CE

EUROTROL

AUTO SU
88:88
O
F
F CH1

± 1h DAY h+ m+

CH1 Reset 1

GR'A'SSLIN

Mains

Heating

°C
10
5 15
0 20
25
Night Set Point

°C
10
5 15
0 20
25
Day Set Point

Winter Off Summer

Mode Selector

Installation & Users Instructions

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1.   Introduction

The Powrmatic Eurotrol is an electronic time and temperature control for controlling any form of heating equipment, and may be used to control mains (240V) or low voltage (24V)

Housed within a stylish a.b.s. enclosure are the digital time switch, adjustable control for both day and night set points, and switch selector giving summer, winter and off modes, access to these controls being a hinged transparent door with tamperproof fixings.

The temperature sensor is housed within a separate remote mounted enclosure which can be sited up to 100m from the Eurotrol.

2.2   General

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Electricity supply	240V 50Hz Fused at 3A.
Internal control fuse	20mm 1A. 240V.
Day set point range	0 - 25 °C.
Night set point range	0 - 25 °C.
Temperature accuracy	0.5 °C.
Overall switching differential	1.0 °C.
Sensing Element	Remote mounted thermistor.
Switching contacts ratings	13A. 240V.ac. (resistive).
Mains Indicator	Green L.E.D.
Heating on Indicator	Red L.E.D.

2.3 Time Switch

Display	7mm L.C.D.
Programming Instructions	16 (8 On and 8 Off)
Shortest switching time	1 minute
Manual override	Self cancelling ON & OFF.
BST / GMT time selector	+1hr button
Battery backup	50 hrs. after 100 hrs. connected to mains.

2. Specifications
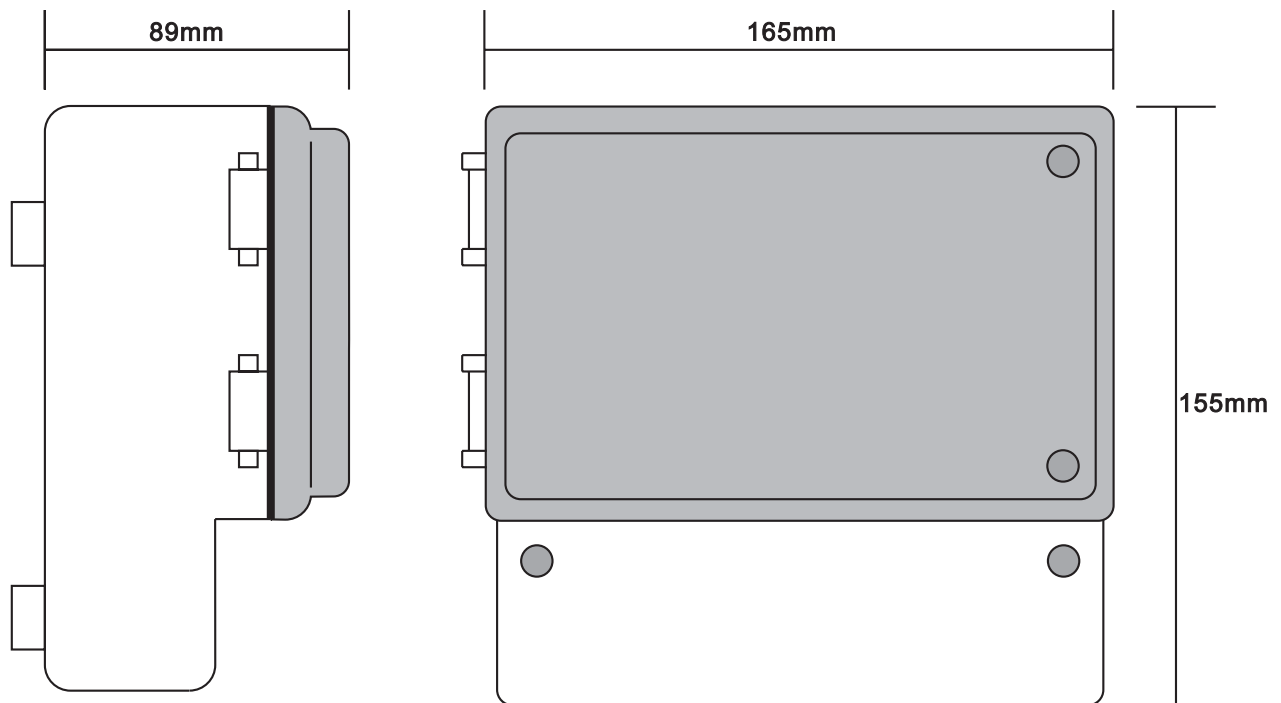## 2.1 Overall Dimensions

89mm

165mm

155mm

Fig.1

3. Installation

3.1 Siting

IMPORTANT

The Eurotrol or sensor **MUST NOT** be sited in areas of high electromagnetic, i.e. distribution boards, transformers or heavy duty supply cables.

