

CE

AQUAMATIC Fan Convectors

**Installation and Servicing
Instructions**

WARNING: THIS APPLIANCE MUST BE EARTHED

CONTENTS

<i>Section</i>	<i>Title</i>	<i>Page</i>
1.	Introduction	3
2.	Delivery / Receipt	4
3.	Description	4
4.	Options	4
5.	Fitting the Unit	4
6.	Water Connections	4
7.	Condensate Tray	4
8.	Fresh Air Box	4
9.	Electrical Connections	4
10.	Aquamaster Units	5
11.	Wiring diagrams	6

Introduction

The Aquamatic Fan Convactor that you have just purchased conforms to European Directive Specification CEM (8913361 CEE).

It is recommended that these appliances are installed and adjusted by qualified persons. Failure to install appliances correctly will invalidate the equipment guarantee.

2 Delivery / Receipt

Every effort has been made to ensure that your unit(s) arrive in good condition, however, it is the responsibility of the purchaser to inspect goods immediately on receipt. Any damage suffered in transit must be reported, in writing, to the carriers and to Powrmatic Limited within three days of receipt. Failure to comply with this condition will automatically make the purchaser responsible for any loss or damage suffered in transit.

3 Description

- Galvanised steel chassis unit.
- 3 row battery (coil) with copper tubes and aluminium heat transfer finning.
- 3 speed fan/motor assembly. Single phase, 50Hz 230 Volt.
- Washable acrylic fibre filter - Efficiency up to 75% AFl.

3.1 SW-SC Model

- Steel outer casing finished in satin beige.
- Moulded polymide top outlet panel, grilles and control covers in a matching beige.

4 Options

AFC model fan convectors can be fitted with any of the following at extra cost:-

- 3 + 1 Batteries (coils) allowing for combination heating and cooling from the same unit.
- Supplementary electric elements
- Four port valve kits (incl. actuator and pipe kit) top suit either two or four pipe systems - fully modulating actuators are available at extra cost.
- Security louvres
- Thermostatic motor speed control as per Aquamaster.

4.1 Options Supplied but not Fitted

- Low temperature cut out (L.T.C.O.)
- Feet for SW type convectors
- Concealed ceiling/wall transition pieces for CC/CW type convectors c/w grilles.
- Air mixing box kits (Fresh air/re-circulated)
- Fresh air recovery box
- Secondary condensate tray
- Air inlet grilles for SW/SC type convectors.

5 Fitting the Unit

These instructions can of necessity only be general in nature as each individual location is likely to vary.

5.1 Type SW/SC

In order to fit the appliance first remove the casing. This is held in place by four fastenings, two at the top (Phillips style self tapping) and two hexagon headed self tapping at the base.

Four keyhole slots will be found on the rear of the chassis. Mark the surface of the wall or ceiling to match the locations of these and apply suitable fixings. The unit can now be 'hung' on these, allowing for both piping and wiring to be completed before the casing is re-attached.

Note:-

- a) Whether on a wall or ceiling ensure, when locating the chassis, that sufficient gap (110mm min) is allowed on the inlet side for air ingress.
- b) Particularly when fitting to a ceiling ensure that the structure to which the unit is attached is strong enough to adequately support the unit. It is important that no strain be imposed on either the piping or wiring.

5.2 Type CW/CC - Same as SW/SC

These chassis type units are designed for concealed use and as such they can be mounted in varying ways to suit the structure to which they are going to be attached or the space in which they are to be concealed.

Provision must be made for maintenance access with special regard to the cleaning and/or changing of the filter. Air throughput, both inlet and outlet, should not be restricted or the performance of the unit may be inhibited. Ducting should be smooth, non restrictive and drag free with a total length that should not normally exceed 750mm. Damage arising from incorrect installation is not covered by the guarantee.

Note: Aquamatic transition pieces and grilles are designed with the above criteria in mind.

6 Water Connections

As normally supplied, the fan convectors are fitted with the standard three row battery (coil). Optional variations to this is the 3 + 1 variant which allows for cooling plus heating.

All connections are ½" BSP female, mechanically secured to prevent twisting during pipe connection. The batteries (coils) are fitted with an airvent on the headers. Batteries (coils) can readily be reversed to change connection locations from right hand to left hand.

Note: When using chilled water for cooling it is advisable to lag all piping.

7 Condensate Tray

An optional condensate tray that is available to recover or dispose of collected condensation. This may be pumped or drained by gravity but careful attention should be paid to condensate volumes.

8 Fresh Air Box

Where the units are installed to make use of fresh air supplies it should be noted that under certain low temperature conditions the battery (coil) and piping could be subject to freezing. Where such climate conditions occur protection for the convector should be arranged eg. frost stat on boiler or automatic dampers etc to prevent fresh air intake.

