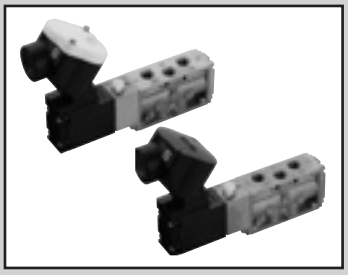


Single valve/body piping
Pilot operated 5-port pneumatic valve

4F2/3-W Series

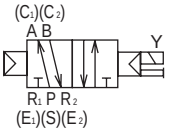
● Cylinder bore size: ø40 to ø100

WEATHER PROOF RoHS CAD

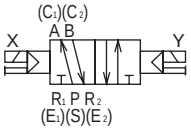
JIS symbol

● 5-port valve

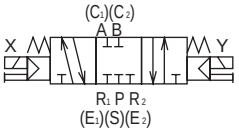
2 position single



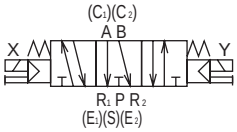
2-position double



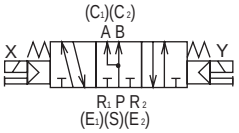
3-position
All ports closed



3-position A/B/R connection



3-position P/A/B connection



Common specifications

Item		Description
Valve and operation		Pilot operated soft spool valve
Working fluid		Compressed air
Max. working pressure	MPa	1.0
Min. working pressure MPa	2-position	0.1 (WC:0.2)
	3-position	0.15 (WC:0.25)
Proof pressure		1.5
Ambient temperature	(*1) °C	-10 to 60 (WC: -20 to 60°C)
Fluid temperature	°C	5 to 60 (WC:-20 to 60 and no freezing)
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		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 V	AC		100, 200 (50/60Hz)
	DC		12, 24
Voltage fluctuation range			±10%
Starting current A	AC	100V	0.170/0.140
		200V	0.090/0.070
	DC	12V	0.500
		24V	0.250
Holding current A	AC	100V	0.100/0.080
		200V	0.050/0.040
	DC	12V	0.500
		24V	0.250
Power consumption W	AC	100V	5.0/4.0
		200V	5.0/4.0
	DC	12V	6.0
		24V	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.

Individual specifications

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

Flow Rate Characteristics

Model No.	Solenoid position		Port size	Sonic conductance C[$dm^3/(s/bar)$]	Critical pressure ratio b	Q[L/min(ANR)]
4F2	2-position	Single	Rp1/4 NPT1/4 G1/4	3.0	0.33	778
		Double				
	3-position	All ports closed		2.5	0.43	695
		A/B/R connection				
4F3	2-position	Single	Rp1/4 NPT1/4 G1/4	3.9	0.42	1077
		Double				
	3-position	All ports closed		4.0	0.35	1051
		A/B/R connection		4.5	0.42	1242
		P/A/B connection		4.0	0.35	1051
	2-position	Single	Rp3/8 NPT3/8 G3/8	5.8	0.42	1601
		Double				
	3-position	All ports closed		4.4	0.42	1215
		A/B/R connection		5.1	0.46	1451
		P/A/B connection		4.4	0.42	1215

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

How to order

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

Ⓐ Model No.
Ⓑ Solenoid position
Ⓒ Port size
Ⓓ Manual override
Ⓔ Electrical connections
Ⓕ Outdoor type
Ⓖ Other options
Ⓗ Voltage

