



Read this document carefully before using this device. The guarantee will be expired by device damages 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.

Mithes TC510 ON/OFF TEMPERATURE CONTROLLER

Thank you for choosing **Mithes TC510** temperature controller.

- * 77 x 35mm sized.
- * NTC or J Sensor input types can be selected (specify at order).
- * Indicates NTC input as decimal.
- * Zero point input shift.
- * C1 Relay out for temperature control.
- * When C1 output configuration is selected for cooling, compressor delay time can be entered.
- * Selectable heating / cooling control.
- * In case of sensor failure, relay state can be configured as ON or OFF.
- * CE marked according to European Norms.



Order Code : TC510 - - -

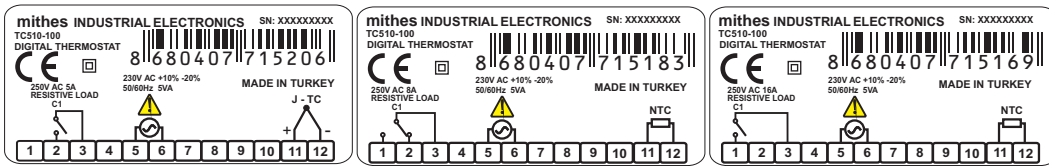
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- | | | |
|---------------------------|----------------------------|-------------------------------------|
| 1- Input selection | 2 - Supply Voltage | 3- Contact Current Selection |
| N.....NTC input | 230VAC...230V AC | 05.....5A Contact output |
| J....J Thermocouple | 110VAC...110V AC | 08.....8A Contact output |
| | 024VAC...24V AC | 16....16A Contact output |
| | SM.....9-30V DC / 7-24V AC | |
| | 24V.....12V / 24V DC | |


CONNECTION DIAGRAM



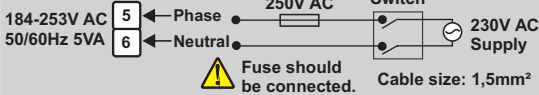
Mithes TC510 is intended for installation within control panels. Make sure that the device is used only for intended purpose. The shielding must be grounded on the instrument side. During an installation, all of the cables that are connected to the device must be free of electrical power. The device 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:



- 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

INPUT

Input Type	Scale Range	Accuracy
NTC Sensor Resistance EN 60751	-25.0...110.0 °C	± 1% (for full scale) ± 1 Digit
J (FeCuNi) Thermocouple EN 60751	-30.0...400.0 °C	± 1% (for full scale) ± 1 Digit

ENVIRONMENTAL CONDITIONS

Ambient/Storage temperature	0 ... +50 / °C -25... +70 °C
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	Max. 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 %±10
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: 2010 (Pollution degree 2, overvoltage category II)
Indicator	4 digits, 12.5mm, 7 segment red LED

OUTPUT


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.
Life Expectancy for Relay	For 16A Models : 250V AC, 16A (for resistive load), NO control output.
	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 no-load operation; 100.000 switching for 16A resistive load at 250VAC.

CONTROL

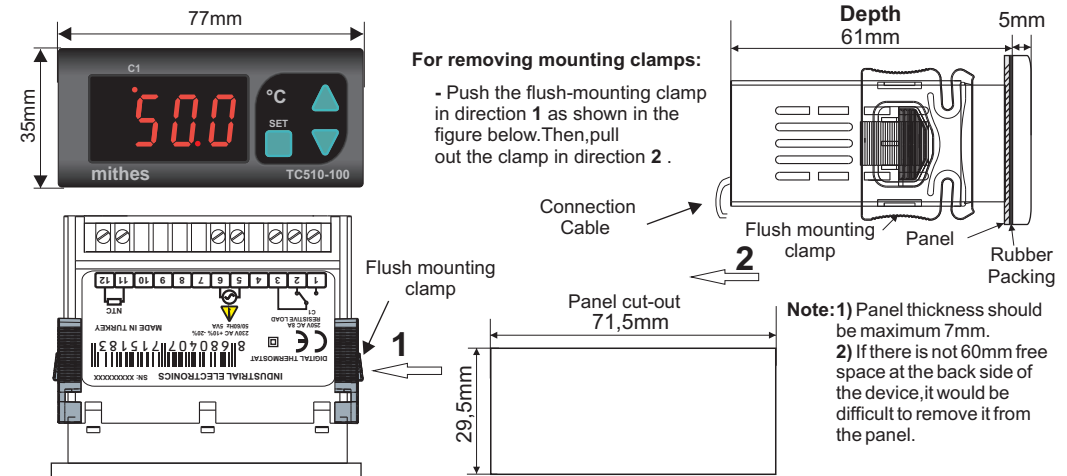
Control Type	Single-setpoint and alarm control.
Control Algorithm	On-Off Control.
A/D Converter	12 bit resolution, 100ms sampling time.
Hysteresis	Adjustable between 0.1 and 5.0°C/F.

