



ANALOG SERIES 86 Non-INDICATING TEMPERATURE CONTROLLER

The Athena Series 86 is a non-indicating, case or track mounted temperature controller that can be used for differential (on/off) to proportional control via simple adjustment. The controller accepts thermocouple or RTD input and offers an output for heating or cooling processes.



Series 86 open board shown with type B output.

KEY FEATURES

- ▲ Single turn, 270° Rotation Potentiometer
- ▲ Failsafe on Open Sensor conditions
- ▲ Optional Remote Setpoint
- ▲ Thermocouple Input or RTD Input
- ▲ Cooling Configuration Available
- ▲ Limit Controller Option



ORDERING INFORMATION

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Configuration Code A= Open PCB unit, setpoint pot on PCB, B= Open PCB unit, remote setpoint, C= Open PCB setpoint on PCB with T case D= T case, setpoint on case E= T case, setpoint remote L= High Limit controller, D configuration with reset button on case.		Output Type Code B = 1 Form C Relay, 15A/10A resistive H = 1 Form A Relay, 30 A resistive (uses tabs on relay) - Heating output only S= Pulsed DC 0-20Vdc * T= SPST 1A SS relay *		STANDARD RANGE CODE - (consult factory for non-standard ranges) <table border="1"> <thead> <tr> <th>Code</th> <th>Set Range</th> <th>Min Divs (PCB)</th> <th>Min Divs (remote)</th> <th>Type</th> </tr> </thead> <tbody> <tr> <td colspan="5">Thermocouple</td> </tr> <tr> <td>T02</td> <td>-225 to 225°F</td> <td>25°</td> <td>10°</td> <td>T</td> </tr> <tr> <td>51F</td> <td>500 to 1500°F</td> <td>50°</td> <td>20°</td> <td>K</td> </tr> <tr> <td>02F</td> <td>0 to 2000°F</td> <td>100°</td> <td>40°</td> <td>K</td> </tr> <tr> <td>03C</td> <td>0 to 300°C</td> <td>25°</td> <td>5°</td> <td>J</td> </tr> <tr> <td>05C</td> <td>0 to 500°C</td> <td>25°</td> <td>10°</td> <td>J</td> </tr> <tr> <td>03F</td> <td>0 to 300°F</td> <td>25°</td> <td>5°</td> <td>J</td> </tr> <tr> <td>16F</td> <td>100 to 600°F</td> <td>25°</td> <td>5°</td> <td>J</td> </tr> <tr> <td>08F</td> <td>0 to 800°F</td> <td>50°</td> <td>10°</td> <td>J</td> </tr> <tr> <td>01F</td> <td>0 to 1000°F</td> <td>50°</td> <td>20°</td> <td>J</td> </tr> <tr> <td>01C</td> <td>0 to 1000°C</td> <td>50°</td> <td>20°</td> <td>K</td> </tr> <tr> <td colspan="5">RTD Platinum (3 wire, 100 ohm at 0°C DIN CURVE STD>)</td> </tr> <tr> <td>S01</td> <td>-100 to 100°C</td> <td>N/A</td> <td>4°</td> <td></td> </tr> <tr> <td>S30</td> <td>0 to 300°F</td> <td>25°</td> <td>5°</td> <td></td> </tr> <tr> <td>S60</td> <td>0 to 600°F</td> <td>50°</td> <td>10°</td> <td></td> </tr> </tbody> </table>						Code	Set Range	Min Divs (PCB)	Min Divs (remote)	Type	Thermocouple					T02	-225 to 225°F	25°	10°	T	51F	500 to 1500°F	50°	20°	K	02F	0 to 2000°F	100°	40°	K	03C	0 to 300°C	25°	5°	J	05C	0 to 500°C	25°	10°	J	03F	0 to 300°F	25°	5°	J	16F	100 to 600°F	25°	5°	J	08F	0 to 800°F	50°	10°	J	01F	0 to 1000°F	50°	20°	J	01C	0 to 1000°C	50°	20°	K	RTD Platinum (3 wire, 100 ohm at 0°C DIN CURVE STD>)					S01	-100 to 100°C	N/A	4°		S30	0 to 300°F	25°	5°		S60	0 to 600°F	50°	10°		Special Options 000 = None Consult factory for available special options you may need for your application.
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*Athena's Series 19 and 39 SCR power controllers can be added to boost AC load switching capacity.

