

ESCTDEB

# Electronic Dual Cylinder Thermostat

## Installation Instructions

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## Thank you for choosing ESi Controls.

All our products are tested in the UK so we are confident this product will reach you in perfect condition and give you many years of service. However, for additional peace of mind, we recommend you register your product online at **[www.esicontrols.co.uk/warranty](http://www.esicontrols.co.uk/warranty)** for your extended warranty.

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## Installation Instructions

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# Installation Instructions

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## Technical data

<b>Electronic Dual Thermostat</b>	
Power Supply	230 VAC 50-60Hz
Switch Action	SPDT (control), SPST (limit) 230 VAC 6(1)A
Temperature Setting Range	25°C to 65°C
Automated "Boost"	As per user setting (see page 9)
Limit Thermostat	80°C with concealed manual reset
Tolerance	<1°C
Switching Differential	2°C
Protection Rating	IP30
Dimensions	L: 110mm x H: 92mm x W: 48mm (excluding flanges)
Complies with	EMC (89/336 & 92/32 EEC) BS EN 60730-1: 2000, BS EN 60730-2-9: 2002. LVD (73/23/ EEC) (93/68/ EEC) BS EN 60730-1:2000, BS EN 60730-2-9:2002

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# Installation Safety Instructions

The unit must be installed by a suitably qualified person in accordance with the latest IEE Wiring Regulations.

**N.B.** *Isolate mains supply before commencing installation.  
Please read all instructions before proceeding.*

Ensure that the fixed wiring connections to the mains supply is via a fuse rated at not more than 6 amps and class 'A' switch having a contact separation of a minimum of 3mm in all poles. The recommended cable sizes are 1.0mm sq or 1.5mm sq. No earth connection is required as the product is double insulated but ensure continuity of earth throughout the system.

## General Safety Instructions

Only use this product for control of domestic hot water. Do not restrict safety valve outlets.

### **WARNING!**

*Take great care to avoid scalding if you do not have a thermostatic mixing valve fitted, during the weekly one hour disinfection "boost" the hot water temperature will be over 60°C.*

## Maintenance

Always isolate the mains supply before commencing any work, servicing or maintenance on the system. And please read all instructions before proceeding.

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Arrange for an annual maintenance and inspection schedule to be carried out by a competent person on every part of the heating and hot water system.

## Safety Notice

### **WARNING!**

*Always isolate the AC mains supply before installing, this product must be fitted by a qualified person, and installation must comply with the guidance provided in the current editions of BS767 (IEE wiring regulations) and part "P" of the building regulations.*

## Fitting the Cylinder Thermostat

1. Slacken the three fixing screws, and insert both sensors fully into the pocket.
2. Position the thermostat onto the pocket.
3. Tighten the three screws to secure the thermostat, take care not to over tighten.
4. Complete the wiring connections.

**N.B.** *As a safety feature, when first connected the Electronic Dual Cylinder Thermostat will call for heat until the hot water cylinder has reached 61°C and held that temperature for one hour. During this time there will be a live output to the DHW zone valve and therefore to the boiler and the pump.*

## Boiler Setting

To ensure the elimination of Legionella Bacteria in the Hot Water Cylinder, at least once a week the Cylinder should be heated to 61°C. This is carried out automatically by the ESCTDEB. **The Boiler Thermostat (output temperature) must therefore be set to maximum and homeowners**



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**should be made aware that once a week the hot water will be warmer following the automatic “weekly boost”.** We also therefore strongly recommend the use of a thermostatic mixing valve (TMV), these blend hot water with cold water to ensure constant safe shower and bath outlet temperatures, preventing scalding.

### **Adjusting and Resetting the Cylinder Thermostat**

Adjust the dial to show the desired hot water temperature on the display, between 25°C to 65°C. The lower the temperature, the less chance of scalding and the more energy saving. Most homeowners find a temperature between 48°C-53°C to be adequate. If the system should overheat, the cause must be determined and resolved by a suitably qualified person. In the event of an overheat, the thermostat cuts out automatically. The reset for the thermostat is under the adjustment dial.

