



Customer Requirements

A chemical company produces products which require chlorine (Cl₂) during the manufacturing process and as a by-product release hydrochloric (HCL) acid gas. For health and safety reasons, it is necessary to monitor and record any airborne levels of these chemicals. The client also wishes to monitor and record temperature at twenty different locations within the plant, and would prefer a single system to perform both tasks.

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



Chemical safety: Manufacturing with chemicals can result in release of harmful gasses which can be detected using the right sensors and data acquisition equipment.

dataTaker Solution

Equipment

dataTaker DT85 data logger
dataTaker Channel Expansion Module (CEM)

Sensors

Chemical sensors - Cl₂ and HCL,
Temperature sensors - RTD's

Implementation Notes

The dataTaker DT85 will be connected to the channel expansion module, which provides a total of 35 full analog channels, or up to 105 single-ended analog sensor points. A number of chemical sensors can be distributed throughout the plant and connected to the DT85. The logger can also be integrated with the company's gas detection system to automate the contaminant removal process when excessive levels are detected.

Temperature measurements can be taken at many different points in the plant every minute using 4-wire RTD's, which will provide an accurate history of the temperature in the plant over a period of time.

The DT85 can be connected to the computer network so that the engineers responsible for the system were able to monitor it using the dataTaker inbuilt web server feature. Historical data can also be downloaded via this interface in CSV format, which can be analysed in Excel or other spreadsheet packages.

Given the generous internal memory in the DT85, the system would be able to operate autonomously with a total 35 4-wire sensors for months-on-end. This could also be further expanded upon if required.