



RS stock number : 348-7949



# FCHM

## Hydromatic Pump Control Module

### Use

To maintain and control water pressure, within a pumped system, for the supply to industrial processes and heating systems. Ensures constant flow and pressure to allow optimum performance of gas boilers or heaters, while preventing cycling and consequent temperature variations in the various appliances.

### Description

A compact unit, which combines all the functions of a complete pressurising system, ie. Pressure Switch, Dry Running cut-out, Control Panel, Pressure Reservoir and Non-return Valve. The system employs a hydraulic chamber, equipped with a damping system to protect against water hammer, and a patented electromechanical control board, to be connected to 240Vac power source, with an internal 24V secondary circuit.

Compared with conventional systems this is not only more compact, but easier and quicker to install, and makes for significant energy savings and reduced pump wear. It is also maintenance free, as the pressurisation unit does not require precharging with air.

This system combines the versatility and control of conventional pressure switches with the advantages of pressure/flow switches.

Avoids the need for pressure reservoirs, along with their associated maintenance costs.

System enables maintenance of constant flow, elimination of shock loads, totally independent management of the electric pump, and can regulate start-up pressure between 1 and 3.5 bar.

System shuts down pump if water supply fails, or the flow falls below 1.5L/min. Units must be mounted with the inlet & outlet aligned within 5° of vertical.

Condensation, due to temperature differential between the water and the control box, is avoided by the distance between the two.



- Start up pressure 1-3.5 bar, adjustable
- Dry running cut out and foot valve
- Visual Indication and manual reset for water circuit faults
- Pressure gauge for easy set up
- Auxiliary fuse to protect pump control circuit

SPECIFICATION	
Supply voltage	240Vac 50-60Hz
Max operating power	2HP
IP Rating	65
Max pressure	10 bar
Max flow rate	100 l/min
Max fluid temperature	60°C
Max ambient temperature	60°C
Minimum start-up pressure adjustable	1 - 3.5 bar
Pump shutdown Flowrate	1.5L/min.
Minimum output pressure(Pump max pressure) > = start-up pressure plus 1.0.bar	

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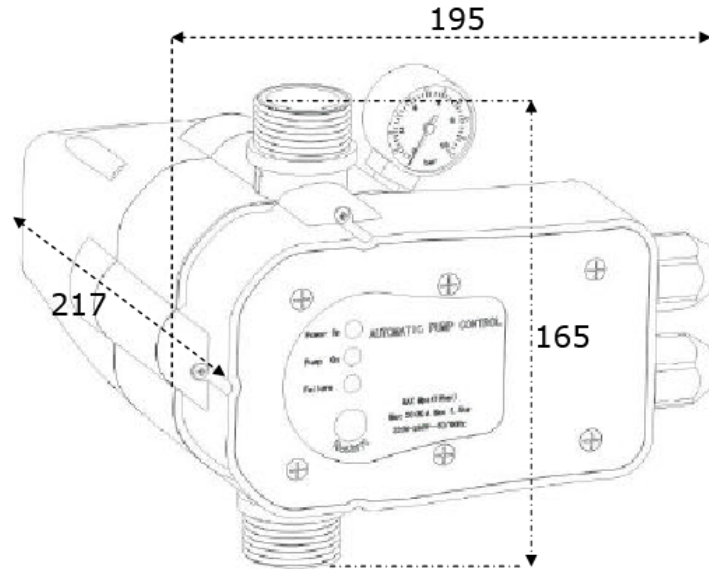
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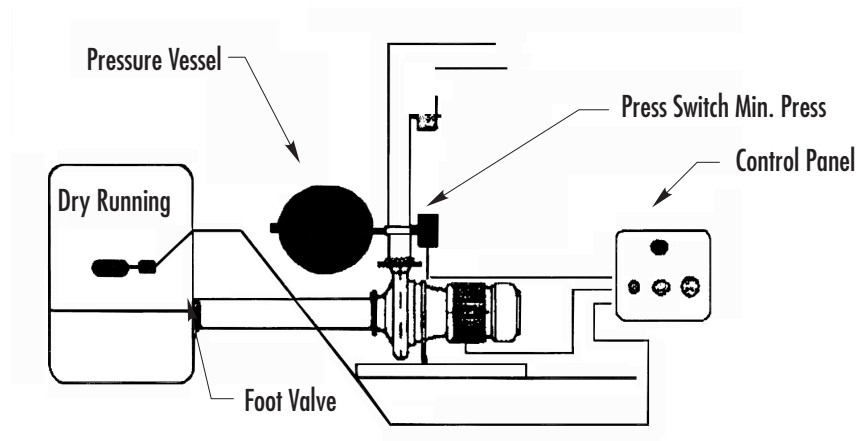
## Hydromatic Pressure Regulator

