

TempTale[®] Monitors

Maintain Precise Visibility of Your Cold Chain

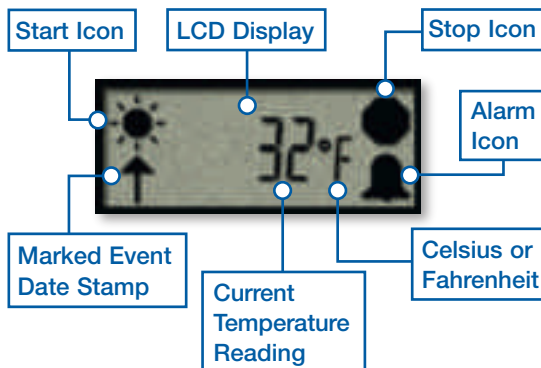
Our precision temperature and humidity monitors let you track and collect data about your temperature-sensitive shipments. These highly reliable, electronic monitors enable you to make immediate accept or reject decisions, and gain greater visibility into every critical step of your cold chain.

In addition to the strict quality control methods used in the design, test, production and service of our monitors, a NIST traceable validation certificate is provided with every TempTale monitor we ship.

TempTale4[®] (TT4) Monitor



Our flagship temperature monitor offers customizable alarm settings to meet the widest array of in-transit and storage applications. The functional design of the alarm integrates pre-programmed time and temperature limits to trigger "time-out-of-range" events. The monitor quickly and easily downloads to a PC for detailed time/ temperature history by using fast, reliable optical communications.



TempTale 4 Specifications

Temperature Measurement Range	-22°F to 158°F (-30°C to 70°C)
Temperature Accuracy Range	±2°F from -22°F to 0°F (±1.1°C from -30°C to -18°C) ±1°F from 0°F to 122°F (±0.55°C from -18°C to 50°C) ±2°F from 122°F to 158°F (±1.1°C from 50°C to 70°C)
Temperature Resolution	0.1°F/C over full temperature measurement range
Memory Type	Non-volatile 2K or 16K EEPROM Options
Data Storage Capacity	1,920 or 16,000 data points
Battery Life/Type	1-year run life/3.0v lithium battery
Data Sampling Interval	Programmable from 10 seconds up to a maximum of 2 hours
Water Resistance Casing	NEMA 6 Rating
Start-Up Delay	Minimum 0 seconds up to maximum 194 days
LCD Programmable Options	Display current temperature reading, display temp values in °F or °C, Enable flashing of start, stop and alarm icons.
Start Up Options	Manual push button or automatic launch option
Alarm Function	Programmable high and low limits; alarm is triggered when temperature exceeds set limits
Typical Dimensions	3.6" L x 2.0" W x 0.67" H (9.2cm L x 5.1cm W x 1.7cm H)
Weight	1.6 ounces, 45.4 grams (apprx)
Quality Assurance Certifications	CE Mark by TUV; Traceable to NIST
Software/Computer Interface	TempTale Manager Desktop Software; Interface Plus Reader



TT4 Humidity Monitor

With its integrated digital humidity sensor, the TT4 Humidity monitor is ideal for any application where relative humidity must be monitored. The TempTale4 Humidity monitor is designed for measuring and recording relative humidity from 10% to 100% RH and temperatures from -30°C to +70°C (-22°F to +158°F).



TT4 Probeless Dry Ice Monitor

This monitor is designed to accurately record, monitor and archive temperature data of dry ice shipments. It is the industry's first self-contained probeless dry ice monitor with an LCD display capability. It can be placed directly into the dry ice environment in contact with the product and monitors temperatures as low as -80°C.

TT4 Humidity Monitor Specifications

Temperature Measurement Range	-22°F to 158°F (-30°C to 70°C)
Humidity Measurement Range	10% – 100% RH
Temperature Sensor Accuracy Range	±2°F from -22°F to 0°F (±1.1°C from -30°C to -18°C) ±1°F from 0°F to 122°F (±0.55°C from -18°C to 50°C) ±2°F from 122°F to 158°F (±1.1°C from 50°C to 70°C)
Humidity Sensor Accuracy Range*	±4% RH from 10 – 90%, ±5% RH from 90 – 100%
<i>*RH Accuracy stated within Temperature Exposure Range of: 5°C to +60°C, Non-Condensing</i>	
Temperature Resolution	0.1°F/C Over Full Temperature Measurement Range
Relative Humidity Resolution	0.4% RH from 10% to 100%
Memory Type	Non-volatile 16K EEPROM
Memory Capacity	Maximum 16,000 data points (8,000 temperature data points/ 8,000 Relative Humidity data points)
Data Sampling Interval	Variable from 10 seconds up to 120 minutes
Start-Up Options	Manual push button or automatic launch option
Start-Up Delay	Minimum 0 seconds up to maximum 194 days
LCD Display	Displays Max/Min Temperature and Humidity Data and Time-Out-of-Range Temperature Data
LCD Programmable Option	Displays Current Temperature and Humidity Data
Programmable High and Low Alarm Options (Ambient Sensor)	Single or cumulative time-out-of-range event above or below ideal temperature range
Programmable High and Low Alarm Options (Humidity Sensor)	Single or continuous time-out-of-range events above and below ideal RH range
Typical Dimensions	4.0" L x 2.0" W x 1.0" H (10.2cm L x 5.1cm W x 2.5cm H)
Weight	1.7 ounces (48.2 grams) approximate
Battery Life	1-year run life
Quality Assurance Certifications	CE Mark by TUV; Traceable to NIST
Software/Computer Interface	TempTale Manager Desktop Software; Interface Plus Reader

