

Thank you for choosing the CAL ETC1311 thermostat.

- \* 34 x 77mm sized.
- \* On-Off control.
- \* J type Thermocouple or Pt100 input.
- \* Temperature compensation.
- \* In the case of probe failure, heating can be selected on, off or periodical running.
- \* Upper and lower limits of the setpoint can be adjusted.
- \* Set value can be adjusted by using single key.
- \* CE marked according to European Norms.



**Order Code : ETC1311-**

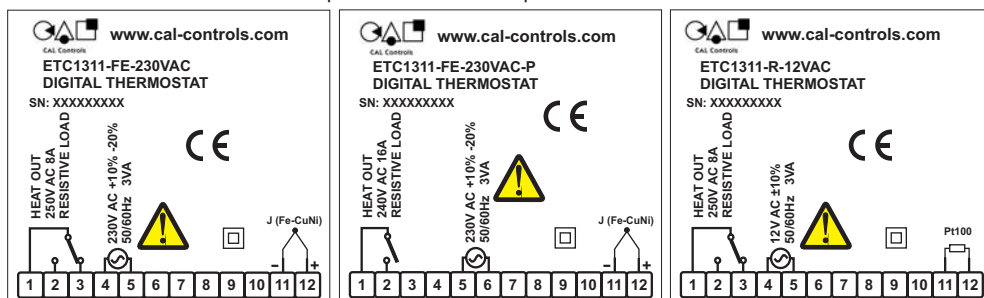
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| 1         |           | 2         |           |           |           | 3         |           |

- |                  |                           |
|------------------|---------------------------|
| <b>1 - Input</b> | <b>2 - Supply Voltage</b> |
| FE.....J Type    | 230VAC...230V AC          |
| R.....Pt100      | 24VAC.....24V AC          |
|                  | 12VAC.....12V AC          |
|                  | SM.....9-30V DC SMPS      |

- ### 3 - Output
- P.....Relay-16A  
None...Relay-8A



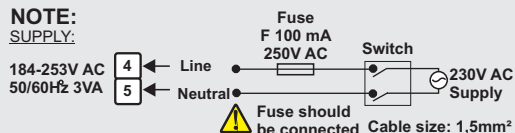
CAL ETC1311 is intended for installation in control panels. Make sure that the device is used only for intended purpose. The electrical connections must be carried out by qualified staff and must be according to the relevant locally applicable regulations. During an installation, all of the cables that are connected to the device must be free of electrical power. The device must be protected against inadmissible humidity, vibrations, severe soiling and make sure that the operation temperature is not exceeded. The cables should not be close to the power cables or components.



 Equipment is protected throughout by DOUBLE INSULATION.

 Holding screw 0.4-0.5Nm

**NOTE:**  
SUPPLY:



**Note:**

- 1) Mains supply cords shall meet the requirements of IEC 60227 or IEC 60245.
- 2) In accordance with the safety regulations, the power supply switch shall bring the identification of the relevant instrument and it should be easily accessible by the operator.

| ENVIRONMENTAL CONDITIONS                                                                                                                                          |                                                                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|
| Ambient/storage temperature                                                                                                                                       | 0 ... +50°C/-25 ... 70°C (with no icing)                         |
| Max. relative humidity                                                                                                                                            | 80%, up to 31°C decreasing linearly 50% at 40°C                  |
| Rated pollution degree                                                                                                                                            | According to EN 60529<br>Front panel : IP60<br>Rear panel : IP20 |
| Height                                                                                                                                                            | Max. 2000m                                                       |
|  Do not use the device in locations subject to corrosive and flammable gasses. |                                                                  |

## ELECTRICAL CHARACTERISTICS

|                     |                                                                                                                                                                        |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Supply voltage      | 230V AC $\pm 10\%$ -20%, 50/60Hz or 12VAC or 24 AC $\pm 10\%$ , 50/60Hz or optional 9-30V DC $\pm 10\%$                                                                |
| Power consumption   | Max. 3VA                                                                                                                                                               |
| Wiring              | 2.5mm <sup>2</sup> screw-terminal connections.                                                                                                                         |
| Scale               | 0 .... +600°C for J Type. -100.... +600°C for Pt100                                                                                                                    |
| Accuracy            | $\pm 0.5\%$ (of full scale) $\pm 1$ digit                                                                                                                              |
| Indicator           | 3 digits, 14mm, 7 parts red LED                                                                                                                                        |
| EMC                 | EN 61326-1: 1997, A1: 1998, A2: 2001 (Performance criterion B is satisfied for EMC tests. The device is designed to operate in controlled electromagnetic environment) |
| Safety requirements | EN 61010-1: 2001 (Pollution degree 2, overvoltage category II)                                                                                                         |

