## Customer Requirements

A wood products manufacturer is occasionally experiencing "under frequency" alarms at an electrical substation but cannot find the cause. The alarms are disrupting production and proving costly.

Maintenance staff believe they could find the cause if power levels could be logged, however the infrequent nature of the faults meant they would have to wade through enormous amounts of data to find the small amount that was relevant. Ideally, the customer want to monitor the power levels (in kW) 10 minutes before and 10 minutes after the fault.

### *dataTaker* DT80

1. A cost effective data logger expandable to 100 channels, 200 isolated or 300 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

**Substation monitoring:** To track intermittent faults in an electrical substation, a wood manufacturer logs power levels both pre and post-events.

## *dataTaker* Solution

### Equipment
*dataTaker* DT80 data logger
USB memory stick

### Sensors
Power transmitters

### Implementation Notes

Given that the client wishes to record data 10 minutes prior to and 10 minutes following an electrical fault event, the *dataTaker* DT80 "archive" function should be used. In this case, the *dataTaker* will be set up to store 20 minutes worth of data in a rolling buffer (old data is dropped off as new data is collected).

When an alarm condition occurs (as measured by a power transmitter), the logger will continue to log for 10 minutes before archiving the 20 minutes of data in the buffer. By waiting 10 minutes, the buffer will contain 10 minutes of data before the alarm and 10 minutes following the alarm. The data is saved to memory for later retrieval and analysis. Using this method, only the data relating to each alarm is stored and all superfluous data is discarded.

Data can be retrieved via the local area network, using either a FTP client or a web browser. The number of events can also be queried through the *dataTaker* internal web server. Alternatively, maintenance staff can use a USB memory stick to manually collect new data as the events occur.

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