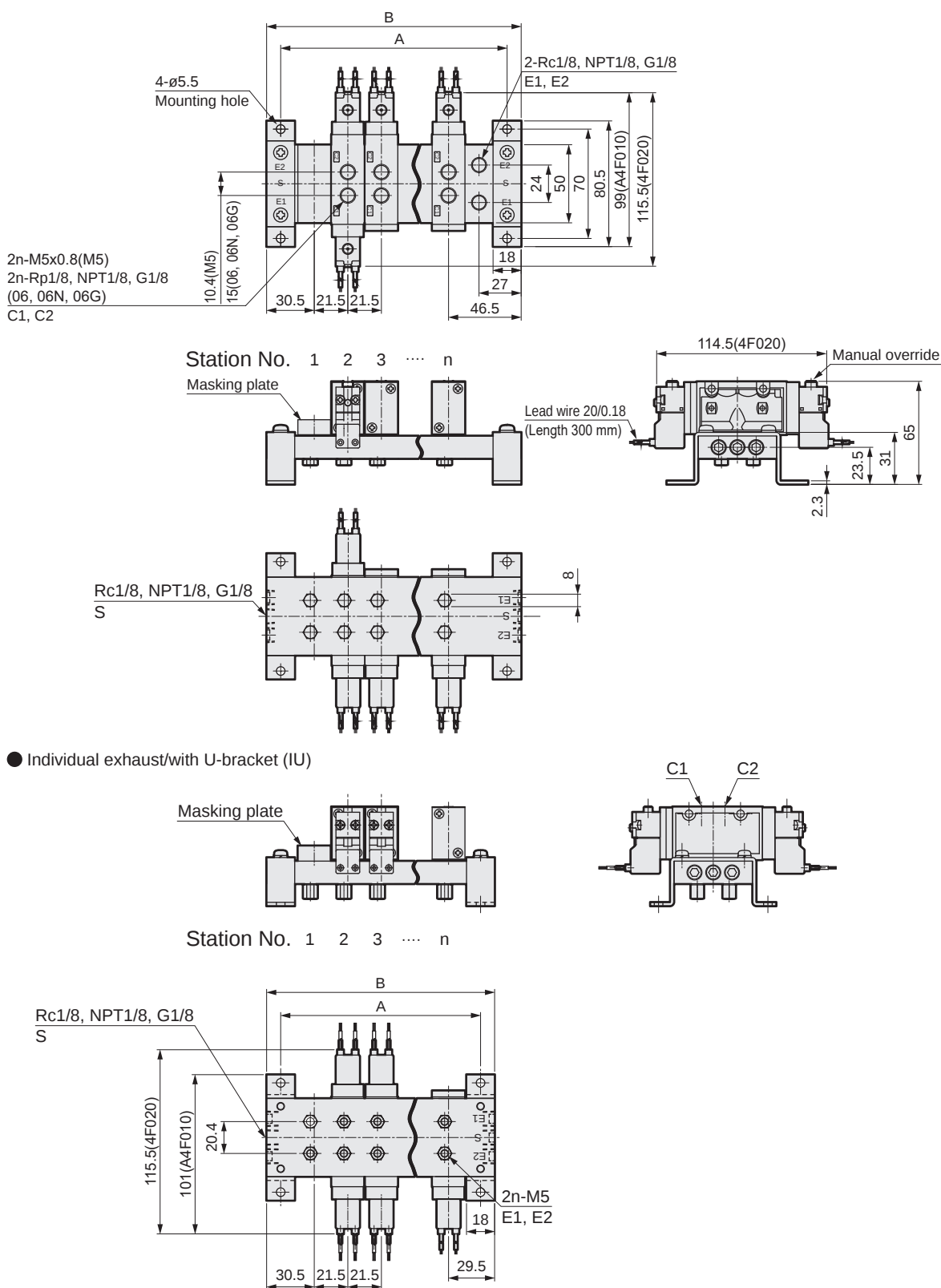
● Position change of manual override: (R)



4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

Individual wiring manifold; body piping

● Common exhaust/with U-bracket: grommet lead wire (CU)

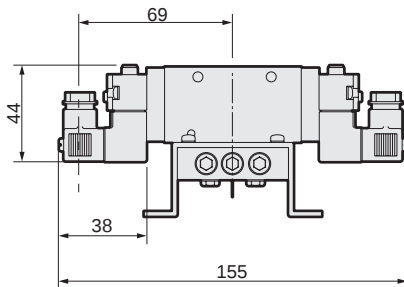


Common exhaust										Individual exhaust									
Stn No.	2	3	4	5	6	7	8	9	10	Stn No.	2	3	4	5	6	7	8	9	10
A	80.5	102	123.5	145	166.5	188	209.5	231	252.5	A	63.5	85	106.5	128	149.5	171	192.5	214	235.5
B	98.5	120	141.5	163	184.5	206	227.5	249	270.5	B	81.5	103	124.5	146	167.5	189	210.5	232	253.5

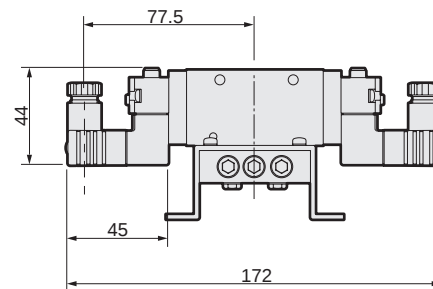
* Refer to page 1446 for details about check valves.

Dimensions

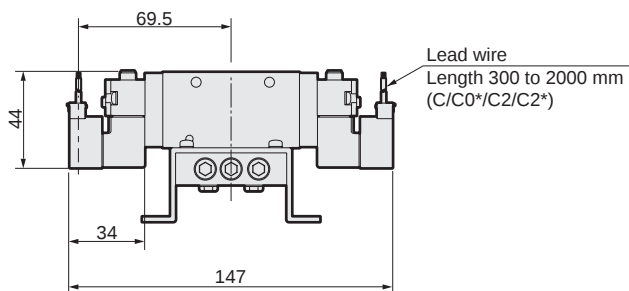
● Compact terminal box: (B)



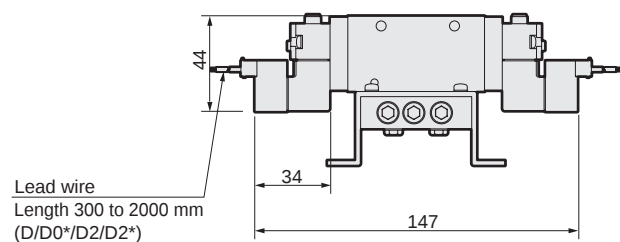
● Compact terminal box with lamp: (L)



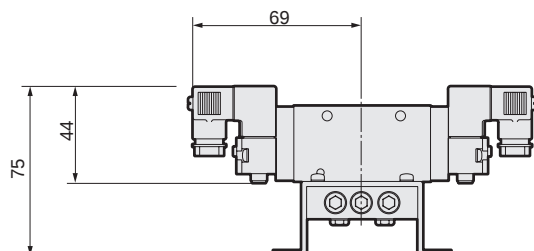
● C-connector: (C/C0*/C1/C2/C2*/C3)



● D-connector: (D/D0*/D1/D2/D2*/D3)



● Position change of manual override: (R)



4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

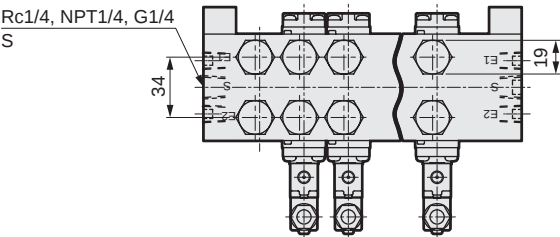
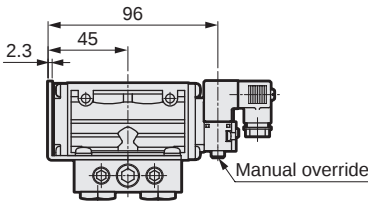
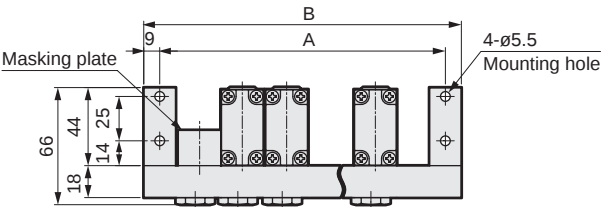
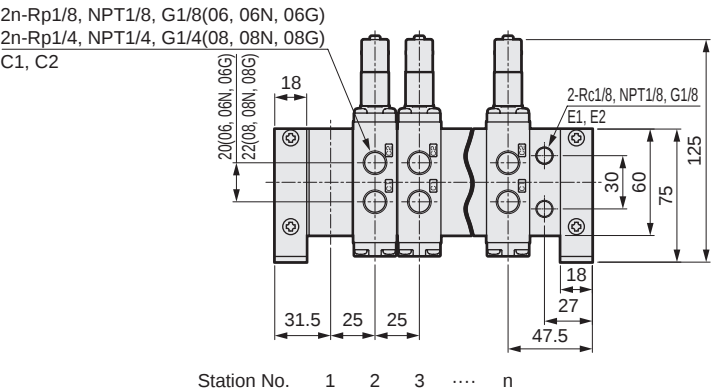
M4F1 Series

Individual wiring manifold; body piping

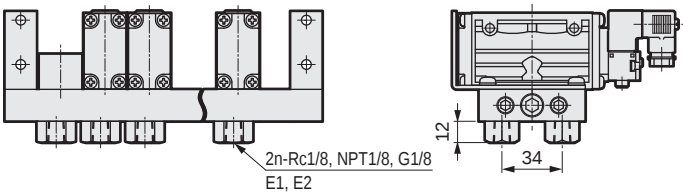
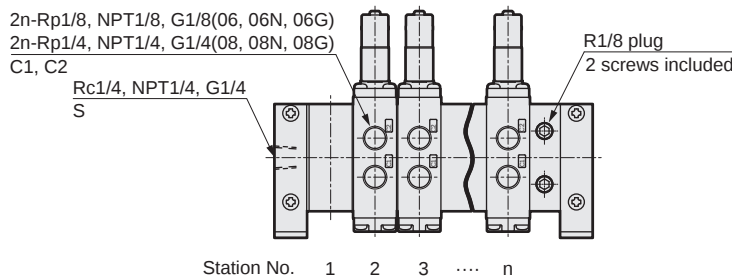
Dimensions

M4F110 (2-position single)

- Common exhaust/with L bracket: compact terminal box (CL)



- Individual exhaust/with L bracket (IL)



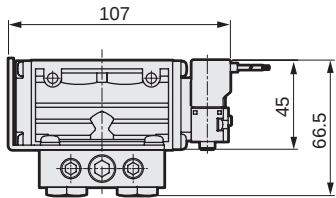
Common exhaust/individual exhaust

Station No.	2	3	4	5	6	7	8	9	10
A	86	111	136	161	186	211	236	261	286
B	104	129	154	179	204	229	254	279	304

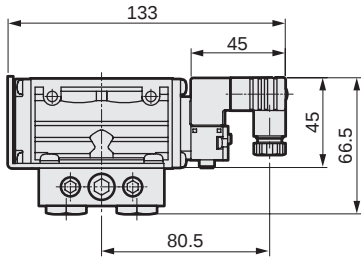
* Refer to page 1446 for details about check valves.

