



Tektroniks

Temperature Monitoring & Alarm System

Wireless | USB | Simple to Install

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Introduction

The system is a stand alone monitoring and alarm system designed to monitor any environmental factor and/or digital status. With web browser access, mass storage, graphical user interface and USB, the unit offers a complete solution for most monitoring requirements.

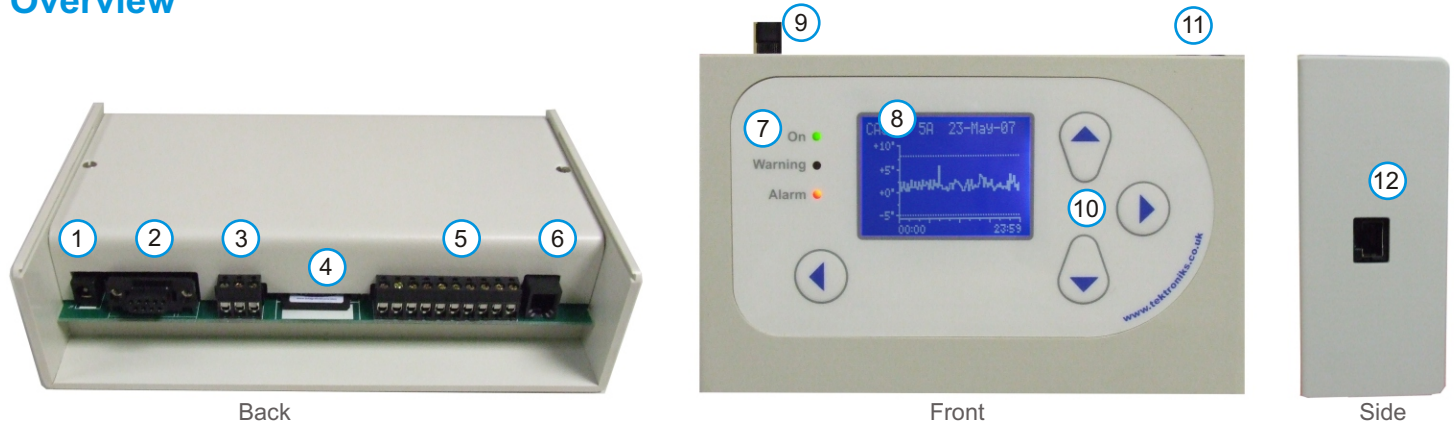
What can I monitor?

The system can be used to monitor refrigerated cases, cold rooms, hot serve ovens, warehouses, plant, working environments, laboratory equipment and is viable in a variety of commercial environments.

What are the benefits?

Comply with legislation | Protect your reputation | Reduce stock losses and wastage | Conserve energy | Make better use of staff time

Overview



- 1. DC Power In
- 2. External Modem Connection
- 3. Volt Free Relay Contact
- 4. MMC Storage Device

- 5. Eight Sensor / Digital Inputs
- 6. Expansion Socket
- 7. Status Lights
- 8. High Contrast display

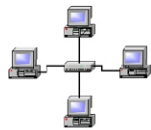
- 9. Antenna for Wireless sensors
- 10. User Keypad
- 11. USB Port
- 12. Ethernet Socket



Connectivity



Direct web access



Network / LAN



Wireless DATACentre



Monitoring Bureau



Printer



Remote strobe / Claxton



Alarm system / Auto dialler



Modem



8 Internal sensor / fault inputs



Up to 120 Wireless sensors



8 way expansion module



Lighting / Multi-purpose schedulers

Wireless Sensors

Wireless is ideal when monitoring a mobile device, retrofitting an existing site with limited access to ceilings and duct work or simply to reduce installation time.

Each wireless module has a low powered transmitter which converts the sensor reading into digital data and transmits it across the airwaves to the base station. Modules are available with internal or external sensors.

In the event that the signal from the transmitter is not strong enough to reach the base station, repeater modules can be used to repeat or “boost” the signal.

With multiple repeaters the units create a mesh type network, which in the event that a signal path becomes unavailable will automatically re-route via another available path.



