APPLICATION NOTE

CAS DATALOGGERS

Automatic Data Retrieval of Frozen Food Storage Temperature Monitoring

Plant Saves Time With Data Transmitted via Modbus

CAS DataLoggers provided the data capture solution for an industrial plant manufacturing frozen food products. Operators needed to collect real-time data on frozen food storage temperature, current, and the distance traveled by moving carts.

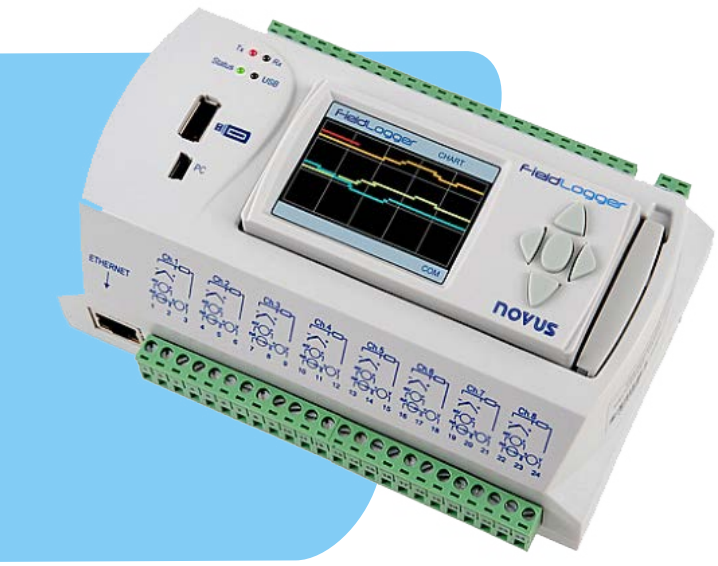
The plant needed to ensure that their freezing food preservation process was meeting requirements and operating smoothly. To accomplish this, the customer needed a data logger with several input channels to record both analog and digital signals. Since personnel don't have time to retrieve data manually, they wanted a device that could transmit the data via Modbus.

Installation

CAS DataLoggers provided the plant with a Novus FieldLogger for flexible collection of analog and digital data. The FieldLogger's 8 universal channels can connect to every required sensor type in this application, including thermocouples, current sensors, and a string pot used to measure distance. The logger supports several types of thermocouples as well as Pt100, mA, mV and higher voltages. Operators can configure each channel individually either as an input or output.

The compact FieldLogger has been installed on a DIN rail using the included 35mm mount within an ABS enclosure. While operating in standalone mode (recording data independently of a PC), the FieldLogger automatically takes a reading from each connected sensor according to the user's preset sampling rate.

For alarm notification, the FieldLogger has 2 alarm relay channels which can be activated when any channel deviates from programmed acceptable conditions. These relays can also be used as digital outputs for connection to alarm sirens, etc.



Usage

The FieldLogger also gives plant personnel the choice of retrieving data using several different communication methods. Choosing Modbus now allows them to transmit data over the plant's SCADA system by using the FieldLogger as a Modbus RTU device. The SCADA system functions as a Modbus master, able to read up to 64 registers from Modbus slaves (remote channels).

In addition to Modbus, the Novus FieldLogger also has an Ethernet interface and an RS485 serial interface. For online storage, the FieldLogger can also connect to a cloud server, giving users access to its data from remote locations whenever they want.

FieldChart, the FieldLogger's free downloadable software, handles configuration, setup and data retrieval from a PC. Configuration is stored in the logger's non-volatile memory. The datalogger can also perform mathematical operations on the input channels.

FieldChart collects data for the PC, displays data in real time, and provides trend and historical views. Users can zoom in and out, print graphs, and export to spreadsheets like Excel™.

Benefits

Using the Novus FieldLogger, the plant's engineer now has real-time access to multiple measurement values whenever needed. The plant saves time by relying on Modbus for data transmission rather than having workers travel back and forth to the data logger to get the data. Just as easily, the engineer can create graphs of his measurements for analysis or presentation.

For more information on the Novus FieldLogger, frozen food storage temperature 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.