

# SUNVIC

## DUOVAL MOTORISED VALVE ACTUATOR DM 5601 DM 5651

### INSTALLATION OF VALVE & ACTUATOR

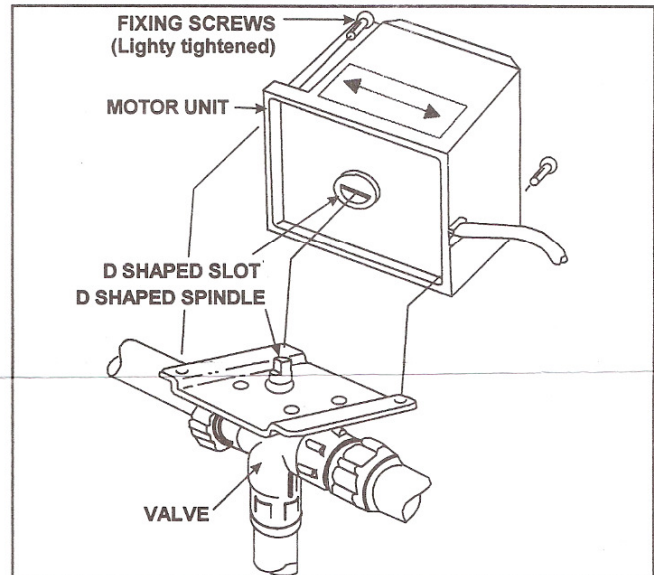
- (1) Select reasonably clean location with adequate access for fitting and wiring motor. Minimum clearance from wall to centre of valve body 45mm (1 3/4"). Maximum water temperature 93°C, minimum temperature 2°C. Maximum ambient temperature 52°C. Motor Actuator unit must not be mounted underneath the valve body.
- (2) Install valve as follows:
  - (a) Remove all protective materials from valve.
  - (b) Remove all foreign matter.
  - (c) Fit valve to pipework using the minimum quantity of joining materials. Make sure valve body is only gripped by the ribbed ends when installing. Do not cover valve body with thermal insulation.
  - (d) Connect the boiler flow to the centre port of the valve. To allow essential venting, a vent pipe must be connected between boiler and valve.
  - (e) Connect hot water cylinder and central heating circuits to the other two ports. These circuits may be connected to either port to allow the arrangement that best suits the pipework.
- (3) Flushing of system  
Turn the valve spindle to the position as indicated on the valve, and flush out and drain the complete system to remove any foreign matter in the water. The system should be filled with water and corrosion inhibitor added if required.
- (4) Fit motor to valve as follows:
  - (a) Hold actuator adjacent to installed valve so that arrows on label (Domestic Hot Water - Central Heating) point to corresponding pipework. Rotate the "D" shaped valve spindle to line up with the "D" shaped recess in the centre of the actuator base. Do not try rotating the recess to match the spindle as this would damage the actuator.
  - (b) Fit actuator to valve ensuring "D" spindle locates properly in the actuator coupling.
  - (c) Secure with screws provided. Screws should be only lightly tightened.

### IMPORTANT NOTES

**Warning - This control must be Earthed.**  
The supply cord is attached by method "Z" therefore the supply cord of this control cannot be replaced; if the cord is damaged, the control should be discarded.  
No user servicable parts under sealed cover, interference with such parts renders guarantee void.  
Valves are not suitable for use on mains water supply.  
This valve actuator is an incorporated, mechanical control for continuous use in a normal pollution situation. It is recommended that valves & actuators be checked during the regular, annual heating system maintenance.

## INSTALLATION INSTRUCTIONS FOR QUALIFIED PERSONS ONLY NOT TO BE LEFT WITH USER

In line with a policy of continuous product development, Sunvic Controls Limited reserve the right to change the specification, design and materials of products without prior notice.