Hard Wired & Network Systems

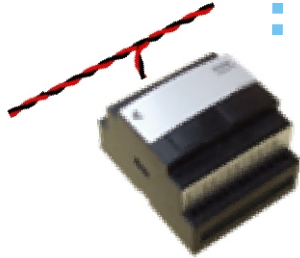
The unit comes with eight internal inputs that can be configured to measure either temperature or digital status. For small sites where the devices being monitored are close to the unit this makes installation straightforward.

For larger types of applications or where more than eight points need to be monitored the system can be expanded using network modules. This avoids dragging individual cables long distances which can be both time consuming and expensive. Each module can accept a further eight digital or sensor inputs with up to 16 units daisy chained together.

To ease installation, the modules use a simple two wire network to send the data digitally resulting in no loss of sensor accuracy.

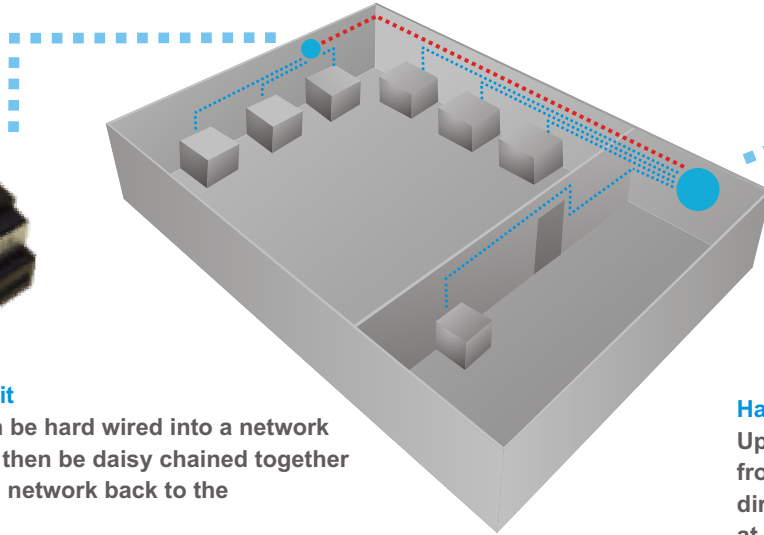


Hard Wired & Network Installation

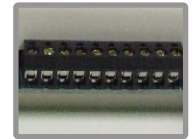


Networked Interface Unit

Up to eight sensors can be hard wired into a network unit. Up to 16 units can then be daisy chained together using a simple two wire network back to the main monitoring unit.



■ Main unit



Hard wired inputs

Hard Wired

Up to eight sensors can be hard wired from the devices being monitored directly into the terminal strip located at the rear of the unit.

Set Up & Operation



Main status screen displaying sensor being viewed, current real time sensor reading together with its alarm thresholds.

The user keypad and display provide a simple interface allowing even the most inexperienced users to navigate the system.

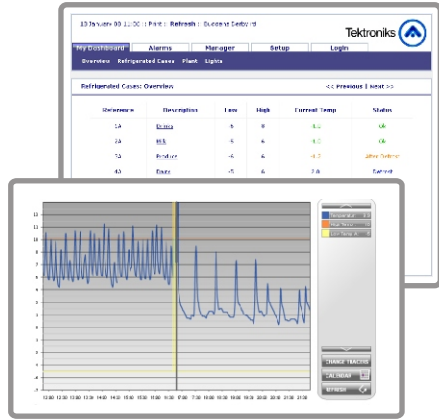
Using the keypad operators can scroll through each monitored point and view real time data, status information, set points and archived data.

All critical functions are password protected and logged internally together with the time and date, user details and a brief description of what has been done providing full audit trail.

During configuration each sensor is assigned a meaningful descriptor which is then referenced in all further programming and interrogation.



Web Browser & Internet Access



Interrogate real time & historical data

When connecting a PC via the internal ethernet port, the system starts to show its flexibility and capacity.

No need for complicated PC software packages, the unit can be viewed and interrogated using a standard web browser either locally, via a LAN or and external modem.

Web browser access is direct to the unit so everything you see is in real time.

Users can be issued with various levels of access from view only to complete programming and alarm management.

Alarms and Traceability

Each monitored device has a set of alarm thresholds so that the unit can determine if its functioning within set parameters. When a threshold is exceeded the system generates an alarm.

Every alarm is logged internally with the time and date and the value that the sensor reached. Alarm history can be reviewed at any time either from the unit or via the web interface. To complete the audit trail, the unit can be configured so that alarms have to be acknowledged by entering a pass code. The details of the user who acknowledges the alarm is also stored with the alarm event.