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

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

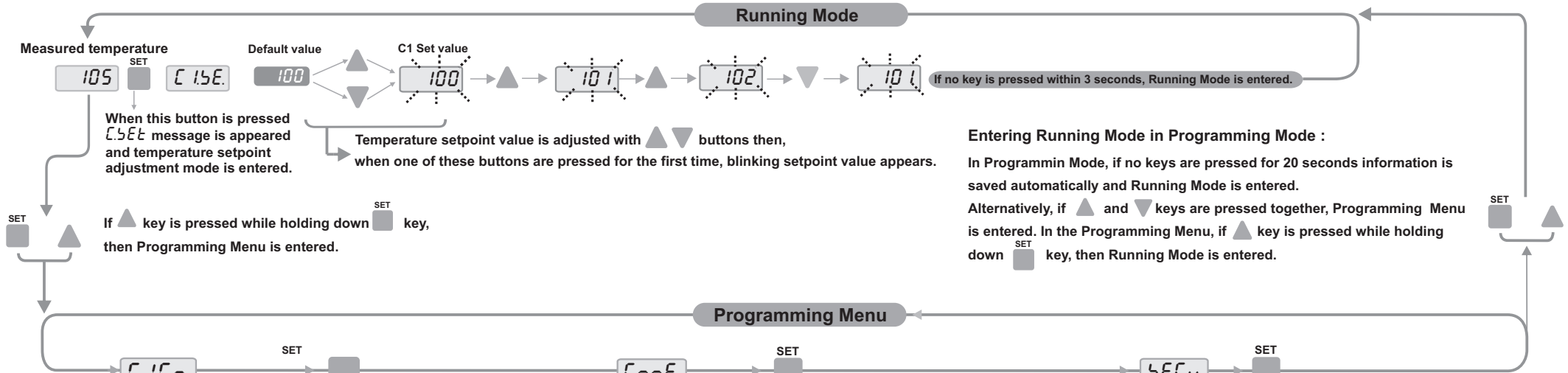
Dimensions



MTM ELEKTRİK ELEKTRONİK SAN. TİC. A.Ş.
ALTINŞEHİR MAH. ŞENEL CAD. NO. 100 Y.DUDULLU ÜMRANIYE
İSTANBUL - TÜRKİYE

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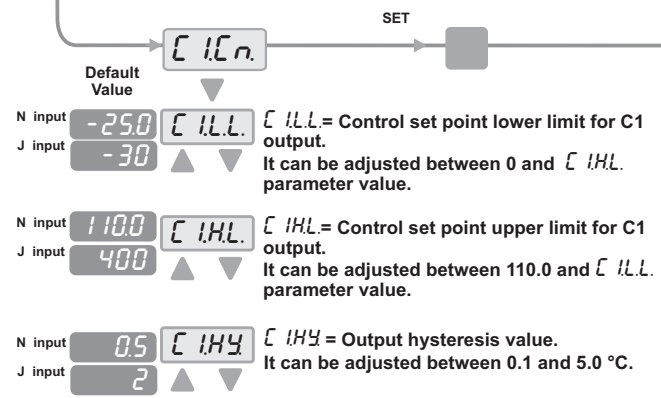
Programming Diagram



