> ⚠ Read this document carefully before using this device. The guarantee will be expired by damaging of the device if you don't attend to the directions in the user manual. Also we don't accept any compensations for personal injury, material damage or capital disadvantages.

ENDA ET1311 DIGITAL THERMOSTAT

Thank you for choosing ENDA ET1311 temperature controller.

* 34 x 77mm sized.
* On-Off control.
* PTC sensor.
* Adjustable offset for PTC sensor.
* Selectable cooling or heating control.
* The maximum and minimum values of the setpoint can be limited.
* Output state can be selected On or Off in the case of probe failure.
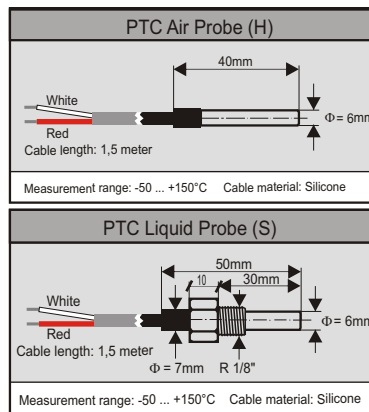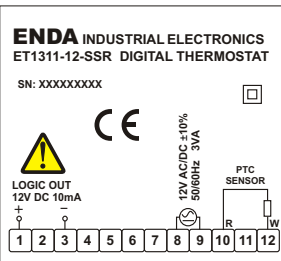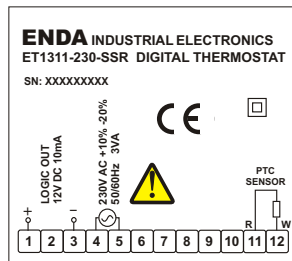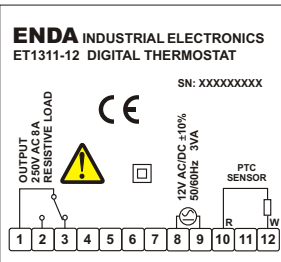* Having CE mark according to European Norms.

CE

OUT -30 °C SET ENDA ET 1311

Supply Voltage	Control Output	Probe	Order Code
230V AC +10% -20%	Relay	PTC air probe	ET1311-230-H-X.X
		PTC liquid probe	ET1311-230-S-X.X
	Logic output	PTC air probe	ET1311-230-SSR-H-X.X
		PTC liquid probe	ET1311-230-SSR-S-X.X
12V AC/DC ±10%	Relay	PTC air probe	ET1311-12-H-X.X
		PTC liquid probe	ET1311-12-S-X.X
	Logic output	PTC air probe	ET1311-12-SSR-H-X.X
		PTC liquid probe	ET1311-12-SSR-S-X.X

NOTE :

CABLE:

X.X : Cable length
For example: 4.0 = 4.0m
1.5m (standard)

ATTENTION !

⚠ ENDA ET1311 is intended for installation in control panels. Make sure that the device is used only for intended purpose. The electrical connections must be carried on by a 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 energy. 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.
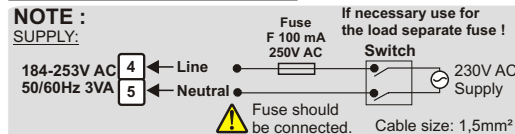
TECHNICAL SPECIFICATIONS

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 Rare panel : IP20
Height	Maximum 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 12V AC/DC ± 10%, 50/60Hz
Power consumption	Max. 3VA
Wiring	1.5mm² screw-terminal connections.
Scale	-50....+150°C
Sensitivity	1°C
Accuracy	±1% (of full scale)
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

COMPRESSOR	Relay: 250V AC, 8A (for resistive load), NO+NC ; ½ HP 250V AC CosΦ=0.4 (for inductive load)
Life expectancy for relay	Mechanical 30.000.000 operation; Electrical 100.000 operation.
Note: The relay contacts are suitable for in-line switching of compressors up to 0,5 HP at 240V AC or 1/4 HP at 110V AC.	

CONTROL

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

HOUSING

Housing type	Suitable for flush-panel mounting.
Dimensions	W77xH34xD70mm
Weight	Approx. 160g (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.

