powrmatic

Designed and produced by Powrmatic Ltd.

eurotrol 2

H P1 ON   14:36
20.5°C 19.03.05

○ Heating On
○ Fault

Reset   Heating

Override   Fan Only

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WARNING
Isolate supplies to both Eurotrol & heater
before removing this cover

Qualified for
Energy Technology List
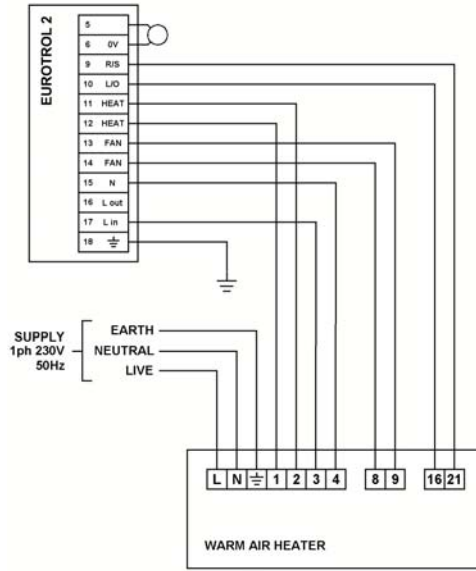www.eca.gov.uk
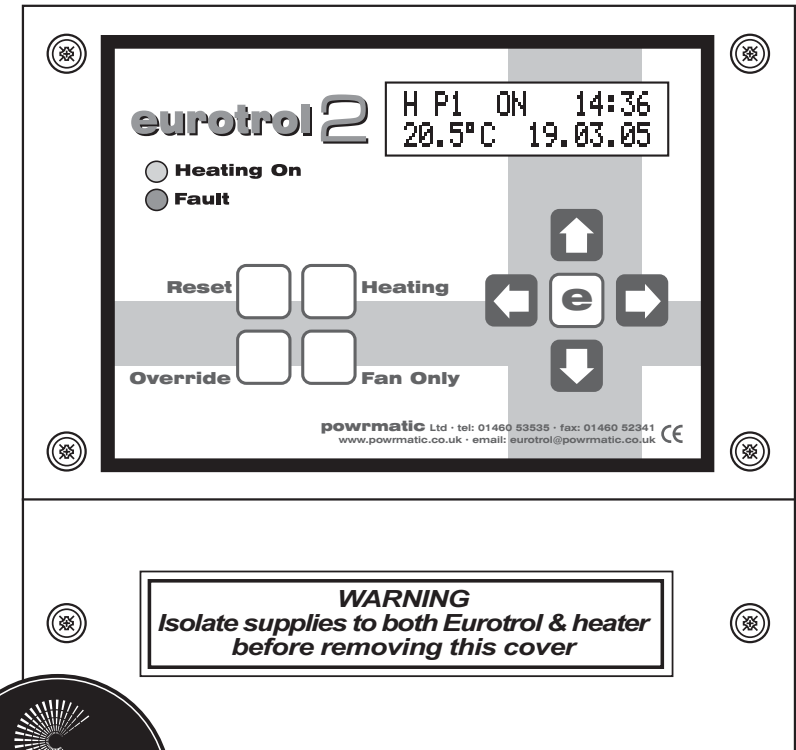
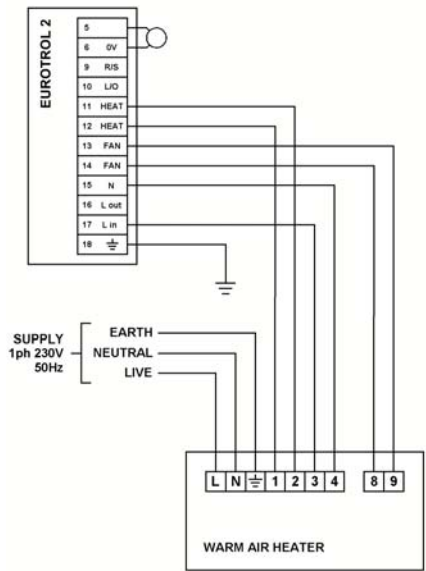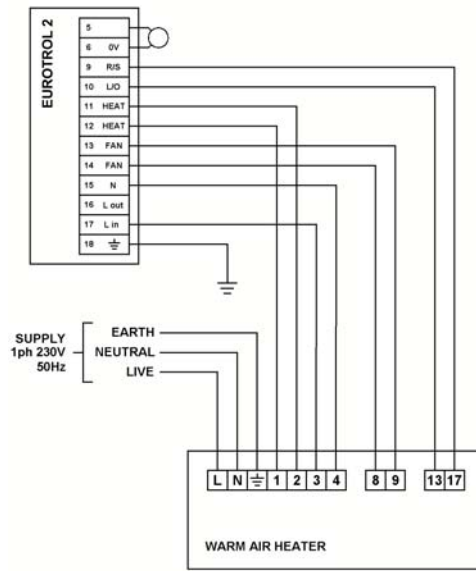# Installation & Users Instructions