9 Electrical Connections

Wiring external to the fan convector must be installed in accordance with the I.E.E. Regulations for Electrical Installations and any local regulations which apply. All standard fan convectors are supplied by 230V - 1ph, 50Hz. The method of connection to the main electricity supply must facilitate the complete electrical isolation of the fan convector(s) and the supply should serve only the fan convector(s).

It must have a contact separation of at least 3mm in all poles.

The method of connection should be provided adjacent to the fan convector(s) in a readily accessible position.

Important: All units must be earthed.

See the accompanying wiring diagram for the heater electrical connections

9.1 Standard Models

In all cases work on the electrical wiring of the fan convector must only be carried out with the unit isolated. All units are fully prewired and only require final connections for the incoming 230V/240V single phase mains supply

9.2 Fan Convectors with Supplementary Electric Elements

These units are only supplied to special order and are factory wired.

The elements are equipped with an overheat thermostat located under the wiring junction box. Access to this is only when the cover is off.

Note: If the overheat thermostat operates the reason must be found eg. clogged filter, and rectified before switching the convector back on.

10 AQUAMASTER Units

These special units are designed principally for schools, public buildings and other locations where strength, safety and security are of prime importance. While they share some common features with other Aquamatic fan convector ranges the manner of fitting, connection and operation does vary in detail.

10.1 Fitting

These convectors are only supplied in wall mounted form and as the plinth is pre-insulated as part of the frame the mounting height is, in effect, preset.

With the front frost lockable access panel removed, take off the outer casing by removing the six screws which fix it to the frame/base. Eight mounting points will now be revealed, four "keyhole" slots as per a standard chassis and four holes in the outer frame. For complete security it is recommended that all points be used. With the convector standing in the desired position locate and mark each mounting hole on the wall to which the convector is going to be mounted. Attach and secure the unit to these fixings.

The piping and wiring may now be completed.

Both the L.T.C.O. and thermostatic fan control are pre-wired. The L.T.C.O. should be attached to the flow pipe by means of the spring strap supplied.

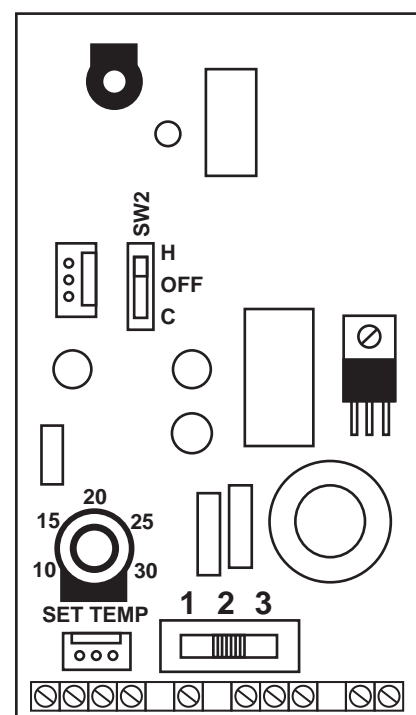
Note: It is possible to use a chassis/frame, with the outer casing removed, as a template for locating wiring and piping exits from either walls or floors. Electrical and water requirements are the same as standard fan convectors.

10.2 Thermostatic Speed Control - AQUAMASTER

COMMISSIONING & SETTING INSTRUCTIONS

1. Remove metal pcb control cover
Ensure SW2 is in the 'H' position and fan speed selector is in position '2' (centre)
2. Turn low temperature cut out stat in heater to minimum. Stat should be heard to click.
(If the room temperature is particularly low and the water supply is unheated it may be necessary to warm up the stat in your hand)
3. Turn power supply on
4. Turn the set temp adjuster on the pcb controller fully clockwise - fan in unit will now run.
5. Turn the set temp adjuster fully anticlockwise - fan in unit will now stop.
6. Turn the set temp adjuster clockwise until fan starts, at this point stop turning adjuster.
7. Warm return air sensor (fitted to fan set) with finger, fan will slow down and stop.
8. Turn the set temp adjuster fully clockwise - fan in unit will run.
9. Turn low temperature cut out stat to maximum, fan will stop
10. Adjust low temperature cut out and set point adjuster to required settings (normally 55°C and 20°C respectfully)
11. Set fan speed to required position 1, 2 or 3 to supply required airflow
12. Refit pcb cover

