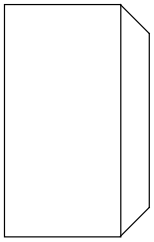
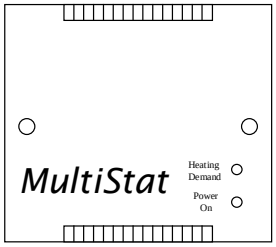
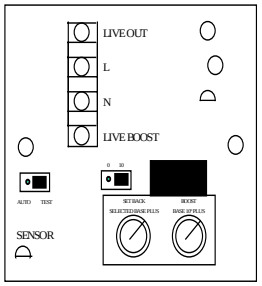
Electronic Temperature Controller ETC/MULTI

Product data







Catalogue Number:	ETC/MULTI
Voltage Supply:	220-240VAC 50Hz
Maximum Load:	16A Resistive Load
Output Operation:	Via mains dedicated N/O contact
Dimensions:	87 x 87 x 53mm
Fixing method:	Surface – 32mm PVC Moulded box
Temperature Control Adjustment:	Frost Protection Only 0° C - 15° C Single Set point 11° C at Base 25° C Setback or Frost Protection 0° C - 15° C Boost 11° C - 25° C
Sensor Type:	Thermistor – Integral internal sensor supplied
Control:	ECK1 Time switch – For programmed time control TIM/MULTI – For set time control or boost control IRS Movement sensor for presence control (Other products may be used for initial control, please contact Chalmor for further details)
Operational indicators:	Red LED – Heating Demand indicates heating on Green LED – Power On indicates power supply Green LED – Flashing indicates a boost period
Conformance:	EMC – 89/336/EEC LVD – 73/23/EEC

CE

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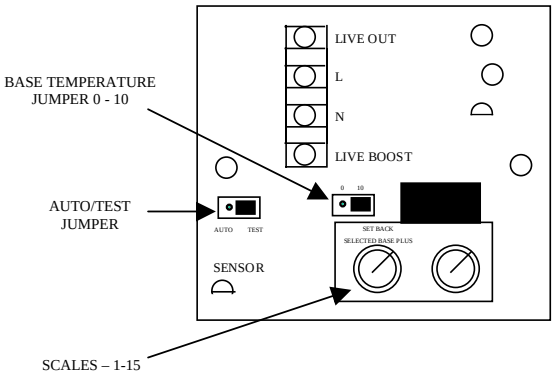
SAVING ENERGY, MANAGING RESOURCES

Settings & Commissioning Information

The diagram shows the layout of the ETC/MULTI temperature adjustment dials and jumpers.
The ETC/MULTI should **not** be adjusted or commissioned whilst still energised.



Frost Protection ONLY

1. Set the jumper labelled AUTO/TEST to the TEST position.
2. Set the jumper marked 'BASE TEMP' to the 0° C For a frost protection value of between 0° C and 15° C.
3. Adjust the 'SETBACK / SELECTED BASE PLUS' dial to the required temperature.
   Base setting 0 ° C + a value from the dial, say 5 will maintain a frost level of 5 ° C.
4. When power is applied the green LED will illuminate to indicate a healthy power supply.
5. If the unit is energised the 'HEATING DEMAND' indicator lamp illuminates then this indicates that the room temperature is lower than the setting. If the 'HEATING DEMAND' indicator lamp has not illuminated then this indicates that the room is at a temperature higher than the setting.
6. To test the operation increase the 'SETBACK / SELECTED BASE PLUS' dial until the red LED illuminates. It should be noted that if the room temperature is above 15° C then the unit will not operate. It is recommended that a frost type spray is used to call the thermistor to check operation. Once commissioning is complete adjust the jumper marked 'AUTO TEST' to the 'AUTO' position and where required reset the required temperature.

