



Model TS4 Multi-Probe Temperature Monitor



FEATURING:

- Easy to read backlit alphanumeric LCD display
- Programmable audio and delay to alarm functions
- Bi-color LED for each probe
- Adjustable and displayable alarm settings
- Alarm test switch
- Standard NiMH battery backup
- Standard SPDT relay output
- Standard 0.1°C display
- Standard -100°C to +100°C range
- Color-coded Teflon probes for easy identification

The basic TS4 is a four-probe alarm, covering the range of -100°C to +100°C, with resolution of 0.1 degree, accuracy +/-0.2 degrees. This unit is very flexible, with operator programmable individual set points and alarm activation timeouts for each probe. There are also programmable delays for relay activation and audible alarm mute.

This instrument has a number of standard features suitable for built-in monitoring of freezers, refrigerators and walk-in environmental chambers, such as alarm beeper muting for user-selectable periods up to 30 minutes (the beeper cannot be disabled completely); battery back-up and SPDT relay contacts with user-adjustable delay period for hook up to a remote alarm device or telephone dialer.

In case of power failure, the unit will go to battery mode for up to 100 hours, shutting down all circuitry except a periodic "chirp" of the beeper and short flashes of the red "Alarm" LED to conserve power. Temperature readout is activated by pressing the red "Mute" button, to read product temperature without opening the chamber. A momentary "Alarm Test" push button actually shuts off power to the unit, to test battery operation and alarms.

The operating program can be customized, to modify the standard alarm sequence logic, as in air and product probes for biological or blood storage applications.

Available Options:

- Ethernet interface option
- Two-color printer for data logging
- °F display
- RTD and thermocouple inputs
- Several panel and mounting bracket options for wall, cabinet top or thru-panel mounting
- RS-232 or RS-485 port to interface to Hampshire Controls central monitoring system

Custom programming and packaging can be provided to fit most temperature monitoring tasks.

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**Power Requirements:**

9-18 volts DC, 800 ma maximum
(120VAC, UL listed supply is standard)
(220V optional)

Battery:

7-cell NiMH, 8.4 volt 150 maHr,
Uses standard 9v size

Charger:

2 ma trickle charger, built in

Standard Sensor:

Current source IC in 1.25" x .25" dia. case
Color-coded 20' Teflon lead
(other lengths available)

Temperature Ranges:

-100°C to +100°C
(°F optional)
(other ranges per special order)

Resolution:

0.1°C

Accuracy:

+/-0.2°C

Sensor Options:

Type "K" or Type "T" thermocouples (3 probes max.)
100 ohm RTD
1000 ohm RTD
Copper 10 ohm RTD
0-5 voltage or 4-20 mA current input

Mechanical:

Case is black bakelite, 7"w x 4"h x 2"d wall or
cabinet top mount with bracket or flush mount

Outputs:

SPDT relay contacts
Ethernet Interface Option
Serial port, CMS
(Consult Hampshire Controls)

Printer Option:

Two color dot matrix printer
with power supply and cable supplies 4.5"
2-ply printouts

There is a one-year warranty on all Hampshire Controls products.

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About Our Company

Started in 1975, Hampshire Controls provides standard and custom designed electronics to the biomedical and industrial markets. In addition to the Model TS4, other products include:

- Model 140 Single Probe Temperature Monitor
- Model LD-200 LN2 Level Detector/Alarm
- Model TC-3 Rapid Response TempCheck
- Multipoint Central Monitoring System (CMS-II)
- Dataplex-32 Multipoint Monitor/Logger
- Model AFM Air Flow Monitor
- Custom Microprocessor Assemblies
- Model ADM Alarm Delay Module
- Model LVC Regulated Output Phase Control
- Isolated Input Line Voltage Controls
- Custom AC Motor Phase Controls
- CO2 Backup Control/Alarm for Freezers