Dimensions

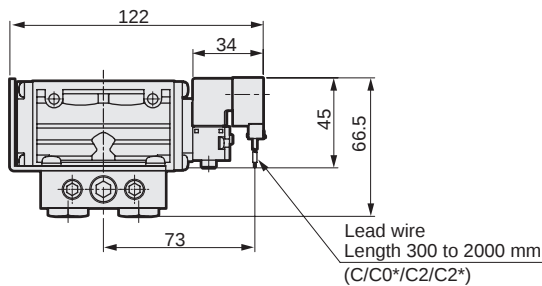
● Grommet lead wire: (E)



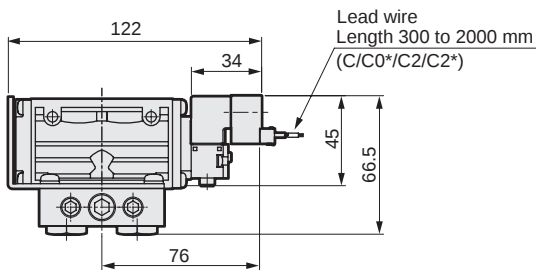
● Compact terminal box with lamp: (L)



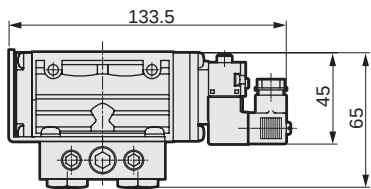
● C-connector: (C/C0*/C1/C2/C2*/C3)



● D-connector: (D/D0*/D1/D2/D2*/D3)



● Position change of manual override: (R)



4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

M4F1 Series

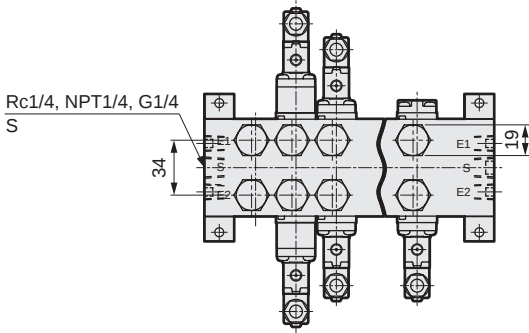
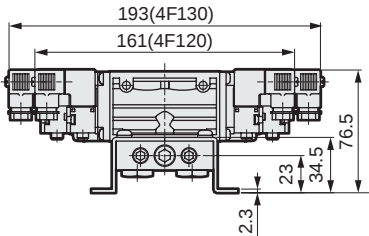
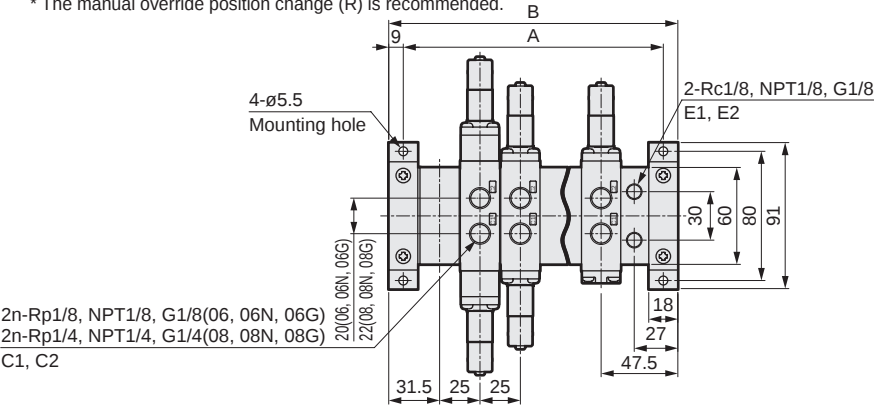
Individual wiring manifold; body piping

Dimensions

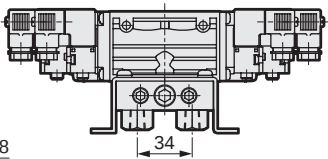
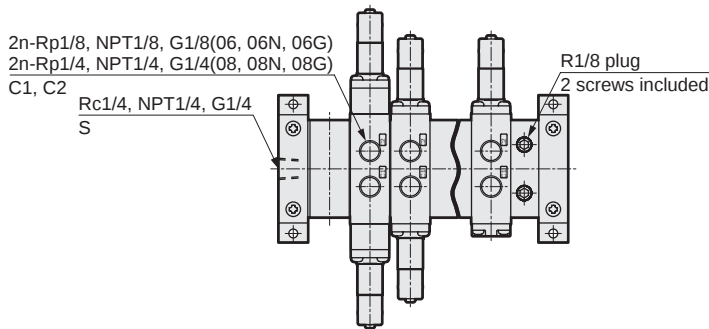
M4F1
1
2
3
4
0

● Common exhaust/with U bracket: compact terminal box (CU)

* The manual override position change (R) is recommended.



● Individual exhaust/with U bracket (IU)



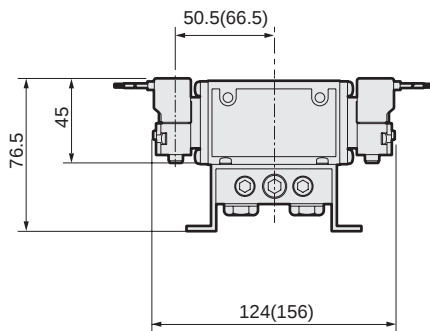
Common exhaust/individual exhaust

Station No.	2	3	4	5	6	7	8	9	10
A	86	111	136	161	186	211	236	261	286
B	104	129	154	179	204	229	254	279	304

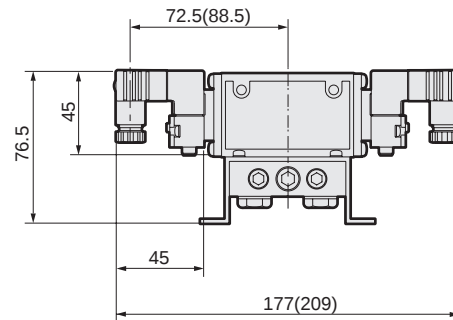
* Refer to page 1446 for details about check valves.

Dimensions

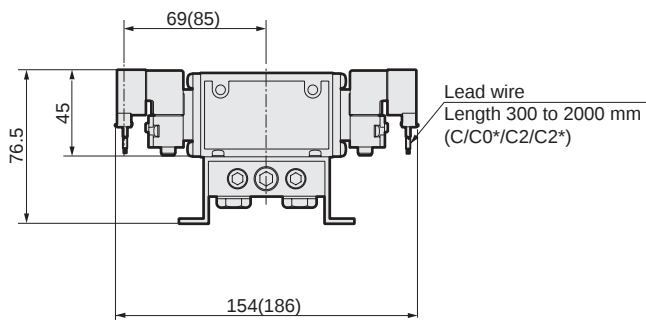
● Grommet lead wire: (E)



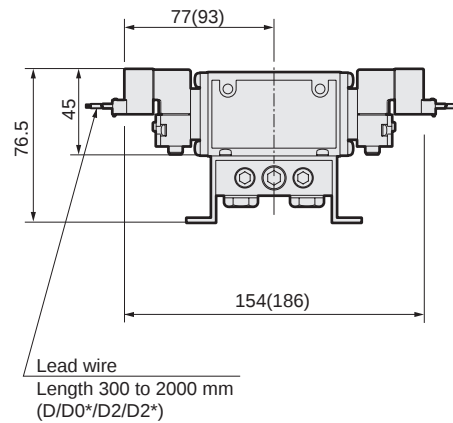
● Compact terminal box with lamp: (L)



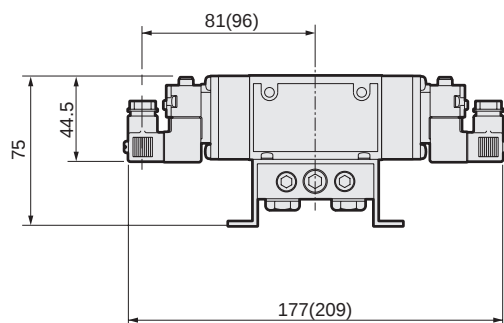
● C-connector: (C/C0*/C1/C2/C2*/C3)



● D-connector: (D/D0*/D1/D2/D2*/D3)



● Position change of manual override: (R)



* Values in () are dimensions for 3-position valves.

4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

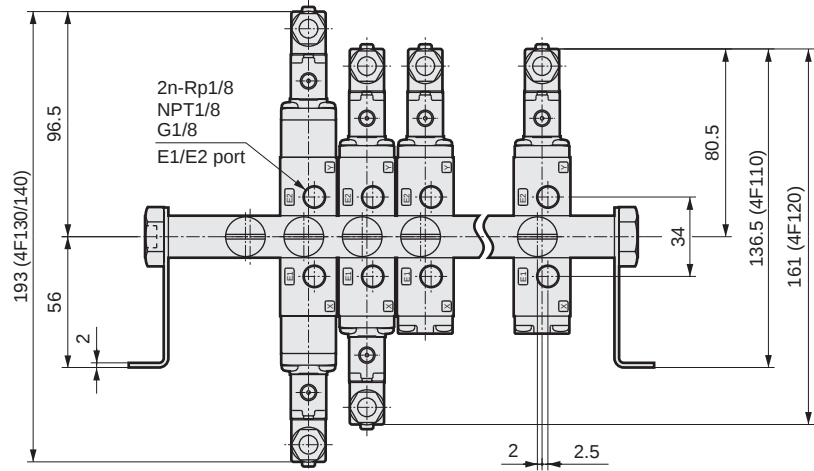
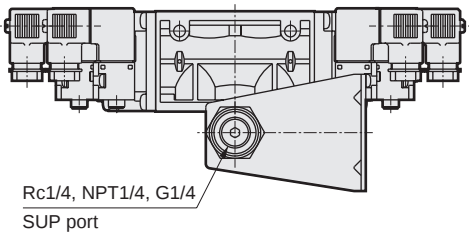
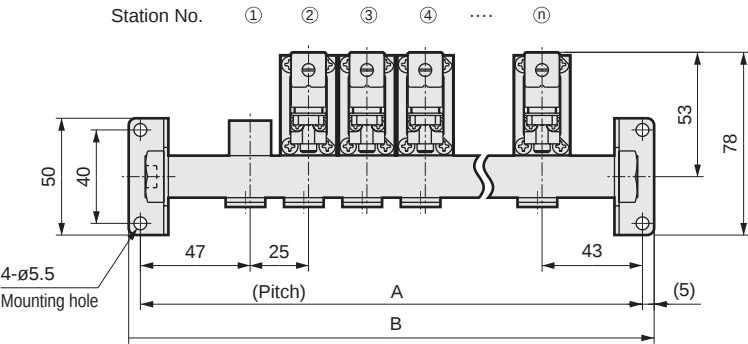
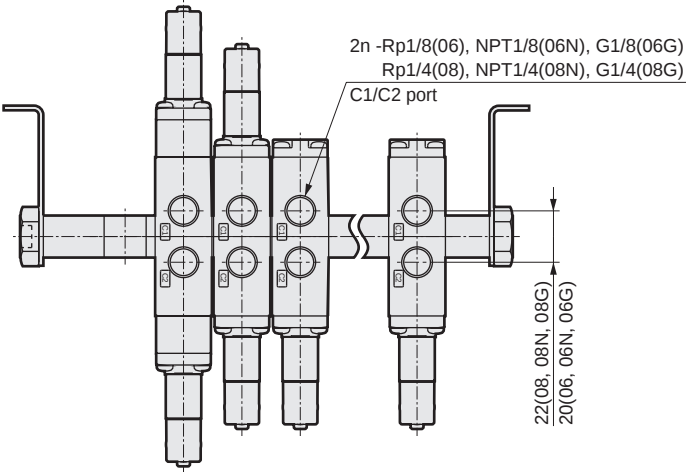
M4F1 Series

Individual wiring manifold; body piping

Dimensions

M4F1
1
2
3
4
0

● Individual exhaust (I)



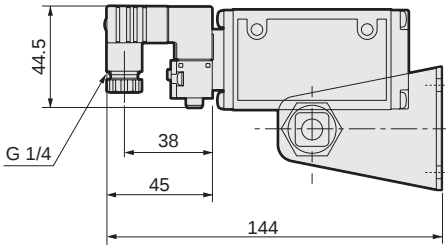
Individual exhaust

Station No.	2	3	4	5	6	7	8	9	10
A	115	140	165	190	215	240	265	290	315
B	125	150	175	200	225	250	275	300	325

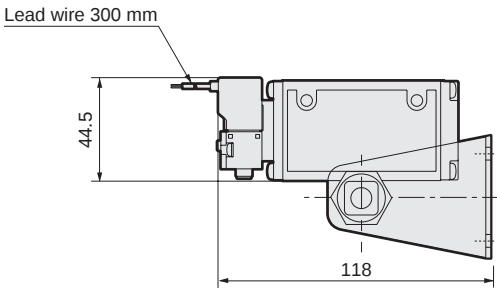
* Refer to page 1446 for details about check valves.