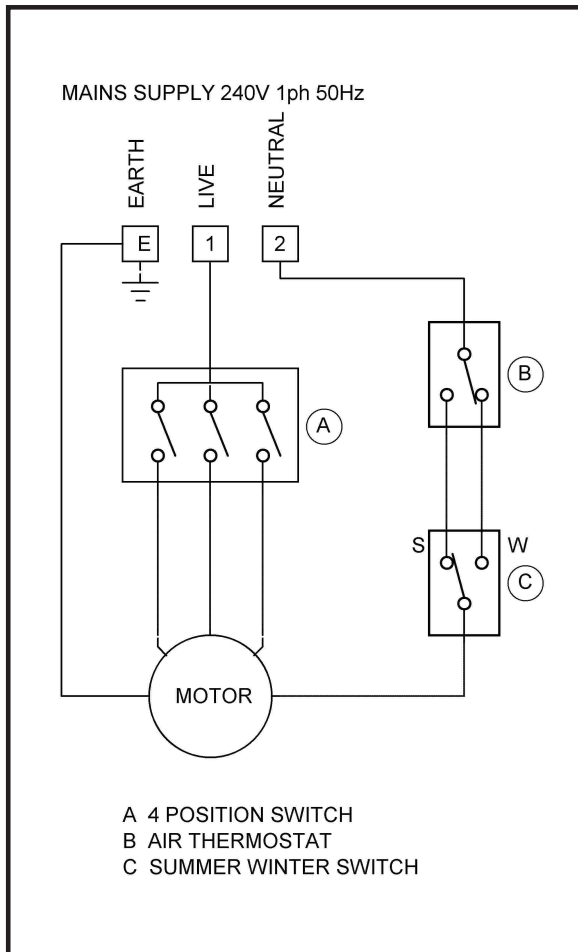
Aquamaster fan speed control pcb.



