ESCTDE

Electronic Dual Cylinder Thermostat*

User and Installation Instructions

*Patent pending

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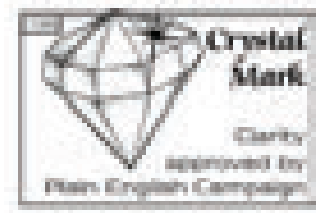
User Instructions

Installation Instructions

User Instructions

What is a Cylinder Thermostat?...An explanation for householders



A cylinder thermostat switches on and off the heat supply from the boiler to the hot-water cylinder. It works by sensing the temperature of the water inside the cylinder, switching on the water heating when the temperature falls below the thermostat setting, and switching it off once this set temperature has been reached.

Turning a cylinder thermostat to a higher setting will not make the water heat up any faster. How quickly the water heats up depends on the design of the heating system, for example, the size of the boiler and the heat exchanger inside the cylinder.

The water heating will not work if a time switch or programmer has switched it off. And the cylinder thermostat will not always switch the boiler off, because the boiler sometimes needs to heat the radiators.

Cylinder thermostats are usually fitted between one quarter and one third of the way up the cylinder. The cylinder thermostat will have a temperature scale marked on it, and it can be adjusted to the chosen temperature, then left to do its job. The thermostat must be designed to kill off harmful bacteria in the water. Raising the temperature of the stored hot water unnecessarily results in wasted energy and increases the risk of scalding.

Dual cylinder thermostats combine both the controller and the limit thermostats into one common unit.

If you have a boiler control thermostat, it should always be set to a higher temperature than that of the cylinder thermostat. In most boilers, a single boiler thermostat controls the temperature of water sent to both the cylinder and radiators, although in some there are two separate boiler thermostats.

Introduction to the ESCTDE (Electronic Dual Cylinder Thermostat)

The ESi Controls Electronic Dual Cylinder Thermostat* is a revolutionary new energy saving product, developed exclusively by ESi Controls. It is a direct** and economical replacement for traditional mechanical dual cylinder thermostats. With real safety and energy saving benefits and providing accurate temperature control, it also features a clear and informative LCD display.

The hot water can be stored at any desired temperature between 25°C and 65°C, with the confidence that the weekly automatic one hour “boost” to above 60°C kills any legionella bacteria, resulting in substantial energy saving.

The LCD display shows the current water temperature and the user defined water temperature, while the red LED indicates that the unit is calling for heat. The

sensitive electronic sensors operate at a far greater accuracy than conventional oil filled mechanical dual thermostats, and do not need physical contact unlike traditional dual thermostats.

The large dial makes it easy to set the required controller temperature (between 25°C and 65°C). While the second (limit) safety thermostat is pre-set to 80°C with a concealed manual reset, to comply with building regulations.

*Patent Pending ** Refer to installation and wiring instructions.

Holiday Switch

This is the black button located under the display (Fig.1, page 4). Press and hold the holiday switch for a minimum of 10 seconds until you hear an audible click, and this switches the ESCTDE off completely so there is no water heating and no weekly “boost” heating. When in Holiday mode, the display is off. This feature should only be used when the property is vacant for extended periods and there is no requirement for water heating or for the weekly “boost”. Pressing and holding the holiday switch again (for a minimum of 10 seconds until you hear an audible click) will restart the ESCTDE, the display will show the cylinder temperature and the weekly “boost” will immediately start, and recur every 7 days at the same time.