Code	Description	4F2	4F3
Ⓐ Model No.			
4F2	4F2 Series	●	
4F3	4F3 Series		●
Ⓑ 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		●
Ⓒ Port size *1			
08	Rp1/4	●	●
10	Rp3/8		●
08N	NPT1/4	●	●
10N	NPT3/8		●
08G	G1/4	●	●
10G	G3/8		●
Ⓓ Manual override *2			
Blank	Locking (resin)	●	●
M2	Non-locking (metal)	●	●
M3	Locking with manual lever (resin)	●	●
R	Position change of manual override	●	●
Ⓔ 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	●	●
Ⓕ Outdoor type			
W	Outdoor (general)	●	●
WC	Outdoor specification (low temperature environment)	●	●
Ⓖ Other options			
Blank	No option	●	●
S	Surge suppressor included	●	●
H	Check valve attached (only applicable to 3-position all ports closed)	●	●
N	Plug included (3-portvalve)	●	●
NC	3-port valve specifications plug assembly (C1 (A), E1 (R1) assembly)	●	●
NO	3-port valve specifications plug assembly (C2 (B), E2 (R2) assembly)	●	●
G	3-year warranty after delivery *5,*6 (with inspection certificate, inspection guidelines, traceability system diagram)	●	●
Ⓗ 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 made-to-order products**			
48 VDC		●	●
100 VDC		●	●
110 VDC		●	●

Precautions for model No. selection

*1: As Rc threads can also be used for piping port, Contact CKD for details.
*2: When using the unit in a complete outdoor exposure environment (where direct sunlight strikes constantly), select the non-locking manual override M2 (metal). Further, as a metal locking manual override is available made to order, contact CKD for details.
*3: 12 VDC is not available for BL with lamp and GL.
*4: Support with a manifold is not available.
*5: 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.
*6: For option G, the specifications and drawings must be exchanged. Refer to page 101 for more information.

[Model No. example]