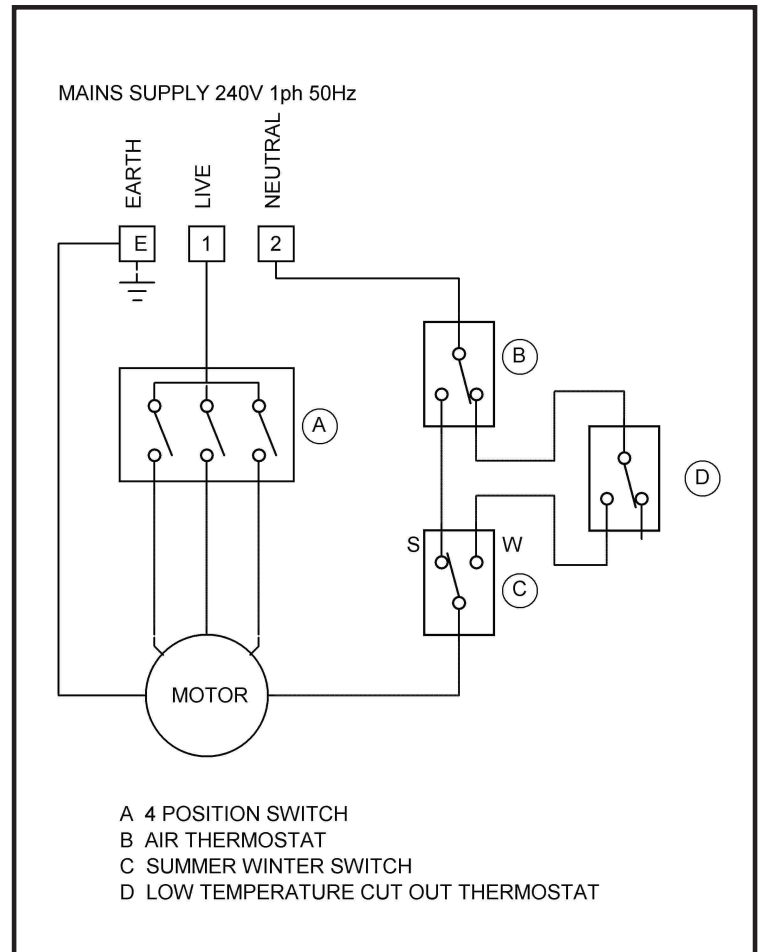
11 Wiring Diagrams

11.1 MODELS AFC. S.W.

Standard

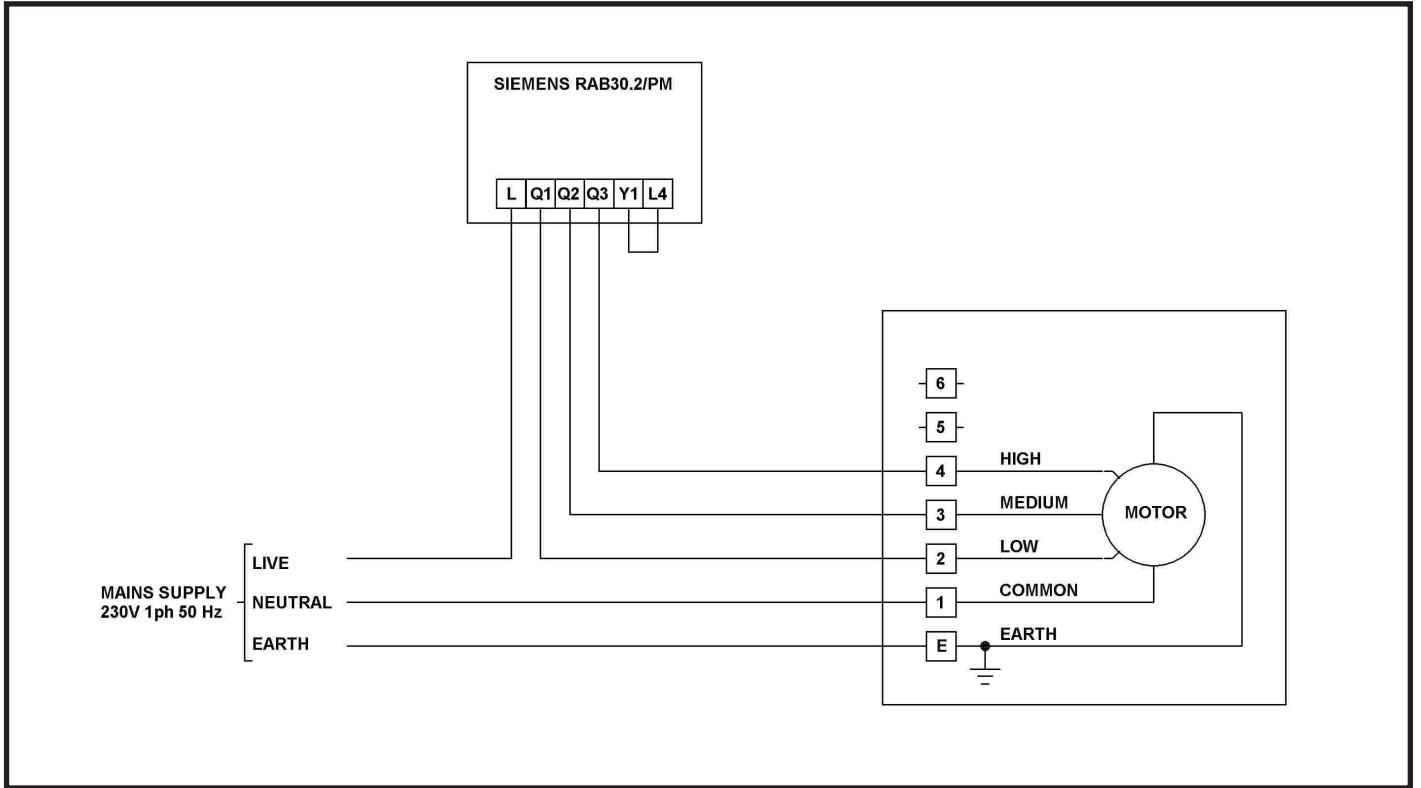


