

## INSTALLING THE ENERGY MINDER

Please read these instructions and study the diagrams carefully before installation. Incorrect wiring may cause permanent damage to the unit rendering the warranty void.

Wiring should be carried out by an electrically competent person. All wiring must be carried out according to current regulations and local codes of practice.

**Safety!** Make absolutely certain that the electricity supply is isolated before commencing the installation.

## SITING AND FIXING THE CONTROLLER

Position the controller at a position that is convenient for the user and where the pre-wired sensors and mains harness will reach their relevant connections. Use a standard junction box to terminate mains connections as shown in the wiring diagram.

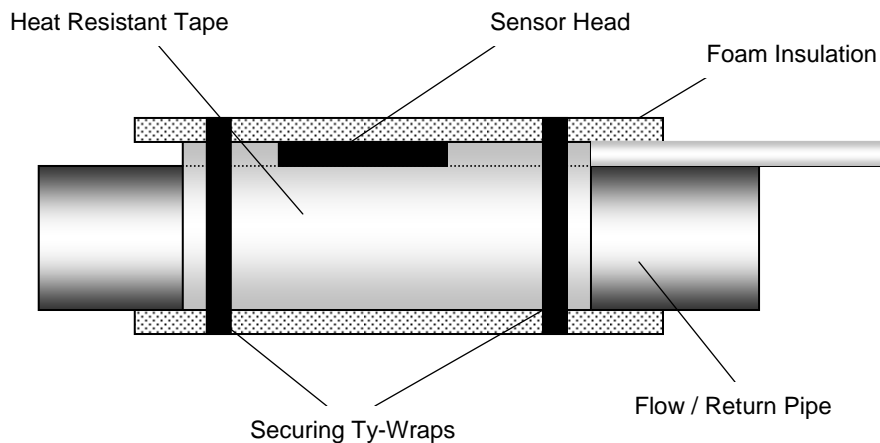
Do not allow the cables to come into direct contact with the hot area of the heat exchanger or flue components.

Mount the controller using the keyhole slot on the rear of the unit and secure in position with the attached bracket.

## FITTING THE SENSORS

The Energy Minder has two sensors, one for the FLOW pipe (sensor identified by black 'F' marked on cable where it exits the unit), and one for the RETURN pipe.

The pipework should be cleaned with wire wool at the sensor contact point which should be at least 50cm from the boiler. Fit the sensor flat to the pipe and secure tightly using heat resistant tape such as duct tape. Cover the sensor element and beyond with 3-4 layers of tape and foam pipe to provide good insulation. Ty-wraps may be used at the ends of the taped area (see diagram) to provide mechanical assistance to the tape. **DO NOT APPLY TY-WRAPPS OVER THE SENSOR HEAD AS DAMAGE MAY OCCUR.**



## **EXTERNAL SENSOR (Optional)**

The optional **External Sensor** should preferably be positioned on a north facing exterior wall, and connected to the provided 2-core flex of the Energy Minder using the blue and yellow wires of the 4-core cable provided with the sensor.

On long cable runs the remaining cores should be earthed to prevent interference.

If it is not possible to mount the sensor on a north facing wall, then mount in a shaded position, under eaves, and away from boiler house vent grilles etc.

