

user instructions

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Instruction Notes for Mantle Minder II 104A PL512 & 104A PL524



General Description

The Mantle Minder II is a non-indicating, time proportional temperature controller. It is designed to maintain temperature of an electrically heated process to within + or – 1% of full scale. Operation is stable in ambient temperature from 32 to 130 degrees Fahrenheit.

Control Features

1. On/Off switch
2. Solid-state relay output.
3. Time-proportional control.
4. Calibration in C.
5. Temperature range of 0 – 750 degrees Celsius.
6. Isolation of sensor and circuitry from line and load.

How to Setup and Operate

First connect the heater load (sized as shown below) and the thermocouple plug to the load and thermocouple receptacles on the rear of the control. Next plug the control line cord into the appropriate 3-wire grounded power receptacle.

Push the power switch to the “ON” position to apply power to the control. Turn the control knob to the desired temperature setting. The “LOAD” pilot light on the front panel indicates where there is power to the load. The control is accurate within + or – 1% of full scale.

Control Sensor

The Mantle Minder II is furnished with a TC105 thermocouple. This probe is an Iron-Constantan thermocouple in a 6” stainless steel sheath. It is furnished with a 48” extension wire with stainless steel overbraid and a polarized plug. The control may be used with any Type J thermocouple which has a lead resistance less than 100 ohms.

Proper placement of the thermocouple can eliminate many problems in the total system. The probe should be placed so that it can detect any temperature change with little thermal lag. In a process that requires fairly constant heat output, the probe should be close to the heater. In processes where heat demand is variable, the probe should be close to the work area. Some experimenting with probe location can be tried to provide optimum results.

Maintenance

Simple preventative maintenance steps include keeping the controller fairly clean. Protect it from excessive dirt, oil and corrosion.

Specifications

Control Mode

- Single input, single output
- Range 0 – 750 degrees C

Operator Interface

- Control knob
- Digital setpoint display
- ON/OFF switch
- Output pilot light
- Type J thermocouple receptacle
- 3-wire load receptacle

Input

- Type J thermocouple input; grounded or ungrounded
- Automatic cold junction compensation and break protection for sensor.

Output

- 15 amp, 120 Volt (Fused); 10 amp, 240 Volt (Push-to-reset circuit breaker)

Accuracy

- Calibration accuracy: + or - 1% of span.
- Set point accuracy: + or - 3% of span maximum.

Power

- 50/60 Hz 10%
- Power consumption less than 4VA plus load.

Operating Environment

- 32 to 130 degrees F/ 0 to 55 degrees C; 0 to 90% RH, non-condensing

Limited Warranty

Glas-Col warrants products of its manufacture to be free from defects in material and workmanship for one year and agrees to repair or replace without charge any products found defective upon examination at the factory. With proper care and operation, Glas-Col products will give long and efficient service. Chemical spillage, overheating, overloading and general misuse will greatly reduce the service life. Glas-Col is not responsible for damage due to apparatus due to improper installation or through attempts to operate the apparatus beyond its rated capacity, intentional or otherwise. Normally expendable parts are not covered by this warranty.

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Glas-Col reserves the right to make product refinements without prior notice.

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Call or fax Customer Service for a Return Goods Authorization (RGA) number before returning a Glas-Col product.

Reference the RGA number on the shipping box and on a written description of the problem.

A 20% restock charge of the net price is charged for all standard product returned to stock.

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