

Discrete valve ISO size 1
DIN terminal box
Pilot operated 5-port valve ISO compliant valve

PV5G-6 Series

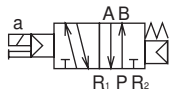
● Cylinder bore size: max. ø100

CE (applied to DC voltage) RoHS

JIS symbol

● 5-port valve

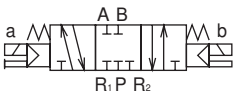
2-position single (FG-S)



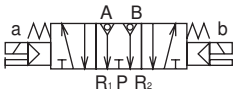
2-position double (FG-D)



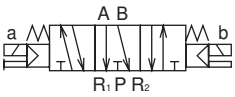
3-position all ports closed (FHG)



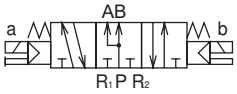
3-position all ports closed Non-leaking (FPG)



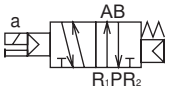
3-position A/B/R connection (FJG)



3-position P/A/B connection (FIG)



2-position single Exhaust pressurized (YZ-S)



2-position double Exhaust pressurized (YZ-D)



Common specifications

Item	Description
Valve and operation	Pilot operated soft spool valve
Working fluid	Compressed air
Max. working pressure MPa	1.0 (≈150 psi, 10 bar)
Min. working pressure MPa	0.15 (≈22 psi, 1.5 bar) 0.20 (≈29 psi, 2 bar) (3-position) (*1)
Proof pressure MPa	1.50 (≈220 psi, 15 bar)
Ambient temperature °C	-5 (23°F) to 60 (140°F) (no freezing)
Fluid temperature °C	5 (41°F) to 60 (140°F)
Lubrication	Not required
Degree of protection	Dust proof/jet proof (IP65 or equivalent)
Leakage cm^3/min (A, B→R port)	10 (ANR) or less 3-position all ports closed non-leaking type only 0.3 (ANR) or less (*2)
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: With YZ-S only, use with a working pressure of R1 > R2 ≥ 0.15 MPa.
*2: The initial value is listed.

Electrical specifications

Item				Description
Rated voltage	V	AC		100(50/60 Hz) 110(50/60 Hz) 200(50/60 Hz) 220(50/60 Hz)
		DC		12,24
Voltage fluctuation range				±10%
Starting current	A	AC	100 V	0.056/0.044
			110 V	0.051/0.040
			200 V	0.034/0.026
			220 V	0.031/0.024
Holding current	A	AC	100 V	0.028/0.022
			110 V	0.025/0.020
			200 V	0.017/0.013
			220 V	0.015/0.012
		DC	12 V	0.083
			24 V	0.042
Power consumption	W	AC	100 V	1.8/1.4
			110 V	(1.8/1.5)
			200 V	2.1/1.6
			220 V	(2.2/1.7)
Values in ( ) are with lamp		DC	12 V	1(1.2)
			24 V	
Thermal class				B (molded coil)
Wiring method				Electrical plug connector

Performance/characteristics by model

Item			PV5G-6
Port size		(*1)	Rc1/4, Rc3/8
Response time ms (*2)	2-position	Single	30 (ON), 40 (OFF)
		Double	30
	3-position		30 (when ON), 50 (when neutral)

*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 with a working pressure of 0.5 MPa, no lubrication, and a DC power supply. It depends on the pressure and the lubricant quality.

Weight

Item			PV5G-6
Weight kg (*1)	2-position	Single	0.40
		Double	0.44
	3-position	Other than non-leaking	0.48
		All ports closed non-leaking	1.14

*1: The weight listed is the weight without the sub-plate.

