

## AMPTEC - CONTROL RELAY

MODEL	PART NUMBER	DESCRIPTION	COMMENTS
RL1	95 970 134	1 x RELAY ASSEMBLY	SUITABLE FOR LINKING AN ELECTRIC SHOWER WITH THE BOILER TO ENSURE THAT BOTH DO NOT RUN AT THE SAME TIME, PREVENTING OVER LOADING THE ELECTRICAL SUPPLY.
RL2	95 970 135	2 x RELAY ASSEMBLY	2 x BOILER PUMP ISOLATION RELAY. SUITABLE FOR BOILERS BEING CONNECTED ON SINGLE PHASE OR 3 PHASE SUPPLIES.
RL3	95 970 136	3 x RELAY ASSEMBLY	3 x BOILER PUMP ISOLATION RELAY. SUITABLE FOR BOILERS BEING CONNECTED ON SINGLE PHASE OR 3 PHASE SUPPLIES.

## RELAY SPECIFICATION

Contact Arrangement	SPCO
Contact Rating	10 amps @ 250Vac
Coil Consumption	500mW
Coil Operating Voltage	230Vac
Temperature Range	-40°C to +70°C
Approvals	VDE, UL, CSA

Capacitor (when fitted) 4.7uF 240V 50Hz Class X2

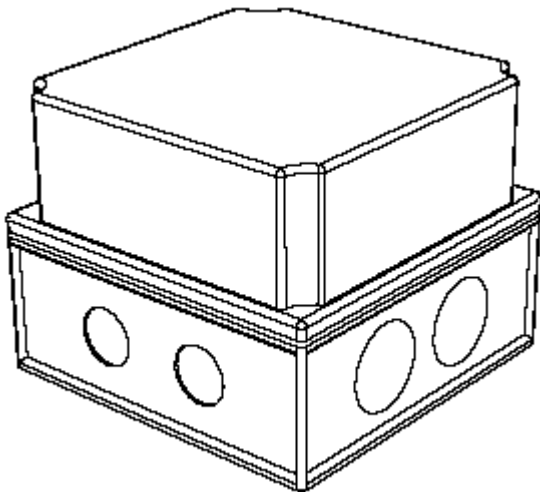


FIGURE ONE: AMPTEC CONTROL RELAY

The relay assemblies are mounted on a DIN rail contained in a plastic housing. They can be used for a variety of applications, including controlling the boilers and operating pumps.

To prevent overloading of the electrical supply where an electric boiler is installed together with an electric shower, the RL1 assembly may be used to temporarily shut down the boiler when the shower is in use.

When 2 or more boilers are used together, the output supply for the pump must be isolated. For a 2-boiler system use the RL2 assembly, for a 3-boiler system use the RL3 assembly (for more than 3 boilers apply to Heatrae Sadia for details). These assemblies are quite suitable for boilers connected on a single-phase electrical supply, or for boilers connected to different phases of a 3 phase supply.

They are not suitable for switching the main power to the boilers.

## **HEATRAE SADIA**

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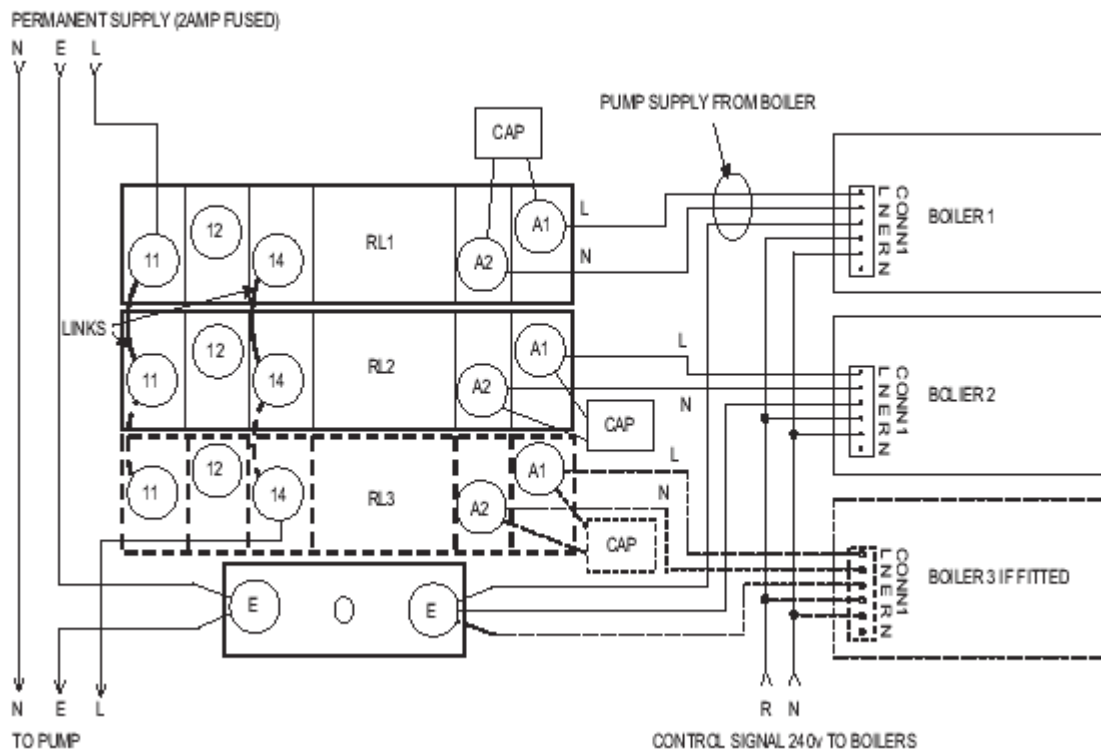
Page 1