### WIRING

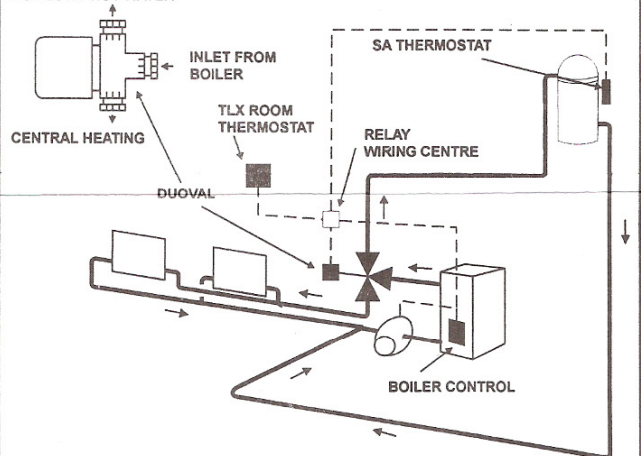
#### DUOFLOW SYSTEM

Wire the Duoval, relay wiring centre and thermostats in accordance with the wiring diagram. Mount the relay wiring centre close to the Duoval to allow the supplied cable to reach it.

#### PLUG-IN DUOFLOW SYSTEM

Position the 4 pin plug from the SA 1502 and the 5 pin plug from the DM 5651 actuator so that the green/yellow wires are at the centre of the board.

#### DOMESTIC HOT WATER



Pipes are drawn diagrammatically to show use of controls and not intended to show actual pipe runs.

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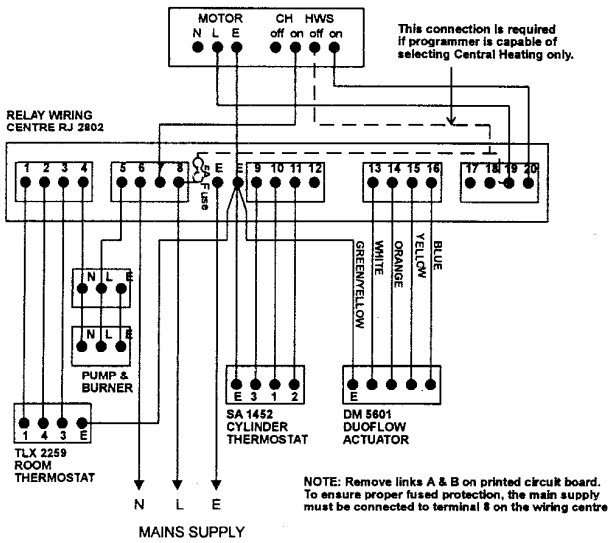
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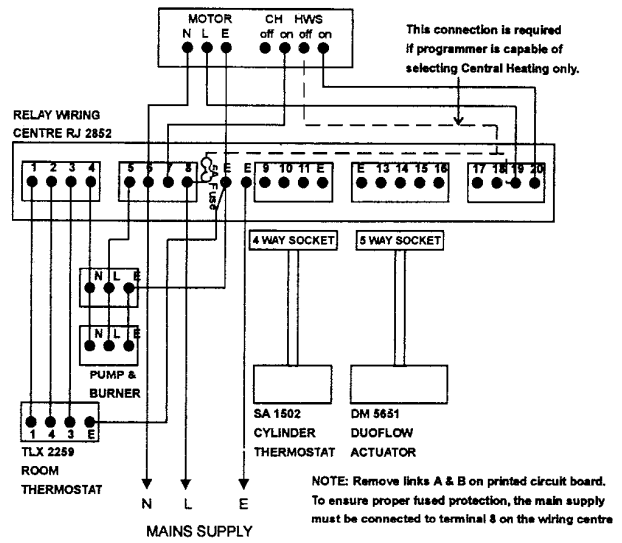
**STANDARD DUOFLOW SYSTEM**  
(RJ 2802, SA 1452, DM 5601 & TLX 2259)

