CAS DATALOGGERS

Remote Pump Monitoring System Using a Modem Data Logger

dataTaker Solution Records Critical Machine Parameters

A company providing automatic water pumping systems contacted CAS DataLoggers requiring an environmental monitoring device for its remotely-located automatic pumps. Previously the station had used paper chart recorders to log various properties such as flow and pressure, but this required too much manual effort to maintain and scarcity of replacement paper and pens was getting more expensive. In the event of operational failure, the station also wanted to send warnings to maintenance personnel via mobile phones so that pump failures or sensor malfunctions can be addressed as soon as possible so a remote pump monitoring system was necessary. Workers had been relying on hard copy feeds from their chart recorders but it was getting harder to find replacement parts and service, necessitating a new solution.

Installation

The station manager installed a dataTaker DT80M Universal Intelligent Data Logger, complete with integrated 3G Cellular Modem. The logger's universal inputs allowed connection with several different types of sensors including those for water level, flow rate, current and pressure. With the dataTaker Series 4 modem data logger, the station did not have to purchase a modem separately. Users can remotely access all logged data, configuration and diagnostics while USB memory stick support enables convenient local data unloading and program transfer.

USAGE

The DT80M is a universal data logger with flexible connection and communication features and a built-in cellular modem ideal for remote monitoring applications. With its 5 to 15 universal analog input channels, the dataTaker DT80M reads all these multiple types of sensor outputs and directly scales them to usable engineering units. The dataTaker DT80M provides precision real-time recording, taking measurements at 18-bit resolution, with a rugged design and construction providing reliable operation under even extreme conditions.

The built-in 3G cellular modem's automatic data transmission sends the data to designated email addresses so it's available to employees no matter where they are and whenever they need it. The manager has entered the operational limits into the dataTaker so that whenever these levels are exceeded, the data logger automatically generates an alarm. For example, the dataTaker's alarms report when tank levels are too low, problems in the chlorine rooms, pump operation has ceased, etc. These alarm emails can also be translated into SMS Text messages as well.

Further cutting down on the manual effort required for system maintenance, the dataTaker DT80M also collects and stores data to its large internal memory instead of paper as the old chart recorder used to do. This results in less waste and longer recording periods. The dataTaker data loggers have embedded dEX software for easy configuration and data visualization via a web browser. The logger's built-in web and FTP server gives the station remote access to all logged data, reconfiguration and diagnostics with a direct USB connection or via a network.

BENEFITS

The dataTaker DT80M data logger has replaced the remote pump monitoring system's station's paper based chart recorders to monitor its pump operation and performance. A cost effective data logger designed for remote applications, the DT80M handles the facility's automatic data transfer, saving workers the need to travel out to collect the data or receive alarms. Additionally, the dataTaker's low power operation enables extended logging sessions.

If the station wants to capture additional environmental data, the DT80M can be used with other sensor types (whether analog or digital) to log temperature, humidity, tipping bucket rain gauges, anemometers, wind vanes etc. This way the dataTaker can act as a remote weather station which can automatically record and communicate back to the station via the logger's internal modem. All these values are recorded in real time and can be stored and downloaded whenever needed.

For further information on dataTaker Intelligent Universal Input Data Loggers, remote pump monitoring systems or to find the ideal solution for your application-specific needs, contact a CAS DataLogger Application Specialist at **(800) 956-4437** or www.DataLoggerInc.com.