Dimensions

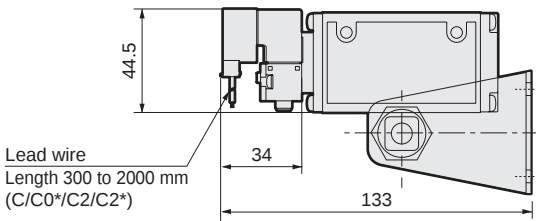
● Compact terminal box with lamp: (L)



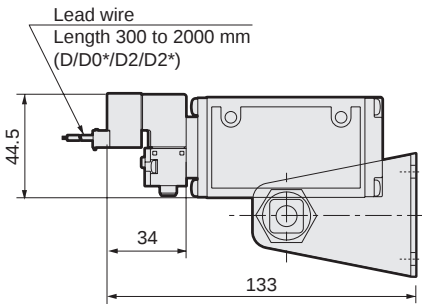
● Grommet lead wire: (E)



● C-connector: (C/C0*/C1/C2/C2*/C3)



● D-connector: (D/D0*/D1/D2/D2*/D3)



4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

M4F2 Series

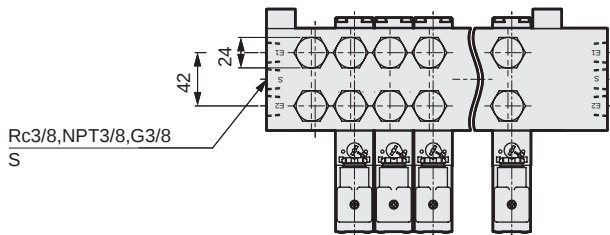
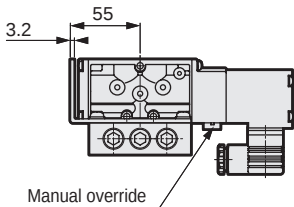
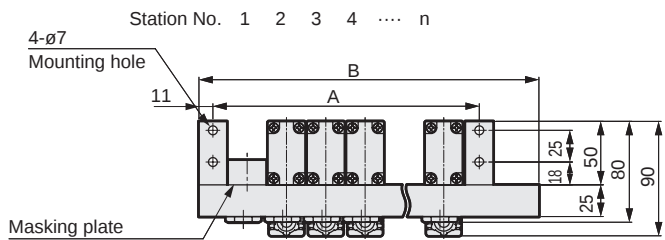
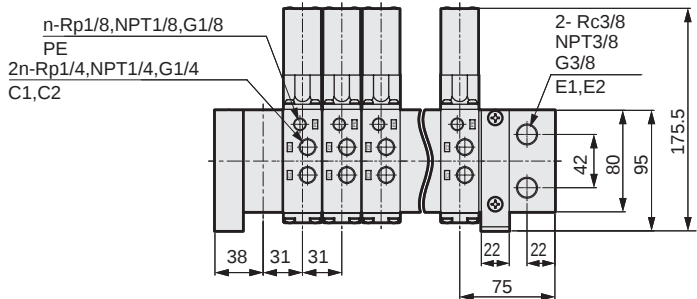
Individual wiring manifold; body piping

Dimensions



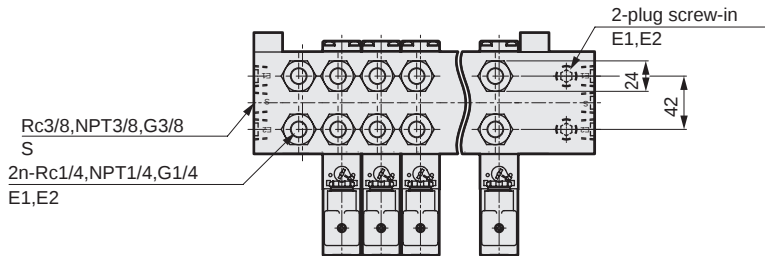
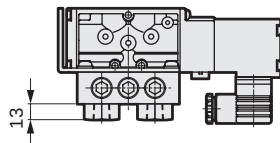
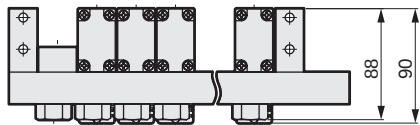
M4F210(2-position single)

- Common exhaust/with L bracket: compact terminal box (CL)



- Individual exhaust/with L bracket (IL)

Station No. 1 2 3 4 ... n



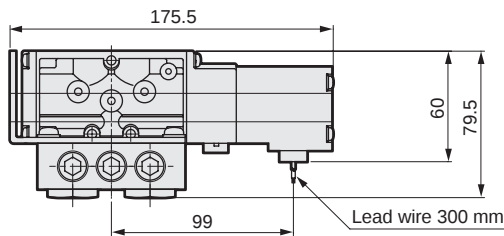
Common exhaust/individual exhaust

Station No.	2	3	4	5	6	7	8	9	10
A	86	117	148	179	210	241	272	303	334
B	144	175	206	237	268	299	330	361	392

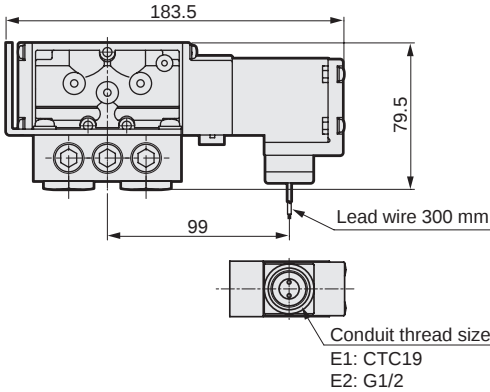
* Refer to page 1446 for details about check valves.

Dimensions

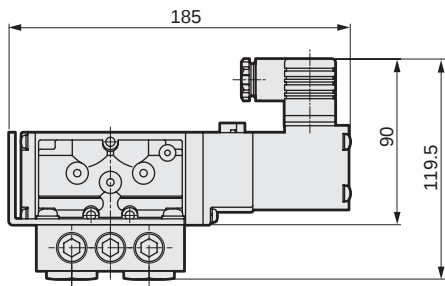
● Grommet lead wire: (E)



● Conduit lead wire: (E1/E2)



● Position change of manual override: (R)



4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

M4F2 Series

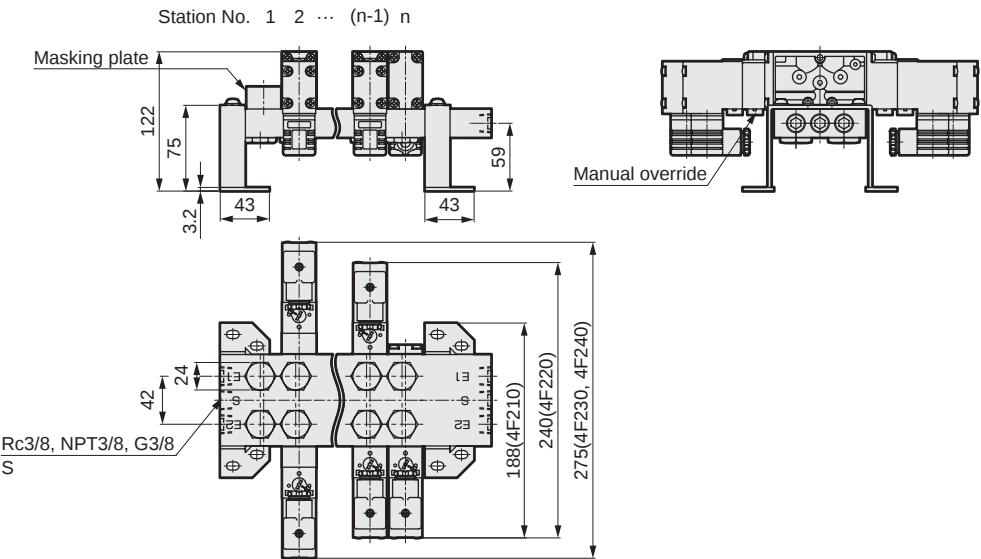
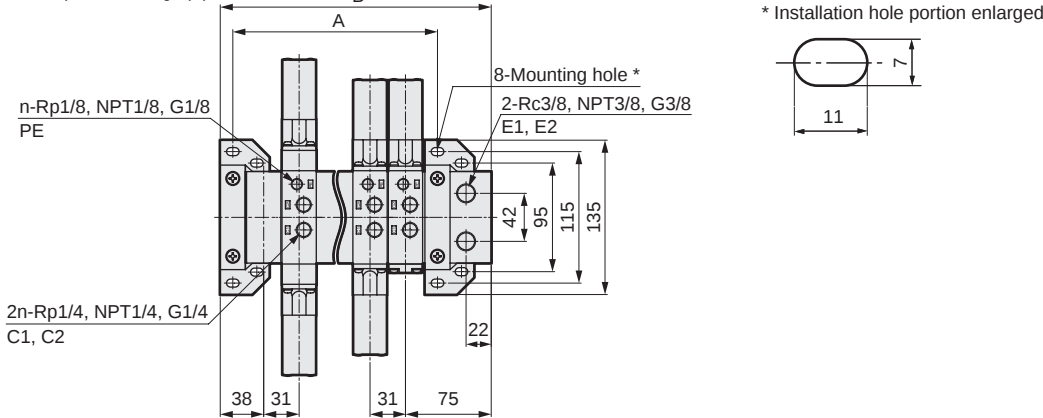
Individual wiring manifold; body piping

Dimensions

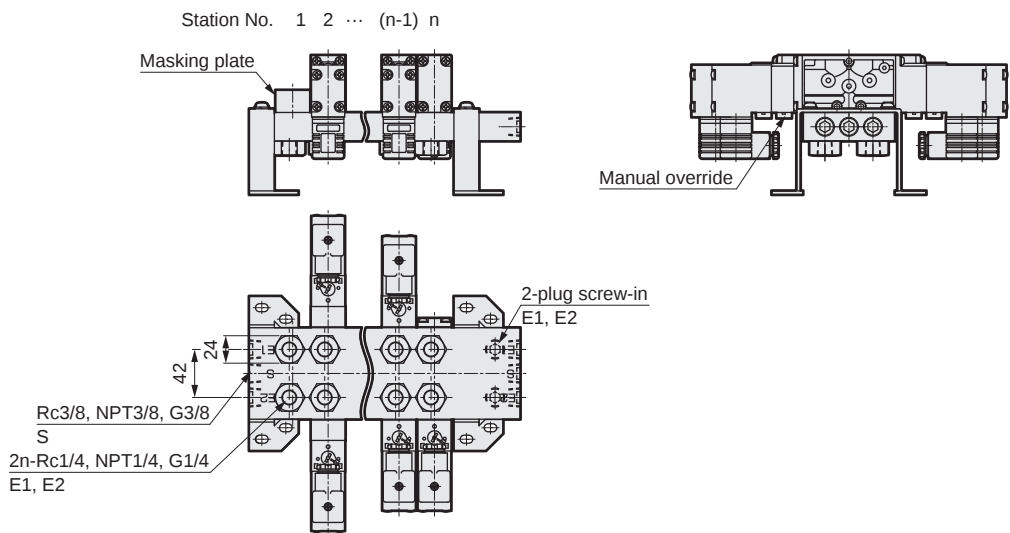
M4F2 $\frac{1}{2}$ $\frac{3}{4}$ 0

● Common exhaust/with U bracket: compact terminal box (CU)

* The manual override position change (R) is recommended. B



● Individual exhaust/with U bracket (IU)



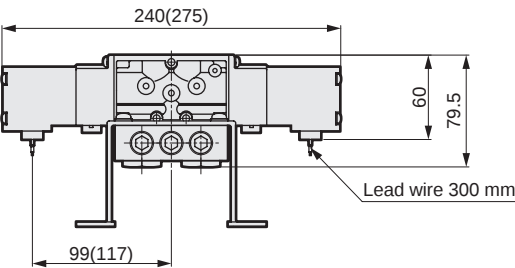
Common exhaust/individual exhaust

Station No.	2	3	4	5	6	7	8	9	10
A	86	117	148	179	210	241	272	303	334
B	144	175	206	237	268	299	330	361	392

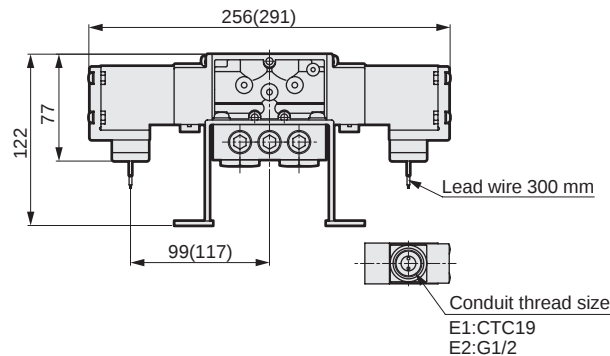
* Refer to page 1446 for details about check valves.

