

HAMPSHIRE



CONTROLS

*"Safeguarding
Your Precious
Biological
Materials"*



T° Sentry Model 140-200 Temperature Monitor/Alarm

FEATURES:

- Continuously monitored NIST-traceably calibrated type T thermocouple temperature probe (-200 °C to +50 °C)
- Easy-to-read LCD screen, 1-degree resolution, °C or °F
- Adjustable high/low alert condition setting 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)

PRODUCT DESCRIPTION:

The T° Sentry Model 140-200 is a standalone, continuously monitoring, single-probe, NIST-traceable temperature verification system with built-in alert status notification for measuring ultra-low temperatures.

The temperature sensing probe is a durable type T thermocouple housed in a 3-inch stainless steel sheath with an operating range of -200 °C to +50 °C. The Model 140-200 is widely used in ULT freezers (-80 °C), cryogenic chest freezers (below -150 °C), and cryogenic LN2 Dewars (-196 °C) to ensure that cold-chain storage temperatures are maintained for in-vitro fertilization (IVF) materials, viruses, vaccines, and other biological materials.

The Model 140-200 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 display, 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, °C or °F models, and optional passcode protection for setpoints. NIST-Traceable probe temperature certifications are available upon request.

If compliance documentation is required, the T° Sentry Model 140-200 with TCP/IP Ethernet output can be optionally integrated into our PC-based networked T° Sentry ALERT Monitoring System for data logging, statistical process control (SPC), and alert email/SMS text notification.

AVAILABLE OPTIONS:

- R - SPDT Relay Dry Contacts
- B - 9V NiMH Rechargeable Battery Backup
- 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 +1.0V
- D - Digital Output: RS-232 or RS-485
- E - TCP/IP Ethernet Output
- Extra Loud Audio Alarm: 100 dB at 10 cm

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



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
www.hampshirecontrols.com



T° Sentry Model 140-200 Temperature Monitor/Alarm Specifications

	Model 140-200	Special Order
Range (°C)	-200 to 50 °C	
Range (°F)	-328 to 122 °F	Option 'F' - °F display
Sensor & Lead	Type T thermocouple, 3" (76mm) s.s. sheath, 10' (3m) lead	Custom s.s. sheath and lead lengths
Accuracy (°C)	±2 °C	
Accuracy (°F)	±4 °F	Option 'F' - °F display
Display Resolution	1 °	
Alarm		
Alarm	Frequency	Amplitude
Audio, Standard	3.6 kHz	90 dB @ 10 cm
Audio, Extra Loud	2.9 kHz	100 dB @ 10 cm
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		
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	-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
- CO₂, LN₂ **CA5000 Freezer Backup Systems**
- **TC-12 TEMP CHECK Rapid Response Thermometers**
- **ADM-215 Remote Alarm Delay Modules**
- Customized monitoring, alarm notification, and logging

