



# TEMPERATURE CONTROLLER

UTC-4202G+

## APPLICATIONS

Packaging Machinery

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Extrusion Machinery

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Furnaces & Boilers

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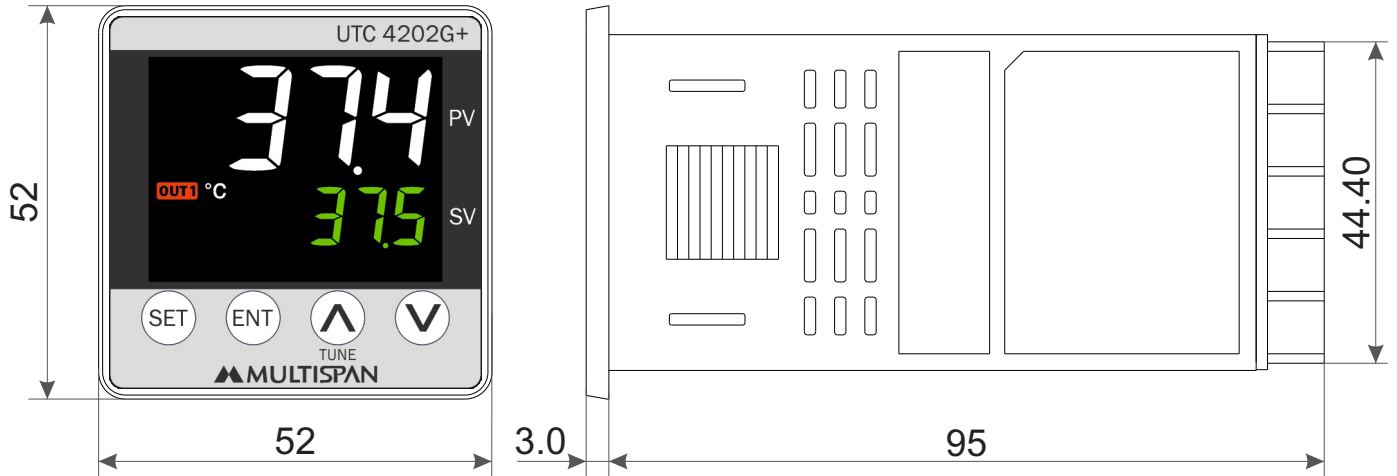
Ovens & Incubators

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Food Industry

# Mechanical Dimensions

## Body Dimensions

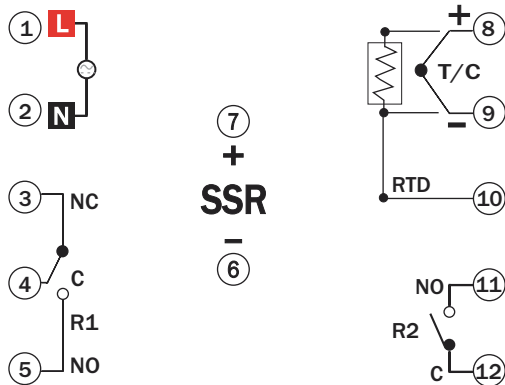


### FRONT VIEW

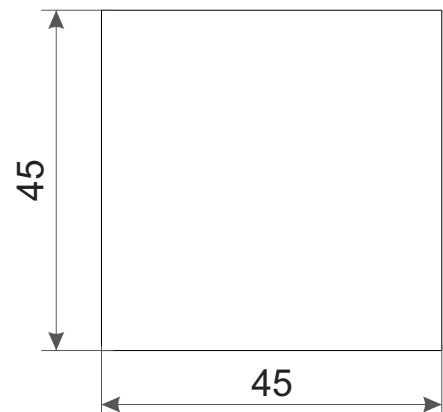
All dimensions are in mm

### RIGHT SIDE VIEW

## Connection Diagram



## Panel Cutout



# TECHNICAL DATA

|                       |                     |                                                                                                                                                                                                                                                          |
|-----------------------|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Input</b>          | <b>Thermocouple</b> | J/ J.1 / K / K.1 / E / B / R / S / T / N (Configurable)                                                                                                                                                                                                  |
|                       | <b>RTD</b>          | PT-100/ PT.1 2 or 3Wire (Configurable)                                                                                                                                                                                                                   |
| <b>Range</b>          |                     | Thermocouple :- J: 0 to 600°C, J.1: 0.0 to 600.0°C,<br>K: 0 to 1200°C, K.1: 0.0 to 950.0°C, E: 0 to 650°C,<br>N: 0 to 1250°C, T: 0 to 350°C, B: 150 to 1800°C<br>R: 0 to 1600°C, S: 0 to 1800°C<br>RTD :- PT-100: -200 to 400°C, PT.1: -199.9 to 400.0°C |
| <b>Output</b>         |                     | 2 Relay 1 C/O, 5A, 230V AC For Resistive Load,<br>& SSR 12V DC Parallel                                                                                                                                                                                  |
| <b>Control Action</b> |                     | PID / ON-OFF / TP / BL.TP ( Configurable )                                                                                                                                                                                                               |
| <b>Operating Mode</b> |                     | High / Low / Inband / Outband / Absolute Low<br>Absolute Outband Alarm ( Configurable )<br>+ Soak Time                                                                                                                                                   |
| <b>Power Supply</b>   |                     | 100-270V AC/DC, 50/60 Hz, Approx 5VA                                                                                                                                                                                                                     |
| <b>Certification</b>  |                     |                                                                                                                                                                       |