Dimensions

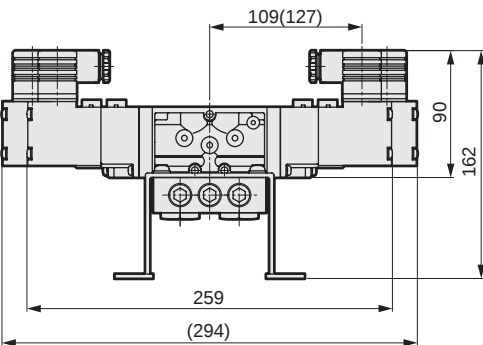
● Grommet lead wire: (E)



● Conduit lead wire: (E1/E2)



● Position change of manual override: (R)



* Values in () are dimensions for 3-position valves.

4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

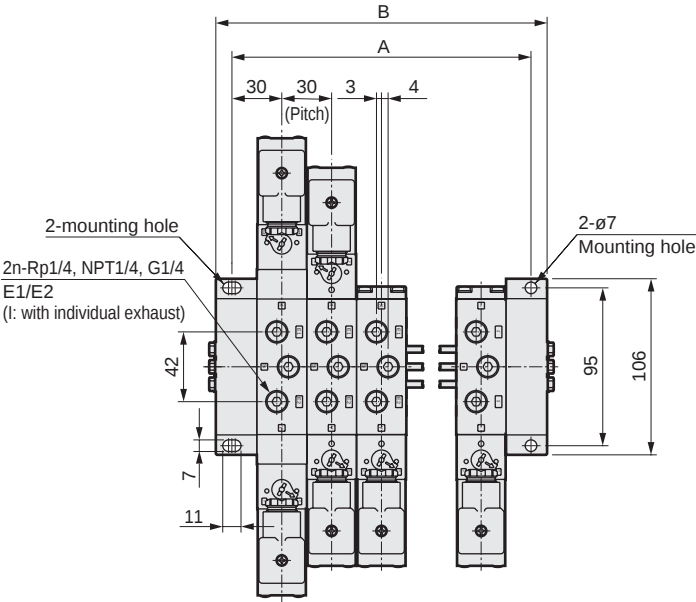
M4F2 Series

Individual wiring manifold; body piping

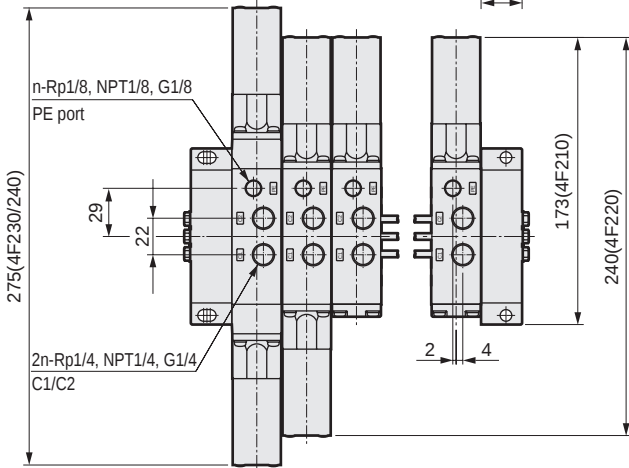
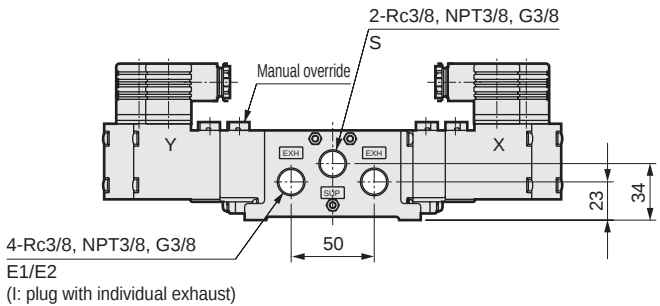
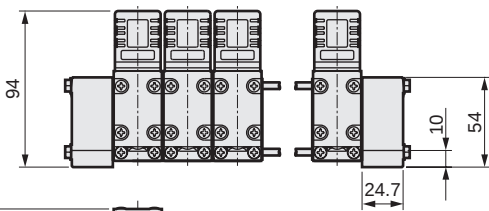
Dimensions

M4F2
1
2
3
4
0

- Individual exhaust (I)
- Common exhaust (C)



Station No. **1** **2** **3** ... **n**



Individual exhaust
Common exhaust

Station No.	2	3	4	5	6	7	8	9	10
A	90	120	150	180	210	240	270	300	330
B	109.4	139.4	169.4	199.4	229.4	259.4	289.4	319.4	349.4

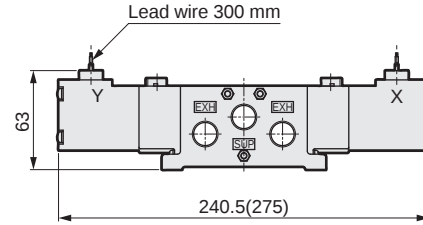
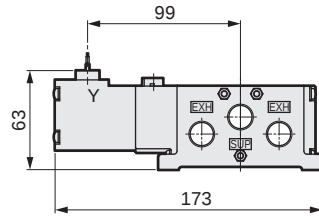
* Refer to page 1446 for details about check valves.

Dimensions

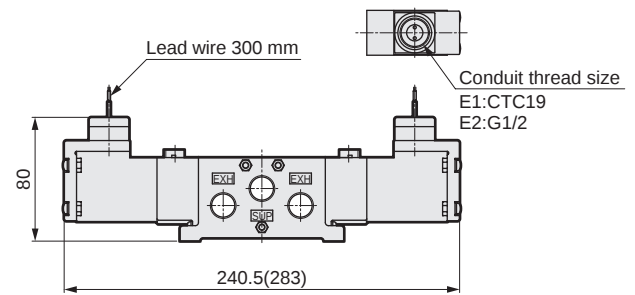
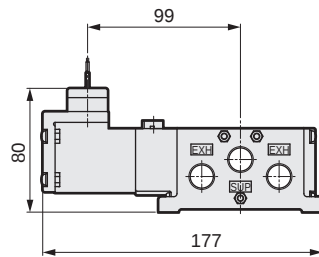
④ 2-position single

④ 2-position double solenoid, 3 position

● Grommet lead wire: (E)

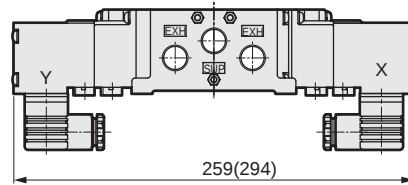
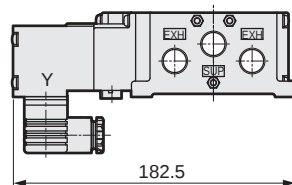


● Conduit lead wire: (E1/E2)



● Position change of manual override: (R)

* Take care upon installation as the DIN terminal box is below the installation surface.



* Values in () are dimensions for 3-position valves.

4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

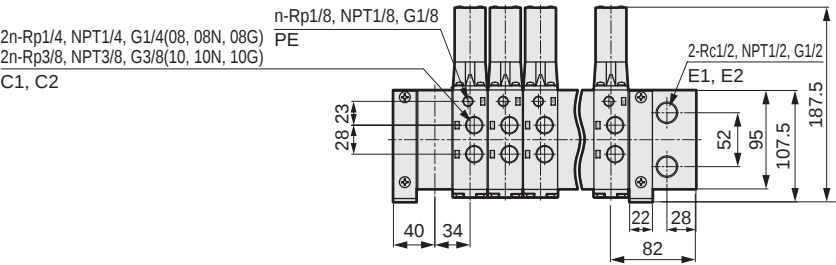
M4F3 Series

Individual wiring manifold; body piping

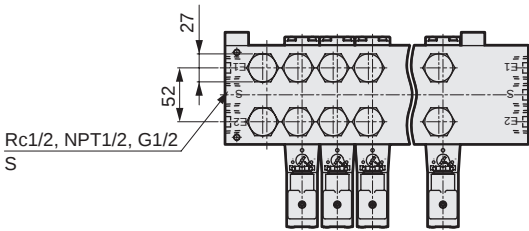
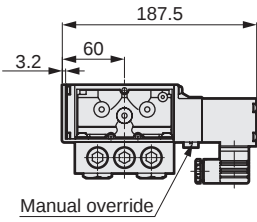
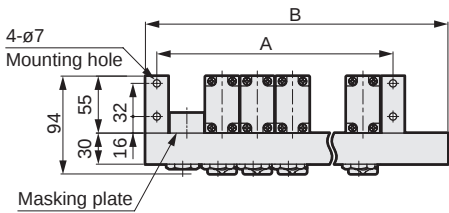
Dimensions

M4F310 (2-position single)

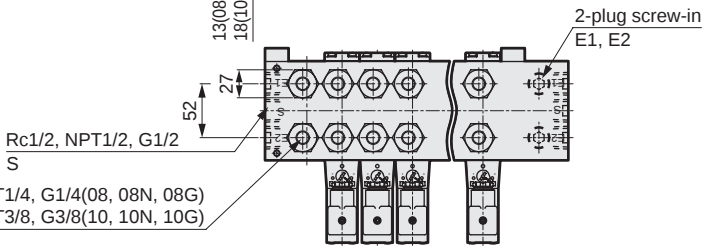
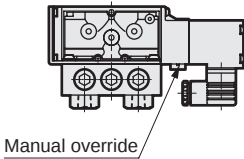
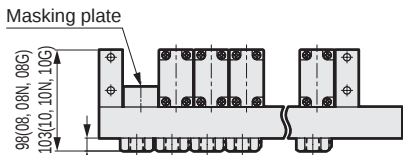
● Common exhaust/with L bracket: compact terminal box (CL)



Station No. 1 2 3 ... n



● Individual exhaust/with L bracket (IL)



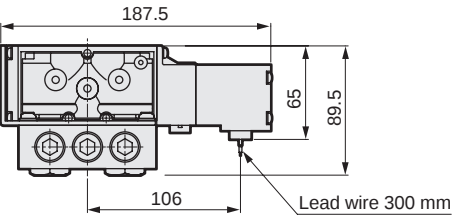
Common exhaust/individual exhaust

Station No.	2	3	4	5	6	7	8	9	10
A	92	126	160	194	228	262	296	330	364
B	156	190	224	258	292	326	360	394	428

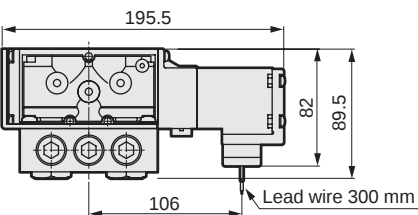
* Refer to page 1446 for details about check valves.

Dimensions

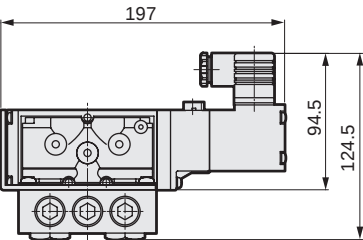
● Grommet lead wire: (E)



● Conduit lead wire: (E1/E2)



● Position change of manual override: (R)



4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

M4F3 Series

Individual wiring manifold; body piping

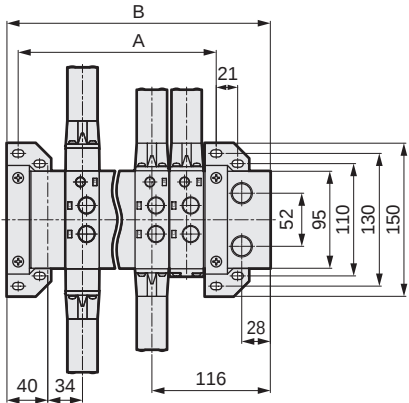
Dimensions



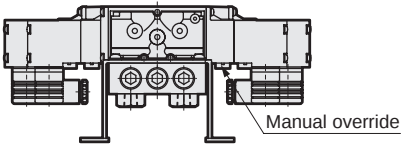
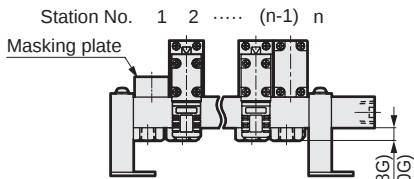
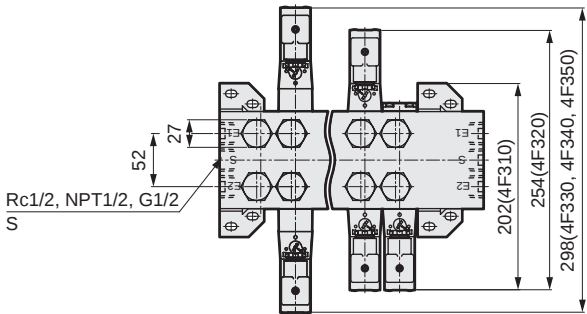
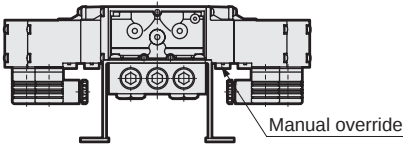
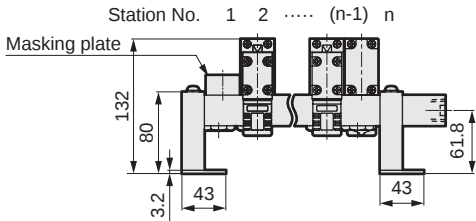
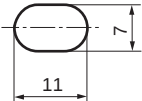
1
2
3
4
5
M4F3 3 0

● Common exhaust/with U bracket: compact terminal box (CU)

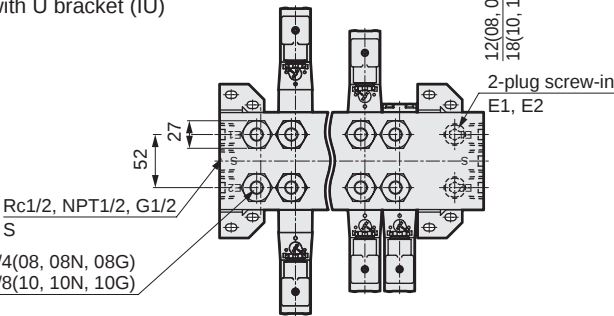
* The manual override position change (R) is recommended.



