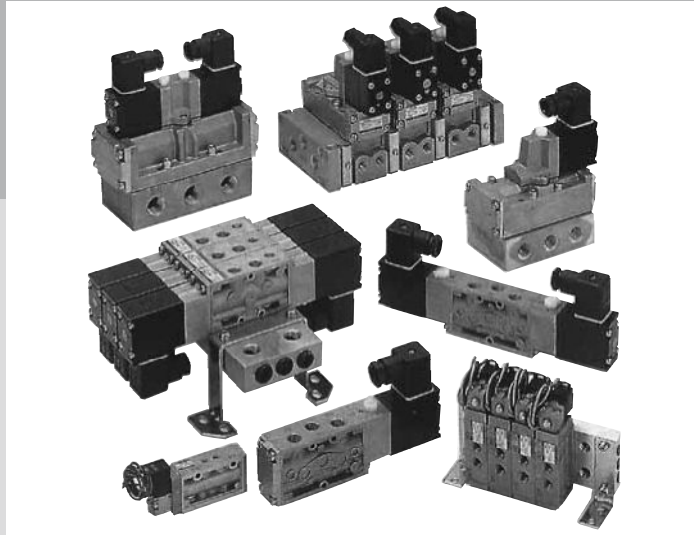


4F

Pneumatic valve



CONTENTS


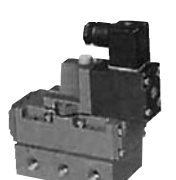
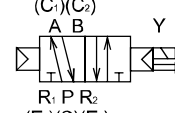
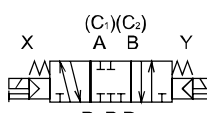
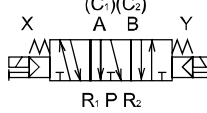
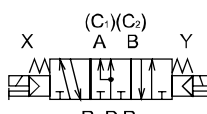
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4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

Series variation

4F Series

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)

Piping method/series appearance	Model No.	Position Number of solenoids JIS symbol	Flow characteristics		Applicable cylinder bore size	Voltage (V)						
			C [dm ³ /(s·bar)] *1	Effective cross-sectional area S (mm ²)								
4F  	Direct	5-port	(A)4F0 *A is single	4F0 to 4F7 ● 2-position single (C ₁)(C ₂)  R ₁ P R ₂ (E ₁)(S)(E ₂)	0.6 to 0.7	-	φ16 to φ20	100 AC 200 AC 24 DC Option 110 AC 220 AC 12 DC				
			4F1		1.5 to 2.0	-	φ20 to φ25					
			4F2		2.5 to 3.0	-	φ40 to φ80					
			4F2 (Outdoor)		2.5 to 3.0	-	φ40 to φ80					
			4F3		3.9 to 5.8	-	φ63 to φ100					
			4F3 (Outdoor)		3.9 to 5.8	-	φ63 to φ100					
			Sub-plate		5-port	4F4	4F1 to 4F7 ● 3-position all ports closed (C ₁)(C ₂)  R ₁ P R ₂ (E ₁)(S)(E ₂)		5.0 to 5.3	-	φ63 to φ100	100 AC 200 AC 24 DC Option 110 AC 220 AC 12 DC
	4F5	9.7 to 10		-		φ80 to φ160						
	4F6	15 to 18		-		φ140 to φ200						
	4F7	-		160		φ180 to φ250						
	Direct	5-port		(A)M4F0 *A is single		● 3-position A/B/R (C ₁)(C ₂)  R ₁ P R ₂ (E ₁)(S)(E ₂)		0.6 to 0.7	-	φ16 to φ20	100 AC 200 AC 24 DC Option 110 AC 220 AC 12 DC	
				M4F1				1.5 to 2.0	-	φ20 to φ25		
				M4F2				2.5 to 3.0	-	φ40 to φ80		
			Sub-plate	5-port	M4F3		4F3 to 4F7 ● 3-position P/A/B (C ₁)(C ₂)  R ₁ P R ₂ (E ₁)(S)(E ₂)	3.9 to 5.8	-	φ63 to φ100		100 AC 200 AC 24 DC Option 110 AC 220 AC 12 DC
M4F4					5.0 to 5.3			-	φ63 to φ100			
M4F5					9.7 to 10			-	φ80 to φ160			
M4F6					15 to 18			-	φ140 to φ200			
M4F7	-	160			φ180 to φ250							

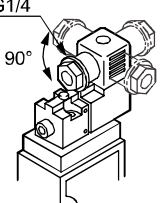
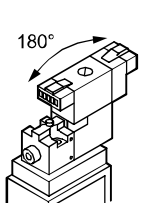
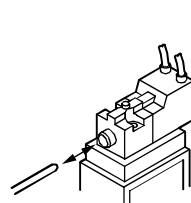
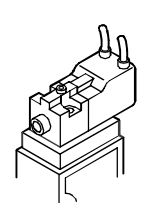
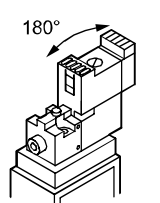
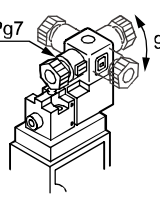
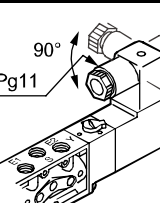
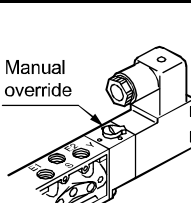
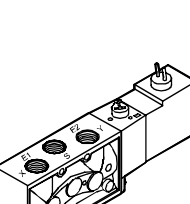
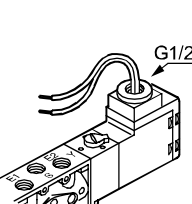
*1: Effective cross-sectional area "S" and sonic conductance "C" are converted as $S \approx 5.0 \times C$.

	Switching position						Port size of A/B port								Electrical connections							Selection page		
	2-position single	2-position double	3-position all ports closed	3-position ABR connection	3-position PAB connection	Mix	Female thread								Compact terminal box	DIN terminal box	C type connector	D type connector	Grommet lead wire	Conduit lead wire	With round terminal box			
							M5	Rp1/8	Rp1/4	Rp3/8	Rc1/4	Rc3/8	Rc1/2	Rc3/4									Rc1	
	●	●					●	●									●		●	●	●			1344
	●	●	●	●				●	●								●		●	●	●			
	●	●	●	●					●									●			●	●	●	
	●	●	●	●					●														●	1372
	●	●	●	●	●				●	●											●	●	●	1344
	●	●	●	●	●				●	●													●	1372
	●	●	●	●	●						●	●									●	●	●	1358
	●	●	●	●	●							●	●								●	●	●	
	●	●	●	●	●								●	●							●	●	●	
	●	●	●	●	●	●	●	●									●		●	●	●			1376
	●	●	●	●	●	●		●	●								●		●	●	●			
	●	●	●	●	●	●			●	●								●			●	●		
	●	●	●	●	●	●					●	●									●	●		1404
	●	●	●	●	●	●						●	●								●	●		
	●	●	●	●	●	●							●	●							●	●		

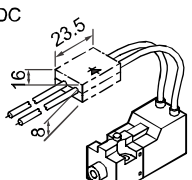
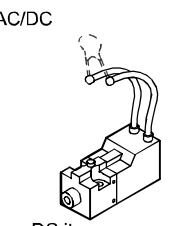

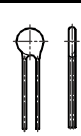

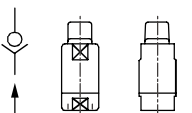
4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

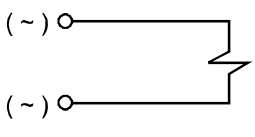
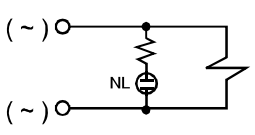
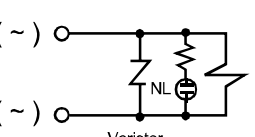
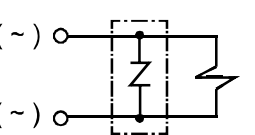
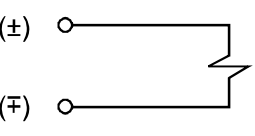
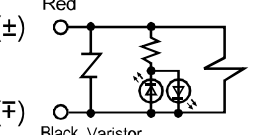
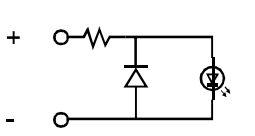
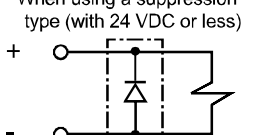
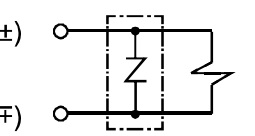
* Refer to the following page for details on electrical connections/other options.

4F Series

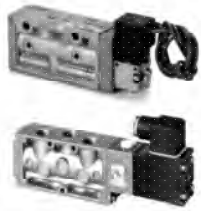
4GA/B	Electrical connections				Manual override	
M4GA/B						
MN4GA/B						
4GA/B (mastr)	4F0/4F1					
4GD/E	Blank/B Compact terminal box	C C type connector with lead wire	C3 C type connector without lead wire with surge suppressor/lamp	D2 D type connector with lead wire with surge suppressor/lamp	Blank Lateral non-locking	M6 Upward non-locking
M4GD/E		● Lead wire length C : 300 mm C00 : 500 mm C01 : 1000 mm C02 : 2000 mm 180° C03 : 3000 mm		● Lead wire length D2 : 300 mm D20 : 500 mm D21 : 1000 mm D22 : 2000 mm D23 : 3000 mm		
MN4GD/E					Press with a rod of $\phi 3$ or less	Press with a rod of $\phi 2$ or less
4GA4/B4						
MN3E MN4E						
W4GA/B2						
W4GB4						
4TB	Blank/E Grommet lead wire	C1 C type connector without lead wire	D D type connector with lead wire	C3 D type connector without lead wire with surge suppressor/lamp	M1 Lateral locking	R Position change of manual override (4F0)
4L2-4/ LMF0			● Lead wire length D : 300 mm D00 : 500 mm D01 : 1000 mm D02 : 2000 mm D03 : 3000 mm		Rotate 90° with a flathead screwdriver	
MN3S0 MN4S0					ON OFF	P (S) port Manual override
4SA/B0						
4KA/B						
4KA/B (mastr)						
4F	L Compact terminal box with lamp	C2 C type connector with lead wire with surge suppressor/lamp	D1 D type connector without lead wire		M4 Dust cover equipped non-locking	R Position change of manual override (4F1)
4F (mastr)		● Lead wire length C2 : 300 mm C20 : 500 mm C21 : 1000 mm C22 : 2000 mm 180° C23 : 3000 mm				
PV5G GMF					Press with hand	A (C ₁) / B (C ₂) port Manual override
PV5 GMF						
PV5S-0						
3QR 3QB						
MV3QR						
3MA/B0	4F2 to 4F7					
3PA/B	Blank DIN terminal box	F DIN terminal box (G1/2)	E1 Conduit lead wire (CTC19)	B B1 G Round terminal box	Blank Locking	M3 Locking with manual lever
P/M/B				B : G 1/2 B1 : G 3/4 G : G 1/2 (gland attached)		
NP/NAP/ NVP					Manual override	Excellent ease of operation with a lever mounted on the manual dial. Manual lever
4F*0EX						
4F*0E						
HMV HSV						
2QV 3QV						
SKH	L DIN terminal box with lamp	E Grommet lead wire	E2 Conduit lead wire (G 1/2)	BL GL Round terminal box (G 1/2) with lamp	M2 Non-locking	R Position change of manual override
PCD				GL : gland attached	Push with a rod $\phi 7$ or less Manual override	
Silencer						
TotAirSys (Total Air)						
TotAirSys (Gamma)						
Ending					Dust cover is custom order product.	

Electric connection circuit diagram

Other options	
S	Surge suppressor attached
DC	 <p>24 VDC or less Lead wire only (Diode)</p>
AC/DC	 <p>DC items other than the lead wire and AC items</p>
N	Plug attached
	 <p>Assemble to NC/C₁ (A), E₁ (R₁) Assemble to NO/C₂ (A), E₂ (R₂)</p>
S	Surge suppressor attached
	
N	Plug attached
	 <p>Assemble to NC/C₁ (A), E₁ (R₁) Assemble to NO/C₂ (B), E₂ (R₂)</p>
H	(Check valve attached)
	

Voltage	Option	Wiring circuit	Electrical connections
AC	—		Grommet lead wire Terminal box (B/F) C connector (C/C0*/C1) D connector (D/D0*/D1)
	With indicator lamp		Terminal box (L, BL)
	With surge suppressor and indicator lamp		C connector (C2/C2*/C3) D connector (D2/D2*/D3)
	Surge suppressor attached		Surge suppressor attached (S)
DC	—		Grommet lead wire Terminal box (B/F) C connector (C/C0*/C1) D connector (D/D0*/D1)
	With surge suppressor and indicator lamp		Terminal box (L) C connector (C2/C2*/C3) D connector (D2/D2*/D3)
			Terminal box (BL)
	Surge suppressor attached	<p>When using a suppression type (with 24 VDC or less)</p>  <p>* Diode has polarity.</p>	4F0/1 Grommet lead wire (24 VDC or less voltage only) (The option code "S" will be included with the surge suppressor.)
		 <p>* Varistor has no polarity.</p>	Surge suppressor attached (S)

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending



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

4F0/1/2/3 Series

● Cylinder bore size: $\phi 16$ to $\phi 100$

CE Refer to the Ending for details.

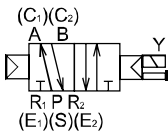


- 4GA/B
- M4GA/B
- MN4GA/B
- 4GA/B (mastr)
- 4GD/E
- M4GD/E
- MN4GD/E
- 4GA4/B4
- MN3E
MN4E
- W4GA/B2
- W4GB4
- 4TB
- 4L2-4/
LMF0
- MN3S0
MN4S0
- 4SA/B0
- 4KA/B
- 4KA/B (mastr)
- 4F**
- 4F (mastr)
- PV5G
GMF
- PV5
GMF
- PV5S-0
- 3QR
3QB
- MV3QR
- 3MA/B0
- 3PA/B
- P/M/B
- NP/NAP/
NVP
- 4F*0EX
- 4F*0E
- HMV
HSV
- 2QV
3QV
- SKH
- PCD
- Silencer
- TotAirSys
(Total Air)
- TotAirSys
(Gamma)
- Ending

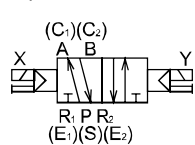
JIS symbol

● 5-port valve

2-position single

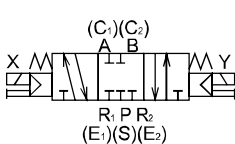


2-position double

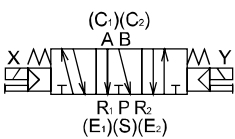


3-position

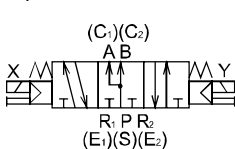
all ports closed



3-position A/B/R connection



3-position P/A/B connection



Common specifications

Descriptions	Content
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

Descriptions		(A)4F0 to 1	4F2/3	
Rated voltage V	AC	100, 200 (50/60 Hz)		
	DC	12, 24		
Voltage fluctuation range		$\pm 10\%$		
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 W	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)		

Individual specifications

1 MPa = 10 bar

Descriptions		(A)4F0 *1	4F1	4F2	4F3
Min. working pressure MPa	2-position	Single	0.15 (≈ 22 psi)	0.10 (≈ 15 psi)	0.10 (≈ 15 psi)
		Double	-	0.20 (≈ 29 psi)	0.15 (≈ 22 psi)
	3-position	All ports closed	-	-	-
		A/B/R connection	-	-	-
Port size *2		M5	Rp 1/8	Rp 1/4	Rp 1/4
			Rp 1/8	Rp 1/4	Rp 3/8
Response time *3		ms	30	30	50
Weight kg	2-position	Single	0.14	0.20	0.60
		Double	0.19	0.26	0.93
	3-position	-	0.33	1.06	

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

*2: G and NPT threads are also used for the piping ports of (A)4F0, 4F1, 4F2, and 4F3. Contact CKD for details.

*3: 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.

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	0.74	0.27
		Double			
4F1	2-position	Single	Rp1/8	2.0	0.33
		Double			
	3-position	All ports closed	Rp1/4	1.5	0.31
		A/B/R connection		1.6	0.29
4F2	2-position	Single	Rp1/4	3.0	0.33
		Double			
	3-position	All ports closed		2.5	0.43
		A/B/R connection			
4F3	2-position	Single	Rp1/4	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	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, (A) is A4F010.

Copper and PTFE free specifications

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

** - Voltage - **P6**

(4F0 is not available.)

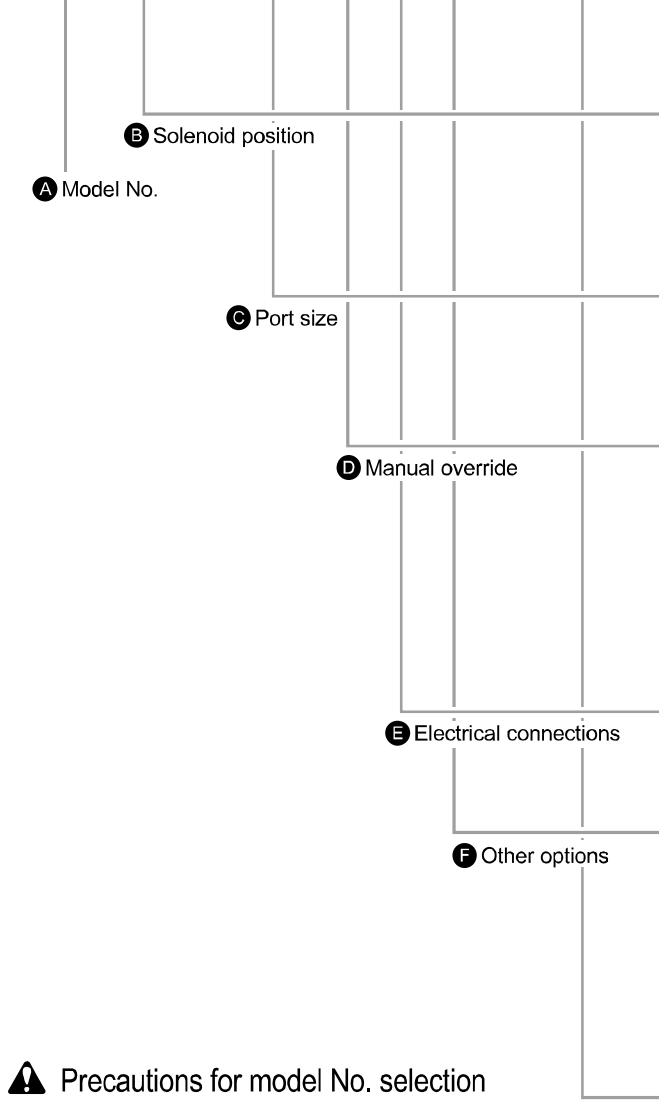
4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

4F0 to 3 Series

Single valve; body piping

How to order single 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 R1/R2 port of 4F1 is Rp 1/8.
- *3 : As Rc and NPT threads can also be used for piping port screws, contact CKD for details.
- *4 : The surge suppressor for attachment is a suppression connector when the grommet lead wire is 24 VDC or less. (Refer to page 1343.)

[Example of model No.]

4F340-08-M2P1-AC100V

- A** Model: 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	Content	(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 *3					
M5	M5	●			
06	Rp 1/8 *1	●	●		
08	Rp 1/4 *2		●	●	●
10	Rp 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 type bracket) (for 2-position single)	●	●	●	●
P1	Installation feet (U type bracket)	●	●	●	●
S	Surge suppressor (varistor) included *4	●	●	●	●
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				●	●

4F0 to 3 Series

Single valve; body piping

		(A) Model No.			
		4F0	4F1	4F2	4F3
[Electrical connection list]					
E Electrical connections					
Compact terminal box					
B	Without lead wire	●			
Blank	Without lead wire		●		
L	Without lead wire, with lamp *6	●	●		
DIN terminal box					
Blank	DIN terminal box (Pg11)			●	●
L	DIN terminal box (Pg11)/with lamp *6			●	●
F	DIN terminal box (G1/2)			●	●
C type 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 type 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 *7			●	●
G	Conduit lead wire round terminal box gland (A-15a)			●	●
GL	Conduit lead wire round terminal box gland (A-15a) with lamp *7			●	●

*6 : The DC of L has a built-in surge suppressor.
(Refer to page 1343 for the circuit diagram with a surge suppressor/lamp.)
*7 : 12 VDC models are not available for BL and GL.

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

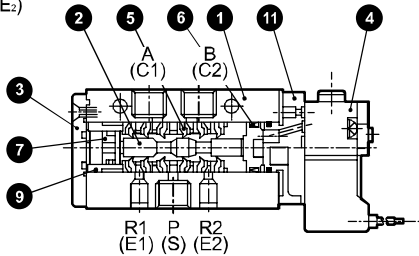
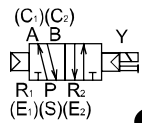
4F0/4F1 Series

Single valve; body piping

4GA/B Internal structure and parts list

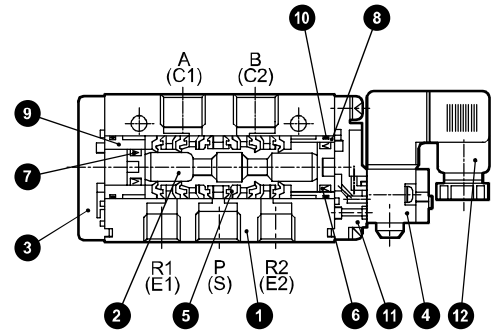
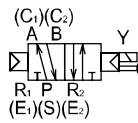
A4F010

● 2-position single



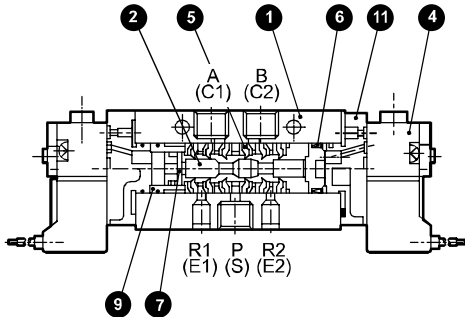
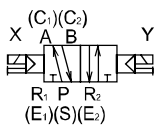
4F110

● 2-position single



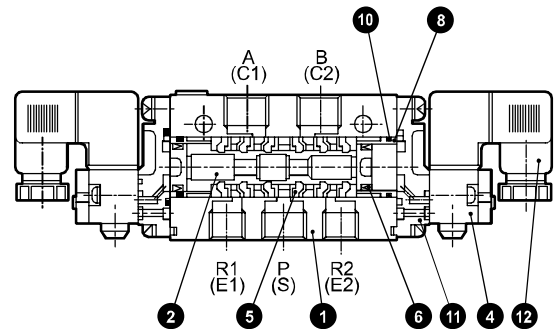
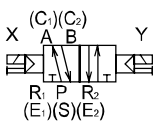
4F020

● 2-position double



4F120

● 2-position double



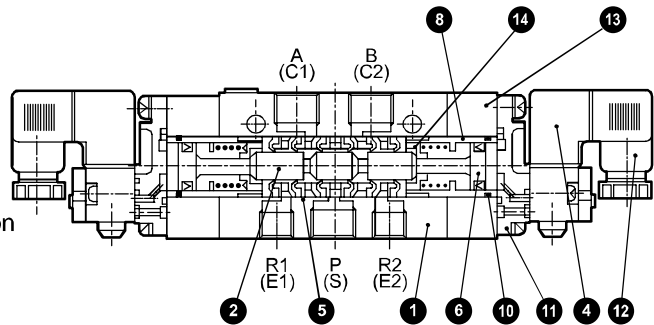
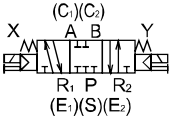
4F

4F (mastr)

4F130

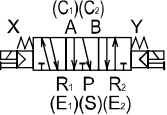
● 3-position

All ports closed



4F140

A/B/R connection



Main parts list

Repair parts list

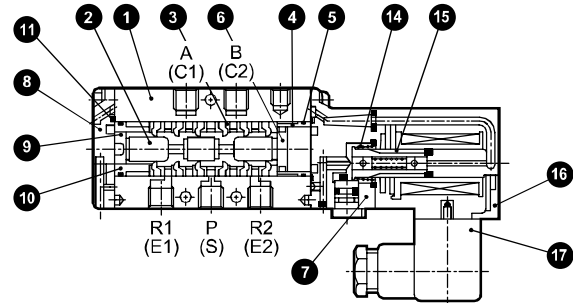
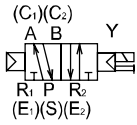
No.	Part name	Material	No./part name		5	6	7	4
			Model No.	Repair parts kit				
1	Body	Aluminum die-casting	A4F010	A4F010-K	4F9-126	4F9-124	4F9-125	4F9 - miniature pneumatic valve single model No. (Std 4F9-P5132-MOE-voltage)
2	Valving element (spool)	Aluminum	4F020	4F020-K	4F9-112	4F9-110	4F9-111	4F9 - miniature pneumatic valve single model No. (Basic P5132-MOB-voltage)
3	Cap	Aluminum die-casting	4F110	4F110-K				
4	Coil assembly (solenoid valve)	-	4F120	4F120-K				
5	Sealant assembly	-	4F130	4F130-K				
6	Piston (A) assembly (large)	-	4F140		4F9-159			
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 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

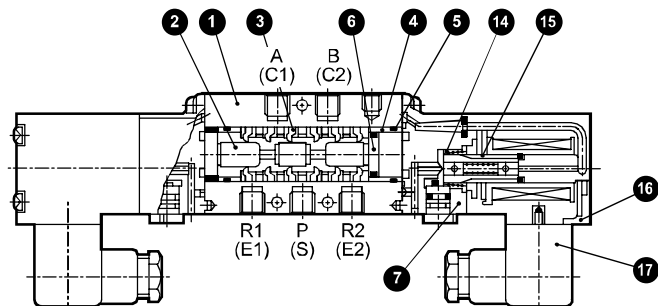
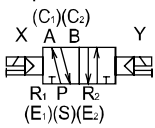
4F210/4F310

- 2-position single



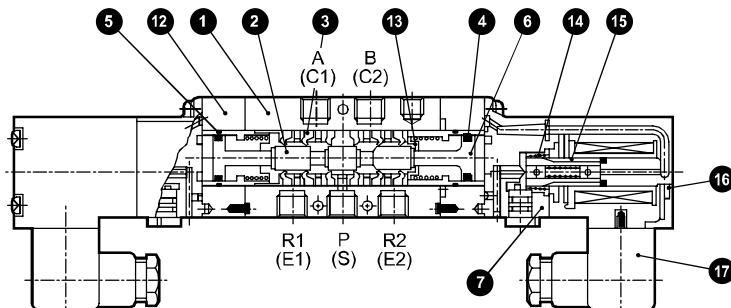
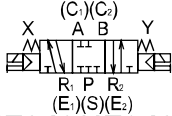
4F220/4F320

- 2-position double



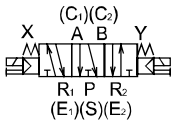
4F230/4F330

- 3-position
- All ports closed



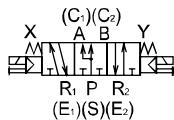
4F240/4F340

A/B/R connection



4F350

P/A/B connection



Main parts list

No.	Part name	Material	Repair parts list					
			No./part name	3	6	9	16	
1	Body	Aluminum die-casting	4F210	4F210-K	4F9-105	4F9-101	4F9-102	4F2*- Electrical connections - COIL-Voltage
2	Valving element (spool)	Aluminum	4F220	4F220-K				
3	Sealant assembly	-	4F230	4F230-K	4F9-106	4F9-113	-	-
4	Cylinder A (large)	Aluminum	4F240	4F240-K				
5	O-ring	Nitrile rubber	4F310	4F310-K	4F9-104	4F9-104	4F9-103	4F3*- Electrical connections - COIL-Voltage
6	Piston (A) assembly (large)	-	4F320	4F320-K				
7	Pilot valve body	Aluminum die-casting	4F330	4F330-K	4F9-114	-	-	-
8	Cap	Aluminum die-casting	4F340					
9	Piston (B) assembly (small)	-	4F350	-	-	-	-	-
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 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 (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

(A)4F0 Series

Single valve; body piping

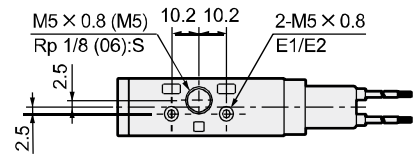
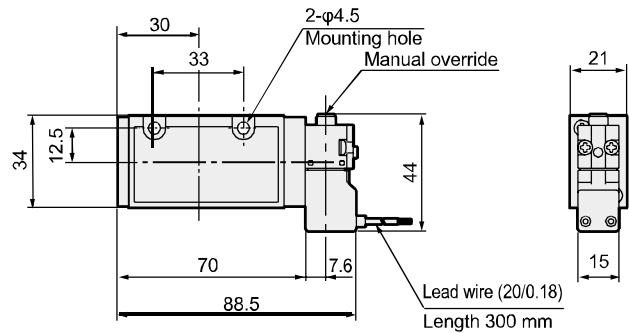
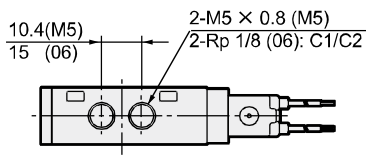
4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

Dimensions

A4F010



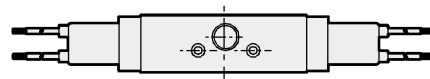
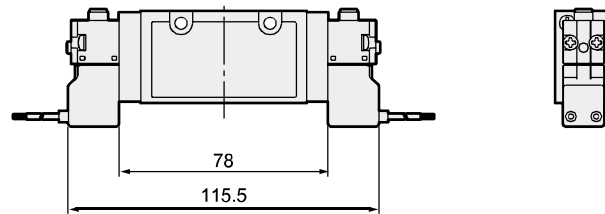
● 2-position single: (grommet lead wire)



