⚠️ Please read this document carefully before using this product. The guarantee will be invalidated if the device is damaged by not following instructions detailed in the manual. CAL Controls shall not be responsible for any damage or losses however caused, which may be experienced as a result of the installation or use of this product.

CAL ETC1311 DIGITAL THERMOSTAT

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.

CE

OUT °C PRG
CAL   ETC1311

Order Code : ETC1311-☐☐-☐☐☐☐☐-☐
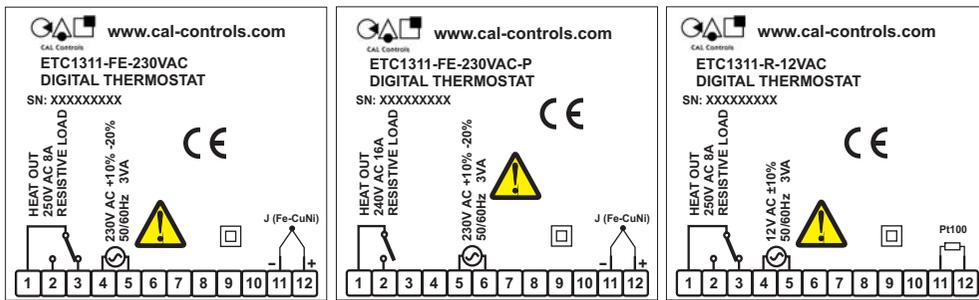   1   2   3

1 - Input
FE.....J Type
R.......Pt100

2 - Supply Voltage
230VAC...230V AC
24VAC.....24V AC
12VAC.....12V AC
SM...........9-30V DC SMPS

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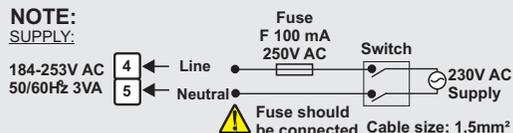None...Relay-8A

Connection Diagram

⚠️ 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.

www.cal-controls.com
ETC1311-FE-230VAC
DIGITAL THERMOSTAT
SN: XXXXXXXXX
HEAT OUT 250V AC 8A RESISTIVE LOAD
230V AC +10% -20% 50/60Hz 3VA
J (Fe-CuNi)
1 2 3 4 5 6 7 8 9 10 11 12

www.cal-controls.com
ETC1311-FE-230VAC-P
DIGITAL THERMOSTAT
SN: XXXXXXXXX
HEAT OUT 240V AC 16A RESISTIVE LOAD
230V AC +10% -20% 50/60Hz 3VA
J (Fe-CuNi)
1 2 3 4 5 6 7 8 9 10 11 12

www.cal-controls.com
ETC1311-R-12VAC
DIGITAL THERMOSTAT
SN: XXXXXXXXX
HEAT OUT 250V AC 8A RESISTIVE LOAD
12V AC ±10% 50/60Hz 3VA
Pt100
1 2 3 4 5 6 7 8 9 10 11 12

▢ Equipment is protected throughout by DOUBLE INSULATION.

⊖ Holding screw 0.4-0.5Nm

NOTE:
SUPPLY:
184-253V AC 50/60Hz 3VA
4 ← Line
5 ← Neutral
Fuse F 100 mA 250V AC
⚠️ Fuse should be connected
Switch
230V AC Supply
Cable size: 1,5mm²

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.

Technical Specifications

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	Front panel : IP60 Rear panel : IP20
Height	Max. 2000m	

⚠️ Do not use the device in locations subject to corrosive and flammable gasses.

