Read this document carefully before using this device. The guarantee will be expired by device demages 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 ET1411 DIGITAL THERMOSTAT

Thank you for choosing **ENDA ET1411** temperature controller.

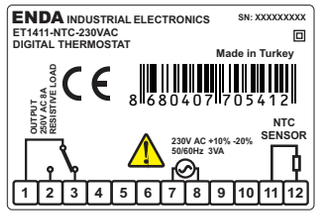
* 35 x 77mm sized.
* On-Off control.
* Single contact output for selectable heating or cooling control.
* Single NTC probe input.
* Offset value can be entered for NTC probe.
* In the case of probe failure, output state can be selected on, off or periodical running.
* Upper and lower limits of the setpoint can be adjusted.
* Temperature unit can be selected °C or °F.
* CE marked according to European Norms.

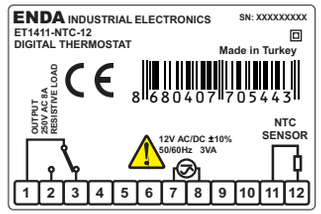
Order Code : ET1411-NTC-□□□□□□
1

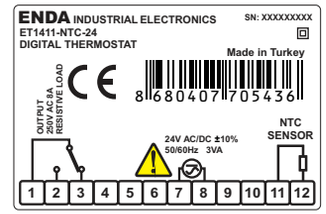
Supply Voltage
230VAC.....230V AC
24.....24V AC/DC
12.....12V AC/DC

R HS Compliant

ENDA ET1411 is intended for installation within control panels. Make sure that the device is used only for intended purpose. The shielding must be grounded on the instrument side. 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. Make sure that the operation temperature is not exceeded.
All input and output lines that are not connected to the supply network must be laid out as shielded and twisted cables. These cables should not be close to the power cables or components. The installation and electrical connections must be carried out by a qualified staff and must be according to the relevant locally applicable regulations.



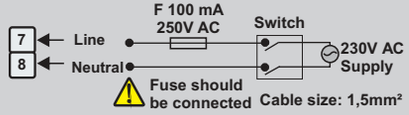




Equipment is protected throughout by DOUBLE INSULATION

Holding screw 0.4-0.5Nm.

NOTE:
SUPPLY:
184-253V AC
50/60Hz 3VA



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.

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ENDA
ET1411-E-08-201408

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 : IP65 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 12/24V AC/DC ±10%, 50/60Hz.
Power consumption	Max. 3VA
Wiring	2.5mm² screw-terminal connections.
Scale	-60.0 ... +150.0°C (-76.0 ... +302.0°F)
Sensitivity/Accuracy	0.1°C / ±1°C
Time Accuracy	(±1%-1sec)
Indicator	4 digits, 12.5mm, 7 segment yellow LED
EMC	EN 61326-1: 2013 (Performance criterion B is satisfied for EMC tests. The device is designed to operate in controlled electromagnetic environment)
Safety requirements	EN 61010-1: 2010 (Pollution degree 2, overvoltage category II)

OUTPUT	
OUTPUT	Relay: 250V AC, 8A (for resistive load), NO+NC; 1/2 HP 240V AC CosΦ = 0.4 (for inductive load)
Life expectancy for relay	Mechanical 30.000.000; Electrical 100.000 operation.

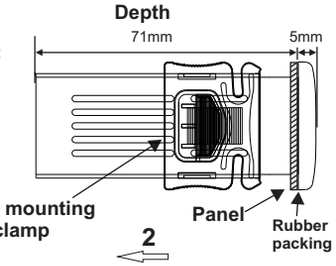
CONTROL	
Control type	Single-setpoint control
Control algorithm	On-Off control
Hysteresis	Adjustable between 0.1 ... 20.0°C.

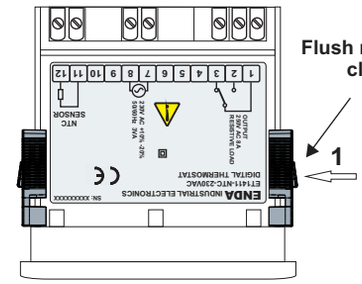
HOUSING	
Housing type	Suitable for flush-panel mounting.
Dimensions	W77xH35xD71mm
Weight	Approx. 205g (After packing)
Enclosure material	Self extinguishing plastics
⚠ **While cleaning the device, solvents (thinner, benzine, acid etc.) or corrosive materials must not be used.**	

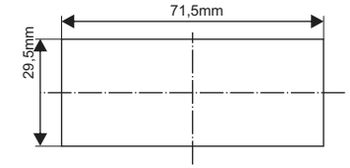
Dimensions

For removing mounting clamps:

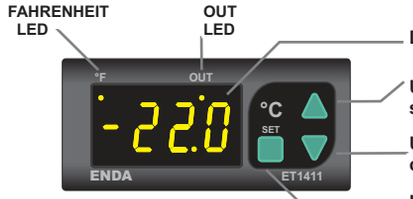
Push the flush-mounting clamp in direction **1** as shown in the figure below. Then, pull out the clamp in direction **2.**







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.