4F020

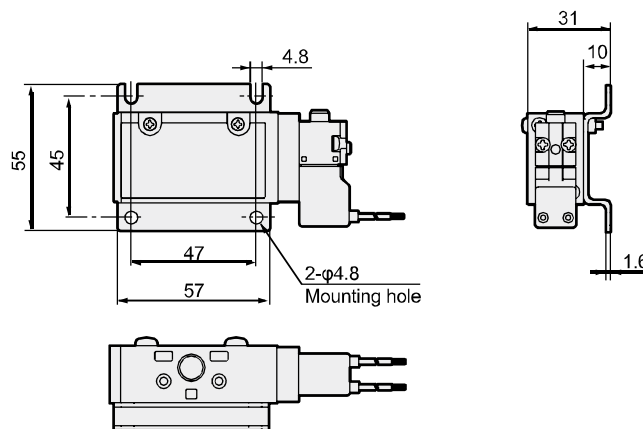
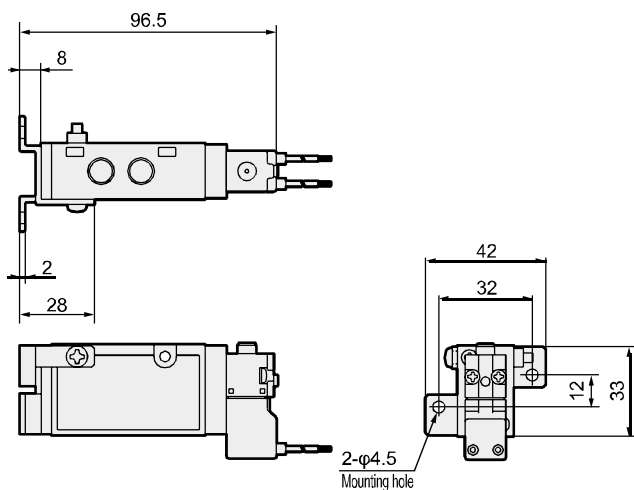


● 2-position double solenoid: (grommet lead wire)



● 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

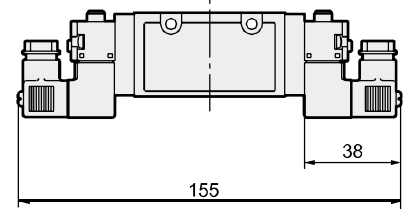
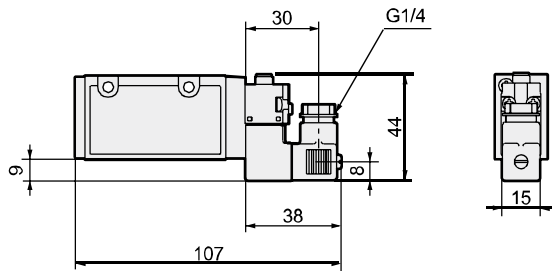


Dimensions

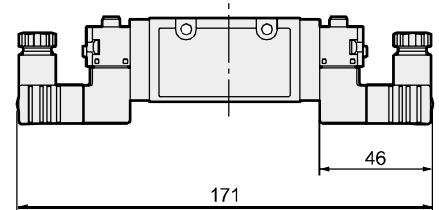
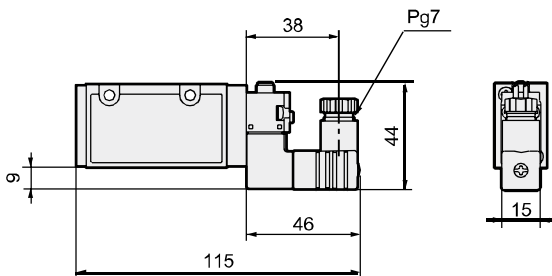
②2-position single

②2-position double

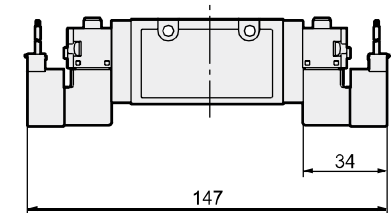
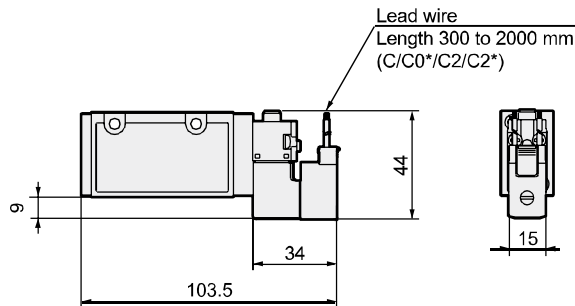
- Compact terminal box: (B)



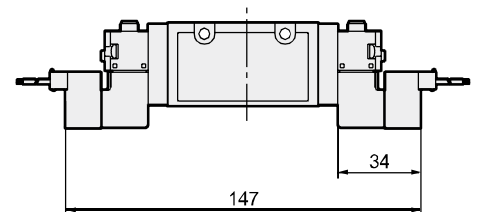
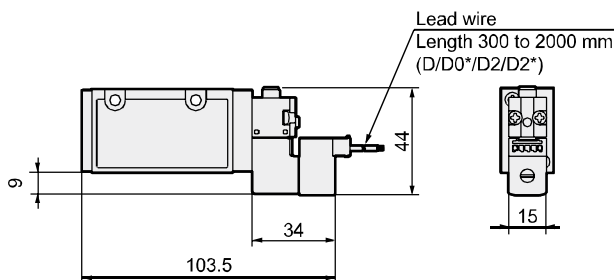
- Compact terminal box with lamp: (L)



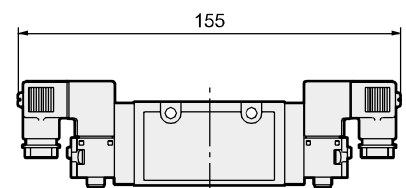
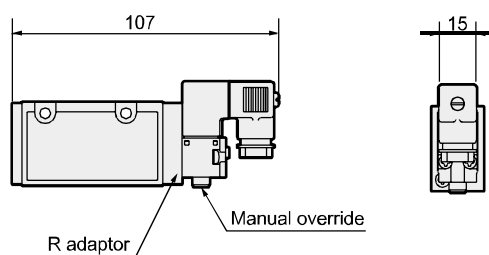
- C type connector: (C/C0*/C1/C2/C2*/C3)



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



- Position change of manual override: (R)



4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

4F1 Series

Single valve; body piping

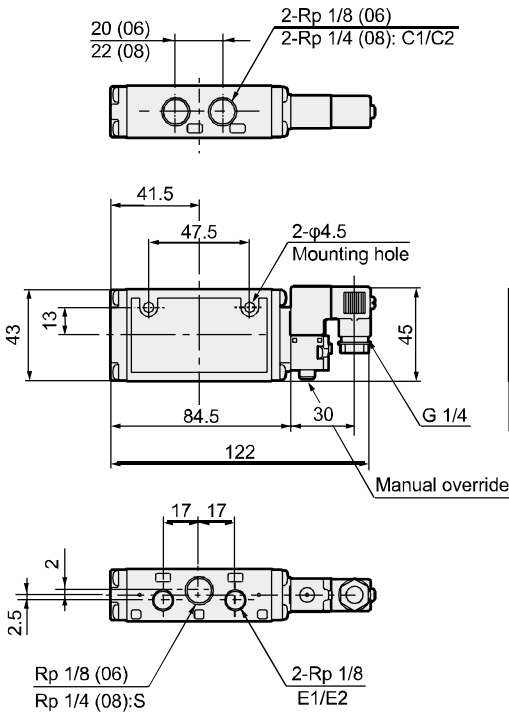
4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

Dimensions

4F110



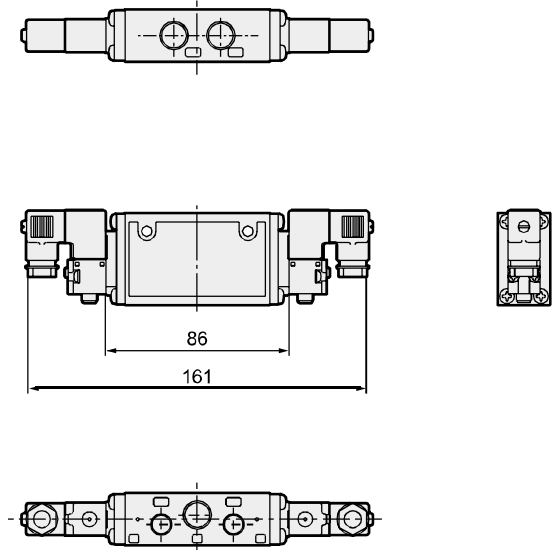
● 2-position single: compact terminal box



4F120



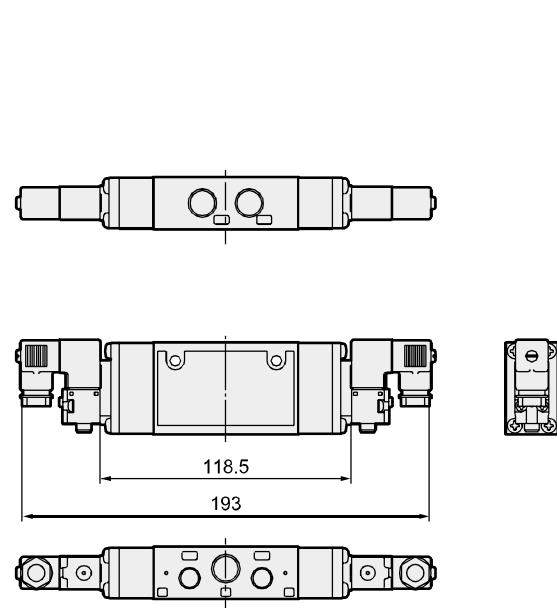
● 2-position double solenoid: compact terminal box



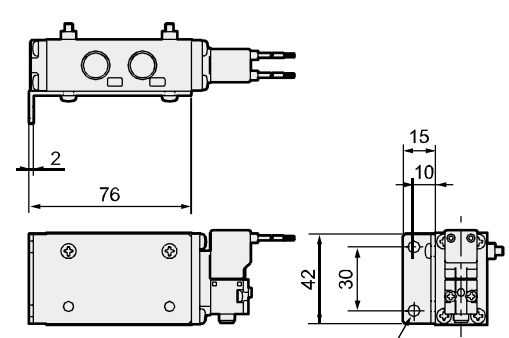
4F1³/₄ 0



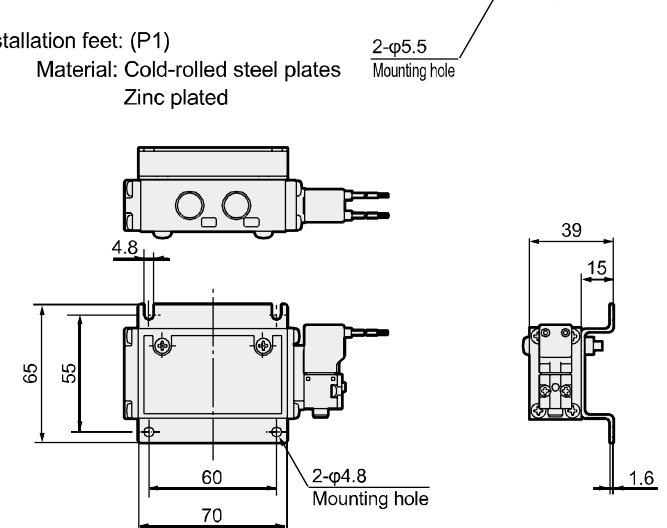
● 3-position double solenoid: compact terminal box



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



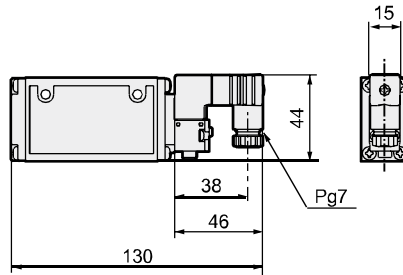
● Installation feet: (P1)
Material: Cold-rolled steel plates
Zinc plated



Dimensions

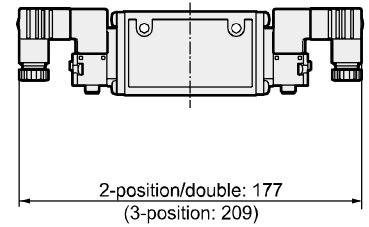
- Compact terminal box with lamp: (L)

① 2-position single

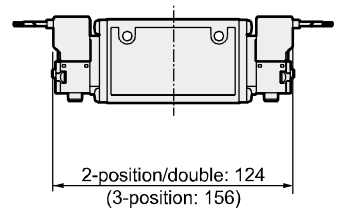
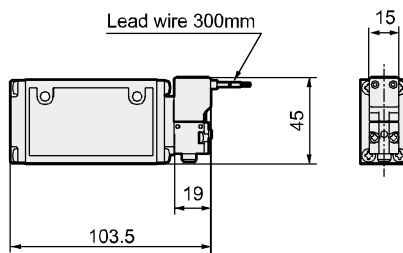


② 2-position double solenoid/3 position

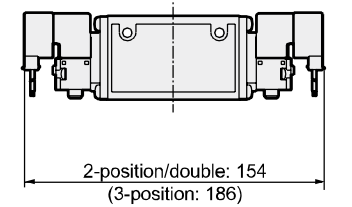
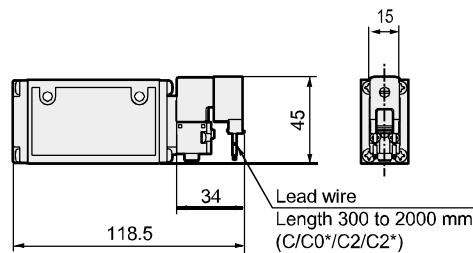
* 2-position double solenoid shown in image.



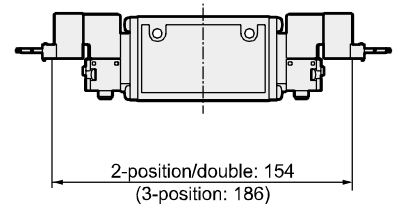
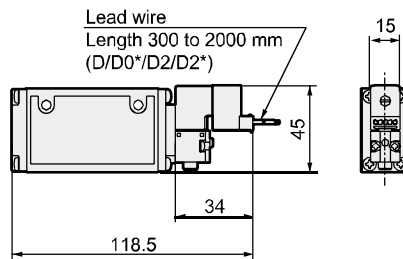
- Grommet lead wire: (E)



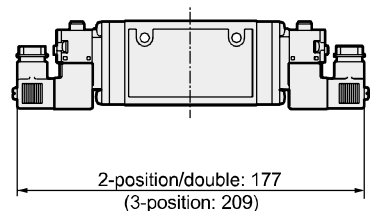
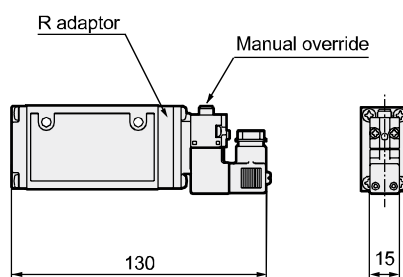
- C type connector: (C/C0*/C1/C2/C2*/C3)



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



- Position change of manual override: (R)



4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

4F2 Series

Single valve; body piping

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

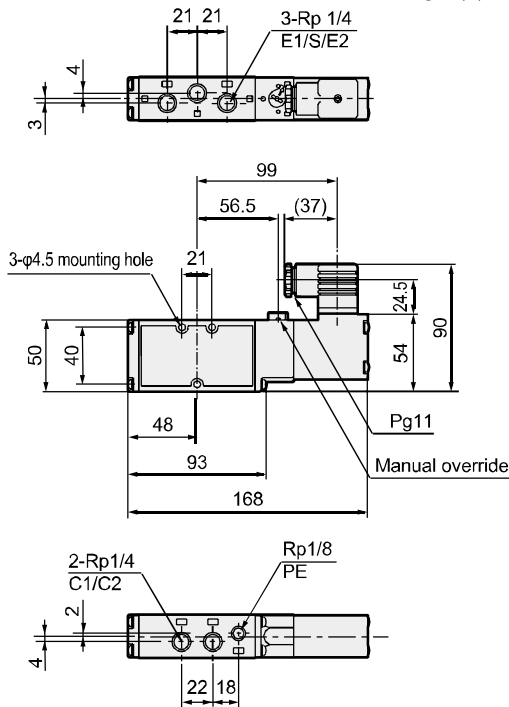
Dimensions

4F210



- 2-position single: DIN terminal box

DIN terminal box/with light (L)

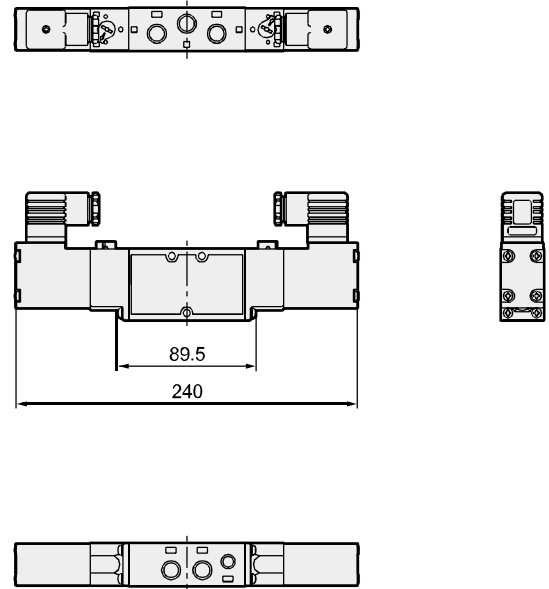


4F220



- 2-position double solenoid: DIN terminal box

DIN terminal box/with light (L)

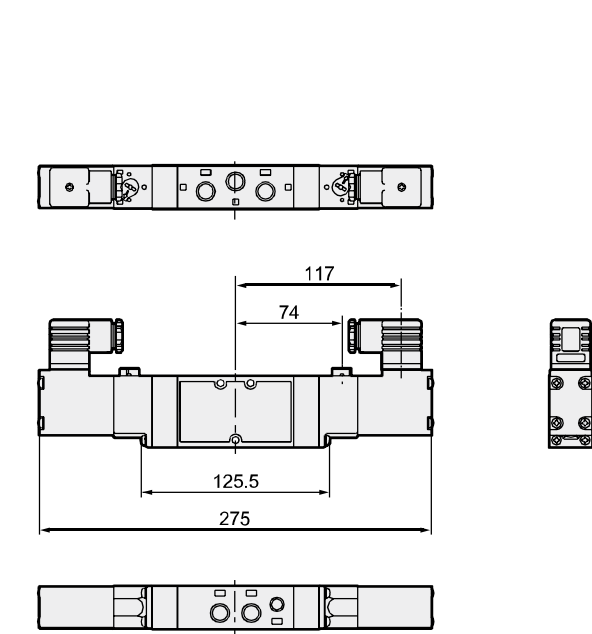


4F240



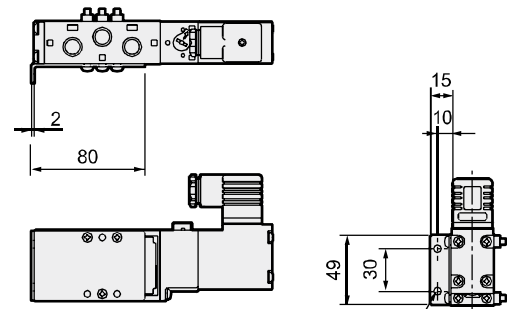
- 3-position: DIN terminal box

DIN terminal box/with light (L)



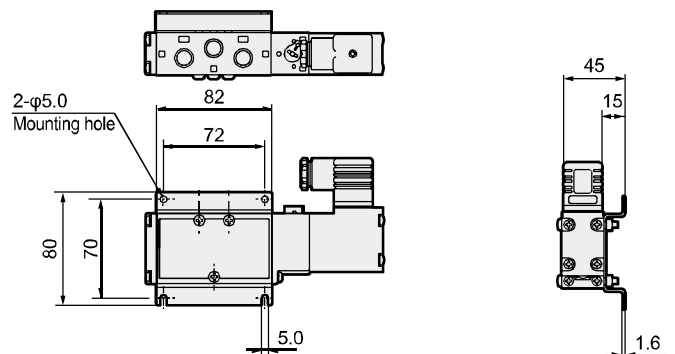
- Installation feet: (P: dedicated for 2-position single)

Material: Cold-rolled steel plates
Zinc plated



- Installation feet: (P1)

Material: Cold-rolled steel plates
Zinc plated

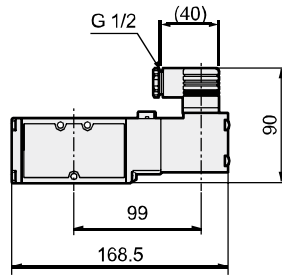


* Refer to page 1412 for details about check valves.

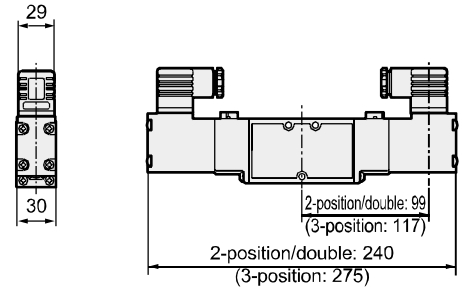
Dimensions

- DIN terminal box: (F)

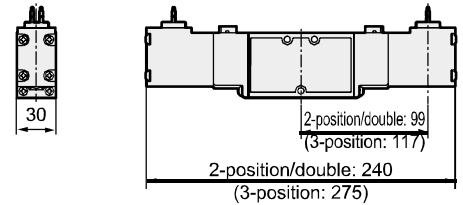
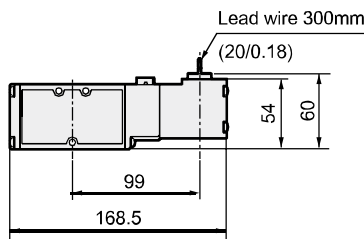
① 2-position single



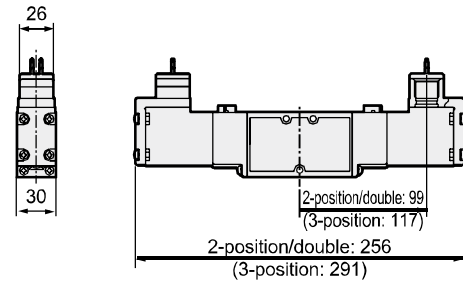
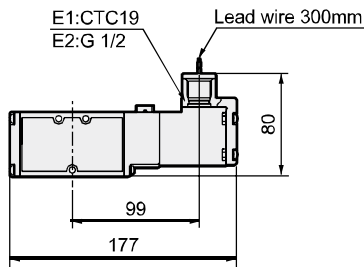
② 2-position double solenoid/3 position
* 2-position double solenoid shown in image.



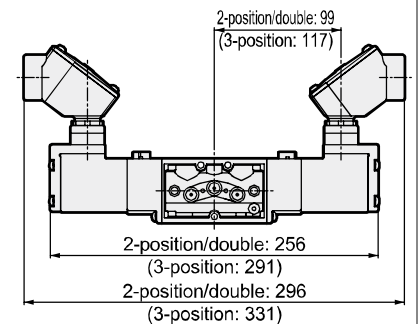
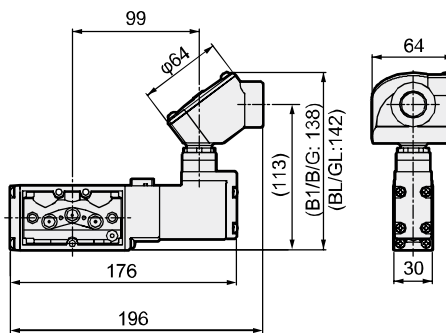
- Grommet lead wire: (E)



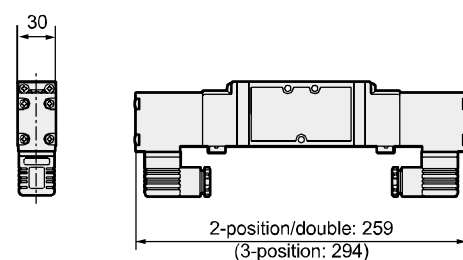
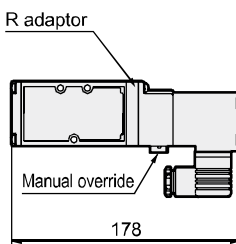
- Conduit lead wire: (E1/E2)



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



- Position change of manual override: (R)



4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

4F3 Series

Single valve; body piping

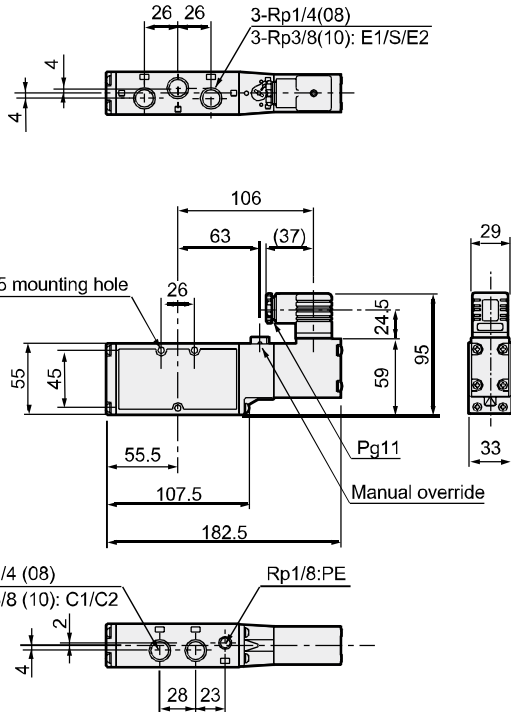
4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

Dimensions

4F310



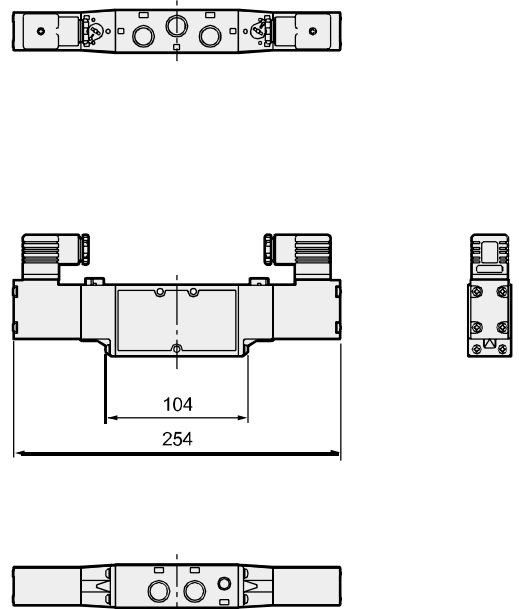
- 2-position single: DIN terminal box
- DIN terminal box/with light (L)



4F320



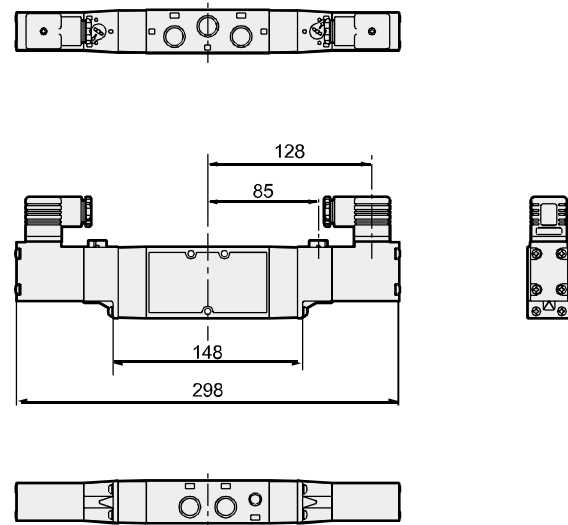
- 2-position double solenoid: DIN terminal box
- DIN terminal box/with light (L)



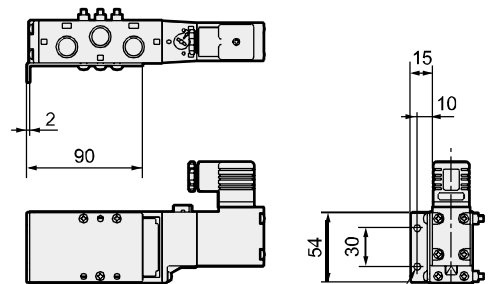
4F340



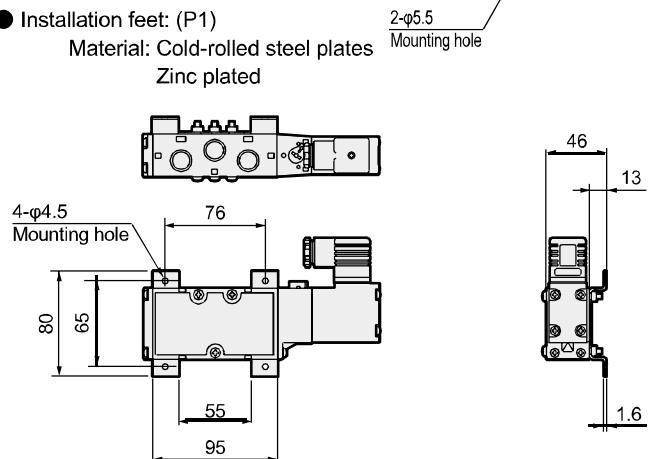
- 3-position: DIN terminal box
- DIN terminal box/with light (L)



- 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

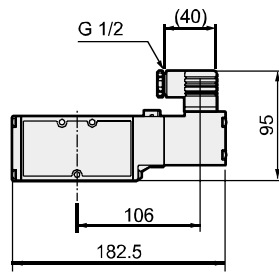


* Refer to page 1412 for details about check valves.

