

# SERIES 58

## Thermocouple or RTD Sensing Temperature Controller



58.01.2

### FEATURES

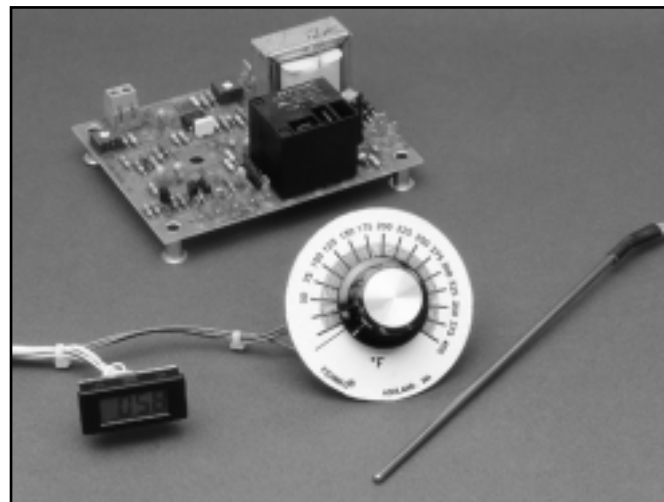
- On/Off control mode
- Power Supply: 120/208/240 VAC field selectable; 24 VDC
- Temperature Ranges: Eight overlapping ranges from 0°F to 2000°F and equivalent °C
- Sensors: Type T, J or K thermocouple  
100 Ohm RTD/DIN, 1000 Ohm RTD/DIN
- Outputs: Relay or output to drive solid state relay
- Set Point Adjustment: Local, remote or reverse shaft
- Sensor Failure: The controller output will de-energize upon an open or short RTD and open Thermocouple
- Agency Approvals: UL, cUL recognized
- Warranty: 2 years
- Remote Indicator Option: LCD meter
- Made in U.S.A.

### APPLICATIONS

- Food Service
- Thermoplastic Packaging
- Pipe Fusion
- Laminating
- Hot Melt Glue
- Sterilization Systems
- Industrial Machinery

### DESCRIPTION

The Series 58 temperature controller is a versatile yet economical solution for applications requiring precise control. Type J, K or T thermocouples, 100 Ohm or 1,000 Ohm RTD sensors can be used with this controller. The controller provides lead break protection and protects against shorted RTD leads. A choice of relay or SSR driver outputs with an optional LCD meter for full scale indication are also featured. The control mode is on/off with a local setpoint Adjustable from the front or rear of the board. An optional remote setpoint adjustment is available.



### SPECIFICATIONS

#### ON-OFF Mode

Differential: 3% of span maximum

#### Time Proportioning Mode

Bandwidth: Adjustable from 6-10% of span

Cycle Time: SSR driver output: 1 second typical

#### Outputs Rating

Relay: 2A, 120 VAC, SPDT, resistive  
20A, 120 VAC, SPST, resistive  
15A, 120 VAC, SPDT, resistive

SSR Output: On Voltage: 6 VDC min.  
Off Voltage: 0 VDC  
Load resistance: 1K Ohm

#### Power Supply

24VDC,  $\pm 10\%$ , 120/208/240 VAC,  $+10\%/-15\%$ , 50/60 Hz

#### Input Power

3 Watts

#### Set Point Accuracy

3% of dial span for remote standpoint models  
15% of dial span for local setpoint models

#### Set Point Stability

The control point will remain within  $\pm 0.25\%$  of dial span for line voltage variation of  $\pm 15\%$  from nominal

## ADDITIONAL SPECIFICATIONS

### Environmental Specifications

Ambient: -13°F to 158°F (-25°C to 70°C), storage  
 Temperature: -13°F to 185°F (-25°C to 85°C), storage  
 Humidity: 10% to 95% RH, operating (non-condensing)  
 10% to 100% RH, storage (condensing)  
 Vibration: Meets requirements of MIL STD202F

### Construction and Installation

Mounting: Eyelets, mounting holes or snap track  
 Connection: TC: #8 screw terminals  
 All others: 1/4 quick connect  
 Weight: Approximately 10 oz.