Single Set point ONLY

1. Set the jumper labelled AUTO/TEST to the TEST position.
2. Set the jumper marked 'BASE TEMP' to the 10° C for a single set point value of between 10° C and 25° C.
3. Adjust the 'SETBACK / SELECTED BASE PLUS' dial to the required temperature.
   Base setting 10 ° C + a value from the dial, say 9 will maintain a set point of 19 ° C.
4. When power is applied the green LED will illuminate to indicate a healthy power supply.
5. If the unit is energised the 'HEATING DEMAND' indicator lamp illuminates then this indicates that the room temperature is lower than the setting. If the 'HEATING DEMAND' indicator lamp has not illuminated then this indicates that the room is at a temperature higher than the setting.
6. To test the operation increase the 'SETBACK / SELECTED BASE PLUS' dial until the red LED illuminates. It should be noted that if the room temperature is above 25° C then the unit will not operate. It is recommended that a frost type spray is used to cool the thermistor to check operation. Once commissioning is complete adjust the jumper marked 'AUTO TEST' to the 'AUTO' position and where required reset the required temperature.

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Frost Protection with Boost Operation or Setback with Boost Operation

1. Set the jumper labelled AUTO/TEST to the TEST position.
2. Set the jumper marked 'BASE TEMP' to the 0° C for a frost protection value of between 0° C and 15° C.
3. Adjust the 'SETBACK / SELECTED BASE PLUS' dial to the required temperature.
4. *Base setting 0 °C + a value from the dial, say 5 will maintain a frost level of 5 °C.*
5. Adjust the 'BOOST' dial to the required upper or boost temperature.
   Boost preset to 10 °C + a value from the dial, say 9 will maintain a boost level of 19 °C.
6. When power is applied the green LED will illuminate to indicate a healthy power supply.
7. When the boost facility is activated either via a time switch or timer the green LED will flash to indicate boost operation.
8. If when the unit is energised the 'HEATING DEMAND' indicator lamp illuminates then this indicates that the room temperature is lower than the applied setting. If the 'HEATING DEMAND' indicator lamp has not illuminated then this indicates that the room is at a temperature higher than the applied setting.
9. To test the operation increase the 'SETBACK / SELECTED BASE PLUS' dial or the 'BOOST' dial until the red LED illuminates. It should be noted that if the room temperature is above 25° C and the boost facility is activated then the unit will not operate. It is recommended that a frost type spray be used to cool the thermistor to check operation. Once commissioning is complete adjust the jumper marked 'AUTO TEST' to the 'AUTO' position and where required reset the required temperatures.

Installation Instructions

1. Fix the ETC/MULTI mounting box on to a secure surface. The ETC/MULTI must be mounted within the area being monitored. The ETC/MULTI should be mounted at 1.5m above the FFL and in a position where its operation will not be affected by a local heat source (lighting, heating appliance, etc.) or by limited air movement.
2. Carry out any adjustments to the heating circuits to allow for the correct operation of the system. Adjust the circuit wiring to allow for the following connection:

   Frost Protection or Single Set-point ONLY

   a) Terminals 'L' and 'N' – Connect a 240V 24-hour supply.
   b) Terminal 'LIVE OUT' – Connect the heater phase conductor or contactor coil phase conductor.
   c) Terminal 'LIVE BOOST' – NO Connection.
   d) Any CPC or earthing conductor should be connected ONLY to the mounting box.

   Frost Protection With Boost or Setback With Boost

   a) Terminals 'L' and 'N' – Connect a 240V 24-hour supply.
   b) Terminal 'LIVE OUT' – Connect the heater phase conductor or contactor coil phase conductor.
   c) Terminal 'LIVE BOOST' – Connect to the boost device (Time Switch/Timer Switch).
   d) Any CPC or earthing conductor should be connected ONLY to the mounting box.

   It is essential that all supplies to this unit are connected via the same electrical phase.

3. All connections, cables and circuit protection must satisfy the requirements of BS7671:2001 (2004).

Chalmor Ltd. recommend that a competent person installs the ETC/MULTI system only.

