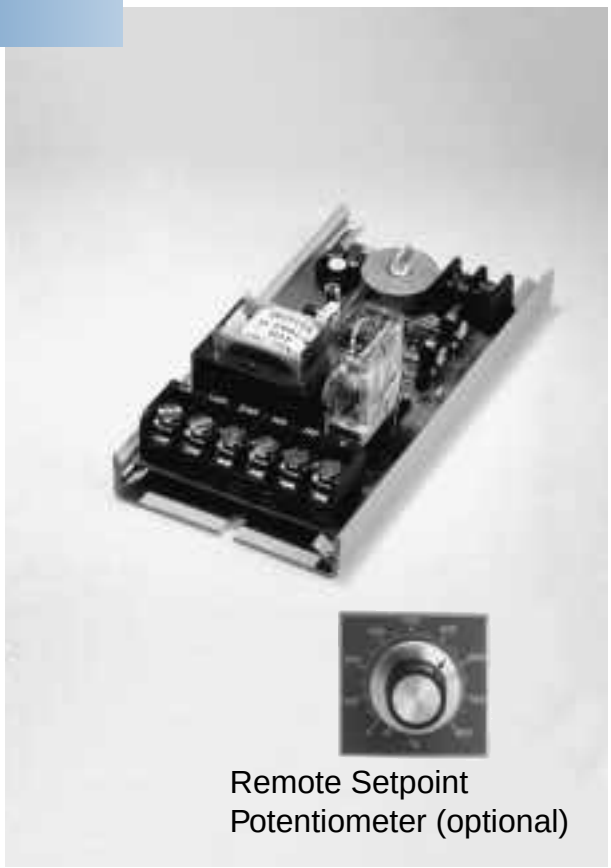
SERIES 86

Low Cost, Non-Indicating Temperature Controller

- *Differential (on-off) to Proportional Control via Simple Adjustment*
- *Case or Track Mounted Versions*
- *Single-turn, 270˚ Rotation Potentiometer*
- *Field Changeable Control Outputs: Relay, SS Relay or Pulsed Voltage*
- *Failsafe in Open Sensor Conditions*
- *Optional Remote Setpoint*
- *Optional Solid-State Contactors for Boosting Power Handling Capacity*
- *Cooling Configuration Available*
- *Thermocouple or RTD Input*
- *Limit Controller Option*



Remote Setpoint Potentiometer (optional)

Ordering Information

8 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]

Sensor Input Code

2 = RTD
6 = Thermocouple

Special Options

(Consult factory)

Configuration Code

A = Open PCB unit, setpoint pot on PCB
B = Open PCB unit, remote setpoint
D = T case setpoint on case
L = High limit controller, D configuration with reset button on case. "B" output relay only

Output Type Plug-In Code

B = SPDT Relay, 7A/5A
H = SPDT Relay , 15A (NON-PLUG-IN)
S = Pulsed dc 0-20 Vdc*
T = SPST 1 A SS relay*

STANDARD RANGE CODE

Thermocouple Consult factory for non-standard ranges.)

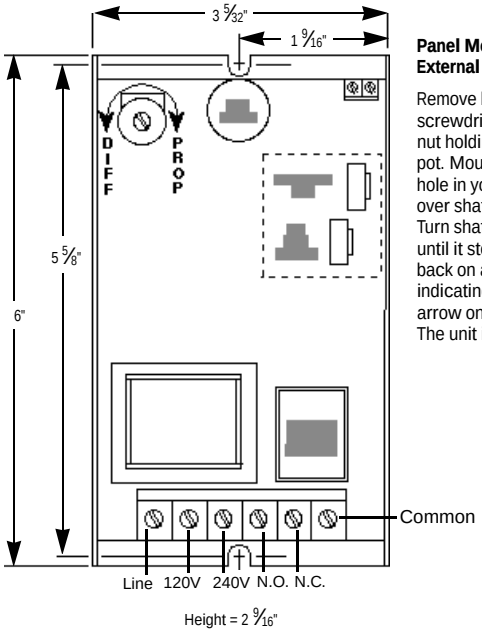
Code	Set Range	Min. Divs. (PCB)	Min. Divs. (Remote)	Type
T02	-225 to +225˚F	25˚	10˚	T
51F	500 to +1500˚F	50˚	20˚	K
02F	0 to +2000˚F	100˚	40˚	K
03C	0 to +300˚C	25˚	5˚	J
05C	0 to +500˚C	25˚	10˚	J
03F	0 to +300˚F	25˚	5˚	J
16F	100 to +600˚F	25˚	5˚	J
08F	0 to +800˚F	50˚	10˚	J
01F	0 to +1000˚F	50˚	20˚	J
01C	0 to +1000˚C	50˚	20˚	K
RTD Platinum (3-wire, 100Ω at)˚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˚	

*Athena's ZC solid state contactors, and Series 91Z and 93Z or Series 19 and 39 SCR power controllers can be added to boost AC load switching capacity.

SERIES 86 NON-INDICATING TEMPERATURE CONTROLLER

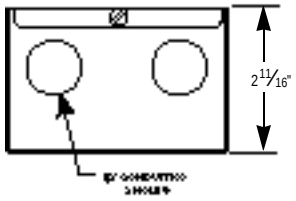
SPECIFICATIONS

Setpoint:	Single-turn, 270˚ rotation potentiometer (local or remote) is standard. Remote digital thumbwheel available for RTD only.
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, potentiometer on circuit board
Ambient Temperature Range:	40˚ to 130˚ F (4˚ to 55˚ C)
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:	Plug-in modules: Type B Relay S.P.D.T. 7A/5A @ 120/240V Type H Relay S.P.D.T. 15A/7A @ 120/240V (NON PLUG IN) Type T S.S. Relay S.S.T. 1A 120/240Vac, 10A inrush, 2-4mA leakage Type S Pulsed dc, 0-20Vdc open ckt.not isolated from sensor.
Supply Voltage:	120/240 ± 10%V, 50-60Hz
Power Consumption:	2 watts



Panel Mounting External Setpoint:

Remove knob with small screwdriver and take off the nut holding the scale to the pot. Mount pot through a 3/8" hole in your panel; put scale over shaft and tighten nut. Turn shaft counterclockwise until it stops. Now put knob back on and line up its indicating mark with the arrow on scale. Tighten knob. The unit is now calibrated.



Mounting Case: (T Case)

Remove the two sheet metal screws holding the cover on; take off cover. Next remove shipping bolts from plastic track and replace them with your mounting hardware. Replace cover.