### Agency Approval

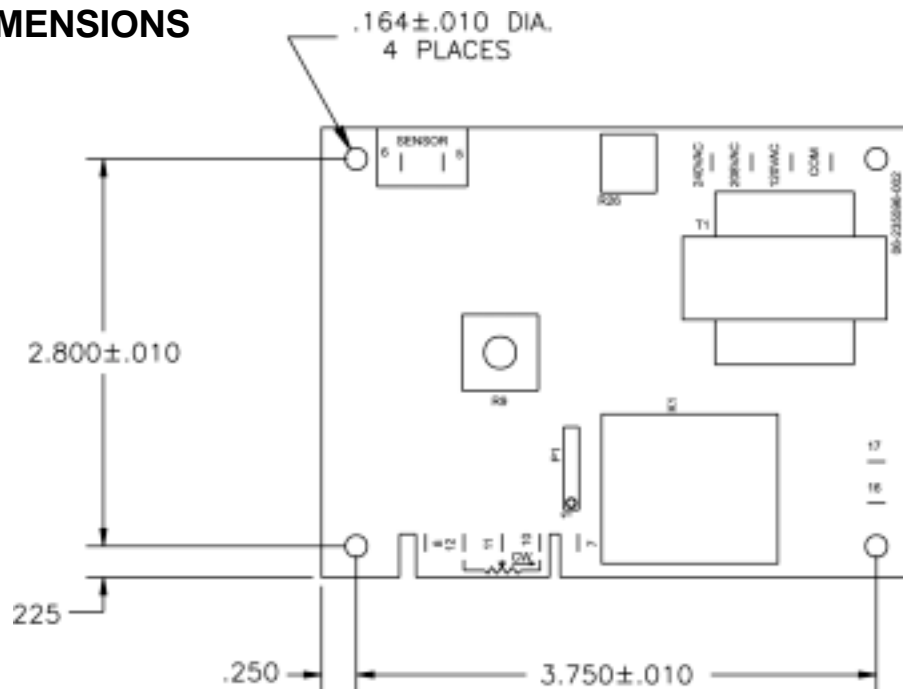
UL recognized: File E18974  
 cUL recognized: File E18974  
 CE Compliant: Future

### Meter

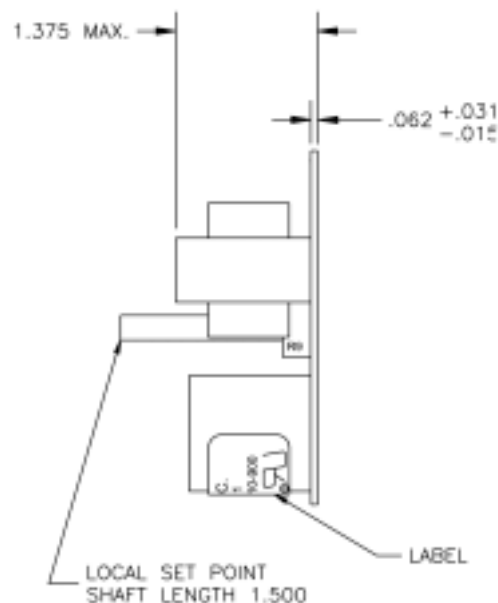
Accuracy: 3% of span  
 LCD Display: 3 1/2 Digit  
 Height: .67 inch  
 Cable length: 12" or 24"