ENDA INDUSTRIAL ELECTRONICS
ET1311-230 DIGITAL THERMOSTAT
SN: XXXXXXXXX
CE
OUTPUT 250V AC 8A RESISTIVE LOAD
230V AC +10% -20% 50/60Hz 3VA
PTC SENSOR
R W
1 2 3 4 5 6 7 8 9 10 11 12

ENDA INDUSTRIAL ELECTRONICS
ET1311-12 DIGITAL THERMOSTAT
SN: XXXXXXXXX
CE
OUTPUT 250V AC 8A RESISTIVE LOAD
12V AC/DC ±10% 50/60Hz 3VA
PTC SENSOR
R W
1 2 3 4 5 6 7 8 9 10 11 12

ENDA INDUSTRIAL ELECTRONICS
ET1311-230-SSR DIGITAL THERMOSTAT
SN: XXXXXXXXX
CE
LOGIC OUT 12V DC 10mA
230V AC +10% -20% 50/60Hz 3VA
PTC SENSOR
R W
1 2 3 4 5 6 7 8 9 10 11 12

ENDA INDUSTRIAL ELECTRONICS
ET1311-12-SSR DIGITAL THERMOSTAT
SN: XXXXXXXXX
CE
LOGIC OUT 12V DC 10mA
12V AC/DC ±10% 50/60Hz 3VA
PTC SENSOR
R W
1 2 3 4 5 6 7 8 9 10 11 12

PTC Air Probe (H)

White
Red
Cable length: 1,5 meter
40mm
Φ = 6mm

Measurement range: -50 ... +150°C   Cable material: Silicone

PTC Liquid Probe (S)

White
Red
Cable length: 1,5 meter
50mm
10 30mm
Φ = 7mm   R 1/8"
Φ = 6mm

Measurement range: -50 ... +150°C   Cable material: Silicone

⚠ Please don't dip the Sensor in liquidity and keep in dry place !

▯ Equipment is protected throughout by

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.

If necessary use for the load separate fuse !
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.

SENSOR INPUT:
Pay attention to the color of the PTC probe cables while connecting them to the PTC SENSOR input of the device.

Dimensions

85mm
34mm
OUT -30 °C SET ENDA ET 1311

Depth
70mm
8mm

For removing mounting clamps:
Push out the flush-mounting clamp in direction **1** as shown in the figure below. Then, pull out the clamp in direction **2**.
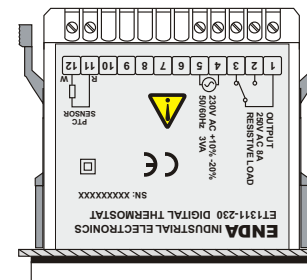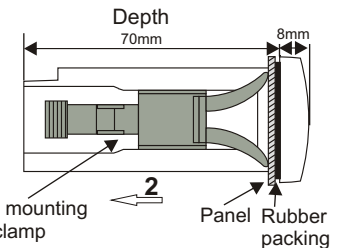
Flush mounting clamp
Flush mounting clamp
Panel   Rubber packing
2
1

ENDA INDUSTRIAL ELECTRONICS ET1311-230 DIGITAL THERMOSTAT
SN: XXXXXXXXX
R W PTC SENSOR
230V AC +10% -20% 50/60Hz 3VA
OUTPUT 250V AC 8A RESISTIVE LOAD
CE

Panel cut-out
71mm
29mm
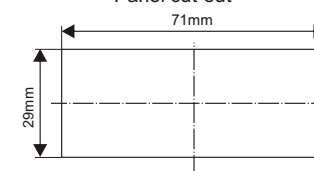
Note : 1) Panel thickness should be maximum 7 mm.
2) If there is no 60mm free space at the back side of the device, it would be difficult to remove it from the

ET1311 PROGRAMMING DIAGRAM

Out LED

OUT
-30 °C

SET

ENDA   ET 1311

Increment key — Used for increasing the setpoint value, as well as the parameter when in programming. When held down for a few seconds, the change rate accelerates.

