

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

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T° Sentry Model 140 Temperature Monitor/Alarm Specifications

	Model 140-100	Model 140-200	Model 140-400	Special Order
Range (°C)	-100 to 100 °C	-200 to 50 °C	0 to 400 °C	Standard or custom temperature range
Range (°F)	-148 to 212 °F	-328 to 122 °F	32 to 752 °F	
Sensor	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.
Lead	10' (3m), Teflon® jacketed, waterproof	10' (3m)	10' (3m)	Maximum lead length depends on sensor selection
Accuracy (°C)	±1 °C or ±0.2 °C ('H')	±2 °C	±2 °C	Dependant on temperature range
Accuracy (°F)	±2 °F or ±0.4 °F ('H')	±4 °F	±4 °F	
Display Resolution	1° or 0.1° ('H')	1°	1°	

Alarm	Frequency	Amplitude	Notes
Audio, Standard	3.6 kHz	90 dB @ 10 cm	
Audio, Extra Loud	2.9 kHz	100 dB @ 10 cm	Special order
Visual	~1 Hz flashing red LED		

Output Options

R – Relay, Dry Contacts	Single Form C (SPDT); user-adjustable relay delay period
V – Voltage	-1.0 to 1.0 V; user-adjustable temperature range (full temperature range standard)
IRP – Current (4 to 20 mA)	Receiver-powered; requires external loop supply (12 to 36 VDC)
ISP – Current (4 to 20 mA)	Self-powered; battery backup 'B' not available with this option
D – Digital, Serial	Specify RS-232 or RS-485; 9600 baud 8N1; ASCII temperature output
E – Ethernet	10/100 Base T TCP/IP output to T° Sentry ALERT Monitoring System data logger

Other Options

B – 9V Rechargeable Battery Backup	NiMH 8.4 V 160 mAh; 2 mA built-in trickle charger
F – Fahrenheit °F Display	
H - High Resolution	0.1 ° display resolution
PC – Passcode Protected Setpoints	Prevent unwanted changes to user-adjustable parameters
SW – Door Switch Input Latching Alarm	Configurable for NO/NC switches, user-selectable door-alarm delay Special order

Power

Power Supply (standard, included)	100-240 VAC, 400 mA max, switching, wall adapter, 12 VDC output 600 mA max
Power Requirements, with Relay ('R')	9-12 VDC, 80 mA max
Power Requirements, without Relay	9-30 VDC, 80 mA max

Mechanical & Environmental

Mounting Options	Standard: Adhesive VELCRO® mounting strips (included)
	Option 1: Interlocking wall mounting bracket (order with P/N 68034)
	Option 2: Large display panel for cabinet mounting (special order)
Dimensions, WxHxD	5 x 4.25 x 1.75 in. (127 x 108 x 44 mm)
Weight	1 lb. (465 g)
Case	Black Bakelite
Operating Temperature Range	Model 140-100: -18 to 55 °C (0 to 130 °F), Models 140-200/400: 0 to 55 °C (32 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
- CO₂, LN₂ CA5000 Freezer Backup Systems
- TC-12 TEMPHECK Rapid Response Thermometers
- ADM-215 Remote Alarm Delay Modules
- Customized monitoring, alarm notification, and logging