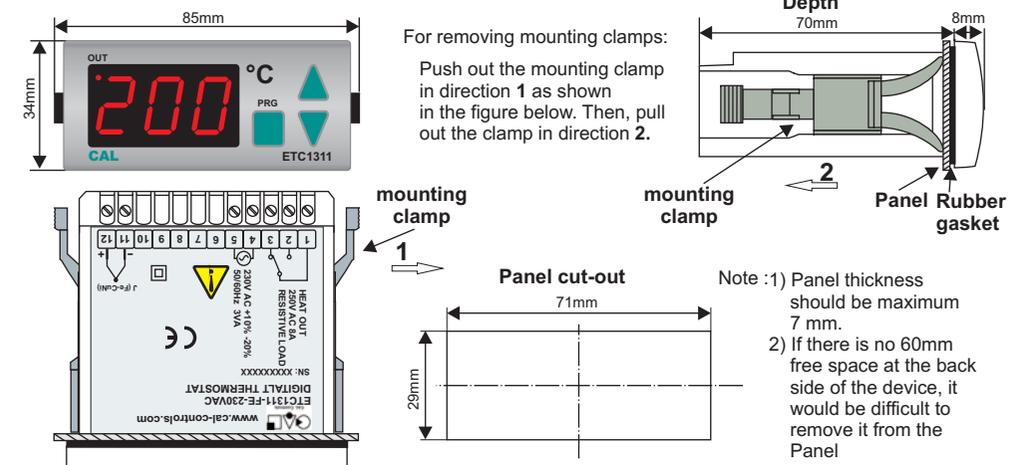| ELECTRICAL CHARACTERISTICS	
Supply voltage	230V AC +%10 -%20, 50/60Hz or 12VAC or 24 AC ±%10, 50/60Hz or optional 9-30V DC ±%10 .
Power consumption	Max. 3VA
Wiring	2.5mm² screw-terminal connections.
Scale	0 .... +600°C for J Type. -100.... +600°C for Pt100
Accuracy	± 0.5% (of full scale) ±1 digit
Indicator	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. 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. 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.

Dimensions

85mm
34mm
OUT °C PRG
CAL   ETC1311

Depth
70mm   8mm

For removing mounting clamps:
Push out the mounting clamp in direction **1** as shown in the figure below. Then, pull out the clamp in direction **2**.

mounting clamp
mounting clamp
Panel Rubber gasket

Panel cut-out
71mm
29mm

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

ETC1311-E-06

HEATING OUT LED

OUT
`200` °C
PRG
CAL   ETC1311

Displayed process value in the run mode, parameter name or value in programming mode.
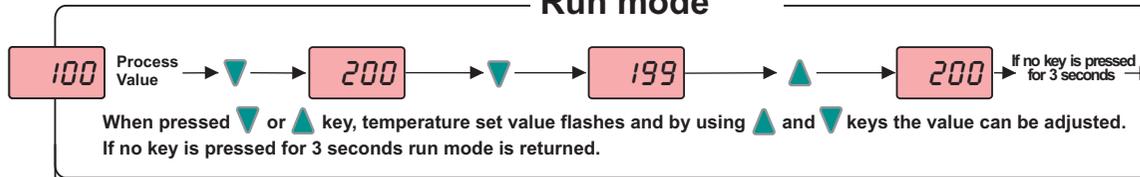
Used for selecting menu and increasing setpoint value of the parameters in the programming mode and for increasing the setpoint value in the run mode. When held down for a few seconds, the change rate accelerates.

Used for selecting parameters and decreasing the setpoint value in the programming mode and for decreasing the setpoint value in the run mode. When held down for a few seconds, the change rate accelerates.

