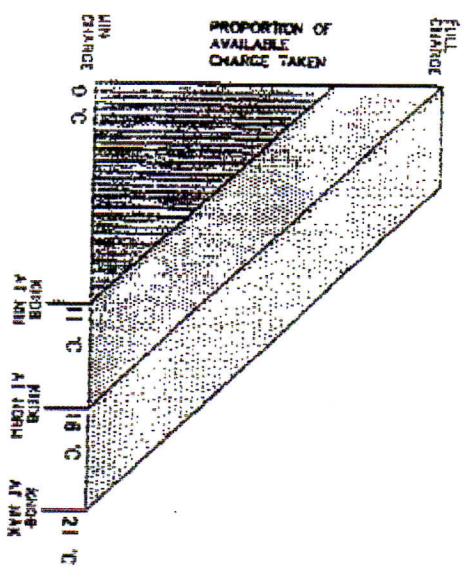


**E270 Storage Heating Controller (The E270)**

(1) **DESCRIPTION:** The E270 is a weather compensating charge controller for electric storage heating systems. It is a "backward acting" control. If less than 100% of the available charging period is required, switch on is delayed to optimise efficiency by ensuring the heat is not stored until the end of the charging period. The "quantity" of heat stored depends on the outdoor temperature at the charging time and the individual adjustment which can be regulated by means of the knob mounted on the front of the controller (see diagram below). The external temperature is monitored by a sensor mounted in a box on the outside of the building.  
 Diagram showing effect of adjustment knob on proportion of charge taken and different temperatures:



Example shows: Outside temperature 8°C. Knob in middle position.  
 Storage will be approximately 50% of full capacity.

There are two separate operating modes selected by means of a switch situated inside the housing:

8H - Continuous (8 hour) for Economy 7, while meter and off peak tariffs of up to 8 uninterrupted hours of availability. The heating system is then charged during one continuous off peak period with the starting time being delayed in accordance with the external temperature and personal adjustment as illustrated above

1H - Intermittent (1 hour) for other off peak tariffs. The heating is charged proportionally during each hourly period of the available charging times according to the external temperature and personal adjustment setting.

The electrician that installed the E270 should have selected the appropriate programme. For regular times when reduced storage is desired (e.g. at weekends in commercial buildings) a time switch or a manual switch can be connected such that a temperature set-back is obtained automatically without disturbing the established setting of the personal adjustment.

Inside the control box there are three LEDs which give an indication of the controller's status as follows:

- (a) The sensor is permanently monitored for fault and open circuit of itself and its wiring by means of a test loop. If a fault occurs the red LED flashes and the heating is switched off for safety.
- (b) Power 'on' is indicated by the green LED
- (c) Heating being energised (relay closed) is indicated by the yellow LED.

**WARNING:** Access to the inside of the control should only be undertaken by a competent person after the supply to it has been disconnected

2. **OPERATION:** All buildings, even apparently similar ones, have different thermal characteristics and occupants requirements will differ also. It is therefore only possible to give general guidance on operational settings with the actual ones found by experience. It is recommended, initially, therefore to set the control knob in the central position, allow the system 2 or 3 days to settle, and then if necessary adjust the knob setting towards maximum or minimum to give more or less charge respectively. Re-assess after a further 2 or 3 ds. Once a suitable setting has been established which suits both the buildings characteristics and personal preference no further adjustment should be necessary.

3. **TECHNICAL DATA:**

Type:	E27
Storage adjustment:	Front mounted knob
Visual indication:	Green-supply voltage
3 LEDs:	Yellow-relay/condition 'closed'
Operating voltage:	Re sensor fault (open or short circuit)
Output:	24V / 50 Hz
Permissible current:	1 way (NOC)
Sensor:	Maximum 15(4)/A/2.5V/ AC
Protective class:	Set conductor type
Mounting:	III extra low potential
Weight:	Wa
	Approximately 200 grammes