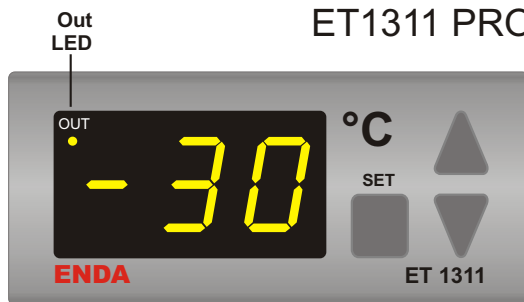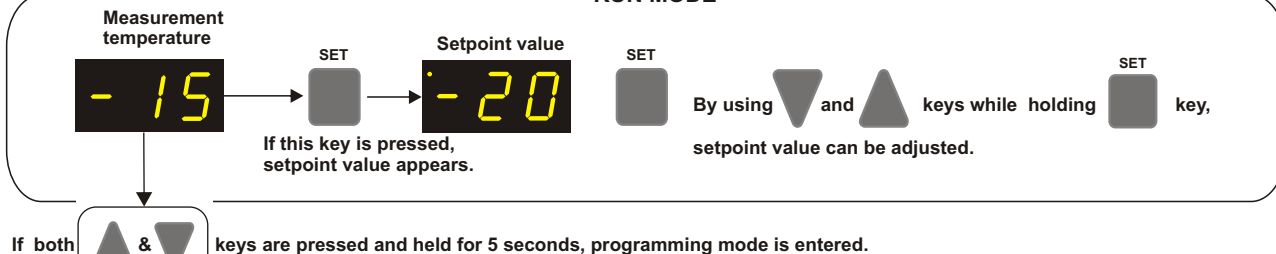**Decrement key** — Used for decreasing the setpoint value, as well as the parameter when in programming. When held down for a few seconds, the change rate

SET

Programming key — Used for adjusting the value of the setpoint in the run mode and for adjusting the selected parameter in the programming mode.

RUN MODE

Measurement temperature
- 15

SET

Setpoint value
- 20

If this key is pressed, setpoint value appears.

SET

By using ▼ and ▲ keys while holding SET key, setpoint value can be adjusted.

If both ▲ & ▼ keys are pressed and held for 5 seconds, programming mode is entered.

PROGRAMMING MODE

Shy
SET
Hysteresis value
2

If this key is pressed, hysteresis value appears.

By using ▼ and ▲ keys while holding SET key, hysteresis value can be adjusted to a desired temperature.
Minimum = 1°C   Maximum = +20°C.

SLL
SET
Lower limit of the setpoint
-50

If this key is pressed, the lower limit of the setpoint appears.

By using ▼ and ▲ keys while holding SET key, the lower limit of the setpoint can be adjusted to a desired temperature.
Minimum = -50°C   Maximum = Value of the SUL parameter.

SuL
SET
Upper limit of the setpoint
150

If this key is pressed, the upper limit of the setpoint appears.

By using ▼ and ▲ keys while holding SET key, the upper limit of the setpoint can be adjusted to a desired temperature.
Minimum = The value of the SLL parameter   Maximum = +150°C.

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oFS
SET
Offset value
0

If this key is pressed, offset value appears.

By using ▼ and ▲ keys while holding SET key, the offset value can be adjusted to a desired value.

---

out
SET
Control mode
HEt

If this key is pressed, control mode appears.

By using ▼ and ▲ keys while holding SET key, heating (HEt) or cooling (col) mode can be selected.

Eot
SET
State of control output in the case of probe failure.
oFF

If this key is pressed, the state of the control output in the case of probe failure appears.

By using ▼ and ▲ keys while holding SET key, the control output state can be adjusted as oFF or on for the case of probe failure. If Eot = On, the control output is energized during the probe failure.
If Eot = oFF, the control output is de-energised during the probe failure.

If any no key is pressed within 25 seconds, the device will time out back to the run mode. Alternatively, re-energising the device, run mode is entered.

PFA

ERROR MESSAGE
Means the temperature sensor is broken or the temperature is out of the scale range.