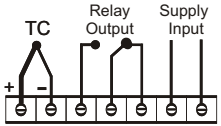
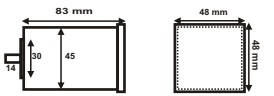
Connection Scheme



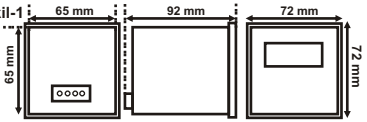
Dimensions

DT 48

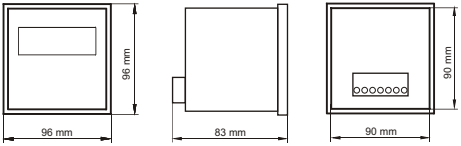


DT 72

Şekil-1



DT 96



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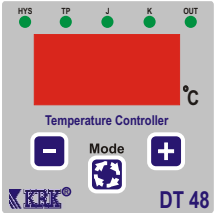
DIGITAL TEMPERATURE CONTROLLER

2 YEARS GUARANTEED

DT-48
DT-72
DT-96



User Guide

DT-72/96 Digital Temperature Controller

The microcontroller based, digital temperature controller with 3 digits display and memory protection.

A) General Specifications:

1) The process temperature value and control method can be indicated and adjusted easily on the digital display.
2) Control method can be chosen between ON-OFF or Time Proportional
3) Memory protection with EEPROM.
4) Input types are J type (Fe-CuNi) and K type (NiCr-Ni) thermocouples.
5) Relay output.
6) The control method (HYS-PI), thermocouple type (J, K) and output state (OUT) can be shown easily by LEDs.

B) Usage of Device :

When the device is energized, at first desired temperature value and then in automatic mode process temperature is seen on the display. By pressing the “MODE” button on the front panel, the message on the display shows the control method. “HYS” message means ON-OFF, “tp” message means the Time Proportional control method is using.
By first pressing the “MODE” button the set value can be seen on the front panel. In 3 seconds, if “MODE” button is pressed again, the control method and value are seen. After that if “MODE” button is pressed again, the control method can be changed and the new control method and value are seen. When “MODE” button is released, process temperature is seen again automatically. In Automatic Mode, if “MODE” button is pressed in 3 seconds, thermocouple type can be changed J or K.
By using the “MODE” button, desired temperature value (SET), ON-OFF control method's hysteresis value (HYS) and according to the 20 ºC proportional band of Time Proportional form's control period (tp) can be chosen.

Setting ranges;

SET from -50ºC to 900ºC , HYS from 2ºC to 20ºC , TP from 10 s. to 200 s
The value is seen on the display, can be adjusted with “+” and “-” buttons. 3 seconds after the adjustment, the adjustment value is automatically saved and then process temperature is seen on the display automatically.

Factory Defaults;

SET : 200ºC
HYS : 10ºC
TP : 20 s.

D) Technical Specifications:

Measurement Range	: -99 ...999 ºC
Control Range	: -50...900 ºC
Accuracy	:± %1
Display	: 3-Digit, Red,DT-48 10mm,DT72/96 14mm
Supply Voltage	: 230V AC ± %20, 50-60 Hz.
Power Consumption	: <=3W
Electrical Life	: 300.000 On/Off (Resistive Load)
Operating Temperature	: -5...+55ºC
Temperature Compensation	: -5...+55ºC
HYS Value Range	: 2ºC - 20ºC (for ON-OFF method)
Proportional Band	: 20 ºC (for Time Proportional method)
Control Period	: 10s-200s(for Time Proportional method)
Sensibility	: 1ºC
Control Output	: Relay, (220 V AC, 5A)
Electrical Connector	: Socketed Connectors
Connection	: Front Panel
Dimensions	: 48x48 ,72 x 72 , 96 x 96

C) Working of Device:

ON-OFF control method;

If the process temperature is bigger then the desired temperature value, the control output is deenergised. If the process temperature is smaller then the desired Temperature value, the control output is energized.

Time Proportional control method;

Due to the proportional band which is 20 ºC, 10 ºC under and over of the desired temperature value, device works as same as ON-OFF control method. In the other values device works related to the control period.
When using these forms, if the energy is cut off, adjusted values and control method retains.If the “Err” message is seen on the display, it means temperature sensor is disconnected or over temperature condition is occured. When this message is seen, the control output is deenergised.