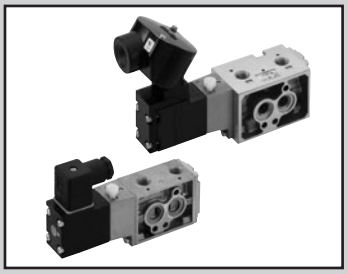


Single valve, direct piping
Pilot-type 5-port Selex valve

4F1/3 Series

NAMUR standards Option

RoHS

Common specification

Item	Description
Valve type and operation method	Pilot-type soft spool valve
Fluid used	Compressed air
Maximum working pressure MPa	1.0
Minimum working pressure MPa	0.1
Proof pressure MPa	1.5
Ambient temperature ˚C	-10 to 60 Note 1
Fluid temperature ˚C	5 to 60
Lubrication	Not necessary (Use turbine oil ISO VG32 for lubrication.)
Protection structure	Dust-proof, IP65 (for round terminal boxes)
Vibration/impact tolerance m/s^2	50 or less / 300 or less
Ambient atmosphere	Unworkable in a corrosive gas atmosphere

Note 1: The ambient temperature here means the temperature of the storage/installation site. It is not the fluid temperature during operation.

Electrical specification

Item			Description
Rating voltage V	AC		100, 200 (50/60 Hz)
	DC		12, 24
Rating voltage variation			±10%
Starting current A	AC	100 V	0.170/0.140
		200 V	0.090/0.070
	DC	12 V	0.500
		24 V	0.250
Holding current A	AC	100 V	0.100/0.080
		200 V	0.050/0.040
	DC	12 V	0.500
		24 V	0.250
Power consumption W	AC	100 V	5.0/4.0
		200 V	5.0/4.0
	DC	12 V	6
		24 V	6
Heat-resistance class			B-mode coil

Flow rate

Model No.	Switching position type		Port size	Sonic-speed conductance C [$dm^3/[s•bar)]$]
4F1	2-position	Single	Rc 1/4 (S, E1, E2)	1.6
		Double		
4F3	2-position	Single		3.1
		Double		

Note 1: The effective cross-section (S) and the Sonic-speed conductance (C) are mutually convertible by: S ≈ 5.0 × C.

How to order

4F3 1 0 - NM - M2 B [ ] - 100 VAC

Ⓐ Model No.
Ⓑ Switching position
Ⓒ Port size
Ⓓ Manual operation device
Ⓔ Electric wire connection
Ⓕ Other options
Ⓖ Voltage

Code	Description	4F1	4F3
Ⓐ Model No.			
4F1	4F1 series	●	
4F3	4F3 series		●
Ⓑ Switching position			
1	2-position single	●	●
2	2-position double	●	●
Ⓒ Port size			
NM	NAMUR standards (Port size: Rc 1/4) Note 3	●	●
Ⓓ Manual operation device			
Blank	Locking (resin)	●	●
M2	Non-locking (metal)	●	●
M3	Locking with manual lever (resin)	●	●
R	Position change of manual operation device	●	●
Ⓔ Electric wire connection			
Blank	DIN terminal box (Pg11)	●	●
L	DIN terminal box (Pg11) with lamp	●	●
F	DIN terminal box (G1/2)	●	●
E	Grommet lead wire	●	●
E1	Conduit lead wire (CTC19)	●	●
E2	Conduit lead wire (G1/2)	●	●
B1	Round terminal box (G3/4)	●	●
B	Round terminal box (G1/2)	●	●
BL	Round terminal box (G1/2) with lamp Note 4	●	●
G	Round terminal box (G1/2) with gland (A-15a)	●	●
GL	Round terminal box (G1/2) with lamp Note 4 with gland (A-15a)	●	●
Ⓕ Other options			
Blank	No options	●	●
W	Outdoor type Note 5, Note 6	●	●
S	with surge killer (varistor)	●	●
Ⓖ Voltage			
100 VAC	100 VAC 50/60 Hz	●	●
200 VAC	200 VAC 50/60 Hz	●	●
110 VAC	110 VAC 50/60 Hz	●	●
220 VAC	220 VAC 50/60 Hz	●	●
12 VDC	12 VDC Note 4	●	●
24 VDC	24 VDC	●	●
*** Other made-to-order types**			
48 VDC		●	●
100 VDC		●	●
110 VDC		●	●

⚠ Note on model No. selection

Note 1: For 4F1, 4F1-standard items are used as body consumables, and 4F3 items are used as coil assembly.

Note 2: Note that, for 4F3, special items are used as body consumables.

Note 3: All piping ports are Rc 1/4.
No screw machining is made to C1 and C2 ports of a NAMUR surface.

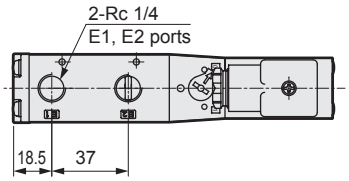
Note 4: Lamp-equipped BL and GL do not support 12 VDC.

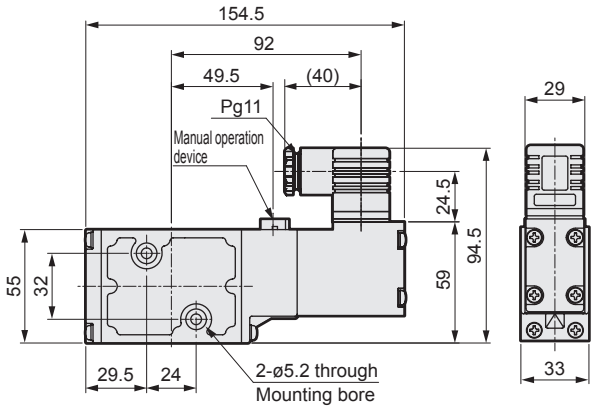
Note 5: For the outdoor type (W), only the round terminal box type is supported for electric wire connection.