Fitted with Optional Low Temperature Cut Out

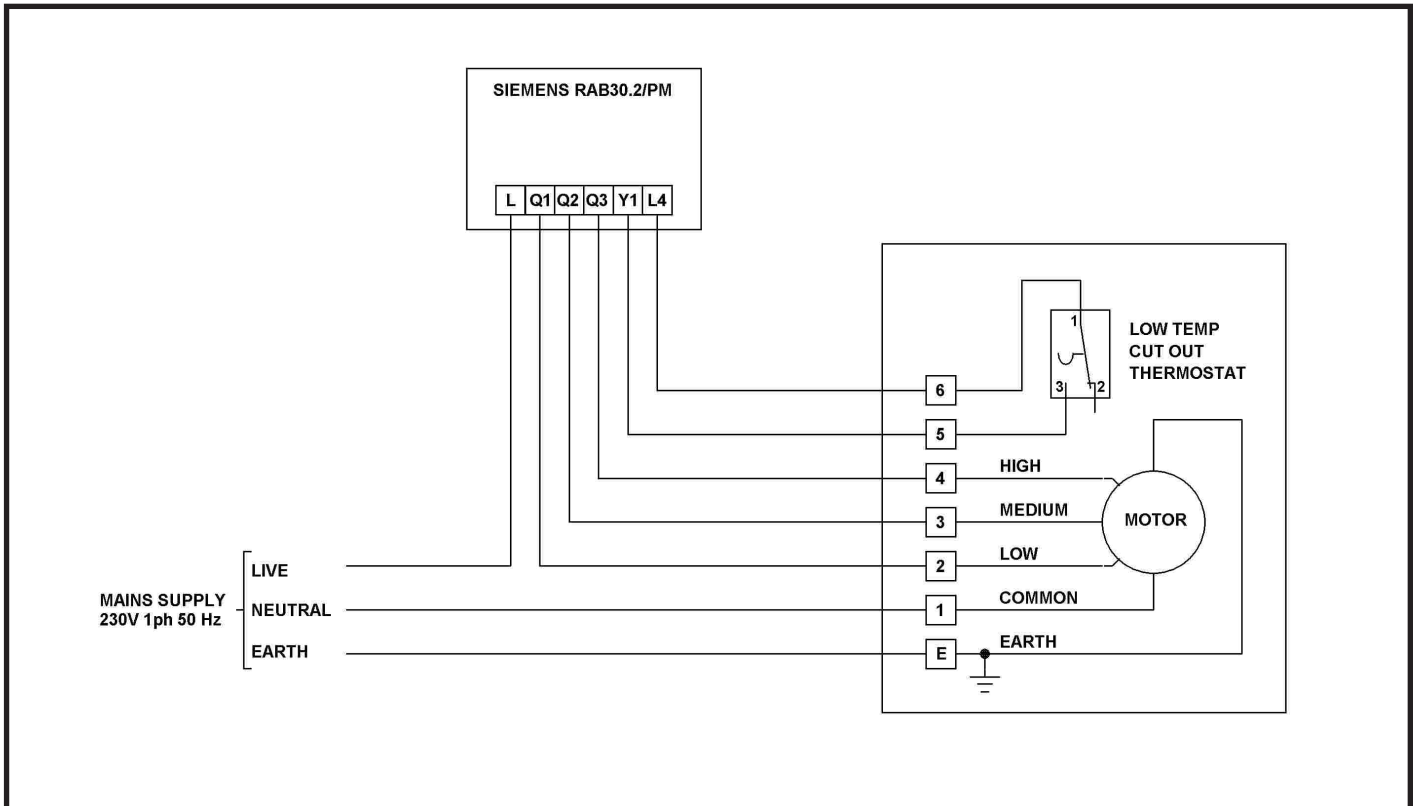


11.2 MODELS AFC. C.W., C.C., S.C.

Standard

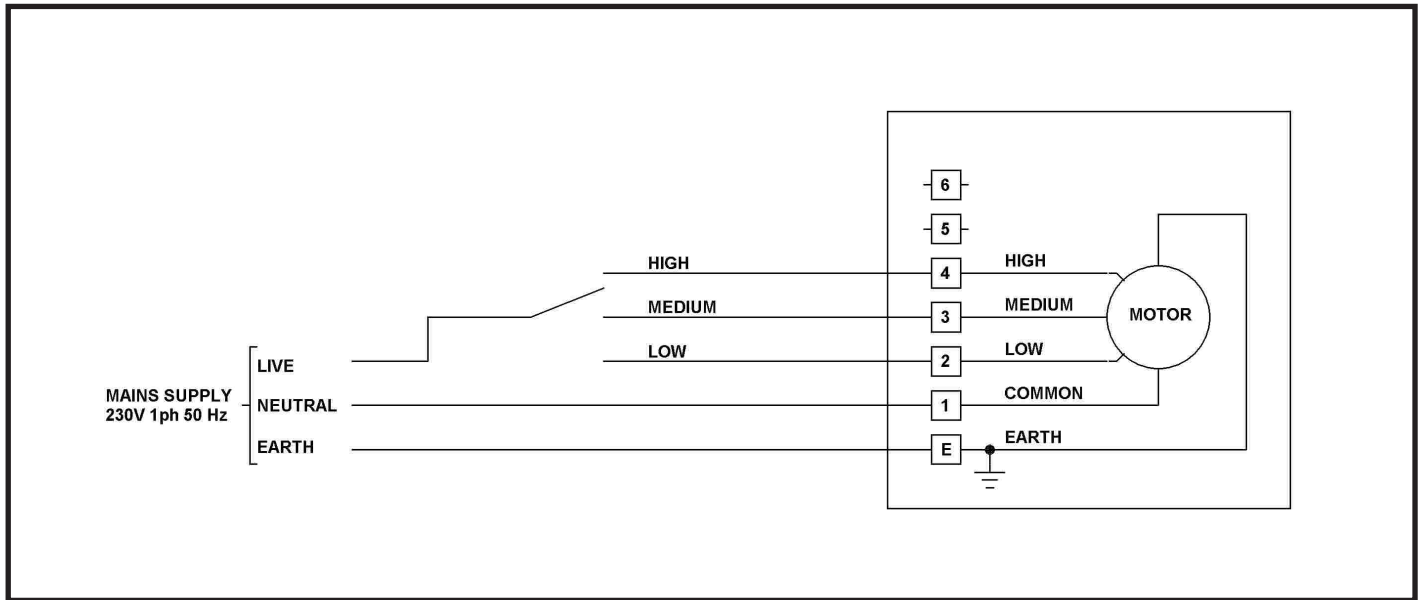