To reduce nuisance alarms an optional alarm delay can be set for each device. In this instance the sensor reading has to be outside the alarm thresholds continuously for the delay period in order for an alarm to be generated.

During this period the status of the sensor will change to “Alarm Pending” and detail how long the device has been outside its limits.



Alarm Signalling

The system can be pre configured to perform various functions when an alarm event is triggered. This can be as simple as to instigate its internal sounder, energise a relay to drive an external klaxon or even send an email. You can also set up a seven day scheduler to only generate external alarms outside trading hours.



Internal sounder and status LEDs



Volt free contact to drive external klaxon & strobes



Connection to monitored alarm systems



Modem output to dial out to a bureau service

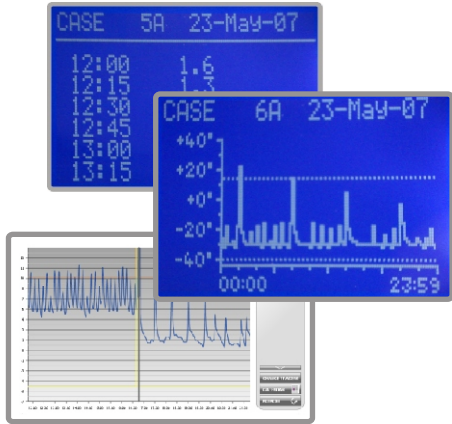


Auto dialler sends pre recorded message direct to telephone



IP / Email

Historical Data & Logging



Historical data viewed in tabular or graphical form either locally or through a web browser

While the display shows real time data, sensor readings are stored internally at one minute intervals.

The data can be retrieved in tabular or graphical form either locally at the unit or externally through a web browser.

Data is stored for up to 5 years internally. This removes the need for costly PC's to be continually connected archiving data.

With the alarm thresholds displayed its very easy to see when limits are breached and for how long enabling clients / users to make informed decisions in the event of system breakdowns.

USB & Reports


The USB port allows users to export historical sensor data direct to a USB memory device.

Various file formats can be selected, including HTML so that the data can be read using a standard web browser or CSV for importing directly into a spreadsheet.

A HACCP report details the monitoring points and sensor data at set periods throughout the day. The user can select either daily, weekly or monthly time periods for report generation.

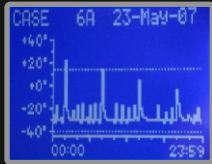
The USB can also be used to back up and restore the system set up and for updating software including web pages.

System	00:00	01:00	02:00	03:00	04:00
6A Soft Drinks	-9	4	6	-9	-4
7A Soft Drinks	11	11	11	11	11
8A I.Cream Top	-36	-33	-32	-34	-36
8B I.Cream Mid	-33	-28	-35	-34	-33
9A Sandwiches	4	1	5	6	2
10A Chiller CR					0
11A Freezer CR					0
12A StorageCab					
13A BckStorgCab					
14A BckStorgCab					
15A Frozen Food					



Data can be exported directly to a USB memory stick in various formats

What you get....



On screen display of real time and historical data

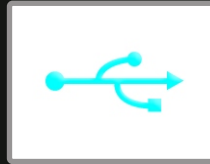
A screenshot of a HACCP report table. The table has columns for 'System', '00:00', '01:00', '02:00', '03:00', and '04:00'. The rows list various components and their corresponding values.

System	00:00	01:00	02:00	03:00	04:00
5A Top Drain	-5	4	6	-5	-4
7A 502 Drain	11	11	11	11	11
8A1 Cream Top	-35	-33	-32	-34	-36
8B1 Cream Mid	-33	-28	-25	-34	-33
9A Reaction Box	4	1	5	5	2
11A Cooler Ch	2	5	1	3	6
11A Pressure Ch	23	20	19	22	18
12A Storage Tank	3	3	6	3	3
13A Washdown Cab	2	2	2	2	2
14A Washdown Cab	5	4	0	5	2
15A Tissue Feed	-17	-18	-18	-16	-15

HACCP Reports direct to a USB memory stick



1 year on board data storage



USB for exporting historical data and reports



Ethernet for connection to a standard web browser



User accountability with various levels of protection.

.... and above all ease of use

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