TT4 Probeless Dry Ice Monitor Specifications

Temperature Measurement Range	-80°C to 30°C (-112°F to 86°F)
Temperature Accuracy Range	±1.7°C from -80°C to 30°C (±3°F from -112°F to 86°F)
Temperature Resolution	0.1°F/C Over Full Temperature Measurement Range
Memory Type	Non-volatile 2K EEPROM
Memory Capacity	Maximum 1,920 recorded data points
Data Sampling Interval	Variable from 10 seconds up to 15 minutes
LCD Display	Displays Max/Min Temperatures and Time-Out-of-Range Data
Typical Dimensions	3.6" L x 2.0" W x 1.2" H (9.2cm L x 5.1cm W x 3.0cm H)
Weight	3.8 ounces (107.0 grams) approximate
Battery Life	1-year shelf life
Start-Up Options	Manual push button or automatic launch option
Start-Up Delay	Programmable from 0 seconds up to 10 days
Quality Assurance Certifications	CE Mark by TUV; Traceable to NIST
Maximum Recording Period	20 days
Software/Computer Interface	TempTale Manager Desktop Software; Interface Plus Reader
Monitor Recording Options	Single Use Only

Operating the monitor outside of published specifications can cause damage to the monitor.



TT4 Monitor with External Temperature Probe

TT4 Dual Sensor Monitor also available

The TT4 monitor with external probe supports applications where a remote probe (5' stainless steel probe or 5' flexible probe) is required. The TT4 Dual Sensor option allows for both the internal and external sensors to be programmed to trigger "time-out-of-range" events. The probe can be placed into a liquid or an insulated package to capture the core temperatures while also monitoring the external ambient temperatures. This capability provides you with maximum application flexibility and extremely high levels of control and visibility into your in-transit temperature monitoring.



TT4 Dry Ice Monitor

The TempTale4 Dry Ice monitor is used for monitoring in-transit and storage temperatures of pharmaceuticals, vaccines and frozen foods that need to be kept at consistently low temperatures to maintain their stability. This monitor features options for 5' flexible or 5' stainless steel probe. It can also be used to validate packaging and other components of your cold chain shipping and storage processes.

TT4 Dual Sensor Monitor Specifications

External Temperature Sensor Options	5' Stainless Steel Probe or 5' Flexible Probe (12.7cm)
External (Probe) Temperature Measurement Range	-22°F to 158°F (-30°C to 70°C)
Internal Temperature Measurement Range	-22°F to 158°F (-30°C to 70°C)
External (Probe) and Internal Sensor Temperature Accuracy Range	±2°F from -22°F to 0°F (±1.1°C from -30°C to -18°C) ±1°F from 0°F to 122°F (±0.55°C from -18°C to 50°C) ±2°F from 122°F to 158°F (±1.1°C from 50°C to 70°C)
Temperature Resolution	0.1°F/C Over Full Temperature Measurement Range
Memory Type	Non-volatile 16K EEPROM
Memory Capacity	Maximum 16,000 temperature data points (8000 probe/8000 ambient)
Data Sampling Interval	Variable from 10 seconds up to 120 minutes
Start-Up Options	Manual push button or automatic launch option
Start-Up Delay	Minimum 0 seconds up to maximum 194 days
Programmable High and Low Alarm Options (Both Sensors)	Single or cumulative time-out-of-range events or programmable above or below ideal temperature range
LCD Display	Displays Max/Min Temperature Data & Time-Out-of-Range Data
LCD Programmable Option	Displays Current Temperature Data
Typical Dimensions	4.0" L x 2.0" W x 1.0" H (10.2cm L x 5.1cm W x 2.5cm H)
Weight	3.5 ounces (99.2 grams) approximate; including probe
Battery Life	1-year run life
Quality Assurance Certifications	CE Mark by TUV; Traceable to NIST
Software/Computer Interface	TempTale Manager Desktop Software; Interface Plus Reader

