



# TEMPERATURE CONTROLLER

TC-49P

## APPLICATIONS

Packaging Machinery

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Extrusion Machinery

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Furnace & Boilers

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Ovens & Incubators

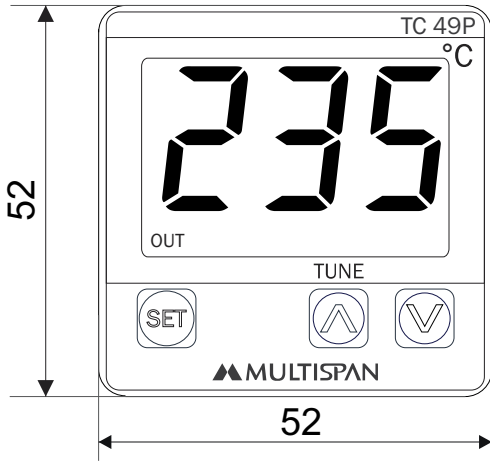
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Food Industry

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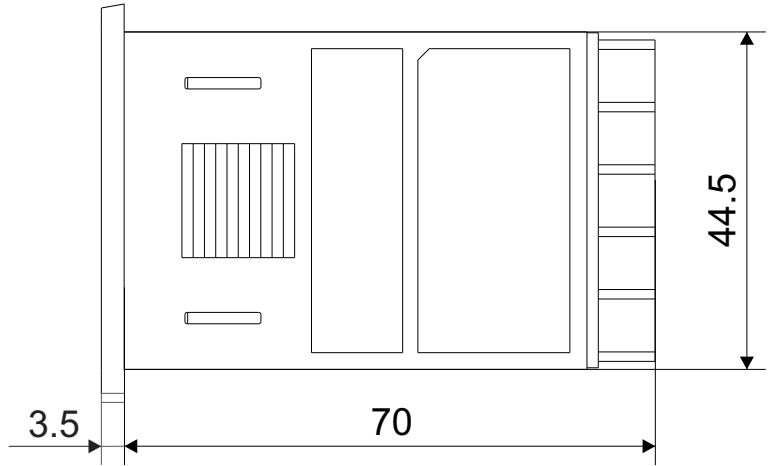
# Mechanical Dimensions

## Body Dimensions



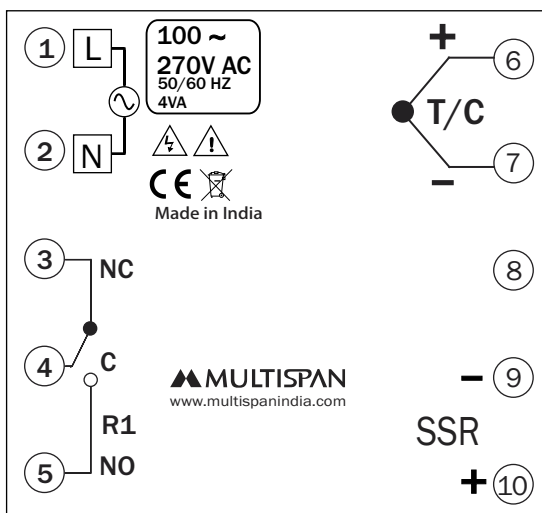
**FRONT VIEW**

All dimensions are in mm

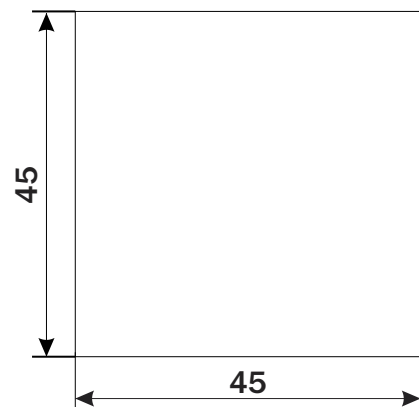


**RIGHT SIDE VIEW**

## Connection Diagram



## Panel Cutout



# TECHNICAL DATA

<b>Input</b>	J / K (Configurable) PT-100/ 2 or 3 Wire ( Factory set )
<b>Range</b>	J: (0 to 600 °C), K: (0 to 999 °C) PT-100: ( 0 to 400 °C ) , -50 to 200.0 °C ( Factory set) (1 set point)
<b>Output</b>	1 Relay 1 C/O, 5A, 230V AC (Resistive Load) & SSR Drive O/P 12V DC, 20mA (Parallel to Relay)
<b>Control Action</b>	PID / ON-OFF ( Configurable )
<b>Power Supply</b>	100-270V AC, 50/60 Hz

## Input

<b>Input Type</b>	Thermocouple : ( J, K ) or PT-100
<b>Display Range</b>	Refer ( Table 1 )
<b>Accuracy</b>	± 1% of FSD
<b>ADC Resolution</b>	10 Bit
<b>Display Resolution</b>	Thermocouple : 1 °C RTD : 1 °C
<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

## Power Supply

<b>Standard</b>	100 - 270V AC, 50/60Hz
<b>Optional</b>	24V DC
<b>Consumption</b>	4VA

**Table 1 ( Sensor Range)**

<b>J</b>	0 to 600 °C
<b>K</b>	0 to 999 °C
<b>PT-100</b>	0 to 400 °C , -50 to 200 °C ( Factory set )

## Output

Control Output	
<b>Control Type</b>	ON-OFF , PID
<b>Proportional Band</b>	000 to 99.9
<b>Integral Time</b>	000 to 999
<b>Derivative Time</b>	000 to 999
<b>Cycle Time For SSR For Relay</b>	1 sec to 99 sec 4 sec to 99 sec
Relay Control Output	
<b>Relay</b>	1 Nos.
<b>Rating</b>	5A @230V AC / 28V DC Resistive Load
SSR Control Output	
<b>Rating</b>	12V DC @30mA

## Display & Keys

<b>Process Value</b>	3 Digit 7 seg 0.8", RED LED Display
<b>Keys</b>	SET, INC, DEC
<b>LED Indication</b>	OUTPUT

### Environmental Characteristics

Working Temperature	0 to 55 °C
Storage Temperature	0 to 55 °C
Relative Humidity	95% RH Non-condensing
Warm up time	5 minutes

### Mechanical Characteristics

Mounting Type	Panel Mount
Dimension (HxWxD) mm	52 x 52 x 70
Panel Cutout (HxW) mm	45 x 45
Material	Body Polycarbonate (PC)
Terminal Screw Size	M3.5
Screw Torque (N.m)	0.5
Wire Gauge (AWG)	26-14
Weight (Approx) gms	Unpacked : 110 Packed : 140
Accessories	1 Mounting Clamp