

Handling Instructions

PV5G・PV5 series

Thank you for purchasing CKD product.  
Please review the precautions in this Instruction thoroughly for safe operation of this equipment.  
Keep this document in a safe location so that it is easily referenced as necessary.  
For further information, refer to the instruction manual and product catalog.

Mounting method

CAUTION!! Do not unpack solenoid valve until the piping is ready for connection.

Foreign materials entering through piping port will cause failure and malfunction.



WARNING

- Do not step on or place objects on the product. Failure to follow this warning may cause falling accident, falling of the product, bodily injury due to fall, malfunction due to breakage of the product, etc.
- Before inspecting, checking or adjusting the product, turn off power supply and shut down compressed air line and verify zero residual pressure.

Piping and installation



WARNING

- Do not use water or solvent for cleaning and painting. Plastics broken by the solvent and coating materials will clog the port, causing malfunction.
- Check the location of piping port by referring to product indication, etc. Wrong piping will cause malfunctioning of actuator.
- Screws used to fasten pipe joints must be tightened with a correct torque. Otherwise, air will leak or screws will be damaged.

Tightening torque

Connecting screw	Tightening torque N・m	Connecting screw	Tightening torque N・m
M3	0.3~0.6	Rc3/8	13~15
M5	0.5~1.0	Rc1/2	16~18
Rc1/8	3~5	Rc3/4	19~40
Rc1/4	6~8	Rc 1	41~70



CAUTION

- Do not throttle the supply port. Otherwise, supply pressure drops during operation and causes the device to malfunction.
- Before connecting the piping to the valve, thoroughly clean the inside of piping by air blowing (flushing) or by washing to clear off chips, cutting lubricant, dust and foreign objects.
- Do not mount the solenoid valve by supporting it with piping. Secure the valve with dedicated supporting member.
- When wrapping a seal tape, start wrapping 2 mm from the tip of the screw, in the direction of screw. If the tape protrudes from the screw section, it will be cut as the piping is screwed, leaving shreds inside valve. These chips or shreds will result in failure.
- Prevent entrainment of foreign materials from exhaust port by facing down the port or by using a silencer.

Lubrication



CAUTION

- This product is basically oil less type, requiring no lubrication. However, it can accept class 1 turbine oil (additive-free), ISO VG32.
- Once the oil is applied to the product, continuous application is required. Loss of oil means loss of lubricant, causing malfunctioning.

Manual override



WARNING

- Be sure the area near cylinder is cleared of all unauthorized personnel before operating the cylinder.



CAUTION

Do not press the manual override with a tool with sharp end, or the rubber cover could be broken.  
(Use a Philips screwdriver not less than tip size #2.)

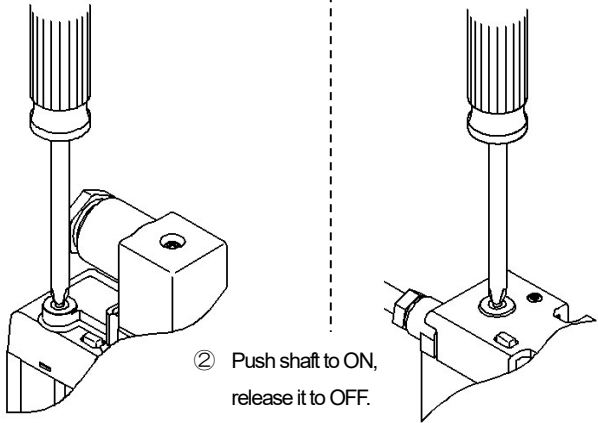
- PV5G・PV5 series is a pilot operated solenoid valve. Even if the manual override is operated, the main valve does not switchover until air is supplied to the supply port.

Operation

Unlock manual override(Standard)

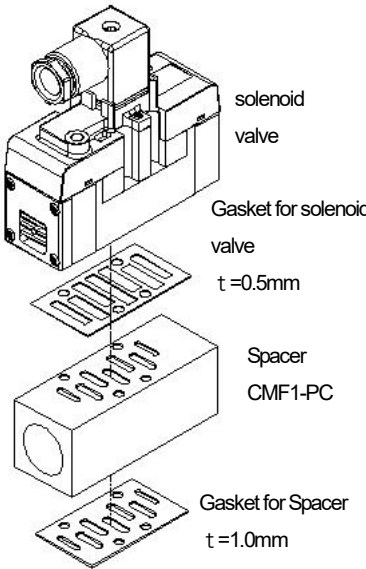
PV5G (DIN terminal box type)

PV5 (I/O connector type)



Spacer assembling

- When using spacers, such as CMF1-PC, there are two kinds of gaskets. Please be careful not to mistake. Otherwise, air will leak.



Wiring method



WARNING

- Be sure to turn off power before attempting wiring work. Never touch a current carrying terminal block or never bring bare hand close to it. Electrical shock may occur.