## Input Table

| Input Type | Range             | Accuracy               | ± 0.50% of FSD                                                                                  |
|------------|-------------------|------------------------|-------------------------------------------------------------------------------------------------|
| J          | 0 to 600°C        | ADC Resolution         | 12 Bit                                                                                          |
| J.1        | 0.0 to 600.0°C    | Display Resolution     | Thermocouple<br>J, K, S, R, B, E, T, N : 1°C<br>K.1, J.1 : 0.1°C<br>RTD : PT: 1°C / PT.1: 0.1°C |
| K          | 0 to 1200°C       | Sample Time            | 600 msec                                                                                        |
| K.1        | 0.0 to 950.0°C    | CJC Error              | ± 2°C                                                                                           |
| PT-100     | -200 to 400°C     | Sensor Open            | All Sensor                                                                                      |
| PT.1       | -199.9 to 400.0°C | Sensor Burnout Current | 1.10uA                                                                                          |
| R          | 0 to 1600°C       | RTD Excitation Current | 0.2mA                                                                                           |
| S          | 0 to 1800°C       | CMRR                   | >120 dB ( Typical )                                                                             |
| E          | 0 to 650°C        | Max Voltage            | 20V DC                                                                                          |
| N          | 0 to 1250°C       | Input Impedance        | >1M                                                                                             |
| T          | 0 to 350°C        |                        |                                                                                                 |
| B          | 150 to 1800°C     |                        |                                                                                                 |

### Display & Keys

|                                                                          |                                                                                            |
|--------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| <b>Display</b>                                                           | UPPER:- 4 Digit 7 seg 0.70",<br>LED Display<br>LOWER:- 4 Digit 7 seg 0.43",<br>LED Display |
| <b>LED Status</b>                                                        | Relay OR SSR                                                                               |
| 4 controlling keys for configuration and operation<br>SET, ENT, UP, DOWN |                                                                                            |

### Environmental Characteristics

|                            |                       |
|----------------------------|-----------------------|
| <b>Working Temperature</b> | 0 to 55 °C            |
| <b>Storage Temperature</b> | 0 to 70 °C            |
| <b>Relative Humidity</b>   | 95% RH Non-condensing |
| <b>Protection</b>          | IP 65 ( Front Side )  |

### Power Supply

|                    |                           |
|--------------------|---------------------------|
| <b>Standard</b>    | 100 - 270V AC/DC, 50/60Hz |
| <b>Optional</b>    | 24V DC                    |
| <b>Consumption</b> | 5VA                       |

### Output

#### Control Output

|                                         |                                              |
|-----------------------------------------|----------------------------------------------|
| <b>Control Type</b>                     | Auto tune PID, ON-OFF, TP,<br>BL.TP(Select.) |
| <b>Proportional Band</b>                | 0000 to 999.9                                |
| <b>Integral Time</b>                    | 0000 to 9999                                 |
| <b>Derivative Time</b>                  | 0000 to 9999                                 |
| <b>Cycle Time For Relay<br/>For SSR</b> | 4.0 sec to 99.9 sec<br>0.1 sec to 99.9 sec   |

#### Relay Control Output

|               |                                                |             |
|---------------|------------------------------------------------|-------------|
| <b>Relay</b>  | 1R                                             | NO - C - NC |
|               | 2R                                             | NO - C - NC |
| <b>Rating</b> | Relay 1: 5A @230V AC/<br>28V DC Resistive Load |             |
|               | Relay 2: 5A @230V AC/<br>28V DC Resistive Load |             |

#### SSR Control Output

|               |              |
|---------------|--------------|
| <b>Rating</b> | 12V DC @30mA |
|---------------|--------------|

### Mechanical Characteristics

|                              |                                |
|------------------------------|--------------------------------|
| <b>Mounting Type</b>         | Panel Mount                    |
| <b>Dimension (HxWxD) mm</b>  | 52 x 52 x 95                   |
| <b>Panel Cutout (HxW) mm</b> | 45 x 45                        |
| <b>Material</b>              | Body 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 : 150<br>Packed : 180 |
| <b>Accessories</b>           | 1 Mounting Clamp               |