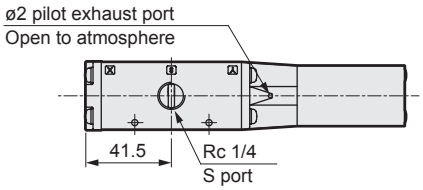
Note 6: The PE exhaust hole and breathing hole of the outdoor type (4F1-W) are exposed to the atmosphere. So install it in an orientation that does not allow rain and water to directly enter these holes.

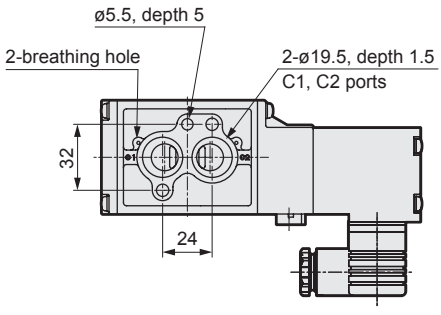
Dimensions

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

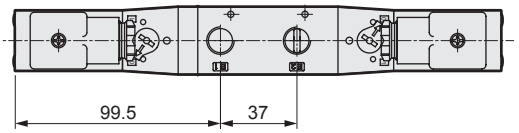


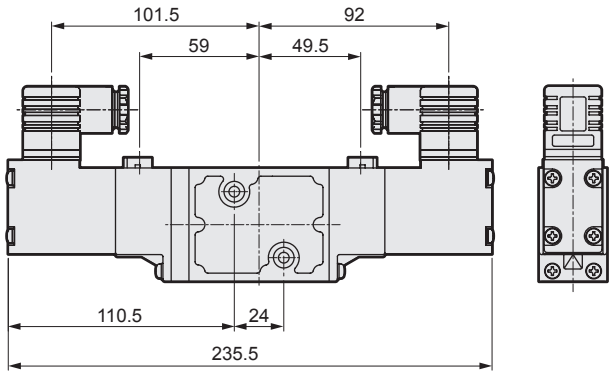


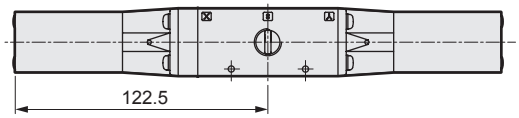


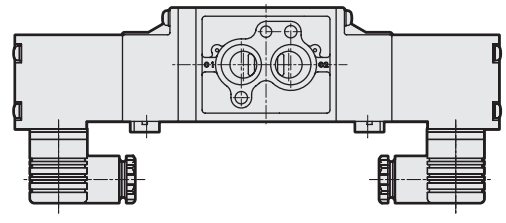


● 4F120-NM
2-position double: DIN terminal box: (blank)
DIN terminal box with lamp: (L)



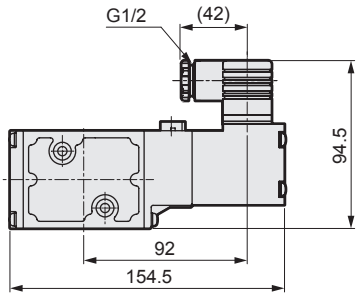




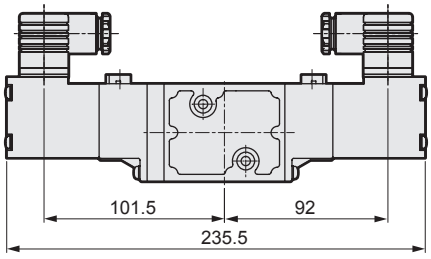


Dimensions

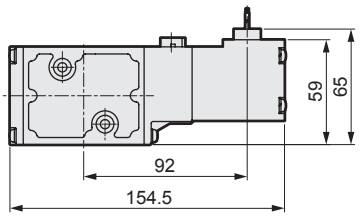
● 2-position single
DIN terminal box: (F)

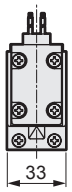


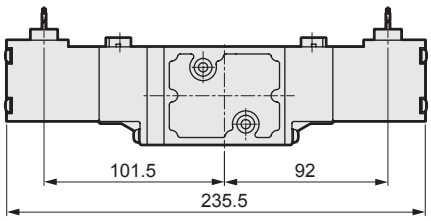
● 2-position double



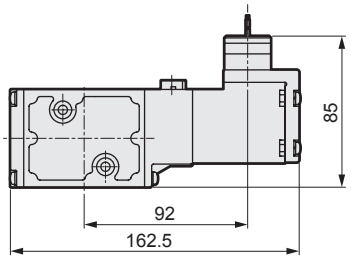
Grommet lead wire: (E)

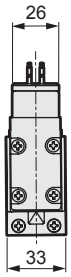


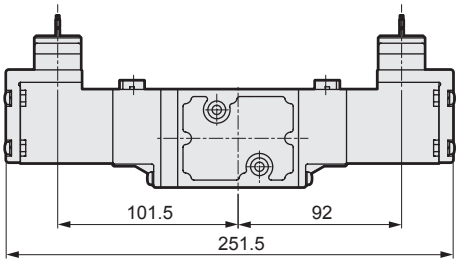




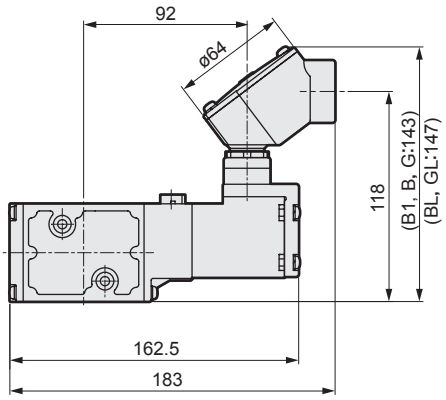
Conduit lead wire (E1, E2)