* Installation hole portion enlarged



● Individual exhaust/with U bracket (IU)



2n-Rc1/4, NPT1/4, G1/4(08, 08N, 08G)
2n-Rc3/8, NPT3/8, G3/8(10, 10N, 10G)
E1, E2

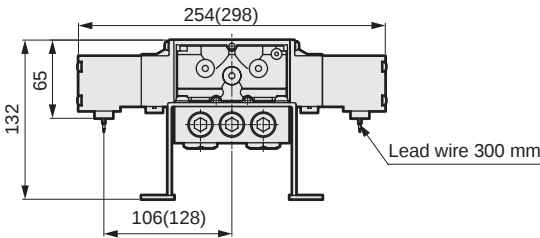
Common exhaust/individual exhaust

Station No.	2	3	4	5	6	7	8	9	10
A	92	126	160	194	228	262	296	330	364
B	156	190	224	258	292	326	360	394	428

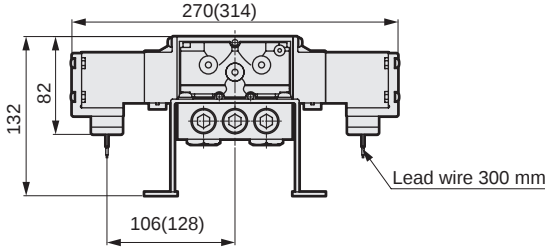
* Refer to page 1446 for details about check valves.

Dimensions

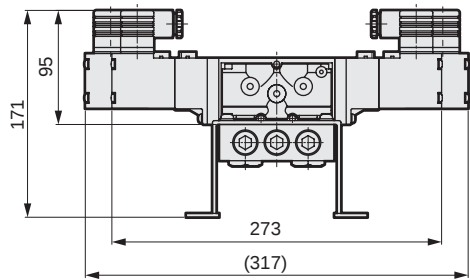
● Grommet lead wire: (E)



● Conduit lead wire: (E1/E2)



● Position change of manual override: (R)



* Values in () are dimensions for 3-position valves.

4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

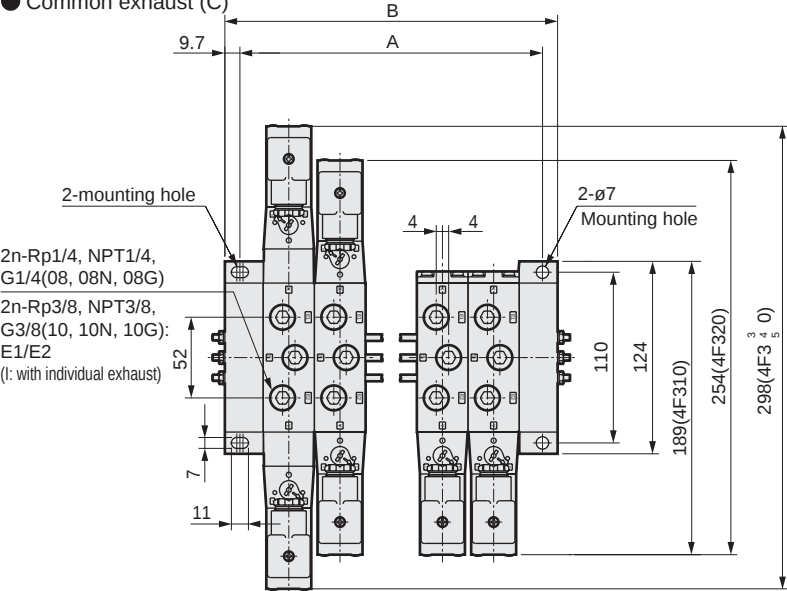
M4F3 Series

Individual wiring manifold; body piping

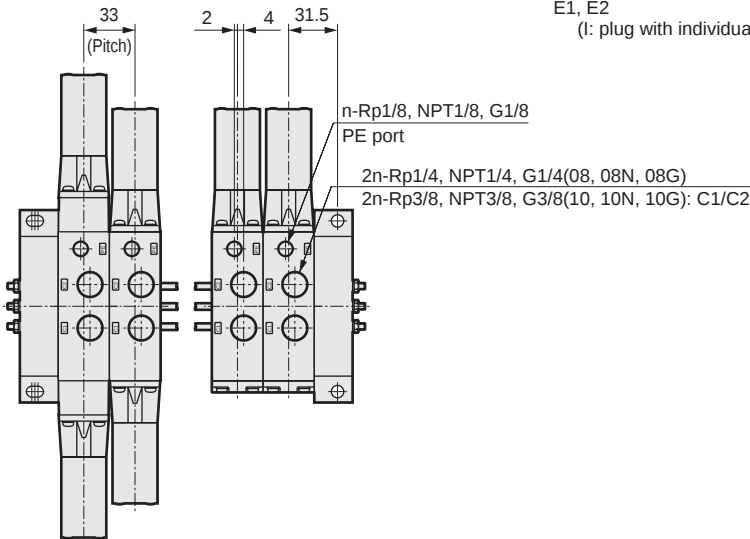
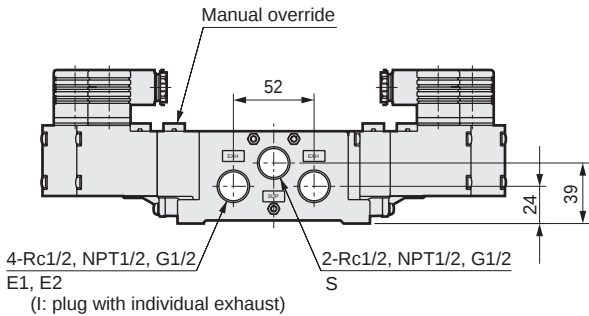
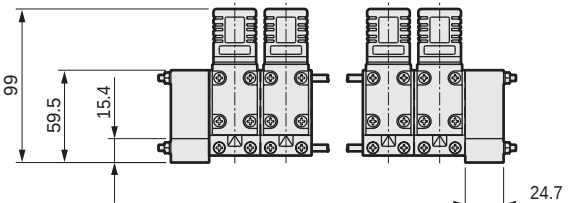
Dimensions

1
2
3
4
5
M4F3 0

- Individual exhaust (I)
- Common exhaust (C)



Station No. **1** **2** **n**



Individual exhaust
Common exhaust

Station No.	2	3	4	5	6	7	8	9	10
A	96	129	162	195	228	261	294	327	360
B	115.4	148.4	181.4	214.4	247.4	280.4	313.4	346.4	379.4

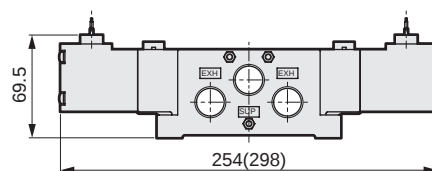
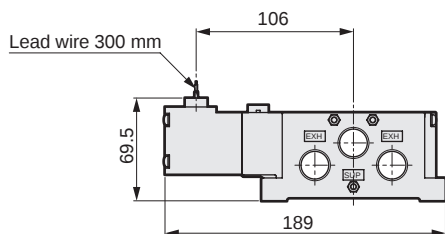
* Refer to page 1446 for details about check valves.

Dimensions

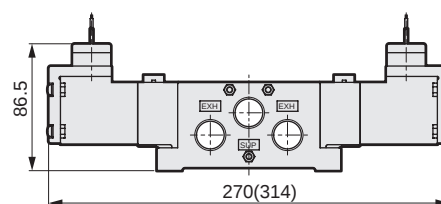
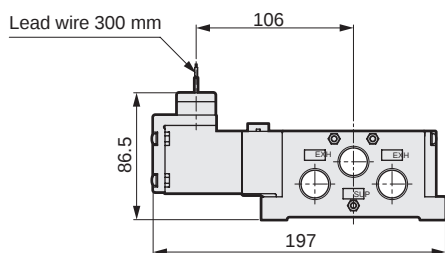
④ 2-position single

④ 2-position double solenoid, 3-position

● Grommet lead wire: (E)

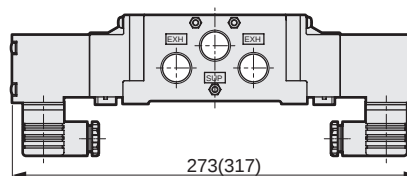
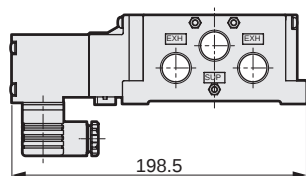


● Conduit lead wire: (E1/E2)



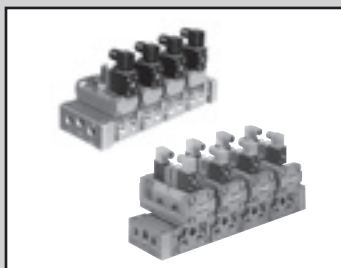
● Position change of manual override: (R)

* Take care upon installation as the DIN terminal box is below the installation surface.



* Values in () are dimensions for 3-position valves.

4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G GMF
PV5 GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP NVP
4G*0EJ
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending



Individual wiring manifold/sub-plate piping
Pilot operated 5-port pneumatic valve

M4F4/5/6/7 Series

● Cylinder bore size: $\varnothing 63$ to $\varnothing 250$



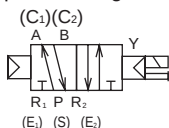
Refer to the Ending for details.



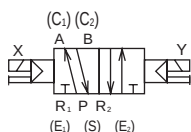
JIS symbol

● 5-port valve

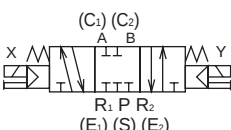
2-position single



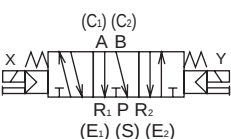
2-position double



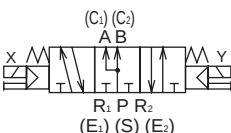
3-position all ports closed



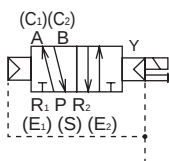
3-position A/B/R connection



3-position P/A/B connection



● External pilot



(Code indicates 2-position single)

Common specifications

Item	Description
Manifold method	Manifold integrated
Manifold	Common supply/common exhaust
Station No.	2 to 10 stations
Valve and operation	Pilot operated soft spool valve
Working fluid	Compressed air
Max. working pressure MPa	1.0 (≈ 150 psi, 10 bar)
Min. working pressure MPa (*2)	Refer to Individual specifications listed below
Proof pressure MPa	1.5 (≈ 220 psi, 15 bar)
Ambient temperature $^{\circ}\text{C}$ (*1)	-10 (14°F) to 60 (140°F) (no freezing)
Fluid temperature $^{\circ}\text{C}$	5 (41°F) to 60 (140°F)
Lubrication	Not required (use turbine oil ISO VG32 if lubrication is necessary)
Degree of protection	Dust-proof
Vibration resistance m/s^2	50 or less
Shock resistance m/s^2	300 or less
Atmosphere	Cannot be used in corrosive gas environment.

*1: The ambient temperature indicates the temperature for storage and upon installation, which will differ from the fluid temperature during operation.