Fitted with Optional Low Temperature Cut Out

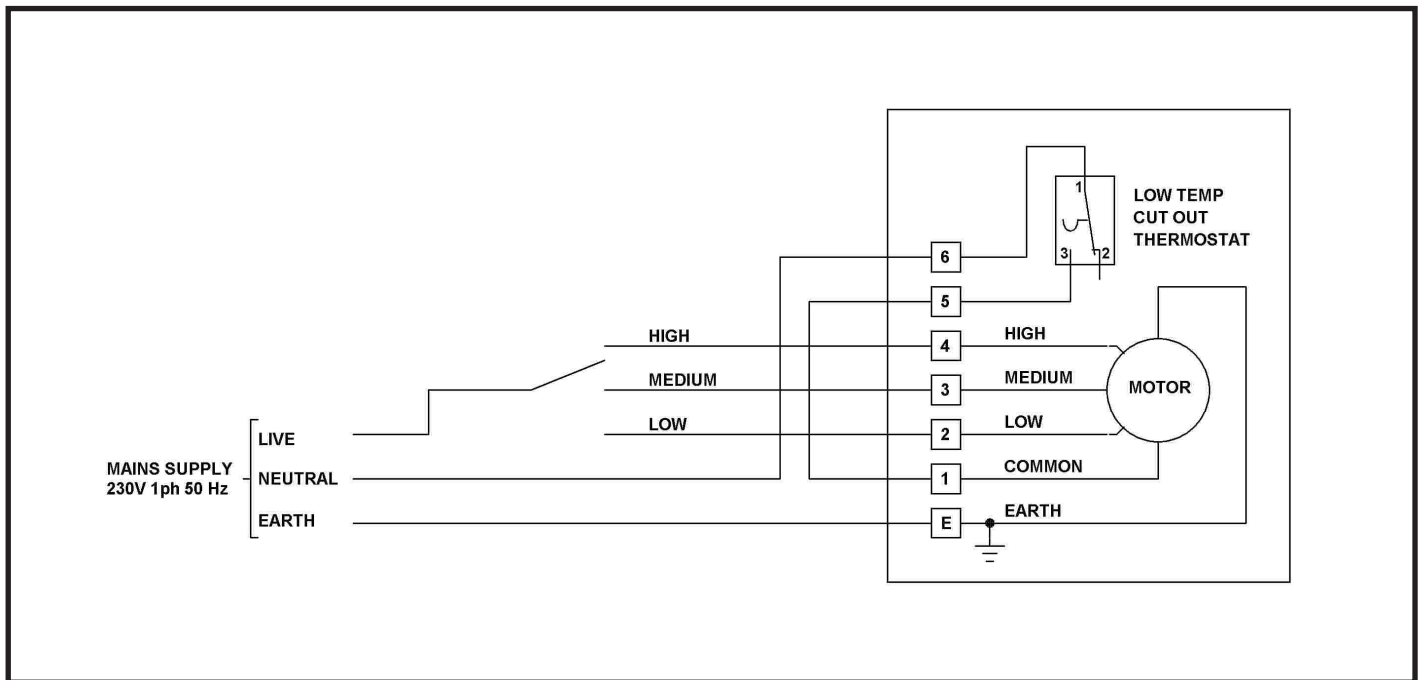


11.3 MODELS AFC. C.W., C.C., S.C. (Manual Control)

