



To Use This Product Safely

Be sure to read this before use. For general cylinder information, see Intro 41, and for cylinder switches, see P. 1512.

Individual Precautions: Compact Cylinder with Valve CKV2 Series

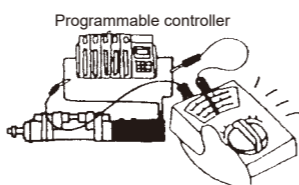
Design / Selection

Warning

- Air may be taken in at the exhaust port of the valve due to valving element operation, causing the intake of foreign matter near the exhaust port. Foreign matter may also enter when the exhaust port is pointed upwards. Install a silencer or pipe the exhaust port downward.
 - The actuator will not operate correctly if the exhaust air is not discharged smoothly.

CAUTION

- Check leakage current to prevent malfunction caused by leakage current from other fluid control components.
 - When using a programmable controller, leakage current may affect the valve and cause a malfunction.
 - The values affected by leakage current depend on the voltage type. Refer to the table below.



Reference		
	For 100 VAC	3.0 mA or less
	For 200 VAC	1.5 mA or less
	For 24 VDC	1.8 mA or less

- Switch the valve at least once every 30 days to prevent malfunction.

- Although the contact service life of the reed switch varies depending on usage conditions, it will generally last several million cycles. If the device used is in continuous operation day and night or high frequency operation, it will reach the contact life region in a short period of time, so use a solid state switch that does not have a contact part.

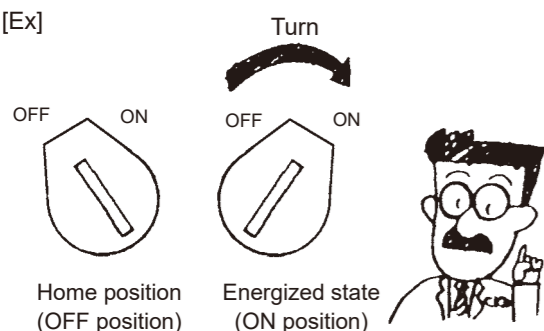
During Use

1. Common

Warning

- Manual operation causes the connected device to function. Make sure that there is no danger before performing manual operation. If the manual operating device of the valve has been activated, be sure to return it to the home position (OFF position) before operating the equipment. If it is not in the home position, supplying compressed air will simultaneously activate the cylinder, creating a dangerous situation.

[Ex]



CAUTION

- Be careful not to hit the solenoid valve with a tool or the equipment during mounting.
- Do not support the cylinder with pipes during mounting.
- Do not pick up the product by the coil lead wire.
 - This may lead to disconnection.
- Polarity
 - All series have no polarity. (Non-polar type)
- Applied voltage
 - When wiring the valve electrically, do not mistake the type of voltage (AC, DC) and the voltage. This will cause a malfunction or coil burnout.
- Checking wiring
 - After wiring is complete, check that there are no errors in the connection.

CAUTION

- When disassembling and assembling the valve, be sure to confirm that it operates normally according to the following work procedure.

Work procedure

1. Check that the manual override is at the origin (OFF position).
2. Set to low pressure. (0.15 MPa)
3. Switch the manual operating device to the operating side (ON position) and confirm that the cylinder operates.
4. Return the manual operating device to the initial position (OFF position) and confirm that the cylinder returns. (Operation confirmation by manual operation is complete.)
5. Perform operation check by electricity.
 - After manual operation check, energize/de-energize to confirm operation.

- With the DIN terminal box, as the Ambient Temperature is high and the gaskets will deteriorate due to heat when used with continuously powered specifications, be sure to regularly replace the gaskets.

How to wire the terminal box

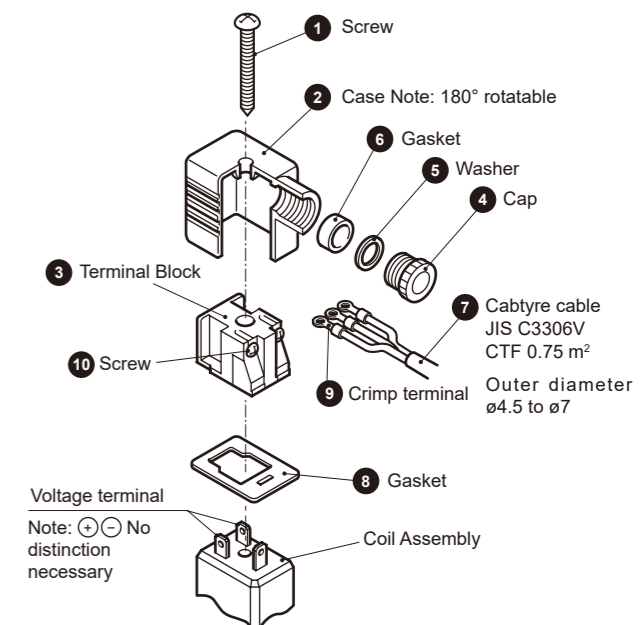
Refer to the diagram below and wire the terminal box according to steps ① to ③.