*2: The working pressure range is 0 to 1.0 MPa when the external pilot (option code: K) is selected. Set the external pilot pressure between 0.15 and 1.0 MPa.

Electrical specifications

Item	4F4 to 7
Rated voltage	AC 100, 200, 110, 220 (50 / 60 Hz) V DC 24
Voltage fluctuation range	$\pm 10\%$
Starting current	AC 100 V 0.170/0.140 200 V 0.090/0.070 110 V 0.15/0.13 220 V 0.08/0.06 A DC 12 V 0.50 24 V 0.250
Holding current	AC 100 V 0.100/0.080 200 V 0.050/0.040 110 V 0.09/0.07 220 V 0.05/0.04 A DC 12 V 0.50 24 V 0.250
Power (W)	AC 100 V 5.0/4.0 200 V 5.0/4.0 110 V 5.0/4.0 220 V 5.0/4.0 DC 12 V 6.0 24 V 6.0
Thermal class	B (molded coil)

Reference: Rated voltage 100 VAC 50/60Hz can be used at 110 VAC 60Hz, and 200 VAC 50/60Hz at 220 VAC 60Hz.

1 MPa = 10 bar

Individual specifications

Item	4F4	4F5	4F6	4F7
Min. working pressure MPa	0.10 (≈ 15 psi) 0.15 (≈ 22 psi, 1.5 bar) 0.15 (≈ 22 psi, 1.5 bar) 0.15 (≈ 22 psi, 1.5 bar)	0.10 (≈ 15 psi) 0.15 (≈ 22 psi, 1.5 bar) 0.15 (≈ 22 psi, 1.5 bar) 0.15 (≈ 22 psi, 1.5 bar)	0.15 (≈ 22 psi, 1.5 bar)	0.15 (≈ 22 psi, 1.5 bar)
Port size	P (S) port Rc3/8, NPT3/8, G3/8 R1(E1), R2(E2) port Rc3/8, NPT3/8, G3/8 A(C1), B(C2) port Rc1/4, NPT1/4, G1/4	P (S) port Rc1/2, NPT1/2, G1/2 R1(E1), R2(E2) port Rc1/2, NPT1/2, G1/2 A(C1), B(C2) port Rc3/8, NPT3/8, G3/8	P (S) port Rc3/4, NPT3/4, G3/4 R1(E1), R2(E2) port Rc3/4, NPT3/4, G3/4 A(C1), B(C2) port Rc1/2, NPT1/2, G1/2	P (S) port Rc1, NPT1, G1 R1(E1), R2(E2) port Rc3/4, NPT3/4, G3/4 A(C1), B(C2) port Rc3/4, NPT3/4, G3/4

Performance/characteristics by model

Item	4F4	4F5	4F6	4F7
Response time *1 ms	60	70	200	300

*1: The response time is the value at 0.5 MPa working pressure, with no lubrication, and with the power ON. It depends on the pressure and the lubricant quality.

Weight

Model No.	M4F4	M4F5	M4F6	M4F7
Weight calculation formula kg	1.26xn+0.47	1.58xn+0.77	3.25xn+1.79	4.56xn+1.79
(n: Station No.)	1.54xn+0.47	1.90xn+0.77	3.59xn+1.79	4.88xn+1.79
	1.70xn+0.47	2.16xn+0.77	3.89xn+1.79	5.90xn+1.79

Flow characteristics

Model No.		Solenoid position	Port size	C[dm ³ /(s·bar)]	b	S(mm ²)
4F4	2-position	Single	Rc1/4	5.0	0.21	-
		Double				
	3-position	All ports closed	NPT1/4 G1/4	4.7	0.24	
		A/B/R connection		5.3	0.29	
		P/A/B connection		5.3	0.29	
4F5	2-position	Single	Rc3/8	10.0	0.32	-
		Double				
	3-position	All ports closed	NPT3/8 G3/8	9.7	0.28	
		A/B/R connection		9.8	0.25	
		P/A/B connection				
4F6	2-position	Single	Rc1/2	18.0	0.31	-
		Double				
	3-position	All ports closed	NPT1/2 G1/2	15.0	0.23	
		A/B/R connection				
		P/A/B connection				
4F7	2-position	Single	Rc3/4	-	-	160
		Double				
	3-position	All ports closed	NPT3/4 G3/4	-	-	
		A/B/R connection				
		P/A/B connection				

*1: Effective cross-sectional area S and sonic conductance C are converted as $S \approx 5.0 \times C$.

CE marking specifications

** - Voltage - **ST**

• Standard voltage of 24 VDC or less is CE marking-compatible even if the model No. is not indicated with "ST".

Copper and PTFE free specifications

● Copper- and PTFE-based materials are not used in the flow path.

** - Voltage - **P6**

4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

M4F4 to 7 Series

Individual wiring manifold: sub-plate piping

How to order individual wiring manifold/sub-plate piping

● Single solenoid valve for manifold * Gasket/mounting screw attached

● Manifold

M 4F4 1 0 -08-M2 L - 3 - C - AC100V

* Fill in the "Manifold specifications sheet" on pages 1450 and 1451

Valve functions when using a mix manifold

Indicate the quantity display position of each function. Refer to the following page.

A Model No.

B Solenoid position

C Port size

D Manual override

E Electrical connections

F Other options

G Station No.

H Exhaust installation method

I Voltage

⚠ Precautions for model No. selection

*1 : The DC of the DIN terminal box with lamp (L) has a built-in surge suppressor. (Refer to page 1371 for a circuit diagram.)

*2 : Contact CKD when using a vacuum with the external pilot (K).

*3 : With the single solenoid valve unit for manifold, gaskets and set screws are attached as standard.

*4 : 12 VDC models are not available for BL and GL.

*5 : The DC type of BL and GL has a built-in surge suppressor.

*6 : The surge suppressor for attachment is a suppression connector when the grommet lead wire is 24 VDC or less. (Refer to page 1371.)

[Example of model No.]

M4F440-08-M2ES-5-C-100 VAC

A Model : M4F4

B Solenoid position : 3-position A/B/R connection

C Port size : Rc1/4

D Manual override : Non-locking

E Electrical connections : Grommet lead wire

F Other options : surge suppressor included

G Station No. : 5 stations

H Exhaust installation method : common exhaust

I Voltage : 100 VAC

Code	Description	4F4	4F5	4F6	4F7
B Solenoid position					
1	2 position single	●	●	●	●
2	2-position double	●	●	●	●
3	3-position all ports closed	●	●	●	●
4	3-position A/B/R connection	●	●	●	●
5	3-position P/A/B connection	●	●	●	●
8	Mix manifold (when there are multiple solenoid positions)	●	●	●	●

C Port size					
08	Rc 1/4	●			
10	Rc 3/8		●		
D15	Rc 1/2			●	
E20	Rc 3/4				●
08 N	NPT 1/4	●			
10 N	NPT 3/8		●		
D15N	NPT 1/2			●	
E20N	NPT 3/4				●
08G	G 1/4	●			
10G	G 3/8		●		
D15G	G 1/2			●	
E20G	G 3/4				●

D Manual override					
Blank	Locking	●	●	●	●
M2	Non-locking	●	●	●	●
M3	Locking with manual lever	●	●	●	●

E Electrical connections					
Blank	DIN terminal box (Pg 11)	●	●	●	●
L	DIN terminal box (Pg11) with lamp (*1)	●	●	●	●
F	DIN terminal box (G1/2)	●	●	●	●
E	Grommet lead wire	●	●	●	●
E1	Conduit lead wire (CTC19)	●	●	●	●
E2	Conduit lead wire (G1/2)	●	●	●	●
B1	Round terminal box (G3/4)		●	●	●
B	Round terminal box (G1/2)		●	●	●
BL	Round terminal box(G1/2)With indicator lamp (*4)(*5)		●	●	●
G	Round terminal box gland(A-15a)with		●	●	●
GL	Round terminal box (*4) (*5) Gland(A-15a)With indicator lamp		●	●	●

F Other options					
Blank	No option	●	●	●	●
K	External pilot (*2)	●	●	●	●
S	Surge suppressor (varistor) attached (*6)	●	●	●	●
N	Plug included (for 3-port valve)	●	●	●	●
NC	3-way valve used plug assembly (C1(A).E1(R 1)Assembly)	●	●	●	●
NO	3-way valve used plug assembly (C2(B).E2(R 2)Assembly)	●	●	●	●

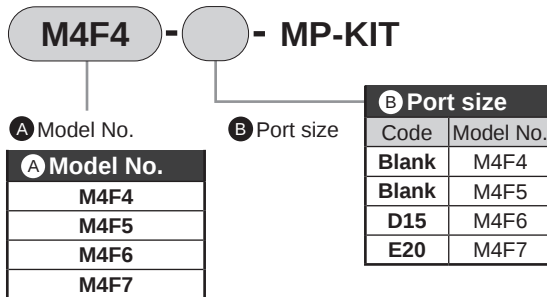
G Station No.					
2	2 stations				
to	to	●	●	●	●
10	10 stations				

H Exhaust installation method					
C	Common exhaust	●	●	●	●

I Voltage					
AC100V	100 VAC	50/60 Hz	●	●	●
AC200V	200 VAC	50/60 Hz	●	●	●
DC12V	12 VDC		●	●	●
DC24V	24 VDC		●	●	●
AC110V	110 VAC	50/60 Hz	●	●	●
AC220V	220 VAC	50/60 Hz	●	●	●

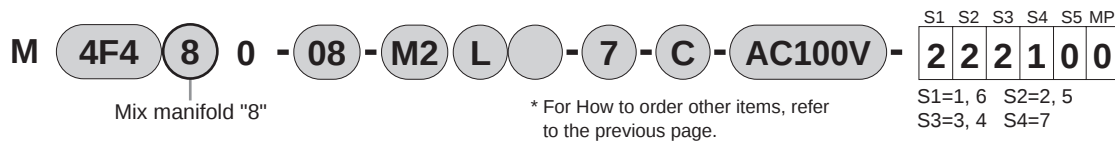
* Other made-to-order products					
DC48V, DC100V, DC110V			●	●	●

How to order masking plate kit



* Gasket/mounting screw attached

How to order mix manifold

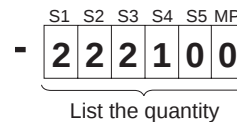


How to fill in form for ordering a mix manifold

- (1) List the quantity for each function (solenoid position) at the end of How to order. The functions and codes are as shown below.

Example: 2-position single → S1

Code	Function (solenoid position)
S1	2-position single
S2	2-position double
S3	3-position all ports closed
S4	3-position A/B/R connection
S5	3-position P/A/B connection
MP	Masking plate



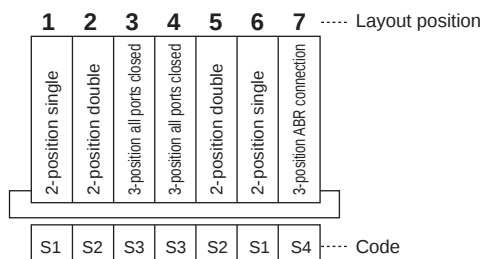
- (2) List the function (solenoid position) and layout position in the field for remarks.

Switching position code = ○, ○th station (refer to the dimensions (pages 1442 to 1445) for how to count stations.)

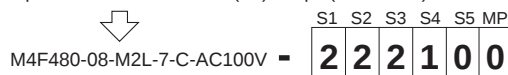
Example: S1 = 1 to 6 (1st, 6th stations are 2-position single)

[Example of model No.]

For 7 stations



2-position single (S1) : 2 units (1st station, 6th station)
 2-position double (S2) : 2 units (2nd station, 5th station)
 3-position all ports closed (S3) : 2 units (3rd station, 4th station)
 3-position ABR connection (S4) : 1 pc (7th station)



S1=1, 6 S2=2, 5 S3=3, 4 S4=7

* Create a manifold specifications sheet.