Notes
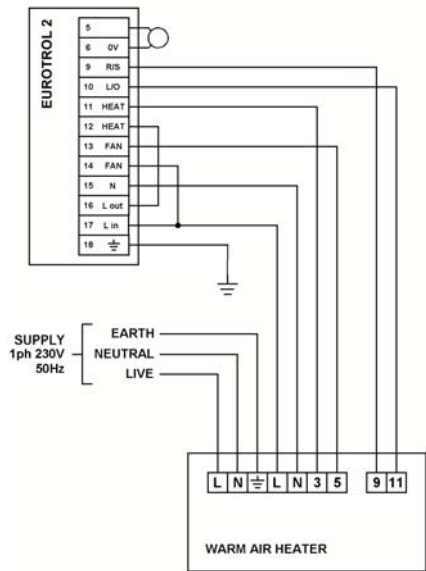
EUROTROL 2 CONTROLLING
EUROMATIC
(ONES WITH PUSH TERMINALS)

EUROTROL 2 CONTROLLING
'OLD STYLE' EUROMATIC
(ONES WITH SCREW TERMINALS)

EUROTROL 2 CONTROLLING
'OLD STYLE' PGUH PERMANENT PILOT
(ONES WITH SCREW TERMINALS)

EUROTROL 2 CONTROLLING
'OLD STYLE' PGUH AUTO IGNITION
(ONES WITH SCREW TERMINALS)

Contents

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Description

The Eurotrol 2 is a high specification heating controller designed specifically to meet the demands of modern fuel efficient heating equipment and the latest environmental guidelines.

The Eurotrol 2 uses optimum start technology as standard. It is continually monitoring the heating systems previous performance to determine the optimum time to turn the heating on to raise the building temperature to the required level when occupancy begins.

Optimum stop can also be selected which can save energy at the end of the heating period.

The Eurotrol 2 has both a basic and advanced programming mode. The basic mode allows easy setting of the temperature and programs. In advanced mode different temperatures may be selected for different times of the day and temperatures may only be adjusted by +/- 3°C without the use of a password.

The Eurotrol 2 is protected by 3 levels of password. The first will allow access to the day to day operation of the (ie. setting times and temperatures, the second allows access to parameters normally used only in the initial setting of the controller, and the third is only accessible to field service engineers for diagnostic purposes.

The 4 button user keypad allows easy selection of the heating and fan only modes, the override functions and fault reset. These may also be locked in various combinations to allow different levels of user accessibility.