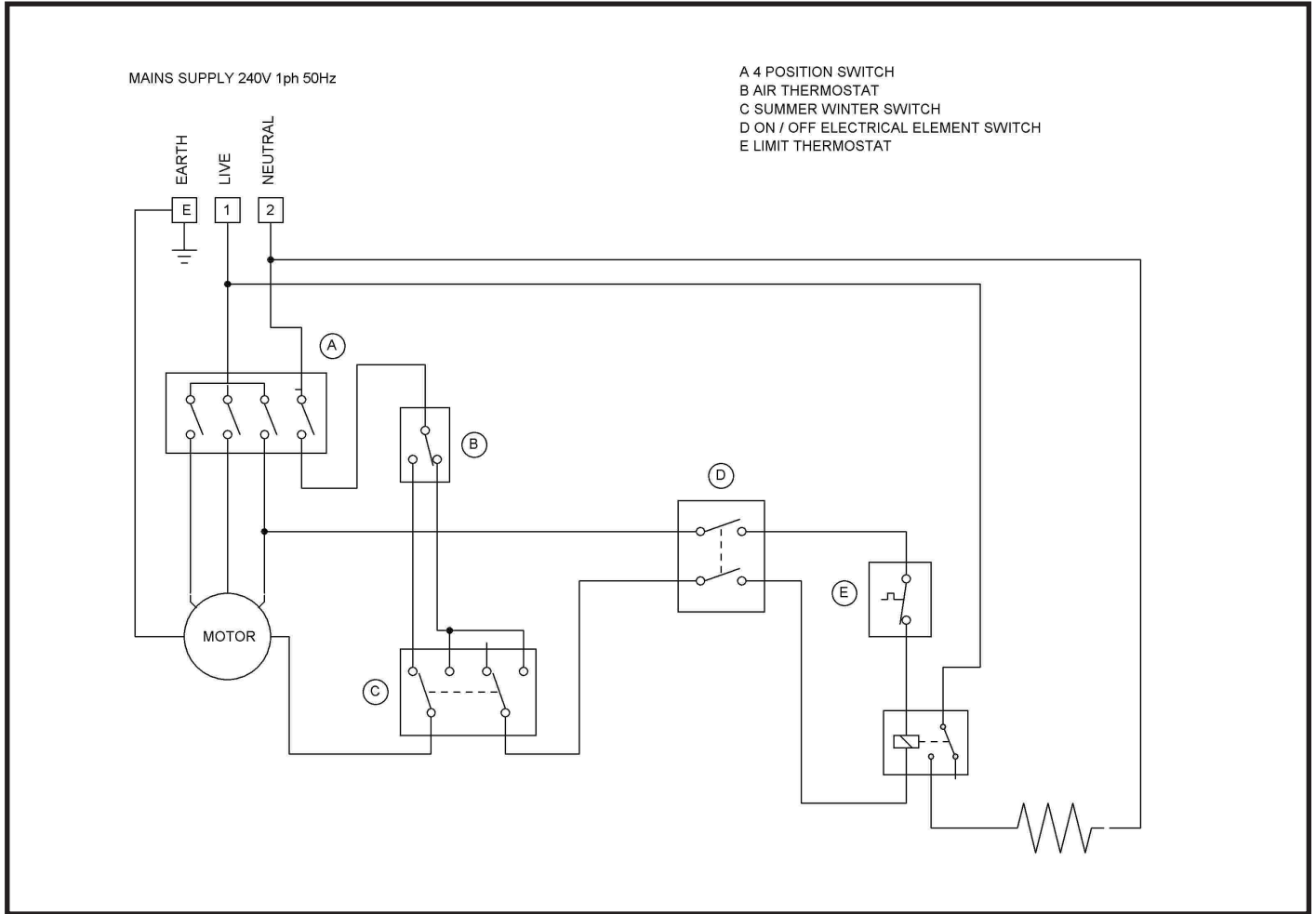
Standard



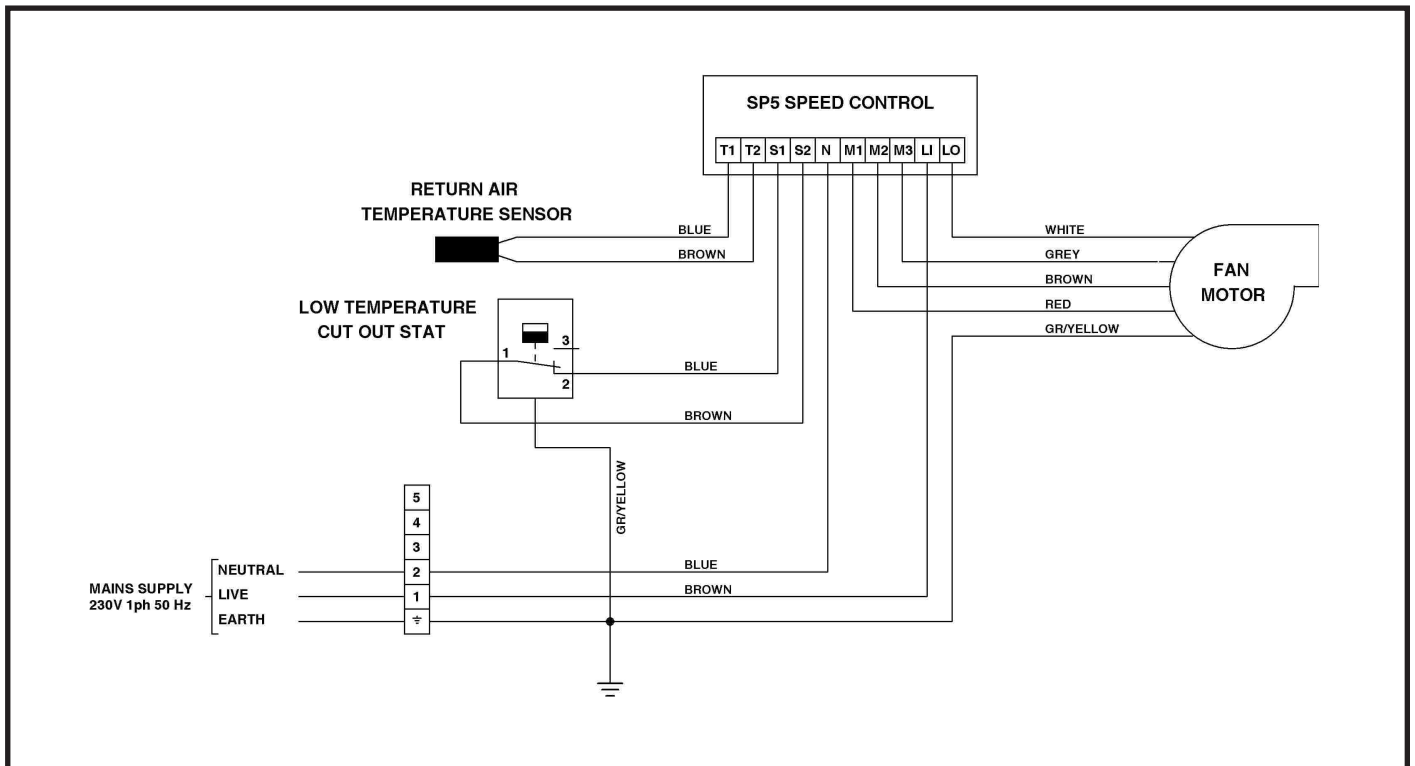
Fitted with Optional Low Temperature Cut Out