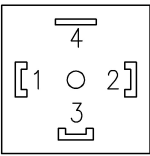
CAUTION

- Identify the voltage of available source
- Simultaneous feeding of many loads causes voltage drop, in proportion to cable length. Make sure that the voltage drop across solenoid is 10% or less the rated voltage.
- Protection class :class I ( )...AC100,110V,200V,220V
- Protection class :class III ( )...DC12,24V

Solenoid valve internal circuit diagram  
PV5G (DIN terminal box type)

- Please use the cable conformable with JIS C3312 (600V vinyl insulation vinyl cable), conductor cross-section areas 0.75mm<sup>2</sup> or 1.25mm<sup>2</sup>, and 2/3/4 conductor (O.D. :8.5 to 11.5mm)
- On the end of cable, use crimp terminal to prevent contact defective and coming off.  
(E.g. :1.25Y-3U/1.25-3.5S/1.25-4M).D.M3.5  
O.D. should be within 7mm)
- Tighten set screws with 0.5N・m tightening torque.

How to wire



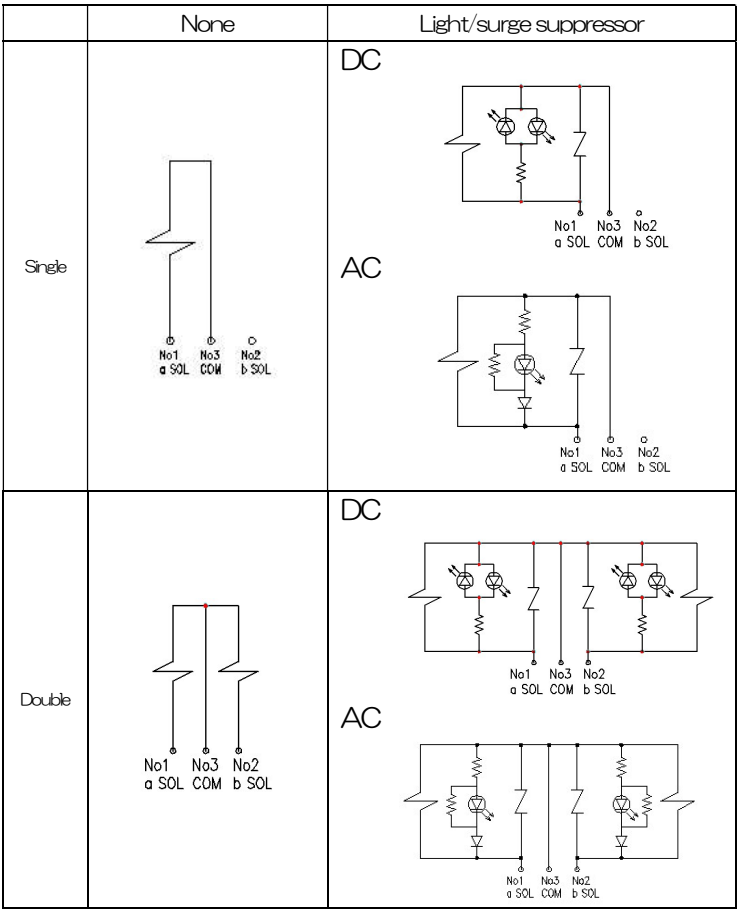
DC12,24V

Terminal	Wiring position
1	Solenoid a
2	Solenoid b
3	Common terminal

AC100,110V

AC200,220V

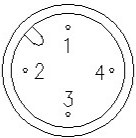
Terminal	Wiring position
1	Solenoid a
2	Solenoid b
3	Common terminal
4	Earth (ground)



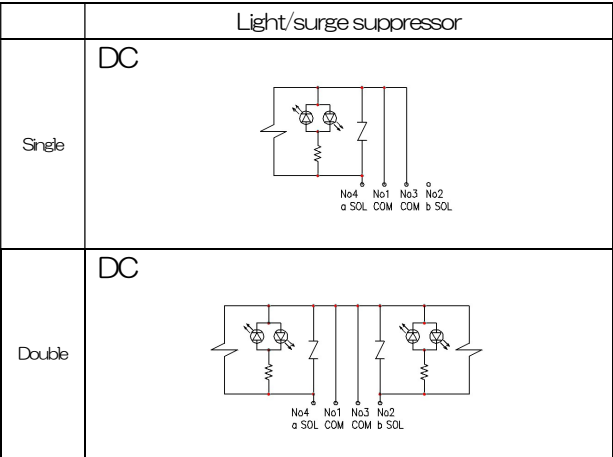
PV5 (I/O terminal type)

- Internal connections are prewired.
- Connect appropriate cable to I/O connector and secure the conductors with appropriate torque.

How to wire



Terminal	Wiring position
1	Common terminal
2	Solenoid b
3	Common terminal
4	Solenoid a



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