



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

4F1/3-NM Series

NAMUR standards option



Common specifications

Item	Description
Valve and operation	Pilot operated soft spool valve
Working fluid	Compressed air
Max. working pressure MPa	1.0
Min. working pressure MPa	0.1 (WC:0.2)
Guaranteed proof pressure MPa	1.5
Ambient temperature (*1) °C	-10 to 60 (for WC -20 to 60°C)
Fluid temperature °C	5 to 60 (WC:-20 to 60; no freezing)
Lubrication	Not required (*2)
Degree of protection	IP65
Vibration/shock resistance m/s ²	50 or less/300 or less
Working atmosphere	Cannot be used in corrosive gas environments

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

*2: Use turbine oil ISO VG32 for lubrication. Consult with CKD regarding use in low-temperature environments.

Electrical specifications

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

Reference: Rated voltage 100 VAC 50/60Hz is available at 110 VAC 60Hz, while 200 VAC 50/60Hz is available at 220 VAC 60Hz.

Flow Rate Characteristics

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

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

How to order

4F3 1 0 - NM - M2 B W - AC100V

A Model No.

B Solenoid position

C Port size

D Manual override

E Electrical connections

F Outdoor type

G Other options

H Voltage

4F1 4F3

Code	Description	4F1	4F3
A Model No.			
4F1	4F1 Series	●	
4F3	4F3 Series		●
B Solenoid position			
1	2 position single	●	●
2	2-position double	●	●
C Port size			
NM	NAMUR standards (port size Rc1/4) *3	●	●
D Manual override *4			
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 *5	●	●
G	Round terminal box (G1/2) With gland (A-15a)	●	●
GL	Round terminal box (G1/2) with lamp *5 Gland (A-15a) attached	●	●
F Outdoor type			
W	Outdoor (general)	●	●
WC	Outdoor specification (low temperature environment)		●
G Other options			
Blank	No option	●	●
S	Surge suppressor included	●	●
G	3-year warranty after delivery *7,*8 (with inspection certificate, inspection guidelines, traceability system diagram)	●	●
H 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 *5	●	●
DC24V	24 VDC	●	●
* Other made-to-order products			
	48 VDC	●	●
	100 VDC	●	●
	110 VDC	●	●

⚠ Precautions for model No. selection

- *1: With 4F1, the body repair parts, etc. are 4F1 standard products. 4F3 products are used in coil assembly.
- *2: For 4F3, note that the repair parts of the body are dedicated parts.
- *3: The only piping port is Rc1/4. The C1/C2 ports on the NAMUR surface have not been threaded.
- *4: Complete outdoor exposure environment (When using the product in a place where it is exposed to continuous direct sunlight, select the manual override of non-locking M2 (metal). Further, as a metal locking manual override is available made to order, contact CKD for details.
- *5: 12 VDC models are not available for BL with lamp and GL.
- *6: 4F1-NM series WC outdoor specifications (low temperature environments) can be made to order supported. Contact CKD for details.
- *7: The warranty period of option G is guaranteed for a period of three years from the date of delivery or for a period of one year from the start of use, whichever comes first.
- *8: For option G, the specifications and drawings must be exchanged. Refer to page 101 for details.

[Model No. example]