Sensor

Siting of the sensor is particularly important in that it must be fitted where the temperature will be generally representative of the area to be heated. Ideally it should be installed 1.7m above floor level and away from draughty areas subjected to direct heat (from

Eurotrol

The position or the Eurotrol should be no greater than 100m from the sensor and should be in a position easily accessible for programming and control.

3.2 Fixing

For fixing into wood use No.8 x 1¼" woodscrews, on masonry use screws together with wallplugs and on metal use M5 machine screws.

3.2.1 Sensor

Offer the mounting template up to the intended mounting position and mark location of the two fixing holes. Unclip the sensor cover and fix sensor base plate to the wall.

3.2.2 Eurotrol

Remove the two screws securing the terminal cover to the Eurotrol and remove the required electrical knockout. Offer the template up to the intended mounting position and mark the location of the three fixing holes and electrical entry position. Secure the top fixing leaving approximately 5mm protruding, hand the Eurotrol on the top fixing screw and line up the bottom fixing holes and secure using two screws.

3.3 Electrical Connections

IMPORTANT

Wiring external to the Eurotrol must be installed in accordance with I.E.E. Regulations together with any local regulations which may apply. Wiring should be completed in conduit, entry for which is provided in the bottom or base of the unit. See external wiring diagram (Fig.2.) Mains supply and control circuit wiring should be completed in cables not less than 0.5mm² and fan circuit in not less than 1.5mm². The method

wiring diagram (Fig.2.) Mains supply and control circuit wiring should be completed in cables not less than 0.5mm² and fan circuit in not less than 1.5mm². The method of connection to the mains electrical supply can be taken from the appliance or a separate 'local' supply, but in both cases a local isolator must be fitted adjacent to the Eurotrol. Should more than one appliance be controlled from one Eurotrol a relay box **MUST BE USED** (See 8.1).

SENSOR WIRING
WARNING
Sensor cable must be two core and a minimum of 0.6mm² if solid and 7 x 0.2mm² if multistrand. Wiring for the temperature sensor **MUST BE RUN SEPARATELY** and apart from ALL other wiring. Failure to regard this instruction may cause the Eurotrol and/or appliance to malfunction and may render if faulty. If screened cable is used, screen must be grounded only at the Eurotrol.

CAUTION
INSULATION TESTS
Do not use a 'Megger' or other high voltage test equipment to test site wiring after connections have been made to the Eurotrol.

CONTINUITY TESTS
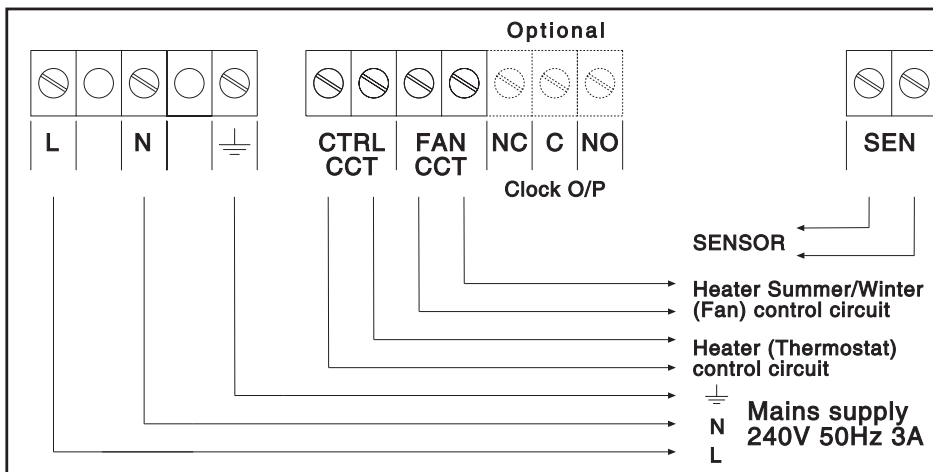Use only a low voltage instrument e.g. Avometer, set to ohms range.

Fig.2

4. Method of Operation
4.1 Mode Selector
The mode selector switch has three positions:

WINTER: The day temperature control operates the heating appliance when the clock is 'ON' and the night temperature control operates when the clock of 'OFF'.