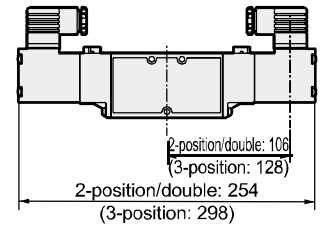
Dimensions

- DIN terminal box: (F)

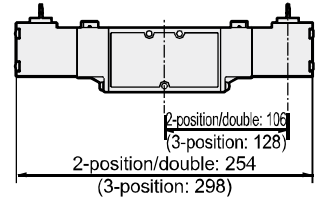
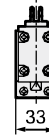
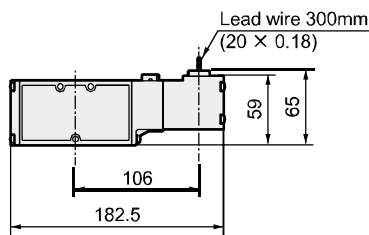
① 2-position single



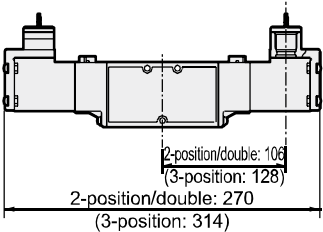
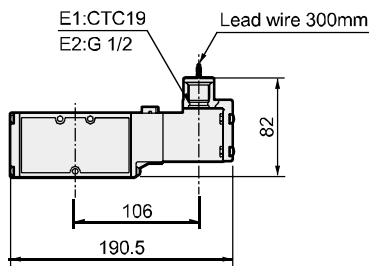
② 2-position double solenoid/3 position
* 2-position double solenoid shown in image.



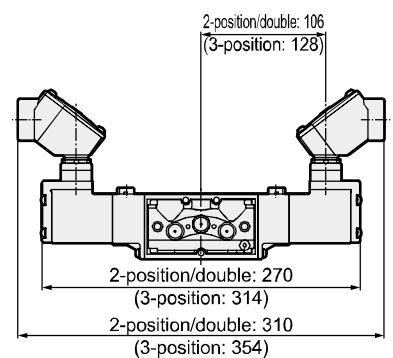
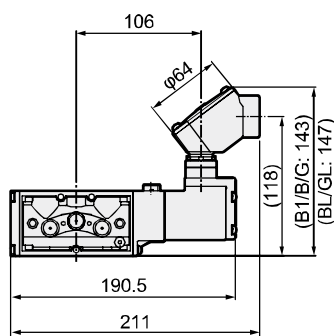
- Grommet lead wire: (E)



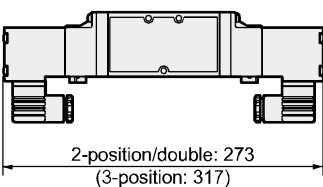
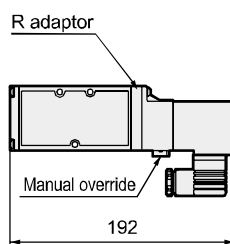
- Conduit lead wire: (E1/E2)



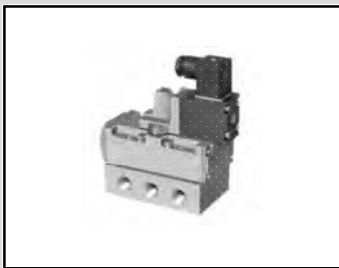
- Round terminal box: (B1/B/BL/G/GL)



- Position change of manual override: (R)



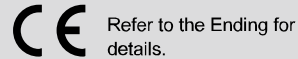
4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending



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

4F4/5/6/7 Series

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

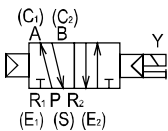


- 4GA/B
- M4GA/B
- MN4GA/B
- 4GA/B (mastr)
- 4GD/E
- M4GD/E
- MN4GD/E
- 4GA4/B4
- MN3E
MN4E
- W4GA/B2
- W4GB4
- 4TB
- 4L2-4/
LMF0
- MN3S0
MN4S0
- 4SA/B0
- 4KA/B
- 4KA/B (mastr)
- 4F**
- 4F (mastr)
- PV5G
GMF
- PV5
GMF
- PV5S-0
- 3QR
3QB
- MV3QR
- 3MA/B0
- 3PA/B
- P/M/B
- NP/NAP/
NVP
- 4F*0EX
- 4F*0E
- HMV
HSV
- 2QV
3QV
- SKH
- PCD
- Silencer
- TotAirSys
(Total Air)
- TotAirSys
(Gamma)
- Ending

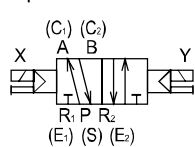
JIS symbol

● 5-port valve

2-position single

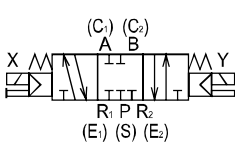


2-position double

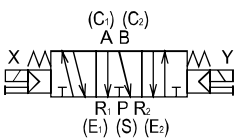


3-position

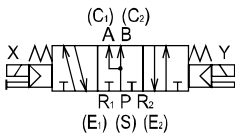
all ports closed



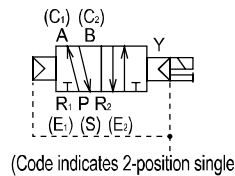
3-position A/B/R connection



3-position P/A/B connection



● External pilot



(Code indicates 2-position single)

Common specifications

Descriptions	Content
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.

*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

Descriptions	4F4 to 7		
Rated voltage V	AC	100, 200 (50/60 Hz)	
	DC	12, 24	
Voltage fluctuation range	$\pm 10\%$		
Starting current	AC	100 V	0.170/0.140
		200 V	0.090/0.070
	A DC	12 V	0.500
		24 V	0.250
Holding current	AC	100 V	0.100/0.080
		200 V	0.050/0.040
	A DC	12 V	0.500
		24 V	0.250
Power W	AC	100 V	5.0/4.0
		200 V	5.0/4.0
	DC	12 V	6
		24 V	6
Thermal class	B (molded coil)		

Individual specifications

1 MPa = 10 bar

Descriptions		4F4	4F5	4F6	4F7				
Min. working pressure MPa	2-position	Single	0.10 (≈ 15 psi)	0.10 (≈ 15 psi)	0.15 (≈ 22 psi, 1.5 bar)				
		Double							
	3-position	All ports closed	0.15 (≈ 22 psi)	0.15 (≈ 22 psi)	0.15 (≈ 22 psi, 1.5 bar)				
		A/B/R connection							
P/A/B connection									
Port size *1		Rc 1/4	Rc 3/8	Rc 3/8	Rc 1/2	Rc 1/2	Rc 3/4	Rc 3/4	Rc 1
Response time	*2 ms	60	70	200	300				
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				

*1: As G and NPT threads can also be used for piping port screws, contact CKD for details.

*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.

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	Rc3/8	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	Rc1/2	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	Rc3/4	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	Rc1	-	-	
		A/B/R connection				
		P/A/B connection				

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

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 (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/
NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

4F4 to 7 Series

Single valve; sub-plate piping

How to order single valve/sub-plate piping

4F4 **1** **0** - **08** - **M2** **L** - **AC100V**

● Single solenoid valve for manifold

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

F Other options

G 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 1343 for the circuit diagram) with surge suppressor/lamp.
- *2 : Contact CKD when using a vacuum with the external pilot (K) and exhaust pressurizing.
- *3 : As G and NPT threads can also be used for piping port screws, contact CKD for details.
- *4 : 12 VDC models are not available for BL and GL.
- *5 : The surge suppressor for attachment is a suppression connector when the grommet lead wire is 24 VDC or less. (Refer to page 1343.)

[Example of model No.]

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

A Model No.

4F4 4F5 4F6 4F7

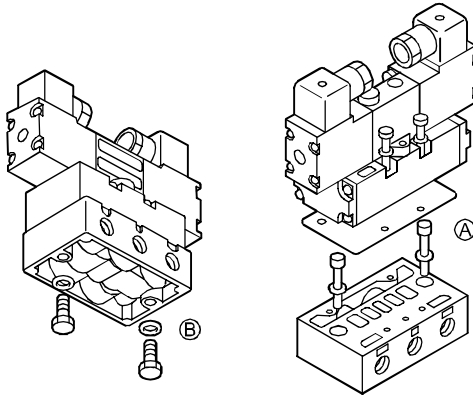
Code	Content	4F4	4F5	4F6	4F7
B Solenoid position					
1	2-position single	●	●	●	●
2	2-position double	●	●	●	●
3	3-position all ports closed	●	●	●	●
4	3-position A/B/R connection	●	●	●	●
5	3-position P/A/B connection	●	●	●	●
C Port size *3					
08	Rc1/4	●			
10	Rc3/8	●	●		
15	Rc1/2		●	●	
20	Rc3/4			●	●
25	Rc1				●
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)	●	●	●	●
B	Round terminal box (G1/2)	●	●	●	●
BL	Round terminal box (G1/2)/with lamp *4	●	●	●	●
G	Round terminal box With gland (A-15a)	●	●	●	●
GL	Round terminal box With gland (A-15a)/with lamp *4	●	●	●	●
Conduit lead wire Assemble on (E1)					
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 custom order products					
DC48V		●	●	●	●
DC100V		●	●	●	●
DC110V		●	●	●	●

4F4 to 7 Series

Single valve; sub-plate piping

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 (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

4F4/4F5 Series

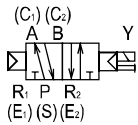
Single valve; sub-plate piping

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/
LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/
NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys
(Total Air)
TotAirSys
(Gamma)
Ending

Internal structure and parts list

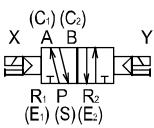
4F410/4F510

● 2-position single



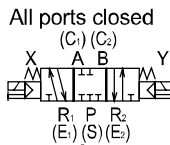
4F420/4F520

● 2-position double



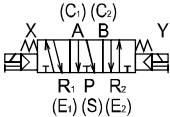
4F430/4F530

● 3-position



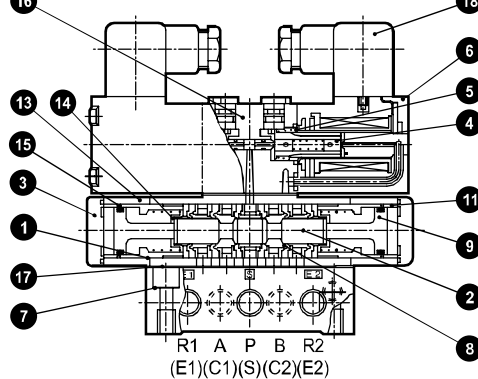
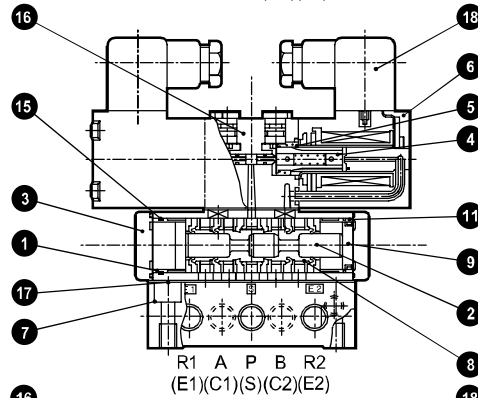
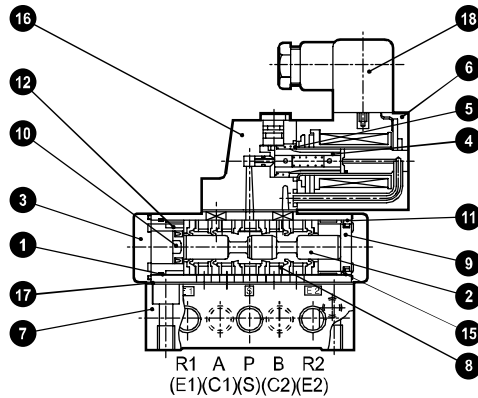
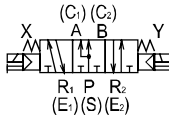
4F440/4F540

A/B/R connection



4F450/4F550

P/A/B connection



Main parts list

Repair parts list

No.	Part name	Material	No./part name		8	9	10	6
			Model No.	Repair parts kit				
1	Body	Aluminum die-casting	4F410	4F410-K	4F9-106	4F9-104	4F9-103	4F4*0- Electrical connections - COIL-Voltage
2	Valving element (spool)	Aluminum	4F420	4F420-K				
3	Cap	Aluminum die-casting	4F430	4F430-K	4F9-107	4F9-114	-	-
4	Plunger	-	4F440					
5	Plunger spring	-	4F450	4F510-K	4F9-108	4F9-109	-	4F5*0- Electrical connections - COIL-Voltage
6	Coil assembly	-	4F510					
7	Sub-plate	Aluminum die-casting	4F520	4F520-K	4F9-115	-	-	-
8	Sealant assembly	-	4F530					
9	Piston (A) assembly (large)	-	4F540	4F530-K	-	-	-	-
10	Piston (B) assembly (small)	-	4F550					
11	Cylinder A (large)	Aluminum						
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	-						

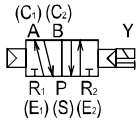
*: Repair parts are in stock as kits. It is not possible to purchase individual components. (The kits include sealant assembly and piston (A), (B) assembly. The coil assembly is not included.)

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

Internal structure and parts list

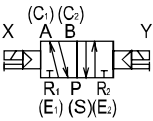
4F610/4F710

● 2-position single



4F620/4F720

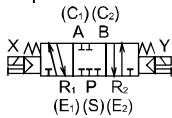
● 2-position double



4F630/4F730

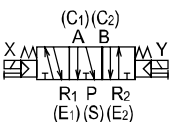
● 3-position

All ports closed



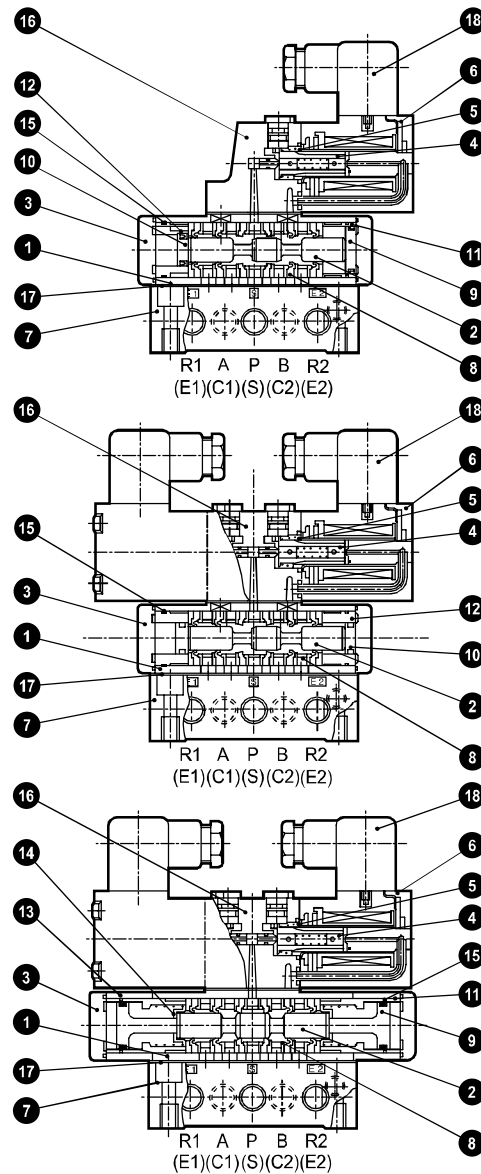
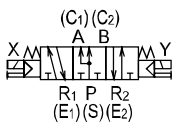
4F640/4F740

A/B/R connection



4F650/4F750

P/A/B connection



Main parts list

No.	Part name	Material	No./part name	Repair parts list			Coil assembly *	
				8 9 10	8	9		10
1	Body	Aluminum die-casting	4F610	4F610-K	4F9-118	4F9-117	4F6*0-	
2	Valving element (spool)	Aluminum	4F620	4F620-K		-	4F9-116	Electrical
3	Cap	Aluminum die-casting	4F630	4F630-K	4F9-119	4F9-122	-	
4	Plunger	-	4F640				4F9-121	-
5	Plunger spring	-	4F650	-	-	-	COIL-Voltage	
6	Coil assembly	-	4F710	4F710-K	4F9-121	4F9-120	4F7*0-	
7	Sub-plate	Aluminum die-casting	4F720	4F720-K	-		Electrical	
8	Sealant assembly	-	4F730	-	4F9-123	-	connections -	
9	Piston (A) assembly (large)	-	4F740	4F730-K		-	COIL-Voltage	
10	Piston (B) assembly (small)	-	4F750	-		-	-	
11	Cylinder A (large)	Aluminum						
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 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 (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

4F4 Series

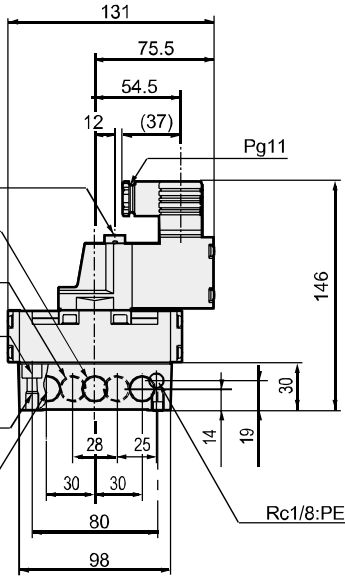
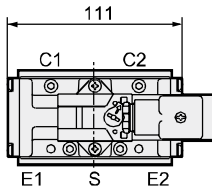
Single valve; sub-plate piping

Dimensions

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

4F410

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



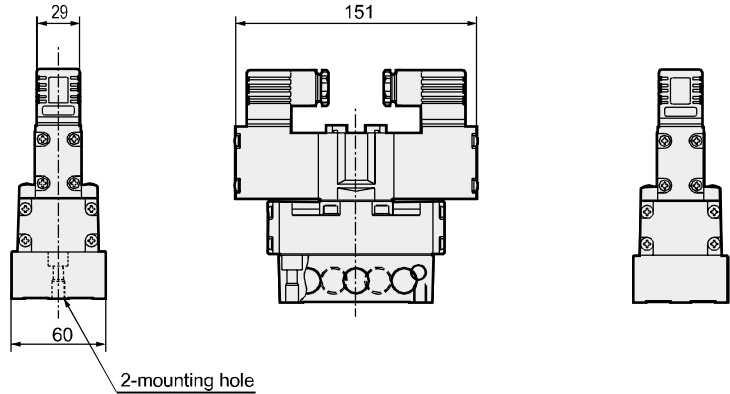
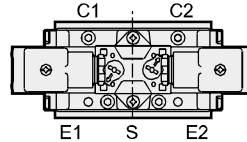
Manual override

- Rc1/4 (08)
- Rc3/8 (10):S
- 2-Rc1/4 (08)
- 2-Rc3/8 (10): C1/C2
- 2-φ13 spot face
- Depth 9 (Mounting hole)
- 2-M8 depth 11 (prepared hole φ7)
- 2-Rc1/4 (08)
- 2-Rc3/8 (10): E1/E2

Rc1/8:PE

4F420

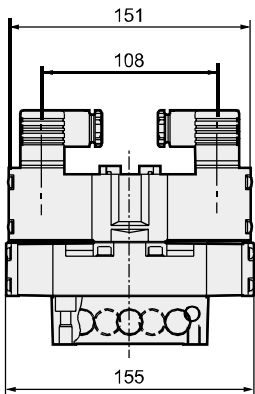
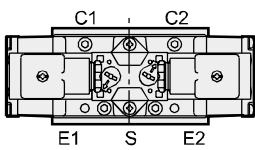
- 2-position double solenoid: DIN terminal box
DIN terminal box/with light (L)



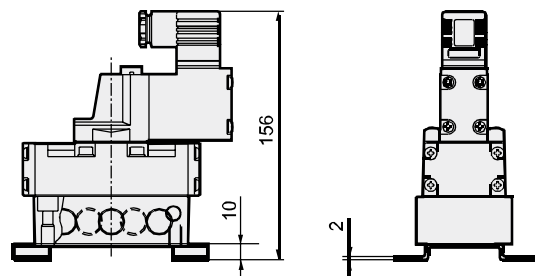
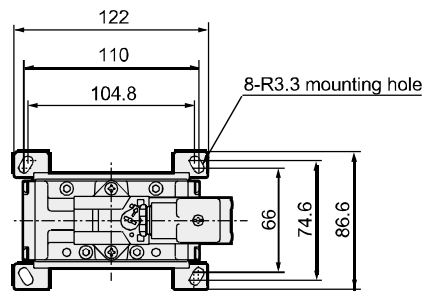
2-mounting hole

4F440 ³/₅

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



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

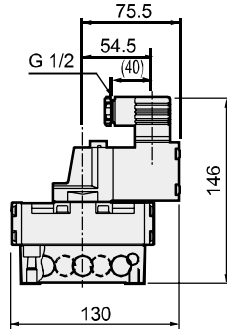


* Refer to page 1412 for details about check valves.

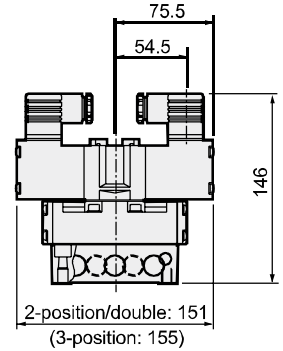
Dimensions

- DIN terminal box: (F)

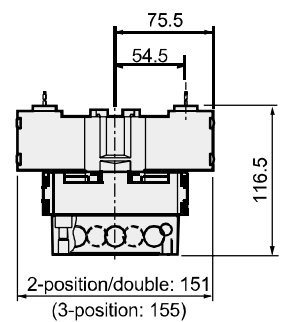
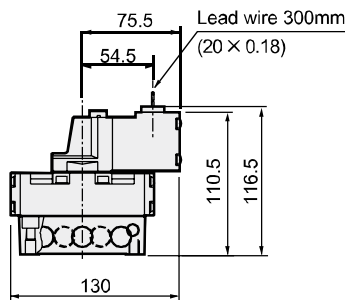
② 2-position single



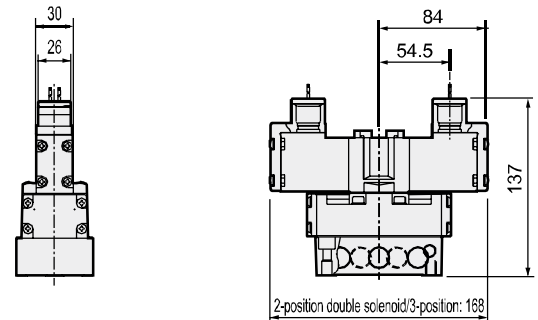
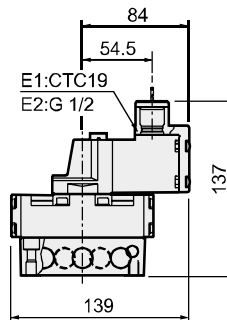
② 2-position double solenoid/3-position
* 2-position double solenoid shown in image.



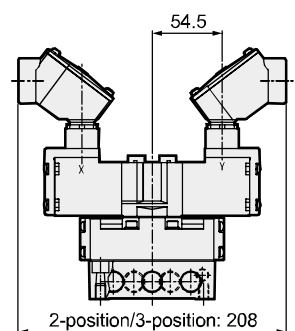
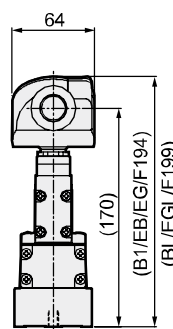
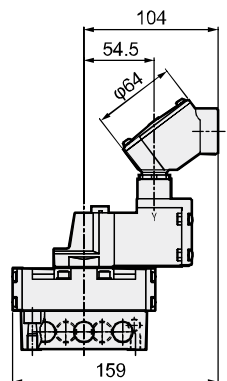
- Grommet lead wire: (E)



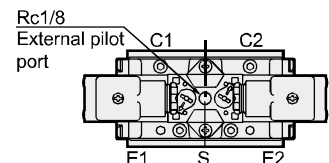
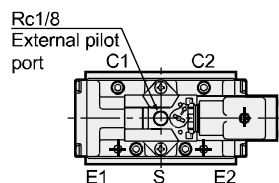
- Conduit lead wire: (E1/E2)



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



- External pilot port: (K)



4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

4F5 Series

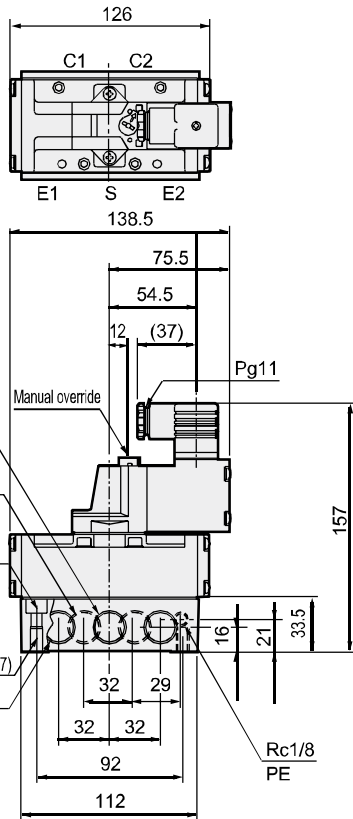
Single valve; sub-plate piping

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

Dimensions

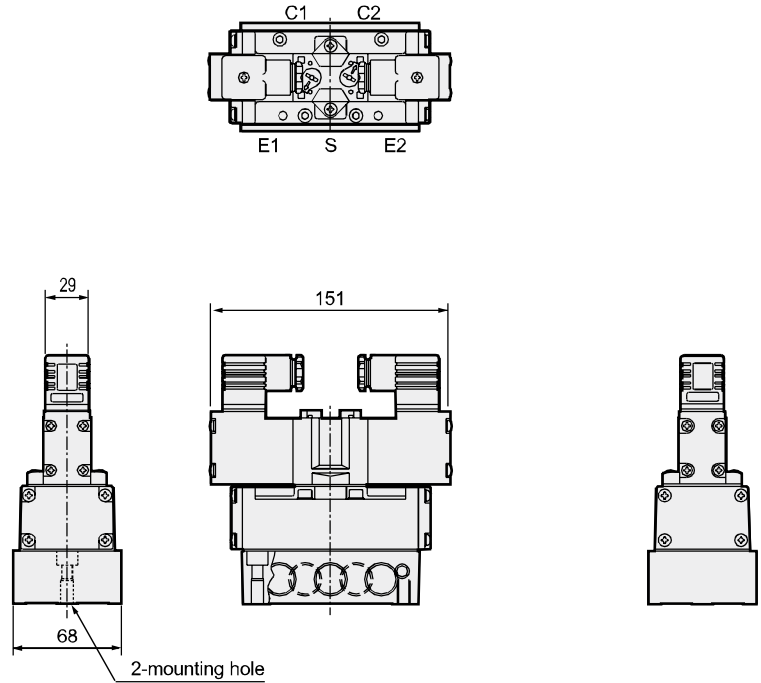
4F510

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



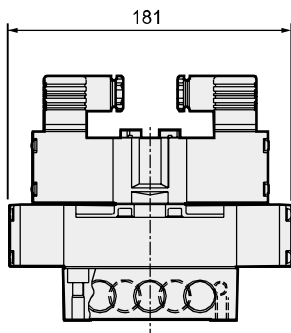
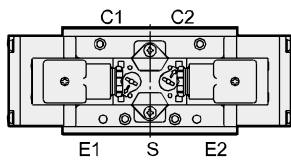
4F520

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

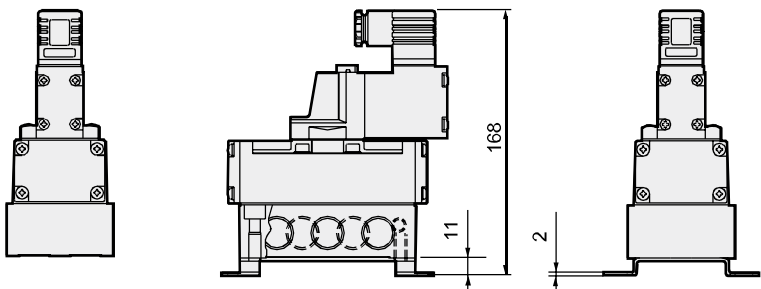
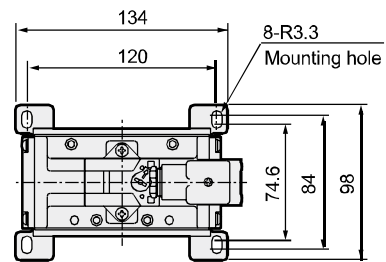


4F540

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



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

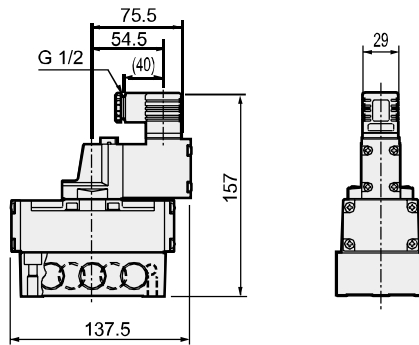


* Refer to page 1412 for details about check valves.

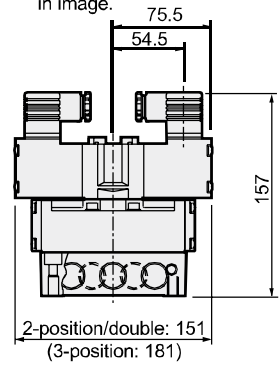
Dimensions

- DIN terminal box: (F)

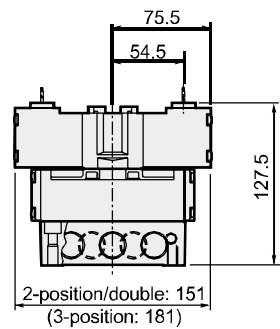
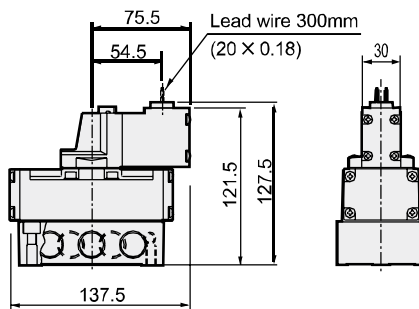
① 2-position single



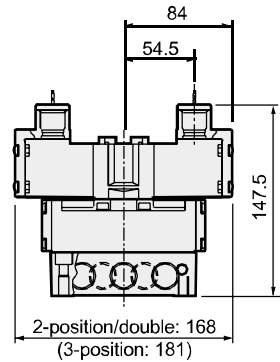
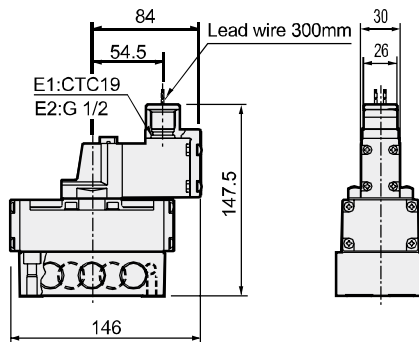
② 2-position double solenoid/3-position
* 2-position double solenoid shown in image.



