

### 2 and 3 port Spring Return Motorised Valves Installation Instructions



#### Applications

The **ZA-V2..** 2 port zone valve is available in 22 and 28mm pipe sizes. It is suitable for zone control of central heating and hot water primary circuits.

The **MA-V3..** 3 port mid-position valve is suitable for fully pumped central heating/hot water systems and ideally suited to smaller systems that do not warrant the use of two zone valves.

The **DA-V322** 3 port diverter valve is available in 22mm only. It is suited to hot water or central heating priority systems or zone control in systems with continuous pump operation.

#### Specification

Voltage: 240V, 50Hz

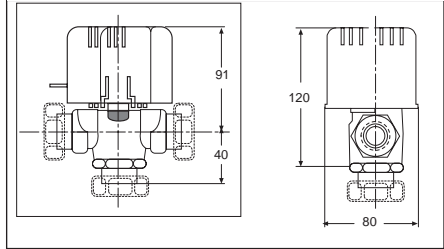
Max. water temperature: 104°C

Max. ambient temperature: 43°C

Auxiliary switch rated: 5A, 240V

Lead length supplied: 1m

#### Dimensions



Note: When draining/venting your system put the Manual lever in the 'MAN' open position. Valves will then take up the following positions:

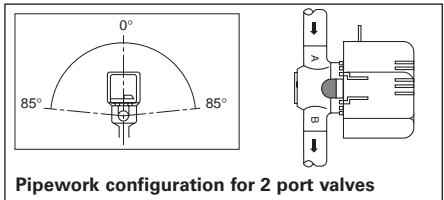
**ZA-V2..** opens, auxiliary switch remains de-energised

**MA-V3..** goes to mid-position

**DA-V322** opens to allow equal flow of water to ports A & B.

#### Installation

Valves may be installed vertically or horizontally within the limits shown below.

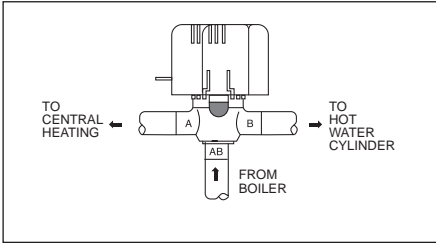


Pipework configuration for 2 port valves

When making the pipe connections to the valve, do not use the actuator for leverage. Valve should be held by wrench flats on valve body. Care should be taken to ensure the valve is installed the correct way round.

Valve type	CV	Diff pressure (Bar)			
ZA-V222C 22mm	5,3	0,5			
ZA-V228C 28mm	6,1	0,4			
		Port A	Port B	Port A	Port B
MA-V322C 22mm	5,9	5,9	0,5	1,0	
MA-V328C 28mm	6,7	6,7	0,4	0,8	
DA-V322C 22mm	5,9	5,9	0,5	1,0	
Max. static pressure: 21 Bar					

## Pipework configuration for 3 port valves



Compression nuts must be tightened sufficiently to provide a watertight seal. They must not be over tightened as this will damage the valve and pipework.

All valves consist of 2 pieces

- 1 **Valve body and Drive Mechanism, c/w electrical cable plus**
- 2 **DETACHABLE motor housing unit**

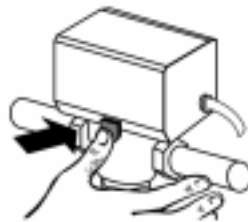
## Wiring and Operation

**Important!**  
Do not attempt to remove electrical and mechanical drive mechanism unit from valve body, only the motor housing can be replaced (see Motor and Housing Replacement).  
Mains must be disconnected before changing.

## Motor and Housing Replacement

Valves use a replaceable synchronous motor housing. In the event of motor failure the motor housing can be easily replaced without the need for specialist tools. To replace follow these simple steps.

1. Before working on the synchronous motor housing replacement you **must** switch off the electrical supply.
2. Lift up fully the two coloured locking sliders.
3. Press in simultaneously on both plastic



## Wiring

Must comply with current I.E.E. regulations. Ensure mains supply to all controls is fused at no more than 3A. Mains isolating switch must have a contact separation of at least 3mm.

For further assistance please contact the Siemens Help Desk.