## OUTLINE DIMENSIONS

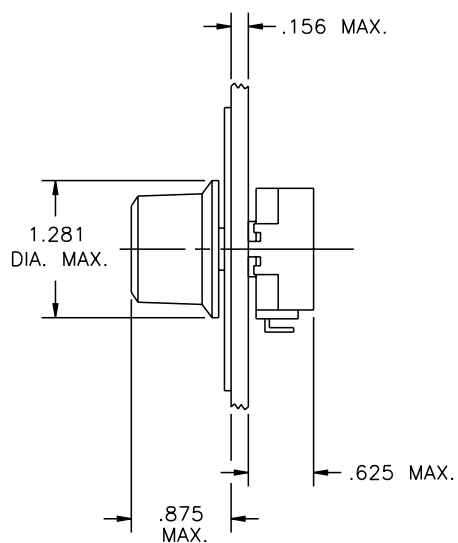
### Front View



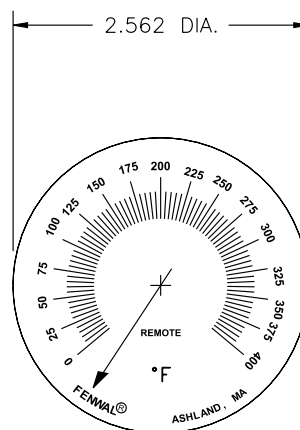
### Side View



## REMOTE POTENTIOMETER

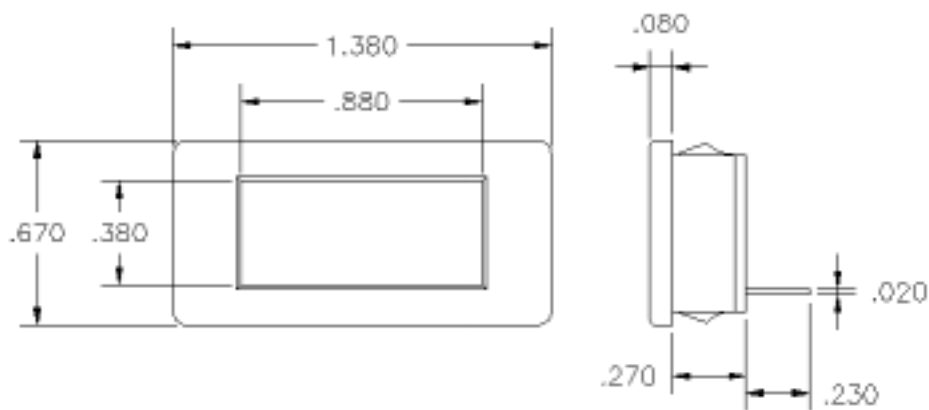


## SETPOINT DIAL



## OPTIONAL LCD REMOTE INDICATING DISPLAY

Part Numbers 58-90001000-012 (12" cable) and 58-90001000-024 (24" cable)



# HOW TO ORDER

## CONTROLLER

58 - X X X X 0 X X 0 - X XX

### INPUT SENSOR

- 0 - Thermocouple
- 2 - RTD

### CONTROL MODE

- 1 - On/off, fixed differential

### LINE VOLTAGE

- 1 - 120/208/240 VAC
- 3 - 24 VDC

### OUTPUT

- 2 - 2A, SPDT
- 3 - 20A, SPST
- 4 - 15A SPDT
- 5 - SSR driver

0

### TEMPERATURE ADJUSTMENT

- 1 - Local setpoint, front adjustment
- 2 - Local setpoint, reverse adjustment
- 3 - Remote setpoint

### MOUNTING

- 1 - Mounting holes only
- 2 - Eyelets
- 3 - Snap Track

0

### DIAL GRADUATIONS

- 1 - °F scale
- 2 - °C scale

### RANGES

01	0 to 400°F	0 to 205°C	Type T
02	0 to 400°F	0 to 205°C	Type J
03	0 to 800°F	0 to 425°C	Type J
06	0 to 2000°F	0 to 1095°C	Type K
08	0 to 1200°F	0 to 650°C	Type J
62	0 to 400°F	0 to 205°C	100 ohm RTD
63	0 to 800°F	0 to 425°C	100 ohm RTD
64	0 to 1000°F	0 to 525°C	100 ohm RTD
65	0 to 400°F	0 to 205°C	1000 ohm RTD
66	0 to 800°F	0 to 425°C	1000 ohm RTD
67	0 to 1000°F	0 to 525°C	1000 ohm RTD

### REMOTE INDICATING METER

- 58-90001000-012 with 12" cable
- 58-90001000-012 with 24" cable



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These instructions do not purport to cover all the details or variations in the equipment described, nor do they provide for every possible contingency to be met in connection with installation, operation and maintenance. All specifications are subject to change without notice. Should further information be desired or should particular problems arise which are not covered sufficiently for the purchaser's purposes, the matter should be referred to FENWAL.

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9/13/02