



# TEMPERATURE CONTROLLER

TC-443

## APPLICATIONS

Packaging Machinery

---

Extrusion Machinery

---

Furnace & Boilers

---

Ovens & Incubators

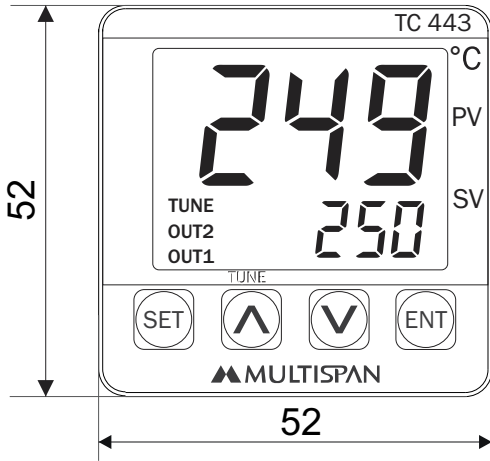
---

Food Industry

---

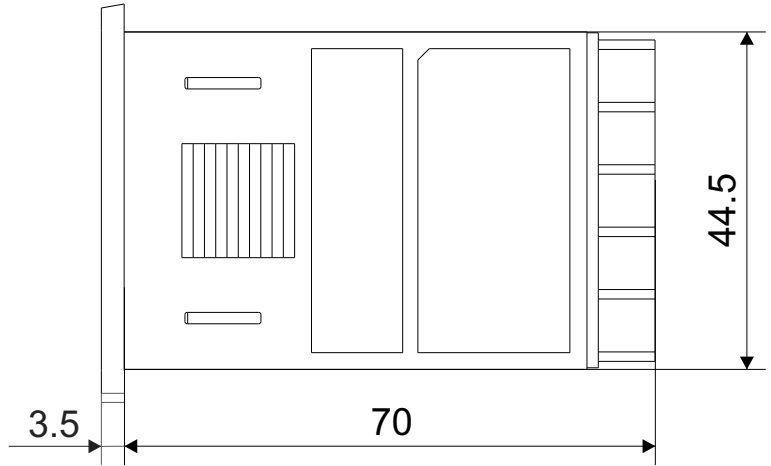
# Mechanical Dimensions

## Body Dimensions



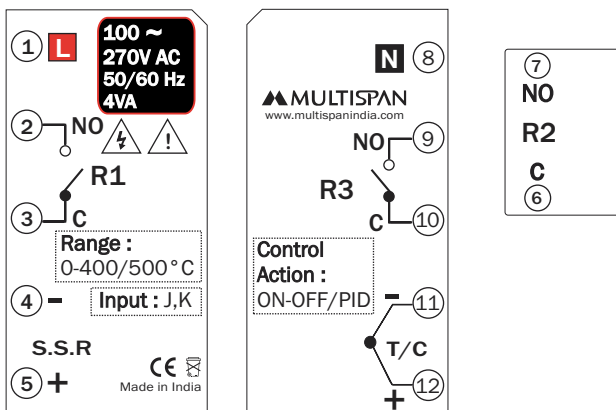
**FRONT VIEW**

All dimensions are in mm

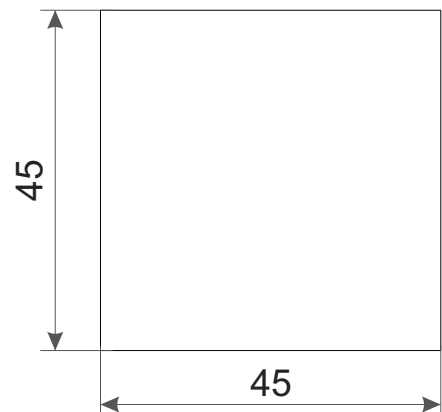


**RIGHT SIDE VIEW**

## Connection Diagram



## Panel Cutout



# TECHNICAL DATA

<b>Input Current</b>	J & K Thermocouple
<b>Range</b>	J: 0 to 400° C ,k: 0 to 500° C
<b>Output</b>	3 Relay 1(NO-C), 5 A 230V AC & 1st Relay Parallel to SSR 12V DC
<b>Control Action</b>	PID /TP / ON-OFF (Configurable)
<b>Mode</b>	Heating /Cooling/ Alarm (Configurable)
<b>Power Supply</b>	100-270V AC, 50/60 HZ

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

Output	
Control Output	
<b>Control Type</b>	On-Off, Auto Tune, PID,TP
<b>Proportional Band</b>	0.0 to 99.9
<b>Integral Time</b>	0 to 999
<b>Derivative Time</b>	0 to 999
<b>Cycle Time</b>	4 sec to 99 sec
Relay Control Output	
<b>Relay</b>	3 Relay (NO-C)
<b>Rating</b>	5A @230V AC Resistive Load
SSR Control Output	
1st Relay Parallel to SSR 12V DC	

Display (Table 1)	
<b>Process Value</b>	Upper: 3 Digit 7 seg 0.63" Red/White LED Display
<b>Set value</b>	Lower: 3 Digit 7 seg 0.30" Green LED Display
<b>Key</b>	SET, INC, DEC, ENT

Table 1 ( Sensor Range )	
<b>J</b>	0 to 400° C
<b>k</b>	0 to 500° C

Power Supply	
<b>Power Supply</b>	100 to 270V AC, 50/60Hz
<b>Optional</b>	24V DC
<b>Consumption</b>	4VA

### Environmental Characteristics

<b>Working Temperature</b>	0 to 55 °C
<b>Storage Temperature</b>	0 to 55 °C
<b>Relative Humidity</b>	95% RH Non-condensing
<b>Protection</b>	IP 65 (Front Side)

### Mechanical Characteristics

<b>Mounting Type</b>	Panel Mount
<b>Dimension (HxWxD) mm</b>	52 x 52 x 70
<b>Panel Cutout (HxW) mm</b>	45 x 45
<b>Material</b> <b>Body</b>	Polycarbonate (PC)
<b>Terminal Screw Size</b>	M3.5
<b>Screw Torque (N.m)</b>	0.5
<b>Wire Gauge (AWG)</b>	26-14
<b>Weight (Approx) gms</b>	Unpacked : 115 Packed : 145
<b>Accessories</b>	1 Mounting Clamp