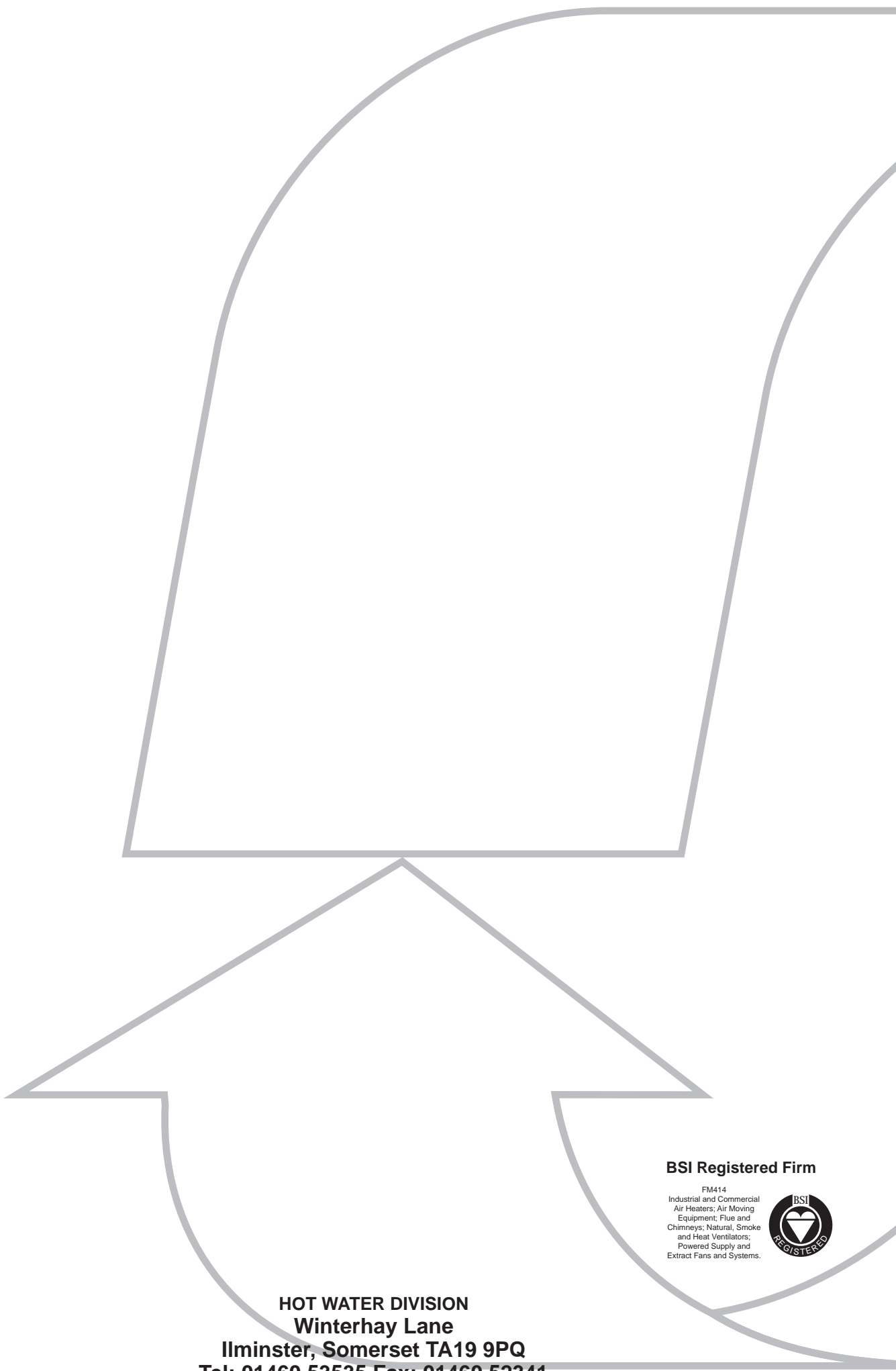


11.4 MODELS AFC. with Supplementary Elements



11.5 AQUAMASTER





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