



## 2 PORT MOTORISED VALVE

PMV21 (1") PMV22 (22 mm) PMV 24 (3/4") PMV28 (28 mm)

### PRODUCT COMPLIANCE

This product complies with the essential requirements of the following EC Directives:

- GPSR 2023/988
- Electro-Magnetic Compatibility Directive 2014/30/EU
- Low Voltage Directive 2014/35/EU
- RoHS 2015/863 and 2017/2102 amending Annex II to Directive 2011/65/EU

### SAFETY INFORMATION

These instructions are applicable to the SALUS Controls model stated on the front cover of this manual only, and must not be used with any other make or model.

This accessory must be fitted by a Competent person, and installation must comply with the guidance provided in the current editions of BS7671 (IEE Wiring Regulations) and Part 'P' of the Building Regulations. Failure to comply with the requirements of these publications could lead to prosecution.

Always isolate the AC Mains supply before removing or refitting the actuator assembly.

Please leave these instructions with the end user where they should be kept in a safe place for future reference.

### INTRODUCTION

A motorised valve is used to control the flow of water in a central heating system. The motorised valve can be used for control of both heating and hot water, and it works by controlling the flow of water from the heating boiler to other parts of the system.

There are two types of motorised valve used in domestic heating systems: two port (also called zone valves), and three port (also called mid position valves). SALUS Controls offers both types of valve in a range of standard port sizes.

### FEATURES

- Two port option in 1", 22mm, 3/4" and 28mm sizes
- Removable actuator assembly
- Manual lever and position indicator
- Spring return
- Industry standard wiring



### INSTALLATION

Please read the important safety information at the start of this manual before you begin to install the device.

#### Before Installation

This valve must only be installed in compatible systems. Before installing, please check that:

- The system pipework has been flushed out to remove any residue.
- There is enough clearance around the valve to allow removal and refitting of the actuator.
- The valve is not installed with the actuator facing down.
- The supply voltage is the same as the voltage indicated on the actuator cover.
- The mains water pressure and the pressure differentials between valve ports are suitable for this valve (see Product Specification).

Do not restore the mains supply to the system until all associated items are fully installed.

**NOTE:** All electrical installation work should be carried out by a suitably qualified Electrician or other competent person. If you are not sure how to install this motorised valve consult either with a qualified electrician, heating engineer or your boiler / heating system supplier for advice on how to continue.

#### Electrical Connection

The electrical connections to the motorised valve are made using the pre-wired cable. This simplifies installation, as no connections need to be made to the actuator itself. The connecting cable uses industry standard colours, and the connection details are shown below:

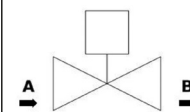
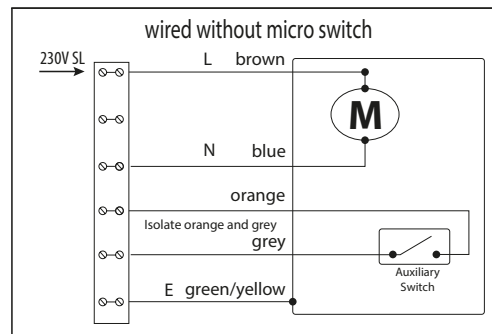
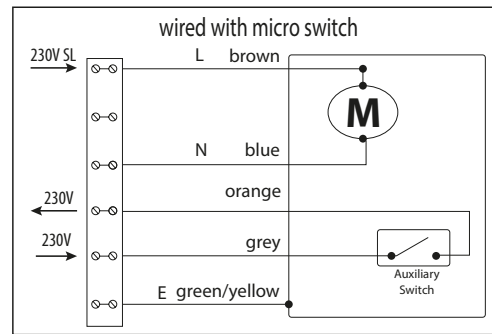
Control wire (Power Supply AC 230V) Brown - Live. Blue - Neutral.

Close valve (no water flow): Brown 0V, Blue is N

Open valve (water flow): Brown 230Vac, Blue is N

Auxiliary switch output (COM, NO) Orange = COM. Grey = NO

When valve is open, orange and grey, AUX switch is closed. When valve is closed, orange and grey, AUX switch is open. Yellow/Green wire is for earth.



**Note:** For basic diverter valve applications please isolate/Disregard the orange and Gray wires.

### MANUAL LEVER

There is a lever on the side of the actuator cover: this lever allows manual operation of the valve, e.g. for refilling and draining of the system or if the actuator fails. For two way valves, the lever allows the valve to be kept open; with three way valves the lever allows both ports A and B to be open at the same time.

To manually operate the valve, gently push the lever forward and latch it in the MAN position. The valve will automatically return to AUTO when the actuator is powered up again.

**NOTE:** Push the manual lever slowly to prevent damage to the actuator motor and gear system. The valve should be in manual position to be fitted.