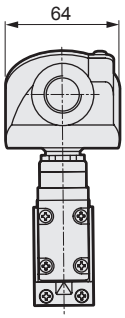


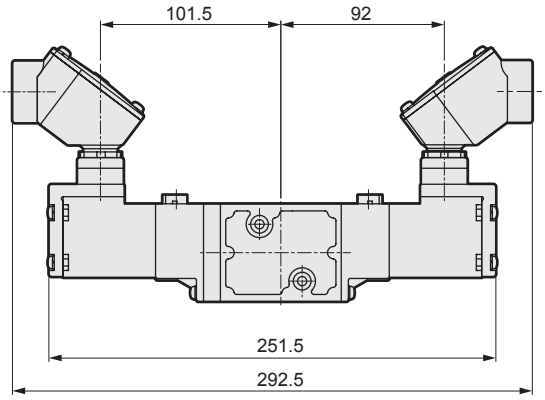




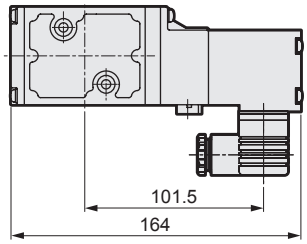
Round terminal box (B1, B, BL, G, GL)

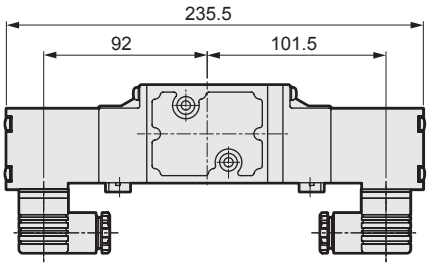






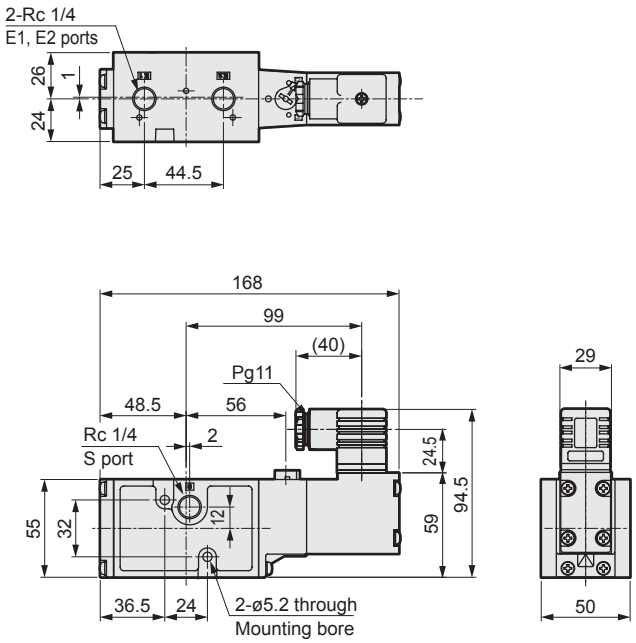
Position change of manual operation device: (R)



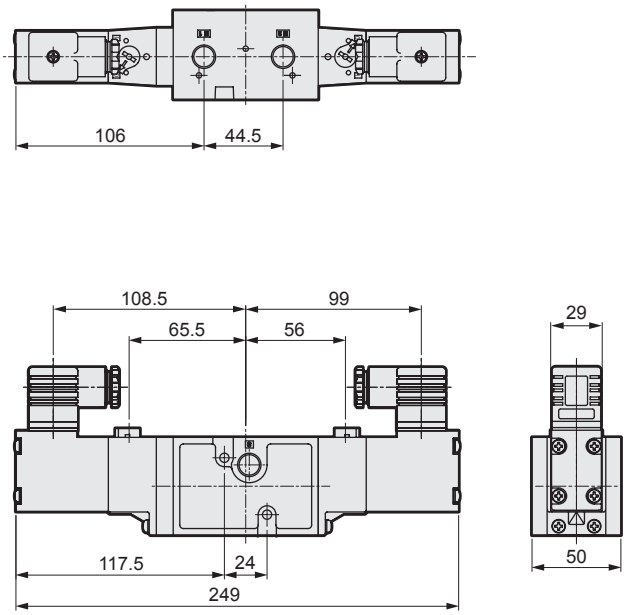


Dimensions

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

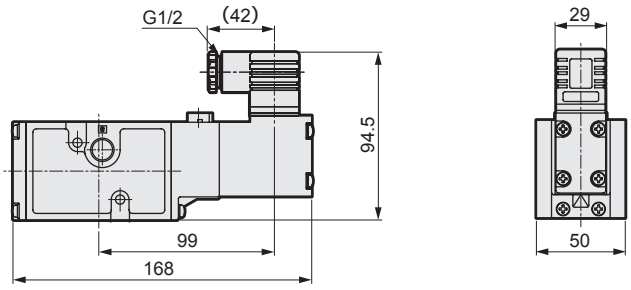


● 4F320-NM
2-position double: DIN terminal box: (blank)
DIN terminal box with lamp: (L)

