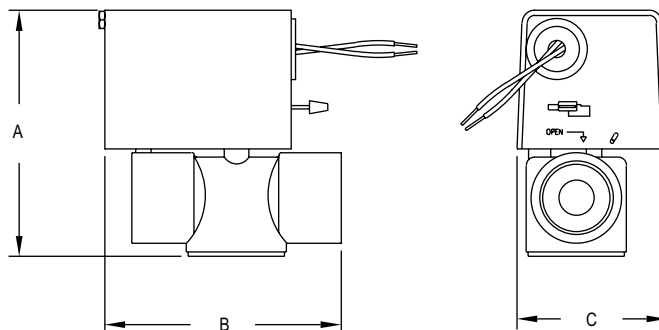
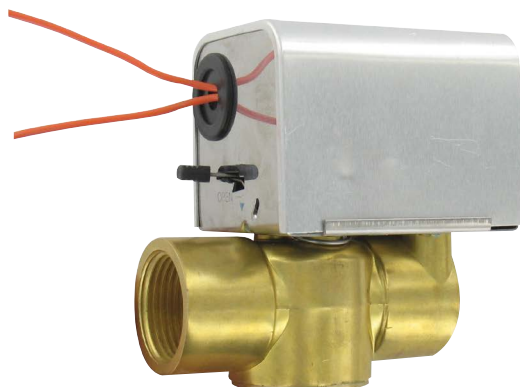




## Series ZV1 Two-Way Zone Valves

### Specifications - Installation and Operating Instructions



Size	A in [mm]	C in [mm]	B in [mm]
1/2"	4.15 [105.5]	2.48 [63]	3.54 [90]
3/4"	4.15 [105.5]	2.48 [63]	3.66 [93]
1"	4.31 [109.5]	2.48 [63]	3.74 [95]

The **Series ZV1 Two-Way Zone Valves** are ideal for flow control in hot and cold water HVAC systems. Zone valves are typically used in conjunction with a thermostat to control room temperature. Units are available in 1/2", 3/4", and 1" sizes with 24 or 120 VAC power supply. Easy to install these units are direct replacements for competitor units. Manual override lever is easily accessible externally. Consult factory for 220 VAC power supply, optional auxiliary switches, and BSP or sweat connections.

MODELS				
Normally Open	Normally Closed	Cv	Size	Supply Voltage
ZV1022-NO	ZV1022	3.78	1/2"	120 VAC
ZV1024-NO	ZV1024	3.78	1/2"	24 VAC
ZV1032-NO	ZV1032	3.78	3/4"	120 VAC
ZV1034-NO	ZV1034	3.78	3/4"	24 VAC
ZV1042-NO	ZV1042	8.02	1"	120 VAC
ZV1044-NO	ZV1044	8.02	1"	24 VAC

#### SPECIFICATIONS

**Service:** Compatible fluids.

**Body:** 2-way.

**Line Size:** 1/2" to 1".

**End Connections:** Female NPT (optional BSP, sweat connections).

**Pressure Limits:** Maximum: 300 psi (20.7 bar); Close-off: 1/2" to 3/4": 22 psi (1.5 bar), 1": 14.5 psi (1 bar).

**Temperature Limits:** Ambient: 32 to 104°F (0 to 40°C); Process: 0 to 201°F (0 to 94°C).

**Wetted Materials:** Brass, SS, NBR.

**Flow Characteristic:** Quick opening.

**Power Requirements:** 120 VAC or 24 VAC,  $\pm 10\%$ , 50/60 Hz. (Optional 220 VAC).

**Power Consumption:** 6.5 W.

**Input:** On/off.

**Electrical Connection:** 22 AWG, 5" (127 mm) long.

**Cycle Time:** Opening time: 11 seconds; Closing time: 5 seconds.

**Enclosure Rating:** General purpose.

**Housing Material:** Aluminum.

## INSTRUCTIONS FOR OPERATION

**WARNING** When working on the Actuator/Valve assembly, disconnect the air or power supply to the actuator. Spring return actuators/valves may change position if power fails or is removed. Never insert any object or body part into the valve body. Severe injury may occur.

2-way and diverting 3-way valve are installed as Figure 1, 2 and 3 shows. For high building, pressure reducing valves should be installed on branch pipes at ground floor.  
**Note:** When the valve is mounted on a horizontal pipe, the angle must be positioned at less than 85° (see Figure 4). When the valve is mounted on a vertical pipe, it must be prevented from dripping. Manual operating lever: Move the manual operating lever slowly and hold in the retaining notch, and then the valve is in normal-opened position. When the valve is first powered on, the lever goes back to the automatic position again.