The Eurotrol 2 can give a readout of the hours the burner has operated, to help accessing servicing intervals and after being programmed with the correct data, can also give an indication of the running costs of the heating appliance
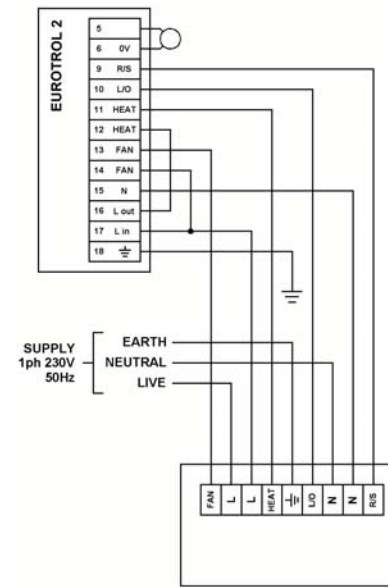
EUROTROL 2 CONTROLLING
NV HEATER
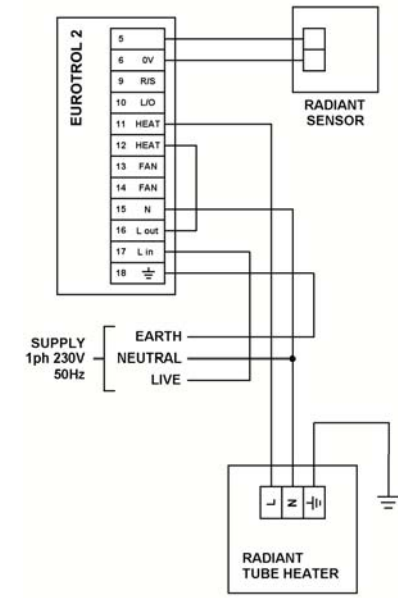
EUROTROL 2
CONTROLLING
RADIANT TUBE
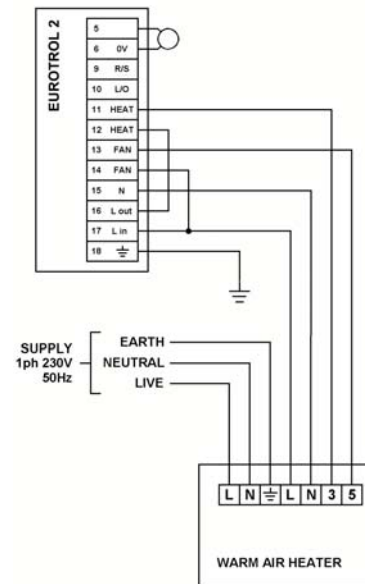
EUROTROL 2 CONTROLLING
PGUH SERIES 3
(ONES WITH PUSH TERMINALS)

EUROTROL 2 CONTROLLING
AUTO IGNITION PGUH SERIES 3
(ONES WITH PUSH TERMINALS)

Sensor Wiring

A single remote sensor may be used in place of the standard internal sensor.

Two remote sensors may be used which relay an average of the two temperatures back to the Eurotrol 2

Important
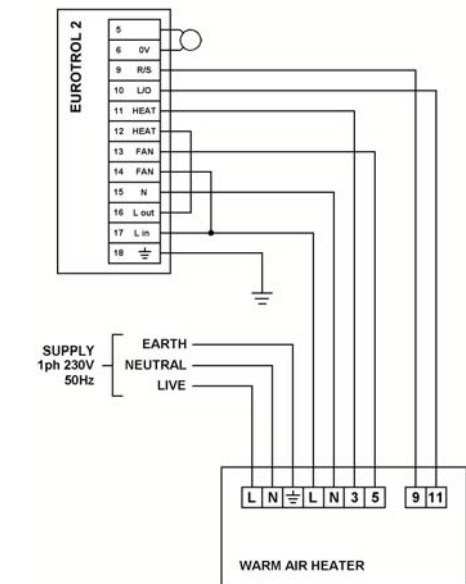Sensor cable must be screened two core and a minimum of 0.6mm² if solid and 7 x 0.2mm² if multistrand. The screen must be grounded only at the Eurotrol 2. Wiring for the temperature sensor **MUST BE RUN SEPARATELY** and apart from ALL other wiring. Failure to regard this instruction may cause the Eurotrol 2 to malfunction and may render it faulty.

INTERNAL SENSOR **REMOTE SENSOR**
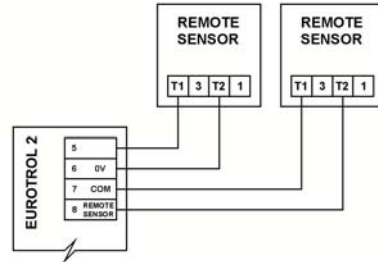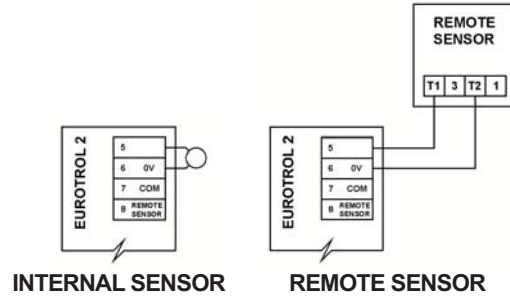
REMOTE AVERAGING SENSORS
(IN EXTENDED MENU SET No OF SENSORS TO 2)

