

Dashboards Efficiently Monitor Utility Usage in a School Building

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The requirement to closely monitor utility usage in a school building measured by floor, as well as present this data logged in an easy-to-understand dashboard for each wing was submitted to CAS DataLogger Solution Analysts. Electrical sub-panels are located on each floor but they are separated from their floors' main utility rooms. These components need to be integrated into the dashboards as well to view the entire usage.



The customer moved forward supplying each floor's utility room with a **dataTaker DT80 Data Logger**, which is connected to the appropriate sensors measuring chilled water flow, hot water flow, and gas flow. The DT80 enables dashboard creation customizable by variable and mimic type, such as thermometer, dial meter, bar graph, etc. Update rates are also variable so they can refresh as often as the operator establishes; the mimics can be saved to the data logger for convenience.

The DT80 is also connected to a power meter located in the electrical utility room. Because of the distance, the unit is connected via a **RS-485 Serial ModBus**. This allows sensors to interface with the DT80 and the data logger itself to interface with the watt node units. This combination is ideal as Modbus has high immunity against the electrical noise present in the utility rooms.

Each floor's dataTaker DT80 units are connected by the LAN, and the client designates one unit as the "master" and the other DT80s as "slaves," allowing the master unit to give a totalized view of the energy usage on every floor. For example, the ground floor dashboard displays the water flow and gas flow including water and electricity usage. The DT80 represents this data in simple gauge format on the customer's PC, including gauges for flow, pressure, motor speed, etc.

The customer increased their data accessibility immediately after installing the DT80s. The school administration has expressed great appreciation to the pictorial references that allows them to closely monitor utility usage. The entire building's usage is recorded with pinpoint accuracy, while the operator is free to view the data in convenient dashboard display arranged by school floor, wing, and total of all variables. Each floor's remote sub-panels are now included.

The customer has additional options available with this solution for increased monitoring and convenience. With a DT80 already on every floor, future expansion to monitor other inputs is easy to set up, measure chilled and hot water temperature, utility room temperature, and filter status. The cafeteria could install its own DT80 since this room has its own data to monitor, including temperatures in refrigerators and freezers. Another DT80 could be added in the boiler room to closely monitor this high-energy usage area; this is also ideal for EPA requirements to monitor and track stack emissions. Further, a separate load meter could be installed to split lighting off of the total electrical load. For a green solution, solar water heaters are one of the most popular new energy-saving devices being considered by schools--the DT80 can easily monitor temperatures inside and out, and also monitor the water flow through the solar panel itself.

For more information on the [DT80 Intelligent Universal Input Data Logger](#), additional remote monitoring solutions, or any other CAS DataLogger product, contact a Solution Analyst at **(800)-956-4437** for recommendations specific to your application or visit www.DataLoggerInc.com.