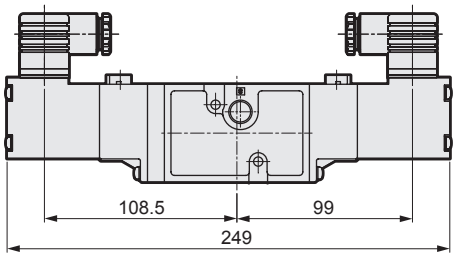


Dimensions

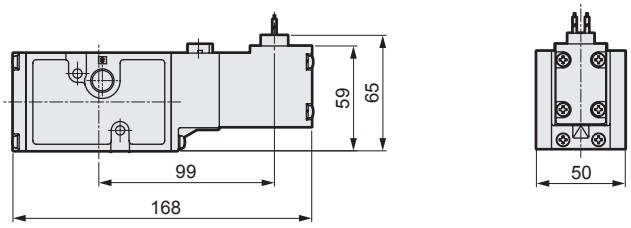
● 2-position single
DIN terminal box: (F)

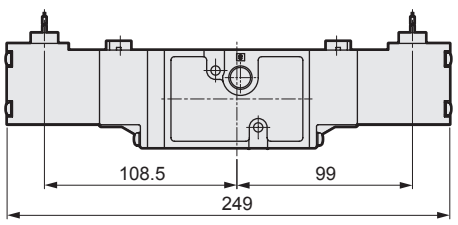


● 2-position double

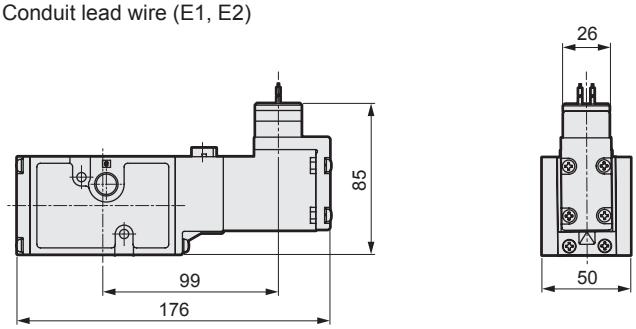


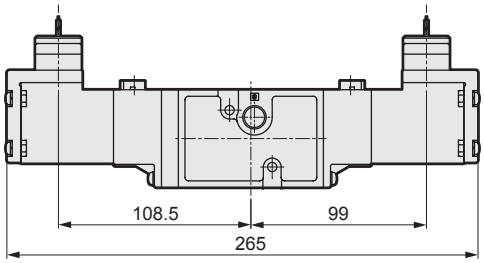
Grommet lead wire: (E)



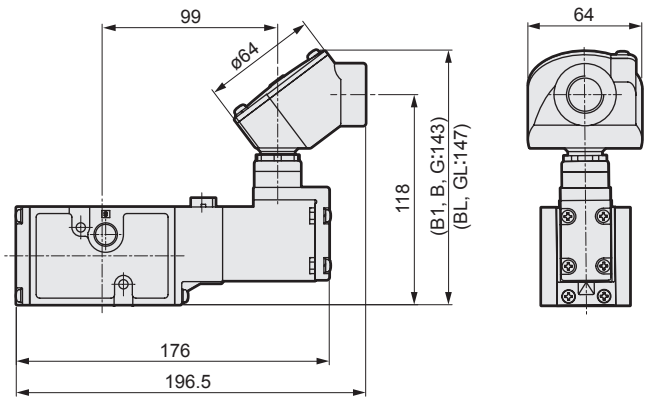


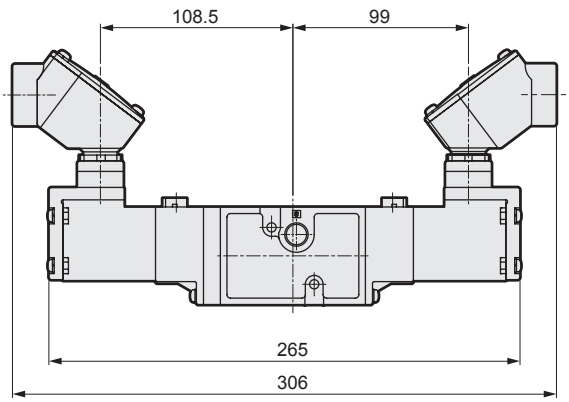
Conduit lead wire (E1, E2)



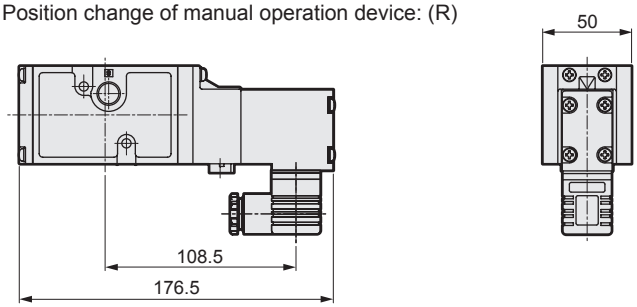


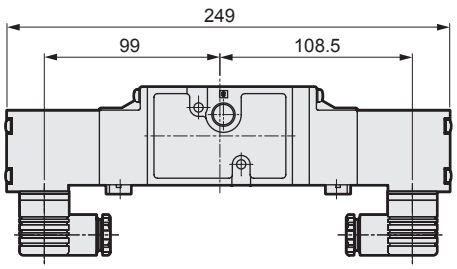
Round terminal box (B1, B, BL, G, GL)

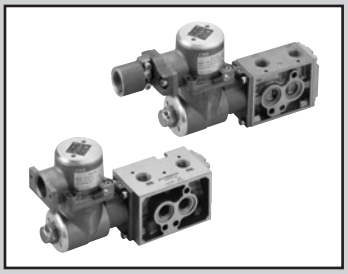




Position change of manual operation device: (R)







Single valve, direct piping
Pilot-type explosion-proof 5-port Selex valve

4F1/3*0E Series

NAMUR standards Option

RoHS

Common specification

Item	Description
Valve type and operation method	Pilot-type soft spool valve
Fluid used	Compressed air
Maximum working pressure MPa	1.0
Minimum working pressure MPa	0.1
Proof pressure MPa	1.5
Ambient temperature ˚C	-10 to 60 Note 1
Fluid temperature ˚C	5 to 60
Lubrication	Not necessary (Use turbine oil ISO VG32 for lubrication.)
Explosion-proof performance	d2G4
Vibration/impact tolerance m/s²	50 or less / 300 or less
Ambient atmosphere	Unworkable in a corrosive gas atmosphere

Note 1: The ambient temperature here means the temperature of the storage/installation site. It is not the fluid temperature during operation.