Connection Diagrams
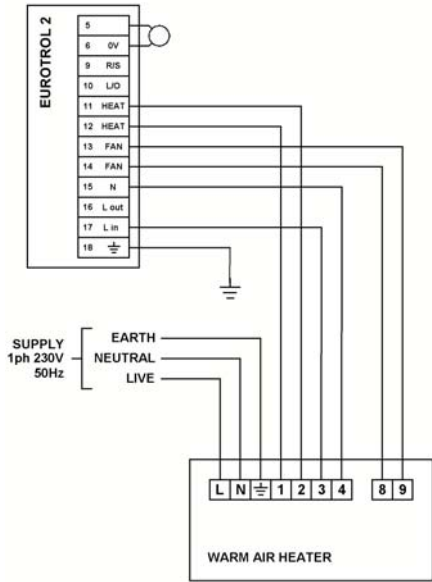
EUROTROL 2 CONTROLLING
1ph CABINET HEATERS
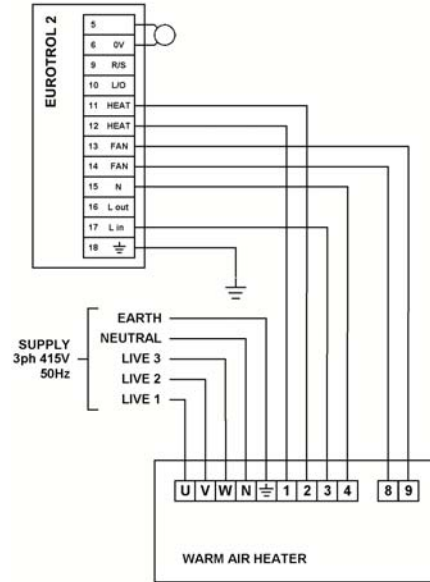
EUROTROL 2 CONTROLLING
3ph CABINET HEATERS

Specifications

General

Electricity supply	240V 50Hz Fused at 3A.
Internal Fuses	F1 20mm 6A 230V.
	F2 20mm 500mA 230V.
Day set point range	0 - 34°C.
Night set point range	0 - 34°C.
Temperature accuracy	0.5 °C.
Overall switching differential	Adjustable 0.5 - 3.0°C.
Sensing Element	Internal or remotely mounted up to 100m from control.
Switching contacts ratings	12A. 240V.ac. (resistive). All Volt Free
Heating ON Indicator	Red L.E.D.
Fault Indicator	Yellow L.E.D.
Protection Rating	IP20

Time Switch

Display	2 line 5mm L.C.D.
Programming Instructions	3 per day
Shortest switching time	1 minute
Battery backup	50 hrs. after 100 hrs. connected to mains.

Dimensions
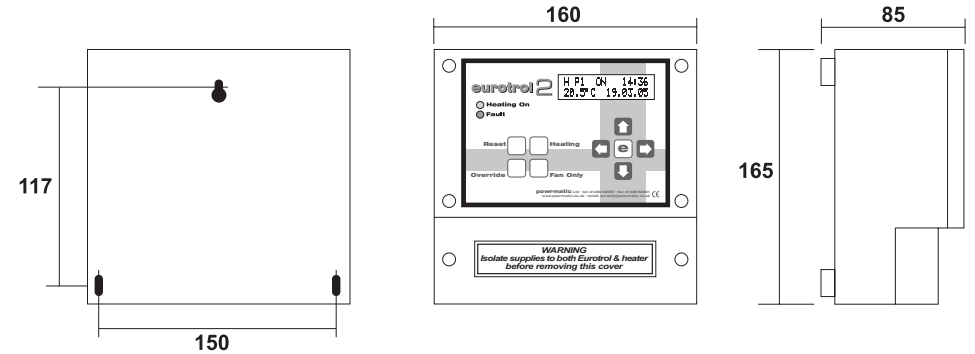
Installation

IMPORTANT
The Eurotrol 2 or sensor MUST NOT be sited in areas of high electromagnetic fields, i.e. distribution boards, transformers or heavy duty supply cables.

Eurotrol 2
Siting of the Eurotrol 2 is important in that it must be fitted where the temperature will be generally representative of the area to be heated. It should be installed 1.7m above floor level and away from draughty areas or areas subjected to direct heat from sunlight, radiators etc. (Unless a remote sensor is being used)

Remote sensor (optional)
The siting of the Eurotrol 2 should be no greater than 100m from the sensor and should be in a position easily accessible for programming and control. Siting of the sensor is important in that it must be fitted where the temperature will be generally representative of the area to be heated. It should be installed 1.7m above floor level and away from draughty areas or areas subjected to direct heat from sunlight, radiators etc.