## ACTUATOR REMOVAL AND REFITTING

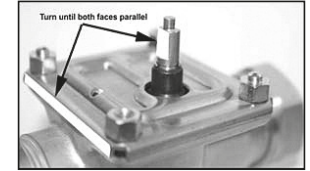
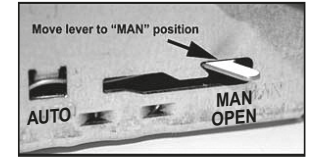
The valve actuator can be removed or refitted without having to disturb the valve installation.

#### Removal:

1. Remove actuator cover
2. Lock lever in 'MAN' position
3. Loosen 2 securing screws
4. Lift actuator from valve body.

#### Re-fitting:

1. Remove actuator cover
2. Lock lever in 'MAN' position
3. Turn valve stem to parallel position as indicated
4. Push actuator onto valve
5. Tighten 2 securing screws
6. Release lever and allow to travel back to 'AUTO'



**Note:** Do not attempt to dismantle the actuator assembly as it contains no user serviceable parts – dismantling or tampering with the actuator assembly will invalidate the product warranty.

### MAINTENANCE

The Motorised Valve requires no special maintenance. Periodically, the outer casing can be wiped clean using a dry cloth (please DO NOT use solvents, polishes, detergents or abrasive cleaners, as these can damage the Motorised Valve).

There are no user serviceable parts within the unit; any servicing or repairs should only be carried out by SALUS Controls or their appointed agents.

Should the Motorised Valve fail to function correctly, check:

- The heating system is switched on.
- The lever is not latched in the MANUAL position.

### PRODUCT SPECIFICATION

Model: 2 port motorised valve PMV21/22/24/28  
Type: Motorised valve designed for domestic heating applications.

#### Electrical

Switching Voltage: 230V AC / 50Hz  
Power Consumption: 6W

#### Response

Opening: 14 seconds  
Closing: 3 seconds

#### Differential Pressure

Pipe size	2 Way		
22mm	0.8 bar	3/4"	0.8 bar
28mm	0.6 bar	1"	0.6 bar
Max Static Pressure:	8.6 bar		

#### Operating Temperatures

Min Fluid Temperature: 5 °C  
Max Fluid Temperature: 88 °C

#### Environment

Operating Temperature: -10 °C to +60 °C  
Storage Temperature: -20 °C to +65 °C  
Protection class: IP20

#### Manufacturer:

SALUS Controls plc, Units 8-10, Northfield Business Park, Forge Way, Parkgate, Rotherham, S60 1SD United Kingdom

#### Importer:

Salus Controls European Distribution sp.z o.o., ul. Szamocka 8, piętro 6, 01 748 Warszawa, Poland

## 3-WAY MOTORIZED VALVE

PMV31 (1") PMV32 (22 mm) PMV34 (3/4") PMV38 (28 mm)

### PRODUCT COMPLIANCE

This product complies with the basic requirements of the EC directives:

- GPRS 2023/988
- Electro-Magnetic Compatibility Directive 2014/30/EU
- Low Voltage Directive 2014/35/EU
- RoHS 2015/863 and 2017/2102 amending Annex II to Directive 2011/65/EU

### SAFETY INFORMATION

Instructions apply only to the SALUS Controls model marked on the cover of this manual; not to be used for other models.

Installation must be performed by a competent person and must comply with the guidelines, standards and regulations applicable in the city, country or state where the product is installed. Failure to comply with relevant standards may result in prosecution.

Disconnect devices that are supplied with 230V from the power supply before installing or working on any components!

Please keep these instructions with the end user where they will be kept in a safe place for future reference.

### INTRODUCTION

The motorized valve is used to control the water flow in a central heating system. It can control both heating and hot water preparation (e.g. boiler coil) and works by controlling the flow of water from the boiler to the other components of the heating system.

There are two types of motorized valves used for home heating: 2-way (also called a zone valve) or 3-way (also called a diverter valve). SALUS Controls offers both types of valves in a range of sizes with standard ports.

### FEATURES

- 3-way model for 1 inch, 22mm, 3/4 inch and 28mm
- Removable actuator
- Hand lever and position indicator
- Return spring
- Standard wiring



### INSTALLATION

Carefully read the safety information above before installing the product.

#### Before installation

- The motorized valve must only be installed in compatible heating systems. Before installation, check the following:
  - System ductwork to be cleaned to remove any debris.
  - Sufficient clearance around the valve for disassembly and reassembly of the actuator.
  - The valve is not installed with the actuator facing down.
  - The power supply must be the same voltage as indicated on the actuator housing.
  - Water line pressure and differential pressure between valve paths must be appropriate for the valve type (see Product Specifications).

Do not restart power to the system until all components have been completely installed. NOTE: Electrical installation must be performed by an authorized person! If you are unsure how to install a motorized valve, consult either a qualified electrician, heating engineer, or the supplier of your boiler or heating system for recommendations.