TECHNICAL SPECIFICATIONS

Setpoint Single-turn, 270° rotation potentiometer (local or remote) is standard.

Setpoint Resolution 1% with circuit board potentiometer, 1/4% with remote potentiometer

Calibration Accuracy 1% at calibration points with remote potentiometer; 2% at calibration points with potentiometer on circuit board

Ambient Temperature 32°F to 130°F (0°C to 55°C)

Humidity Tolerance 5 to 95%, non-condensing

Cold Junction Compensation Internal electrical bridge

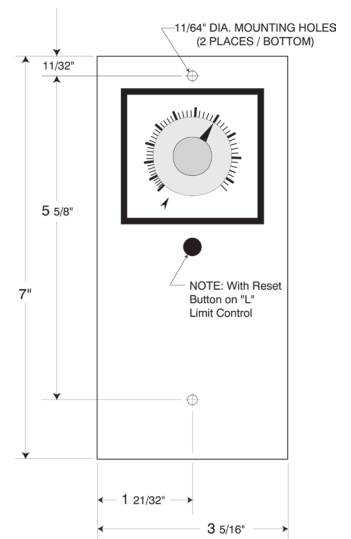
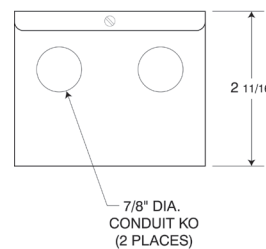
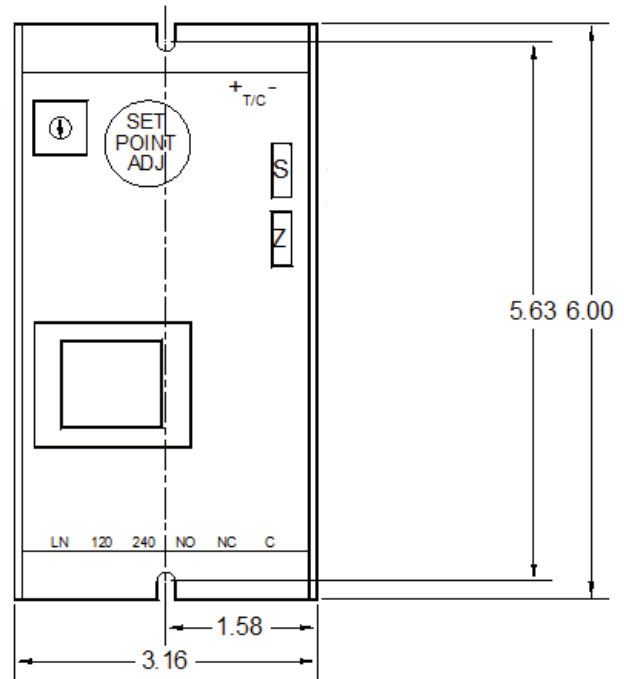
Hysteresis/Proportional Band Thermocouple: adjustable from hysteresis of 5° to proportional band of 25°
RTD: deadband is 3° to proportional band of 10°

Thermocouple Break Protection Output power off with open sensor

Output
Type B: 1 Form C Relay, 15A/10A resistive
Type H: 1 Form A Relay, 30A, resistive, (uses tabs on relay)
Type T: S.S. Relay S.S.T. 1A 120/240 Vac, 10A inrush, 2-4mA leakage
Type S: Pulsed dc, 0-20 Vdc open ckt. not isolated from sensor.

Supply Voltage 120/240 Vac ±10%, 50-60 Hz

Power Consumption 2 watts



All wiring to be in accordance with local code requirements,

Specifications subject to change without notice.



Please use the QR code to access the manual..



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Reference 900D500U01