



# TEMPERATURE CONTROLLER

TC-29P

## APPLICATIONS

Packaging Machinery

Extrusion Machinery

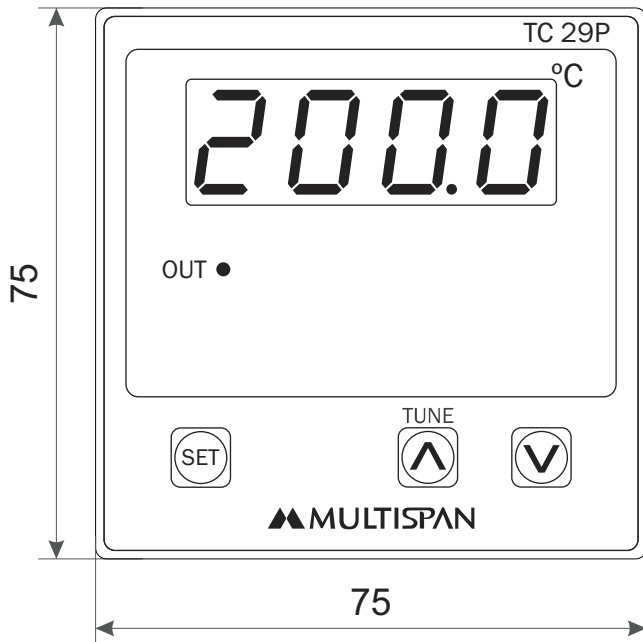
Furnace & Boilers

Ovens & Incubators

Food industry

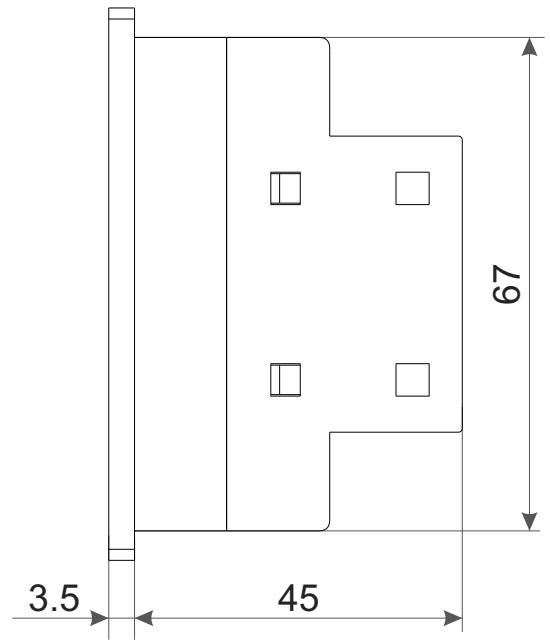
# Mechanical Dimensions

## Body Dimensions



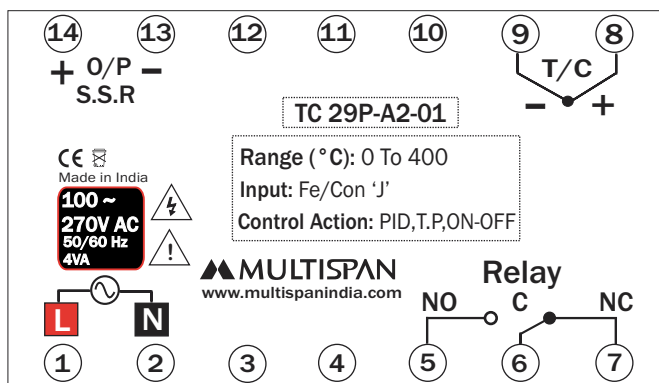
**FRONT VIEW**

All dimensions are in mm

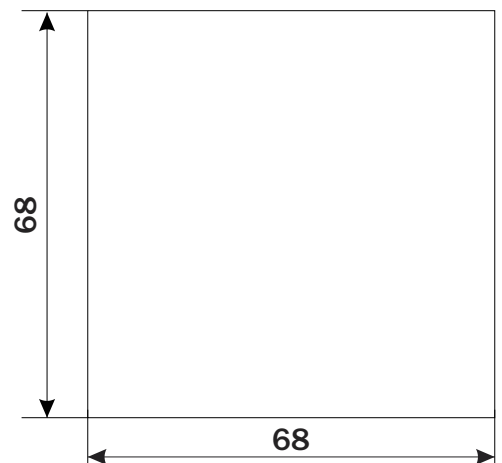


**RIGHT SIDE VIEW**

## Connection Diagram



## Panel Cutout



# TECHNICAL DATA

|                       |   |
|-----------------------|---|
| <b>Input</b>          | J or PT-100 2W/3W (Factory Set)   |
| <b>Range</b>          | J (0 °C to 400 °C)<br>PT-100 2 Wire or 3 Wire 0 °C to 400 °C,<br>(Any one factory set)  |
| <b>Output</b>         | 1 Relay 1 C/O, 5A, 230V AC (Resistive Load)<br>or SSR Drive O/P 12VDC, 20mA (Parallel to Relay)/<br>1 Set point (Factory Set) |
| <b>Control Action</b> | PID / TP / ON-OFF ( Configurable )  |
| <b>Power Supply</b>   | 100 to 270V AC,50/60Hz  |

| Input                         |  |
|-------------------------------|--|
| <b>Input Type</b>             | Thermocouple : ( J )<br>PT-100 2 Wire or 3 Wire<br>(Factory Set) |
| <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<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>         | PID / TP / ON-OFF                      |
| <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                           |

| Display, Led & Keys   |   |
|-----------------------|---|
| <b>Process Value</b>  | 4 Digit 7 Seg 0.56",<br>RED LED Display |
| <b>Key</b>            | SET,INC,DEC                             |
| <b>LED Indication</b> | Relay                                   |

| Auxiliary power supply |                        |
|------------------------|------------------------|
| <b>Standard</b>        | 100 to 270V AC,50/60Hz |
| <b>Consumption</b>     | 4VA                    |

| Table 1 (Sensor Range)  |             |
|-------------------------|-------------|
| J                       | 0 to 400 °C |
| PT-100 2 Wire or 3 Wire | 0 to 400 °C |

### Environmental Characteristics

|                     |                       |
|---------------------|-----------------------|
| Working Temperature | 0 to 55 °C            |
| Storage Temperature | 0 to 55 °C            |
| Relative Humidity   | 95% RH Non-condensing |

### Mechanical Characteristics

|                       |                                |
|-----------------------|--------------------------------|
| Mounting Type         | Panel Mount                    |
| Dimension (HxWxD) mm  | 75 x 75 x 45                   |
| Panel Cutout (HxW) mm | 68 x 68                        |
| Material              | Front<br>Enclosure             |
|                       | Polycarbonate (PC)<br>ABS      |
| Terminal Screw Size   | M3.5                           |
| Screw Torque (N.m)    | 0.5                            |
| Wire Gauge (AWG)      | 26-14                          |
| Weight (Approx) gms   | Unpacked : 125<br>Packed : 155 |
| Accessories           | 1 Pair of Mounting Clamps      |