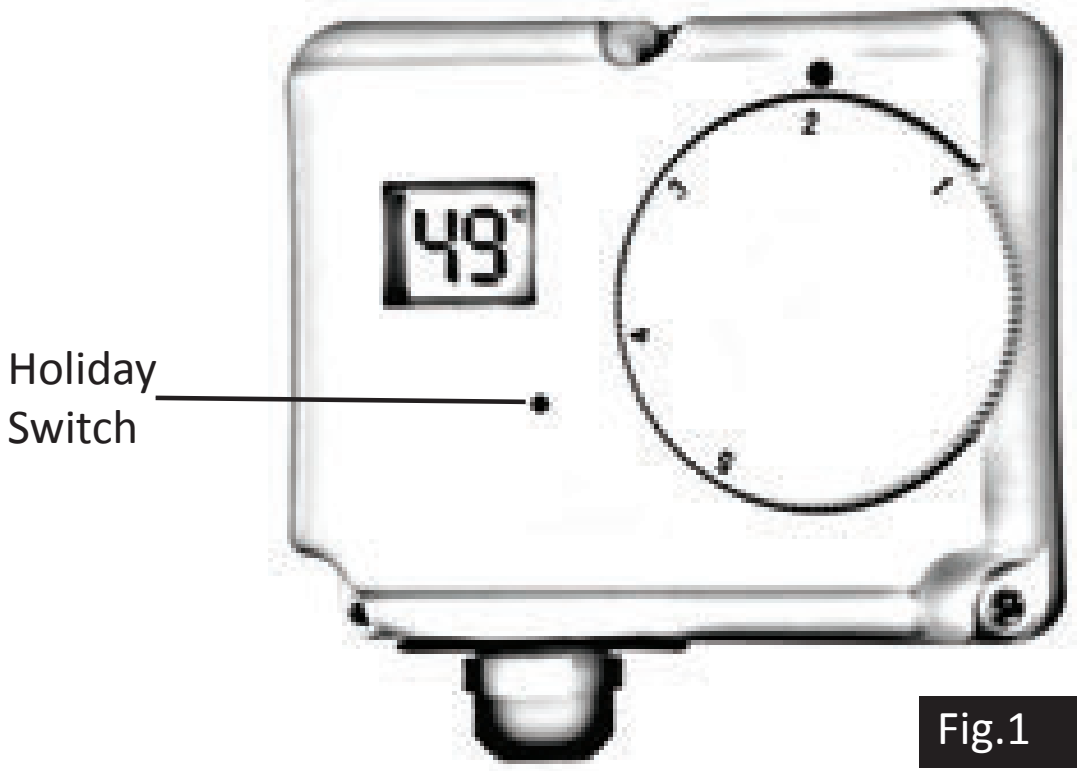


Fig.1

Installation Instructions

Technical Data

Electronic Dual Thermostat	
Power Supply	230 VAC 50-60Hz
Switch Action	SPDT (control), SPST (limit)
Temperature Setting Range	25°C to 65°C
Automated “Boost”	Once per week, >60°C for one hour
Limit Thermostat	80°C with concealed manual reset
Tolerance	<1°C
Switching Differential	2°C
Dimensions	L: 108mm x H: 90mm x D: 54mm
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

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 sqr or 1.5mm sqr. 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.

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^{o}C.

Maintenance

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

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 COMPETENT 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.

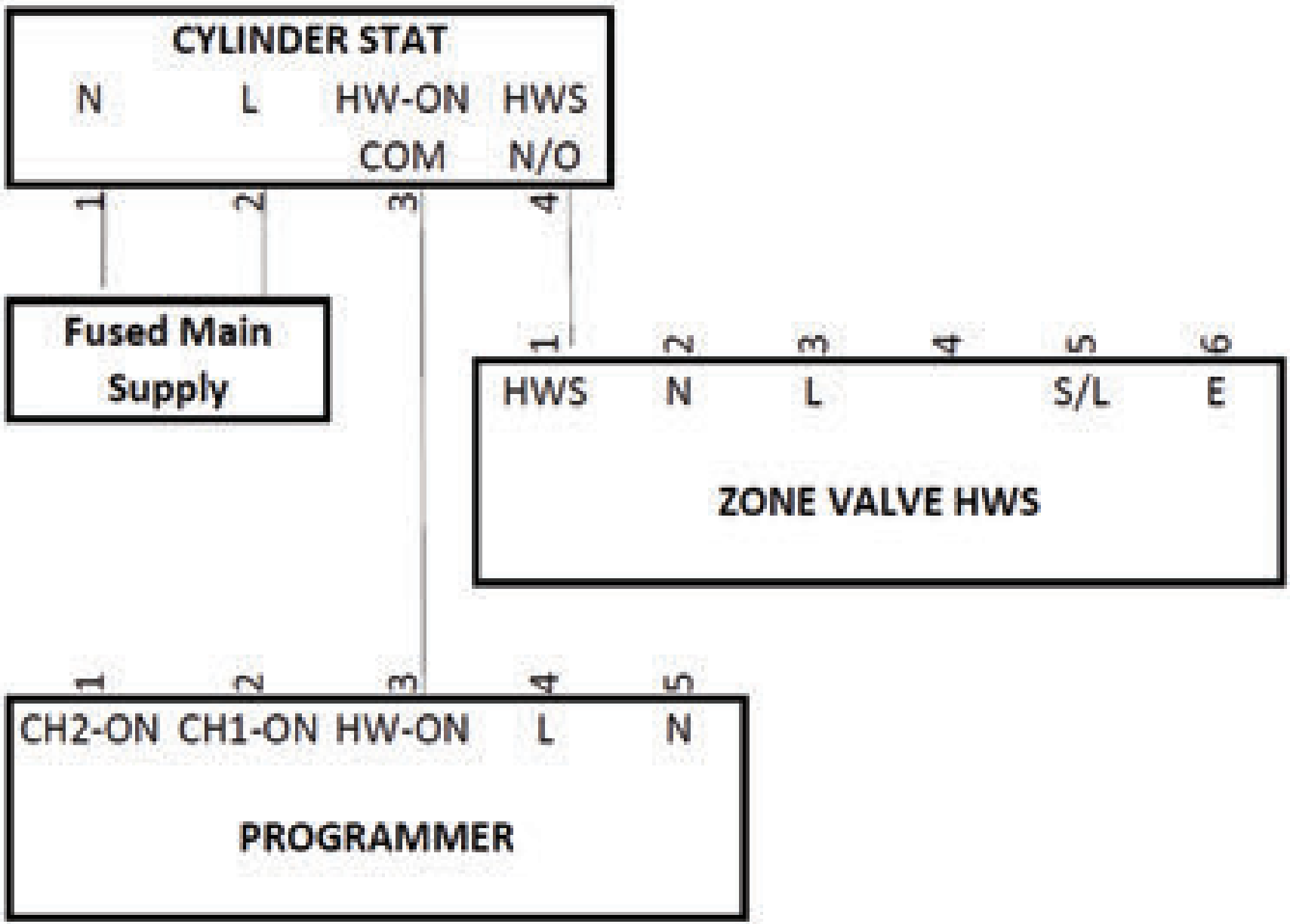
4. Complete the wiring connections.