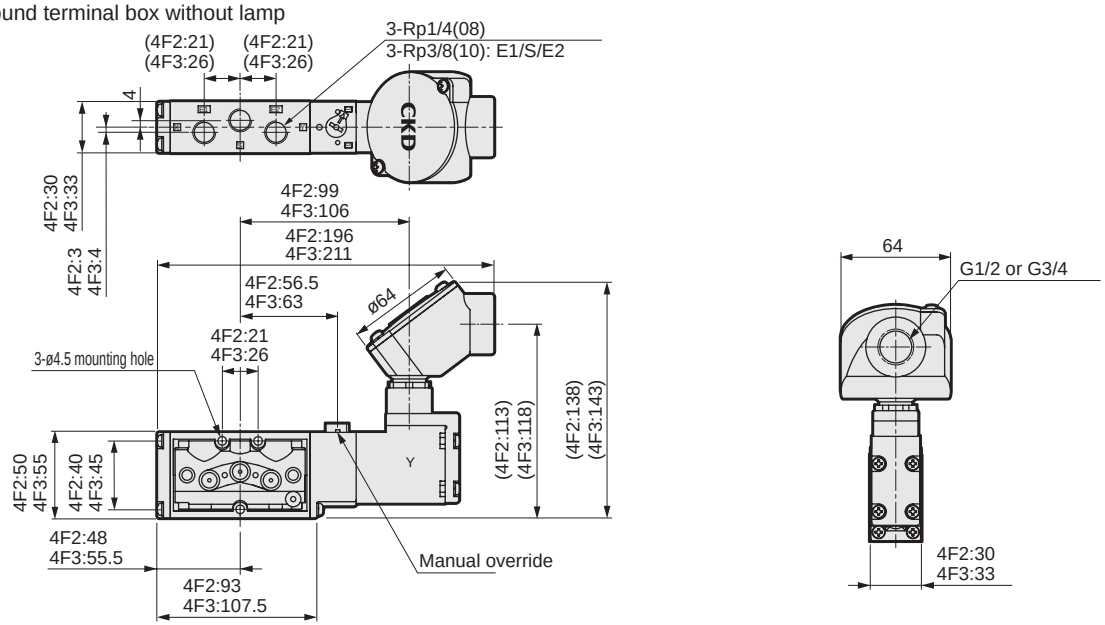
4F210-08-M2BW-AC100V

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

Dimensions

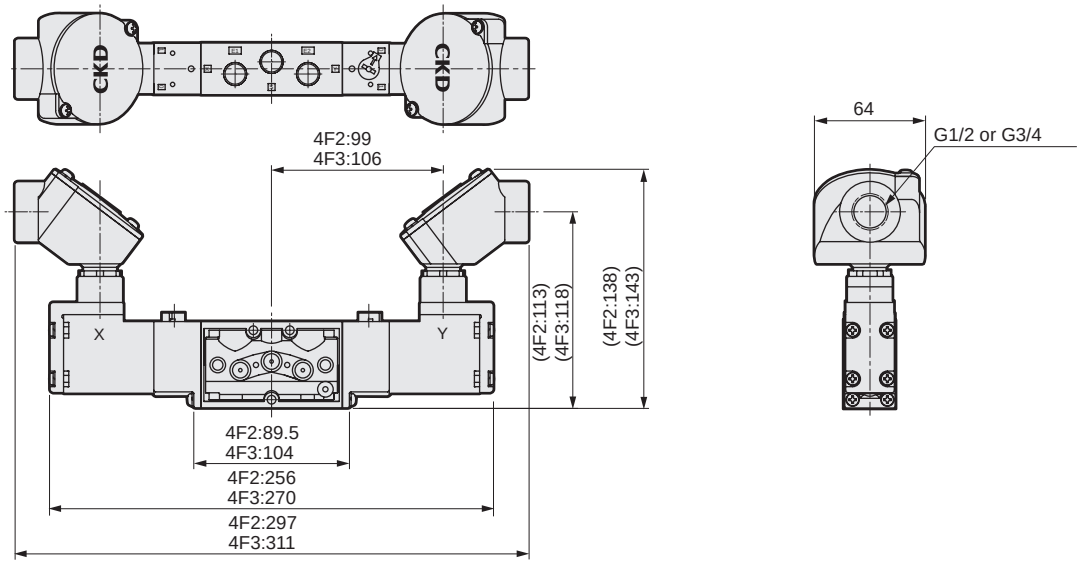
4F210, 4F310

● 2-position single: round terminal box without lamp



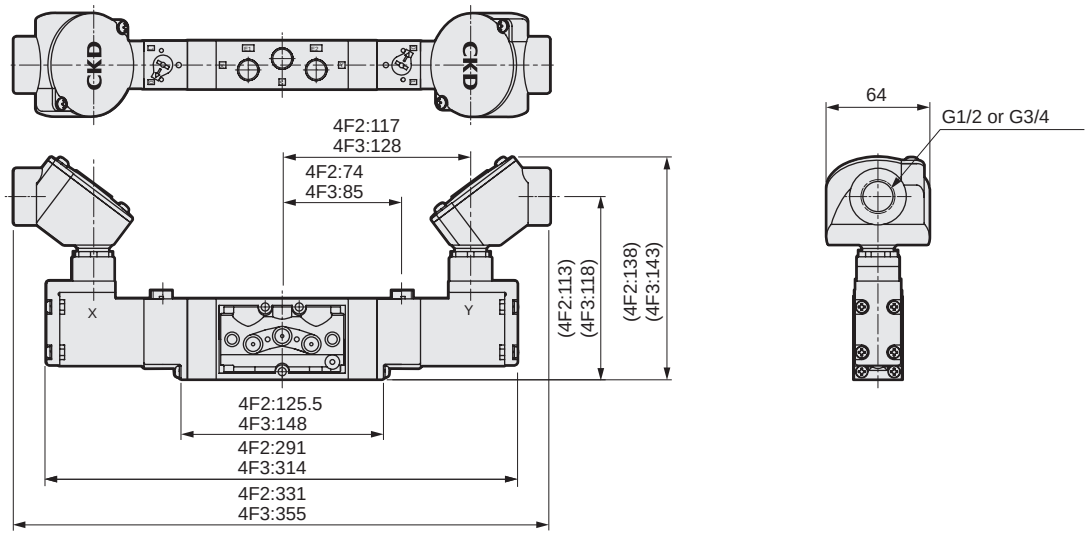
4F220, 4F320

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