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.

Remote sensor (optional)
Remove cover and offer the sensor up to the intended mounting position and mark two fixing holes. Fix sensor base plate to the wall.
See connection diagrams on page 16

Eurotrol 2
Remove the two screws from the terminal cover and remove. Offer the unit up to the intended mounting position and mark the location of the three fixing holes using the template on the packaging box Secure the top fixing leaving approximately 5mm protruding, hang the Eurotrol 2 on the top fixing screw, line up the bottom fixing holes and secure using two screws.

Electrical Connections

IMPORTANT
Wiring external to the Eurotrol 2 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 of the unit. See external wiring diagram 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 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 2 a relay box **MUST BE USED**.

WARNING - SENSOR WIRING
Sensor cable must be screened two core and a minimum of 0.6mm² if solid and 7 x 0.2mm² if multistrand. The screen must be grounded only at the Eurotrol 2. Wiring for the temperature sensor **MUST BE RUN SEPARATELY** and apart from ALL other wiring. Failure to regard this instruction may cause the Eurotrol 2 to malfunction and may render it faulty.

Display	Description
No OF SENSORS ↕ ← 1 →	Set number of sensors
EXTENSION TIME ↕ ← 1hour →↓	Set length of extension time
QUICK MODE ↕ ← ON →	Set quick mode ON or OFF
BUTTON ACCESS ↕ ←ALL ACTIVE→↓	Set user access to front buttons
CONSTANT FAN ↕ ← OFF →	Set constant fan ON or OFF
OPTIMUM STOP ↕ ← 0°C →	Set optimum stop temperature
HI/LOW DIFF ↕ ← 3°C →	Set Hi/Low differential*
RUN LOG ↕ → HOURS: 00000:00 COST £0.00	View run log
POWER & COST ↕ → POWER: 0000kW COST: 0.000P/kWh	Set power & cost parameters
SERVICE DATE ↕ → SERVICE 01.06.03 ON 01460_256404	Set service date parameters
NEW PASSWORD ↕ → NEW PASSWORD: 0000	Set new 'extended menu' password
ENGINEER MENU ↑ → ENTER PASSWORD 0000	Restricted access

*When applicable

Menu Layout

```
H P1  ON   14:36
20.5°C   19.03.05
```
Main display

```
ENTER PASSWORD
           0000
```
Default password set to 0000

[e]

```
    RUN MODE
ON ← → OFF ↓
```
◄ ►
Switches Eurotrol ON or OFF

↓ ↑

```
TEMPERATURE  ↑
← 20°C →  ↓
```
◄ ►
Adjusts day temperature

↓ ↑

```
FROST TEMP  ↑
← 02°C →  ↓
```
◄ ►
Adjusts frost temperature

↓ ↑

```
PROGRAM  ↑
 TIMES  ↓
```
[e]
```
MO   P1
 08:00 → 17:00
```
[e]
Set program times

↓ ↑

```
HOLIDAY  ↑
 DATES  ↓
```
[e]
```
HOLIDAY DATES:
 01.01 → 01.01
```
[e]
Set holiday dates

↓ ↑

```
   SET   ↑
 CLOCK  ↓
```
[e]
```
SET CLOCK: 12:34
   WE  19.03.05
```
[e]
Set current time and date

↓ ↑

```
   NEW   ↑
PASSWORD  ↓
```
[e]
```
NEW PASSWORD:
           0000
```
[e]
Set new 'main menu' password

↓ ↑

```
EXTENDED  ↑
 MENU
```
[e]
```
ENTER PASSWORD
           0000
```
[e]
Default password set to 0000

↓ ↑

```
 OPERATION
← BASIC → ↓
```
◄ ►
Set Basic or Advanced

↓ ↑

```
DIFFERENTIAL ↑
← 1.0°C →  ↓
```
◄ ►
Set temperature differential

↓ ↑

```
NIGHT TEMP  ↑
← OFF →  ↓
```
◄ ►
Adjusts night temperature

↓ ↑

User keypad (4 Buttons)

Heating

Fan Only
A short press of either button will place the control into that respective mode until midnight of that day. (Indicated by a flashing H for heating or F for fan only,in the display)

Pressing either button for 5 secs. will permanently place the control into that respective mode. (Indicated by a 'steady' H for heating or F for fan only, in the display)

Reset
Resets the burner from lockout, (when this facility is available), and resets the run log to zero when used in the main menu.