Flow rate

Model No.	Switching position		Port size	Sonic-speed conductance C [dm³/(s•bar)]
4F1	2-position	Single	Rc 1/4 (S, E1, E2)	1.6
		Double		
4F3	2-position	Single		3.1
		Double		

Note 1: The effective cross-section (S) and the Sonic-speed conductance (C) are mutually convertible by: S ≒ 5.0 × C.

Electrical specification

Item			Description
Rating voltage V	AC		100, 200 (50/60 Hz)
	DC		24
Rating voltage variation			±10%
Starting current A	AC	100 V	0.186/0.135
		200 V	0.093/0.068
	DC	12 V	-
		24 V	0.166
Holding current A	AC	100 V	0.06/0.05
		200 V	0.03/0.025
	DC	12 V	-
		24 V	0.166
Power consumption W	AC	100 V	4.5/4.0
		200 V	4.5/4.0
	DC	12 V	-
		24 V	4
Heat-resistance class			A (Note 1, H)

Note 1: Heat-resistant class H is optional. Sizes are the same as A.

How to order

4F3 1 0E - NM - G P - R - X - 100 VAC

- Ⓐ Model No.
- Ⓑ Switching position
- Ⓒ Port size
- Ⓓ External pilot wire connection method
- Ⓔ Options
- Ⓕ Heat-resistance class
- Ⓖ Voltage

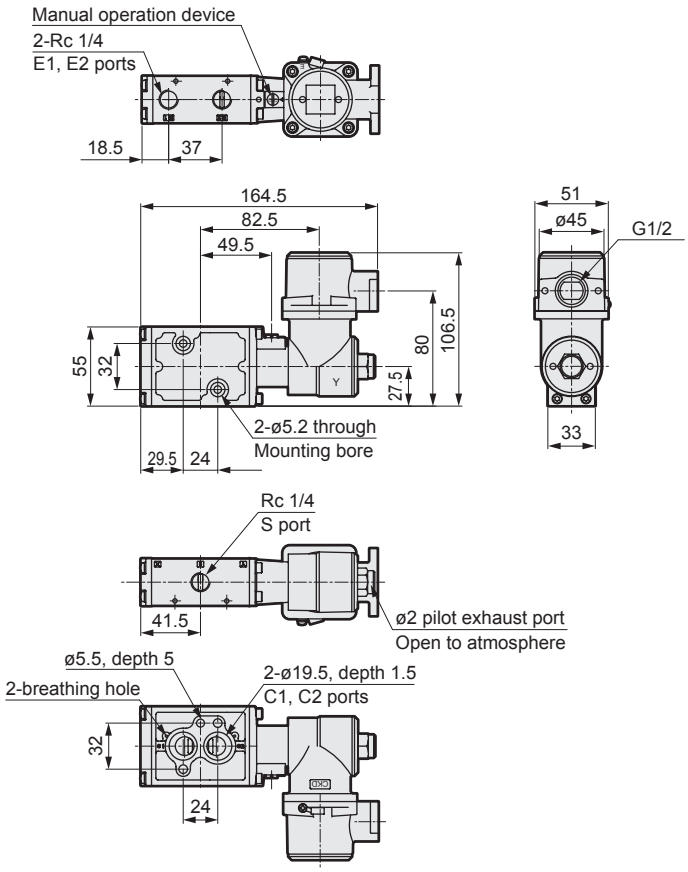
Code	Description	4F1	4F3
Ⓐ Model No.			
4F1	4F1 series	●	
4F3	4F3 series		●
Ⓑ Switching position			
1	2-position single	●	●
2	2-position double	●	●
Ⓒ Port size			
NM	NAMUR standards (Port size: Rc 1/4) Note 3	●	●
Ⓓ External pilot wire connection method			
G	Pressure-proof packing protection tube screw-in method	●	●
T	Conduit screw-connection method	●	●
Ⓔ Options			
Blank	No options	●	●
R	Position change of manual operation device	●	●
Ⓕ Heat-resistance class			
Blank	A (Standard item)	●	●
X	H (Optional)	●	●
Ⓖ Voltage			
100 VAC	100 VAC (50/60 Hz)	●	●
200 VAC	200 VAC (50/60 Hz)	●	●
24 VDC	24 VDC	●	●
12 VDC	12 VDC	●	●
110 VAC	110 VAC (50/60 Hz)	●	●
220 VAC	220 VAC (50/60 Hz)	●	●
*** Other made-to-order types**			
[AC voltage]			
12 V, 24 V, 48 V		●	●
115 V, 120 V, 125 V		●	●
127 V, 210 V, 230 V		●	●
240 V, 250 V, 380 V		●	●
[DC voltage]			
45 V, 48 V, 80 V		●	●
100 V, 110 V, 125 V		●	●

