

Electronic Extension Timer with Delay

The ET-313 is a single-shot extension timer designed to control part, or all of a heating, lighting or air-conditioning system outside normal occupancy hours. A voltage-free relay output is switched on for a configurable number of hours after the delay period has elapsed (also configurable). Thus enabling plant equipment to be automatically activated at the correct time in the future without the user being present. The unit is an extremely user-friendly device with fully adjustable timings (in steps of 1 hour), providing simple yet powerful control of user-managed devices when they are unmanned.

The ET-313 combines precise and accurate operation with fully configurable parameters to provide effective energy control. This efficient timer offers an adjustable "Delay" period from 0 to 99 hours and an "Extension" period from 1 to 9 hours. The unit also provides the functionality to pre-set a maximum "Extension" period at hourly intervals to ensure that the end-user does not over-estimate the 'On' (extension) duration, allowing the authorised user control over each and every extension period.

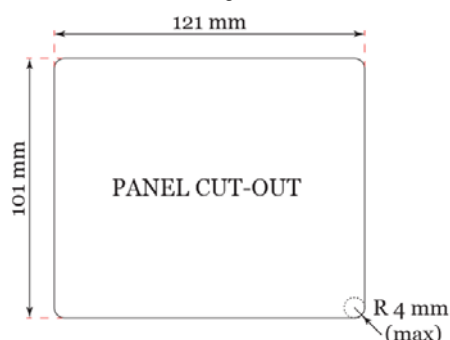


The ET-313, not only efficiently controls plant equipment and provides additional efficiency to the time-management of personnel, but it effectively reduces energy bills.

| Model Type | Model | Description |
|-----------------------|---------------------|--|
| | ET-313 | Electronic Extension Timer, Extension time up to 9 hours, Delay Time Up to 99 Hours, 85-265VAC |
| Technical Data | Power Supply | 85-265VAC |
| | Relay Contact | 250VAC (res.) 10A Change-Over Relay |
| | Extension Time | Up to 9 Hours |
| | Delay Time | Up to 99 Hours |
| | Operating Temp | -10 to +40°C |
| | Mounting | Wall Mounting on Single Gang UK Pattern Box (22mm or deeper) |
| | Weight | 0.3 kg |
| Dimensions | W119 x H99 x D42 mm | |

Installation

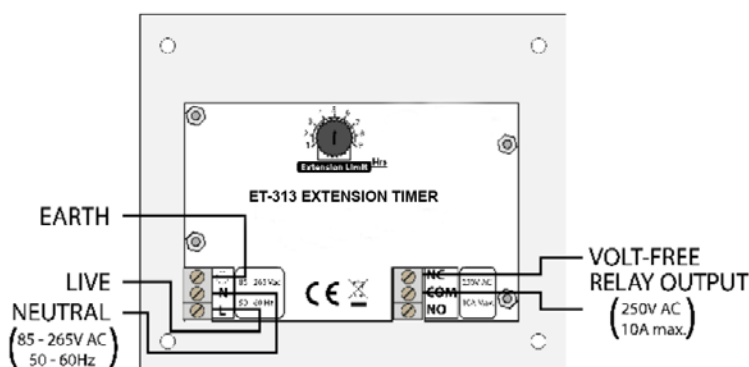
- IMPORTANT:** Ensure all electrical connections are isolated before commencing any work on the unit.
- Ensure the control panel has a hole cut-out of the correct size to mount the ET-313 extension timer (see Panel Cut-Out Figure).
- Unscrew the 4 screws on the face of the E313 to remove the back cover, plus the 2 screws holding the mounting bracket to the back cover.
- Feed the wiring through the control panel cut-out, through the rubber grommet in the ET-313 back cover and connect the wiring to the terminal blocks on the extension timer as shown in the wiring diagram (or any suitably appropriate form). Make sure to choose the correct output terminals that are suitable to your application
- Adjust the "Extension Limit" dial to suit the operational requirement (see the "Operation" section).
- Replace the back cover and 4 screws on the face of the ET-313.
- Seat the ET-313 in the control panel.
- Replace the mounting bracket and tighten the bracket screws to securely hold the ET-313 in place.
- NOTE:** Do not over-tighten the screws!.



Wiring Information

IMPORTANT: Ensure all electrical connections are isolated before commencing any work on the unit.

- Power to the ET-313 extension timer is provided via the Live and Neutral input terminals labelled "L" and "N" on the circuit board. It is universally compatible with all worldwide mains power (85 - 265V AC, 50 - 60Hz).
- NOTE:** This timer **MUST** be earthed using the earth terminal provided.
- A voltage-free changeover relay output capable of switching loads of up to 10A, 250V AC (resistive) is provided by the extension timer.
- The Common "COM" terminal is connected to the Normally Open "N/O" terminal during the extension period, otherwise it is connected to the Normally Closed "N/C" terminal at all other times.



Operation

During installation, adjust the "Extension Limit" dial to select the maximum number of hours the end user may select for the extension period (typical setting: up to 4 hours).

Operation Modes

The ET-313 has 3 operating modes:

Standby: Power-saving mode where the dimmed LED displays show "0" on all digits.

Setting Up: Bright LED displays with the currently selected digit blinking.

Running: Bright LED displays with the "Running" LED blinking. The "On" LED illuminates when the extension is active.

"Increase" Pushbutton

Press: Increments the blinking digit by 1 unit.

Hold: Increments the blinking digit automatically while held down.

"Select/Start" Pushbutton

Press: Selects the next digit to adjust (has no effect when in the "Running" mode).

Hold: Starts or stops the extension.

Typical Example

Setting up a 16 hour delay with a 4 hour extension period:

- a. From the Standby mode touch either pushbutton to select the first digit of "Delay".
- b. Touch the "Increase" pushbutton to increment the first digit to "1".
- c. Touch the "Select" pushbutton to select the second digit of "Delay".
- d. Hold or repeatedly press the "Increase" pushbutton until the second digit increments to "6".
- e. Touch the "Select" pushbutton to select the "Extension" digit.
- f. Hold or repeatedly press the "Increase" pushbutton until the digit shows "4".
- g. Hold "Start" to start the extension running (Running mode). The "Running" LED will begin to flash once every second while the extension is running.

After the 16 hours delay has elapsed, the relay output will be activated for 4 hours (also shown by the "On" LED illuminating for those 4 hours).

Additional Operating Guidelines

- a. An active extension may be cancelled at any time by holding down the "Select/Start" button for 2 seconds.