TV2 Data Sheet

Monitoring temperature and humidity

Monitoring temperature and humidity conditions does not have to be complicated or expensive.

The TV2 is an ideal instrument for monitoring and documenting up to four different areas for temperature and humidity with external wired or wireless sensors.

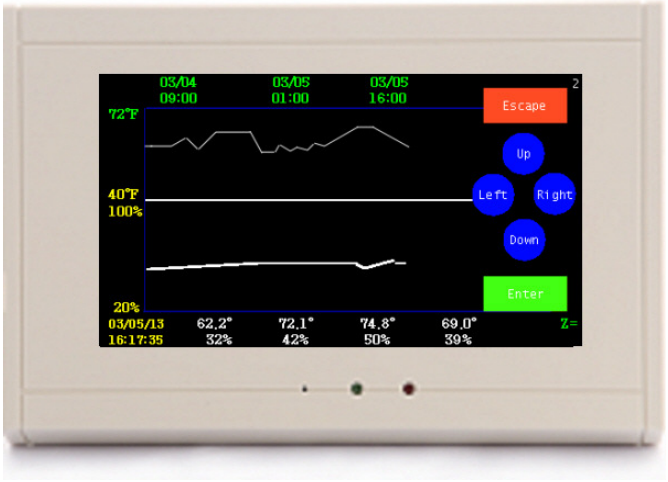
It is the only instrument that monitors, alarms, logs and charts temperature and humidity all by itself. It needs no computer or other equipment. It has a Quick Check display which turns red any time temperature or humidity indicates unsafe conditions. And although it is a very sophisticated electronic instrument it has a simple user interface.

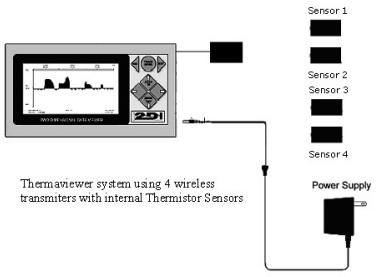
An on-board menu system allows the user to quickly set the display and alarms for any particular application.

Installation is a simple 6-step process:

1. **Position the sensor modules in the areas to be monitored.**
2. **Plug the TV2 power adaptor into a wall socket.**
3. **Attach the auto dialer (if purchased).**
4. **Set the time and monitoring frequency (see below for suggested settings).**
5. **Set the alarm in needed.**

It is accurate and automatic, providing continuous monitoring and indicating trends so that corrective action can be taken. In addition to the display showing the current temperatures as pictured above, if the user touches any of the current readings, the display changes to show a chart of the readings. The user can easily see many months of temperature/humidity history, all of which can be exported to an excel worksheet with the included TView software. .





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Features:

2di has been protecting pressurized rooms, warehouses, and storage areas for years. Our customers include, doctors, warehouses, manufactures, research facilities, testing labs, schools, etc...

A list of some of our customers can be seen on our website: https://www.e2di.com/customers.html.

Accuracy and calibration information

The TV2 monitor itself has no instrument error and never needs calibration. Sensor accuracy and calibration requirements are listed in the table below.

Sensor	Accuracy	Calibration
TSMRH or WS4HIHMIRH - Wired or wireless Thermistor (-20°C to 80°C) and humidity sensors	±0.3°C ±3.0%	Every other year

Data logging

The TV2 logs temperature and humidity data in its non-volatile memory, storing over 1.5 years of temperature history for each. This data is always current since older data is replaced with newer data. The temperature/RH log for each sensor can be viewed on the TV2 by touching the display. The chart can be expanded so that each individual temperature can be seen, and compressed so that all 80,000 logged temperature/RH data points can be viewed on one chart. This makes it possible to see trend data in addition to each individual logged temperature and humidity points.

Trace mode

A trace mode can be used on the TV2 chart to view the date and time each individual temperature and humidity point was logged. This is very useful if an alarm occurs and it becomes necessary to determine when conditions began to change, how long it was unsafe and when or if it returned to normal.

Backup and data safety

The TV2 has a rechargeable lithium ion battery capable of operating the TV2 **for over 100 hours** if wall power is interrupted. While the TV2 is operating on battery power all functions continue including, logging, high-low alarms, responding to auto download requests from computers and all menu functions.

Interfacing to computers

The TV2 is a completely stand-alone data logger and viewer but it can be interfaced with computers for additional usefulness'. It comes with **free secure PC software** so that all logged data can be downloaded to or queried from a computer. The TV2 can be wired to a computer via its USB port or through the wired Ethernet port. If the TV2 is communicating with a computer or LAN it can generate text or email alerts any time an alarm occurs. It can also continually backup the data to the hard drive of the PC. And, of course, it can print charts reflecting the logged data or exported it to Excel.

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Data security

- **All data logged to the TV2 is stored in non-volatile RAM memory**
- **Stored data cannot be changed or edited - only viewed**
- **Data downloaded to a PC is encrypted and can only be viewed with TView software**
- **TView software is 21CFR11 compliant**
- **Data imported to a computer is stored in 256 bit encrypted files**

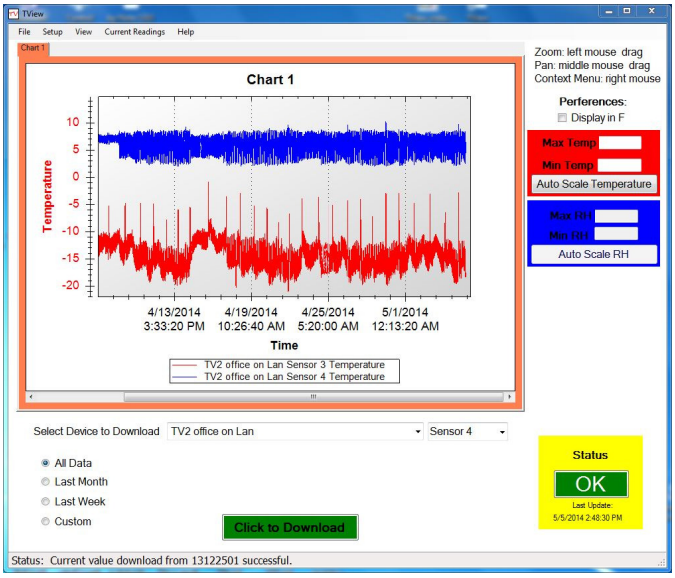
Alarms:

- **Individual high - low temperature for each sensor**
- **Power Failure alarm**
- **Low battery alarm**
- **Missing sensor alarm**
- **Lost communication with a computer**
- **Audio Visual alarm**
- **N/O Dry contact relay closes if alarm occurs**
- **All alarms are logged to PC if connected**

Downloading data:

The TV2 will hold and chart approximately 1.5 years of temperature history for each sensor. All logged data can be copied to a PC via a USB cable, or the TV2 can be attached to your local area network via the optional wired Ethernet socket.

The TView software, which comes with the TV2 can automatically download the temperature history from the TV2, so that the resultant chart can be printed out or archived.



The TView software can also be used to send a text or email alert if one of the sensors sees a temperature that is too hot or cold.

Current and historical temperatures can also be viewed on a computer with the free TView software. All temperatures can be automatically copied to a file on a computer through a USB port or over a local area network so that everyone can have access to them at any time.

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