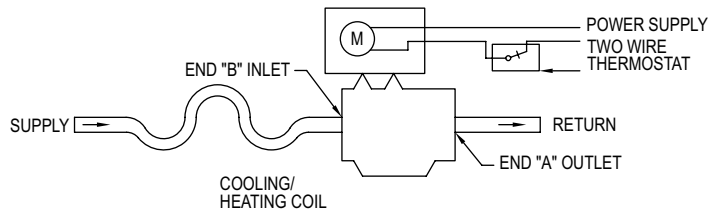


Figure 1: Two-way valve

When install normal-closed two-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.

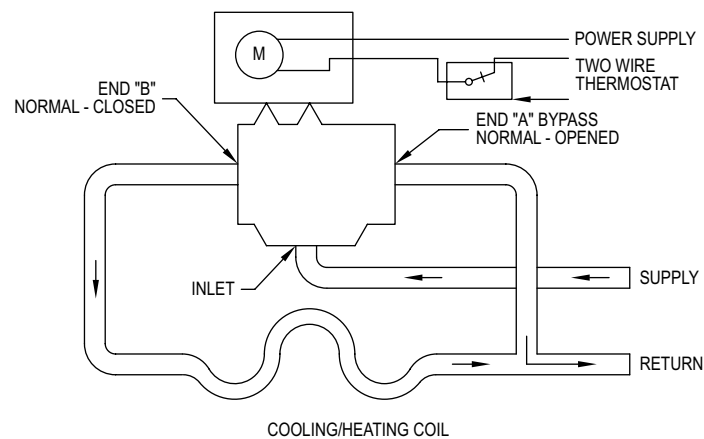


Figure 2: Three-way valve

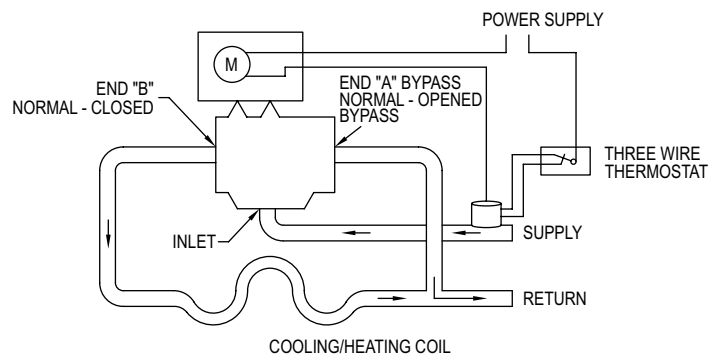


Figure 3: Three-way valve with box change-over switch

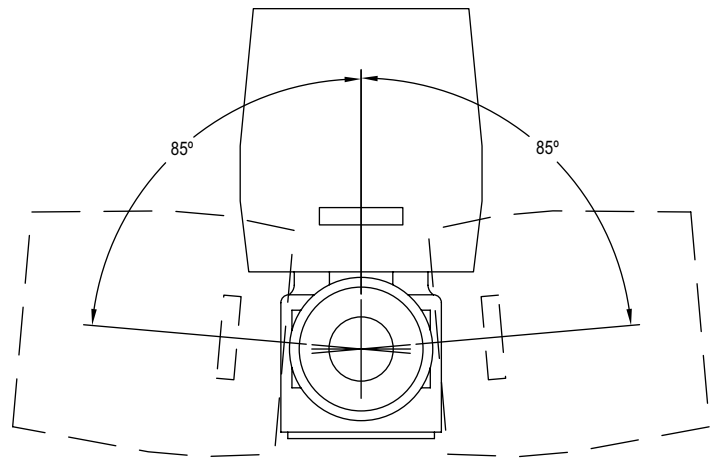
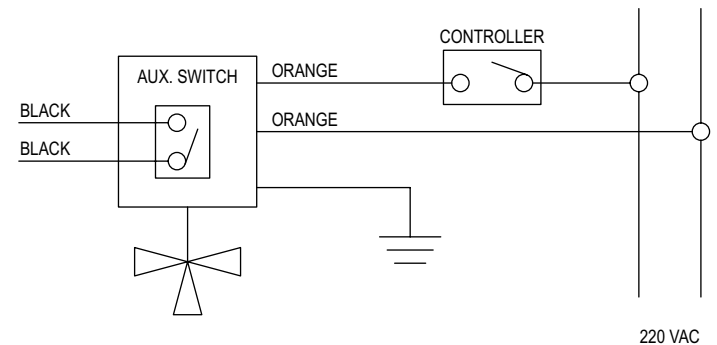


Figure 4

When installing a diverting 3-way valve, end "B" is the supply to the coil, end "A" is the by-pass. There is no mark for an inlet. End "A" and "B" are marked on the bottom of the valve.

When the valve has an auxiliary micro switch, the wiring diagram is as following:



## MAINTENANCE

Upon final installation of the Series ZV1 Two-Way Zone Valves, no routine maintenance is required. A periodic check of the system calibration is recommended. The Series ZV1 is not field serviceable and should be returned if repair is needed (field repair should not be attempted and may void warranty). Be sure to include a brief description of the problem plus any relevant application notes. Contact customer service to receive a return good authorization number before shipping.