### FCHM SCHEMATIC

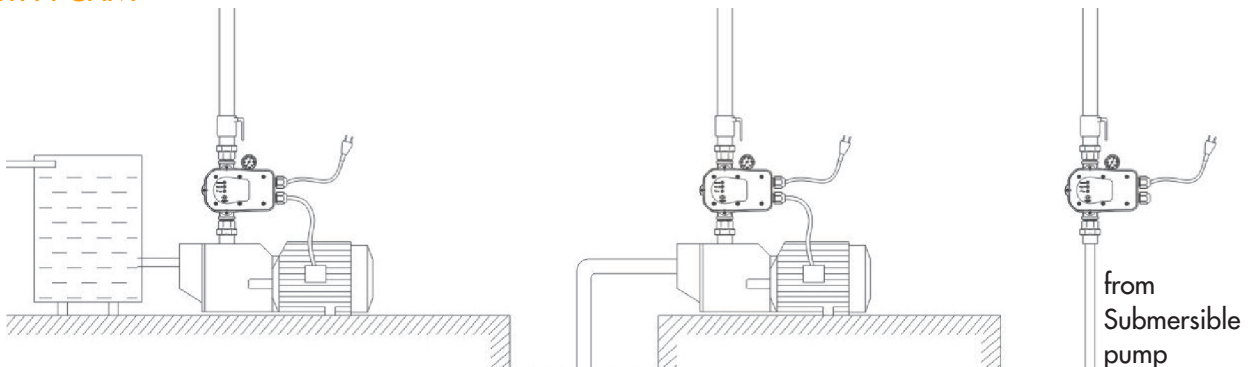


### OPERATING SCENARIOS

#### WITHOUT FCHM



#### WITH FCHM



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## Setting start up pressure

Always install a pump that develops a maximum output pressure that is at least 1 bar greater than the required minimum start up pressure.

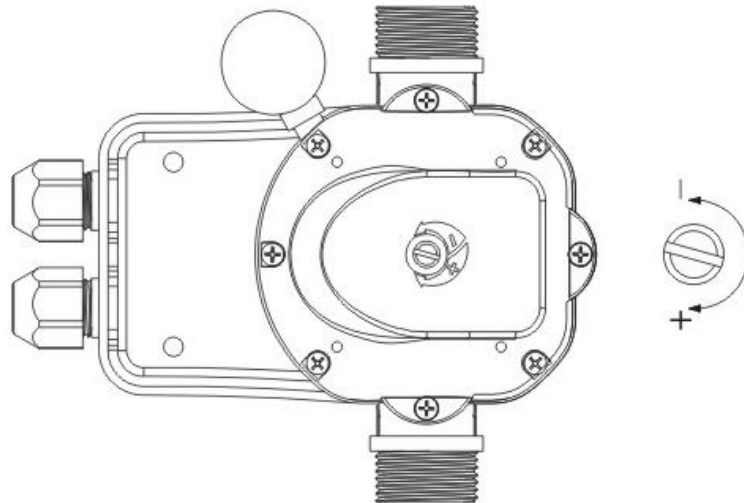
If the head to be pumped is greater than 15m, it is necessary to increase the start up pressure setting e.g. 20m head requires at least 2.5 bar start up pressure, 25m head requires at least 3 bar start up pressure.