Override
Pressing once will activate the 'soft override' (will change the programs On or Off state until the next program step). Holding down for 5 secs will initiate or cancel the extension time. . Used as the 'escape key' in the programming menus.

Programming keypad (5 Buttons)

[e]
Use this button to enter data and move from a main screen to a sub-menu.
Holding down for 5 secs. will display the run log.

```
TEMPERATURE  ↑
← 20°C →  ↓
```
↑ ↓ Use these two buttons to move up and down between screens.

Use these two buttons to increase/decrease the value.

```
SET CLOCK: 12:34
   WE  19.03.05
```
↑ ↓ Use these two buttons to increase/decrease the selected value

◄ ► Use these two buttons to move along the screen.
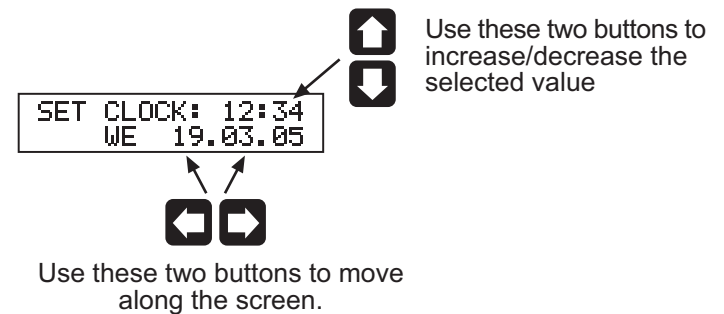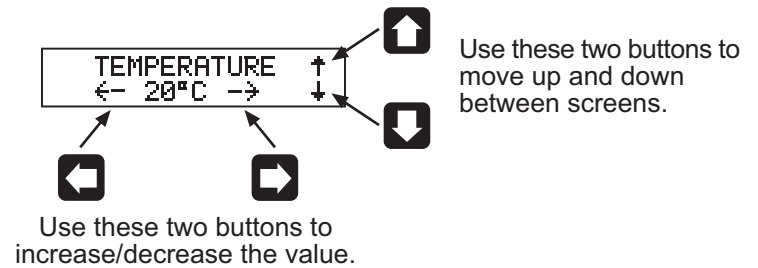
Overview

The eurotrol 2 comes preprogrammed with a typical heating program.
After installation the minimum setup required will be to program the current time and date.

Power up

████████████████

On initial power up a blank display followed by a partial display will appear for up to 15 seconds before the full display.

Programming the date and time if not correctly displayed

Note: GMT and BST will automatically be set and will change automatically twice each year.

```
H P1  ON   14:36
20.5ºC  19.03.05
```
From the main screen press **e** to enter the password screen

```
ENTER PASSWORD
          0000
```
From the password screen press **e** to enter the main menu
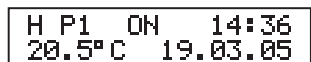
Note: the factory set password is 0000
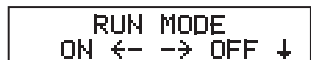
```
   RUN MODE
ON ←- -→ OFF ↓
```
From the main menu screen press ⬇ 5 times to enter the set clock screen

```
   SET        ↑
   CLOCK      ↓
```
From the set clock screen press **e** to enter the setting screen

```
SET CLOCK: 00:00
     WE  01.01.03
```
Press ⬆ or ⬇ to adjust the hour

```
SET CLOCK: 00:00
     WE  01.01.03
```
Press ➡ to move to minutes

```
SET CLOCK: 00:00
     WE  01.01.03
```
Press ⬆ or ⬇ to adjust the minutes

Set date . month . year in a similar way. Note: day will be automatically set

```
SET CLOCK: 00:00
     WE  01.01.03
```
Press **e** to enter the data and return to the set clock screen

```
   SET        ↑
   CLOCK      ↓
```
Press ⬆ or ⬇ to move to another screen

Alternatively press Override ▢ or wait 30secs to return to main screen

Constant Run Fan

```
CONSTANT FAN   ↑
←-   OFF -→    ↓
```
Heater fan runs constantly during program times in heating mode.

Optimum Stop

```
OPTIMUM STOP   ↑
←- 0ºC -→      ↓
```
Sets the temperature differential for optimum stop to begin.