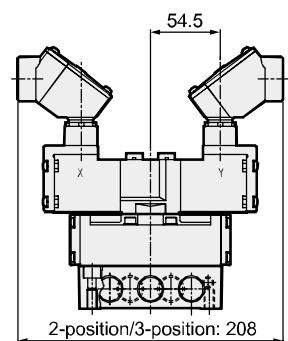
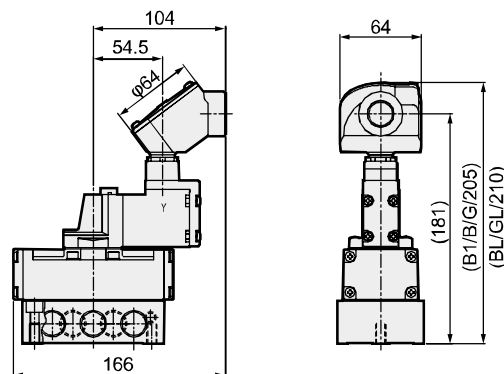
- Grommet lead wire: (E)



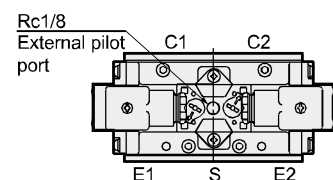
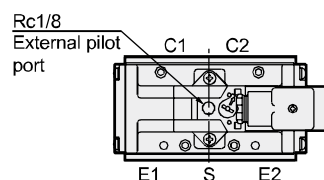
- Conduit lead wire: (E1/E2)



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



- External pilot port: (K)



4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

4F6 Series

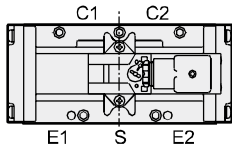
Single valve; sub-plate piping

Dimensions

- 4GA/B
- M4GA/B
- MN4GA/B
- 4GA/B (mastr)
- 4GD/E
- M4GD/E
- MN4GD/E
- 4GA4/B4
- MN3E
- MN4E
- W4GA/B2
- W4GB4
- 4TB
- 4L2-4/LMF0
- MN3S0
- MN4S0
- 4SA/B0
- 4KA/B
- 4KA/B (mastr)
- 4F**
- 4F (mastr)
- PV5G
- GMF
- PV5
- GMF
- PV5S-0
- 3QR
- 3QB
- MV3QR
- 3MA/B0
- 3PA/B
- P/M/B
- NP/NAP/NVP
- 4F*0EX
- 4F*0E
- HMV
- HSV
- 2QV
- 3QV
- SKH
- PCD
- Silencer
- TotAirSys (Total Air)
- TotAirSys (Gamma)
- Ending

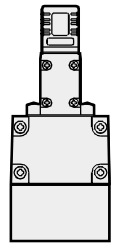
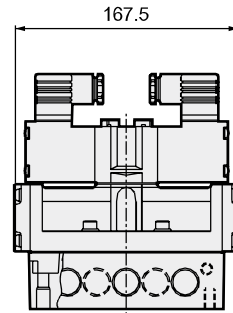
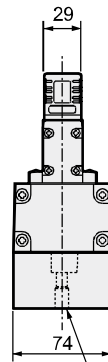
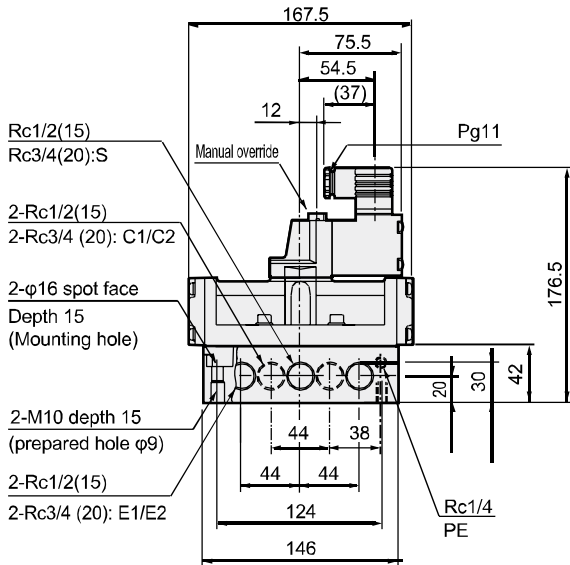
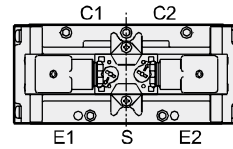
4F610

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



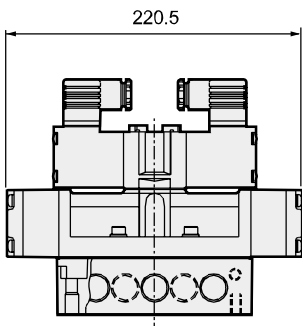
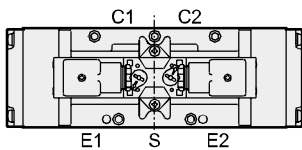
4F620

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

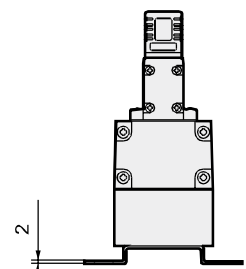
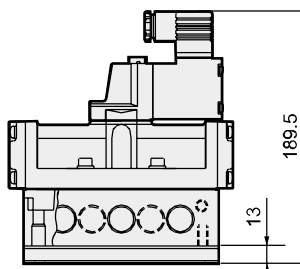
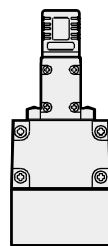
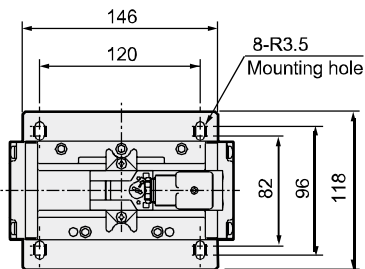


4F640 ³/₅

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



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

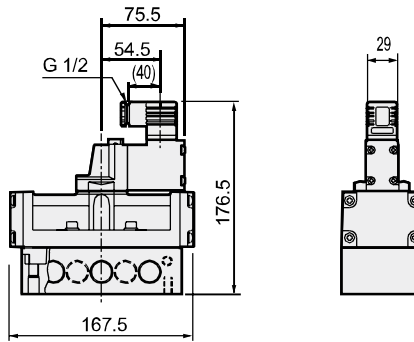


* Refer to page 1412 for details about check valves.

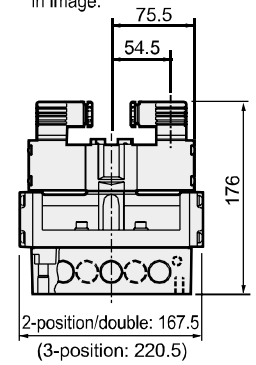
Dimensions

- DIN terminal box: (F)

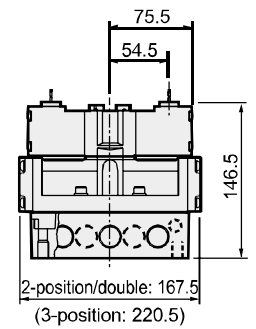
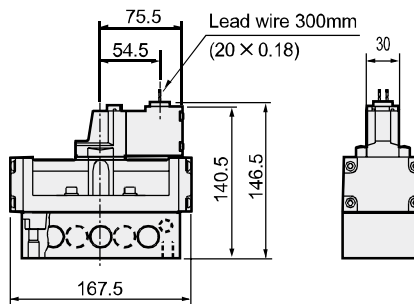
① 2-position single



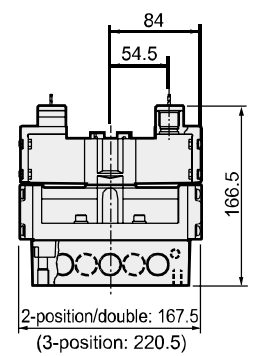
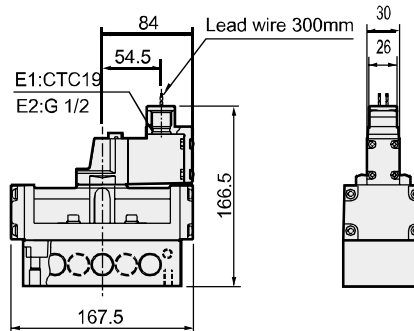
② 2-position double solenoid/3-position
* 2-position double solenoid shown in image.



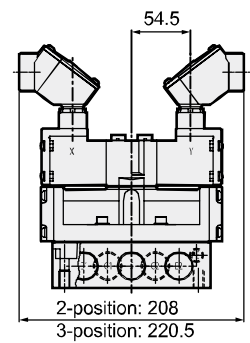
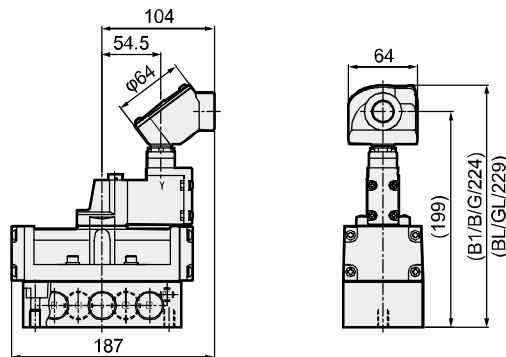
- Grommet lead wire: (E)



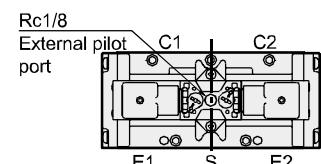
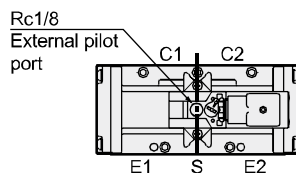
- Conduit lead wire: (E1/E2)



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



- External pilot port: (K)



4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

4F7 Series

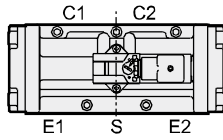
Single valve; sub-plate piping

Dimensions

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

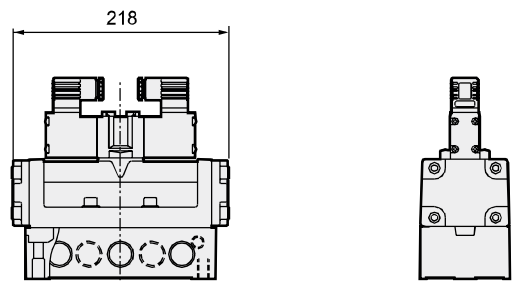
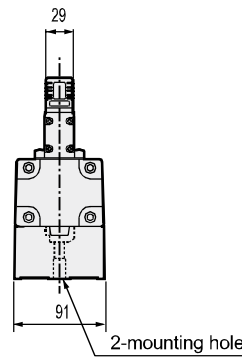
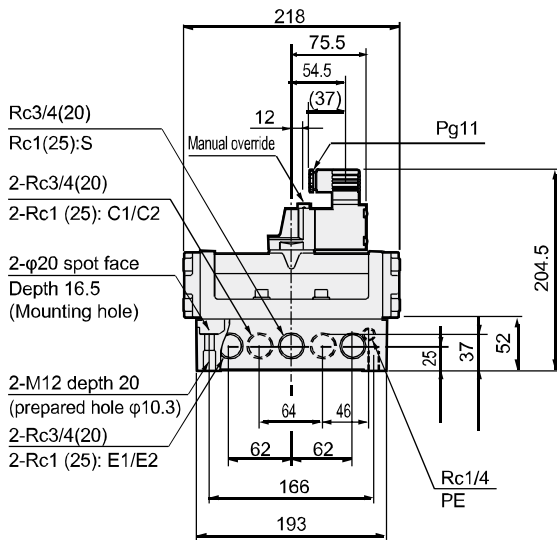
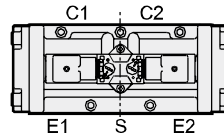
4F710

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



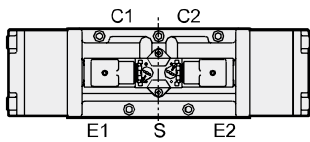
4F720

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

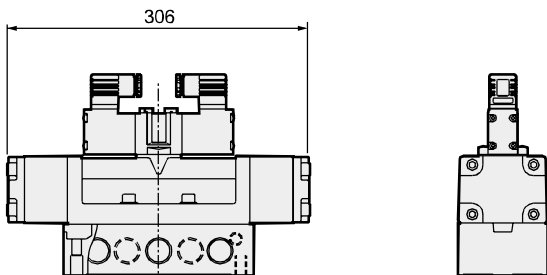
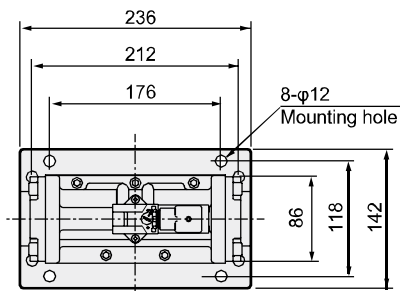


4F740

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



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



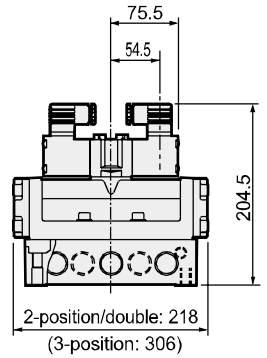
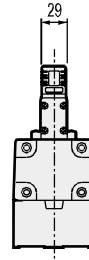
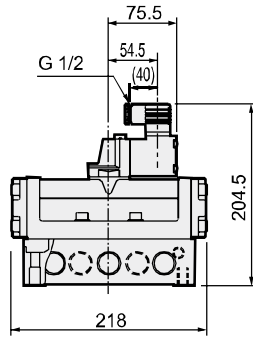
* Refer to page 1412 for details about check valves.

Dimensions

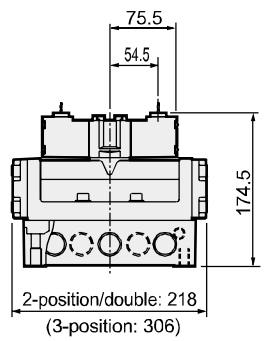
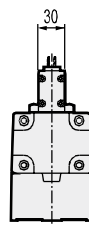
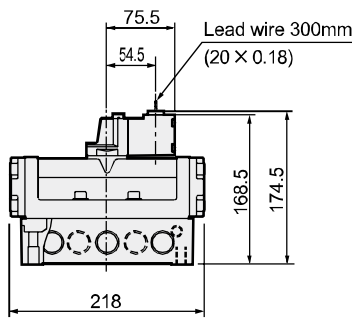
⊕ 2-position single

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

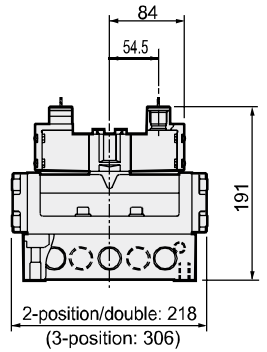
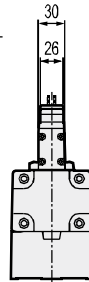
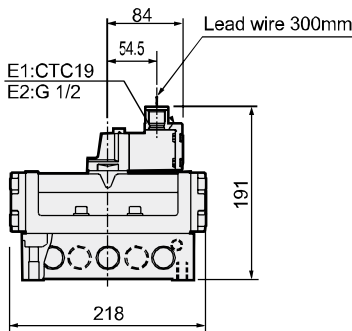
- DIN terminal box: (F)



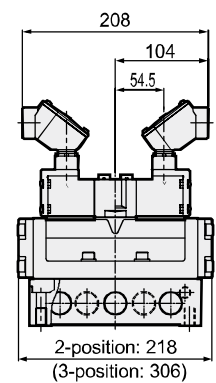
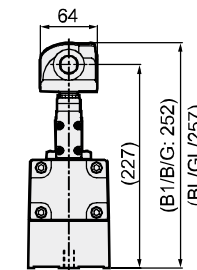
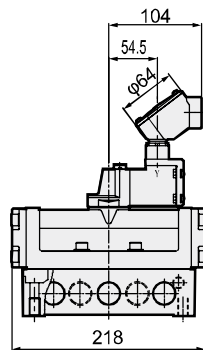
- Grommet lead wire: (E)



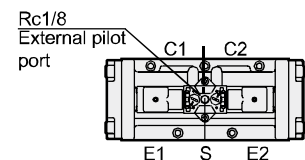
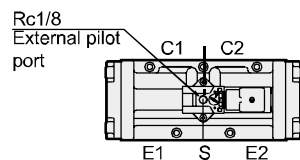
- Conduit lead wire: (E1/E2)



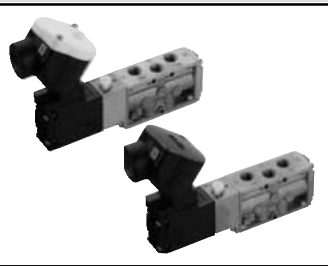
- Round terminal box: (B1/B/BL/G/GL)



- External pilot port: (K)



4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending



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

4F2/3 Series Outdoor options

● Cylinder bore size: $\phi 40$ to $\phi 100$

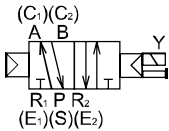


- 4GA/B
- M4GA/B
- MN4GA/B
- 4GA/B (mastr)
- 4GD/E
- M4GD/E
- MN4GD/E
- 4GA4/B4
- MN3E
MN4E
- W4GA/B2
- W4GB4
- 4TB
- 4L2-4/
LMF0
- MN3S0
MN4S0
- 4SA/B0
- 4KA/B
- 4KA/B (mastr)
- 4F**
- 4F (mastr)
- PV5G
GMF
- PV5
GMF
- PV5S-0
- 3QR
3QB
- MV3QR
- 3MA/B0
- 3PA/B
- P/M/B
- NP/NAP/
NVP
- 4F*0EX
- 4F*0E
- HMV
HSV
- 2QV
3QV
- SKH
- PCD
- Silencer
- TotAirSys
(Total Air)
- TotAirSys
(Gamma)
- Ending

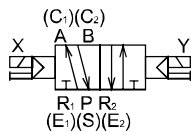
JIS symbol

● 5-port valve

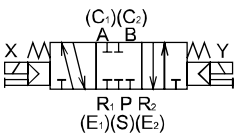
2-position single



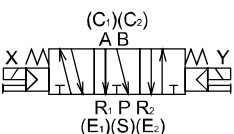
2-position double



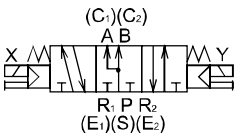
3-position all ports closed



3-position A/B/R connection



3-position P/A/B connection



Common specifications

Descriptions	Content	
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	$^{\circ}\text{C}$	-10 (14°F) to 60 (140°F) *1
Fluid temperature	$^{\circ}\text{C}$	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

Descriptions	Content		
Rated voltage	AC	100, 200(50/60 Hz)	
	DC	12.24	
Voltage fluctuation range	$\pm 10\%$		
Starting current	AC	100 V	0.170/0.140
		200 V	0.090/0.070
	DC	12 V	0.500
		24 V	0.250
Holding current	AC	100 V	0.100/0.080
		200 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
	DC	12 V	6.0
		24 V	6.0
Thermal class	B (molded coil)		

Individual specifications

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

Flow characteristics

Model No.	Solenoid position		Port size	Sonic conductance $C[\text{dm}^3/(\text{s}\cdot\text{bar})]$	Critical pressure ratio b	
4F2	2-position	Single	Rp1/4	3.0	0.33	
		Double				
	3-position	All ports closed		2.5	0.43	
		A/B/R connection				
4F3	2-position	Single	Rp1/4	3.9	0.42	
		Double				
	3-position	All ports closed		4.0	0.35	
		A/B/R connection				
		P/A/B connection				
	2-position	Single		Rp3/8	5.8	0.42
		Double				
		3-position			All ports closed	4.4
A/B/R connection						
3-position	P/A/B 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 $S \approx 5.0 \times C$.

4F2/4F3 Series (outdoor specification)

Single 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: Contact CKD, as the piping port threads are also compatible with Rc screws and NPT screws.
- *2: 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.
- *3: 12 VDC models are not available for BL with lamp and GL.
- *4: Support with a manifold is not available.
- *5: 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	Content	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 *1			
08	Rp1/4	●	●
10	Rp3/8		●
D Manual override *2			
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 *3	●	●
G	Round terminal box (G1/2) With gland (A-15a)	●	●
GL	Round terminal box (G1/2) with lamp *3 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 *3	●	●
DC24V	24 VDC	●	●
* Other custom order products			
DC48V		●	●
DC100V		●	●
DC110V		●	●

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

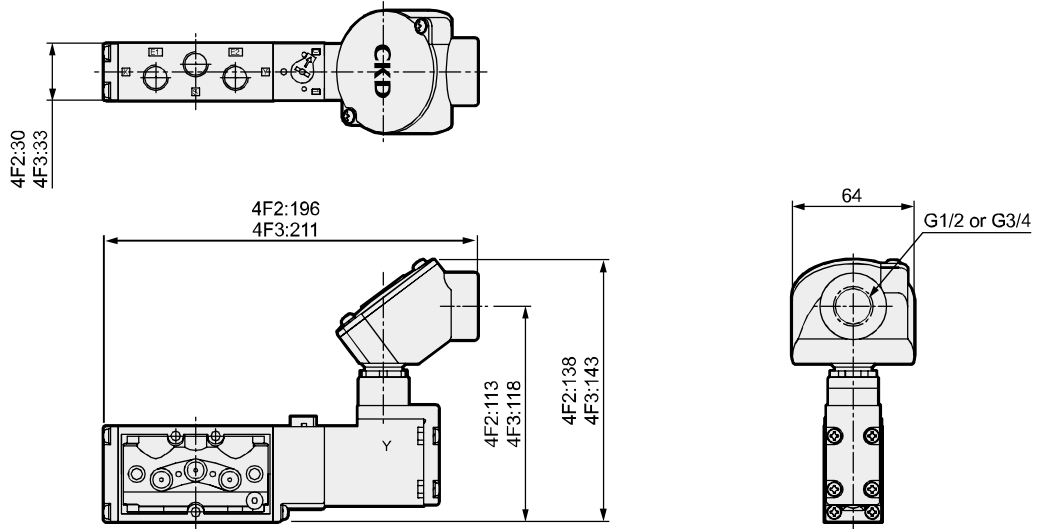
4F2/4F3 Series (outdoor specification)

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

Dimensions

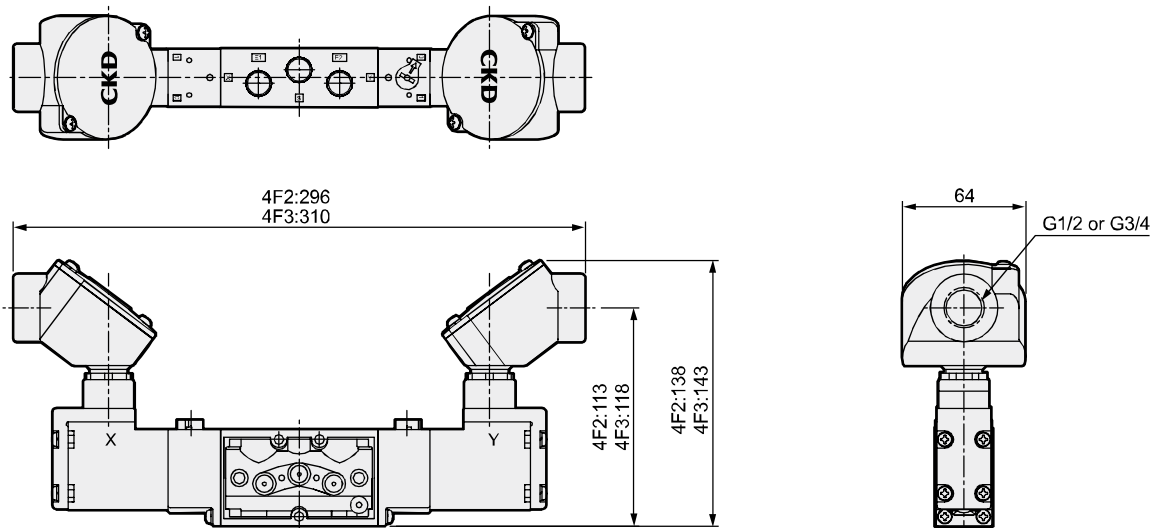
4F210/4F310

● 2-position single: round terminal box without lamp



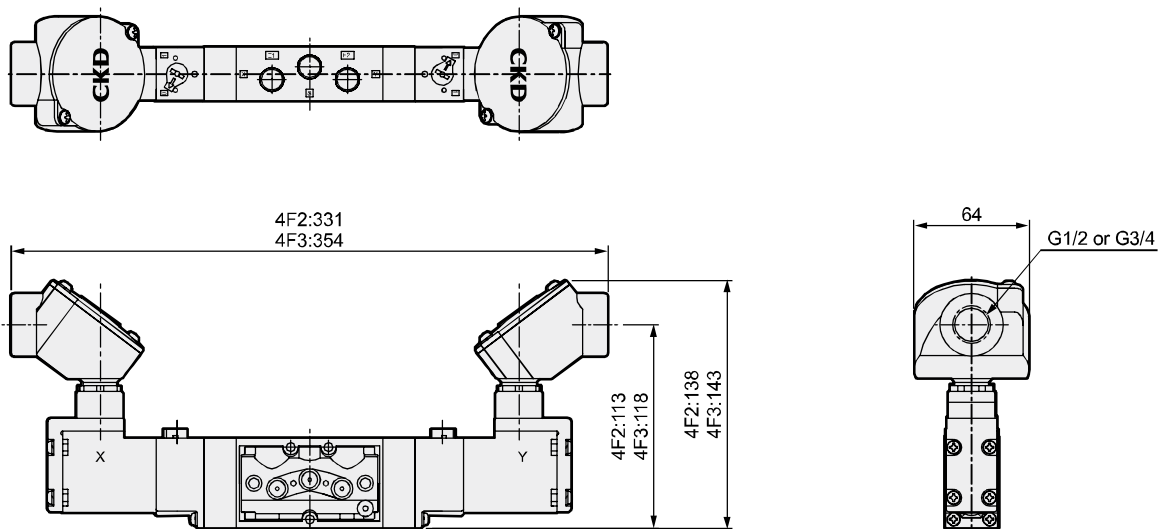
4F220/4F320

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



4F2³/₄0/4F3³/₅0

● 3-position: round terminal box without lamp



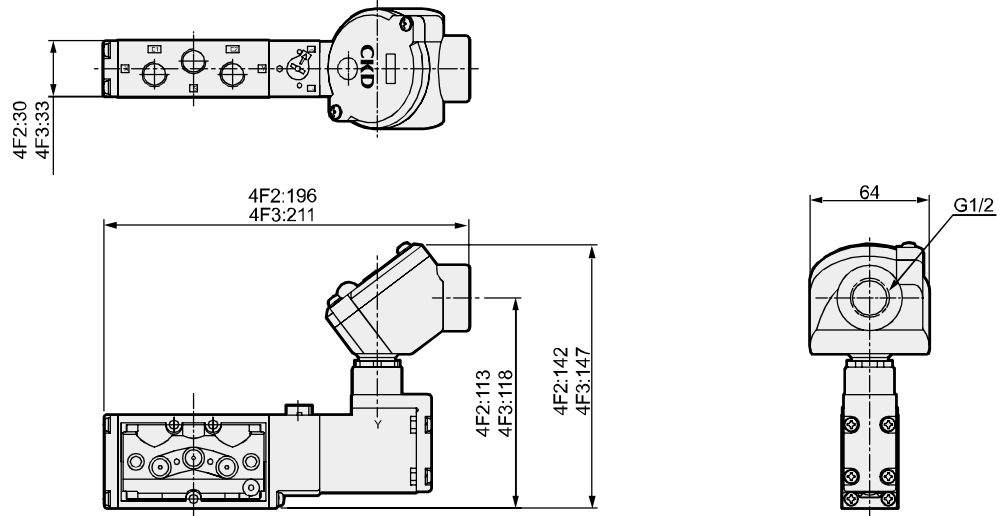
4F2/4F3 Series (outdoor specification)

Single valve/body piping

Dimensions

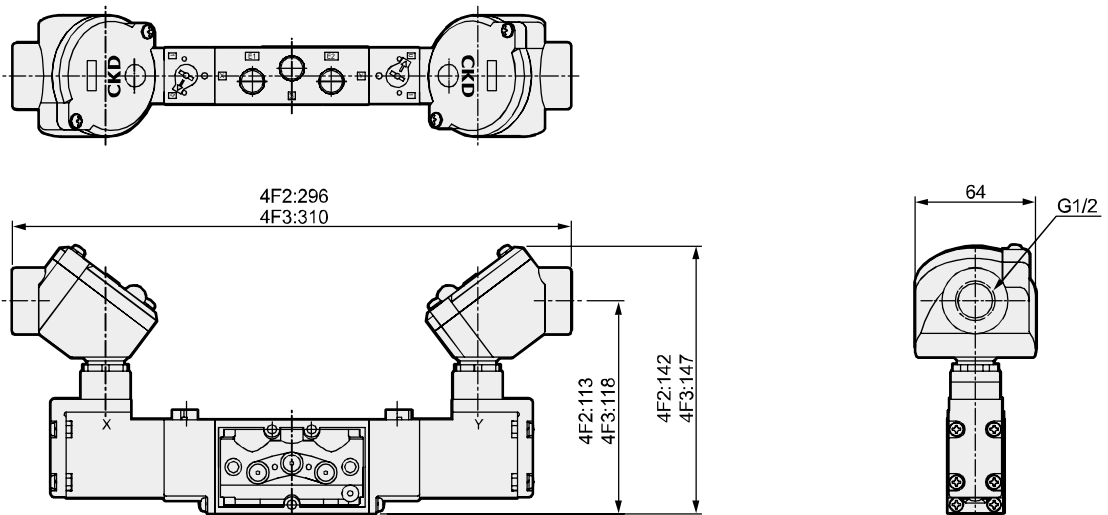
4F210/4F310

- 2-position single: round terminal box with lamp



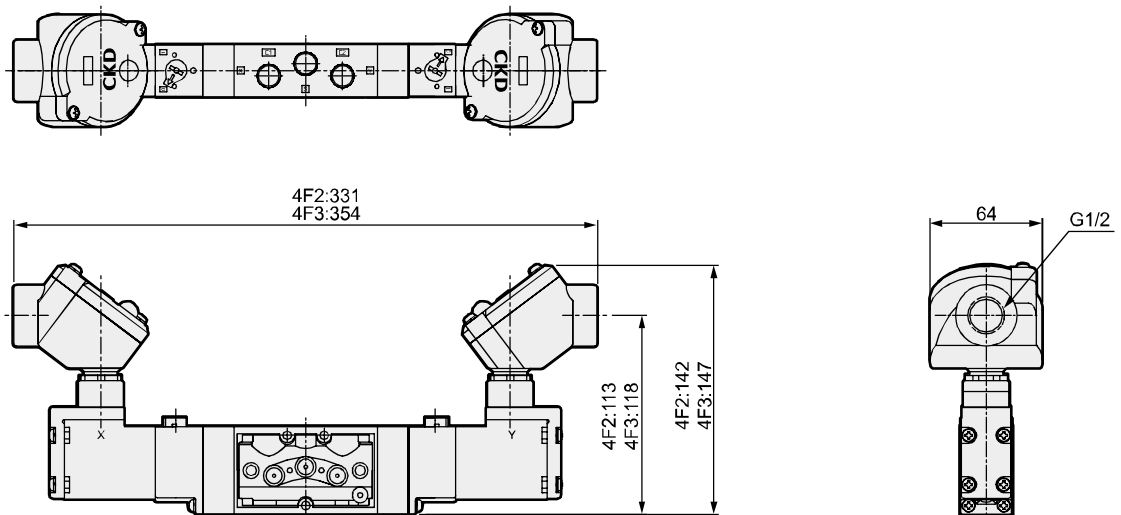
4F220/4F320

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

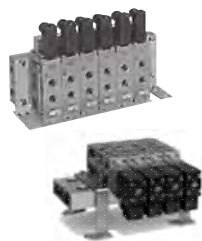


4F2 $\frac{3}{4}$ 0/4F3 $\frac{3}{4}$ 0

- 3-position: round terminal box with lamp



4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
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: $\phi 16$ to $\phi 100$



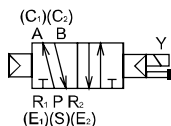
Refer to the Ending for details.