- ① Pass the cabtyre cable ⑦ through the cap ④, washer ⑤, and gasket ⑥ in that order, and ② insert it into the case.
 - ② When using crimp terminals, process the cabtyre cable ⑦ to an appropriate length as shown in the diagram and ⑨ crimp the crimp terminal to its end.
 - ③ Remove the ⑩ screw from the ③ terminal block, pass the ⑨ crimp terminal through (for Y-type terminals, loosen and insert), and tighten the ⑩ screw again.
- (Note) Tighten with a torque in the range of 0.5 N·m ±15%.

- Remarks:
- It is possible to wire the terminals with bare wires. In that case, loosen the screw, ⑩ insert the lead wire into the fitting, and tighten it again.
 - The orientation of the cord can be changed by pulling out the terminal block from the case, rotating it by 180°, and returning the block to the case.
 - The crimping terminals ⑨ listed in the table below can be used.

Nichifu Terminal Industries Co., Ltd.		Fuji Terminal Industry Co., Ltd.		J.S.T. Mfg. Co., Ltd.	
O-Terminal	Y-Terminal	O-Terminal	Y-Terminal	O-Terminal	Y-Terminal
0.3-3	0.3-3	1.25-3	1.25-YAS3	0.5-3	0.25-B3A
1.25-3	1.25Y-3		1.25-YAS3.5	1.25-3	1.25-C3A
1.25-3S	1.25Y-3.5				

If using other manufacturers, please use equivalent products.



With Valve

With Valve

CKV2

CAV2/
COVP/
N2

CKV2

CAV2/
COVP/
N2

Cylinders
Switch

Ending

Cylinders
Switch

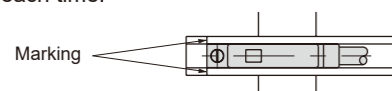
Ending

2. Common (With T-type Switch)

CAUTION

■ When Moving the Switch Position in the Stroke Direction

- The T2, T3, T0, and T5 switches can be fine-tuned by approximately ±3 mm from the default position of installation. If the adjustment range exceeds ±3 mm, or when finely adjusting the position of other switches, move the position of the band.
- Loosen the switch mounting screw, move the switch along the rail, and tighten at the specified position. For T2, T3, T0, T5, use a flat-head screwdriver (watchmaker's screwdriver, precision screwdriver, etc.) with a grip diameter of 5 to 6 mm, tip shape width of 2.4 mm or less, and thickness of 0.3 mm or less to tighten the switch fixing screw with a tightening torque of 0.1 to 0.2 N·m. For T1, T□C, T2J, T2Y, T3Y, T8, tighten with a tightening torque of 0.5 to 0.7 N·m.
- The switch rail has a marking 4 mm from the end face of the rail. Use it as a guide for mounting position when replacing the switch. The switch rail marking is set to the switch maximum sensitivity position at factory shipment. If the switch type changes or the band is moved, the maximum sensitivity position changes, so adjust the position each time.

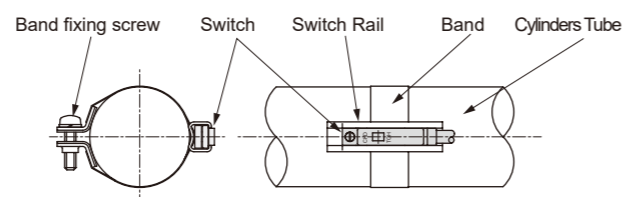


■ When Moving the Switch Position in the Circumferential Direction

- Loosen the band fixing screw, move the switch rail circumferentially, and tighten it at the specified position. The tightening torque is 0.6 to 0.8 N·m.

■ When Moving the Band Position

- Loosen the band fixing screw, move the switch rail and band along the cylinder tube, and tighten them at the specified position. The tightening torque is 0.6 to 0.8 N·m.



CAV2, COVP^P_N2

Cell Cylinders®

With Valve

ø50, ø75, ø100



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For precautions during mounting, installation, adjustment, use, and maintenance, please see "Precautions for Use" in this catalog and the CKD Components product site (<https://www.ckd.co.jp/kiki/en/>) → "Model No." → [Instruction Manual].

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CKV2

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COVP/
N2

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Cylinders
Switch

Ending

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