#### Electrical connection

Electrical connections to the valve are made using pre-wired cable. This simplifies installation, as no other connections to the actuator are necessary. The pre-wired cable uses industry standard colors and the connection details are exemplified as follows:

When port A is open and port B is closed, water flows from port A

When port B is open and port A is closed, water flows from port B

Control cable (230V power supply) White - Live. Blue - Null (Neutral)

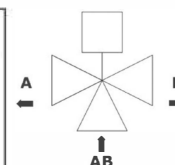
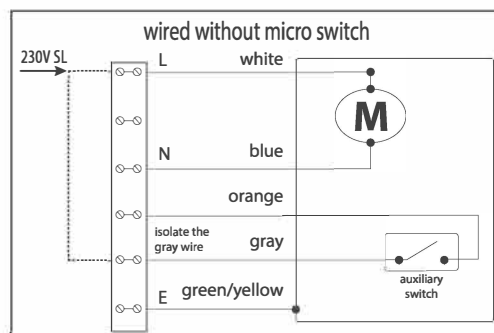
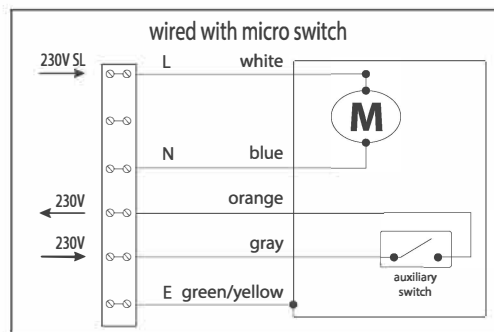
When port A is open and port B is closed; white 0V, blue is N

When port B is open and port A is closed; white 230V, blue is N

Auxiliary Output Switch (COM, NO) Orange = COM (Common Terminal) Gray = NO (Normally Open)

Yellow/Green Cable = Ground (Earth)

When the valve is open, the orange wire, gray wire and auxiliary switch are closed. When the valve is closed, the orange wire, gray wire and auxiliary switch are open. The yellow/green wire is for grounding (Earth).



Note: For diverter valves, insulate/ignore the orange wire. But connect the white and gray wires together

### MANUAL MODE LEVER

There is a lever on the side edge of the actuator housing: this allows manual operation of the valve, for example for charging or draining the system or in case the actuator stops working. For 2-way valves the lever allows the valve to be opened, and for 3-way valves the lever allows both ports A and B to be open at the same time.



To operate the valve manually, carefully push the lever forward and set the lever to the MAN position. The valve will automatically return to AUTO as soon as the actuator is started again.

Note: Push the handle carefully to prevent damage to the motor and actuator gear system.

### DISASSEMBLY AND REASSEMBLY OF THE ACTUATOR

The valve actuator can be disassembled or reassembled without interfering with the valve installation.

#### Disassembly:

1. Remove the actuator housing.
2. Secure the lever in the MAN position.
3. Unscrew the 2 retaining screws.
4. Remove the actuator from the valve housing.

#### Reassembly:

1. Remove the actuator housing.
2. Set the lever to the MAN position.
3. Turn the valve stem to the parallel position as shown in the picture.
4. Insert the actuator into the valve body.
5. Screw in the 2 retaining screws.
6. Release the lever and let it return to the AUTO position.

**Note:** Do not disassemble the component parts of the detachable actuator as they cannot be repaired by the user. Disassembly or damage to the actuator will void the warranty.

### MAINTENANCE

The motorized valve does not require special maintenance. Periodically you can wipe the outside of the housing with a dry cloth (DO NOT use solvents, lacquers, detergents or abrasive cleaners as they may damage the motorized enclosure).

The assembly contains no user serviceable components. Any servicing or repair shall be performed by SALUS Controls or its designated agents

If the motorized valve does not operate properly, check that:

- Heater is turned on.
- The knob is not locked in the MANUAL position.

### PRODUCT SPECIFICATIONS

Model: PMV31/32/34/38 Motorized 3-way motorized fanlight  
Type: Motorized fan designed for home heating system.

Electric

Switching voltage: 230V AC / 50Hz

Power consumption: 6W

#### Response time

On: 14 seconds

Closing: 3 seconds

#### Differential pressure

Size 3 ways

22mm 0.8 bar 3/4" 0.8 bari

28mm 0.6 bar 1" 0.6 bari

Maximum static pressure: 8.6 bar

#### Operating temperatures

Minimum liquid temperature:

Maximum liquid temperature: 5 °C

Operating temperature: 88 °C

Operating temperature: -10 °C to +60 °C

Storage temperature: -20 °C to +65 °C

Degree of protection: IP20

#### Manufacturer:

SALUS Controls plc, Units 8-10, Northfield Business Park, Forge Way, Parkgate, Rotherham, S60 1SD United Kingdom

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