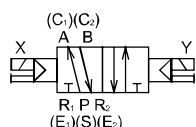
- 4GA/B
- M4GA/B
- MN4GA/B
- 4GA/B (mastr)
- 4GD/E
- M4GD/E
- MN4GD/E
- 4GA4/B4
- MN3E
MN4E
- W4GA/B2
- W4GB4
- 4TB
- 4L2-4/
LMF0
- MN3S0
MN4S0
- 4SA/B0
- 4KA/B
- 4KA/B (mastr)
- 4F
- 4F (mastr)
- PV5G
GMF
- PV5
GMF
- PV5S-0
- 3QR
3QB
- MV3QR
- 3MA/B0
- 3PA/B
- P/M/B
- NP/NAP/
NVP
- 4F*0EX
- 4F*0E
- HMV
HSV
- 2QV
3QV
- SKH
- PCD
- Silencer
- TotAirSys
(Total Air)
- TotAirSys
(Gamma)
- Ending

JIS symbol

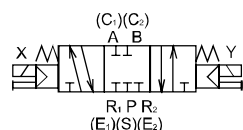
● 5-port valve
2-position single



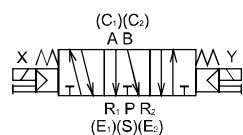
2-position double



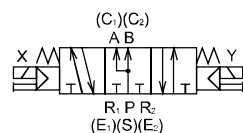
3-position all ports closed



3-position A/B/R connection



3-position P/A/B connection



Common specifications

Descriptions	Content
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

Descriptions		(A)4F0 to 1	4F2/3	
Rated voltage	AC	100, 200 (50/60 Hz)		
	DC	12, 24		
Voltage fluctuation range		$\pm 10\%$		
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)		

Individual specifications

1 MPa = 10 bar

Descriptions		(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
		A/B/R connection	-	(≈ 29 psi)	(≈ 22 psi)	(≈ 22 psi, 1.5 bar)
Port size	P (S) port	Rc1/8	Rc1/4	Rc3/8	Rc1/2	
	R ₁ (E ₁), R ₂ (E ₂) port	Rc1/8	Rc1/8	Rc3/8	Rc1/2	
	A(C ₁), B(C ₂) port	M5	Rp 1/8	Rp 1/8	Rp 1/4	Rp 1/4
Response time *3		ms	30	30	50	50

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

*2: G and NPT threads are also used for the piping ports of (A)4F0, 4F1, 4F2, and 4F3. Contact CKD for details.

*3: 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.

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	2-position	Single	0.19 X n + 0.19	0.29 X n + 0.26	0.23 X n + 0.14	0.82 X n + 0.54	0.71 X n + 0.36	1.04 X n + 0.98	0.70 X n + 0.45
			Double	0.24 X n + 0.19	0.35 X n + 0.26	0.29 X n + 0.14	1.15 X n + 0.54	1.04 X n + 0.36	1.36 X n + 0.98	1.02 X n + 0.45
(n: Station No.)		3-position	-	0.42 X n + 0.26	0.36 X n + 0.14	1.28 X n + 0.54	1.17 X n + 0.36	1.55 X n + 0.98	1.21 X n + 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	0.74	0.27
		Double			
4F1	2-position	Single	Rp1/8	2.0	0.33
		Double			
	3-position	All ports closed	Rp1/4	1.5	0.31
		A/B/R connection		1.6	0.29
4F2	2-position	Single	Rp1/4	3.0	0.33
		Double			
	3-position	All ports closed		2.5	0.43
		A/B/R connection			
4F3	2-position	Single	Rp1/4	3.9	0.42
		Double			
	3-position	All ports closed		4.0	0.35
		A/B/R connection			
		P/A/B connection	4.0		
	2-position	Single	Rp3/8	5.8	0.42
		Double			
		3-position		All ports closed	4.4
A/B/R connection				5.1	
3-position	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, (A) is A4F010.

Copper and PTFE free specifications

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

** - Voltage - **P6**

(4F0 is not available.)

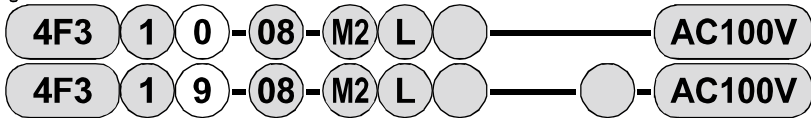
4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (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 1414 to 1415).

● Manifold



4F3: up to S5
4F1/2: up to S4
4F0: up to S2

A Model No.

B Solenoid position

C Port size

D Manual override

E Electrical connections

F Other options

G Station No.

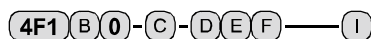
H Exhaust installation method

I Voltage

⚠ Precautions for model No. selection

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

■ For 4F0 to 4F1



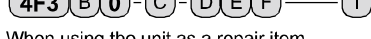
When using the unit as a repair item, separately also purchase the gasket kit listed below depending on the model.

- 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, I



(However, when item ⑩ 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 1343.)

*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 1380.

Code	Content	(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 (when there are multiple solenoid positions)	●	●	●	●
C Port size					
M5	M5	●			
06	Rp1/8	●	●		
08	Rp1/4		●	●	●
10	Rp3/8			●	●
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 type bracket (for 2-position single)	●	●	●	●
CU	Common exhaust/U type bracket	●	●	●	●
IL	Individual exhaust/L type bracket (for 2-position single)	●	●	●	●
IU	Individual exhaust/U type 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

		A Model No.			
		(A)4F0	4F1	4F2	4F3
[Electrical connection list]					
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 type 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 type 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 1343 for the circuit diagram with a surge suppressor/lamp.)

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

(A)M4F0 to 3 Series

Individual wiring manifold; body piping

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/
LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/
NVP
4F*0EX
4F*0E
HNV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys
(Total Air)
TotAirSys
(Gamma)
Ending

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

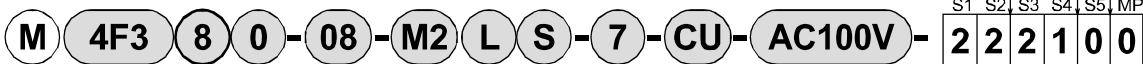
M4F3-08 -MP-KIT

Model No.

A Port size

A Port size	
08	Rp1/8
10	Rp3/4

How to order mix manifold



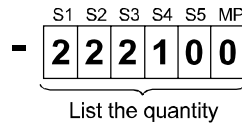
Mix manifold "8"

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

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

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

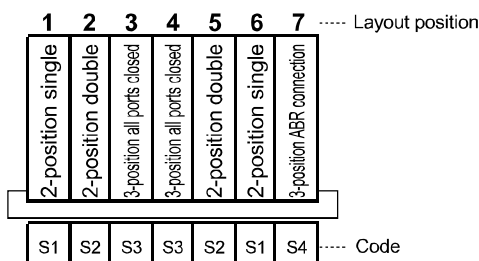
- (2) List the function (solenoid position) and layout position in the field for remarks.

Switching position code = ○, ○ th station (refer to the dimensions (pages 1382 to 1402) 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)

M4F380-08-M2LS-7-CU-AC100V - **2 2 2 1 0 0**

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

MEMO

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

(A)M4F0 Series

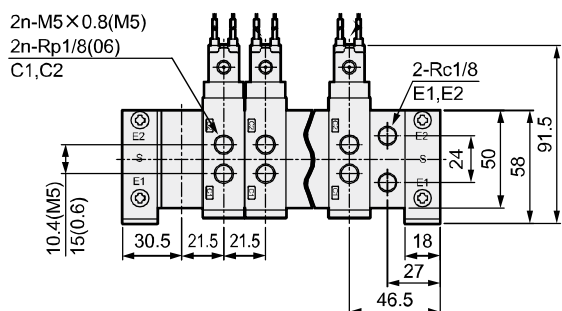
Individual wiring manifold; body piping

Dimensions 

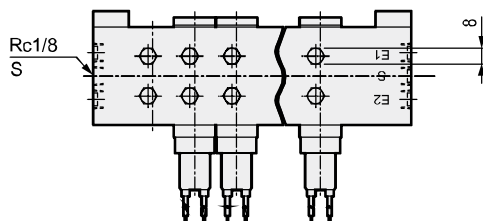
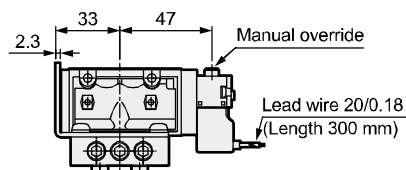
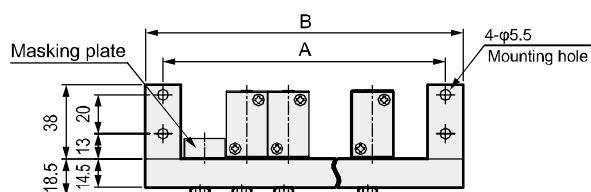
- 4GA/B
- M4GA/B
- MN4GA/B
- 4GA/B (mastr)
- 4GD/E
- M4GD/E
- MN4GD/E
- 4GA4/B4
- MN3E
MN4E
- W4GA/B2
- W4GB4
- 4TB
- 4L2-4/
LMF0
- MN3S0
MN4S0
- 4SA/B0
- 4KA/B
- 4KA/B (mastr)
- 4F**
- 4F (mastr)
- PV5G
GMF
- PV5
GMF
- PV5S-0
- 3QR
3QB
- MV3QR
- 3MA/B0
- 3PA/B
- P/M/B
- NP/NAP/
NVP
- 4F*0EX
- 4F*0E
- HMV
HSV
- 2QV
3QV
- SKH
- PCD
- Silencer
- TotAirSys
(Total Air)
- TotAirSys
(Gamma)
- Ending

AM4F010 (2-position single only)

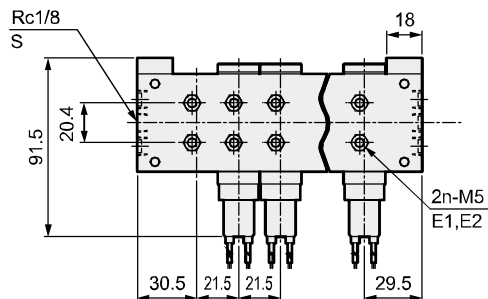
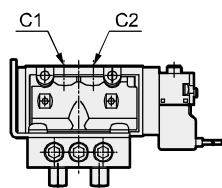
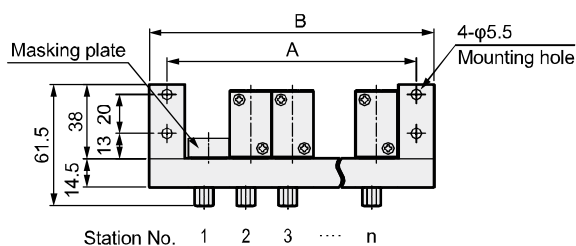
● Common exhaust/with L bracket: grommet lead wire (CL)



Station No. 1 2 3 ... n



● Individual exhaust/with L bracket (IL)



Common exhaust

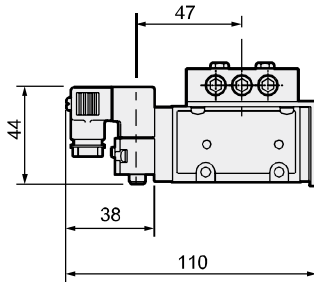
Individual exhaust

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

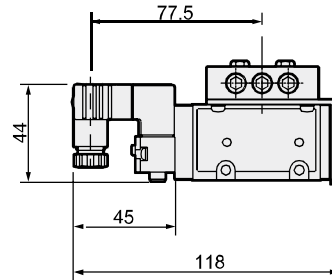
* Refer to page 1412 for details about check valves.

Dimensions

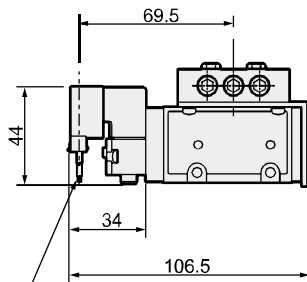
● Compact terminal box: (B)



● Compact terminal box with lamp: (L)

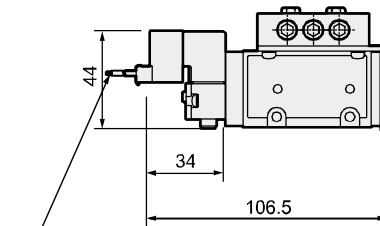


● C type connector: (C/C0*/C1/C2/C2*/C3)



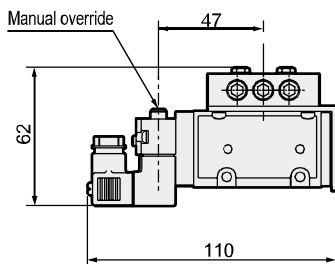
Lead wire
Length 300 to 2000 mm
(C/C0*/C2/C2*)

● D type 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 (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

(A)M4F0 Series

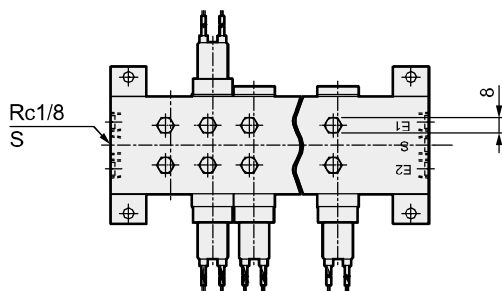
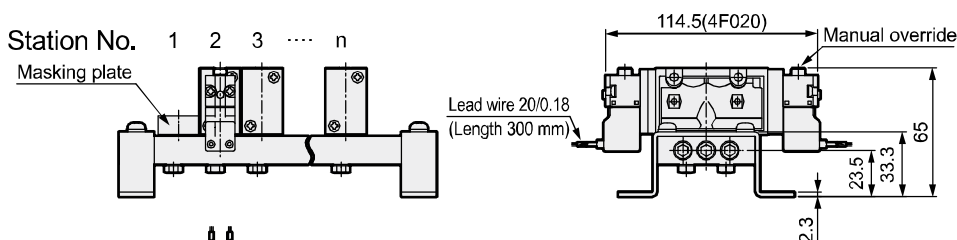
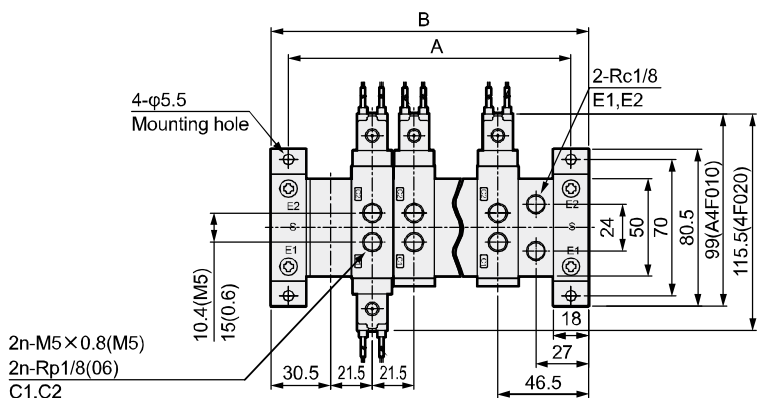
Individual wiring manifold; body piping

Dimensions 

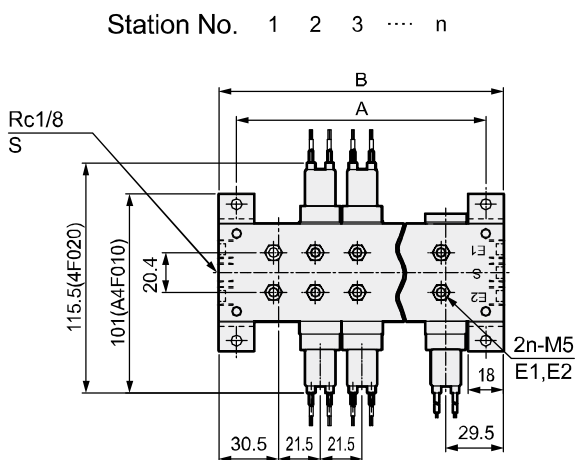
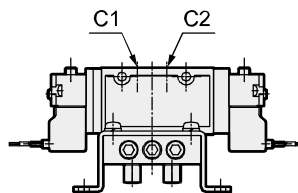
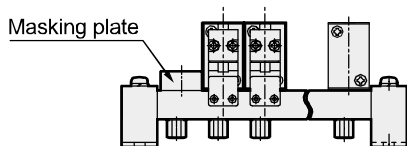
- 4GA/B
- M4GA/B
- MN4GA/B
- 4GA/B (mastr)
- 4GD/E
- M4GD/E
- MN4GD/E
- 4GA4/B4
- MN3E
- MN4E
- W4GA/B2
- W4GB4
- 4TB
- 4L2-4/LMF0
- MN3S0
- MN4S0
- 4SA/B0
- 4KA/B
- 4KA/B (mastr)
- 4F**
- 4F (mastr)
- PV5G
- GMF
- PV5
- GMF
- PV5S-0
- 3QR
- 3QB
- MV3QR
- 3MA/B0
- 3PA/B
- P/M/B
- NP/NAP/NVP
- 4F*0EX
- 4F*0E
- HMV
- HSV
- 2QV
- 3QV
- SKH
- PCD
- Silencer
- TotAirSys (Total Air)
- TotAirSys (Gamma)
- Ending

AM4F010/M4F020

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



● Individual exhaust/with U bracket (IU)



Common exhaust

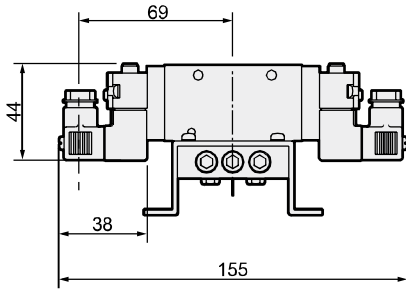
Individual exhaust

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

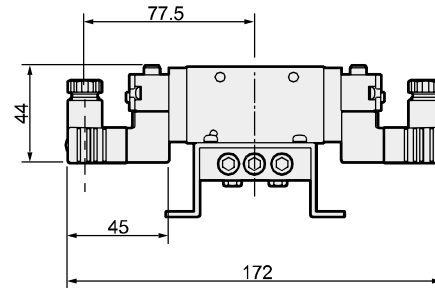
* Refer to page 1412 for details about check valves.

Dimensions

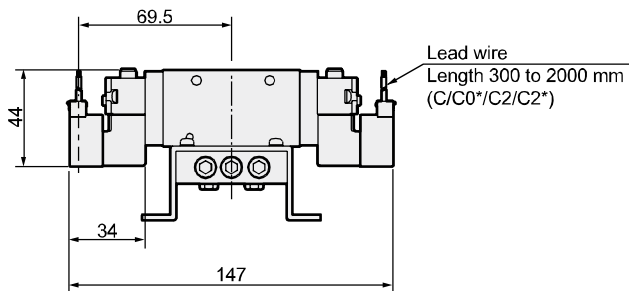
● Compact terminal box: (B)



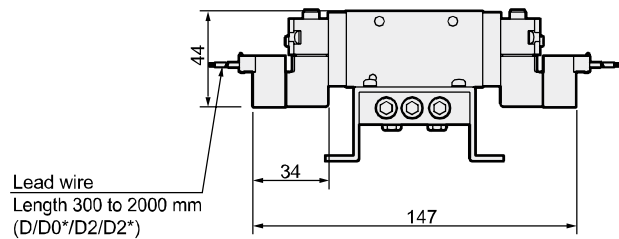
● Compact terminal box with lamp: (L)



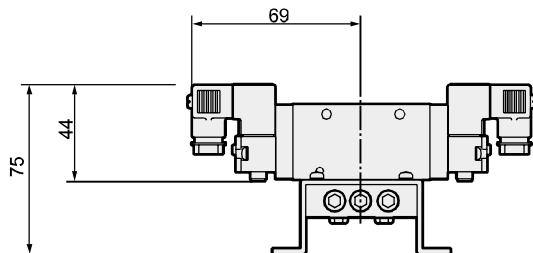
● C type connector: (C/C0*/C1/C2/C2*/C3)



● D type connector: (D/D0*/D1/D2/D2*/D3)



● Position change of manual override: (R)



4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

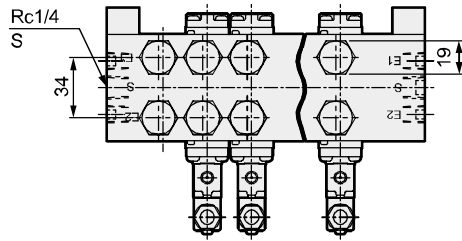
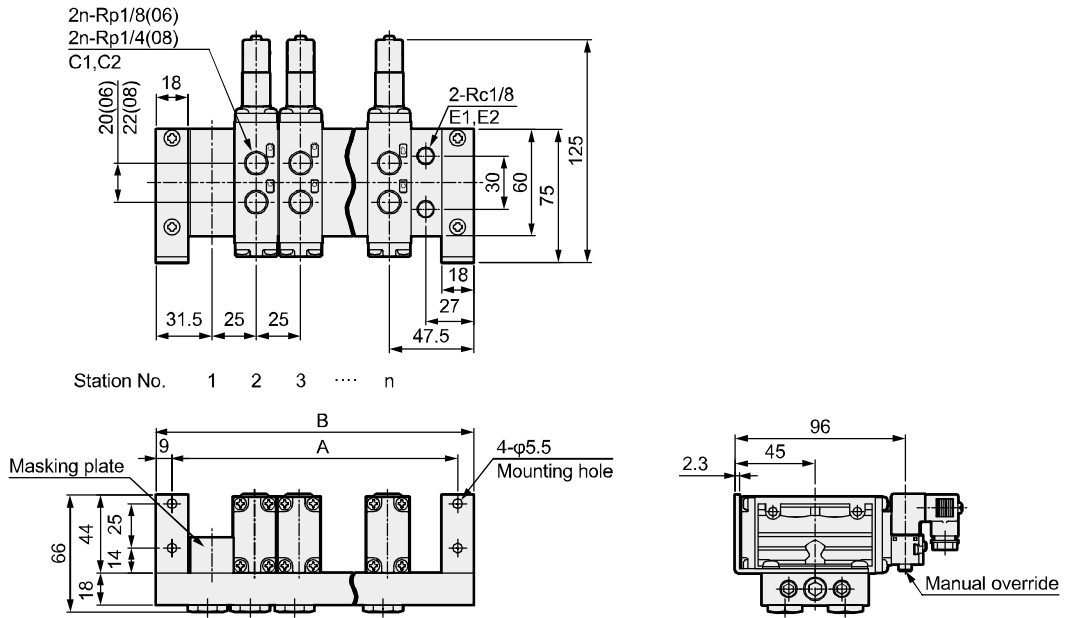
M4F1 Series

Individual wiring manifold; body piping

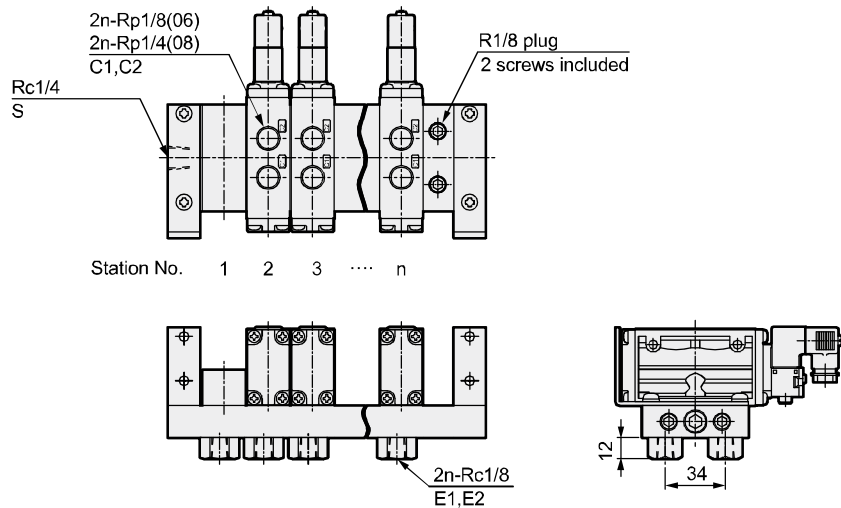
Dimensions 

M4F110 (2-position single)

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



● Individual exhaust/with L bracket (IL)



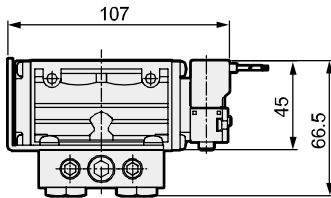
Common exhaust/individual exhaust

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

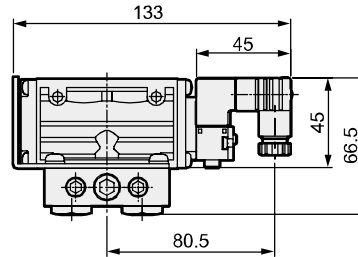
* Refer to page 1412 for details about check valves.