TYPICAL PROGRAMMER INSTALLATION

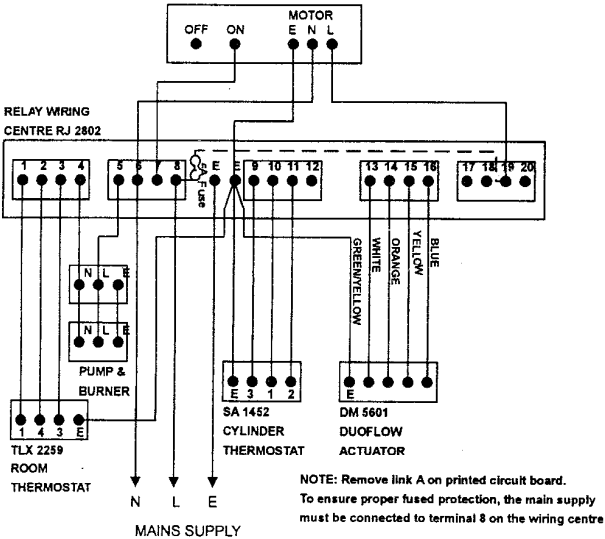


**PLUG-IN DUOFLOW SYSTEM**  
(RJ 2852, SA 1502, DM 5651 & TLX 2259)

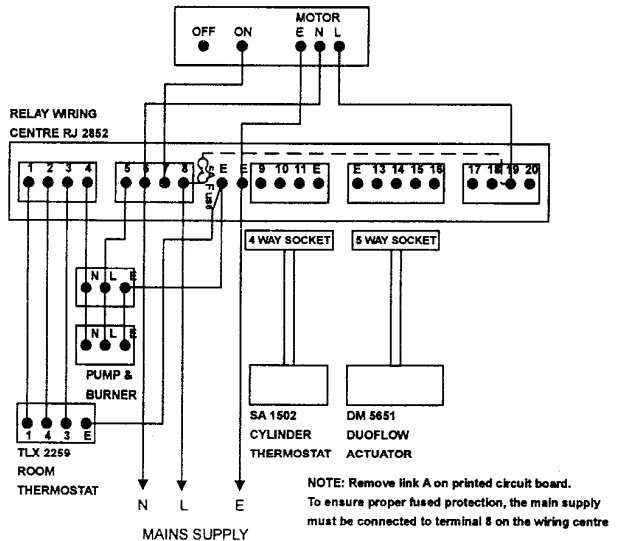
TYPICAL PROGRAMMER INSTALLATION



TYPICAL TIMESWITCH INSTALLATION



TYPICAL TIMESWITCH INSTALLATION



**OPERATIONAL CHECK**

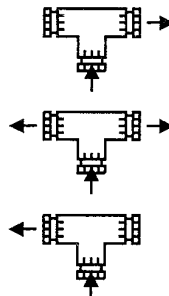
With the heating system in operation, the correct functioning of the Duoval may be checked as shown below:-

Note that the Duoval may take approximately 4 minutes to complete the movement from one position to another and appropriate time must therefore be allowed when checking.

1. Turn TLX room thermostat knob to low end of scale and SA cylinder thermostat to high end of scale. Hot water should flow to cylinder only.
2. Turn TLX room thermostat knob to high end of scale. Hot water should flow to cylinder and heating circuits.
3. Turn SA cylinder thermostat to low end of scale. Hot water should flow to heating circuits only.

During all the above operations the boilerfiring and pump should remain "ON".

4. Turn TLX room thermostat knob to low end of scale. Boiler pump should switch "OFF".



Electrical supply details are shown on cover label.

Connections to the actuator **must** be made in accordance with the wiring diagram for correct operation of the system.

**Suitable SUNVIC thermostats**

Cylinder Thermostats  
Standard Duoflow System : SA 2452

Room Thermostats TLX 2259  
TLX 2284  
TLX 2222