



Customer Requirements

A large medical research facility requires monitoring of the temperature and humidity within refrigeration equipment and the ambient laboratory environment. The customer also requires data to be accessible by researchers in various locations throughout the facility.

dataTaker DT85

- 1 A cost effective data logger expandable to 300 channels, 600 isolated or 900 single-ended analog inputs
- 2 Built-in web and FTP server allows for remote access to logged data, configuration and diagnostics
- 3 Modbus slave and master functionality allows connection to Modbus sensors and devices and to SCADA systems
- 4 Smart serial sensor channels capable of interfacing to RS232, RS485, RS422 and SDI-12 sensors
- 5 Rugged design and construction provides reliable operation under extreme conditions
- 6 Includes USB memory stick support for easy data and program transfer



Staying Cool: A single *dataTaker* data logger can be used to easily monitor and log all refrigeration units and temperature sensitive environments within a research facility.

dataTaker Solution

Equipment

dataTaker DT85 data logger
Channel Expansion Modules (CEM)

Sensors

Thermocouples
RTDs
Humidity Sensor

Implementation Notes

Within a medical research facility, a *dataTaker* DT85 can be used to monitor and log temperature controlled environments, sample temperatures, refrigeration and freezer units and gas levels. Paired up with *dataTaker* Channel Expansion Modules (CEMs), the number of isolated differential inputs can be increased to up to 600 or single-ended inputs up to 900. Given this generous number of inputs, it becomes possible to monitor all of the above parameters within the research facility using a single logger.

The DT85 can be installed anywhere within the facility, preferably as close to the sensors as possible to reduce sensor cable lengths. The CEMs can be distributed to other areas within the facility where other measurements may be taken, again minimising sensor cable length.

Connecting the DT85 to the computer network (intranet) via Ethernet allows any computer on the intranet to act as a monitoring terminal through a web browser.

An important feature of the *dataTaker* data loggers is exploited in this application, which is the ability to operate independently to all other systems. If the laboratory control or power systems were to go offline then the logger will continue to collect data, whilst being powered by its internal rechargeable battery. This means that there is no danger of losing valuable data during the time when it may be most critical.