



ESWA[®]

E 272

STORAGE HEATING CONTROLLER

USER INSTRUCTIONS

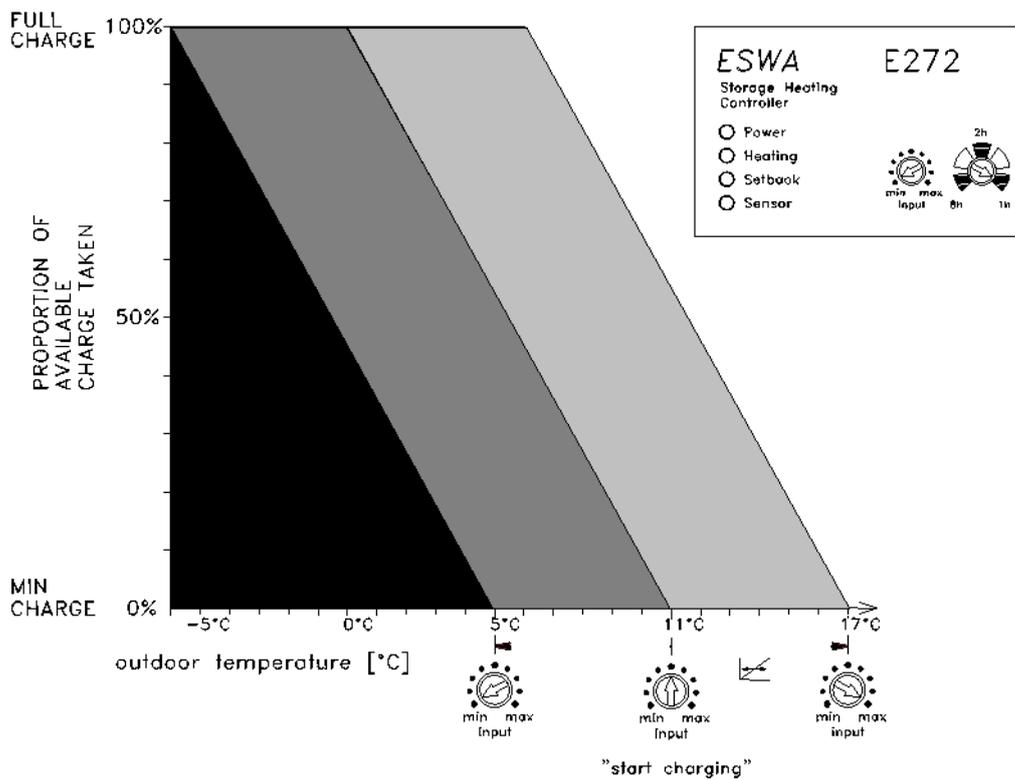
ESWA Weather Sensor - Type E 272

1. Description

The E272 is a weather -compensating charge controller for storage heating systems. It is a backward-acting control, i.e. if less than 100% of the available charging period is required, switch on is delayed to optimise efficiency. The “quantity” of heat stored depends on the outdoor temperature at the charging time and the personal adjustment which made by turning the “input” 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.

Any adjustment necessary is made by the potentiometers which are available at the front of the controller.

Diagram shows the effect of adjustment knob “input” on proportion of charge taken at different temperatures:



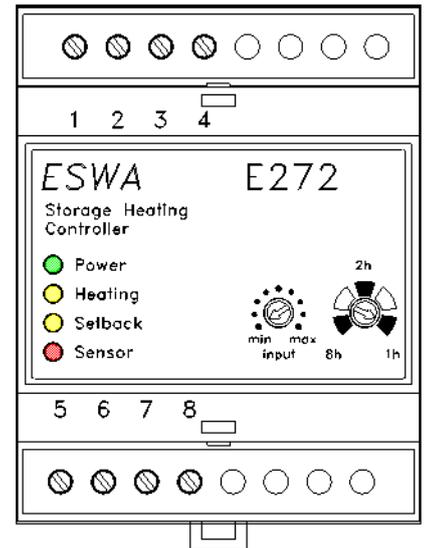
Example: Outdoor temperature 0°C, knob in the left position
Storage will be approximately 45% of full capacity.

There are three operating modes (1/2/8 hour) available to correspond to the chosen tariff. The electrician that installed the E272 has to select the correct mode. The mode only has to be changed if the tariff is changed.

For regular times when reduced storage is desired a time switch or a manual switch can be connected, so that a temperature setback is obtained automatically without disturbing the established setting of the personal adjustment.

In front of the control box there are four LEDs which give indication of the controllers status as follows:

- a) Power On is indicated by the green LED
- b) Heating being energised (relay closed) is indicated by the yellow LED. The flashing LED indicates a running countdown and the relay is currently switched off. If there is no control deviation the LED and the relay are permanently off.
- c) If the setback input is active (closed) the yellow LED is glowing.
- d) The sensor is permanently monitored for short and open circuit of itself and wiring by means of a test loop. If such a fault occurs the red LED is glowing and the outdoor temperature is “set” internally to 5°C. This avoids a total loss of function.



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 to initially, therefore, set the control knob (“input”) in the central position, allow the system 2 or 3 days to settle and then if necessary adjust the knob (“input”) setting towards maximum or minimum to give more or less charge respectively. Re-assess after a further 2 or 3 days. 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	E272, storage heating controller
Settings	spindle with screwdriver slot
Visual indication	4 LEDs, for details see page 3
Operating voltage	240 V AC, +/- 10%, 50 Hz
Fuse	has to be provided within the distribution board
Power consumption (electronics)	approx. 2.5 VA
Contact	relay contact (normally open contact)
Maximum permissible current relay	16(4) A, 250 V AC
Electrical lifetime	minimum 1.2×10^5 switching operations
Mechanical lifetime	minimum 30×10^6 switching operations
Electrical connections	screw terminal blocks
Enclosure Material	synthetic material
Mounting	on DIN-rail
Protective kind	IP 20
Protective class	II, in accordance with VDE 0700, <u>when built-in</u>
Weight	approx. 250 g
Permissible ambient temperature	0 to +45 °C
Storage temperature	-10 to +60°C

Specifications and details may be subject to change as a result of continuous product evaluation.

ESWA LTD, 70 Woolmer Way, Bordon, GU35 9QF. T: 01420 476 049