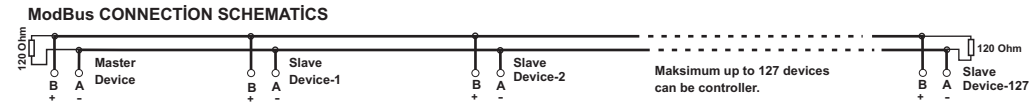
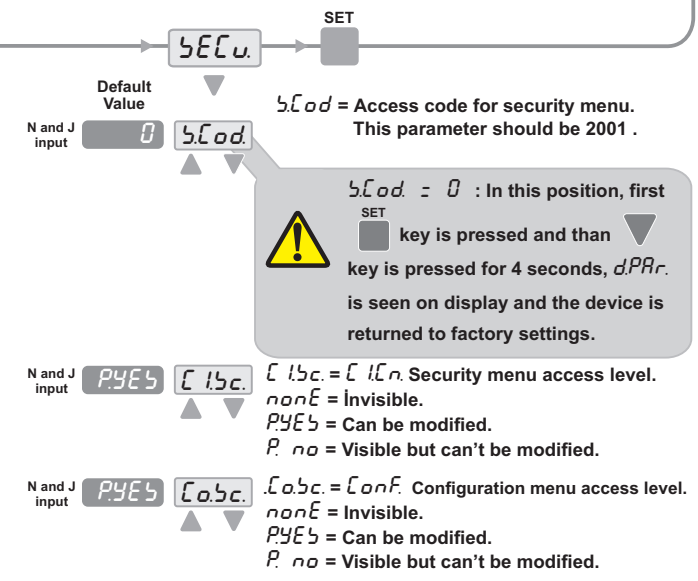
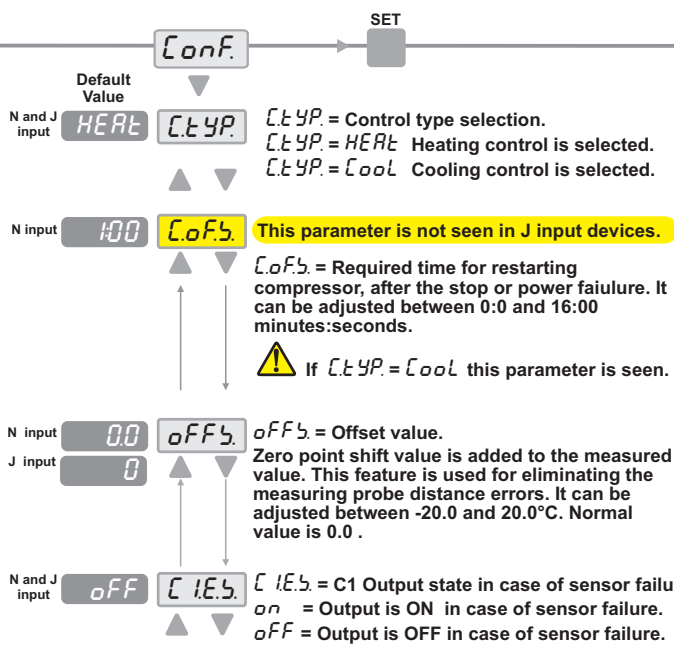
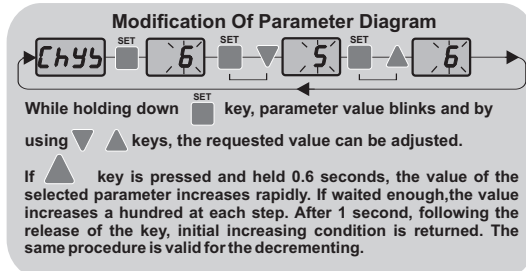
Entering Running Mode in Programming Mode :

In Programin Mode, if no keys are pressed for 20 seconds information is saved automatically and Running Mode is entered. Alternatively, if ▲ and ▼ keys are pressed together, Programming Menu is entered. In the Programming Menu, if ▲ key is pressed while holding down SET key, then Running Mode is entered.

Programming Menu



⚠ While the parameter names appear, if ▲ and ▼ keys are pressed together, returns to the program mode.



⚠ Terminations must be added to headline and endline by using 120 ohm resistors.