⚠ Note on model No. selection

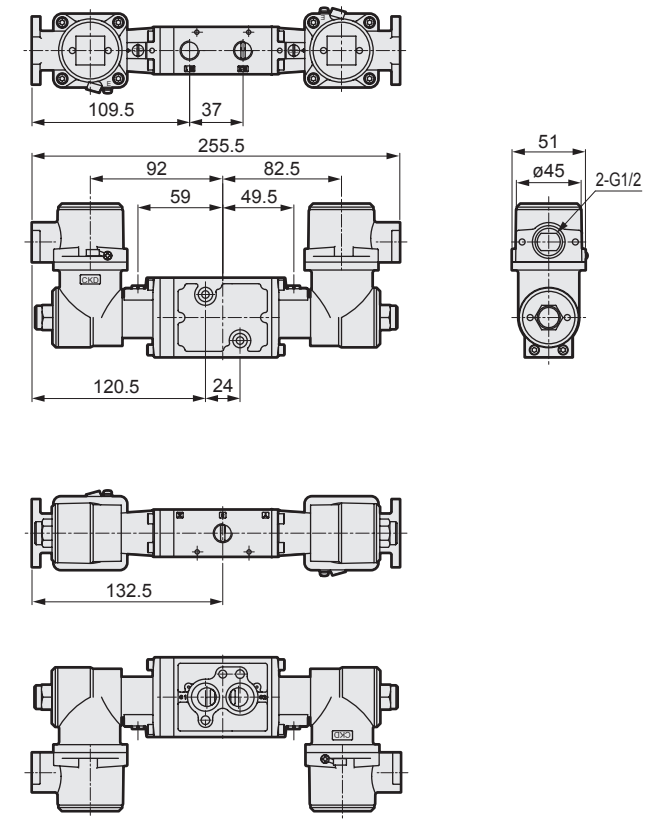
Note 1: For 4F1-NM, 4F1-standard items are used as body consumables, and 4F3 items are used as pilot actuators.
Note 2: Note that, for 4F3-NM, special items are used as body consumables.
Note 3: All piping ports are Rc 1/4.
No screw machining is made to C1 and C2 ports of a NAMUR surface.
Note 4: The PE exhaust hole and breathing hole are exposed to the atmosphere. So install it in an orientation that does not allow rain and water to directly enter these holes when you use 4F1 in outdoor environments.

