

**HAMPSHIRE**



**CONTROLS**

*"Safeguarding  
Your Precious  
Biological  
Materials"*



## T° Sentry Model 140 Temperature Monitor/Alarm

### PRODUCT DESCRIPTION:

The T° Sentry Model 140 is a standalone, continuously monitoring, single-probe, NIST-traceable temperature verification system with built-in alert status notification. The standard Model 140 (-100 °C to +100 °C) is widely used in laboratory grade refrigerators, freezers, and walk-in coolers. However, using other available probe types, the Model 140 can be used for high-temperature monitoring applications like ovens, batch ovens, industrial heating chambers, and other thermal processing manufacturing equipment. The T° Sentry Model 140 can be used wherever material storage temperatures must be maintained within a specified range.

The Model 140 includes user-adjustable high/low temperature alert condition thresholds, audible (beeper) and visual (LED) alarms, user-selectable alert condition mute and "chirp" periods up to 120 minutes, and a UL-listed, plug-in power supply. NiMH rechargeable battery-backup is also available.

In addition to the easy-to-read LCD screen, temperature readings can be output in a variety of formats including current (4 to 20 mA), voltage (e.g., 10 mV per degree), RS-232, RS-485, and TCP/IP (Ethernet). Other features include optional relay contacts to provide temperature and power failure condition alerts, whole-degree or tenth-degree display, °C or °F models, and optional passcode protection for setpoints. NIST-traceable probe temperature certifications are available upon request.

**Custom programming and  
packaging can be provided  
to satisfy any temperature  
monitoring application.**



### FEATURES:

- Continuously monitored NIST-traceably calibrated temperature probe
- -200 °C to +400 °C with variable ranges and probe types
- Easy-to-read LCD screen: 1 ° or 0.1 °, °C or °F, optional backlight
- Adjustable high/low alert condition settings and alarm delay period
- Selectable audible alarm mute period
- Optional SPDT relay contact output with adjustable relay delay period
- Available temperature outputs: 4 to 20 mA, voltage, RS-232, RS-485, TCP/IP (Ethernet)

### AVAILABLE OPTIONS:

- R - SPDT Relay Dry Contacts
- B - 9V NiMH Rechargeable Battery Backup
- H - High Resolution, 0.1 ° display resolution
- I - Current Output (4 to 20 mA)
- F - Fahrenheit °F Display
- SW - Door Switch Input
- PC - Passcode Protected Setpoints
- V - Voltage Output: 10 mV per degree, -1.0 to 1.0 V
- D - Digital Output: RS-232 or RS-485
- E - TCP/IP Ethernet Output
- Sensors: 100/1000-Ohm RTD, cryoRTD, Type T/J/K thermocouples
- Extra Loud Audio Alarm: 100 dB at 10 cm

PO Box 516, Dover, NH 03821  
U.S. Toll Free (866) 496-9424  
Tel: (603) 749-9424  
Fax (603) 749-9433  
E-mail: [sales@hampshirecontrols.com](mailto:sales@hampshirecontrols.com)  
[www.hampshirecontrols.com](http://www.hampshirecontrols.com)