Used for adjusting the value of the setpoint in the run mode and for adjusting the selected parameter in the programming mode.
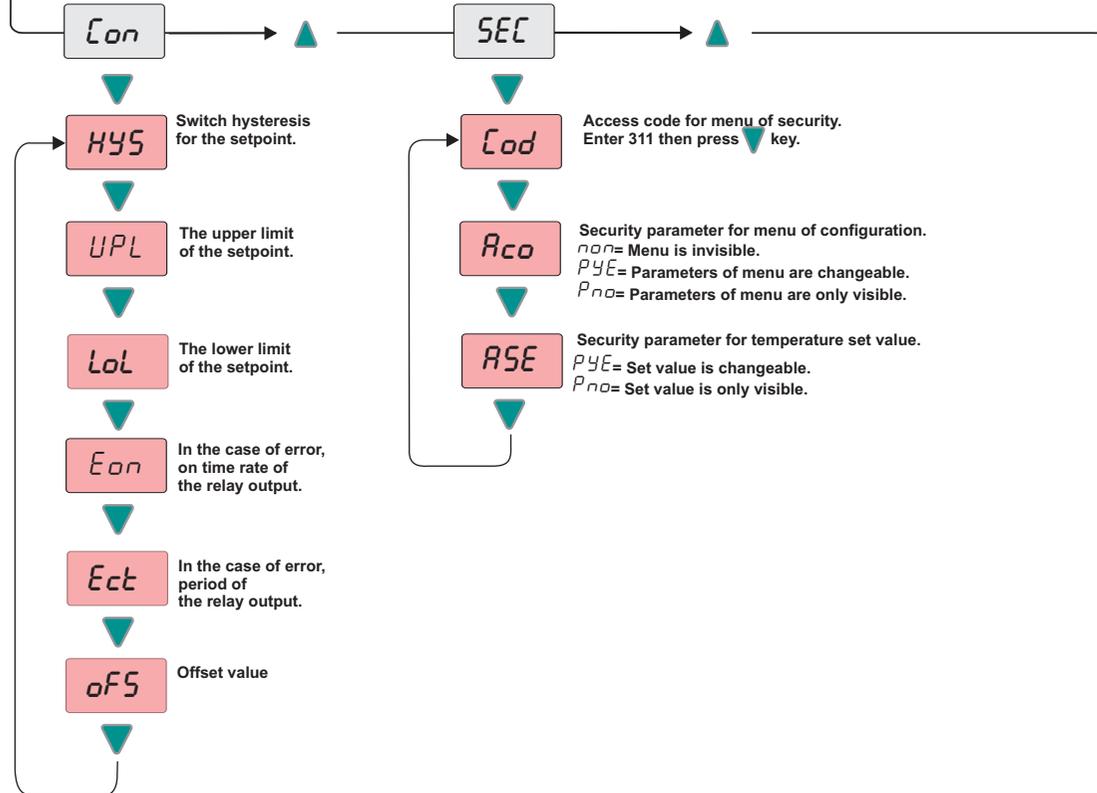
While holding **PRG** key, setpoint value of the selected parameter appears and by using ▲ and ▼ keys the value can be adjusted.

Run mode

`100` Process Value → ▼ → `200` → ▼ → `199` → ▲ → `200` If no key is pressed for 3 seconds →

When pressed ▼ or ▲ key, temperature set value flashes and by using ▲ and ▼ keys the value can be adjusted.
If no key is pressed for 3 seconds run mode is returned.

If **PRG** key is pressed and held for 3 seconds, programming mode is entered.

If **PRG** key is pressed, run mode is entered.

Programming Mode

`Con` → ▲ → `SEC` → ▲

`HYS` Switch hysteresis for the setpoint.
▼
`UPL` The upper limit of the setpoint.
▼
`LoL` The lower limit of the setpoint.
▼
`Eon` In the case of error, on time rate of the relay output.
▼
`Ect` In the case of error, period of the relay output.
▼
`oFS` Offset value
▼

`Cod` Access code for menu of security. Enter 311 then press ▼ key.
▼
`Aco` Security parameter for menu of configuration.
`non`= Menu is invisible.
`PYE`= Parameters of menu are changeable.
`Pno`= Parameters of menu are only visible.
▼
`ASE` Security parameter for temperature set value.
`PYE`= Set value is changeable.
`Pno`= Set value is only visible.
▼

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	0
		Pt100	-99	`UPL`	°C	-99
`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**					
`Aco`	Security parameter for menu of configuration. `non`= Menu is invisible. `PYE`= Parameters of menu are changeable. `Pno`= Parameters of menu are only visible.					
`ASE`	Security parameter for temperature set value. `PYE`= Set value is changeable. `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.

ETC1311-E-06