Dimensions

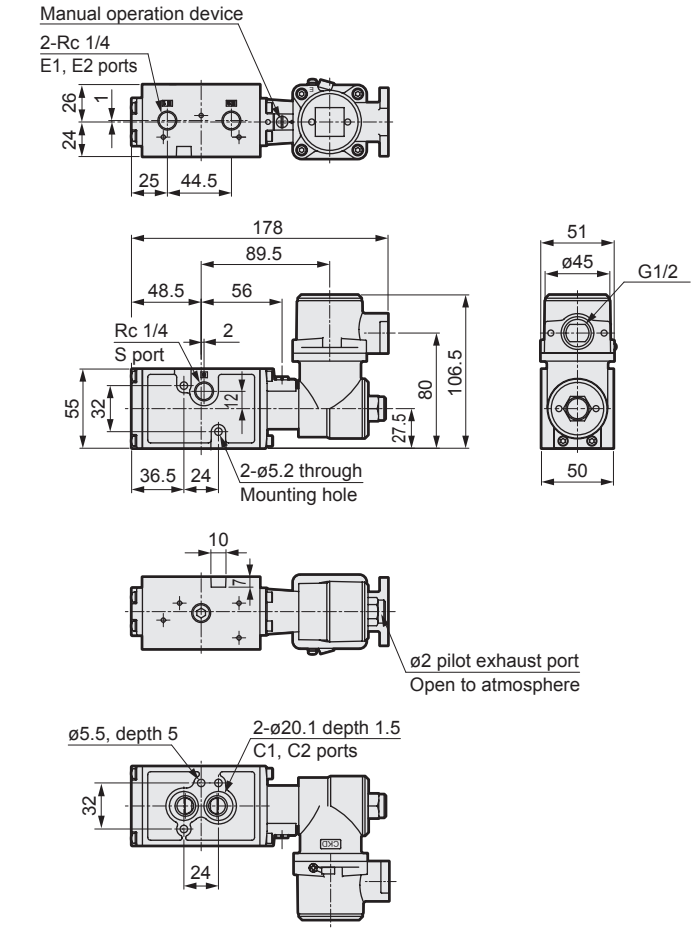
● 4F110E-NM



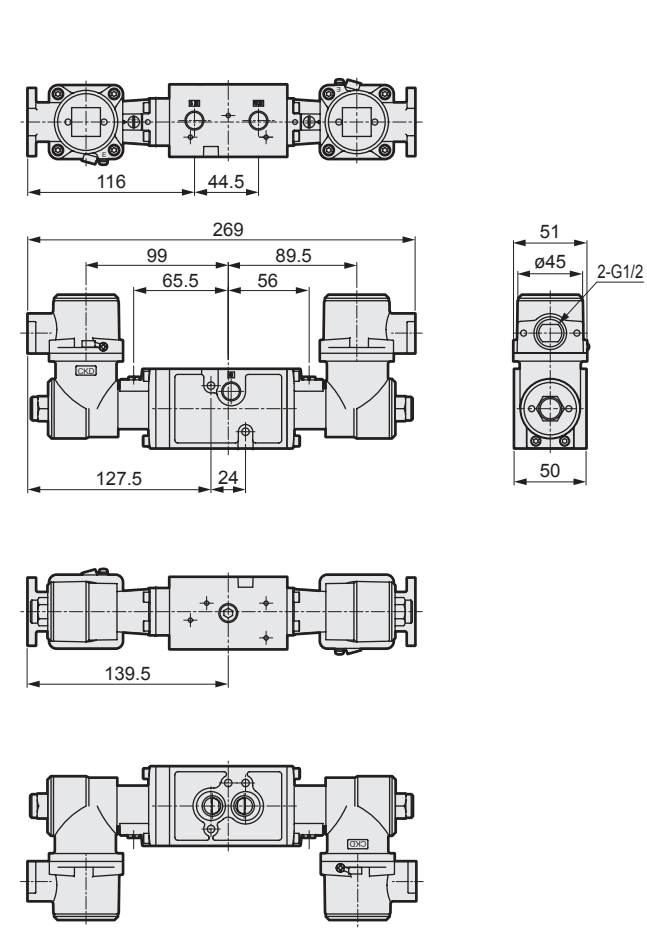
● 4F120E-NM

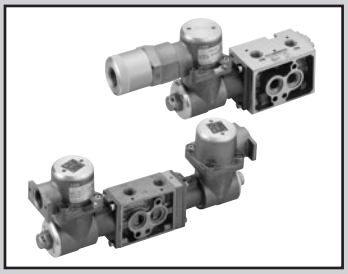


● 4F310E-NM



● 4F320E-NM





Single valve, direct piping
Pilot-type explosion-proof 5-port Selex valve

4F1/3*0EX Series

NAMUR standards Option

- Pressure-proof explosion-proof structure ExdIIBT4 (group IIB, temperature grade T4)
- Japan certificate No. TC20523
- Korea certificate No. 15-AV4B0-0389
- Taiwan certificate No. Industrial electricity (2015) 00216

RoHS

Common specification

Item	Description
Valve type and operation method	Pilot-type soft spool valve
Fluid used	Compressed air
Maximum working pressure MPa	1.0
Minimum working pressure MPa	0.1
Proof pressure MPa	1.5
Ambient temperature ˚C	-10 to 60 Note 1
Fluid temperature ˚C	5 to 60
Lubrication	Not necessary (Use turbine oil ISO VG32 for lubrication.)
Explosion-proof performance	ExdIIBT4
Vibration/impact tolerance m/s²	50 or less / 300 or less
Ambient atmosphere	Unworkable in a corrosive gas atmosphere

Note 1: The ambient temperature here means the temperature of the storage/installation site. It is not the fluid temperature during operation.

Flow rate

Model No.	Switching position		Port size	Sonic-speed conductance C [dm³/[s•bar)]
4F1	2-position	Single	Rc 1/4 (S, E1, E2)	1.6
		Double		
4F3	2-position	Single		3.1
		Double		

Note 1: The effective cross-section (S) and the Sonic-speed conductance (C) are mutually convertible by: S ≒ 5.0 × C.

Electrical specification

Item			Description
Rating voltage V	AC		100, 200 (50/60 Hz)
	DC		24
Rating voltage variation			±10%
Starting current A	AC	100 V	0.186/0.135
		200 V	0.093/0.068
	DC	12 V	-
		24 V	0.166
Holding current A	AC	100 V	0.06/0.05
		200 V	0.03/0.025
	DC	12 V	-
		24 V	0.166
Power consumption W	AC	100 V	4.5/4.0
		200 V	4.5/4.0
	DC	12 V	-
		24 V	4
Heat-resistance class			H

How to order

4F3 1 0EX - NM - G 10 - R - 100 VAC - KR

- 4F3 / 1 → Ⓐ Model No.
- 1 → Ⓑ Switching position
- NM → Ⓒ Port size
- 10 → Ⓓ External diameter of applied cable
- R → Ⓔ Options
- 100 VAC → Ⓕ Voltage
- KR → Ⓖ Explosion resistance certification institute

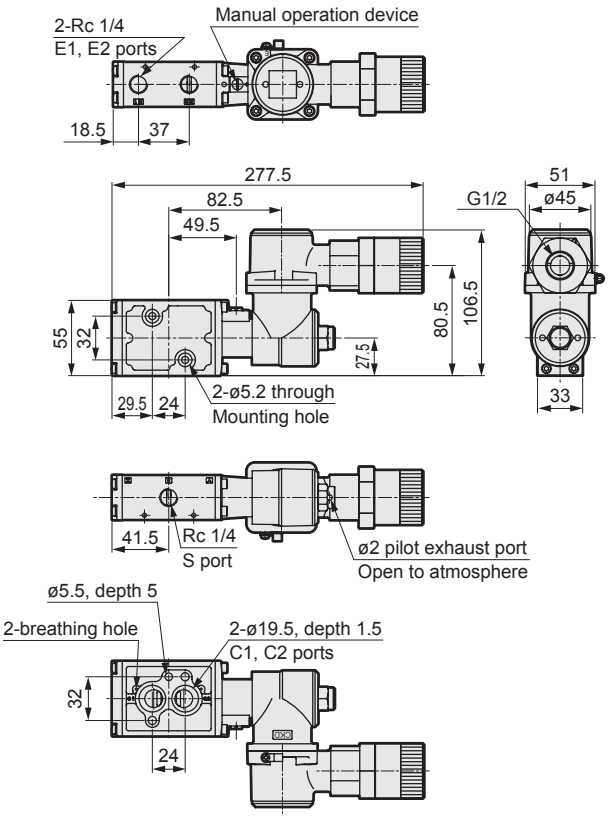
Code	Description	4F1	4F3
Ⓐ Model No.			
4F1	4F1 series	●	
4F3	4F3 series		●
Ⓑ Switching position			
1	2-position single	●	●
2	2-position double	●	●
Ⓒ Port size			
NM	NAMUR standards (Port size: Rc 1/4)	●	●
Ⓓ External diameter of applied cable			
9	ø7.5 to ø9.5 Note 5	●	●
10	ø9.5 to ø10.5	●	●
11	ø10.5 to ø11.5	●	●
13	ø11.5 to ø13.5 Note 5	●	●
Ⓔ Options			
Blank	No options	●	●
R	Position change of manual operation device	●	●
Ⓕ Voltage			
100 VAC	100 VAC (50/60 Hz)	●	●
200 VAC	200 VAC (50/60 Hz)	●	●
24 VDC	24 VDC	●	●
12 VDC	12 VDC	●	●
110 VAC	110 VAC (50/60 Hz)	●	●
220 VAC	220 VAC (50/60 Hz)	●	●
*** Other made-to-order types**			
[AC voltage]			
12 V, 24 V, 48 V		●	●
115 V, 120 V, 125 V		●	●
127 V, 210 V, 230 V		●	●
240 V, 250 V, 380 V		●	●
[DC voltage]			
45 V, 48 V, 80 V		●	●
100 V, 110 V, 125 V		●	●
Ⓖ Explosion resistance certification institute			
Blank	Japan certification (TIIS)	●	●
KR	Korea certification (KOSHA)	●	●
TW	Taiwan certification (ITRI)	●	●