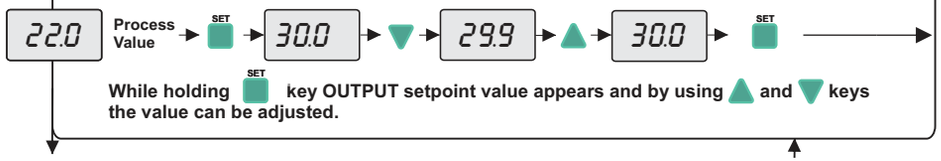
Displayed process value in the run mode, parameter name or value in programming mode.

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 SET key, setpoint value of the selected parameter appears and by using ▲ and ▼ keys the value can be adjusted.

Run Mode

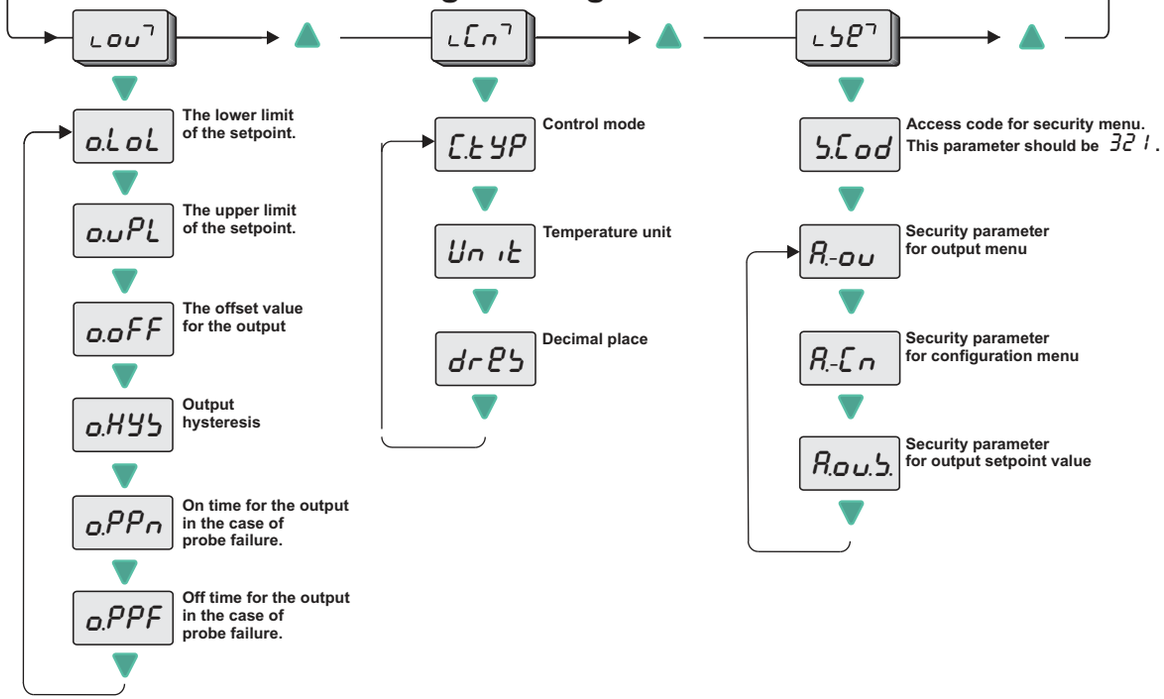


While holding SET key OUTPUT setpoint value appears and by using ▲ and ▼ keys the value can be adjusted.

If both ▲ ▼ keys are pressed and held for 3 seconds, programming mode is entered.

If both ▲ ▼ keys are pressed, run mode is entered.

Programming Mode



PARAMETER TABLE

		MIN	MAX	UNIT	DEF. SET
oUt	**Menu of Output control parameters**				
oLoL	The lower limit of the setpoint.	-60.0	oUPL	°C	-60
oUPL	The upper limit of the setpoint.	oLoL	150.0	°C	150
oOFF	The offset value for the output	-20.0	20.0	°C	0
oHYS	Output hysteresis	0.1	20.0	°C	2
oPPn	On time for the output in the case of probe failure.	0	255	Min.	0
oPPF	Off time for the output in the case of probe failure.	0	255	Min.	1
Cn	**Menu of Configuration**				
CtYP	Control mode (HEAt = Heating cotrol, Cool =Cooling control)	HEAt	Cool		HEAt
Unit	Temperature unit	°C	°F		°C
drES	Decimal place (no = no decimal point, 22 °C; YES = with decimal point, 22.3 °C)	no	YES		no
SEt	**Menu of Parameter security**				
A-ou	Security parameter for menu of output control	nonE = Menu is invisible. PYES = Parameters of menu are changeable. Pno = Parameters of menu are only visible.			
A-Cn	Security parameter for menu of configuration				
AouS	Security parameter for output setpoint value	PYES = Setpoint value is changeable. Pno = Setpoint value is only visible.			

Error Messages

PbC	Means, thermostat probe is short circuit.
PFA	Means, thermostat probe is broken.
----	Temperature value is higher than the scale.
----	Temperature value is lower than the scale.

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