## OUTPUT

|                           |                                                                                                                                                      |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| HEAT OUT                  | For ETC1311-XX-XX ; Relay: 250V AC, 8A(for resistive load), NO+NC.<br>For ETC1311-FE-XXP ; Relay: 240V AC, 16A(for resistive load), NO.              |
| Life expectancy for relay | For ETC1311-XX-XX ; Mechanical 30,000,000; Electrical 100,000 operation.<br>For ETC1311-FE-XXP ; Mechanical 30,000,000; Electrical 30,000 operation. |

## CONTROL

|                   |                                |
|-------------------|--------------------------------|
| Control type      | Single-setpoint control        |
| Control algorithm | On-Off control                 |
| Hysteresis        | Adjustable between 1 ... 20°C. |

## HOUSING

|                    |                                                     |
|--------------------|-----------------------------------------------------|
| Housing type       | Suitable for panel mounting.                        |
| Dimensions         | W77xH34xD70mm                                       |
| Weight             | Approx. 250g (after packing the device and a probe) |
| Enclosure material | Self extinguishing plastics                         |

 While cleaning the device, solvents (thinner, benzine, acid etc.) or corrosive materials must not be used.

**Figure 1: Mounting dimensions of the digital thermostat.**

The figure illustrates the mounting requirements for the digital thermostat, showing front, side, and back views with dimensions and labels.

**Front View Dimensions:**

- Width: 85mm
- Height: 34mm
- Display: 20.0 °C
- Buttons: OUT, PRG, CAL
- Model: ETC1311

**Side View Dimensions:**

- Depth: 70mm
- Mounting clamp removal directions: 1 (push in), 2 (pull out)
- Panel Rubber gasket

**Back View Dimensions:**

- Panel cut-out dimensions: 71mm (width) x 29mm (height)
- Terminal block connections: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
- Wiring: 230V AC 10A, 20% RESISTIVE LOAD
- Warning: 230V AC 10A, 20% RESISTIVE LOAD
- CE mark
- ETC1311-FE-230VAC
- www.cal-controls.com