⚠ Note on model No. selection

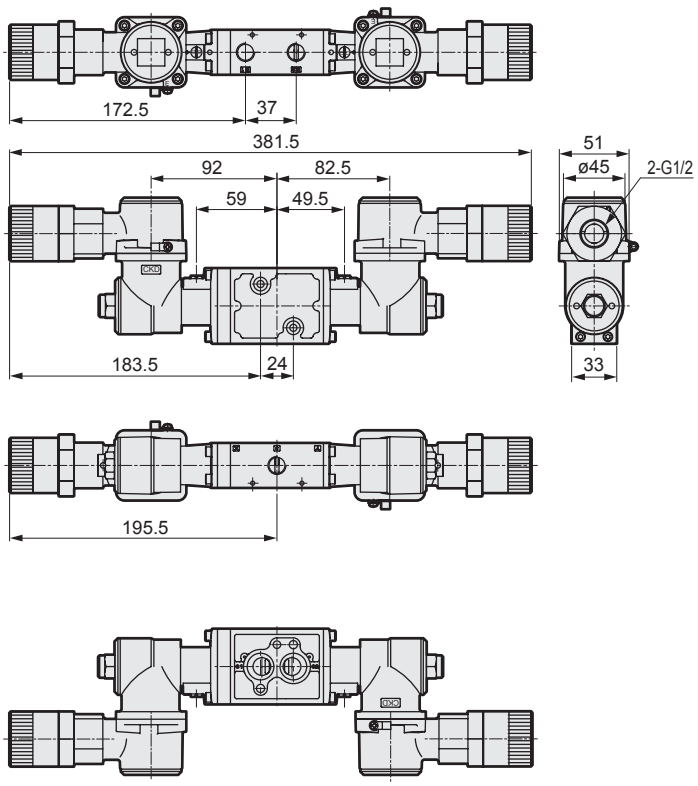
Note 1: For 4F1, 4F1-standard items are used as body consumables, and 4F3 items are used as pilot actuators.
Note 2: Note that, for 4F3, special items are used as body consumables.
Note 3: All piping ports are Rc 1/4.
No screw machining is made to C1 and C2 ports of a NAMUR surface.
Note 4: The PE exhaust hole and breathing hole are exposed to the atmosphere. So install it in an orientation that does not allow rain and water to directly enter these holes when you use 4F1 in outdoor environments.
Note 5: When the explosion resistance certification institute is KR or TW, the range of "External diameter of applied cable" 9 is ø8.5 to 9.5, and "External diameter of applied cable" 13 is not selectable.

Dimensions

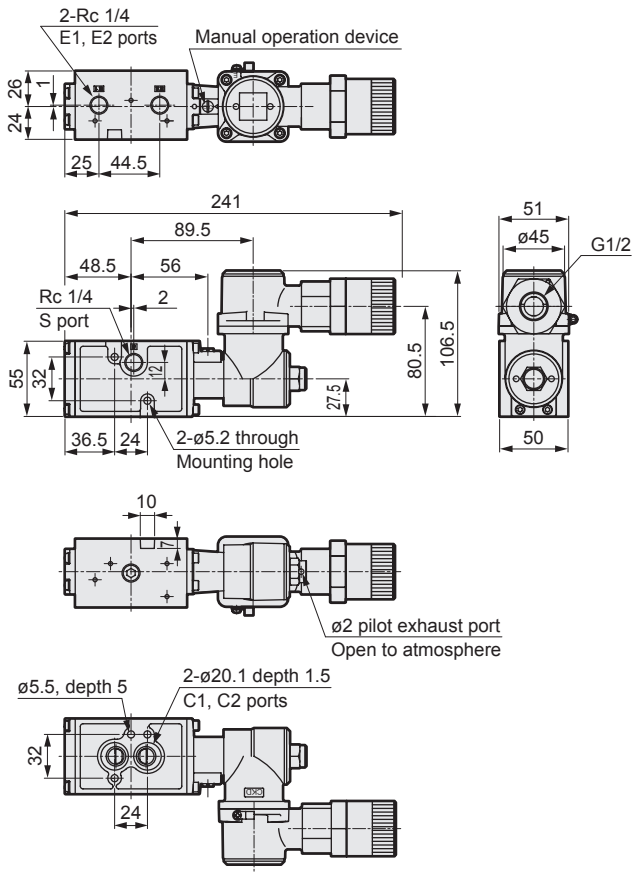
● 4F110EX-NM



● 4F120EX-NM



● 4F310EX-NM



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