**Temperature Controller**

**FEATURES**

- Sub-panel mount
- 15 amp solid state output zero switching to minimize objectionable RFI
- 120/240 V. operation
- External bridge board for easy field replacement
- Remote setpoint potentiometer
- Operate with either RTD or thermistor sensors

**GENERAL DESCRIPTION**

The Model 03-00-04 and 03-00-05 temperature controllers are sub-panel units with 15 amp triac outputs. These units offer a unique temperature range and sensor selection feature. This feature utilizes an external bridge board and setpoint potentiometer assembly which can be changed to suit the user’s requirements without changing the basic controller. A complete system would consist of a controller, bridge board, setpoint potentiometer and sensor assembly, either thermistor or platinum type. The Model 03-00-04 is an ON/OFF unit, and the Model 03-00-05 is a proportional plus reset unit and also incorporates a fixed cycle time and has an anti-reset circuit which inhibits reset action when outside the proportional band.

**SPECIFICATIONS:**

**OUTPUT:** Solid state zero switching isolated triac.

**CONTACT RATING:** 15 A rms at 120 or 240 VAC resistive.
1.5 A rms at 120 or 240 VAC inductive.

Note: Load current must be 0.1 A minimum to insure proper triac switching.

**LINE VOLTAGE:** 120/240 VAC ± 10%, 50/60 Hz.

**POWER CONSUMPTION:** 2.0 VA (controller only).

**INDICATION:**

Output available for external 500-0-500 microamp null meter.

**OPERATING AMBIENT:** 30 to 130°F.

**CONTROL MODES:**

- Model 03-00-04 — ON/OFF.
- Switching sensitivity 0.15°F to 0.07°F.
- Model 03-00-05 — Proportional with reset.
- Cycle time — fixed — 7 seconds minimum.
- Proportional band — adjustable 7 to 70°F.
- Reset — adjustable 35 seconds to 15 minutes.
- Anti-reset — prevents wind up of reset circuit when outside the proportional band.

**BRIDGE EXCITATION:** 5.6 VAC.

**SETPOINT POTENTIOMETER:** Remote, 24” leads standard.
TEMPERATURE RANGES

<table>
<thead>
<tr>
<th>THERMISTOR SENSOR</th>
<th>BRIDGE BOARD</th>
<th>SET POINT ASSEMBLY</th>
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<tbody>
<tr>
<td>50 to 150°F</td>
<td>B007-154</td>
<td>A006-246</td>
</tr>
<tr>
<td>150 to 450°F</td>
<td>B007-155</td>
<td>A006-247</td>
</tr>
<tr>
<td>200 to 600°F</td>
<td>B007-156</td>
<td>A006-248</td>
</tr>
<tr>
<td>-20 to +60°C</td>
<td>B007-152</td>
<td>A006-244</td>
</tr>
<tr>
<td>-10 to +120°C</td>
<td>B007-153</td>
<td>A006-245</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>PLATINUM SENSOR</th>
<th>BRIDGE BOARD</th>
<th>SET POINT ASSEMBLY</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 500°F</td>
<td>B007-157</td>
<td>A006-249</td>
</tr>
<tr>
<td>0 to 1000°F</td>
<td>B007-158</td>
<td>A006-250</td>
</tr>
<tr>
<td>0 to 100°C</td>
<td>B007-159</td>
<td>A006-251</td>
</tr>
<tr>
<td>0 to 350°C</td>
<td>B007-160</td>
<td>A006-252</td>
</tr>
<tr>
<td>0 to 500°C</td>
<td>B007-161</td>
<td>A006-253</td>
</tr>
</tbody>
</table>

ORDERING INFORMATION

Specify model number, temperature range, bridge board number, sensor type, and setpoint potentiometer assembly number. Also specify meter (if required).

Model 03-00-04 — ON/OFF
Model 03-00-05 — Proportional with Reset
Meter 835-025
ELECTRONIC TEMPERATURE CONTROLLER

SPECIFICATIONS

GENERAL: The Model 03-02-01 is an On-Off, integral cycle, zero switching temperature controller using positive temperature coefficient sensor. The controller is not isolated from the line. The unit has an internally mounted set pot.

DESIGN AND PERFORMANCE SPECIFICATION:

LINE VOLTAGE: 115 VAC ± 10%, 60 Hz.

POWER CONSUMPTION: 3.5 VA exclusive of load power.

AMBIENT OPERATING TEMPERATURE: 50° F to 125° F.

OUTPUT: Solid state switch for driving resistive loads up to 500 watts @ 115 VAC. Switch is On-Off, integral cycle, zero switching. Output switch is not isolated from the sensor.

SWITCHING SENSITIVITY: 1 ohm change in sensor-resistance rework.

CONTROLLER TEMPERATURE RANGE: Designed to suit application.

SET POT: Mounted on controller terminal board.
GENERAL: The Waynco Model 03-03-20, zero switching - 1/2 wave, time proportioning temperature controller is designed for the control of lower power resistance heater loads operating directly on the 24 volt, 50/60 Hz. line. The load current is delivered as 1/2 wave A.C.

It features a set point stability of ± 50 milli-degree centigrade for A.C. supply variations of 20 volts to 28 volts and also for ambient temperature of 10°C to 50°C.

SPECIFICATIONS:

SUPPLY VOLTAGE: 20 to 28 volts A.C. (Nominal 24 volts).

OPERATING AMBIENT: 0°C to 60°C.

SENSOR: Negative temperature coefficient thermistor.

SET POINT: Sensor resistance plus set pot. equals 10,000 ohms.

CONTROL MODE: Time proportioning and zero switching of load power.

PROPORTIONAL BAND: Normal band 1°C. Depends on sensor characteristic.

CONTROL ACCURACY: Depends upon thermal design of system. Typically ± 0.05°C.

POWER OUTPUT RATING: 25 watts at 24 volts.

SIZE: 1" x 1" x 2" (approximately).
ELECTRONIC TEMPERATURE CONTROLLER

SPECIFICATIONS:

OPERATING A.C. LINE VOLTAGE: 115 volts A.C. + 10%, 50/60 Hz.

OUTPUT LOAD: The output load rating is 500 watts resistive load at a line voltage of 115 volts R.M.S.

TEMPERATURE SENSOR: The temperature sensor shall be a negative temperature coefficient thermistor, @ 25°C.

SET POINT RANGE: The temperature adjust potentiometer will balance sensor resistances in the range of 4000 ohms to 500 ohms; approximate temperature range.

CONTROL MODE: The control mode is on-off switching of output power to a resistance heater load. The switching action is zero switching integral cycle.

SWITCHING SENSITIVITY: A temperature change of 0.1°F at the sensor will typically cause the output power to be switched between full on and full off.

OPERATING AMBIENT TEMPERATURE RANGE: 40°F to 125°F.

ISOLATION: None, control operates directly on A.C. line.