

# TEMPERATURE CONTROLLER TC-442



## TECH SPECS

Model	TC-442
Dimension (HxWxD) mm	48 x 48 x 70
Panel Cutout	45 x 45
Input	J & K Type Thermocouple
Range	J: 0 to 400° C, K: 0 to 500° C
Output	2 Relay 1 C/O, 10A 230V AC/28V DC & 1st Relay Parallel to SSR 12V DC
Control Action	PID / TP / ON-OFF ( Configurable )
Mode	Heating / Cooling / Alarm ( Configurable )
Power Supply	100-270V AC, 50/60 HZ

## APPLICATIONS

Packaging Machinery

Extrusion Machinery

Furnace & Boilers

Ovens & Incubators

Food Industry

# Technical Specifications

Input	
Input Type	Thermocouple : ( J, K )
Display Range	Refer ( Table 1 )
Accuracy	± 1% of FSD
ADC Resolution	10 Bits
Display Resolution	Thermocouple : 1 °C
Sample Rate	6 Sample / Sec
CJC Error	± 2 °C
Sensor Open	All Input
Sensor Burnout Current	1.10uA
RTD Excitation Current	0.2mA
CMRR	>120 db ( Typical )
Input Impedance	>1M
Max Voltage	20V DC

Output	
<b>Control Output</b>	
Control Type	On-Off, Auto tune PID,TP
Proportional Band	0.0 to 99.9
Integral Time	0 to 999
Derivative Time	0 to 999
Cycle Time	4 sec to 99 sec
<b>Relay Control Output</b>	
Relay	2Relay 1C/O
Rating	10A @230V AC/28V DC Resistive Load
<b>SSR Control Output</b>	
1st Relay Parallel to SSR 12V DC	

Physical	
	<b>TC-442</b>
Enclosure	Molded ABS
Weight	180gm
Color	Black
Front Bezel ( mm )	48 x 48
Panel cutout ( mm )	45 x 45
Depth behind panel	70 mm
Accessories	1 pair of Mounting clamp
Terminal Cable Size	Barrier Type terminal Cable Size ( 2.5 mm <sup>2</sup> )

Environmental	
Operating Temperature	0 to 55 °C
Storage Temperature	0 to 70 °C
Humidity	95% RH Non-condensing
Protection	IP 54 ( Front Side )

Power Supply	
Standard	100 - 270V AC @ 50/60 Hz
Optional	24V DC
Consumption	4VA

Display ( Table 1 )	
	<b>TC-442</b>
Process Value	UPPER: 3 Digit 7 seg 0.63",RED/ WHITE LED Display
Set Value	LOWER: 3 Digit 7 seg 0.30",GREEN LED Display
Keys	SET, INC, DEC, ENT

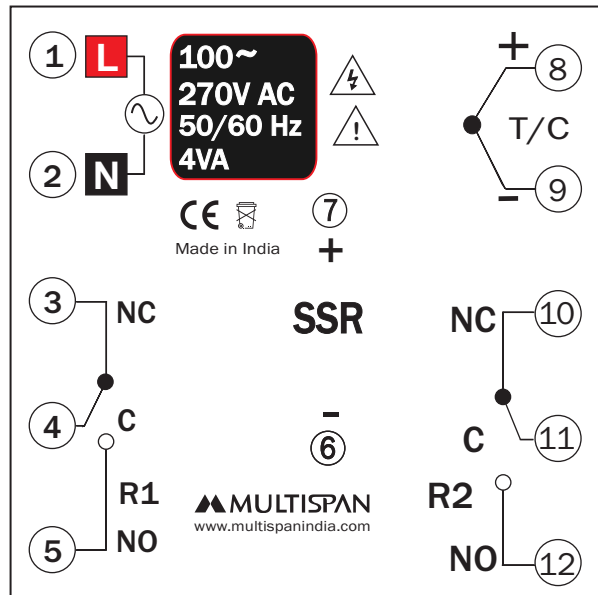
**Table 1 ( Sensor Range )**

J	0 to 400 °C
K	0 to 500 °C

## Mechanical Dimension

Outline Dimension (mm)	Panel Cutout Dimension (mm)

## Terminal Diagram



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