



# TEMPERATURE CONTROLLER

TC-49

## APPLICATIONS

Packaging Machinery

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Extrusion Machinery

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Furnace & Boilers

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Ovens & Incubators

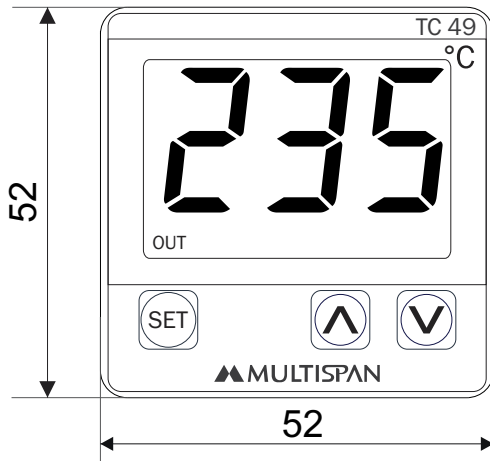
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Food Industry

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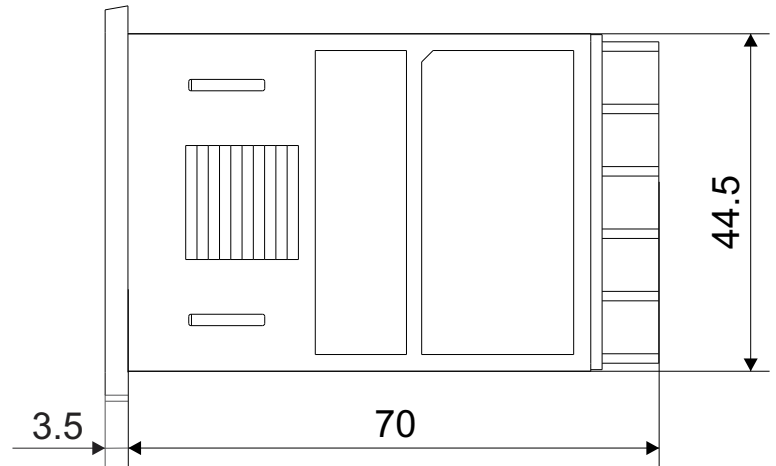
# Mechanical Dimensions

## Body Dimensions



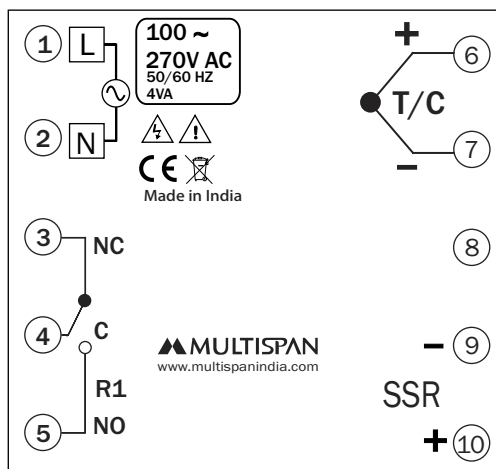
**FRONT VIEW**

All dimensions are in mm

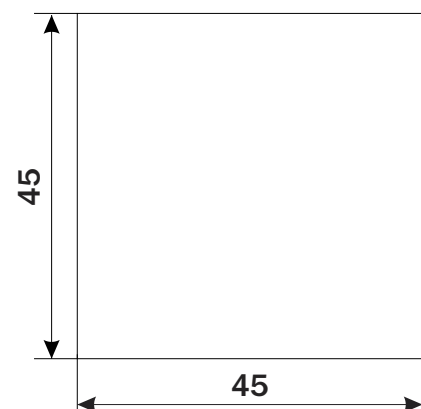


**RIGHT SIDE VIEW**

## Connection Diagram



## Panel Cutout



# TECHNICAL DATA

|                       |   |
|-----------------------|---|
| <b>Input</b>          | J / K or PT-100 2W/3W ( Factory set )   |
| <b>Range</b>          | J: 600 °C , K: 999 °C<br>PT-100 : -50 °C to 400 °C  |
| <b>Output</b>         | 1 Relay 1 C/O, 5A, 230V AC (Resistive Load) &<br>SSR Drive O/P 12V DC, 20mA (Parallel to Relay) |
| <b>Control Action</b> | TP / ON-OFF ( Factory set )   |
| <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<br>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                            |

## Output

|                             |  |
|-----------------------------|--|
| <b>Control Output</b>       |  |
| <b>Control Type</b>         | ON-OFF , TP                            |
| <b>Relay Control Output</b> |  |
| <b>Relay</b>                | 1 Nos.                                 |
| <b>Rating</b>               | 5A @230V AC / 28V DC<br>Resistive Load |
| <b>SSR Control Output</b>   |  |
| <b>Rating</b>               | 12V DC @30mA                           |

## Table 1 ( Sensor Range)

|               |               |
|---------------|---------------|
| <b>J</b>      | 0 to 600 °C   |
| <b>K</b>      | 0 to 999 °C   |
| <b>PT-100</b> | -50 to 400 °C |

## Power Supply

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

## Display & Keys

|                |   |
|----------------|---|
| <b>Display</b> | 3 Digit 7 seg 0.8",<br>RED/WHITE LED Display<br>with output indicator |
| <b>Keys</b>    | SET, INC, DEC   |

### 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<br>Packed : 140 |
| Accessories           | 1 Mounting Clamp               |