

Weather Station Data Logger Collects Meteorological Data

Complete Weather monitoring using an Intelligent Universal Data Logger

A construction company needed to collect meteorological data to study the effects on building materials such as roofing tile. CAS Data Loggers provided the [dataTaker DT-85](#) for an environmental monitoring solution. Long-term monitoring of a variety of weather data is required to determine how the products perform under harsh [environmental](#) conditions. The field engineer desired a single recording device to connect with various types of environmental sensors that would be reliable enough to log unattended in harsh winter [weather](#).



Installation

The field engineer assembled a fully-functioning weather station using a dataTaker DT-85 Intelligent Universal Data Logger as the brain of the system. The data logger's 16 analog inputs allows for connection of up to 32 differential or 48 single ended sensors providing for potential future expansion. The DT-85 data logger samples the analog signals from all these sensors, scales the data into engineering units and securely logs the data to non-volatile memory.

The rugged DT-85 data logger boasts a high-quality design that can stand up to extreme temperatures and hazardous environments. For additional protection, the dataTaker is housed in a waterproof Pelican® enclosure secured to a metal panel on the roof. External ports in the enclosure enable the dataTaker to connect to the extensive array of sensors. The DT-85 can connect directly to virtually any meteorological sensor, be it analog or digital. This flexibility allowed all required data to be logged by a single instrument.

Usage

The dataTaker DT-85 data logger now collects data on solar radiation, ultraviolet radiation, surface temperatures, humidity, periods of wetness, wind speed, wind direction, and rainfall. The dataTaker records and stores a reading from each of these

sensors at any interval chosen during configuration, for this application the engineer chose once every 15 minutes.

The dataTaker data loggers have a 10 million data point memory for extended logging applications where physical access to the logger is inconvenient or not possible and users can utilize sophisticated memory management features. For this application the engineer chose to unload the data with a USB thumb drive twice a month with a simple push of a button. From that point the data can easily be transferred to a PC for analysis. Using the saved data files, the engineer can create tables, charts and graphs illustrating the historical conditions to which the materials were exposed.

The [dataTaker dEX software](#) is built-in the DT-85 and accessed with a web browser for quick setup and configuration in a user-friendly interface. Users can view the software directly with a USB or Ethernet connection or remotely over the Internet or via cellular modem.

Benefits

The Intelligent Universal dataTaker DT-85 is a flexible and reliable solution for recording and storing the necessary meteorological data at a cost-effective price. The field engineer doesn't have to waste time learning two or more incompatible software applications thanks to the included dEX software. And the easy to use system is rugged enough to keep logging within its enclosure no matter the weather.

For more information on the [dataTaker DT-85 Universal Input Data Logger](#) or to find the ideal solution for your application-specific needs, contact a CAS Data Logger Applications Specialist at **(800) 956-4437** or visit our website at www.DataLoggerInc.com.