Dimensions

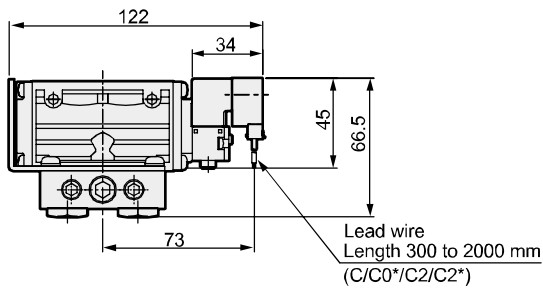
- Grommet lead wire: (E)



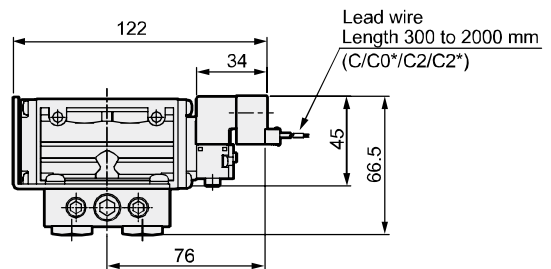
- Compact terminal box with lamp: (L)



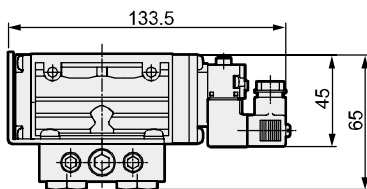
- C type connector: (C/C0*/C1/C2/C2*/C3)



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



- Position change of manual override: (R)



4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

M4F1 Series

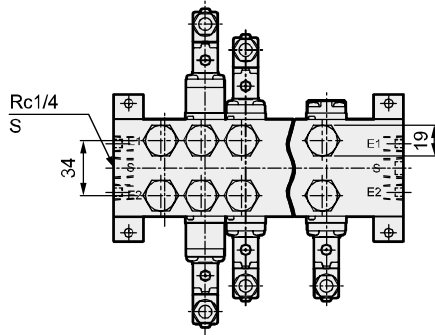
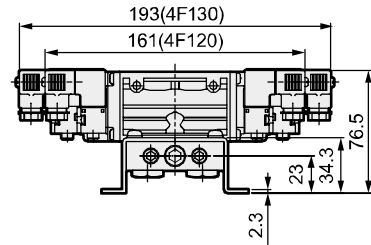
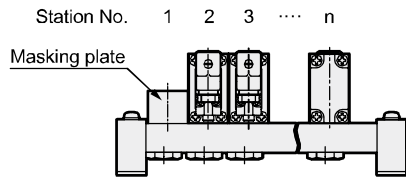
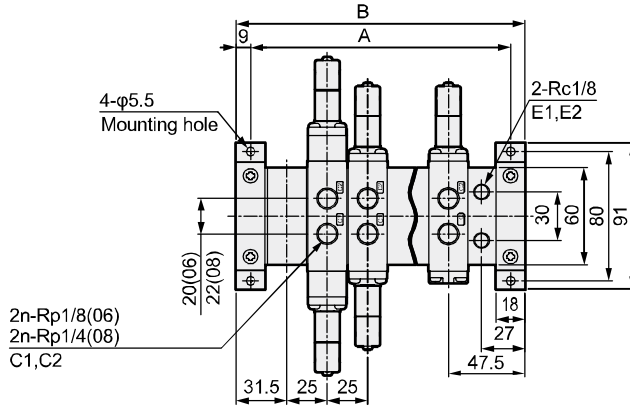
Individual wiring manifold; body piping

Dimensions

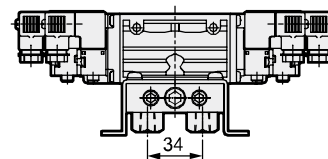
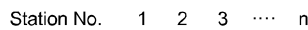
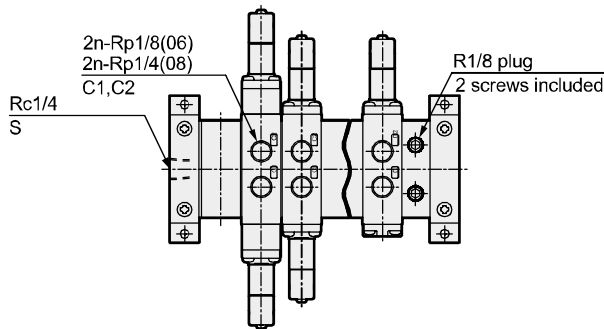
M4F1 $\frac{1}{3}$ 0

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

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



● Individual exhaust/with U bracket (IU)



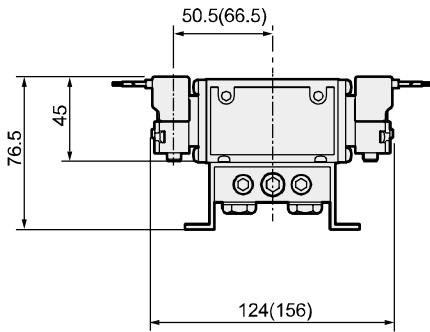
Common exhaust/individual exhaust

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

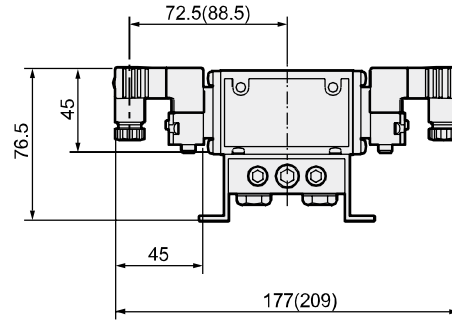
* Refer to page 1412 for details about check valves.

Dimensions

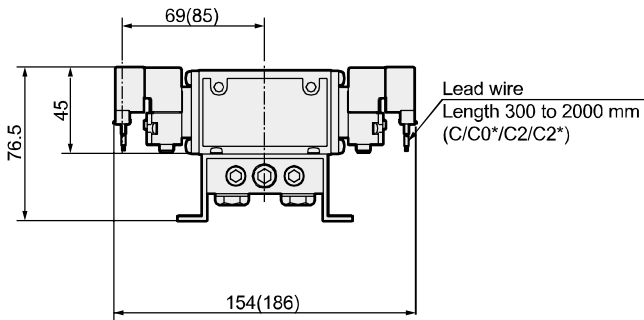
- Grommet lead wire: (E)



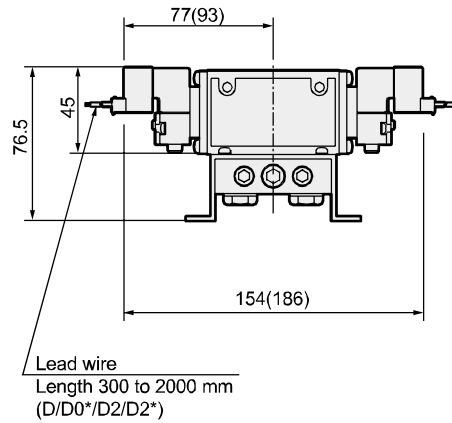
- Compact terminal box with lamp: (L)



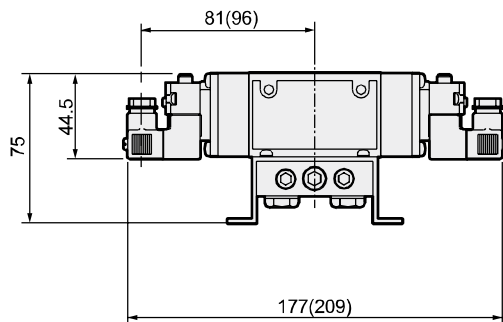
- C type connector: (C/C0*/C1/C2/C2*/C3)



- D type 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 (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

M4F1 Series

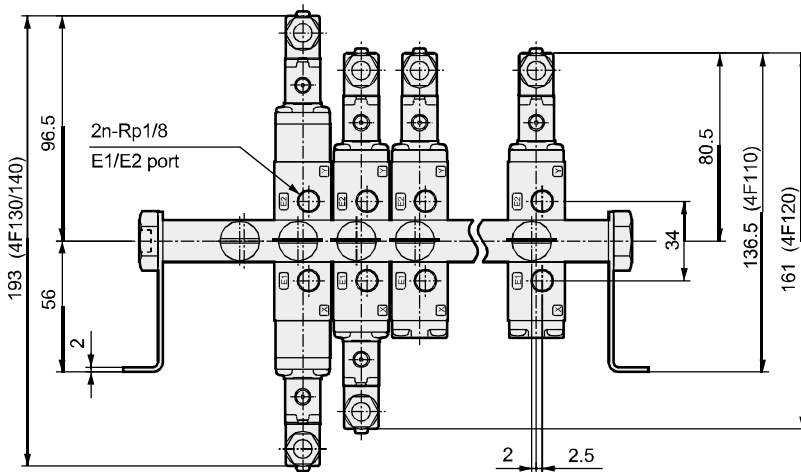
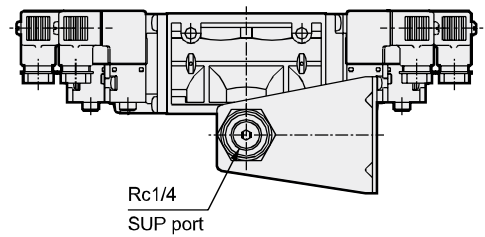
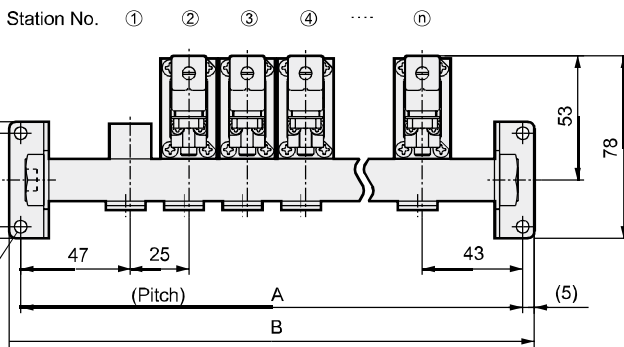
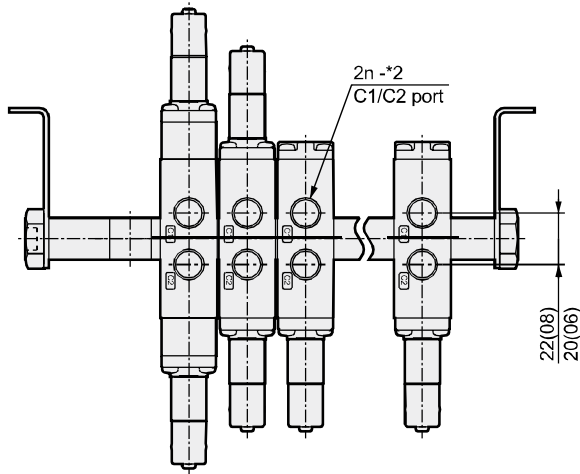
Individual wiring manifold; body piping

Dimensions



M4F1*0

● Individual exhaust (I)



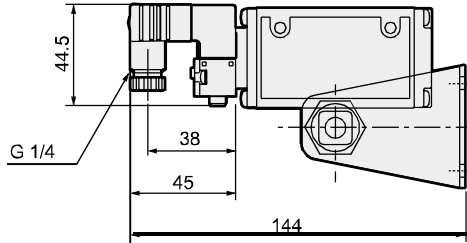
Individual exhaust

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

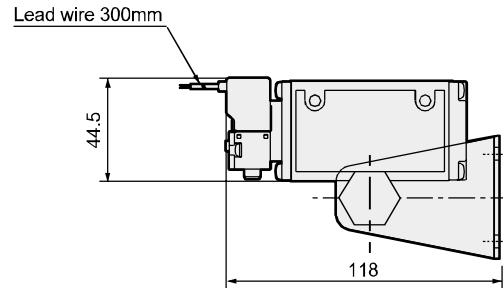
* Refer to page 1412 for details about check valves.

Dimensions

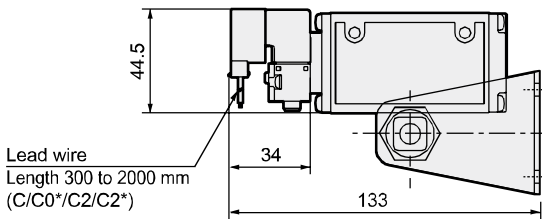
- Compact terminal box with lamp: (L)



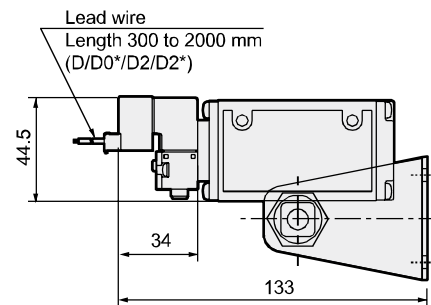
- Grommet lead wire: (E)



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



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



4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

M4F2 Series

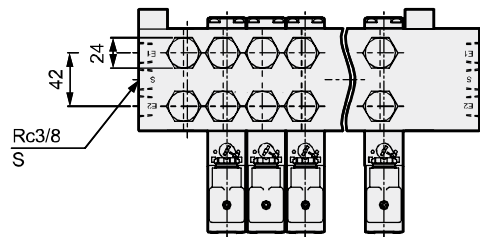
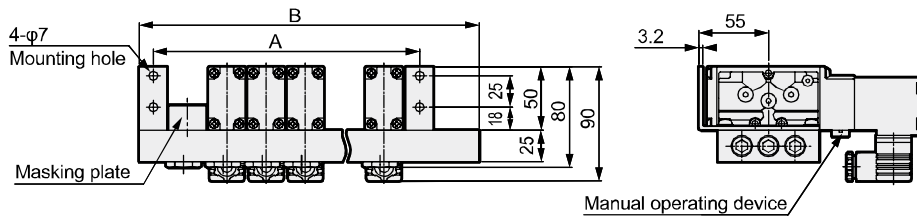
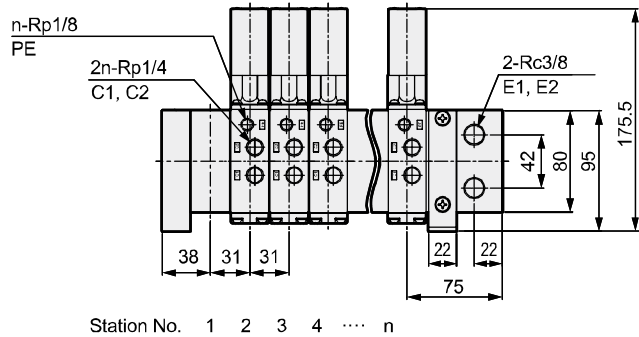
Individual wiring manifold; body piping

Dimensions

- 4GA/B
- M4GA/B
- MN4GA/B
- 4GA/B (mastr)
- 4GD/E
- M4GD/E
- MN4GD/E
- 4GA4/B4
- MN3E
- MN4E
- W4GA/B2
- W4GB4
- 4TB
- 4L2-4/ LMF0
- MN3S0
- MN4S0
- 4SA/B0
- 4KA/B
- 4KA/B (mastr)
- 4F**
- 4F (mastr)
- PV5G
- GMF
- PV5
- GMF
- PV5S-0
- 3QR
- 3QB
- MV3QR
- 3MA/B0
- 3PA/B
- P/M/B
- NP/NAP/ NVP
- 4F*0EX
- 4F*0E
- HMV
- HSV
- 2QV
- 3QV
- SKH
- PCD
- Silencer
- TotAirSys (Total Air)
- TotAirSys (Gamma)
- Ending

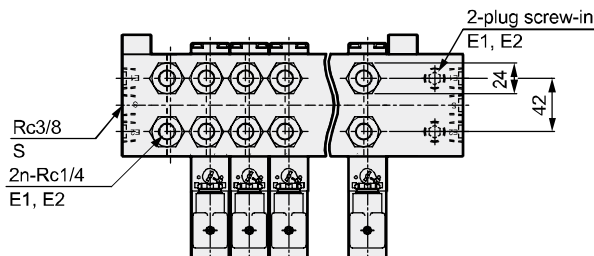
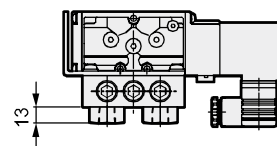
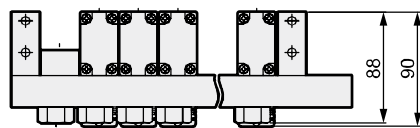
M4F210 (2-position single)

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



● Individual exhaust/with L bracket (IL)

Station No. 1 2 3 4 ... n



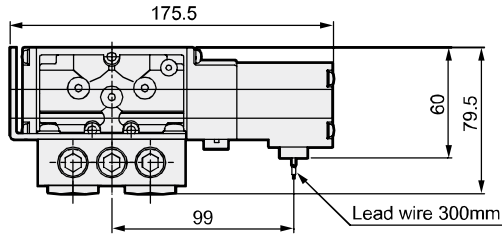
Common exhaust/individual exhaust

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

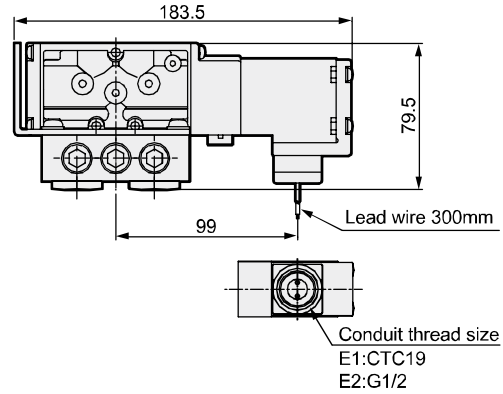
* Refer to page 1412 for details about check valves.

Dimensions

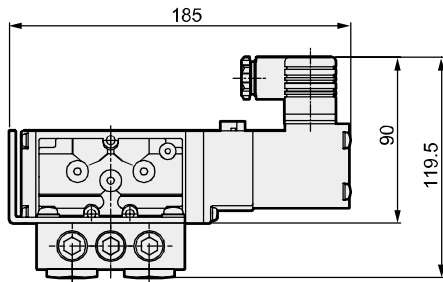
● Grommet lead wire: (E)



● Conduit lead wire: (E1/E2)



● Position change of manual override: (R)



4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

M4F2 Series

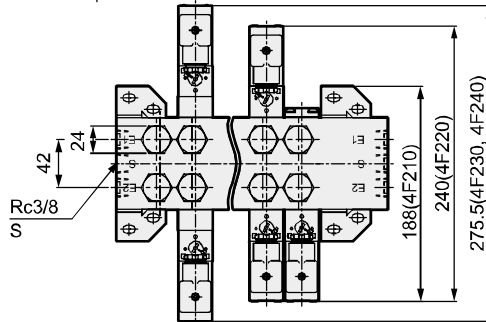
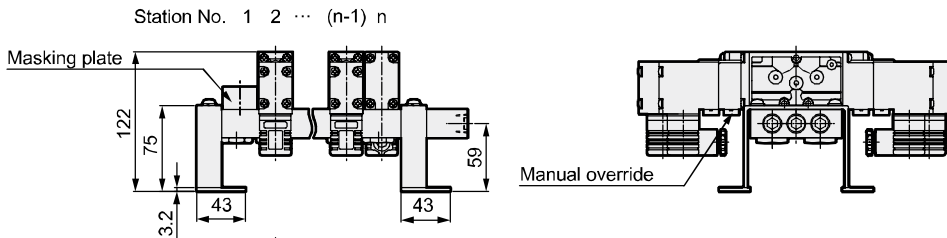
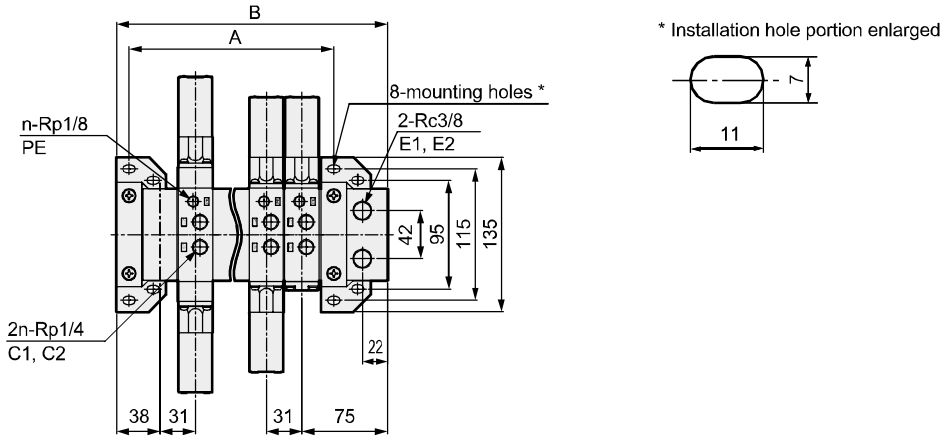
Individual wiring manifold; body piping

Dimensions 

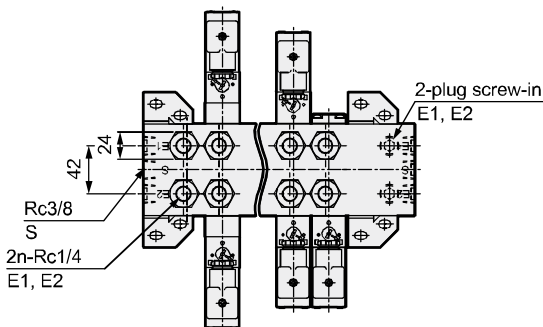
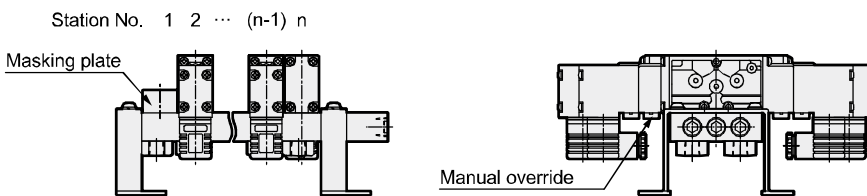
M4F2 $\frac{1}{2}$ 0

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

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



● Individual exhaust/with U bracket (IU)



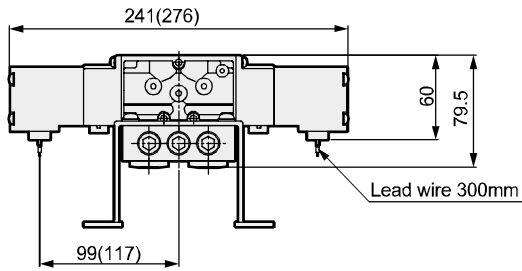
Common exhaust/individual exhaust

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

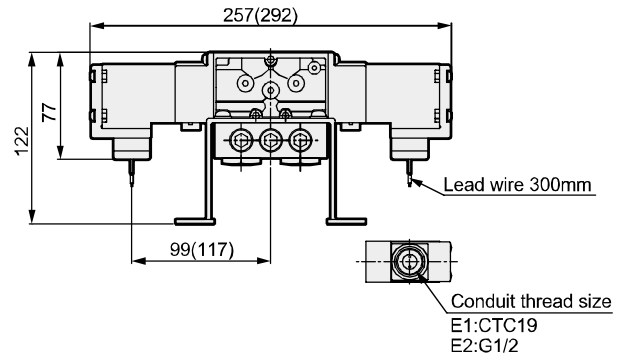
* Refer to page 1412 for details about check valves.

Dimensions

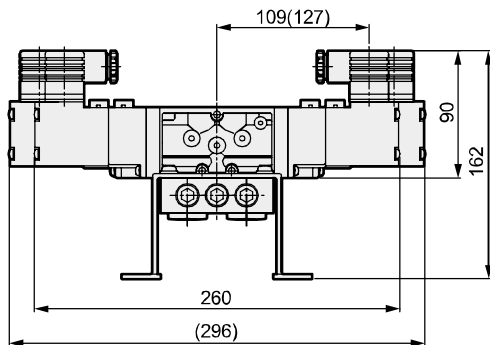
● Grommet lead wire: (E)



● 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 (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

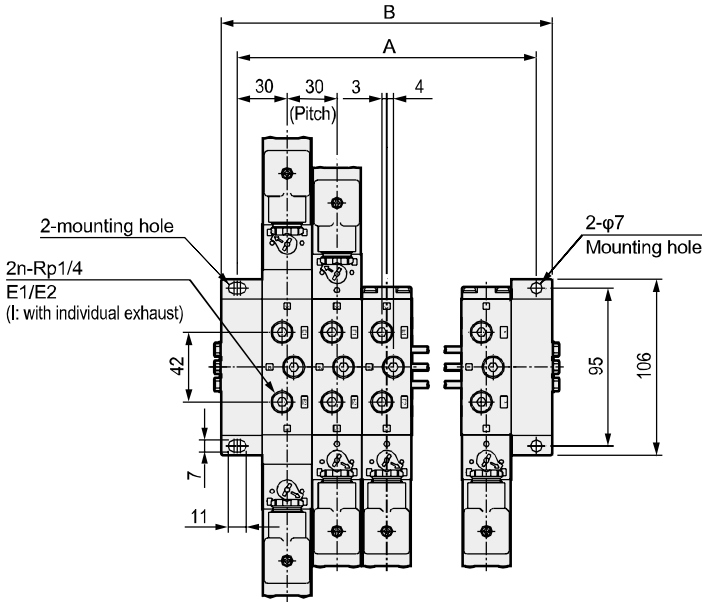
M4F2 Series

Individual wiring manifold; body piping

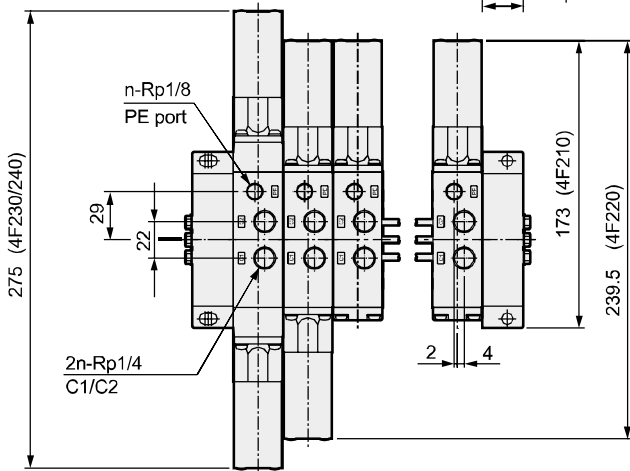
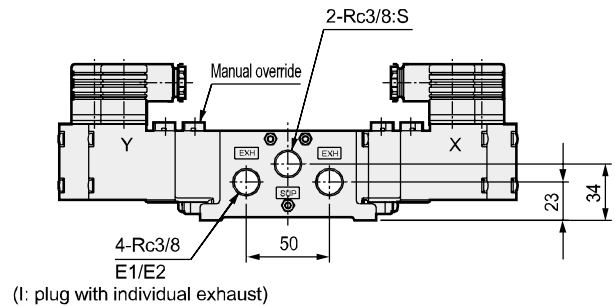
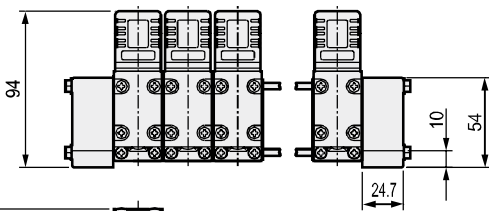
Dimensions

M4F2*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

Silencer

TotAirSys (Total Air)

TotAirSys (Gamma)

Ending

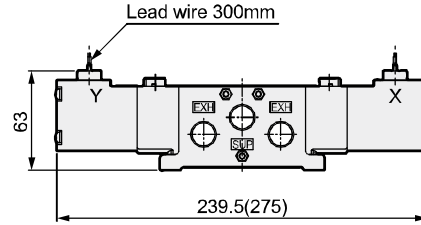
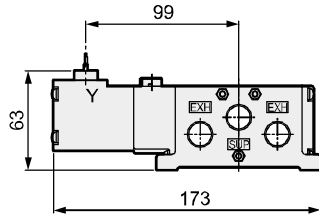
* Refer to page 1412 for details about check valves.

Dimensions

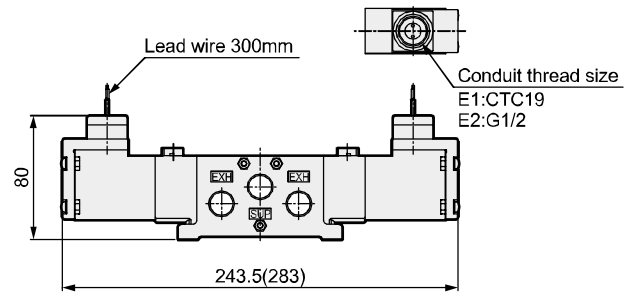
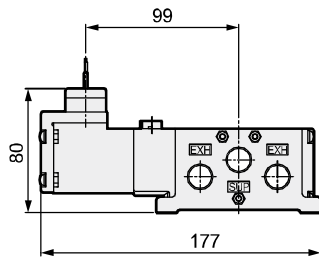
① 2-position single

② 2-position double solenoid, 3 position

- Grommet lead wire: (E)

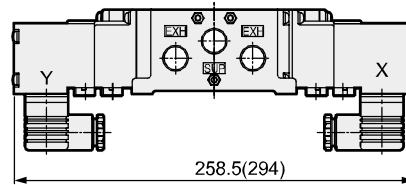
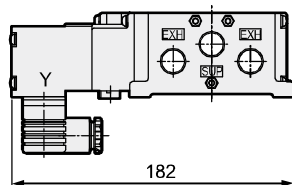


- Conduit lead wire: (E1/E2)



- Position change of manual override: (R)

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



4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

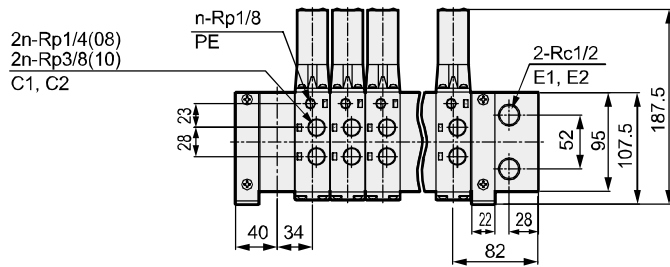
M4F3 Series

Individual wiring manifold; body piping

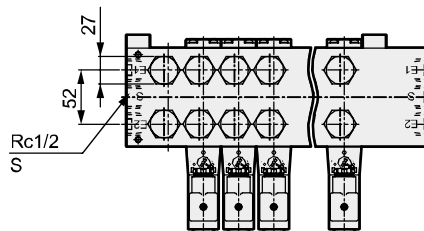
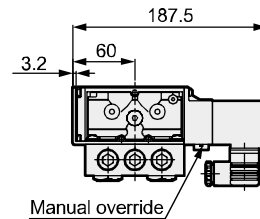
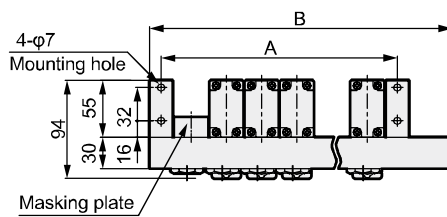
Dimensions 

M4F310 (2-position single)

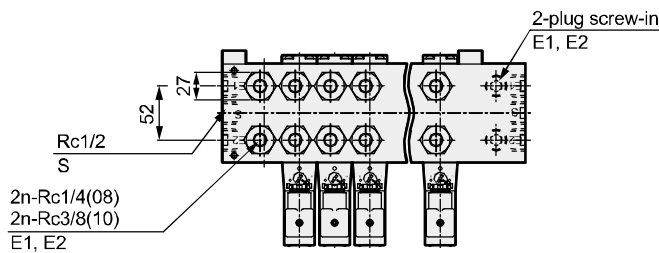
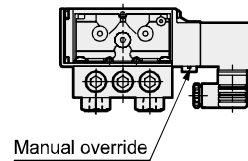
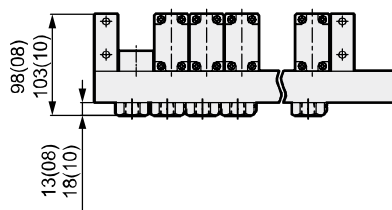
● Common exhaust/with L bracket: compact terminal box (CL)



Station No. 1 2 3 n



● Individual exhaust/with L bracket (IL)



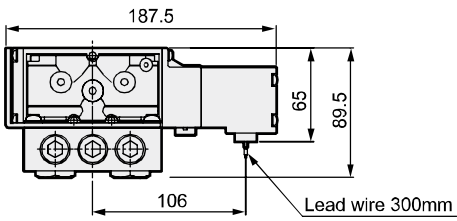
Common exhaust/individual exhaust

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

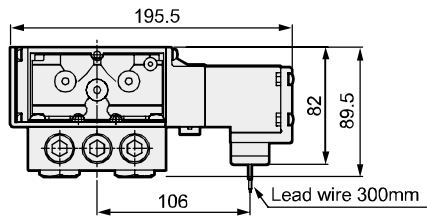
* Refer to page 1412 for details about check valves.