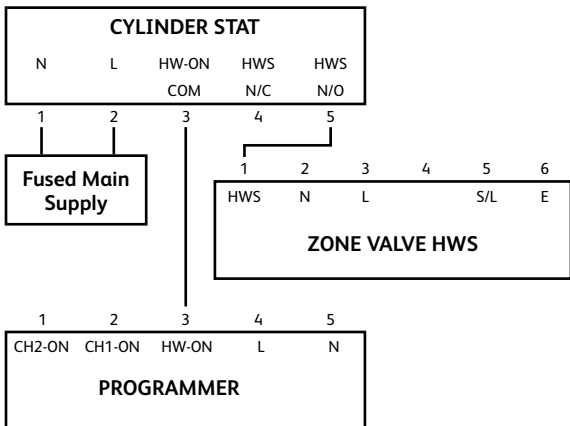
### **Adjusting the 1 Hour Boost**

The ESCTDEB has user defined settings where the duration of the Legionella Override can be adjusted from 1 to 7 days or completely disabled to operate as a conventional Dual Cylinder Thermostat.

1. To disable/adjust the legionella boost turn the unit off by pressing and holding down the **HOLIDAY** button until an audible click is heard and the red LED turns off.
2. Release the button and after approx. 10 seconds press and hold the **HOLIDAY** button again. After 5 seconds the red LED will light up and an audible click is heard, keep the **HOLIDAY** button pressed for a further 5 seconds until the LCD display flashes.
3. Release the button and use the **HOLIDAY** button to choose between disabling the override (OF) or setting the delay between the overrides from 1 – 7 days.

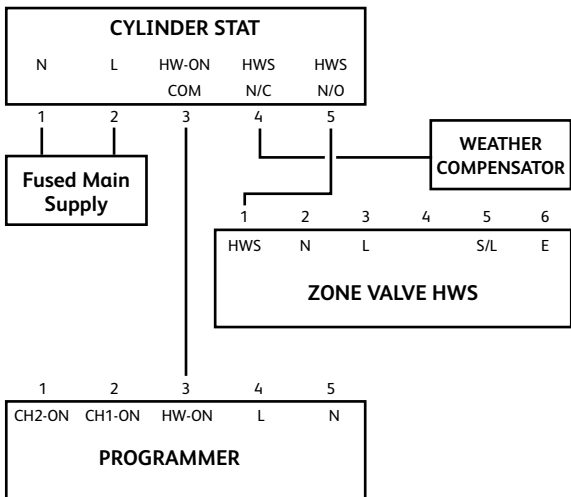
4. Once selected, release the button and the unit will return to the user set position within 5 seconds.
5. Press and hold the **HOLIDAY** button for a further 5 seconds to confirm your selection.

### Wiring Example: S Plan

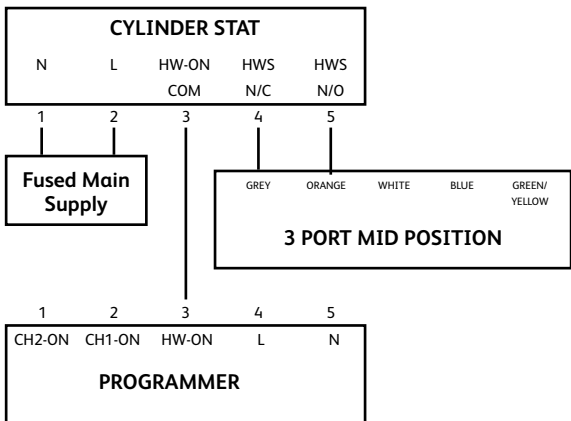


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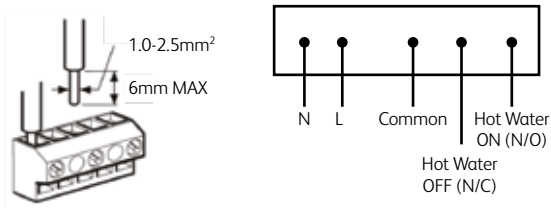
## Wiring Example: S Plan with Weather Compensator



## Wiring Example: Y Plan



## Wiring Diagram



This product requires a fused permanent Live and Neutral supply.

As shown in the wiring examples, the NC (normally closed) terminal is only used in Y Plan systems with a Mid Position 3 Port Zone Valve, or when the installation is using Weather Compensation.

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We are continuously developing our products to bring you the very latest in energy saving technology and simplicity. However, should you have any questions setting up your controls please email us at **[sales@esicontrols.co.uk](mailto:sales@esicontrols.co.uk)**.

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**WARNING: Interference with sealed parts renders the guarantee void.**

In the interests of continuous product improvement we reserve the right to alter designs, specifications and materials without prior notice and cannot accept liability for errors.



Energy Saving Innovative Controls Limited

[www.esicontrols.co.uk](http://www.esicontrols.co.uk)

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