**Warning!**  
Valves must be Earthed  
for wiring diagrams see page 3.

## Fully pumped Zone Control System

**ZA-V2..** Zone valve must be installed so the arrow on the valve body points in the direction of water flow, i.e. port A is the input and port B the output. Port A is normally closed when motor is de-energised. When Brown wire is live, valve opens and the auxiliary switch closes. When the auxiliary switch is closed there is a circuit between Grey and Orange wires.

## Fully pumped Mid position Control System

**MA-V3..** Mid-position valve has ports marked AB, A and B. Port AB must be connected to the boiler flow. Port A must be connected to the radiator circuit and port B to the hot water cylinder circuit. When the motor is de-energised, water will flow from port AB to B. When the White wire only is live, water flows from port AB out of both ports A and B. With both White and Grey wires energised water flows from port AB to A and the Orange wire will fire the pump and boiler.

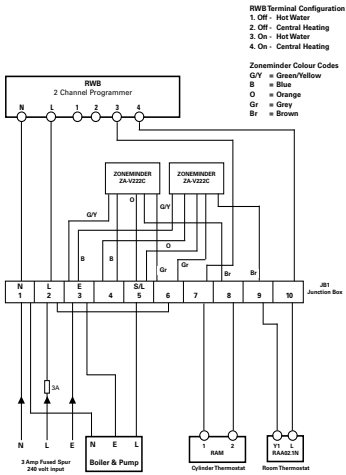
## Fully pumped Diverter Control System

**DA-V322** Diverter valve has the same valve body as the MA-V3.. Port AB must be connected to the boiler flow. When the motor is de-energised, water flows from port AB to port B. When the Brown wire is live port A opens and port B shuts diverting water from AB to port A.

tongues and lift up the plastic cover.

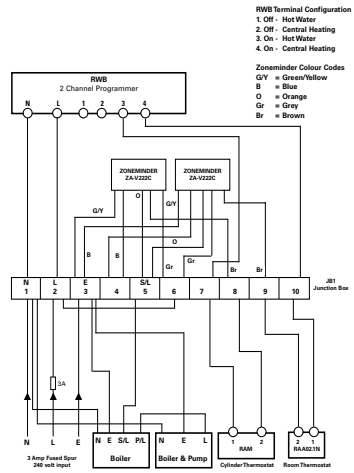
4. Disconnect the electrical internal connector.
5. Now remake the electrical internal connector from the new motor housing unit.
6. Hold the coloured sliders up and locate the plastic tongues in their respective slots, push down firmly until the tongues are fully located then push down the coloured locking sliders.
7. Turn on electrical supply and test for operation.

## Zone Control system for boilers without pump overrun



Time and temperature control of Central Heating and Hot Water.  
 Possible to have Central Heating only, Hot Water only or both together.

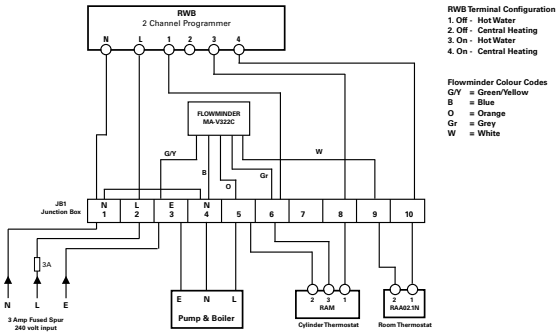
## Zone Control system for boilers with pump overrun



Time and temperature control of Central Heating and Hot Water.  
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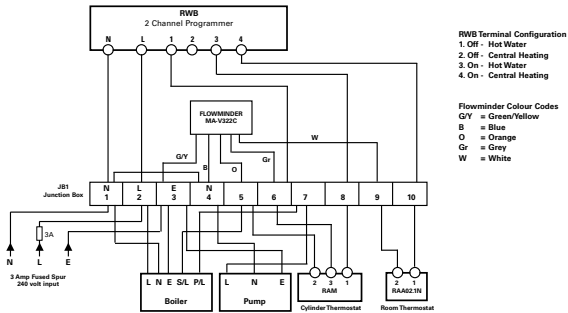
### NOTES

## Mid-Position Fully Pumped system for boilers without pump overrun



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### NOTES