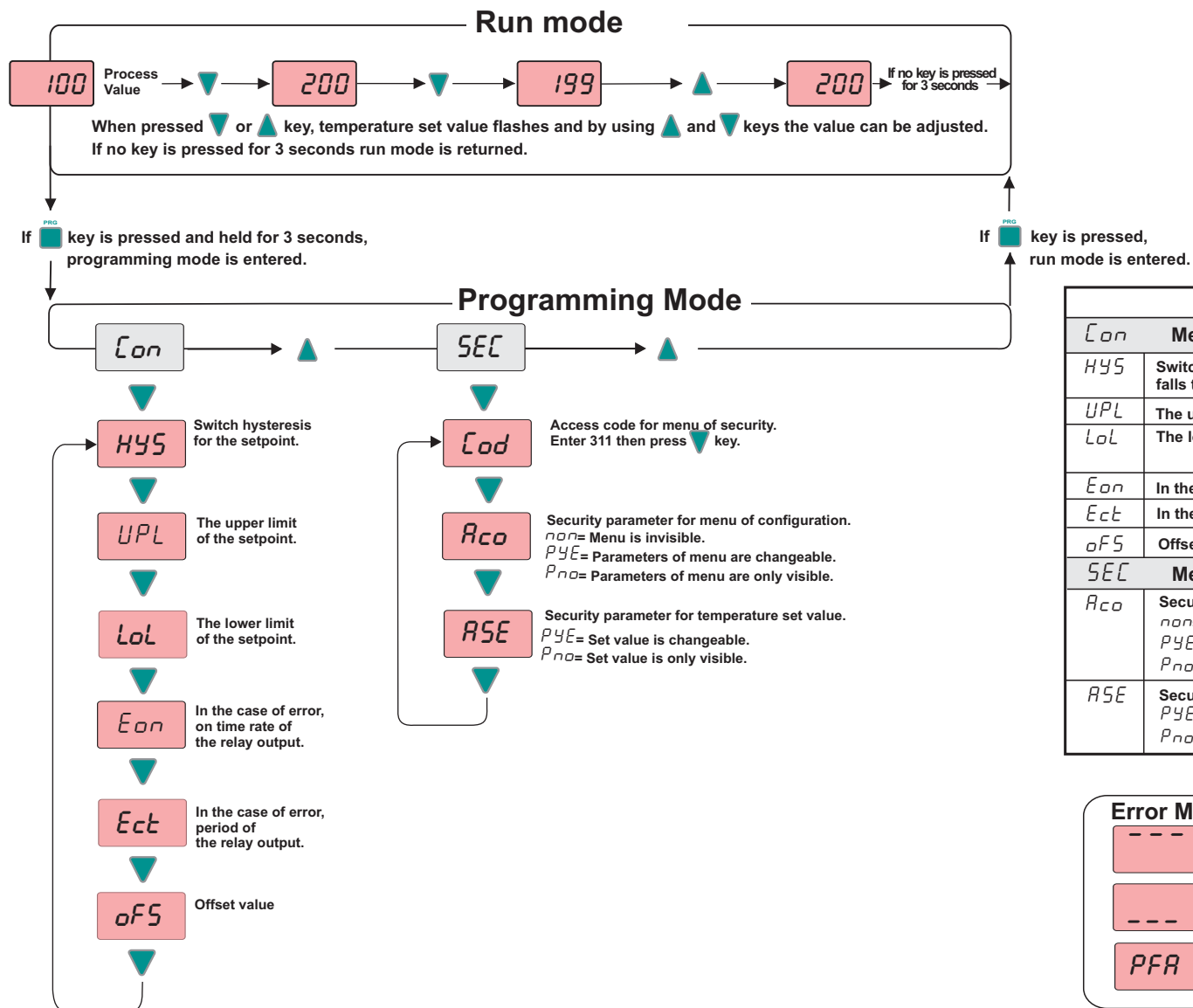
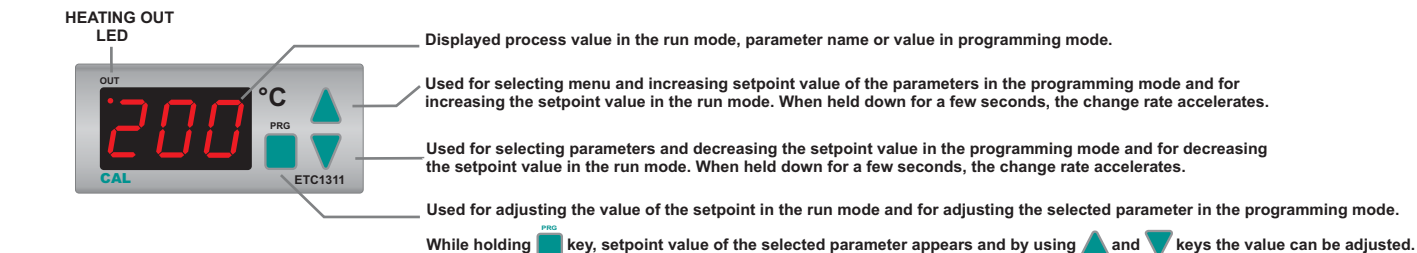
**Note:**

- 1) Panel thickness should be maximum 7 mm.
- 2) If there is no 60mm free space at the back side of the device, it would be difficult to remove it from the Panel

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| PARAMETER TABLE                      |                                                                                                                                                                  |         |     |       |         |
|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-----|-------|---------|
| Con Menu of Configuration parameters |                                                                                                                                                                  | MIN     | MAX | UNIT  | DEF.SET |
| HYS                                  | Switch hysteresis for the setpoint. (When temperature falls to SET-HYS, output relay becomes active.)                                                            | 1       | 20  | °C    | 1       |
| UPL                                  | The upper limit of the setpoint.                                                                                                                                 | LoL     | 600 | °C    | 600     |
| LoL                                  | The lower limit of the setpoint.                                                                                                                                 | Fe-CuNi | 0   | UPL   | °C      |
|                                      |                                                                                                                                                                  | Pt100   | -99 | UPL   | °C      |
| Eon                                  | In the case of error, on time rate of the relay output.                                                                                                          | 0       | 100 | % Ect | 0       |
| Ect                                  | In the case of error, period of the relay output.                                                                                                                | 10      | 250 | sec   | 30      |
| oFS                                  | Offset value.                                                                                                                                                    | -99     | 99  | °C    | 0       |
| SEC Menu of Parameter security       |                                                                                                                                                                  |         |     |       |         |
| Rco                                  | Security parameter for menu of configuration.<br>non= Menu is invisible.<br>PYE= Parameters of menu are changeable.<br>Pno= Parameters of menu are only visible. |         |     |       |         |
| RSE                                  | Security parameter for temperature set value.<br>PYE= Set value is changeable.<br>Pno= Set value is only visible.                                                |         |     |       |         |

### Error Messages

- Means, temperature value is higher than the scale.
- Means, temperature value is lower than the scale.
- PFA** Means, temperature sensor is broken or over temperature.