Dimensions

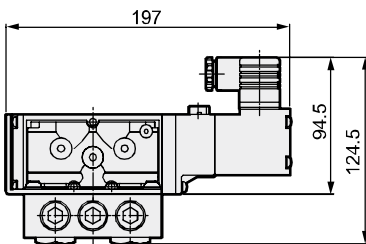
● Grommet lead wire: (E)



● Conduit lead wire: (E1/E2)



● Position change of manual override: (R)



4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

M4F3 Series

Individual wiring manifold; body piping

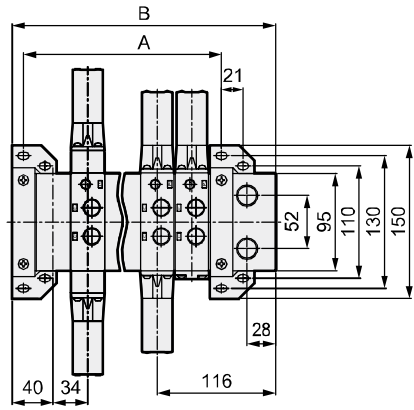
- 4GA/B
- M4GA/B
- MN4GA/B
- 4GA/B (mastr)
- 4GD/E
- M4GD/E
- MN4GD/E
- 4GA4/B4
- MN3E
MN4E
- W4GA/B2
- W4GB4
- 4TB
- 4L2-4/
LMF0
- MN3S0
MN4S0
- 4SA/B0
- 4KA/B
- 4KA/B (mastr)
- 4F**
- 4F (mastr)
- PV5G
GMF
- PV5
GMF
- PV5S-0
- 3QR
3QB
- MV3QR
- 3MA/B0
- 3PA/B
- P/M/B
- NP/NAP/
NVP
- 4F*0EX
- 4F*0E
- HMV
HSV
- 2QV
3QV
- SKH
- PCD
- Silencer
- TotAirSys
(Total Air)
- TotAirSys
(Gamma)
- Ending

Dimensions

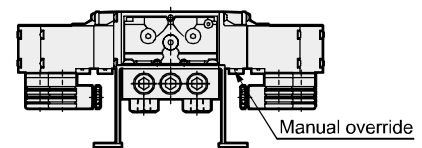
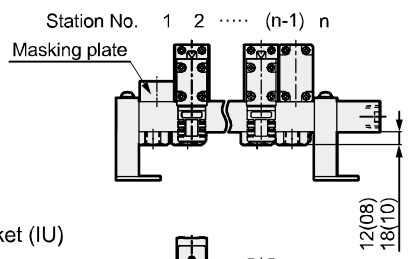
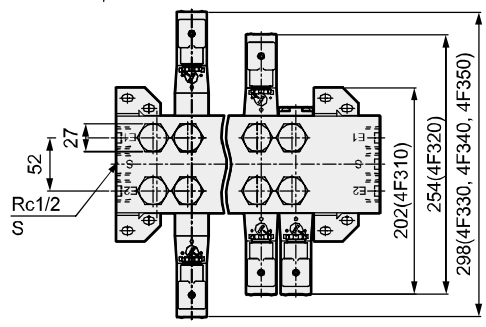
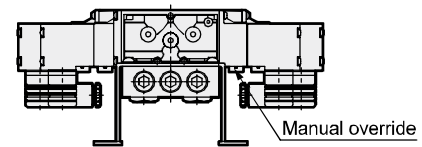
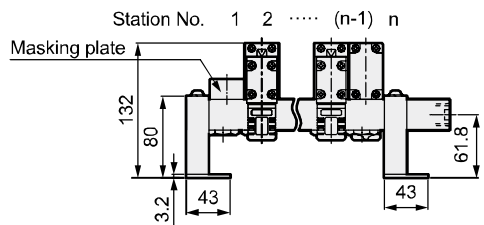
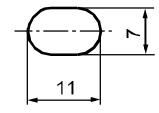
1
2
3
4
5
M4F3 3 0

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

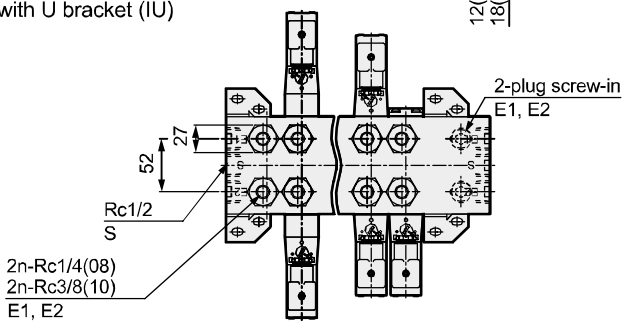
* The manual override position change (R) is recommended.



* Installation hole portion enlarged



● Individual exhaust/with U bracket (IU)



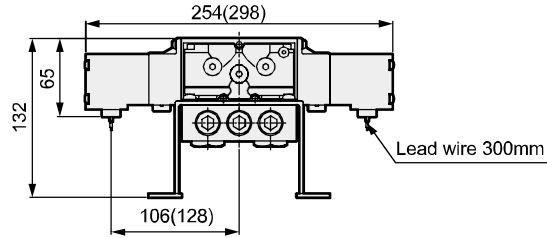
Common exhaust/individual exhaust

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

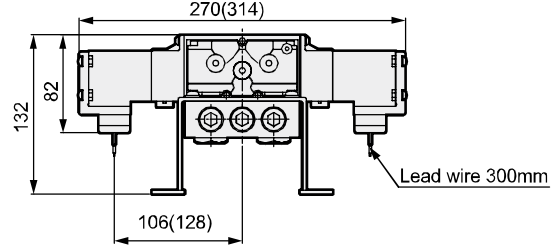
* Refer to page 1412 for details about check valves.

Dimensions

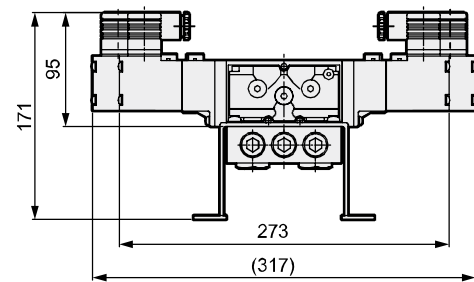
● Grommet lead wire: (E)



● 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 (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

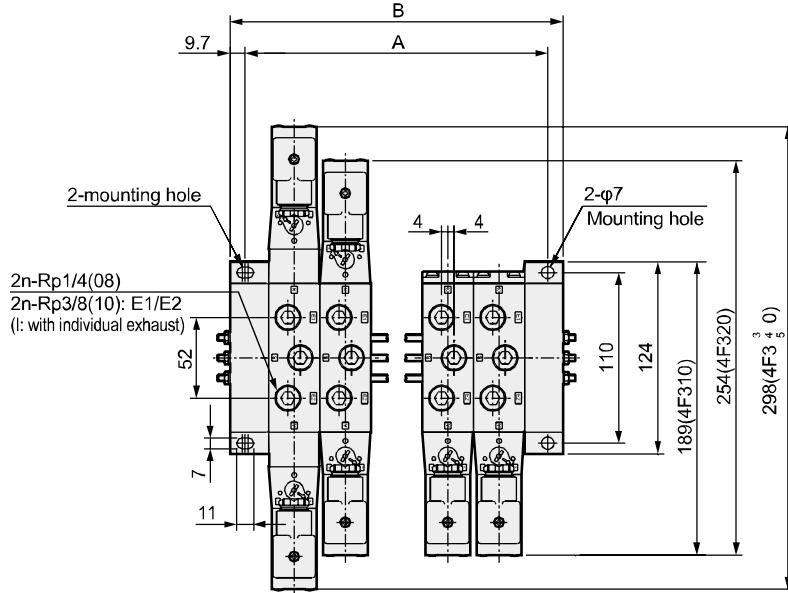
M4F3 Series

Individual wiring manifold; body piping

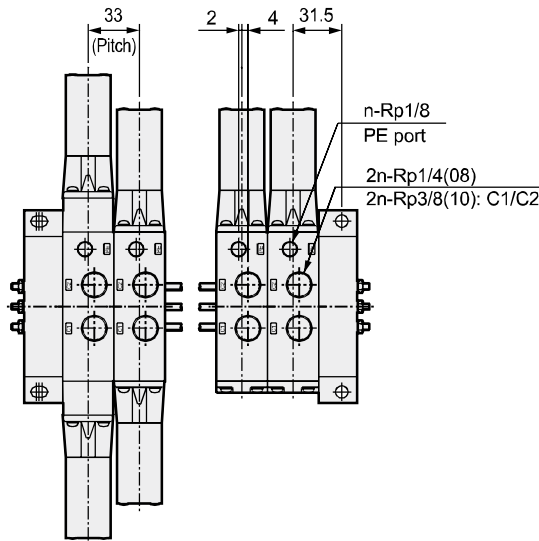
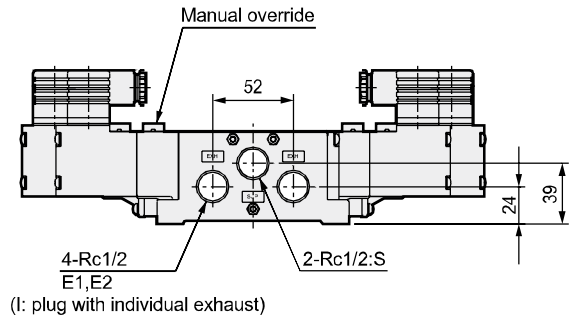
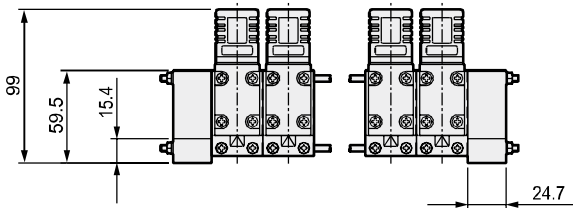
Dimensions 

M4F3*0

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



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



Individual exhaust
Common exhaust

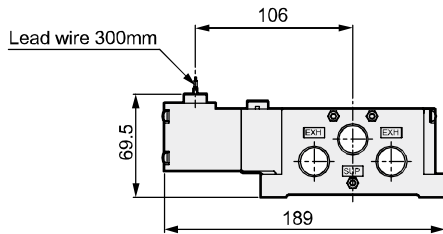
Station No.	2	3	4	5	6	7	8	9	10
A	96	129	162	195	228	261	294	327	360
B	115.4	148.4	181.4	214.4	247.4	280.4	313.4	346.4	379.4

* Refer to page 1412 for details about check valves.

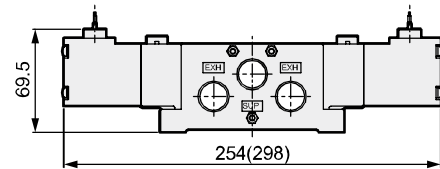
Dimensions

① 2-position single

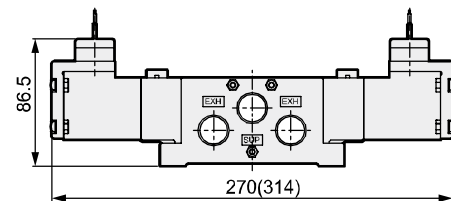
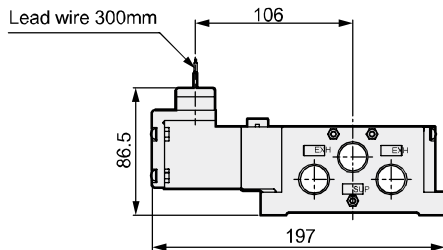
- Grommet lead wire: (E)



② 2-position double solenoid, 3-position

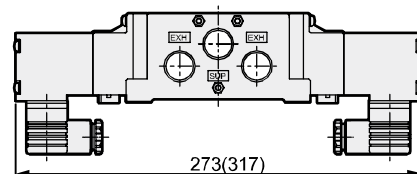
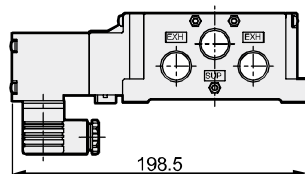


- Conduit lead wire: (E1/E2)

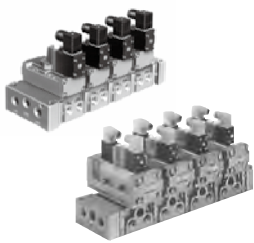


- Position change of manual override: (R)

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



4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
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: $\phi 63$ to $\phi 250$



Refer to the Ending for details.

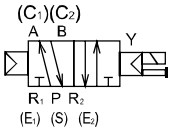


- 4GA/B
- M4GA/B
- MN4GA/B
- 4GA/B (mastr)
- 4GD/E
- M4GD/E
- MN4GD/E
- 4GA4/B4
- MN3E
MN4E
- W4GA/B2
- W4GB4
- 4TB
- 4L2-4/
LMF0
- MN3S0
MN4S0
- 4SA/B0
- 4KA/B
- 4KA/B (mastr)
- 4F
- 4F (mastr)
- PV5G
GMF
- PV5
GMF
- PV5S-0
- 3QR
3QB
- MV3QR
- 3MA/B0
- 3PA/B
- P/M/B
- NP/NAP/
NVP
- 4F*0EX
- 4F*0E
- HMV
HSV
- 2QV
3QV
- SKH
- PCD
- Silencer
- TotAirSys
(Total Air)
- TotAirSys
(Gamma)
- Ending

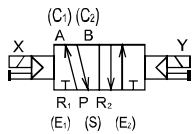
JIS symbol

● 5-port valve

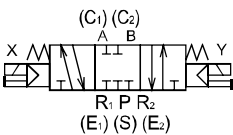
2-position single



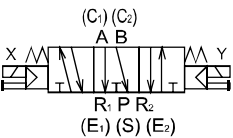
2-position double



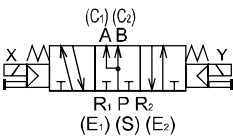
3-position all ports closed



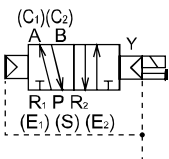
3-position A/B/R connection



3-position P/A/B connection



● External pilot



(Code indicates 2-position single)

Common specifications

Descriptions	Content
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 $^{\circ}\text{F}$) to 60 (140 $^{\circ}\text{F}$) (no freezing)
Fluid temperature $^{\circ}\text{C}$	5 (41 $^{\circ}\text{F}$) to 60 (140 $^{\circ}\text{F}$)
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

Descriptions	4F4 to 7		
Rated voltage	AC	100, 200 (50/60 Hz)	
	DC	24	
Voltage fluctuation range		$\pm 10\%$	
Starting current	AC	100 V	0.170/0.140
		200 V	0.090/0.070
	DC	12 V	0.50
		24 V	0.250
Holding current	AC	100 V	0.100/0.080
		200 V	0.050/0.040
	DC	12 V	0.50
		24 V	0.250
Power (W)	AC	100 V	5.0/4.0
		200 V	5.0/4.0
	DC	12 V	6
		24 V	6
Thermal class		B (molded coil)	

Individual specifications

1 MPa = 10 bar

Descriptions			4F4	4F5	4F6	4F7
Min. working pressure MPa	2-position	Single	0.10	0.10	0.15	0.15
		Double	(≈ 15 psi)	(≈ 15 psi)		
	3-position	All ports closed	0.15	0.15	(1.5 bar)	(1.5 bar)
		A/B/R connection P/A/B connection	(1.5 bar)	(1.5 bar)		
Port size	P (S) port		Rc3/8	Rc1/2	Rc3/4	Rc1
	R ₁ (E ₁), R ₂ (E ₂) port		Rc3/8	Rc1/2	Rc3/4	Rc3/4
	A(C ₁), B(C ₂) port		Rc1/4	Rc3/8	Rc1/2	Rc3/4
Response time *2			ms	60	70	200

*1: As G and NPT threads can also be used for piping port screws, contact CKD for details.

*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.

Model No.	M4F4	M4F5	M4F6	M4F7		
Weight calculation formula						
(n: Station No.)	kg	2-position Single	$1.26 \times n + 0.47$	$1.58 \times n + 0.77$	$3.25 \times n + 1.79$	$4.56 \times n + 1.79$
		Double	$1.54 \times n + 0.47$	$1.90 \times n + 0.77$	$3.59 \times n + 1.79$	$4.88 \times n + 1.79$
3-position		$1.70 \times n + 0.47$	$2.16 \times n + 0.77$	$3.89 \times n + 1.79$	$5.90 \times n + 1.79$	

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		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		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		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		-	-	
		A/B/R connection				
		P/A/B connection				

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

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 (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

M4F4 to 7 Series

Individual wiring manifold: sub-plate piping

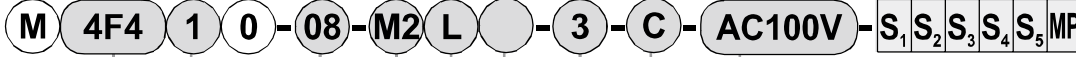
How to order individual wiring manifold/sub-plate piping

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



* Be sure to fill in "Manifold specifications sheet" (pages 1416 to 1417).

● Manifold



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

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

A Model No.

Code	Content	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	Rc1/4	●			
10	Rc3/8		●		
D15	Rc1/2			●	
E20	Rc3/4				●
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)			●	●
B	Round terminal box (G1/2)			●	●
BL	Round terminal box (G1/2)/with lamp *4			●	●
G	Round terminal box With gland (A-15a)			●	●
GL	Round terminal box With gland (A-15a)/with lamp *4			●	●
F Other options					
Blank	No option	●	●	●	●
K	External pilot *2	●	●	●	●
S	Surge suppressor (varistor) included *5	●	●	●	●
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					
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 custom order products					
DC48V		●	●	●	●
DC100V		●	●	●	●
DC110V		●	●	●	●

⚠ 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 1343 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 surge suppressor for attachment is a suppression connector when the grommet lead wire is 24 VDC or less. (Refer to page 1343.)

[Example of model No.]

M4F440-08-M2ES-5-C-AC100V

- 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 attached
- G** Station No. : 5 stations
- H** Exhaust installation method : Common exhaust
- I** Voltage : 100 VAC

How to order masking plate kit

M4F4 - **MP-KIT** * Gasket/mounting screw attached

A Model No.

A Model No.
M4F4
M4F5
M4F6
M4F7

B Port size

Code	Content	Model No.
Blank	Rc1/4	M4F4
Blank	Rc3/8	M4F5
D15	Rc1/2	M4F6
E20	Rc3/4	M4F7

How to order mix manifold

M **4F4** **8** **0** - **08** - **M2** **L** - **7** - **C** - **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.

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

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

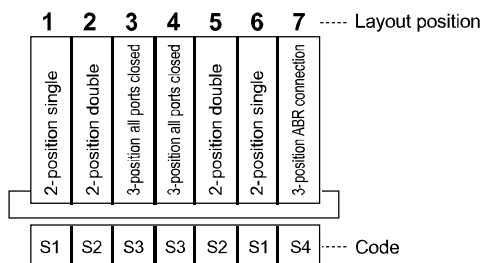
(2) List the function (solenoid position) and layout position in the field for remarks.

Switching position code = ○, ○ th station (refer to the dimensions (pages 1408 to 1411) 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)

↓

M4F480-08-M2L-7-C-AC100V -

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

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

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

M4F4 Series

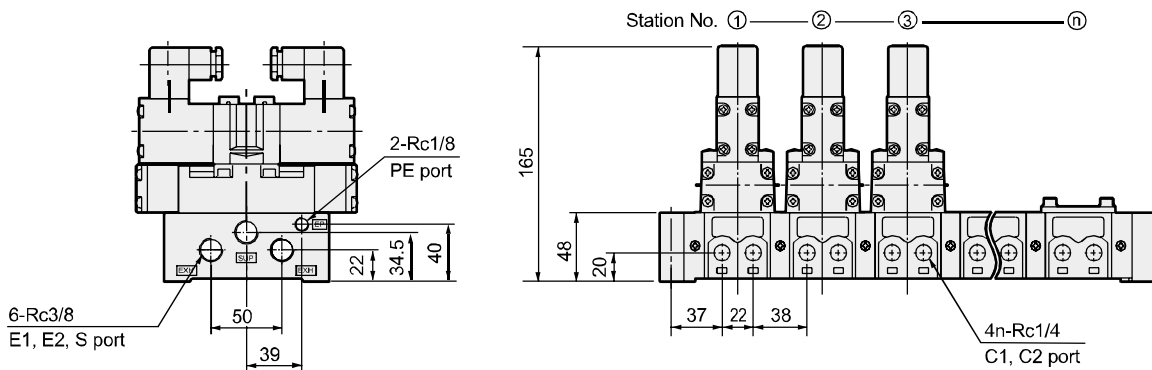
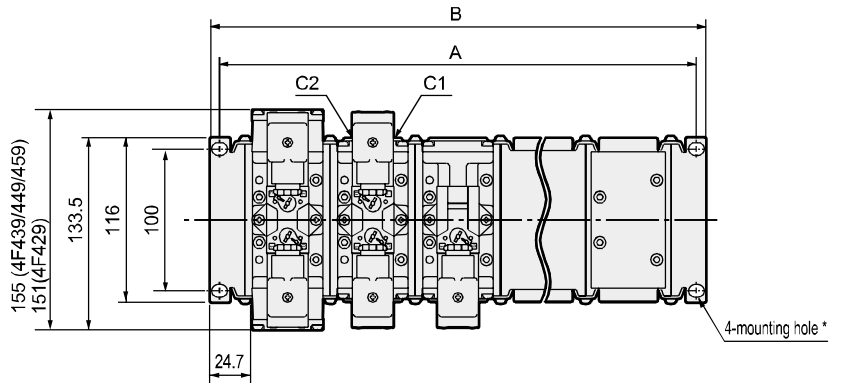
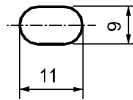
Individual wiring manifold: sub-plate piping

Dimensions

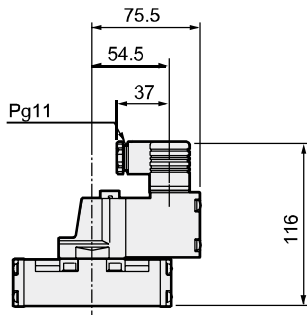
M4F4 30

● Common exhaust: DIN terminal box

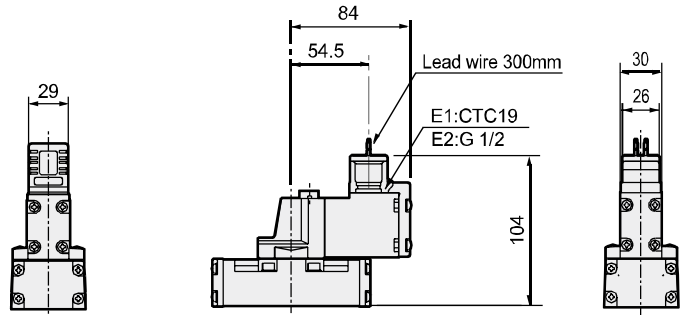
* Installation hole portion enlarged



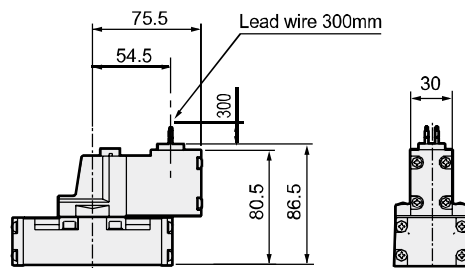
● DIN terminal box with lamp: (L)



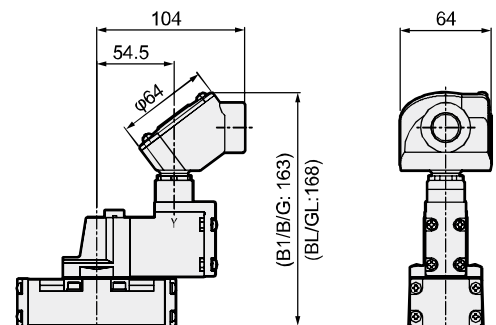
● Conduit lead wire: (E1/E2)



● 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 1412 for details about check valves.

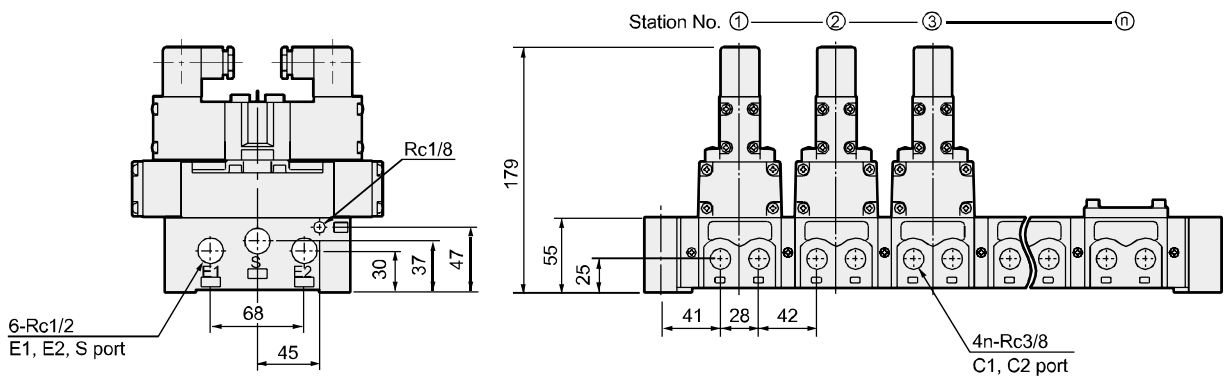
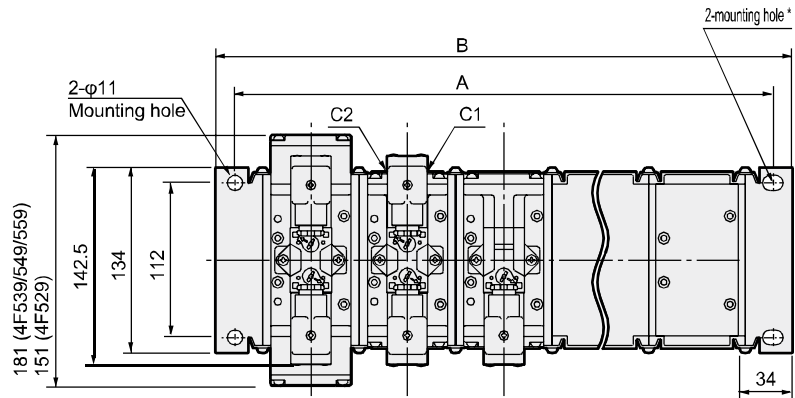
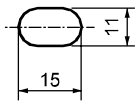
Dimensions



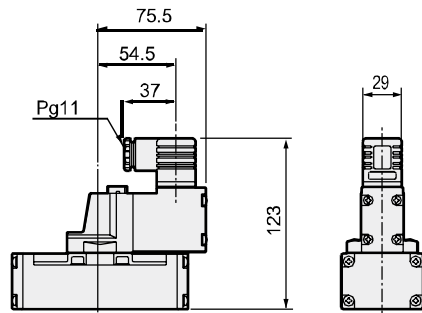
1
2
3
4
5
M4F5 30

● Common exhaust: DIN terminal box

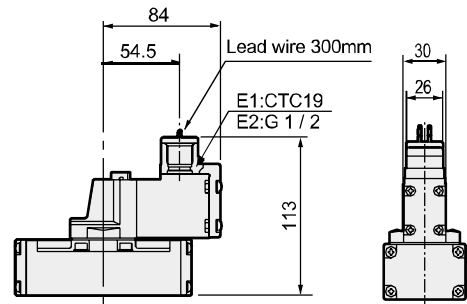
* Installation hole portion enlarged



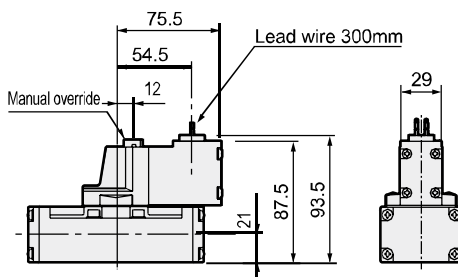
● DIN terminal box with lamp: (L)



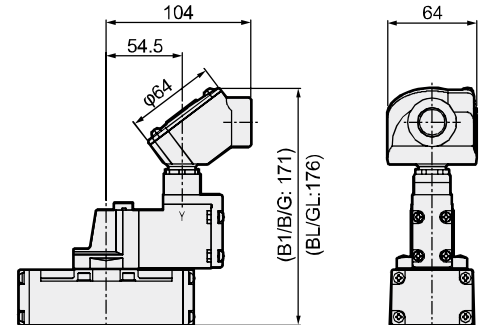
● Conduit lead wire: (E1/E2)



● 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 1412 for details about check valves.