Optimum stop:
  Set temperature differential (preprogrammed to 0ºC).
  Optimum stop will switch off the heating to save energy before the end of the program time.

Example: If the heating program calls for the building to be heated to 20ºC, but it is felt that at the end of the heating program this temperature could drop to 18ºC with no detrimental effect, then the optimum stop should be set to 2ºC (20ºC - 18ºC). This 2ºC will be applied to any of the programs in use.

Note: A setting of 0ºC effectively turns optimum stop off.

High / Low Differential
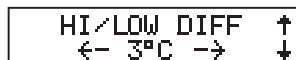
```
HI/LOW DIFF    ↑
←- 3ºC -→      ↓
```
Sets the temperature differential for hi / low operation.
Note: Hi / low only available with add on module.

Run Log
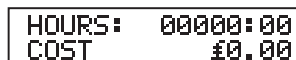
```
HOURS:   00000:00
COST        £0.00
```
Displays burner hours run and approximate running cost.

Note: Run log may also be displayed from the main display py pressing and holding e for 10 secs. (Password not required)

Power and Cost

```
POWER:     0000kW
COST: 0.000₽/kWh
```
Enters data to calculate approximate running cost.

Service Date
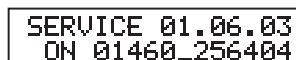
```
SERVICE 01.06.03
ON 01460_256404
```
Displays service reminder and contact phone No.

Engineer Menu

```
ENGINEER       ↑
MENU
```
Menu only available to Powrmatic service engineers.

Menu options

Run Mode

```
    RUN MODE
 ON ←- -→ OFF ↓
```
Turns the controller On or OFF.

Set Temperature

```
  TEMPERATURE    ↑
  ←- 20°C -→     ↓
```
Adjusts the set point temperature.

Frost Temperature

```
  FROST TEMP     ↑
  ←- 02°C -→     ↓
```
Sets temperature that heater operates during fan only, heating off times and holiday periods. May be turned OFF

Holiday Dates

```
 HOLIDAY DATES:
  01.01 -→ 01.01
```
Suspends the program while the buiding is unoccupied. Enter first day of holiday and day of return.

New Password

```
 NEW PASSWORD:
           0000
```
Sets a new password.

Temperature Differential

```
  DIFFERENTIAL   ↑
  ←- 1.0°C -→    ↓
```
Sets the switching differential for all set points.

Night Temperature

```
  NIGHT TEMP     ↑
  ←-   OFF -→    ↓
```
Sets temperature that heater operates during program OFF times. May be turned OFF

No. of Sensors

```
 No OF SENSORS  ↑
    ←- 1 -→      ↓
```
Sets the number of sensors connected.

Extension Time

```
 EXTENSION TIME ↑
  ←-  1hour  -→ ↓
```
Extends the current program when Override ☐ is pressed for 5 secs.

Button Access

```
 BUTTON ACCESS  ↑
 ←-ALL ACTIVE-→ ↓
```
Sets the level of user button access.

Basic & advanced operating modes

The eurotrol 2 is supplied in the BASIC operating mode:
This allows easy adjustment of the temperature set point after entering the first level password and allows entering 3 switching programs per day

By selecting the ADVANCED operating mode, easy temperature set point adjustment is limited to +/- 3°C (in the temp offset screen) without the use of a password.

The ADVANCED mode programs allow up to 3 switching programs per day each with a different temperature set point if required.

Selecting operating mode

```
 H P1  ON   14:36
 20.5°C  19.03.05
```
From the main screen press **e** to enter the password screen

```
 ENTER PASSWORD
            0000
```
From the password screen press **e** to enter the main menu

Note: the factory set password is 0000

```
    RUN MODE
 ON ←- -→ OFF ↓
```
From the main menu screen press **↓** 7 times to enter the extended menu screen

```
   EXTENDED     ↑
     MENU
```
From the extended menu screen press **e** to enter the password screen

```
 ENTER PASSWORD
            0000
```
From the password screen press **e** to enter the extended menu

Note: the factory set password is 0000

```
   OPERATION
  ←-  BASIC  -→ ↓
```
Press **◄** or **►** to select basic or advanced

```
   OPERATION
  ←-  BASIC  -→ ↓
```
Press **▲** or **▼** to move to another screen

Alternatively press e to enter selection

Heating / Fan Only modes

☐ Heating
A short press of either button will place the control into that respective mode for the remainder of the day. (Indicated by a flashing H for heating or F for fan only,in the display)

☐ Fan Only
Pressing either button for 5 secs. will permanently place the control into that respective mode. (Indicated by a 'steady' H for heating or F for fan only, in the display)

Entering the switching program (BASIC OPERATION)

Individual days may be programmed with up to 3 entries (P1-P3) and a Monday to Friday block may also be set with a further 3 entries.