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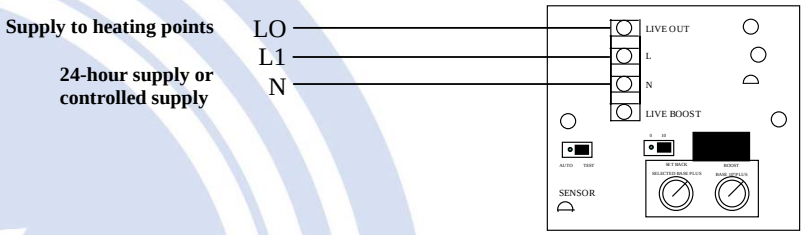
Wiring Diagram

ETC/MULTI
Frost Protection / Single Setpoint
Wiring Diagram

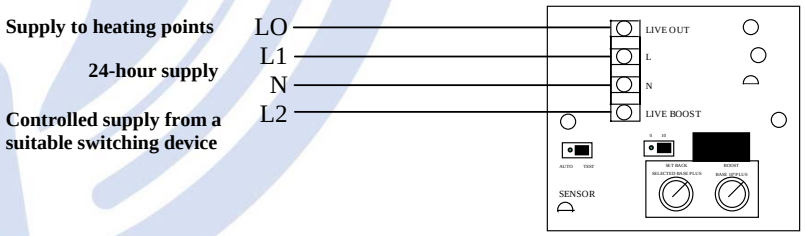


ETC/MULTI

NOTES

2. The control supply should be via a suitable control switch – Timeswitch etc.
3. See supplied data sheet for full installation details.

ETC/MULTI
Frost Protection / Single Setpoint
With Boost Facility Wiring Diagram



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NOTES

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ETC/MULTI

Troubleshooting Guide

The following instructions will require some tests to be completed using a suitable test meter. Chalmor recommend that only suitably qualified persons should complete the suggested tests.

Heating Fails To Operate

a) Check the green power LED is illuminated or illuminated and flashing. If it not illuminated then go to b). If it is illuminated go to c).
b) Check that there is a supply on the 'L' and 'N' terminals and that the supply and switch wires have been correctly connected. If there is no supply a check of the supply circuit and any time switches connected to the supply circuit should be completed and repaired/reset as necessary. If there is a supply to the controller then it is possible that the controller has a fault.
c) Check the red heating demand LED is illuminated and the green LED is flashing. If the red LED is not illuminated and the green LED is flashing, turn the boost temperature setting dial clockwise to 15. After 30 seconds, the heating demand light should illuminate and the heating should work. (It should be noted that the room temperature must be less than 25° C for this test to work). If the green LED is not flashing then check the supply to the terminal labelled 'LIVE BOOST'. If there is no supply to the terminal labelled 'LIVE BOOST' then the fault is with the boost supply. If there is a supply to the 'LIVE BOOST' terminal and the green LED is not flashing then it is possible that there is a fault with the controller.
d) If during the completion of any of the suggested tests the heating demand LED illuminates but the heating fails to come on go to e).
e) Whilst the heating demand LED is illuminated check there is a supply on the terminal labelled 'LIVE OUT'. If there is no supply and the heating demand LED is illuminated then it is possible that the controller is faulty. If there is a supply on the 'LIVE OUT' terminal then the fault is with the final circuit to the heating.
f) If the problem is that the heating works correctly during the boost period but fails to operate when the boost period has finished then it is possible that the setback temperature is not set correctly for the application. To adjust the setback temperature turn the setback dial to the desired temperature position and ensure that the jumper is correctly set to either '0' or '10'.

Heating On Continuously

a) Check the green power LED is flashing and the heating demand LED are illuminated. If they are not illuminated then go to b). If they are illuminated go to c). If only the power LED is illuminated and not flashing go to d).
b) Check that there is not a short circuit on the supply cables and that the cables are correctly connected. In the case of this type of fault, the problem will be a circuit problem and not a control problem.
c) Check temperature settings in relationship to the room temperature by turning the 'BOOST' temperature setting dial anti-clockwise , the heating demand LED and the heating system should go off. Check that the controller is not affected by cold air from a cavity, window or door. Finally ensure the controller is connected correctly.
d) Check there is a supply on the terminal labelled 'LIVE OUT'. If there is a supply and the heating demand LED is not illuminated then it is possible that the controller is faulty. If there is no supply on the 'LIVE OUT' terminal and the heating demand LED is off then the fault is on the heating circuit.

The Heat Keeps Continuously Switching On and Off

a) Check that the AUTO/TEST jumper is connected across the AUTO and centre pins.

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Essential Points To Check

a) Are the settings correct for both the setback and boost operation?
b) Are the two jumpers correctly set?
c) Has the controller been correctly connected?

Additional support is available by contacting the Chalmor Help Desk – 01582 748700

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