Adjusting and Resetting the Cylinder Thermostat

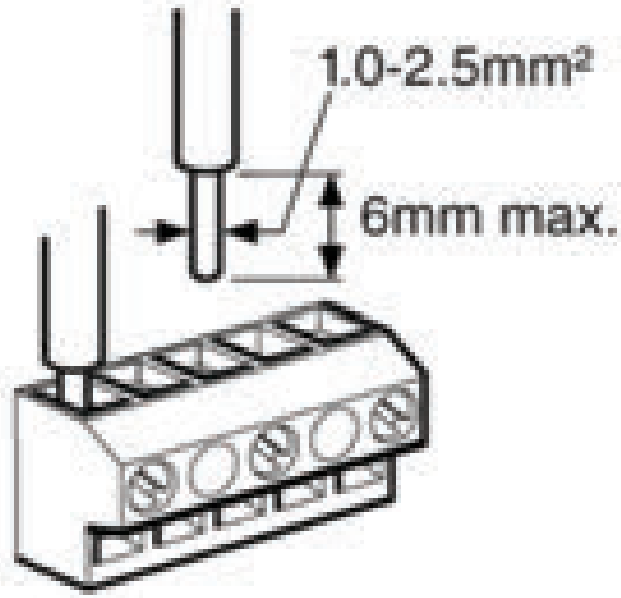
Adjust the dial to show the desired hot water temperature on the display, between 25°C to 65°C. Remember, the lower the temperature, the less chance of scalding, and the more energy saving. Most home owners find a temperature of around 48°C - 53°C to be adequate.

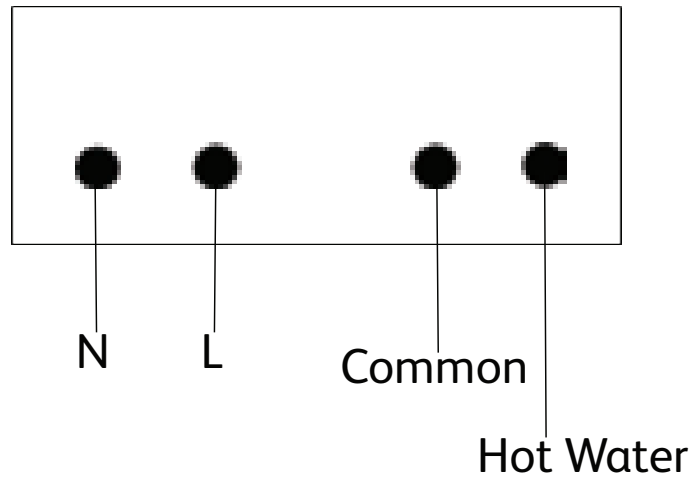
If the system should overheat, the cause must be determined and resolved by a suitably qualified person. In the event of an overheat, the thermostat cuts out automatically. The reset for the thermostat is under the adjustment dial.

Wiring Example



Wiring Diagram





This product requires a fused permanent Live and Neutral supply.

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