OVERVIEW

Model 3300 is a digital, microprocessor based temperature controller designed to be used in conjunction with TECA products. When ordering a complete package, simply plug in the control cable and with factory preset tuning and you are ready to go!

All models are designed with Nema-4X front panel for corrosion and water resistance. This is ideal for applications such as food processing where equipment needs to be cleaned frequently. Features such as auto-tuning, dual output, and single input are available from these controllers. Each unit comes with factory default programming, but can be user modified through a setup menu.

FEATURES

- Easy-to-use Auto-tune program
- Simple menu-driven programming
- Full P.I.D. operation
- Single ramp/soak (dwell) program
- Heat-cool operation
- IP66 protection
- CE compliant
- Thermocouple, PT100 (RTD) & mV
- Two outputs, SSR driver or Relay
- 5-alarm modes, full scale, deviation & band
- RS232 or RS485 (retrofittable)
- MODBUS RTU protocol

SPECIFICATIONS

Thermocouple
- Standards: IPTS/68/DIN 43710
- CJC rejection 20:1 (0.05°/°C) typical
- External resistance: 1000Ω maximum

Resistance Temperature Detector – (RTD)
- RTD/Pt100 2 wire
- Standards: DIN 43760 (100%0°C/138.5½100°C Pt)
- Bulb current: 0.2mA maximum

Applicable to all inputs
- Calibration accuracy: ±0.25%SM ±1°C
- Sampling frequency: input 10Hz, CJC 2 sec
- Common mode rejection: Negligible effect up to 140dB, 240V, 50-60Hz
- Series mode rejection: 60dB, 50-60Hz
- Temperature coefficient: 150ppm/°C SM

Output devices (Maximum 2 outputs)
- 5sd: Solid state relay driver: to switch a remote SSR 5Vdc +0/-15% 15mA non-isolated
- Miniature power relay: Form A/SPST contacts (AgCdO) 2A/250 VAC resistive load
- 2nd relay (option) Form A/SPST contacts (AgCdO) 1A/250 VAC resistive load

General
- Displays: Main, 4 digits high brightness green LED, 10mm high
- Lower (9400 only), 4 digits high brightness orange LED, 9mm high
- LED output indicators – flashing SP1 square green, SP2 round red
- Keypad: 3 full travel elastomeric buttons
- Weight: 110g

Environmental
- Safety: UL 873, EN 61010, CSA 22.2 No. 1010. 1-92
- Humidity: Max 80%
- Altitude: up to 2000m
- Installation: Categories II and III
- Pollution: Degree II
- Protection: NEMA 4X, IP66
- EMC emission: EN50081-1, FCC Rules 15 subpart J Class A
- EMC immunity: EN50082-2
- Ambient: 0–50°C
- Mouldings: Flame retardant polycarbonate
## TC-3300 PID Temperature Controller

### Part Number and Ordering

<table>
<thead>
<tr>
<th>Options</th>
<th>Panel Cutout Spacing</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>20 mm (0.79)</td>
</tr>
<tr>
<td>X</td>
<td>10 mm</td>
</tr>
</tbody>
</table>

#### Input Voltage
- **0**: Universal AC - 100 to 240Vac, 50/60 Hz
- **4**: 12V - 24V (AC/DC) +/-20% 4.0 VA Polarity not required

#### Functions
- **0**: For assembly with TECA unit
- **1**: Cool only - No relay
- **2**: Heat/Cool - No relay
- **3**: Cool only, with relays
- **4**: Heat/Cool, with relays

#### Switching Volts & Amps
- **A**: None, drive signal only - no relays
- **B**: Cool only, VAC switching, 120/240Vac, 10 Amps
- **C**: Cool Only, VDC switching, 0-100 VDC, 12 Amps
- **D**: Cool Only, VDC switching, 0-100 VDC, 20 Amps
- **E**: Cool Only, VDC switching, 0-100 VDC, 40 Amps
- **F**: Heat/Cool, VDC switching, 0-100 VDC, 12 Amps
- **G**: Heat/Cool, VDC switching, 0-100 VDC, 20 Amps
- **H**: Heat/Cool, VDC switching, 0-100 VDC, 40 Amps
- **I**: Heat/Cool, Heat: 120/240 VAC, 10 amps; Cool: VDC switching, 0-100 VDC, 12 Amps
- **J**: Heat/Cool, Heat: 120/240 VAC, 10 amps; Cool: VDC switching, 0-100 VDC, 20 Amps
- **K**: Heat/Cool, Heat: 120/240 VAC, 10 amps; Cool: VDC switching, 0-100 VDC, 40 Amps
- **L**: Heat/Cool, Heat: 120/240 VAC, 10 amps; Cool: VDC switching, 0-100 VDC, 20 Amps
- **M**: Heat/Cool, Heat: 0-100 VDC, 12 Amps; Cool: VAC switching, 120/240 VAC, 10 amps
- **N**: Heat/Cool, Heat: 0-100 VDC, 20 Amps; Cool: VAC switching, 120/240 VAC, 10 amps
- **O**: Heat/Cool, Reverse Polarity, 0-100 VDC, 12 Amps
- **P**: Heat/Cool, Reverse Polarity, 0-100 VDC, 20 Amps
- **Q**: Heat/Cool, Reverse Polarity, 0-100 VDC, 40 Amps
- **R**: Heat/Cool, VAC switching, 120/240 VAC, 10 amps

#### Sensor
- **0**: None
- **1**: 3-Wire RTD - RTD-Probe
- **2**: T type thermocouple (ring mount) - RTD-Ring

#### Communications
- **0**: No communications
- **1**: RS-232 external option
- **2**: RS-485 internal option

### Dimensions and Cutout

- **Dimensions in mm (inches)**
  - 22.0 (0.87)
  - 28.5 (1.12) includes gasket
  - 51.0 (2.0)
  - 106.7 (4.2) with gasket fitted
  - 116.2 (4.57)

- **Cutout**: 1/32 DIN

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