Flow characteristics

Model No.	Port size	Solenoid position	P→A/B		A/B→R1/R2	
			C[dm^3/(s·bar)]	b	C[dm^3/(s·bar)]	b
PV5G-6	Rc1/4	2-position single	6.1	0.28	6.7	0.20
		2-position double	6.1	0.28	6.7	0.20
		3-position all ports closed	5.2	0.32	5.6	0.30
		3-position A/B/R connection	5.1	0.32	6.9	0.16
		3-position P/A/B connection	6.3	0.28	5.9	0.28
		3-position all ports closed non-leaking	3.4	-	3.0	-

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

Coolant proof specifications

Can be selected with "How to order" Item Ⓓ option "A" on page 1474.

CE marking specifications (applies to DC voltage type)

** - ST

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

How to order DIN terminal box

● ISO Size 1

PV5G - 6 - FG-S - 3 - N ( ) - A03

- PV5G: Model No.
- 6: ISO size 1
- FG-S: Ⓐ Solenoid position
- 3: Ⓑ Voltage
- N: Ⓒ Surge suppressor/lamp
- ( ): Ⓓ Option
- A03: Ⓔ With/without sub-plate and port size

Code	Description		Model No. PV5G-6
Ⓐ Solenoid position			
FG-S	P pressurized	2-position single	●
FG-D		2-position double	●
FHG-D		3-position all ports closed	●
FJG-D		3-position ABR connection	●
FIG-D		3-position PAB connection	●
FPG-D		3-position all ports closed non-leaking	●
YZ-S	Exhaust pressurized	2-position single	●
YZ-D		2-position double	●
Ⓑ Voltage			
1	100 VAC		●
2	200 VAC		●
3	24 VDC		●
4	12 VDC		●
5	110 VAC		●
6	220 VAC		●
Ⓒ Surge suppressor/lamp			
Blank	None		●
N	With surge suppressor/lamp (*1)		●
Ⓓ Option			
Blank	None		●
A	Coolant proof		●
Ⓔ With/without sub-plate and port size			
Blank	Without sub-plate		●
A02	Side piping (Rc1/4 (Rc3/8 for R port only))		●
A03	Side piping (Rc3/8)		●

⚠ Precautions for model No. selection

*1: Refer to page 1470 for the circuit diagram with a surge suppressor/lamp.

[Example of model No.]

PV5G-6-FG-S-3-N-A03

Model: PV5G/ISO size 1 (DIN terminal box)

- Ⓐ Solenoid position : P pressurized type 2-position Single solenoid
- Ⓑ Voltage : 24 VDC
- Ⓒ Surge suppressor/indicator lamp : With surge suppressor and indicator lamp
- Ⓓ Option : None
- Ⓔ Sub-plate port size : Side piping (Rc3/8)

ISO size 1 sub-plate specifications and how to order

CB1 - A02

- A02: Ⓐ Piping connection method

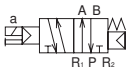
Code	Type	P/A/B port	R1/R2 port	Weight (kg)
Ⓐ Piping connection method				
A02	Side piping	Rc1/4	Rc3/8	0.27
A03		Rc3/8		

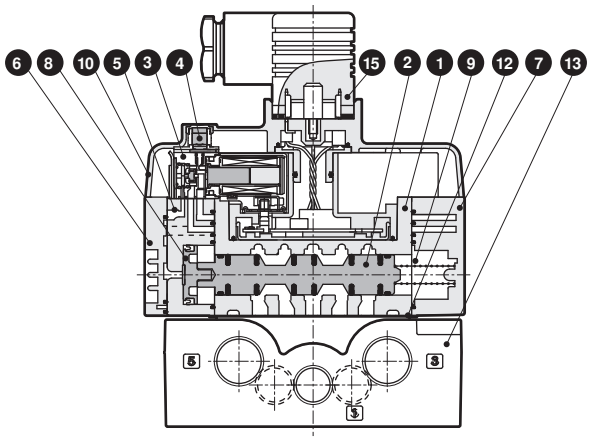
Internal structure and parts list: DIN terminal box