# T° Sentry Model 140 Temperature Monitor/Alarm Specifications

	Model 140-100	Model 140-200	Model 140-400	Special Order
<b>Range (°C)</b>	-100 to 100 °C	-200 to 50 °C	0 to 400 °C	Standard or custom temperature range
<b>Range (°F)</b>	-148 to 212 °F	-328 to 122 °F	32 to 752 °F	
<b>Sensor</b>	100-ohm RTD in 4" (102mm) s.s. sheath	Type T thermocouple. 3" (76mm) s.s. sheath	Type K thermocouple. 3" (76mm) s.s. sheath	Cryo-RTD, 1000-Ohm RTD, Thermocouple (Type T, J or K), etc.
<b>Lead</b>	10' (3m), Teflon® jacketed, waterproof	10' (3m)	10' (3m)	Maximum lead length depends on sensor selection
<b>Accuracy (°C)</b>	±1 °C or ±0.2 °C ('H')	±2 °C	±2 °C	Dependant on temperature range
<b>Accuracy (°F)</b>	±2 °F or ±0.4 °F ('H')	±4 °F	±4 °F	
<b>Display Resolution</b>	1° or 0.1° ('H')	1°	1°	
Alarm		Frequency	Amplitude	Notes
<b>Audio, Standard</b>		3.6 kHz	90 dB @ 10 cm	
<b>Audio, Extra Loud</b>		2.9 kHz	100 dB @ 10 cm	Special order
<b>Visual</b>	~1 Hz flashing red LED			
Output Options				
<b>R – Relay, Dry Contacts</b>	Single Form C (SPDT); user-adjustable relay delay period			
<b>V – Voltage</b>	-1.0 to 1.0 V; user-adjustable temperature range (full temperature range standard)			
<b>IRP – Current (4 to 20 mA)</b>	Receiver-powered; requires external loop supply (12 to 36 VDC)			
<b>ISP – Current (4 to 20 mA)</b>	Self-powered; battery backup 'B' not available with this option			
<b>D – Digital, Serial</b>	Specify RS-232 or RS-485; 9600 baud 8N1; ASCII temperature output			
<b>E – Ethernet</b>	10/100 Base T TCP/IP output to T° Sentry ALERT Monitoring System data logger			
Other Options				
<b>B – 9V Rechargeable Battery Backup</b>	NiMH 8.4 V 160 mAh; 2 mA built-in trickle charger			
<b>F – Fahrenheit °F Display</b>				
<b>H - High Resolution</b>	0.1 ° display resolution			
<b>PC – Passcode Protected Setpoints</b>	Prevent unwanted changes to user-adjustable parameters			
<b>SW – Door Switch Input Latching Alarm</b>	Configurable for NO/NC switches, user-selectable door-alarm delay Special order			
Power				
<b>Power Supply (standard, included)</b>	100-240 VAC, 400 mA max, switching, wall adapter, 12 VDC output 600 mA max			
<b>Power Requirements, with Relay ('R')</b>	9-12 VDC, 80 mA max			
<b>Power Requirements, without Relay</b>	9-30 VDC, 80 mA max			
Mechanical & Environmental				
<b>Mounting Options</b>	<b>Standard:</b> Adhesive VELCRO® mounting strips (included) <b>Option 1:</b> Interlocking wall mounting bracket (order with P/N 68034) <b>Option 2:</b> Large display panel for cabinet mounting (special order)			
<b>Dimensions, WxHxD</b>	5 x 4.25 x 1.75 in. (127 x 108 x 44 mm)			
<b>Weight</b>	1 lb. (465 g)			
<b>Case</b>	Black Bakelite			
<b>Operating Temperature Range</b>	-18 to 55 °C (0 to 130 °F)			

**One-year warranty on all Hampshire Controls products.**

**About Us:** Established in 1975, Hampshire Controls provides standard and custom-designed electronics to the biomedical and industrial markets. In addition to the wide variety of T° Sentry Model 140 Temperature Monitor/Alarms, our product portfolio includes:

- MPS Multi-Probe Monitor/Alarms
- TT-150/200 temperature & humidity Wi-Fi transmitters
- LD-215 Liquid Nitrogen Level Detector/Alarms
- Air Flow Monitors (50 to 2500 FPM)
- STEDIVOLT SV2005 Line Voltage Controls
- Customized OEM electronics design and manufacturing
- T° Sentry ALERT Monitoring System data logging
- CO<sub>2</sub>, LN<sub>2</sub> CA5000 Freezer Backup Systems
- TC-12 TEMPHECK Rapid Response Thermometers
- ADM-215 Remote Alarm Delay Modules
- Customized monitoring, alarm notification, and logging

