

C742 DIGITAL INDICATING SOAK/CUT OFF CONTROLLER

FUNCTIONS:

- (1) Constant digital read out of temperature.
- (2) Automatic cut off at top temperature.
- (3) Manual soak facility at top temperature i.e. when in soak mode the instrument and kiln must be switched off by the user.

Controlled heating up is achieved with the energy regulator.

USE:

- (1) Ensure controller is in cut off mode i.e. black button marked 'Soak/Cut Off' is out.
- (2) Ensure kiln and controller are connected and mains switched on. You will see a red mains light on kiln and a temperature display on the controller – this number should approximate to ambient (room) temperature if the kiln is cool.
- (3) You must now set the temperature you wish to fire to by using the 'set' button and screw driver supplied. Hold the 'set' button in and adjust the small inset screw above it until the desired temperature appears in the display. Release the 'set' button and the display will revert to ambient temperature. Once the top temperature is set you can depress the 'set' button at any time to check your top temperature is correct or adjust it.
- (4) You must now decide whether you want the kiln to switch off when top temperature is reached or to go into manual soak at top temperature.
- (5) Push the button marked 'Soak/Cut Off' in. This energises the contactor and starts the firing. The red light on the controller comes on.
- (6) For manual soak do nothing more.
- (7) For automatic cut off at top temperature push the 'Soak/Cut Off' button again so that it springs out. The controller is now in cut off mode and will switch the kiln off when pre-set temperature is reached.

NOTE:

If you leave the button pressed in at the beginning of the firing, the kiln will stay in soak mode until you turn it off. Serious over-fires can result if cut off is wanted but the user forgets to release the button.

Always check you are in the right mode before leaving kiln.

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Installation

The Control Cabinet should be mounted on a wall adjacent to the kiln, in such a position as to allow the control plug and lead to reach the socket on the kiln without the lead causing an obstruction or being stretched. The cabinet must not be positioned where it may be subjected to the direct heat of an open kiln door, lid, vent, or damper, and it must never be mounted above the kiln.

Wiring

The controller will normally be supplied with a special plug and lead to plug directly into a matching socket on the kiln avoiding complicated installation wiring on site. Simply connect the kiln to an appropriate mains supply, and plug in the controller, and the kiln is ready for use. Where the controller is not supplied with a plug and lead, a terminal block will be fitted inside, and a matching terminal block will be fitted to the kiln numbered as shown in the diagram below. Wire as shown using 1.0mm² cable or similar, except for the thermocouple circuit which must be wired using the compensating cable provided.



Operation

1. Ensure that the SOAK/CUT OFF SWITCH is in the 'cut Off' position, and switch on the power supply to the kiln, including the door interlocking system in use.
2. Set the ENERGY REGULATOR on the kiln to give the required initial rate of rise in temperature.
3. Set the controller SET POINT to the temperature to which the kiln is required to fire.
4. Set the SOAK/CUT OFF SWITCH to the 'Soak' position. The contactor on the kiln will be heard to engage. If the kiln is required to shut off as soon as temperature is reached, reset the switch to 'Cut Off'; if a soak is required at the end of the firing, leave the switch in the 'Soak' position.
5. The kiln will rise in temperature at a rate determined by the use of the energy regulator as instructed elsewhere until the kiln reaches the temperature set in 3. . For a 'Cut Off' firing, the kiln will automatically shut off and begin to cool. For a 'Soak' firing, the kiln power will be continually switched on and off to hold the temperature at that set, until the power is manually switched off, or the 'Soak/Cut Off' switch set to 'Cut Off'.
6. The temperature is continually displayed when the kiln is rising in temperature or soaking, but the display is switched off during cooling. If it is desired to read the temperature during cooling, switch the energy regulator to 'Off', and with the mains supply switched on, set the 'Soak/Cut Off' switch to 'Soak'. Switch off the mains supply after firing.