4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

M4F4 Series

Individual wiring manifold: sub-plate piping

Dimensions

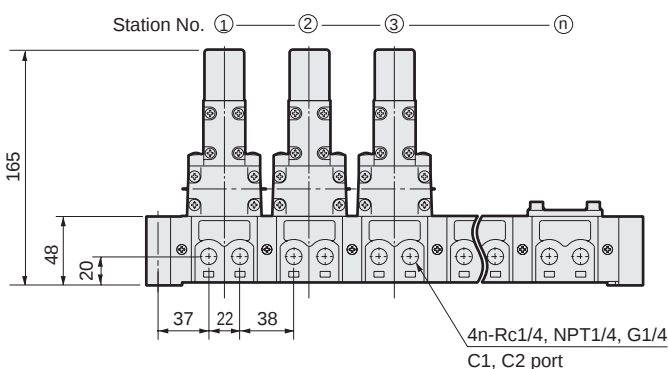
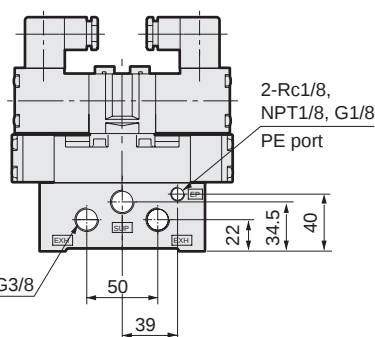
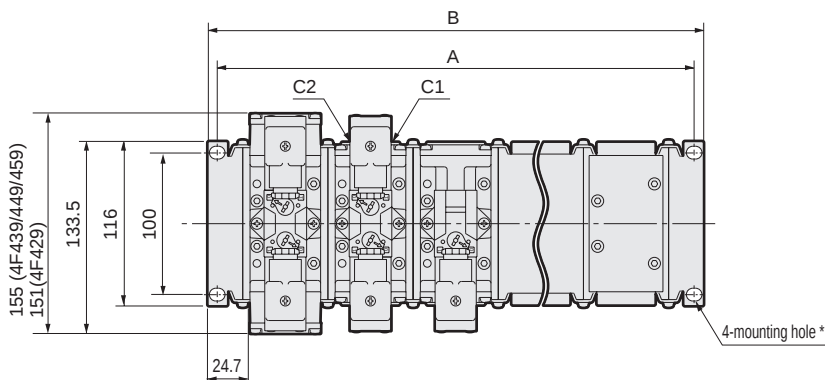
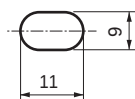


M4F4 30

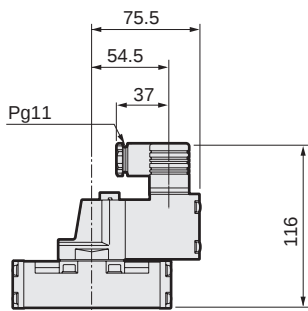
1
2
3
4
5

● Common exhaust: DIN terminal box

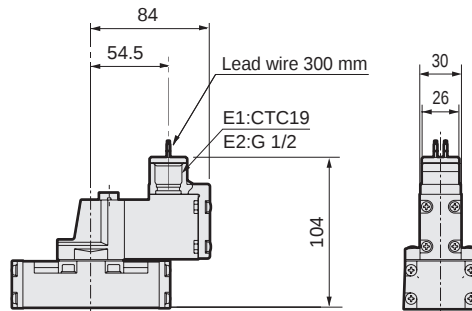
* Installation hole portion enlarged



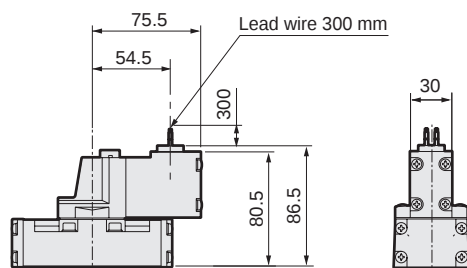
● DIN terminal box with lamp: (L)



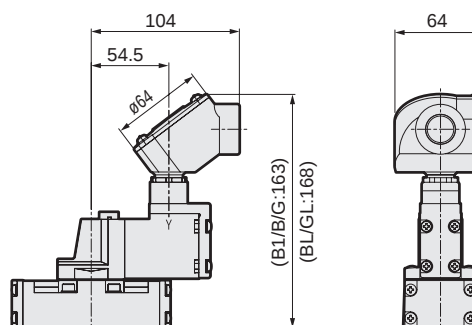
● Conduit lead wire: (E1/E2)



● Grommet lead wire: (E)



● Round terminal box: (B1/B/BL/GL)



Common exhaust

Station No.	2	3	4	5	6	7	8	9	10
A	156	216	276	336	396	456	516	576	636
B	169.4	229.4	289.4	349.4	409.4	469.4	529.4	589.4	649.4

* Individual supply and individual exhaust are available as a custom order.

* Refer to page 1446 for details about check valves.

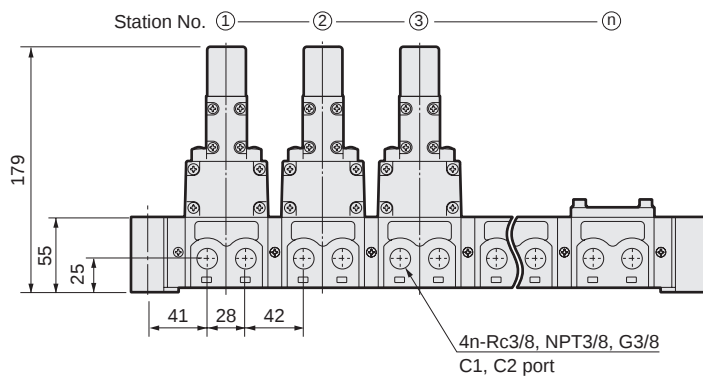
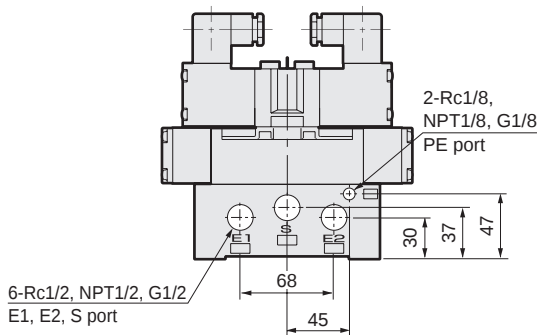
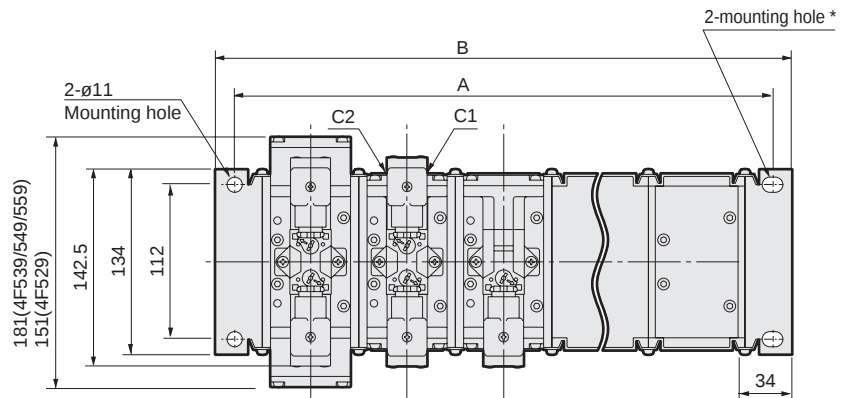
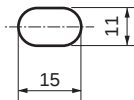
Dimensions



M4F5 0

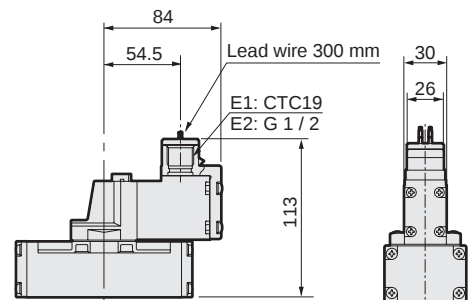
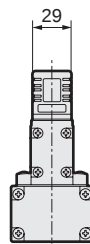
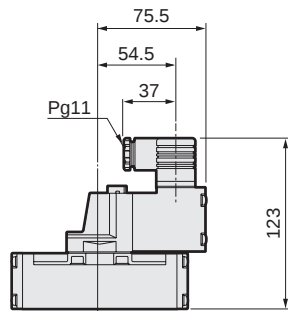
● Common exhaust: DIN terminal box

* Installation hole portion enlarged



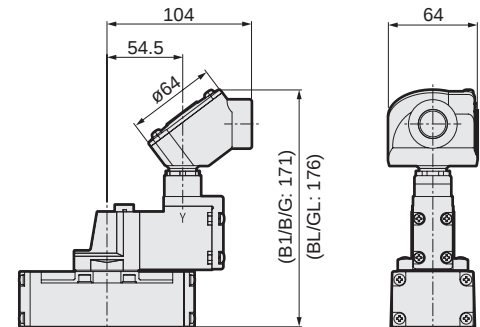
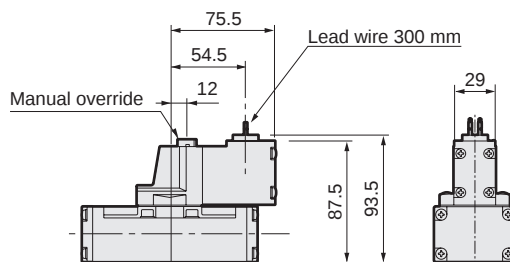
● DIN terminal box with lamp: (L)

● Conduit lead wire: (E1/E2)



● Grommet lead wire: (E)

● Round terminal box: (B1/B/BL/G/GL)



Common exhaust

Station No.	2	3	4	5	6	7	8	9	10
A	180	250	320	390	460	530	600	670	740
B	208	278	348	418	488	558	628	698	768

* Individual supply and individual exhaust are available as a custom order.

* Refer to page 1446 for details about check valves.

4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

M4F6 Series

Individual wiring manifold: sub-plate piping

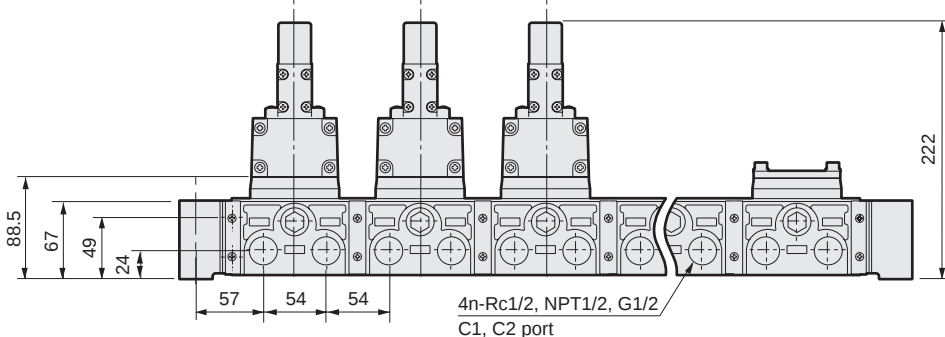
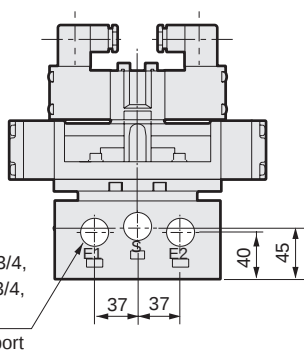
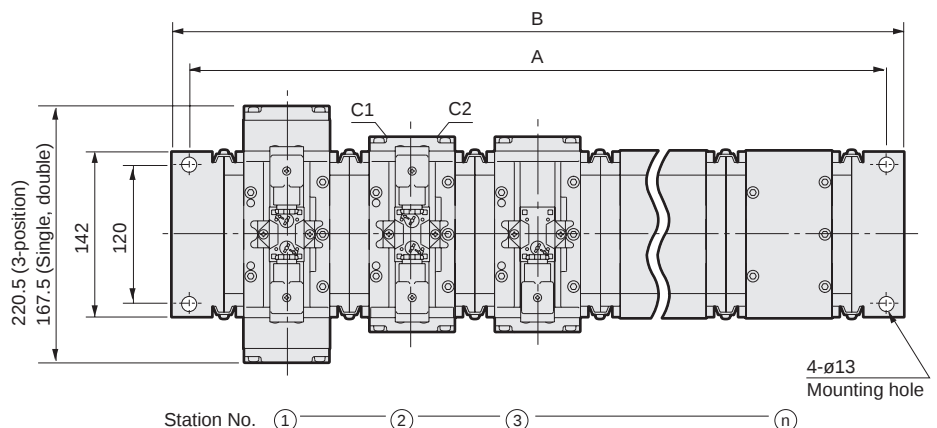
Dimensions



M4F6 3 0

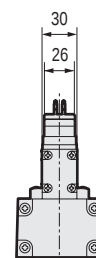
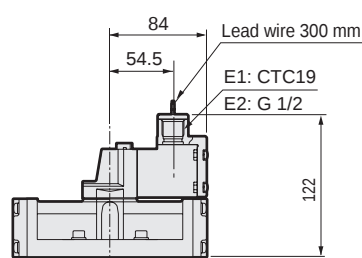
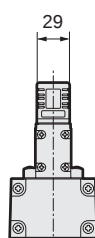
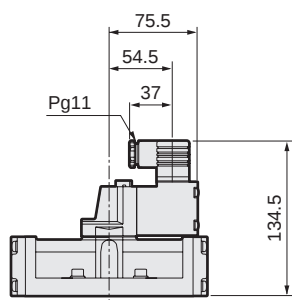
1
2
3
4
5

● Common exhaust: DIN terminal box



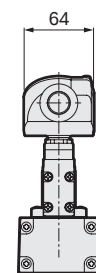
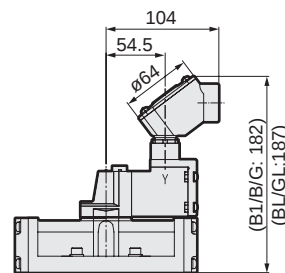
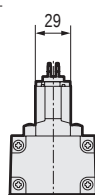
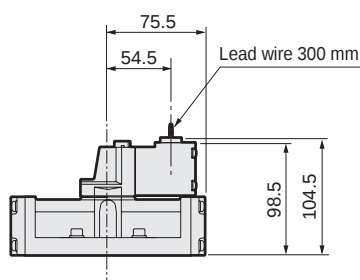
● DIN terminal box with lamp: (L)

● Conduit lead wire: (E1/E2)



● Grommet lead wire: (E)

● Round terminal box: (B1/B/BL/G/GL)



Common exhaust

Station No.	2	3	4	5	6	7	8	9	10
A	276	384	492	600	708	816	924	1032	1140
B	306	414	522	630	738	846	954	1062	1170

* Individual supply and individual exhaust are available as a custom order.

