Description:

The TV2 is a highly engineered monitor/alarm/logger with a simple user interface. It is the only device which monitors, alarms, logs and charts data. It uses up to four remote wired or wireless sensors to collect temperature, humidity, and/or pressure data. The QuickCheck display shows current conditions as well as over 80,000 data points for each sensor.

The monitor continually shows current and maximum /minimum values as well as current conditions of each remote sensor. It also logs historical data, which can be copied to a computer with the free secure TView program for archiving or printing. All archived data is encrypted to comply with 21 CRF 11 requirements and can be seen in graphic or tabular form.

Stored data:

The **TV2** stores **over 80,000 temperatures** for each sensor, which means that it will store over 1.5 year of temperature history if you are sampling temperature once every 10 minutes. If you are logging temperature **and** humidity it will story nine months of history for each of the four sensors. Although the **T**V2 can store and display temperature from absolute zero to thousands of degrees, the actual temperatures collected depends on the type of sensors being used (see below).

In addition to showing the current conditions, the TV2 can display the temperature history. Touching one of the temperatures causes the temperature history to be shown in an easy-to-read chart format. The chart can be scrolled backwards and forward. It can also be zoomed into or out of to show more or less data.

Temperature chart for one sensor

The menu system

A password-protected Easy Touch menu is used to set and display parameters such as high and low temperatures, sampling intervals, and alarm levels. Since the menu system is password protected the **T**V2 can be placed in high traffic areas so that each staff member can see it and be part of your quality control process.

The **T**V2 is powered through a USB cable and has an internal 72-hr battery backup. When It enters battery mode during a power failure the display 'sleeps' but the sensors continue to collect temperatures for at least 72 hours depending on your settings. In the event that power is not restored before the batteries are depleted, the stored data will still be retained although the unit will not collect new data. Once power is restored, the display wakes up and normal operations continue.

The TV2 display:

The LCD is a full color Easy Touch graphic display, controlled by a microprocessor showing 220 columns of temperature data at all times. Three hours of data is displayed if it is logged once a minute, or thirty hours of data is displayed if it is being logged once every ten minutes.

However, it is possible to view much more than 30 hours of history with the zoom feature. Each time the display is **'zoomed out'** the number of temperatures displayed **doubles**. This unique feature makes it possible to display over 23,000 temperatures on one screen.

To view previous temperatures, you can move the display backwards with the **'left arrow'**. making it possible to see months of data in great detail a few days or hours at a time.

The bottom two rows of the display are used for system-data showing the chart scale, the current temperature of each sensor, the date time, and whether the TV2 is connected to your Local Area Network.

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Technical Specifications:

Display	
Channels	Temperature only - Four Channels Temperature/humidity - Eight Channels (4 temp & 4 RH)
Current Conditions Display	Shows: 1. Temperature of each sensor (4) 2. Low internal LI battery indicator 3. Max/Min temperature of each sensor 4. Temperature alarm enabled/disabled 5. Sensor battery capacity (for wireless sensors only) 6. Date and time
Display Resolution	0.1°C on LCD, 0.0001C on PC
Monitoring	Continuous with active display
Max/Min Display	Shows on active display. Resets with Easy Touch.
Sensor Accuracy	Sensor dependent. *(See sensor specs below)*
Size	8 3/8" x 5" x 1 3/8"
Sample Interval	User selectable: 1/min - 1/24hrs
Temperature Range:	Sensor dependent *(see below)*
Sensors	
Digital Sensor	-30°C to 80°C (±1.0°C)
Thermistor sensor	-20°C to 75°C (±0.3°C), (±.2°C option) for glycol bottle
Thermistor/Humidity sensor	-20°C to 75°C (±0.3°C), RH 0% to 100% ±3.0% w 0.5% Repeatability
K Thermocouple sensors	-200°C to 1250°C. Accuracy ~±2.2°C
E Thermocouple sensors	-200°C to 900°C. Accuracy ~±1.7°C
J Thermocouple sensors	-0°C to 750°C. Accuracy ~±2.2°C
T Thermocouple sensors	-250°C to 350°C. Accuracy ~±1.0°C
Note: All thermistor and thermocouple sensors come with a 3-foot wire ending in a 2 inch stainless steel probe.	
Technical Stuff	
Alarms	1. High/Low with delay for each sensor= 2. Low internal LI battery 3. Low sensor battery if sensor is wireless 4. Power outage 5. Sensor out of range 6. Alarm disabled (visual only)
Calibration:	Optional NIST traceable

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Characterization:	One - three point calibration table
Data Storage Technique	Non-volatile RAM
Non-volatile memory	80000 samples per channel
Power	Via USB cable or screw terminals 5-24vdc
Battery Backup	>72 hrs while in sleep mode. 3 AA batteries.
Output to PC	Via USB cable or LAN connection
Indicators	LCD & LED
Controls	Full color Easy-Touch display
User Settings	On board password-protected menu
LCD Pixels	488 horizontal x 270 vertical
LCD Temperatures	Operating 0°C to 50°C, storage -20°C to 68°C
LCD size	2.5" x 4.5"
LED	Green indicates AC power present
Relay	Dry contact N/O with 2 terminal clamp<30v fused for .5 amp
Mounting	Wall mount - Velcro.
Display weight	1 lb