

# MV03 Series

# Floating / Modulating Valve

## APPLICATION

MV03 series floating/modulating valves are widely used in central air-conditioning cool/heat water system. It can accurately control the flow of cool/heat medium depending upon the requirements of the given application, and can not result in sudden change of temperature and to control the room temperature accurately.

The valve is driven by bi-directional motor, which is connected with the floating thermostat by common, open and close terminals. The floating thermostat will continuously collect the data and make processing, and send out control signals to operate or stop the motor so as to modulate angle of the valve. Then the chilled/hot water will enter into the fan coil, and cool/heat air will be supplied to the room. When the room temperature reaches the set-point, the thermostat will make the valve power off. So the opening angle of the valve will be always at the best state, and the room temperature will be kept within the set range of the thermostat.

If the controller for the valve is without overtime protection function, the timing protection device can be selected to assemble in the valve. With this timing protection device, the life of the motor will be extended.

Two types of MV03 series floating/modulating valve: 2-way and 3-way. The sizes: 1/2", 3/4", 1" and 1 1/4". There are 11 kinds of specifications classified by the access type and the fluid characteristic. There are also different pipe connections for your selection: BSP (G), NPT (N), SWEAT(S), INVERTED FLKARE (F), etc.

The base and cover of MV03 series floating /modulating valve is used flameproof engineering plastic. Ball valve plug is used to control the fluid. It has the advantages of large flow rate, high differential pressure, low noise, stable and dependable performances. It provides superior ease of operation and can maintain and regulate high volume, high pressure, high/low temperature flow and high humidity condition often appeared in concealed fan coil unit.



## FEATURES

- Bi-directional floating proportional control;
- High precision and sensitivity of temperature control;
- Various AC voltages for selection, such as 24V, 110V and 220V, etc;
- Timing protection device (for 24V working power supply, it can be assembled for optional), to ensure motor reliable and durable life;
- Built-in electronic card (24V working power supply) can receive 0~10V (for model MV03...B) or 4~20mA (for model MV03...EC) DC input control signal, and provide proportional control;
- The valve actuator and valve body is used tight lock connection. The actuator can be installed after the installation of valve body. It has flexible and convenient assembly.

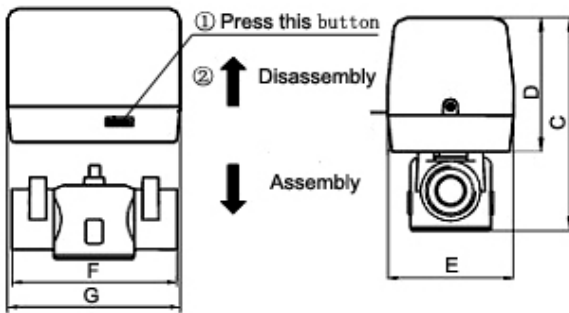
## SPECIFICATIONS

Rated Voltage (optional):	220V AC / 110V AC / 24V AC
Frequency:	50/60Hz
Body Pressure:	2.1 MPa
Closes-Off Pressure:	0.3Mpa
Medium:	Chilled/ hot water
Fluid Temp.	2~94℃
Working Temp.	<40℃

## DATASHEETS

P/N	TYPE	Kv Value	SIZE	Full Stroke Time
MV03G2D15V24A	2-way	3.2	1/2"	55s
MV03G2D20V24A		4.6	3/4"	55s
MV03G2D25V24A		6.8	1"	60s
MV03G2D32V24A		10.0	1 1/4"	80s
MV03G3D15V24A	3-way	3.2	1/2"	60s
MV03G3D20V24A		4.6	3/4"	60s
MV03G3D25V24A		5.7	1"	65s
MV03G3D32V24A		8.4	1 1/4"	105s