SUMMER: The main air movement fans of the heating appliance (and/or ventilation equipment) will run when the clock is 'ON', the burner will not operate irrespective of the clock or temperature control.

OFF: The heating appliance will not operate irrespective of clock or temperature control.

4.2 Day Temperature Control
The day temperature control may be adjusted between 0 - 25 deg C.

4.3 Night Temperature Control
The night temperature control may be adjusted between 0 - 25 deg C. If required the night temperature control may be inhibited by cutting the link on the underside of the p.c.b. fitted under the switch panel of the unit *See Fig.3*.

IMPORTANT:

Disconnect mains electrical supply before attempting to inhibit night temperature control. Remove the two socket set screws retaining the transparent cover in place.

Fig.3

Rear View of switch panel
circuit board

Night setback
temperature link
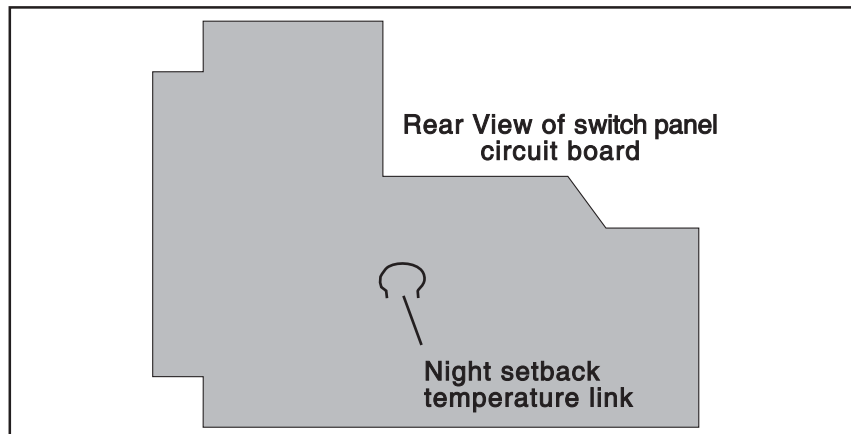
Remove the two screws on the left hand side of the switch panel and the two hexagon spacers on the right hand side. Carefully lift the switch panel from the enclosure and then unplug the connector from the p.c.b. on the underside of the switch panel. Refer to Fig 3 and identify the link to be CUT to inhibit night temperature control. Cut the link at both ends and remove the centre section.

4.4 Mains Indicator
The green L.E.D. will be illuminated when the mains supply is present.

4.5 Heating on Indicator
The red L.E.D. will be illuminated when the heating appliance is operating.

5. Digital Time Switch
5.1 Start Up
Switch mains power to Eurotrol on. If a clock display does not appear immediately wait a short time (approx. 2 mins) until the display appears. See also Section 10. Use a pencil or similar instrument to briefly operate the '**Reset**' button. '*OFF 00:00*' will appear in the display

5.2 Setting Day of Week and Time of Day
Keep button '🕐' depressed during the entire duration of this setting procedure. Press button '**Day**' to set the actual day of the week. Press the '**h+**' and '**m+**' buttons to set actual hours and minutes. If buttons '**h+**' or '**m+**' are kept pressed for longer than two seconds, a rapid advance of figures will result. If British Summer Time is in force when the unit is being programmed then depress button '+1hr' to advance time by 1 hour. After setting the actual time of day and day of week release button 🕐 '. A flashing colon (*:*) will appear in the display after a few seconds.

5.4 Progamming of Switching Times
Thera are 16 storage spaces for programming i.e. 8 ON and 8 OFF. Programme times that are to be executed at the same time on consecutive days of the week may be programmed in groups to use less storage space.
1.   Press the '**CH 1**' button. Display shows '__*:*__' and '**ON**'.

1.	Press the '**CH 1**' button. Display shows '**__ : __**' and '**ON**'.
2.	Pressing the '**Day**' button cycles through the grouped days of the week , as shown below, then the individual days and then repeats.
	'***Mo Tu We Th Fr Sa Su***'
	'***Mo Tu We Th Fr***'
	'***Sa Su***'
3.	Having selected the required group of days, or day, press the '**h+**' and '**m+**' buttons to program the first switching '**ON**' time.
4.	Press '**CH 1**' again and display shows '**__ : __**' and '**OFF**'.
5.	Repeat steps 2 and 3 to enter the first switching '**OFF**' time.
6.	Repeat steps 1 to 4 until all required switching times are entered.
7.	Press the '⏲' button to revert to actual time and the time switch will automatically set ON or OFF to correspond with entered program.

