Safety Notice & Caution For Solenoid Valve

Please read the safety notice carefully before using and pay attention to the safety cautions of this product.

Caution of this product

Warning

- While designing the circuit, make thorough understanding to the characteristic of the compressed air and the application of this product.
- The air in use is compressed, please note that expandable and unstable pressure may fly out, burst out or leak.
- Beware of the fluid temperature, please follow the range defined by Specification Table (0~60℃)
- While designing and selecting the machine model, please consider the incorrect shift of the driven object caused by emergency or transient power interruption which may impair safety. When choosing the machine model, please have the competence of controlling model, and the fixed position or automatic shift model during power interruption under consideration.
- Excessive water in the pipeline will cause malfunction of the solenoid valve, please install water removing filter at front end.
- Carbon powder chip and debris will occur when the air compressor is running; malfunction of solenoid valve is possible when the attached amount is excessive. Filter is required to prevent jammed in inside portion.
- Requirement of ambient environment:
  1.Avoid chemical, inflammable substance, corrosive sea water, and high temperature in working environment.
  2.Avoid application in place with heating and radiation heat.
  3.Follow the requirement of the ambient temperature stated in the Specification Table.
  4.Prevent malfunction caused by freezing while used in cold place.
  5.Avoid exposure to outdoor sunlight, dusty condition which may cause unstable quality.
  6.Avoid application in places with oily, inflammable substance and explosion proof.

Caution

Take care of the impact of leak current that may affect the normal operation of other controller under machine work. Therefore proper circuit protection device is necessary; also need to avoid the error action of the solenoid valve.

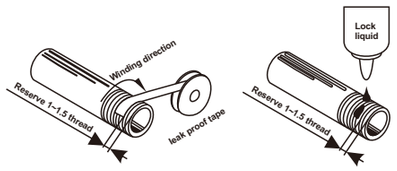
• Allowable values

While used in DC12V	Below 1.5 mA
While used in DC24V	Below 1.8 mA
While used in AC110V	Below 1.5 mA
While used in AC220V	Below 3.0 mA

Caution for installation

Warning

- Caution for manner of installation: for the complex moving and three position model, please install horizontally.
- Don't use if the vibration of the mounting position exceed 50m/s²; for the place with low vibration, install with the solenoid valve perpendicularly to direction of vibration to prevent loosen.
- Prevent entrance of debris and dust foreign object into solenoid valve before pipe laying in order to prevent failure and error action.
- Prevent debris and leak proof tape residue from entering the pipe while pipe laying and assembling the connector. Reserve 1~1.5 thread not wound with tape seal while winding.
- If the connector is locked by using anoxic glue, avoid excessive amount fluid glue flowing in the body, which may cause jammed and poor movement.
- Follow the torque in table below while laying the pipe (tighten the connector), never exceed the range of application to avoid damage of product.
- The exhaust of solenoid valve should be equipped with muffler to prevent excessive noise. If there is no muffler equipped, avoid to discharge the exhaust gas upwardly and absorb foreign object.
- Take care for concentrated exhaust while manifold is used, fail to discharge completely will cause back pressure and affect the switch and normal operation of solenoid valve.
- Avoid the destruction of plastic material by water soluble solvent and coating equipment after installation, causing blockage and poor action.
- When using manifold to secure the solenoid valve, take care proper position of the manifold packing, and then tighten at both sides evenly to prevent leakage.
- Avoid lengthy distance between solenoid valve and piping; long pipeline will affect the activation effect and response.

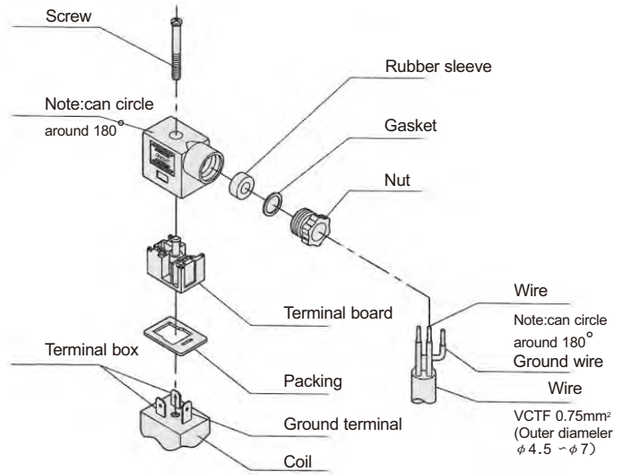


Torque chart for piping

Size of pipe	Appropriate turning torque N.m(kfg.cm)
M5	1.5~2(15~20)
Rc(PT)1/8	7~9(70~90)
Rc(PT)1/4	12~14(120~140)
Rc(PT)3/8	22~24(220~240)
Rc(PT)1/2	28~30(280~300)

Caution

- Connection of DIN terminal box
  DIN terminal box is class IP65 water proof: please positioned and slot firmly when installing, use screw for fixing.



Caution of application

Warning

- Don't switch manual button while the solenoid valve is energized; resume to normal position after the manual button is operated.
- Never apply incorrect voltage to the coil of solenoid valve to prevent damage.
- The energizing of the compound movement solenoid valve, the energizing time is at least 0.1 second.
- Provide voltage stabilizer to power supply, rated voltage supply within 10%, avoid surge.

Caution

- Heat dissipation should be taken into consideration after long period energizing.
- Take special attention to intermediate airtight solenoid valve for leakage between solenoid valve and cylinder and cause error action and displacement.

Caution of service and maintenance

Warning

- Shut off the power switch and air source properly before service and maintenance, confirm that there is no residue pressure in the pipeline and start work after confirming the status is safe.
- The manual device of solenoid valve must be retumed to home (initial position) and confirm that all are reset, and then start the normal operation is allowed, because if the power is turning on before confirming for reset to home will cause abnormal action and lead to hazard.
- The assembly and disassembly of solenoid valve should be carried by personnel who is familiar with structure of the product and know well the internal structure and principle, avoid error disassembly and cause safety concern on operation and application.

Caution

- Keep the air source dry without moisture and debris, and pay attention for normal action of the front filter of the solenoid valve and draining device.
- No oil is required for the solenoid valve as it is lubricated at assembly. In case of oiling is necessary, use ISO-VG32 lubricant, consequent poor action if stop oiling (if there is minor moisture in the air; lubrication is required at fast moving condition.)
- Service and maintenance should be perform regularly as schedule, and confirm the normal operation of following:

(1) Is the compressed air supplied stably?
(2) Is the front filter of the solenoid valve and draining device normal?
(3) Is the connection portion or piping loosen accompany moving of object? Is the pipe connection portion normal?
(4) Is the action condition of the solenoid valve normal? Is there any delay and exhaust phenomena? Any strange noise?
(5) Whether the piping system connected to activator (or cylinder) normal? Terminal start and stop movement normal? Is the load system normal?
(6) Is the lubricant feeding system normal? Is the oil amount adjusted properly?
(7) Is the exhaust smooth? Any blockage? Are exhaust and speed normal?