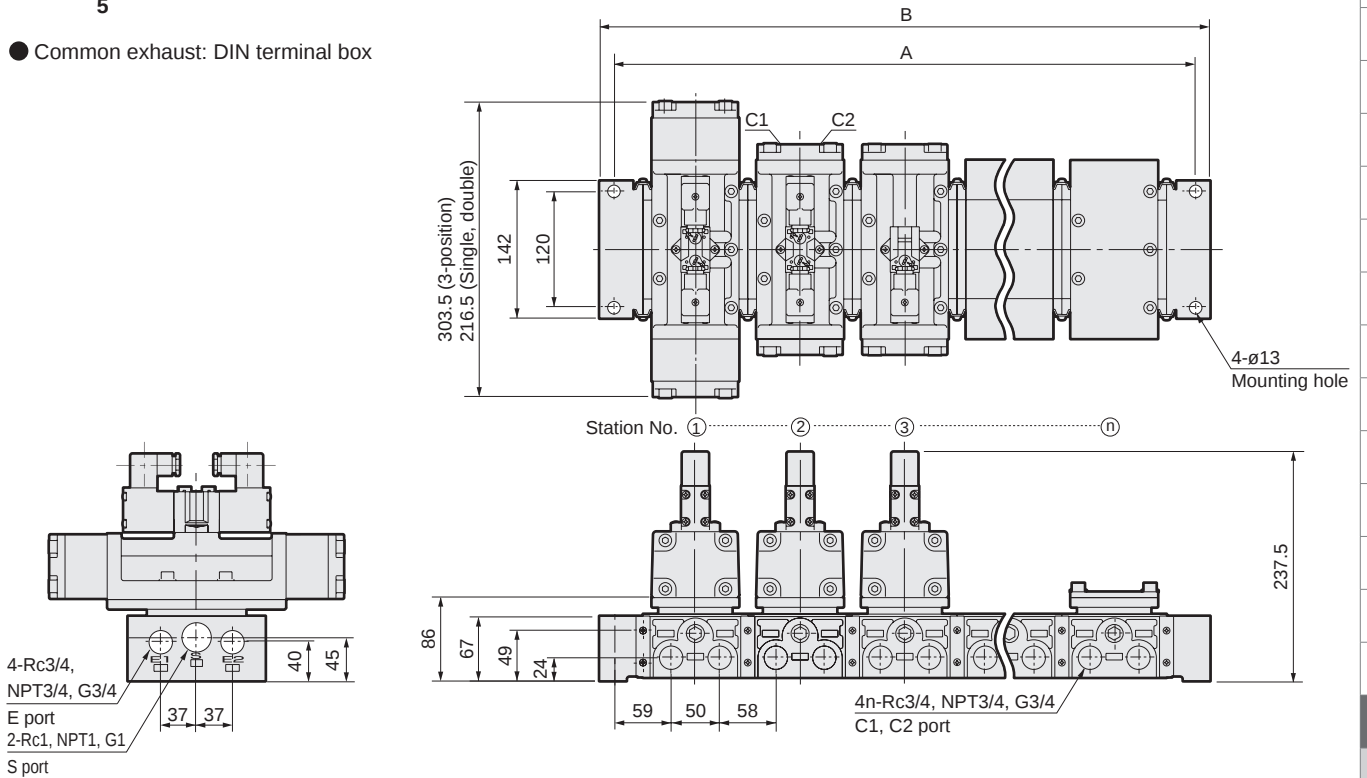
* Refer to page 1446 for details about check valves.

Dimensions

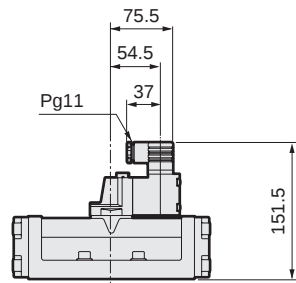
M4F7 30

1
2
3
4
5

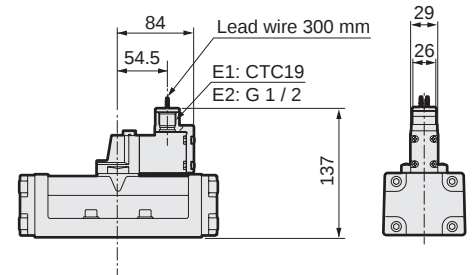
● Common exhaust: DIN terminal box



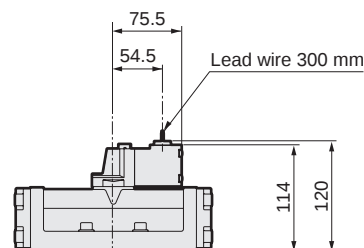
● DIN terminal box with lamp: (L)



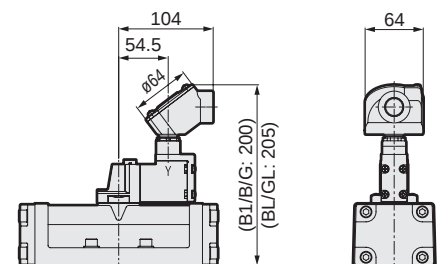
● Conduit lead wire: (E1/E2)



● Grommet lead wire: (E)



● Round terminal box: (B/B1/BL/G/GL)



Common exhaust

Station No.	2	3	4	5	6	7	8	9	10
A	276	384	492	600	708	816	924	1032	1140
B	306	414	522	630	738	846	954	1062	1170

* Refer to page 1446 for details about check valves.

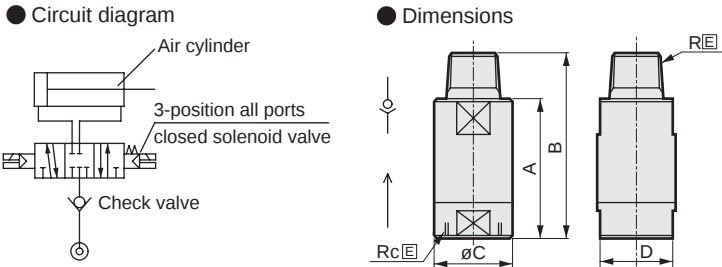
4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

4F Series

Check valve/round terminal box/adaptor/DIN terminal

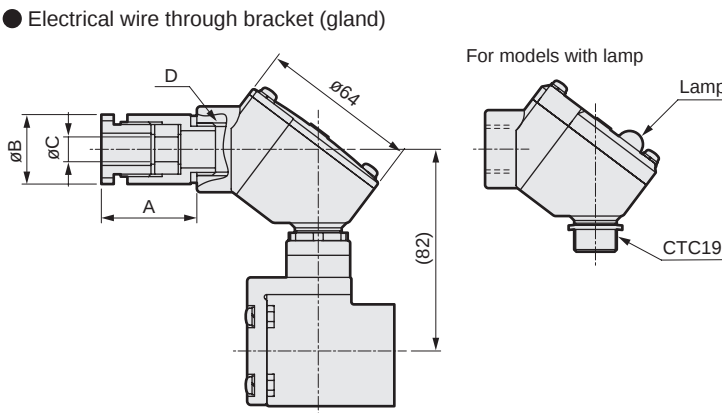
3-position check valve (H) dimensions

When the pneumatic source is no longer available when using a 3-position all ports closed solenoid valve, the pneumatic pressure will flow in the reverse direction to the SUP (S) port side. In order to prevent this reverse flow, use a check valve.



Model No.	A	B	C	D	E	Eff. X-sectional area mm ²	Cracking pressure
AC- 8A	49	63	20	17	1/4	20	0.05 MPa
AC-10A	55	70	25	22	3/8	40	
AC-15A	60	80	33	30	1/2	80	
AC-20A	70	92	50	46	3/4	160	
AC-25A	75	100	50	46	1	160	

Round terminal box dimensions (with gland) (Models other than B, BL, G, and GL are available as made to order.)



Coil option		
B	Round terminal box G1/2	Without indicator lamp
BL		With indicator lamp
B1	Round terminal box G3/4	Without indicator lamp
B1L	(Made-to-order product)	With indicator lamp
G	Round terminal box with gland (Models other than G and GL are available as made to order.)	A-15a Without indicator lamp
GL		A-15a With indicator lamp
G1		A-15b Without indicator lamp
G1L		A-15b With indicator lamp
G2		A-15c Without indicator lamp
G2L		A-15c With indicator lamp
G3		A-20a Without indicator lamp
G3L		A-20a With indicator lamp
G4		A-20b Without indicator lamp
G4L		A-20b With indicator lamp
G5		A-20c Without indicator lamp
G5L		A-20c With indicator lamp

Note: The manifolds of 4F2 to 4 are not equipped with a round terminal box, because of interference.

The cabtyre cables recommended by CKD are marked with a circle in the table.

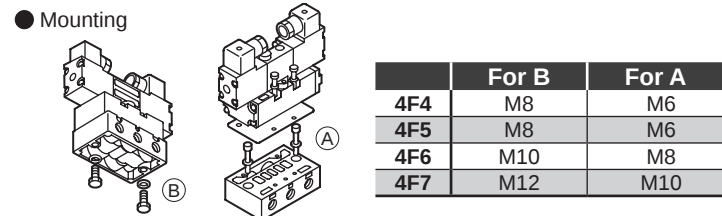
Vinyl cabtyre cable (VCT multiple core JIS C3312)			(Marine cable gland) (JIS F8801)				Upper row: model No. (Lower row: Gasket ø)	
Nominal section area	Number of cores	Finish O.D.	15a (ø9)	15b (ø10)	15c (ø11)	20a (ø12)	20b (ø13)	20c (ø15)
0.75 mm ²	2	ø8.8	○					
	3	9.2	○					
	4	9.9		○				
1.25	2	9.6		○				
	3	10.5			○			
	4	11.5				○		
2	2	10.5			○			
	3	11			○			
	4	12				○		
3.5	2	12				○	○	
	3	13					○	
	4	14						○

Note: This table shows the relation between marine cable gland and cabtyre cable.

Adaptor (option)

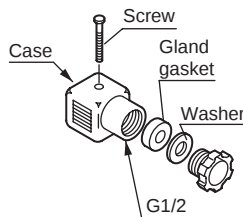
Use an adaptor when combining the actuator of the 4F series with the sub-plate of the FS series. (Contact CKD for details)

Mounting method of 4F4 to 7 single units



DIN terminal (option)

When installing metal pipes or flexible pipes with the DIN terminal box F type (G 1/2), basically use the unit upon removing the gland gasket and washer.



Rp (PS) threads

4F0 to 4F3 are provided with Rp threads to enable assembly with the manifold. Rp threads are commonly used as a parallel female thread that fits with a tapered screw. (also indicated in JIS standards)

How to order gasket kit

- M4F0 -GASKET-KIT
- M4F1 -GASKET-KIT
- M4F1-I -GASKET-KIT
- M4F2 -GASKET-KIT
- M4F3 -GASKET-KIT

4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G GMF
PV5 GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP NVP
4G*0EJ
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending