



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 EDT1411 TEMPERATURE CONTROLLER

Thank you for choosing ENDA EDT1411 temperature controller.

- * 34 x 77mm sized.
- * On-Off control.
- * Single contact output for cooling control.
- * NTC probe input for cold room temperature.
- * Offset value can be entered for NTC probe.
- * Compressor protection parameters can be entered.
- * 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.
- * Defrosting duration and interval can be adjusted.
- * Upper and lower limits of the alarm value can be adjusted depending on the setpoint value.
- * Having CE mark according to European Norms.

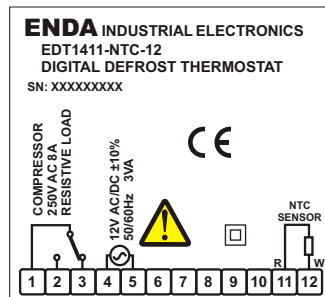
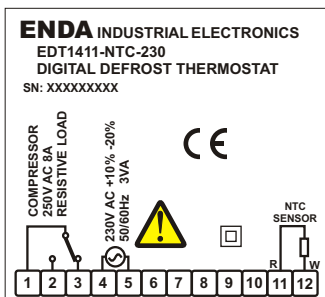


Output	Supply Voltage	Order Code
Relay	230V AC +%10 -%20	EDT1411-NTC-230
	12V AC/DC ±%10	EDT1411-NTC-12

Connection Diagram



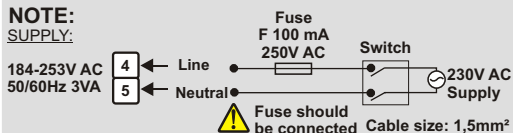
ENDA EDT1411 is intended for installation in control panels. Make sure that the device is used only for intended purpose. The electrical connections must be carried on by a qualified staff and must be according to the relevant locally applicable regulations. During an installation, all of the cables 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.



Holding screw
0.4-0.5Nm.

Equipment is protected throughout by DOUBLE INSULATION

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.

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 12V AC/DC ±%10, 50/60Hz.
Power consumption	Max. 3VA
Wiring	1.5mm² screw-terminal connections.
Scale	-50.0 ... +110.0°C (-58.0 ... +230.0°F)
Sensitivity/Accuracy	0.1°C / ±1°C
Time Accuracy	(±1-15sec) for hour unit, (±%1-1sec) for minute unit
Indicator	4 digits, 14mm, 7 parts yellow 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	
COMPRESSOR	Relay: 250V AC, 8A(for resistive load), NO+NC; 1/2 HP 250V AC Cos =0.4(for inductive load)
Life expectancy for relay	Mechanical 30.000.000; Electrical 100.000operation.

Note: The relay contacts are suitable for in-line switching of compressors up to 1/2 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 0.1 ... 20.0°C.

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



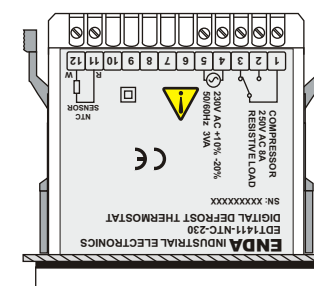
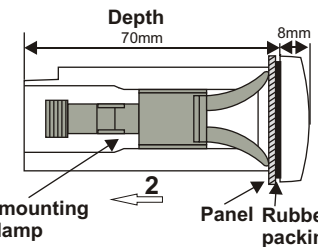
While cleaning the device, solvents (thinner, benzene, acid etc.) or corrosive materials must not be used.

Dimensions



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

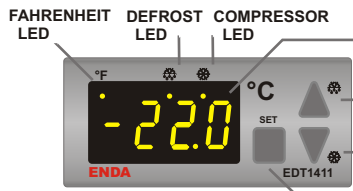
Flush mounting clamp

Panel Rubber packing

Panel cut-out

- 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

SİSEL MÜHENDİSLİK ELEKTRONİK SAN. VE TİC. A.Ş.
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Displayed process value in the run mode, parameter name or value in programming mode.

When held down for 3 second in the run mode, manual defrost starts. After the specified time with *ddur* parameter manual defrost finishes. When held down for 3 second manual defrost finishes before the specified time ends. 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.

When held down for 3 second in the run mode continuous mode starts. After the specified time with *CCon* parameter this mode finishes. When held down for 3 second continuous mode finishes before the specified time ends. 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.

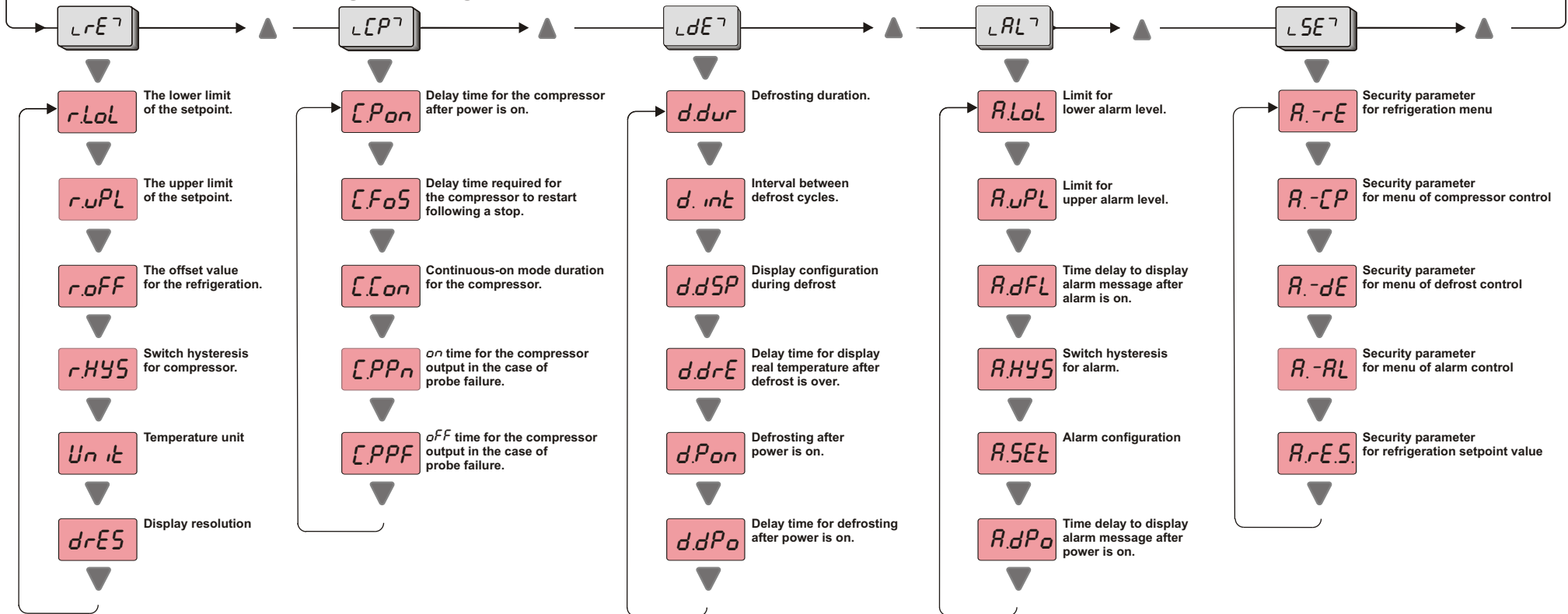
Run Mode



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

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

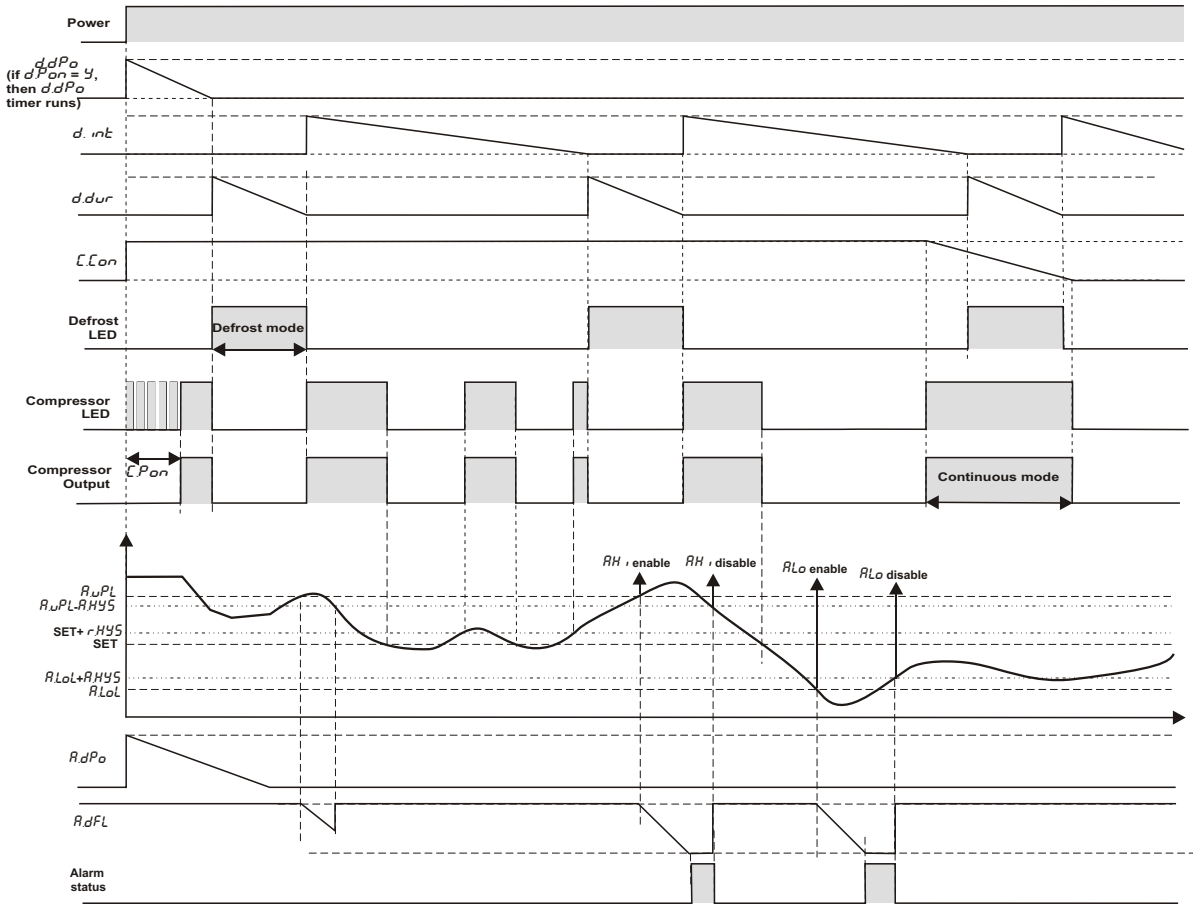
Programming Mode



Error Messages

- PSc** Means, thermostat probe is short circuit or temperature value is higher than the scale.
- PFA** Means, thermostat probe is broken or temperature value is lower than the scale.
- Rh_i** Means, measured value is higher than the adjusted upper alarm limit.
- ALo** Means, measured value is lower than the adjusted lower alarm limit.

EDT1411 OUTPUT AND PARAMETER TABLE



NOTE : Variables for lower and upper alarm level are determined according to $R.SET$ parameter. If $R.SET = RRb5$, then $R.LoL = R.LoL$ & $R.uPL = R.uPL$.
 If $R.SET = A.rEF$, then $R.LoL = SET-R.LoL$ & $R.uPL = SET+R.uPL$.

Menu of Refrigeration control parameters		MIN	MAX	UNIT	DEF.SET
$r.LoL$	The lower limit of the setpoint.	-50.0	$r.uPL$	°C	-50.0
$r.uPL$	The upper limit of the setpoint.	$r.LoL$	110.0	°C	110.0
$r.oFF$	The offset value for the refrigeration.	-20.0	20.0	°C	0.0
$r.HYS$	Switch hysteresis for compressor.	0.1	20.0	°C	0.1
$Un it$	Temperature unit	°C	°F		°C
$drES$	Display resolution (n = no decimal point, y = with decimal point.)	n	y		n
Menu of Compressor control parameters					
$C.Pon$	Delay time for the compressor after power is on.	0	255	min.	1
$C.FoS$	Delay time required for the compressor to restart following a stop.	0	255	min.	1
$C.Con$	Continuous-on mode duration for the compressor.	0.0	24.0	h.	0.1
$C.PPn$	on time for the compressor output in the case of probe failure.	0	255	min.	1
$C.PPF$	oFF time for the compressor output in the case of probe failure.	0	255	min.	1
Menu of Defrost control parameters					
$d.dur$	Defrosting duration. (If $d.dur=0$, then defrost is disable.)	0	255	min.	1
$d.int$	Interval between defrost cycles.	1	120	h.	1
$d.dSP$	Display configuration during defrost ($rERL$ = Real temperature is displayed during defrost. dEF = dEF message is displayed during defrost.)	$rERL$	dEF		dEF
$d.drE$	Delay time for display real temperature after defrost is over.	0	255	min.	1
$d.Pon$	Defrosting after power is on. (y =Defrosting begins when power is on, n =Defrosting doesn't begin when power is on.)	n	y		n
$d.dPo$	Delay time for defrosting after power is on.	0	30	min.	1
Menu of Alarm control parameters					
$R.LoL$	Limit for lower alarm level.	-50.0	$R.uPL$	°C	-50.0
$R.uPL$	Limit for upper alarm level.	$R.LoL$	110.0	°C	110.0
$R.dFL$	Time delay to display alarm message after alarm is on.	0	255	min.	0
$R.HYS$	Switch hysteresis for alarm.	0	15	°C	2
$R.SET$	Alarm configuration ($RRb5$ = Absolute alarm. Alarm values are $R.LoL$ and $R.uPL$. $R.rEF$ = Relative alarm. Alarm values are $SET-R.LoL$ and $SET+R.uPL$.)	$RRb5$	$R.rEF$		$RRb5$
$R.dPo$	Time delay to display alarm message after power is on.	0	23.5	hr.	0.3
Menu of Parameter security					
$R.rE$	Security parameter for refrigeration menu ($nOnE$ = menu is invisible, $P.YES$ = Parameters of menu are changeable, $P.No$ = Parameters of menu are only visible.)				
$R.-CP$	Security parameter for menu of compressor control ($nOnE$ = menu is invisible, $P.YES$ = Parameters of menu are changeable, $P.No$ = Parameters of menu are only visible.)				
$R.-dE$	Security parameter for menu of defrost control ($nOnE$ = menu is invisible, $P.YES$ = Parameters of menu are changeable, $P.No$ = Parameters of menu are only visible.)				
$R.-AL$	Security parameter for menu of alarm control ($nOnE$ = menu is invisible, $P.YES$ = Parameters of menu are changeable, $P.No$ = Parameters of menu are only visible.)				
$R.rES$	Security parameter for refrigeration setpoint value ($P.YES$ = Setpoint value is invisible, $P.No$ = Setpoint value is only visible.)				