TT4 Dry Ice Monitor Specifications

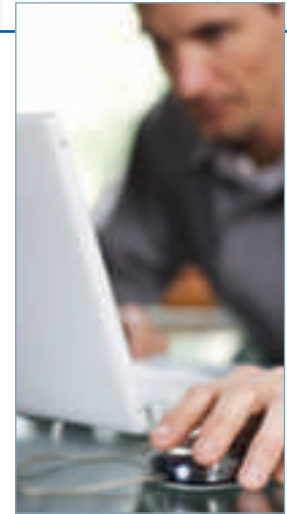
Probe Sensor Temperature Measurement Range	-80°C to 30°C (-112°F to 86°F)
Probe Sensor Accuracy Range	±1.7°C from -80°C to 0°C (±3°F from -112°F to 32°F)
Electronics Operating Range	-30°C to 70°C (-22°F to 158°F)
Temperature Resolution	0.1°F/C Over Full Temperature Measurement Range
Memory Type	Non-volatile 16K EEPROM
Memory Capacity	Maximum 16,000 temperature data points
Data Sampling Interval	Variable from 10 seconds up to 120 minutes
Start-Up Options	Manual push button or automatic launch option
Start-Up Delay	Minimum 0 seconds up to maximum 194 days
Programmable High and Low Alarm Options	Single temperature event, continuous or cumulative time-out-of-range events above and below ideal temperature range
LCD Display	Displays Max/Min Temperature Data & Time-Out-of-Range Data
LCD Display Factory Programmable Option	Displays Current (Probe) Temperature Data
Typical Dimensions	3.6" L x 2.0" W x 1.0" H (9.2cm L x 5.1cm W x 2.5cm H)
Weight	3.5 ounces (99.2 grams) approximate; including probe
Battery Life	1-year run life
Quality Assurance Certifications	CE Mark by TUV; Traceable to NIST
Options/Accessories	TempTale Manager Desktop Software; Interface Plus Reader

TempTale Manager Desktop Software

TempTale Manager Desktop is an easy-to-use, powerful PC-based Windows application for programming, downloading, displaying, analyzing and reporting time and temperature data from any TempTale monitor. The user-friendly interface provides superior flexibility when viewing, saving, printing and exporting monitor data.

- Supported operating systems include: Windows 2000 and XP
- Program both Primary and Secondary sensor alarms
- Automatically export data to Excel for further in-depth analysis or processing
- Multiple Document Interface (MDI) feature allows user to display multiple window views at once on user's desktop
- View multiple graphs simultaneously by overlaying graphs from multiple monitors to quickly highlight relationships
- Easily zoom-in on any segment of a Single or Multi-Graph view for a closer, more detailed display of a particular trip segment
- Software automatically computes key statistical information from multiple data files such as, Min, Max, Delta, Mean, Standard Deviation Temperature Values
- Composite View feature displays Graph, Summary and Tabular data views all on one screen
- Automatically calculates and displays Mean Kinetic Temperature (MKT) data value
- Automatically switch to a single data series view from a Multi-Graph view

- Online help manual
- Toolbar buttons provide quick access to commonly used functions
- E-mail a saved file to a local or remote location or user
- Easily and quickly configure multi-use monitors to your specific application needs
- Request Technical Support online
- Automatically receive notification of software updates
- Software automatically configures communications port for Interface Plus Reader



Data Security and Integrity

Data Security and Integrity is administered in several ways:

- Data files are saved as encrypted XML files and can only be read by the TTMD application
- Username and password is required to launch application
- System employs an automatic file-naming convention to link a printed and signed record to an electronic record
- System Administration rights required to setup new users, install application and assign user privileges
- Validated system with supporting Software Validation Package and documentation

Quality and Validation Support and Services

Sensitech is committed to product excellence and customer satisfaction. Our facilities are ISO 9001:2000 certified, our products are tested to NIST traceable standards and we have successfully participated in and completed over 24 supplier audits since 2001 with leading pharmaceutical and biotechnology companies.

What does this commitment to quality and process improvement mean to you and your business? Peace of mind and the assurance that you are partnering with an organization that meets the highest level of quality standards in the industry.

To meet a wide range of validation requirements, we offer the following validation packages and certification services:

- TempTale[®]4 Monitor Validation Package
- TempTale[®] Manager Desktop Software Validation Package
- 3 Point NIST-traceable Certificate of Validation
- Post Validation Services with Certificate
- 1-Year Limited Warranty
- On-site Audits

Sensitech is the world's leading provider of cold chain visibility solutions enabling global leaders in Food and Pharmaceuticals to track and monitor assets across the supply chain, protecting the integrity of their temperature-sensitive products. Sensitech is an ISO 9001:2000 registered company. The company is based in Beverly, Massachusetts, and has offices in Amsterdam, Calgary, Melbourne, Redmond and Santiago with service and distribution offices around the world. For additional information about Sensitech, call 978-927-7033 or visit www.sensitech.com. ©2006. Sensitech Inc. All Rights Reserved. All trademarks and service marks are the property of Sensitech Inc.