**DIMENSIONS (mm)**



**Fig.1**

TYPE	DIMENSIONS (mm)				
	C	D	E	F	G
DN15 2-way	115	73	67	80	90
DN15 3-way	125	73	67	80	90
DN20 2-way	115	73	67	89	90
DN20 3-way	127	73	67	89	90
DN25 2-way	117	73	67	93	90
DN25 3-way	139	73	67	93	90
DN32 2-way	131	73	67	105	90
DN32 3-way	146	73	67	105	90

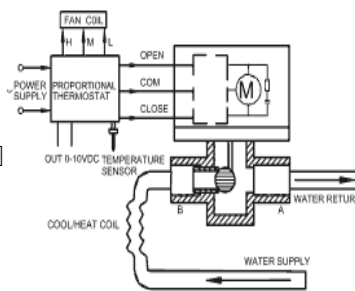
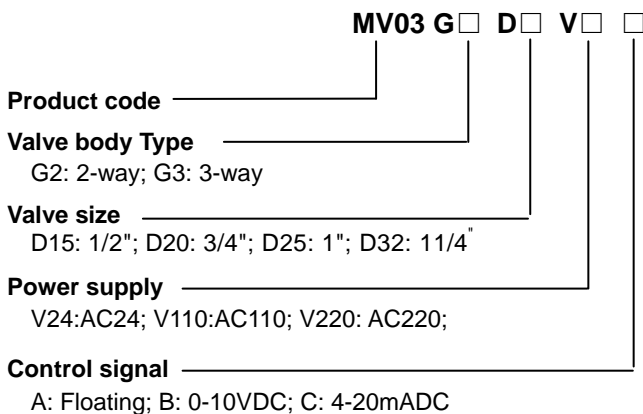
**Warning!**

- **Make sure the arrow on the valve conforms to the flow direction.**
- **Please check the power supply of actuator carefully, make sure it is suitable for actuator to avoid damaging motor.**

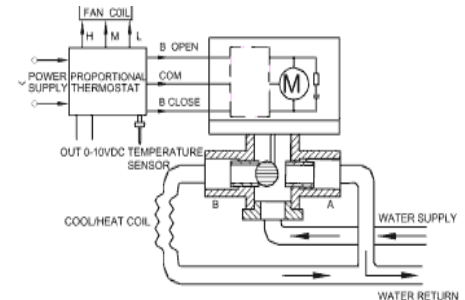
**INSTALLATION AND OPERATION**

- Assembly and disassembly of the actuator and valve body: as in Fig.1, fit the square axis of the valve body with the square hole in the actuator and insert a little (make sure that another axis won't touch the actuator), rotate the actuator or valve body, make another axis of the valve body aim at the corresponding hole in the actuator. Use a little strength to press the actuator, when hearing a "clatter", and then the assembly of the actuator and valve body is finished. When disassembly, presses the detachable button on the actuator, and uses a little strength to pull out the actuator according to the opposite direction of assembly, then it is detached.
- 2-way and 3-way valve is installed as Figure 2 and 3. For high building, pressure-reducing valve should be installed on branch pipe at ground floor.
- Note: When the valve is mounted on horizontal pipe, the angle must be positioned less than 85 ° (see Figure 4), and it must be prevented from dripping. When the valve is mounted on vertical pipe, it must be prevented from dripping.
- Manual operating lever: The valve is unlocked when press the manual operating button. Moving the manual lever can make the valve return. When release the button, the valve will be locked again automatically.
- When install 2-way valve, the flow direction is from end "B" to "A", for normal-open valve, it is from end "A" to "B". In both situations, the valve closing direction is opposite.
- When install 3-way valve, end "B" is supply to the coil, end "A" is by-pass, there is no mark for inlet, end "A" and "B" is marked on the bottom of the valve body.

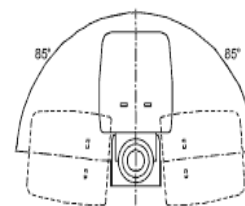
**MODEL DEFINITION**



**Fig. 2 2-Way Valve**



**Fig. 3 3-Way Valve**



**Figure 4**