## 5.6	Programming at a Later Date

If additional switching times are required at a later date depress '**CH 1**' button repeatedly until the next free storage space is displayed.

## 5.7	Checking and Altering Program

Press '**CH 1**' button successively to indicate all programmed switching times. Alterations are carried out by 'overwriting' the individual switching time with the new data.
If a switching operation is to be cancelled the display must show '**__ : __**'.
e.g. if 23:15 it to be cancelled, press '**h+**' until '**__ : 15**' is displayed, then press '**m+**' until '**__ : __**'. is displayed.

## 5.8	Manual Switch

The button marked '✍' has 4 function steps.
Press once - Advances to next switching Status, either 'ON' or 'OFF'.
Press again - Constant 'ON'
Press again - Constant 'OFF'   } irrespective of the time switch program.
Press again - Return to automatic operation.

## 5.9	British Summertime / Wintertime Change Over

To change from wintertime to summertime depress '**+1h**' button once, display shows '**+1h**'.
To change from summertime to wintertime depress '**+1h**' button once, '**+1h**' disappears from display.

6.   Commissioning and Testing

NOTE: During these commissioning instructions reference is made to 'the burner starting'. This may not be instantaneous as burners with automatic sequence controls take up to 30 seconds to actually ignite after the control box has been activated.

1. Set Day and Night set point adjusters to their lowest settings and Mode selector to '**OFF**'.
2. Ensure all external electrical connections have been connected correctly and switch on the electrical supply.
3. The mains on indicator will illuminate.
4. Set time switch to '**ON**' using manual override (see 5.8), and Mode selector to '**WINTER**'.
5. Turn day set point adjuster slowly clockwise, as it passes through the ambient space temperature the heating on indicator will illuminate and the burner will start.
6. Set time switch to '**OFF**' using manual override, Heating on indicator will extinguish and burner will stop.
7. Turn Night set point adjuster slowly clockwise, as it passes through the ambient space temperature the Heating on indicator will illuminate and the burner will start.
8. Turn Mode selector '**OFF**', Heating on indicator will extinguish and burner will stop.
9. Turn Mode selector to '**SUMMER**' and time switch to '**ON**', the main air circulation fans of the heating appliance will start running.
10. Set time switch to '**OFF**', the fans will stop.
11. Set day and night set point adjusters together with Mode selector to customers requirements.

7.   Instructions to the Installer

Explain to the customer the principles involved in setting the time switch together with the operation of the unit, leaving these instructions together with the allen key with the customer.

8.   Optional Extras
8.1   Relay Boxes

More than one heater may be controlled by a Eurotrol by the use of a relay box, (RB box). RB boxes are available to control up to eight heaters, if control of more heaters is required please contact Powrmatic Ltd. for advice.

8.2   Optimum Start Control

An optimum start control package is available for connection to the Eurotrol. This modifies the start time of the heating equipment relative to outside temperature conditions and the heating programme. This control requires a dedicated Optimum start version of the Eurotrol and cannot be used with the standard Eurotrol.

8.3   Averaging Sensors

Special sensors are available to sense the average temperature between two or more sensors where large ares are being heated.

8.4   Black Bulb Sensors

Special sensors are available to sense radiant heat instead of air temperature.

9.   Replacement of Failed Components

WARNING

Always switch off and disconnect electricity supply before undertaking the replacement of any failed components.

9.1   Removal of Switch Panel

The replacement of any failed component will require the removal of the switch panel as follows. Remove the two socket set screws retaining the transparent cover in place. Remove the two screws on the left hand side of the switch panel and the two hexagonal spacers on the right hand side. Carefully lift the switch panel from the enclosure and then unplug the connector from the p.c.b. on the underside of the switch panel.

9.2   Time Switch Module

Carefully pull apart the 3 pin plug and socket connecting the time switch to the main p.c.b. noting how the two halves are positioned together.
Remove the two screws holding the retaining clip, remove clip and clock module. Insert new clock module and reassemble in reverse order. Reconnect the 3 pin plug, taking care to refit it in the correct position.
Carefully replace the switch panel in the enclosure and secure using the screws and hexagonal spacers.

9.3   Other Failures

In the event of any other fault the entire Eurotrol should be returned for repair.

9.4   Spare Parts

Item	Part No
EUROTROL FACIA & PCB	143000101
TIME SWITCH EM/1 DIGI 16. GRASSLIN	143000460
POWER ASSEMBLY PCB.	143058120
STANDARD SENSOR	143070022
FUSE	143170667
ENCLOSURE C/W DOOR	143170391
TRANSFORMER	143080045
INSTALLATION & USER INSTRUCTIONS	143888135