Note: A basic program of Monday to Friday on at 08:00 (8am) and off at 17:00 (5pm) and a set point temperature of 20ºC is preprogrammed into the eurotrol 2.

```
H P1  ON   14:36
20.5ºC  19.03.05
```
From the main screen press **e** to enter the password screen

```
ENTER PASSWORD
          0000
```
From the password screen press **e** to enter the main menu

Note: the factory set password is 0000

```
   RUN MODE
ON ←- -→ OFF ↓
```
From the main menu screen press **↓** 3 times to enter the program screen

```
   PROGRAM      ↑
   TIMES        ↓
```
From the program screen press **e** to enter the setting screen

```
MO     P1
  08:00 -→ 17:00
```
Press **↑** or **↓** to alter the day (individual days are selectable together with MO-FR as one entry)

```
MO     P1
  08:00 -→ 17:00
```
Press **→** to move to program number

```
MO     P1
  08:00 -→ 17:00
```
Press **↑** or **↓** to select the program number (3 programs P1-P3 are available for each day)

```
MO     P1
  08:00 -→ 17:00
```
Press **→** to move to 'ON hour'

```
MO     P1
  08:00 -→ 17:00
```
Press **↑** or **↓** to change the 'ON hour'

```
MO     P1
  08:00 -→ 17:00
```
Press **→** to move to 'ON minutes'

Set ON minutes and OFF time in a similar way

```
MO     P1
  08:00 -→ 17:00
```
Press **→** to select the day again. Work through subsequent days and program no's. as required

```
MO     P1
  08:00 -→ 17:00
```
Press **e** to enter the program

```
   PROGRAM      ↑
   TIMES        ↓
```
Press **↑** or **↓** to move to another screen

Alternatively press Override **or wait 30secs to return to main screen**

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Important: As the Eurotrol 2 is an optimum start controller the program start time should be when occupancy begins and no pre-heat time should be allowed for.

Entering the switching program (ADVANCED OPERATION)

The ADVANCED programming is similar to BASIC operation with the addition of:

```
MO     P1 20ºC  √
  08:00 -→ 17:00
```
selects the temperature for the program entry

```
MO     P1 20ºC  √
  08:00 -→ 17:00
```
select X to temporarily disable the program entry

Sample program

The screens pictured below show the settings required in the ADVANCED operation for the following program:
Monday to Friday on between 8am and 1pm controlled at 20ºC
Monday to Friday on between 2pm and 5pm controlled at 20ºC
Saturday on between 8.30am and 12pm controlled at 18ºC

```
MO-FR P1 20ºC  √
  08:00 -→ 13:00
```
1. Set MO-FR Program 1: Temp 20ºC: On 08:00 Off 13:00
   Sets these times for Monday through to Friday

```
MO-FR P2 20ºC  √
  14:00 -→ 17:00
```
2. Set MO-FR Program 2: Temp 20ºC: On 14:00 Off 17:00
   Sets these times for Monday through to Friday

```
SA     P1 18ºC  √
  08:30 -→ 12:00
```
3. Set SA Program 1: Temp 18ºC: On 08:30 Off 12.30
   Sets these times and temperature for Saturday

Quick mode / temp offset (ADVANCED OPERATION)

Temp offset allows the adjustment of the set point temperature to be carried out without entering a password, allowing a limited day to day adjustment of +/- 3°C.

ie. If the temperature has been set to 20°C in the program and the temp offset is set to +2°C then the set point will have been adjusted to 22°C (20+2=22)

```
H P1  ON   14:36
20.5ºC  19.03.05
```
in the extended menu select quick mode ON

```
H P1  ON   14:36
20.5ºC  19.03.05
```
during normal operation press **←** or **→** to enter the temp offset screen

```
   TEMP OFFSET   ↑
   ←-  0ºC  -→   ↓
```
Press **←** or **→** to adjust the temperature by +/- 3°C

Press **e** to enter selection

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