## **MAINS WIRING**

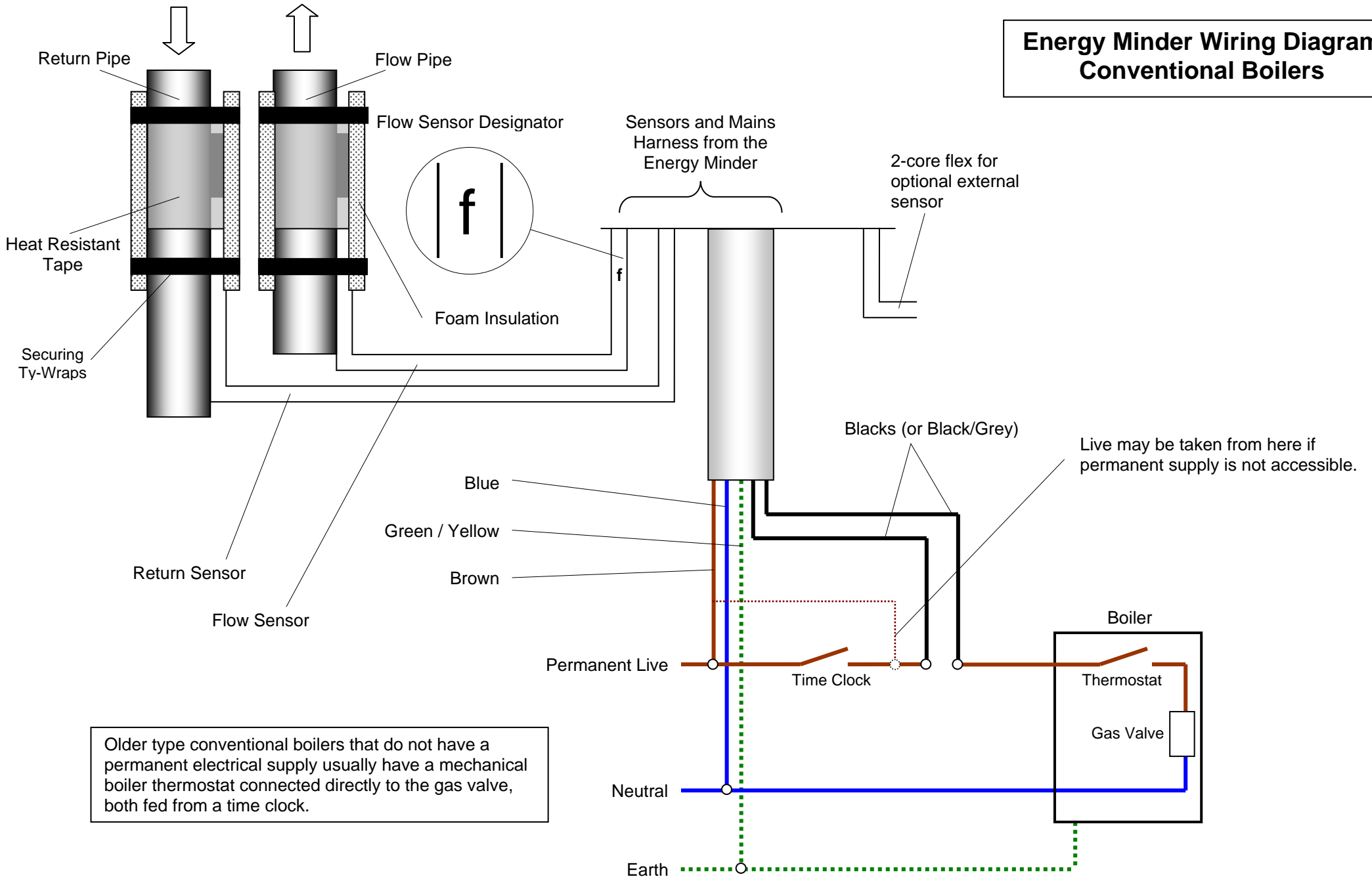
Carry out the mains wiring as per the diagrams provided.

**NOTE:** All Energy Minders are factory tested and calibrated. Most reported problems are due to incorrect wiring, poorly fitted sensors or an unclear understanding of the operation of the controller.

The installer should read the USER INSTRUCTIONS carefully so that he can confidently explain the unit's operation to the user. This will reduce recalls due to user misunderstandings etc.