PV5G-6-FG-S
● 2-position single



PV5G-6-YZ-S
● 2-position single
Exhaust pressurized



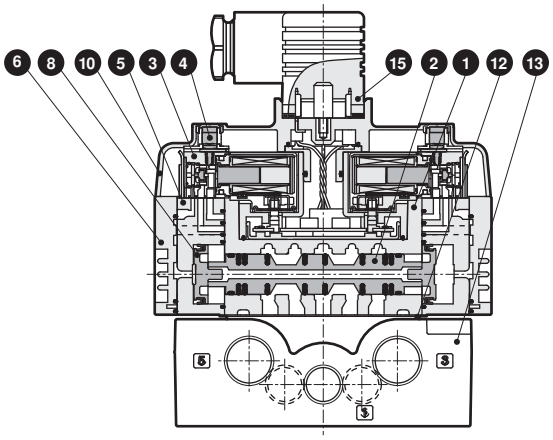


PV5G-6-FG-D
● 2-position double



PV5G-6-YZ-D
● 2-position double
Exhaust pressurized





PV5G-6-FHG-D
● 3-position all ports closed

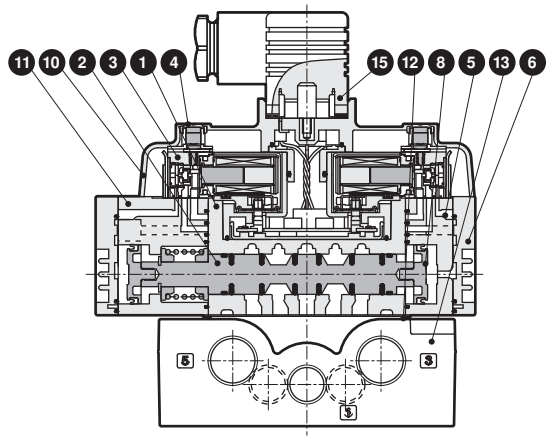


PV5G-6-FJG-D
● 3-position A/B/R connection

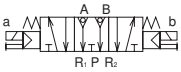


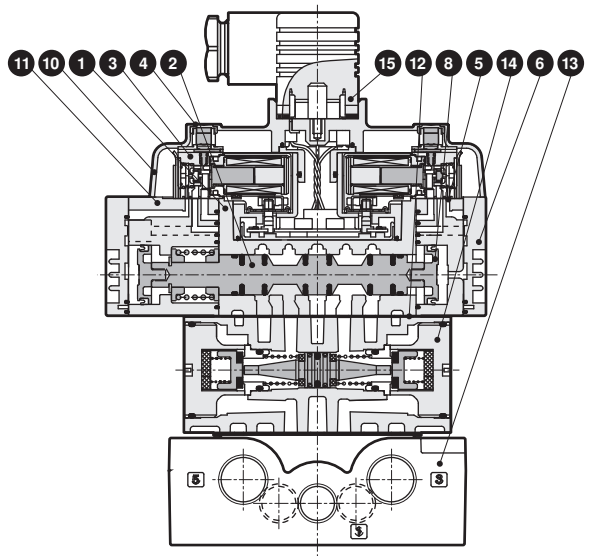
PV5G-6-FIG-D
● 3-position P/A/B connection