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### **RELAY UNIT -SCHEMATIC (RL2 / RL3).**

2 or 3 boilers on single phase 240V or 3 phase 415v supply.





**FIGURE THREE: WIRING LAYOUT**

Cap = Capacitor 240v 0.47uf type X2

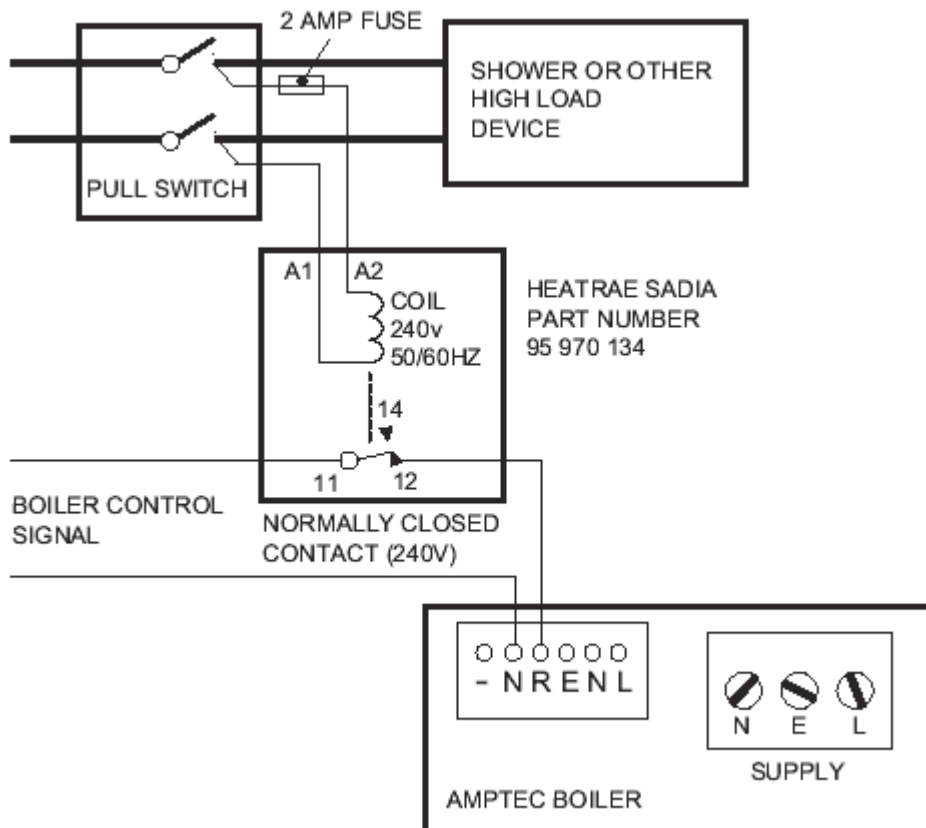
Model 95 970 135 for 2 boiler assembly

Model 95 970 136 for 3 boiler assembly

Page 3

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**SHOWER - RELAY CONTROL FOR AMPTEC: BOILER (RL1).**



**FIGURE FOUR: SHOWER RELAY CONTROL**

#### LIMITATIONS ON ELECTRICAL SUPPLY

In the case where there is an electric shower and an electric flow boiler installed, the electrical supply may be overloaded if both units are operating at the same time. To prevent this condition a simple switch over relay box can be added, which will ensure this does not happen.

Connections: -

The coil of the relay is connected across the switched supply to the electric shower. The 'normally closed' contact of the relay is connected in to the control line of the electric flow boiler. The relay does not switch the high current to the boiler, only the control signals.

Operation: -

When the shower is switched on, the relay is activated breaking the control signal to the boiler, and hence shutting it down in a controlled manner, thereby preventing overload on the mains electrical supply.

Electric showers are normally run for short periods at a time, and therefore shutting down the heating during these times should not cause any discomfort with the heating

Note, this is only required if there is doubt with regard to supply limitations, and an electric shower that heats the water at the same time as the Amptec boiler is used. It is not required with power showers, which only pump the water.

A suitable relay unit is available from Heatrae Sadia. Part number 95 970 134. This relay unit is also suitable for other applications where there is a high load demand to be shared with the boiler.

Other relay units containing 2 or 3 relays are also available from Heatrae Sadia.