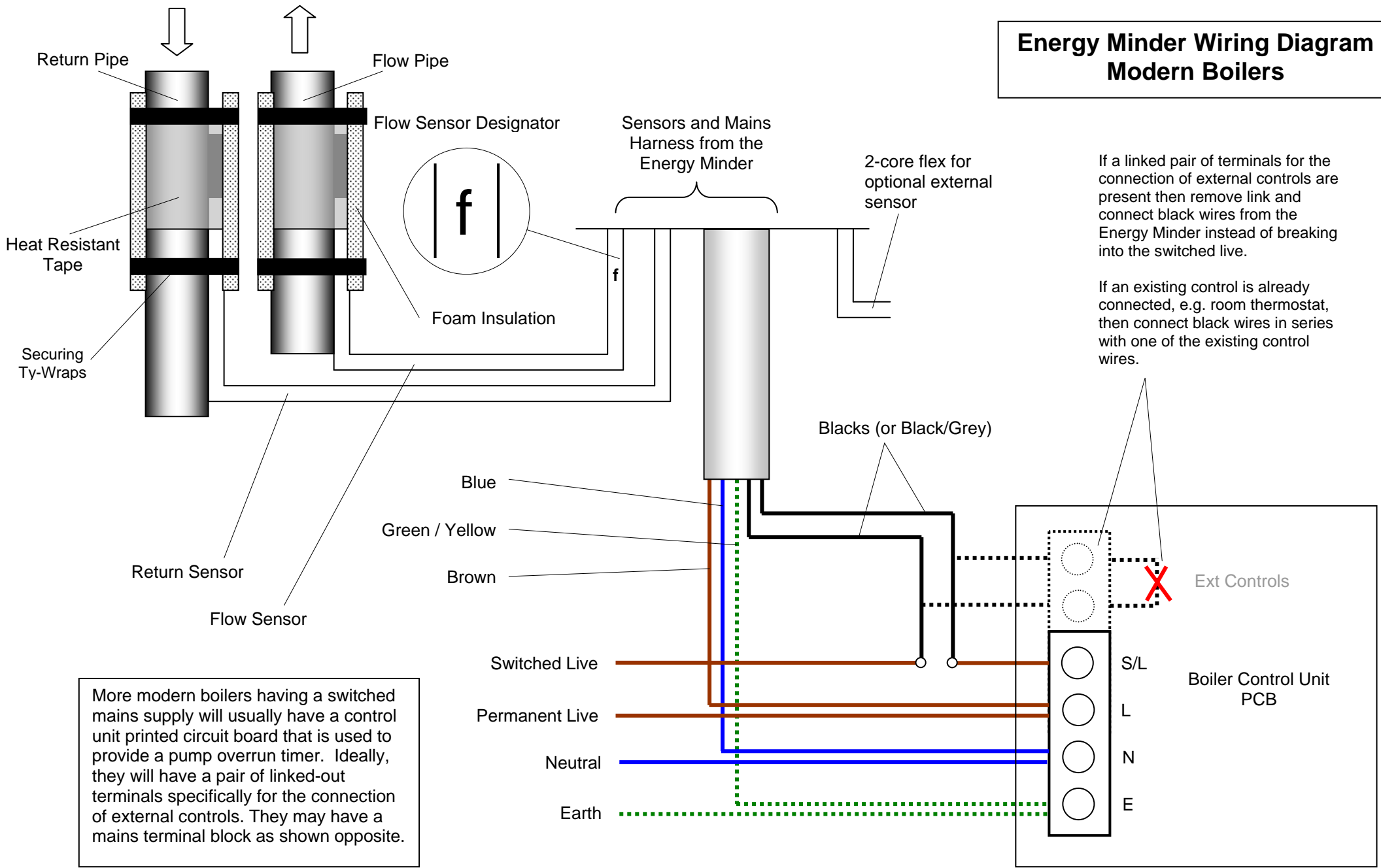
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# Energy Minder Wiring Diagram Conventional Boilers



Older type conventional boilers that do not have a permanent electrical supply usually have a mechanical boiler thermostat connected directly to the gas valve, both fed from a time clock.

# Energy Minder Wiring Diagram Modern Boilers



If a linked pair of terminals for the connection of external controls are present then remove link and connect black wires from the Energy Minder instead of breaking into the switched live.

If an existing control is already connected, e.g. room thermostat, then connect black wires in series with one of the existing control wires.

More modern boilers having a switched mains supply will usually have a control unit printed circuit board that is used to provide a pump overrun timer. Ideally, they will have a pair of linked-out terminals specifically for the connection of external controls. They may have a mains terminal block as shown opposite.