PV5G-6-FPG-D
● 3-position all ports closed
Non-leaking type





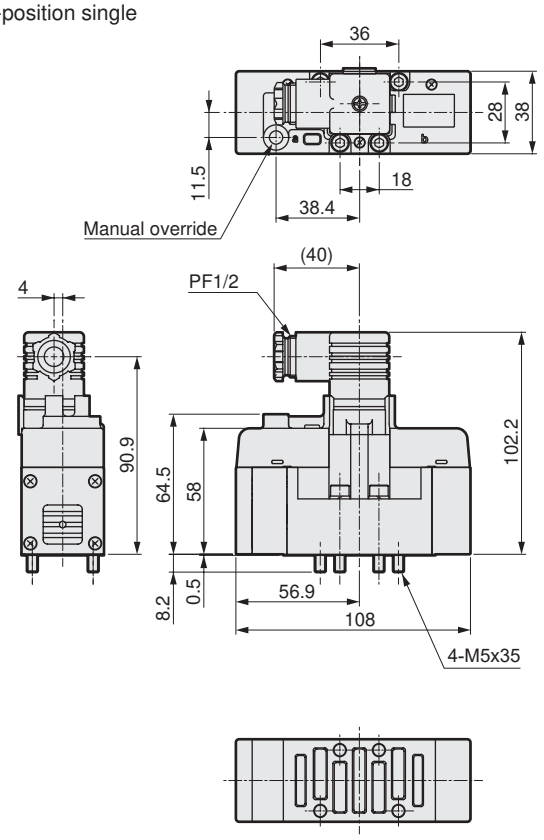
Main parts list

No.	Part name	Material	No.	Part name	Material
1	Body	Aluminum alloy die-casting	9	Spring S	-
2	Spool assembly	-	10	Wiring cover	Resin
3	Pilot valve	-	11	Pilot valve assembly for 3-position	Resin
4	Manual override	-	12	Gasket	-
5	Pilot valve assembly for double	Resin	13	Sub-plate	Aluminum alloy die-casting
6	Cap D	Resin	14	Air pilot check valve	-
7	Cap S	Resin	15	DIN terminal box	-
8	Piston D assembly	-			

Dimensions: DIN terminal box (out sub-plate)