4F2$^{3}_{4}$0, 4F3$^{3}_{4}_{5}$0

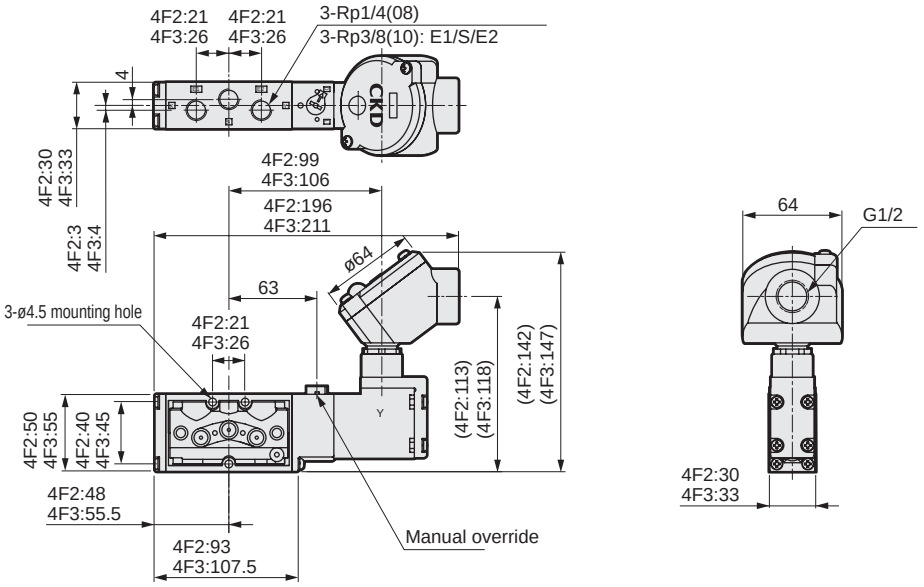
● 3-position: round terminal box without lamp



Dimensions

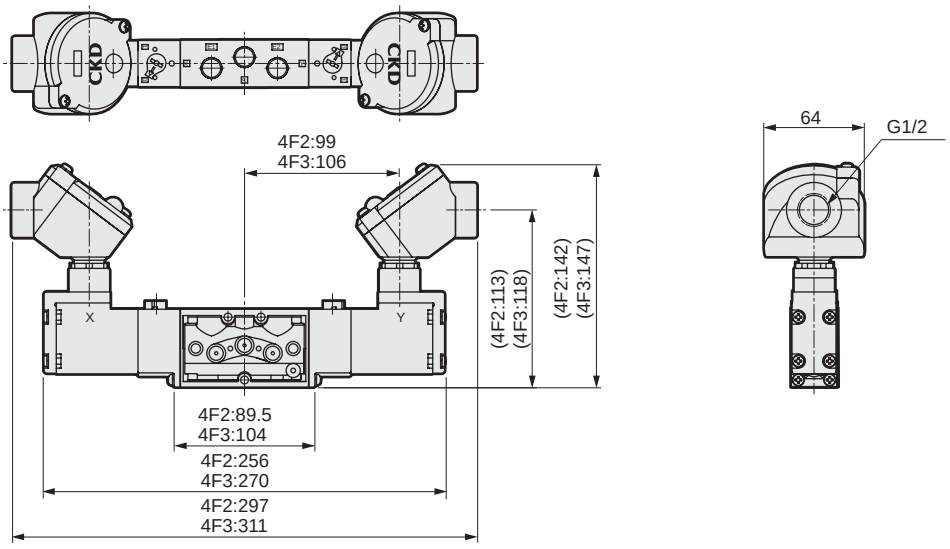
4F210, 4F310

● 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}{5}$0

● 3-position: round terminal box with lamp