To increase the start up pressure setting:

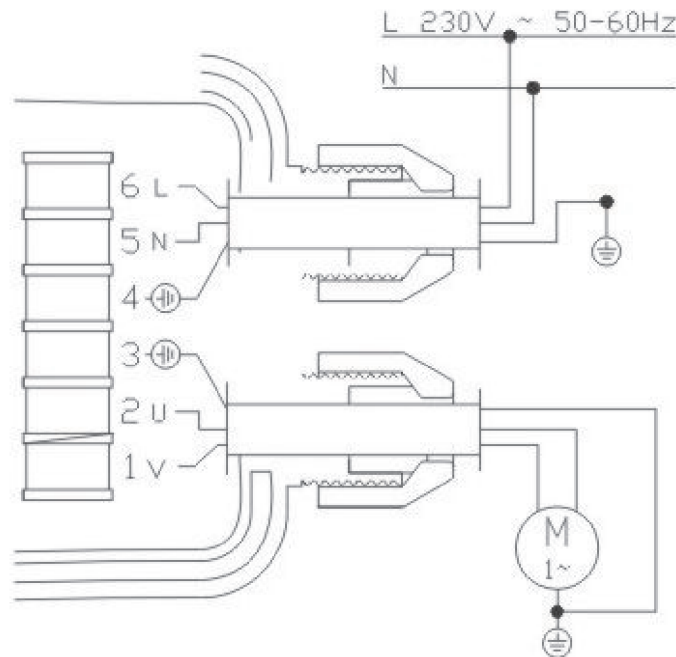
Gradually release the pressure from the system, until the desired start up pressure is shown on the gauge.

Turn the adjustment screw, found at the rear of the module, clockwise until the pump starts.

The module is now set.



## Wiring for 1 phase pumps up to 2HP



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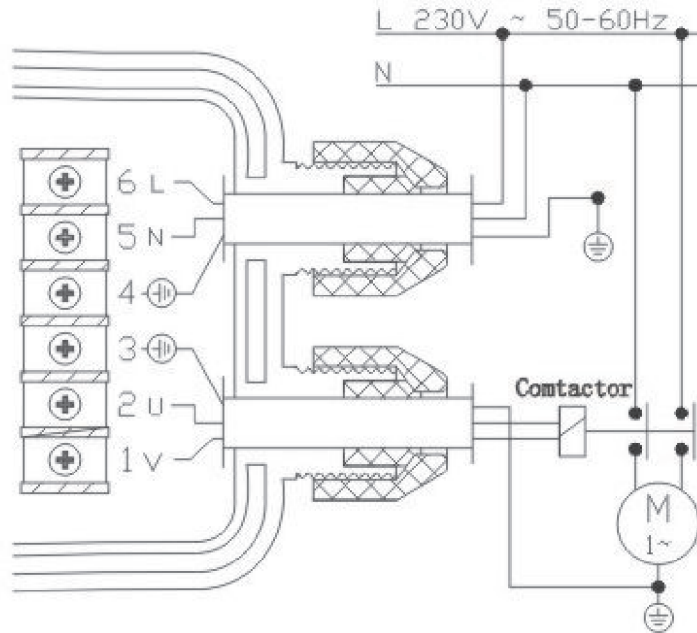


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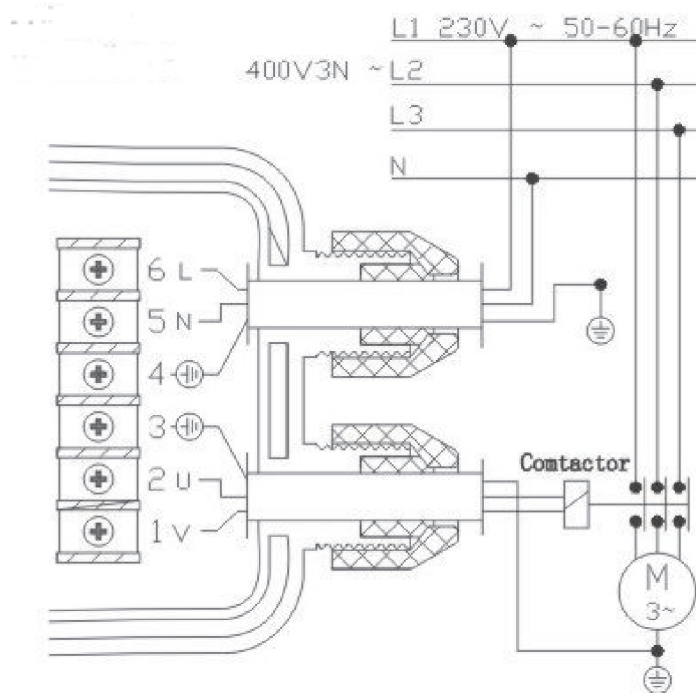


# FCHM Hydromatic Pump Control Module

## Wiring for 1 phase pumps over 2HP



## Wiring for 3phase pumps



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