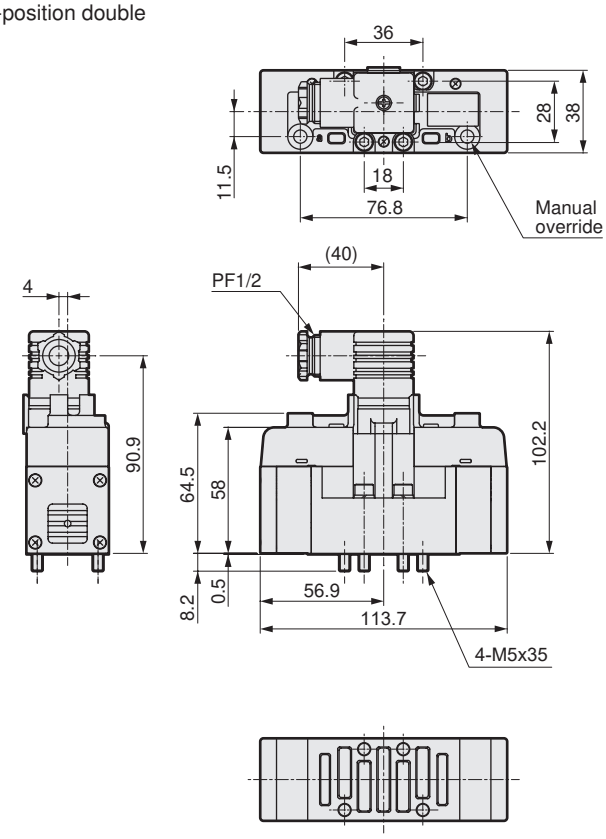
PV5G-6-FG-S-*
PV5G-6-YZ-S-*

● 2-position single



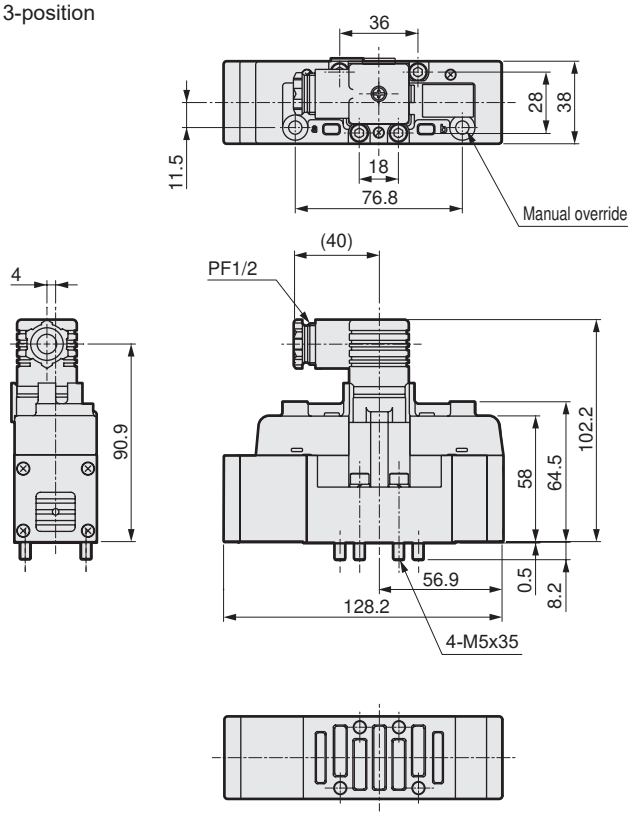
PV5G-6-FG-D-*
PV5G-6-YZ-D-*

● 2-position double



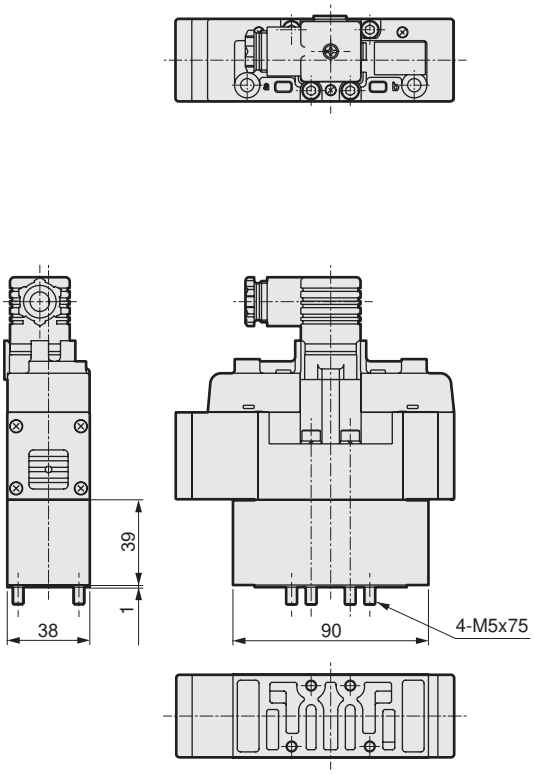
PV5G-6-FHG-D-*
PV5G-6-FJG-D-*
PV5G-6-FIG-D-*

● 3-position



PV5G-6-FPG-D-*

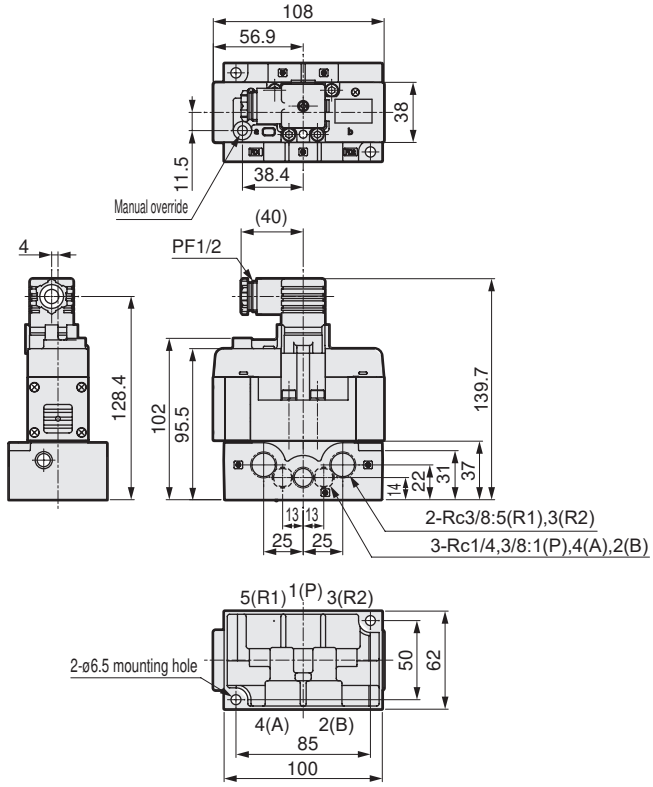
● 3-position/non-leaking



Dimensions: DIN terminal box (with sub-plate)