4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

M4F6 Series

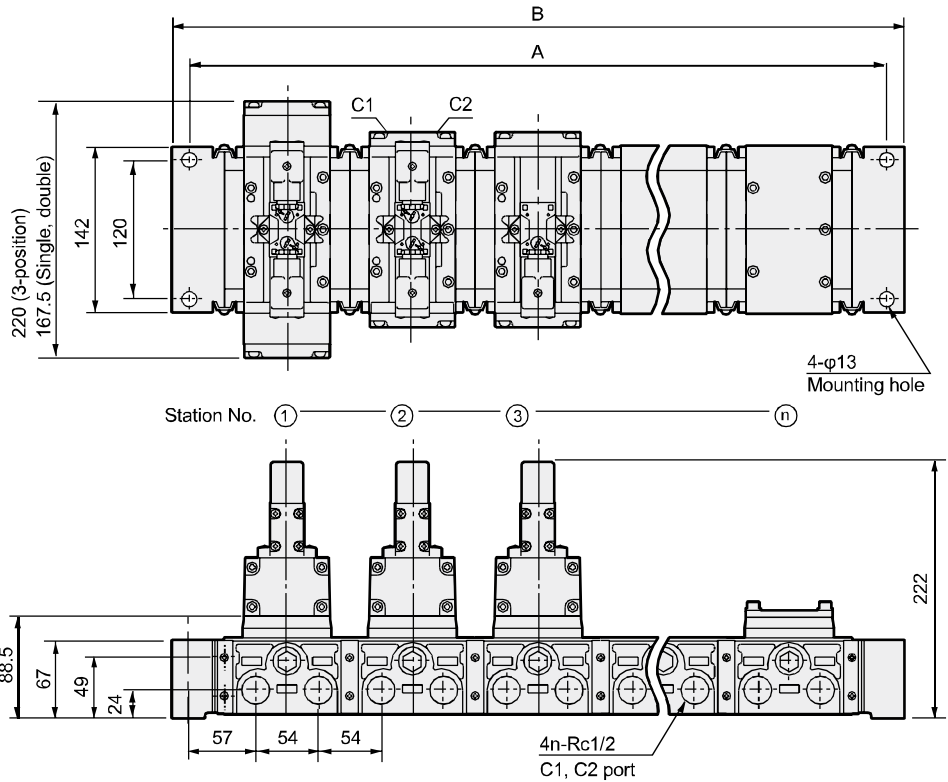
Individual wiring manifold: sub-plate piping

Dimensions

- 4GA/B
- M4GA/B
- MN4GA/B
- 4GA/B (mastr)
- 4GD/E
- M4GD/E
- MN4GD/E
- 4GA4/B4
- MN3E
- MN4E
- W4GA/B2
- W4GB4
- 4TB
- 4L2-4/LMF0
- MN3S0
- MN4S0
- 4SA/B0
- 4KA/B
- 4KA/B (mastr)
- 4F**
- 4F (mastr)
- PV5G
- GMF
- PV5
- GMF
- PV5S-0
- 3QR
- 3QB
- MV3QR
- 3MA/B0
- 3PA/B
- P/M/B
- NP/NAP/NVP
- 4F*0EX
- 4F*0E
- HMV
- HSV
- 2QV
- 3QV
- SKH
- PCD
- Silencer
- TotAirSys (Total Air)
- TotAirSys (Gamma)
- Ending

M4F6 3 0

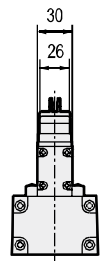
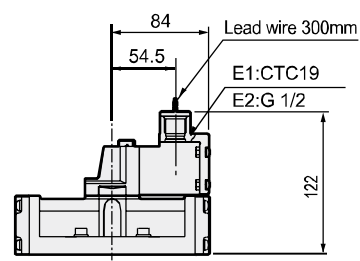
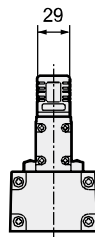
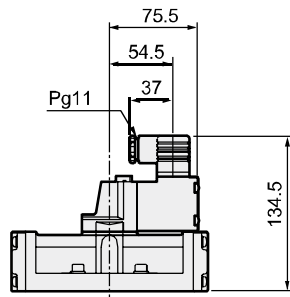
● Common exhaust: DIN terminal box



6-Rc3/4 E/S port

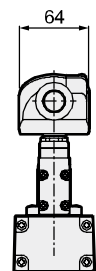
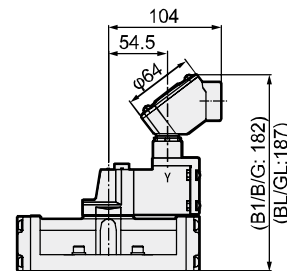
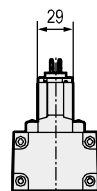
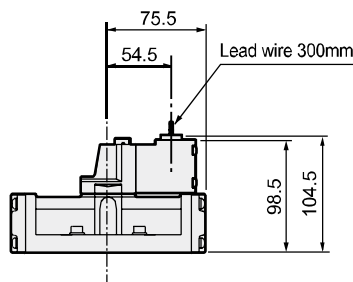
● DIN terminal box with lamp: (L)

● 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

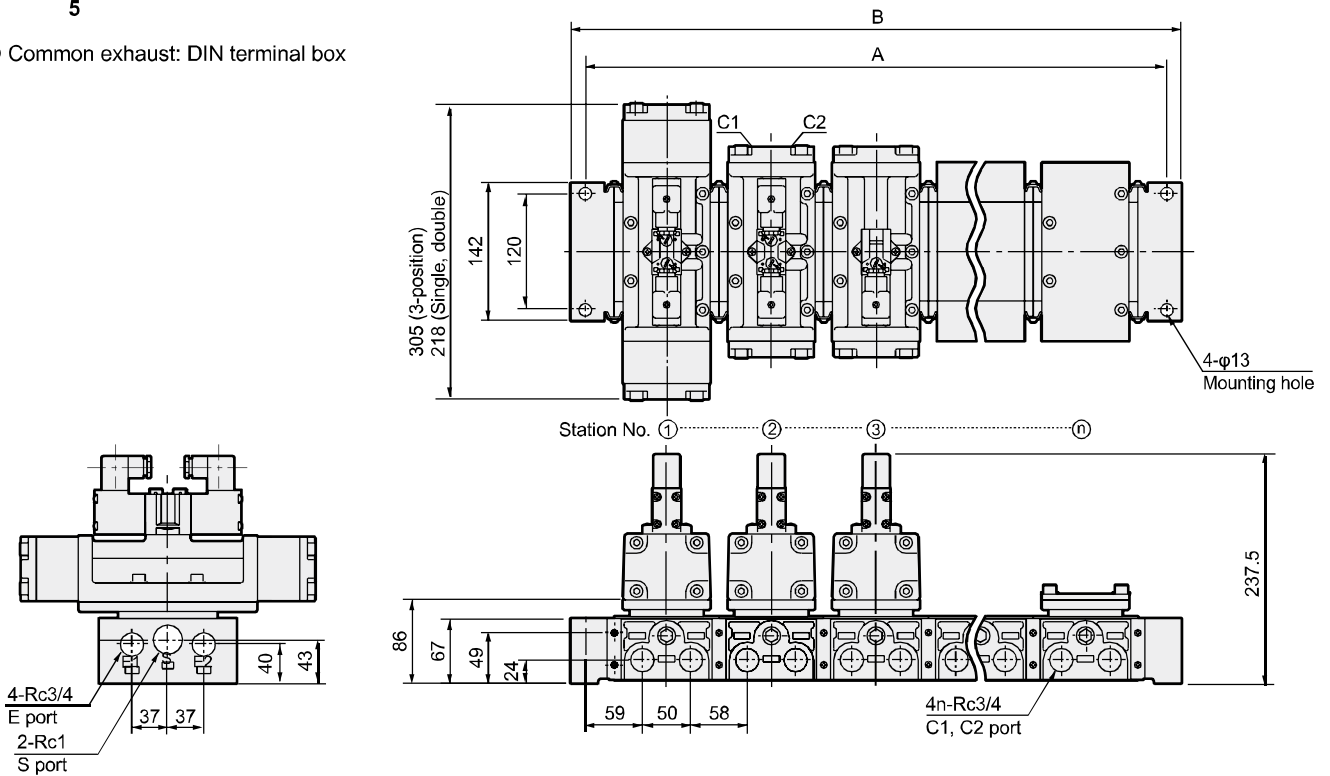
* Individual supply and individual exhaust are available as a custom order.

* Refer to page 1412 for details about check valves.

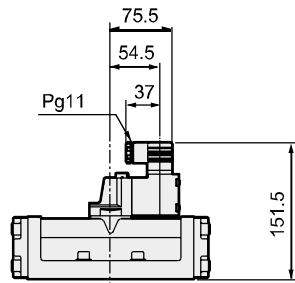
Dimensions

M4F7 3 0
1
2
3
4
5

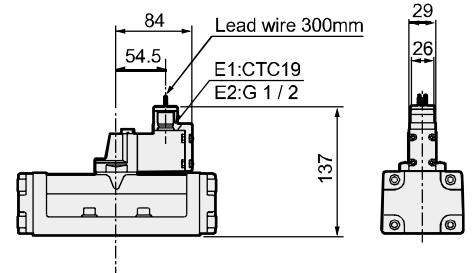
● Common exhaust: DIN terminal box



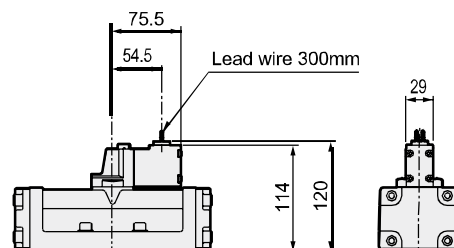
● DIN terminal box with lamp: (L)



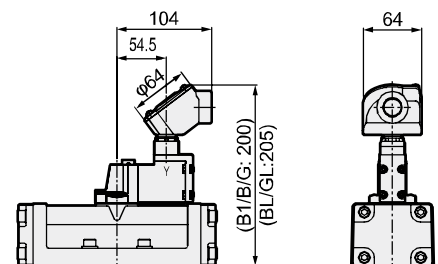
● Conduit lead wire: (E1/E2)



● Grommet lead wire: (E)



● Round terminal box: (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 1412 for details about check valves.

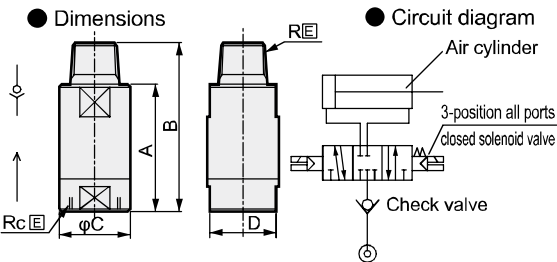
4GA/B
M4GA/B
MN4GA/B
4GA/B (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
4TB
4L2-4/LMF0
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G
GMF
PV5
GMF
PV5S-0
3QR
3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/NVP
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

4F Series

Check valve/round terminal box/adaptor/DIN terminal

3-position check valve (H) dimensions

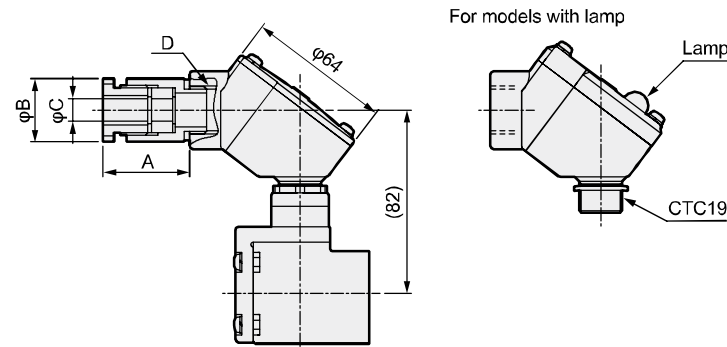
When the pneumatic source is no longer available when using a 3-position all ports closed solenoid valve, the pneumatic pressure will flow in the reverse direction to the SUP (S) port side. In order to prevent this reverse flow, use a check valve.



Model No.	A	B	C	D	E	Eff. X-sectional area mm ²	Cracking pressure
AC- 8A	49	63	20	17	1/4	20	0.05MPa
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 custom order.)

Electrical wire through bracket (gland)



Type	A	B	C	D	Option code
A-15a	39	28	9	G1/2	G □
A-15b	39	28	10		G1 □
A-15c	39	28	11		G2 □
A-20a	43	34	12	G3/4	G3 □
A-20b	43	34	13		G4 □
A-20c	43	34	15		G5 □

*1: The * dimensions are provided for reference.

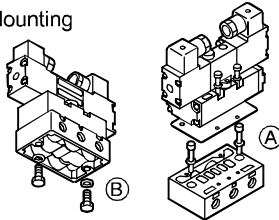
*2: Depending on the draw-out cable size, decide on a, b, and c with dimension C as a reference.

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

Mounting



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

Coil option		
B	Round terminal box G1/2	Without indicator lamp
BL		With indicator lamp
B1	Round terminal box G3/4 (Custom order product)	Without indicator lamp
B1L		With indicator lamp
G	Round terminal box with gland (Models other than G and GL are available as a custom 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.

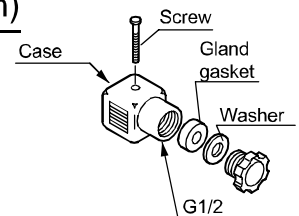
The cabtyre cables recommended by CKD are marked with a circle in the table.

Nominal section area	Number of cores	Finish O.D.	(marine cable gland) (JIS F8801)					Upper row: model No. (Lower row: Gasket φ)	
			15a (φ9)	15b (φ10)	15c (φ11)	20a (φ12)	20b (φ13)	20c (φ15)	
0.75 mm ²	2	φ8.8	○						
	3	9.2	○						
	4	9.9		○					
1.25	2	9.6		○					
	3	10.5			○				
2	4	11.5				○			
	2	10.5				○			
3.5	3	11				○			
	4	12					○		
	2	12						○	
4	3	13						○	
	4	14							○

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

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 (mastr)
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/ LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (mastr)
4F
4F (mastr)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP/ NVP
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

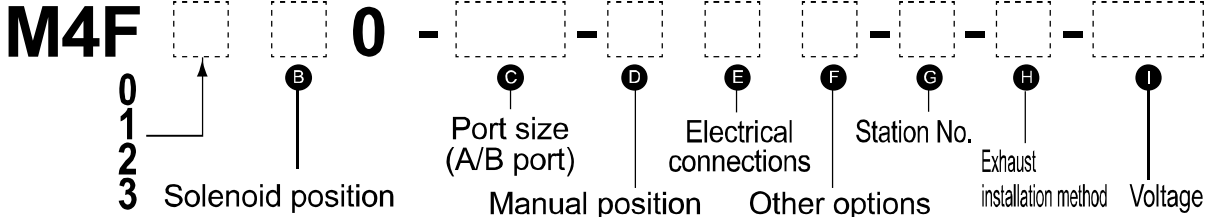
M4F0 to 3 Manifold specifications sheet

Issued / /
 Your company name
 Contact
 Order No.

● Contact ● Quantity Set ● Delivery date /
 Slip No. Order No.

Exhaust installation method/with bracket (CL, CU, IL, IU)
 If instructions are provided for piping port mixtures and exhaust method mixtures, etc., with these manifold specifications, units will be delivered with the corresponding items assembled.
 When using these specifications to place an order, contact CKD about the manifold model, etc.

● Manifold model No.



Solenoid valve			Installation position										Subtotal	Total	
JIS symbol	Model	Bore size	1	2	3	4	5	6	7	8	9	10			
2-position single 	4F														
2-position double 	4F														
3-position all ports closed 	4F														
3-position A/B/R connection 	4F														
3-position P/A/B connection 	4F														
Masking plate															

Position/number of solenoids and cylinder port size (cylinder ports other than those listed below are not available)

Number of positions/solenoids	Series model No.					Station No.	
	2-position/single	2-position/double	3-position all ports closed	3-position A/B/R connection	3-position P/A/B connection	Manifold Model No.	Cylinder port
●						M4F0	M5
	●					M4F020	Rp1/8
●						M4F110	Rp1/8 Rp1/4
	●					120	
		●				130	
			●			140	
●						M4F210	Rp1/4
	●					220	
		●				230	
			●			240	
●						M4F310	Rp1/4 Rp3/8
	●					320	
		●				330	
			●			340	
				●		350	

Note: Mixtures of series 4F0, 1, 2, 3 are not available.

M4F2/3 Manifold specifications sheet

Issued / /
 Your company name
 Contact
 Order No.

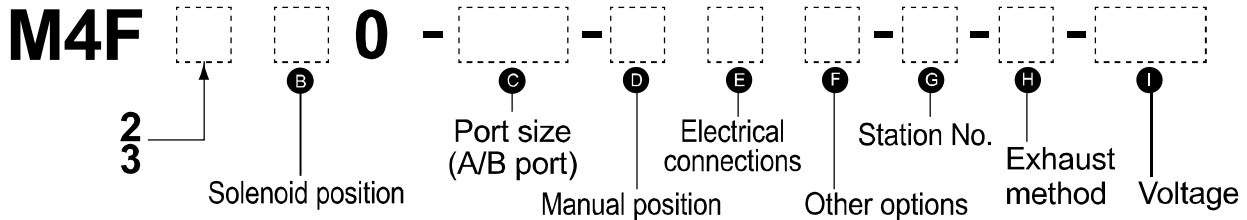
● Contact ● Quantity Set ● Delivery date /
 Slip No. Order No.

Exhaust installation method/without bracket (C, I)

If instructions are provided for piping port mixtures, partition plates, exhaust method mixtures, and individual supply, etc., with these manifold specifications, units will be delivered with the corresponding items assembled.

When using these specifications to place an order, contact CKD about the manifold model, etc.

● Manifold model No.



Solenoid valve			Installation position										Subtotal	Total
JIS symbol	Model	Bore size	1	2	3	4	5	6	7	8	9	10		
2-position single 	4F													
2-position double 	4F													
3-position all port closed 	4F													
3-position A/B/R connection 	4F													
3-position P/A/B connection 	4F													
Masking plate														

Position/number of solenoids and cylinder port size (cylinder ports other than those listed below are not available)

Number of positions/solenoids						Series model No.	Station No.	Cylinder port
2-position/single	2-position/double	3-position/all ports closed	3-position/A/B/R connection	3-position/P/A/B connection	Manifold model No.			
●					M4F210	2 to 10	Rp1/4	
	●				220			
		●			230			
			●		240			
●					M4F310	2 to 10	Rp1/4 Rp3/8	
	●				320			
		●			330			
			●		340			
				●	350			

· Note: Mixtures of series 4F2, 3 are not available.

- 4GA/B
- M4GA/B
- MN4GA/B
- 4GA/B (mastr)
- 4GD/E
- M4GD/E
- MN4GD/E
- 4GA4/B4
- MN3E
MN4E
- W4GA/B2
- W4GB4
- 4TB
- 4L2-4/
LMF0
- MN3S0
MN4S0
- 4SA/B0
- 4KA/B
(mastr)
- 4F**
- 4F
(mastr)
- PV5G
GMF
- PV5
GMF
- PV5S-0
- 3QR
3QB
- MV3QR
- 3MA/B0
- 3PA/B
- P/M/B
- NP/NAP/
NVP
- 4F*0EX
- 4F*0E
- HMV
HSV
- 2QV
3QV
- SKH
- PCD
- Silencer
- TotAirSys
(Total Air)
- TotAirSys
(Gamma)
- Ending

M4F4/5 Manifold specifications sheet

Issued / /

Your company name

Contact

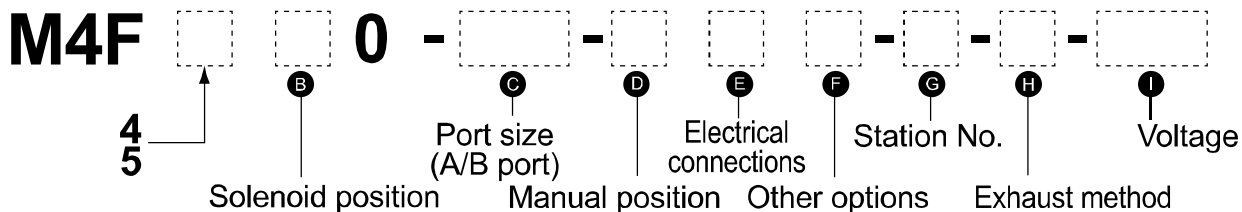
Order No.

● Contact ● Quantity Set ● Delivery date /

Slip No.	Order No.
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If instructions are provided for combinations of 4F4/5 solenoid valves, changes of piping ports, partitioning plates, and individual exhaust, etc., with these manifold specifications, units will be delivered with the corresponding items assembled.
When using these specifications to place an order, contact CKD about the manifold model, etc.

● Manifold model No.



Solenoid valve	Installation position										Subtotal	Total	
	JIS symbol	Model	Bore size	1	2	3	4	5	6	7			8
2-position single 	4F4	Rc ¹ / ₄											
	4F5	Rc ³ / ₈											
2-position double 	4F4	Rc ¹ / ₄											
	4F5	Rc ³ / ₈											
3-position all ports closed 	4F4	Rc ¹ / ₄											
	4F5	Rc ³ / ₈											
3-position A/B/R connection 	4F4	Rc ¹ / ₄											
	4F5	Rc ³ / ₈											
3-position P/A/B connection 	4F4	Rc ¹ / ₄											
	4F5	Rc ³ / ₈											
Masking plate													

- 4GA/B
- M4GA/B
- MN4GA/B
- 4GA/B (mastr)
- 4GD/E
- M4GD/E
- MN4GD/E
- 4GA4/B4
- MN3E
MN4E
- W4GA/B2
- W4GB4
- 4TB
- 4L2-4/
LMF0
- MN3S0
MN4S0
- 4SA/B0
- 4KA/B
- 4KA/B (mastr)
- 4F**
- 4F (mastr)
- PV5G
GMF
- PV5
GMF
- PV5S-0
- 3QR
3QB
- MV3QR
- 3MA/B0
- 3PA/B
- P/M/B
- NP/NAP/
NVP
- 4F*0EX
- 4F*0E
- HMV
HSV
- 2QV
3QV
- SKH
- PCD
- Silencer
- TotAirSys
(Total Air)
- TotAirSys
(Gamma)
- Ending

M4F6/7 Manifold specifications sheet

Issued / /

Your company name

Contact

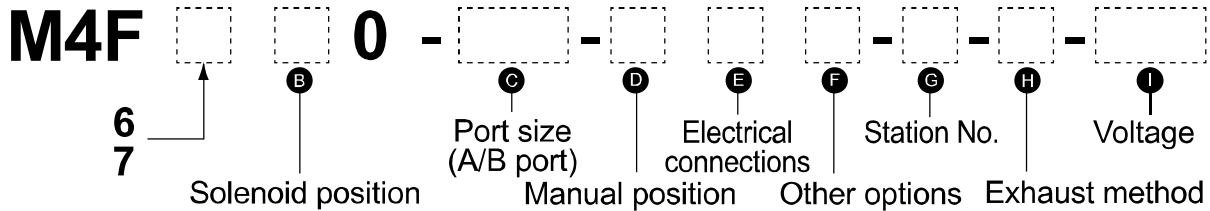
Order No.

● Contact ● Quantity Set ● Delivery date /

Slip No.	Order No.
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If instructions are provided for changes of piping ports, partition plates, and individual exhaust, etc., with these manifold specifications, units will be delivered with the corresponding items assembled.
 When using these specifications to place an order, contact CKD about the manifold model, etc.

● Manifold model No.



Solenoid valve			Installation position										Subtotal	Total
			1	2	3	4	5	6	7	8	9	10		
2-position single 	Model	Bore size												
	4F6	Rc1/2												
2-position double 	Model	Bore size												
	4F7	Rc3/4												
3-position all ports closed 	Model	Bore size												
	4F6	Rc1/2												
3-position A/B/R connection 	Model	Bore size												
	4F7	Rc3/4												
3-position P/A/B connection 	Model	Bore size												
	4F6	Rc1/2												
Masking plate	Model	Bore size												
	4F7	Rc3/4												

- 4GA/B
- M4GA/B
- MN4GA/B
- 4GA/B (mastr)
- 4GD/E
- M4GD/E
- MN4GD/E
- 4GA4/B4
- MN3E
MN4E
- W4GA/B2
- W4GB4
- 4TB
- 4L2-4/
LMF0
- MN3S0
MN4S0
- 4SA/B0
- 4KA/B
- 4KA/B (mastr)
- 4F**
- 4F (mastr)
- PV5G
GMF
- PV5
GMF
- PV5S-0
- 3QR
3QB
- MV3QR
- 3MA/B0
- 3PA/B
- P/M/B
- NP/NAP/
NVP
- 4F*0EX
- 4F*0E
- HMV
HSV
- 2QV
3QV
- SKH
- PCD
- Silencer
- TotAirSys
(Total Air)
- TotAirSys
(Gamma)
- Ending

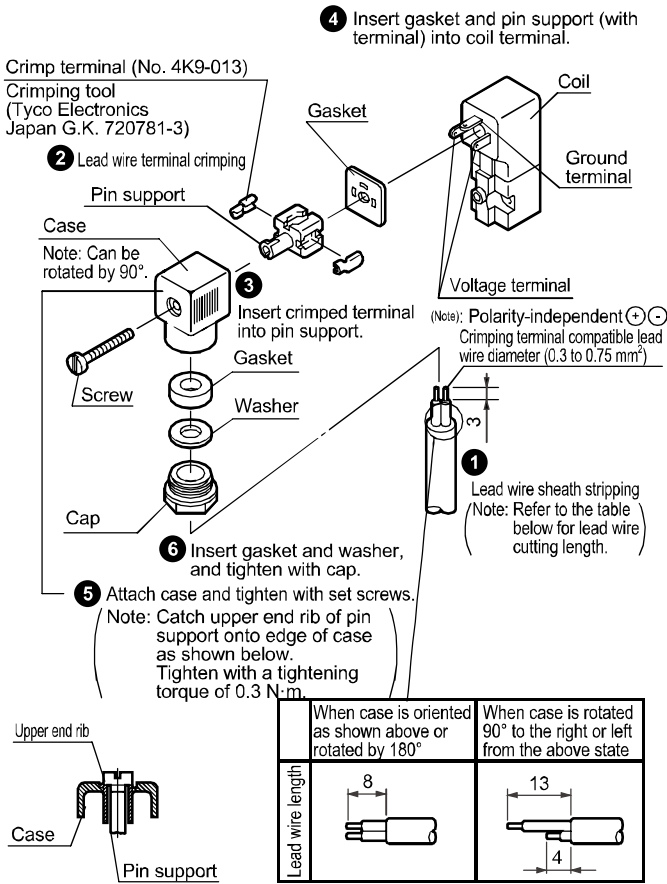
4F Series

Technical data ① Terminal box wiring/connector connection method

Refer to the figure below for the wiring method of the terminal box and the C-line and D-line connectors.

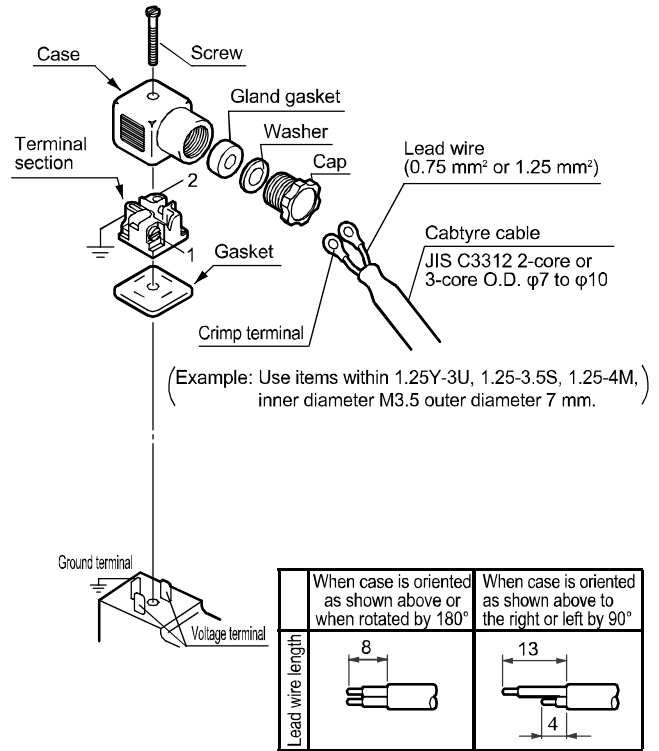
Compact terminal box (B) wiring method

Wire the compact terminal box (B) by following the steps of ① to ⑥ with reference to the figure below.



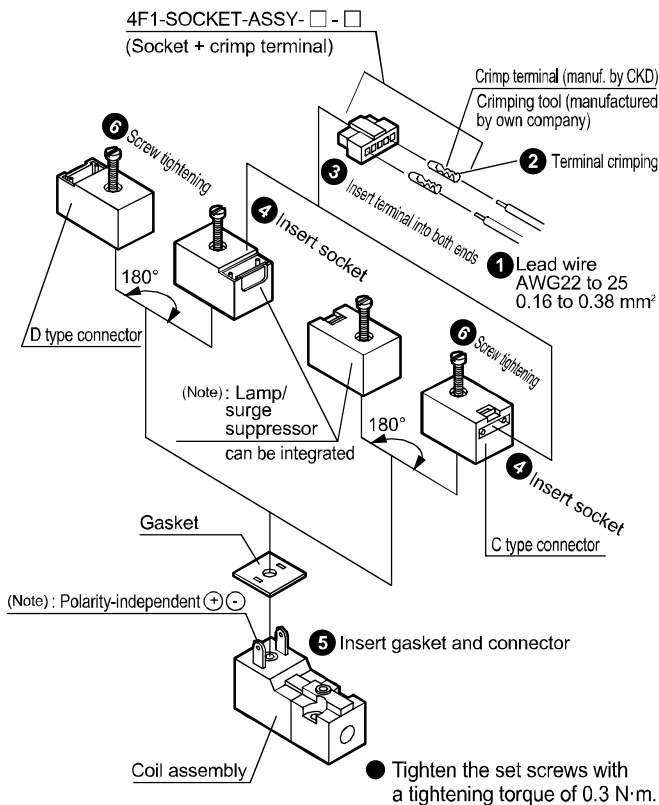
4F2 to 7 Series (DIN terminal box)

- The lead wire opening of the case is available for 4 directions each 90° apart.
- Connect the wiring to the DIN terminal with 1 and 2.
- Tighten the screws with a tightening torque of 0.5 N·m.



C type/D type connector wiring method

Wire with steps ① to ⑥.



Compact terminal box with light wiring method

Wire with steps ① to ⑤.

