

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.

# **FNDA FT2411 ON/OFF HEAT CONTROLLER**

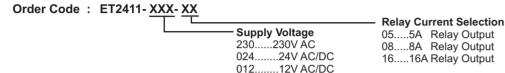
Thank you for choosing ENDA ET2411 ON/OFF Heat Controller.

- \* 77 x 35mm sized.
- \* Single NTC sensor input.
- \* Zero point input shift.
- \* Selectable heating or cooling control for C1 relay output.
- \* Selectable heating or cooling control.
- \* In the case of sensor failure, relay state can be set to ON or
- \* Upper and lower setpoint limits can be adjusted.
- \* Temperature unit can be selected as °C or °F.
- \* CE marked according to European Norms.





# **R**<sub>N</sub>HS Compliant





ENDA ET2411 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.

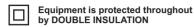
SM......7-24VAC/9-30VDC

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.

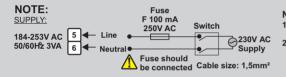












url: www.enda.com.tr

#### 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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### TECHNICAL SPECIFICATIONS

| Input Type            |          | Scale Range                | Accuracy                        |
|-----------------------|----------|----------------------------|---------------------------------|
| NTC Sensor Resistance | EN 60751 | -60.0150.0 °C -76.0302.0°F | ± 1% (for full scale) ± 1 Digit |

#### ENVIRONMENTAL CONDITIONS

| Ambient/Storage temperature | 0 +50 / °C -25 +70 °C(without icing)  |  |
|-----------------------------|---|--|
| Relative Humidity           | Max. humidity 80% for temperatures up to 31°C decreasing linearly to 50% relative humidity at 40°C. |  |
| Protection Class            | According to EN60529; Front panel: IP65 Rear panel: IP20  |  |
| Height                      | May 2000m   |  |



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

#### ELECTRICAL CHARACTERISTICS

| Supply              | 230V AC +%10 -%20, 50/60Hz or 12/24V AC/DC %±0  |  |
|---------------------|---|--|
| Power Consumption   | Max. 3VA  |  |
| Wiring              | Power connector : 2.5mm² screw-terminal, Signal connector : 1,5mm² screw-terminal conenction. |  |
| Line Resistance     | Max. 100ohm   |  |
| Data Retention      | EEPROM (Min. 10 years)  |  |
| EMC                 | EN 61326-1: 2013 (Performance criterion B is satisfied for EN 61000-4-3)                      |  |
| Safety Requirements | EN 61010-1: 2012 (Pollution degree 2, overvoltage category II)                                |  |
| Indicator           | 4 digits, 12.5mm, 7 segment red LED   |  |

|                           | OUIPUI  |
|---------------------------|---|
| C1 Output                 | For 5A Models: 250V AC, 5A (for resistive load), NO control output.   |
|                           | For 8A Models: 250V AC, 8A (for resistive load), NO and NC control output.                                      |
|                           | For 16A Models: 250V AC, 16A (for resistive load), NO control output.   |
| Life Expectancy for Relay | For 5A Models: 5.000.000 Switching for no-load operation; 100.000 switching for 5A resistive load at 250VAC.    |
|                           | For 8A Models: 30.000.000 Switching for no-load operation; 300.000 switching for 8A resistive load at 250VAC.   |
|                           | For 16A Models : 30 000 000 Switching for po-load operation: 100 000 switching for 16A resistive load at 250VAC |

#### CONTROL

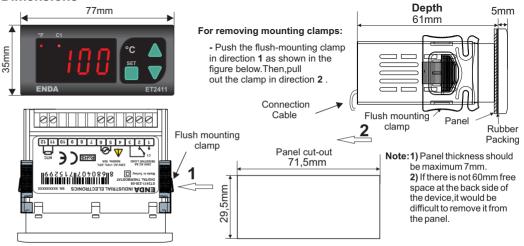
| Control Type      | Single-setpoint and alarm control.      |  |
|-------------------|---|--|
| Control Algorithm | On-Off Control.                         |  |
| A/D Converter     | 12 bit resolution, 100ms sampling time. |  |
| Hysteresis        | Adjustable between 0.1 and 20.0°C/F.    |  |
|                   | HOUSING                                 |  |

**Housing Type** Suitable for flush-panel mounting according to DIN 43 700. Dimensions W77xH35xD61mm Weight Approx. 215g (After packing) **Enclosure Materials** Self extinguishing plastics



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

### **Dimensions**



ET2411-E-01-201406 1/2

## **Programming Diagram**