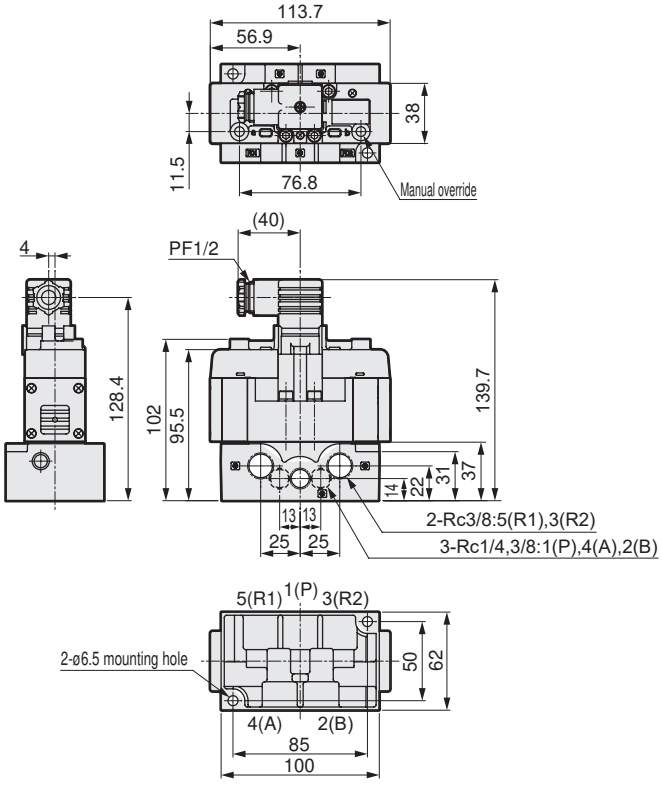
PV5G-6-FG-S-*-*
PV5G-6-YZ-S-*-*

● 2-position single



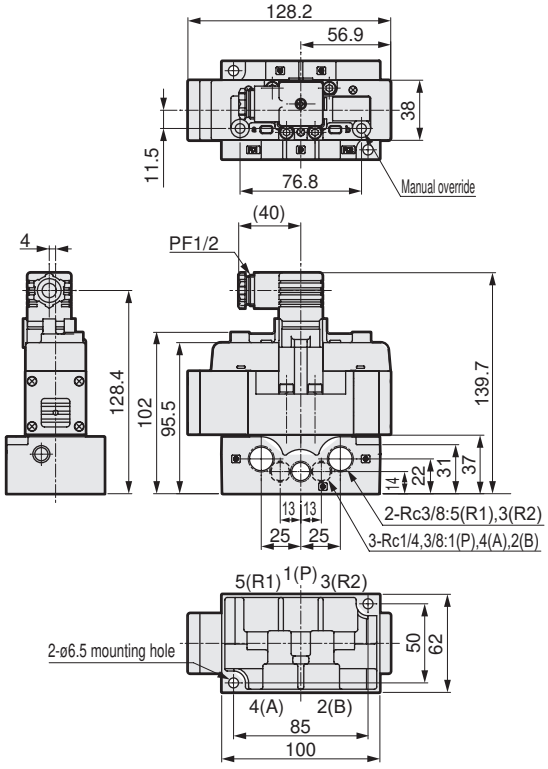
PV5G-6-FG-D-*-*
PV5G-6-YZ-D-*-*

● 2-position double



PV5G-6-FHG-D-*-*
PV5G-6-FJG-D-*-*
PV5G-6-FIG-D-*-*

● 3-position



● Sub-plate dimensions