4F310-NM-M2BW-AC100V

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

Drain separator
F.R.L. unit

Pneumatic auxiliary
components

Pneumatic
valves

Fluid control
valves

Pneumatic
cylinders

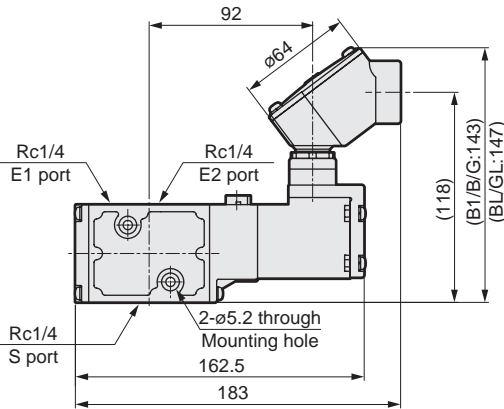
Related
products

Safety
precautions

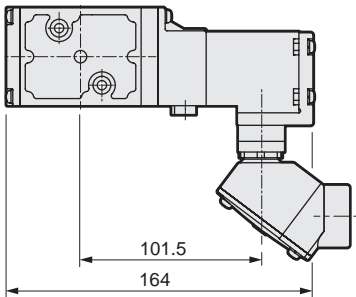
4F1, 4F3-NM Series

Dimensions

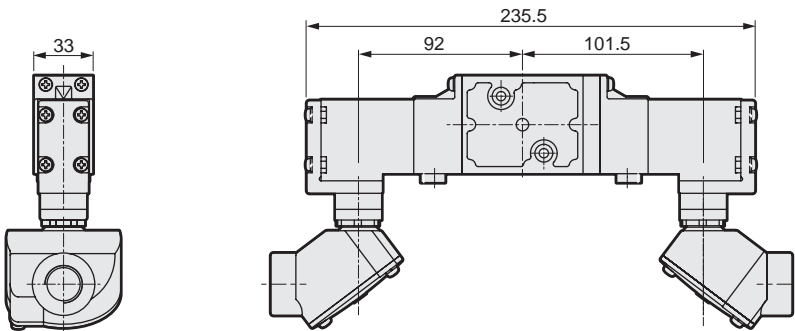
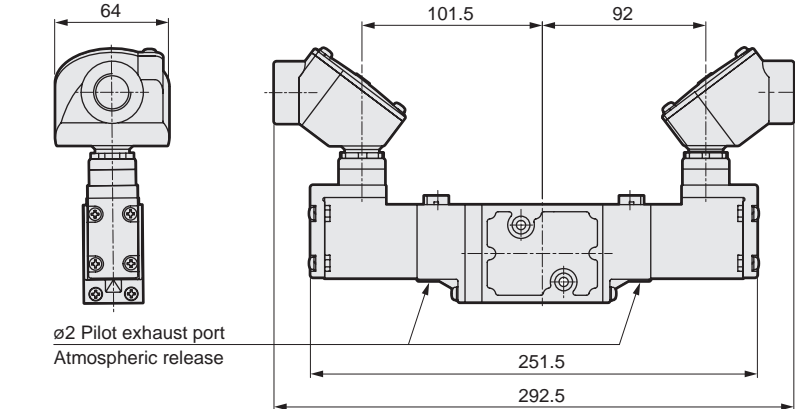
- 4F110-NM
 - 2 position single
 - Round terminal box: (B1/B/BL/G/GL)



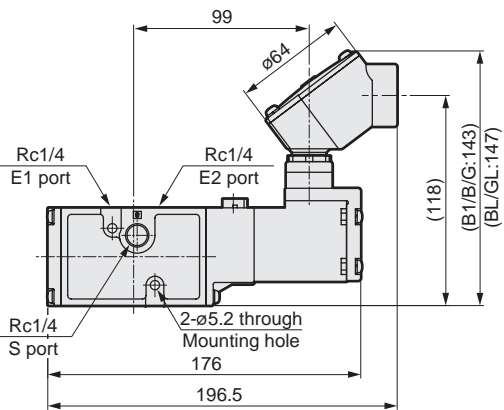
Position change of manual override: (R)



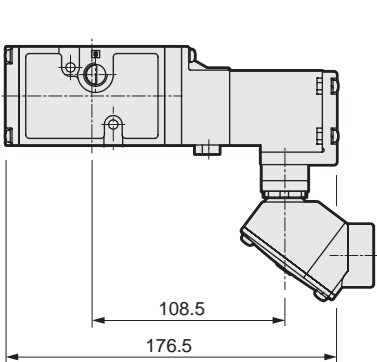
- 4F120-NM
 - 2-position double



- 4F310-NM
 - 2 position single
 - Round terminal box: (B1/B/BL/G/GL)



Position change of manual override: (R)



- 4F320-NM
 - 2-position double

