



AL-V Series Zone Valve for Fan Coil Control

The AL-V... zone valves are used primarily in heating, ventilation, air conditioning and refrigeration systems for water-based control of hot, chilled and cooling water.

Nominal sizes of DN1/2", DN3/4" and DN1" are provided. Two port & three port diverting versions are provided. Fully-enclosed one-way hysteresis synchronous motor, with spring return and water proof functions.

ALC special design extends the life cycle above 100,000 cycles.

The AL-V... zone valve is used in conjunction with on/off controller (thermostat) which delivers the control signal to the valve. When the temperature of the medium deviates from the setpoint, the actuator will be energized and drives the valve to open position. When the temperature of medium falls within the desired range, the actuator is de-energized and the return spring brings to the valve to close position.

Manual override lever is equipped to allow manual position mode for serving. When normal operation is resumed, the lever is automatically disengaged.

All-in-one unit and version with separate actuator are provided, in which case replacement of faulty actuator may be performed easily.

Model Specification

| Version with Separate Actuator | | | |
|--------------------------------|------------|-----------|--------------------------|
| Nominal Size | Type | Kv (Cv) | Close-off Pressure (MPa) |
| 1/2" | Two-port | 2.2 (2.5) | 0.18 (25 psi) |
| 1/2" | Three-port | 2.6 (3.0) | 0.18 (25 psi) |
| 3/4" | Two-port | 3.0 (3.5) | 0.16 (23 psi) |
| 3/4" | Three-port | 3.4 (4.0) | 0.16 (23 psi) |
| 1" | Two-port | 6.9 (8.0) | 0.14 (20 psi) |
| 1" | Three-port | 6.5 (7.5) | 0.14 (20 psi) |

* Standard operating voltage of AL-V series is 220Vac. Please specify when ordering if other operating voltage is required

Technical Data

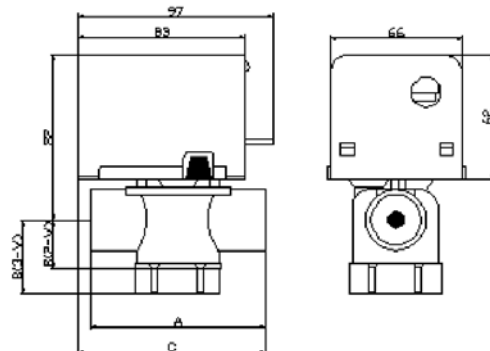
| | |
|-------------------------|-----------------------------------------------------------------------------------------------|
| Medium | Cooling or heating water |
| Rated Power Supply : | 220Vac, 24Vac |
| Power Consumption : | 7W |
| Operating Fluid Temp : | 0 - 90 deg C |
| Operating Temperature : | 0 – 40 deg C |
| Running Time : | 10~15 seconds (power stroke) 4~5 seconds (spring return stroke) |
| Operating Pressure : | PN20, PN25 |
| Action : | Spring return N/C |
| Material : | Stainless steel base-plate; aluminum cover; Valve Body : Forged brass; Valve Flap : NBR |
| Pipe Connection : | BSP |

The motorized valves are manufactured in conformity with ISO 9001 standard & with CE Approval.

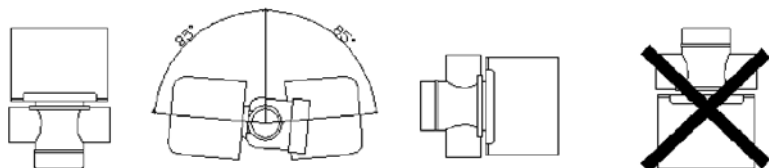
Dimensions

Model AL-VS...

| Model | Dimensions (mm) | | |
|----------|-----------------|----|----|
| | A | B | C |
| AL-VS152 | 70 | 23 | 86 |
| AL-VS153 | 70 | 37 | 86 |
| AL-VS202 | 87 | 23 | 93 |
| AL-VS203 | 87 | 37 | 93 |
| AL-VS252 | 94 | 25 | 95 |
| AL-VS253 | 94 | 42 | 95 |



Installation Guideline

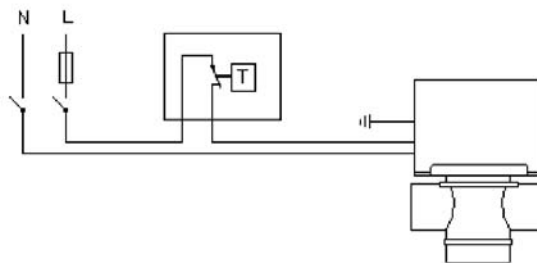


When installing the valve, take note of the direction of flow marked on the valve body.

The valve should be piped using proper tools. The installation location should be free of dripping water and easy accessible for electric connections. Please note that the valve has to be connected in compliance with local regulation by authorized personnel. A minimum of 100mm clearance from ceilings or walls must be maintained to allow for installation & maintenance.

Wiring Diagram

- T Temperature Controller (AL-T/AL-TL Thermostat)
- L Phase (Brown)
- N Neutral (Blue)
- E Earth (Yellow / Green)



Ordering code

AL- VS - .

O – No Option
X – Specify when order

Voltage
1 – 24 VAC
2 – 220 VAC

Body Rating
1 – 20 Bar
2 – 25 Bar

Valve Type
2 – 2 Way
3 – 3 Way

Valve Size
15 – 15 mm
20 – 20 mm
25 – 25 mm

Valve Body Type
I – Integrate
S - Seperate