



Saving energy the easy way

Saving energy is an important topic for medium-sized businesses as well as for energy-intensive industries. An energy measurement case identifies potential savings.

The DIN EN ISO 50001 standard and Germany's regulations on energy efficiency (Spa EfV) require businesses to make energy savings. To enable businesses to do this, Delphin Technology have developed an energy measurement case.

The measurement case performs the following:

- Acquisition of energy data (analog and digital)
- Analysis and documentation of measurement data
- Identification of potential energy savings

Delphin's LogMessage data logger is at the heart of the data acquisition. An integrated 3-phase power measuring unit enables the acquisition of relevant electrical data – such as power, active power, idle power and power-consumption – as well as that required by ISO 50001. The data is processed and linked together within the main data logger. Digital input channels acquire data from a range of different energy meters such as electric, gas and water meters. Analog inputs acquire temperatures, pressures and other measurement data. Each channel can be linked within the device and processed for further analysis.

It is also possible to analyse a company's complex usage of energy thereby identifying potential savings. Energy data from PLC or machine management systems or central management systems can also be acquired via field bus interfaces such as Profibus and Modbus.

The measuring case enables multiple 3-phase power measuring units to be chronologically synchronized which saves having to perform multiple measurements at different locations. Data from remote or inaccessible measurement points can be acquired and analysed via WLAN. Comprehensive monitoring of all relevant energy data is then possible.

Independence and security from the measurement case

Each measurement value is securely recorded to an internal memory and given a unique and manipulations-safe time/date stamp. The memory has a capacity for up to 1 billion measurement values. This enables long-term independent measuring as well as the acquisition of large-volume measurement data over short time intervals. Ring buffer storage can be configured according to requirements and provides compliance to traceability obligations as required by DIN EN ISO 50001.

The measuring case immediately operates as a stand alone system as soon as it is configured. Different configurations can be stored and retrieved as required thereby significantly saving time. If a power failure occurs during measuring, the logger restarts automatically and continues with data acquisition and storage. Measurement data acquired up to the point of power failure remains securely stored in the device's internal memory. Configuration data for the logger is also safe.



Simultaneous analysis of energy data and faults

The mobile equipment is ideal for companies wanting to establish an energy management system according to DIN EN ISO 50001. The measuring case's high-speed analog and digital input channels make it also suitable for carrying out fault diagnostics on plant and machinery. The system is easily extendible and therefore capable of meeting future requirements or extra numbers of signals.

In combination with the ProfiSignal software, data acquired by the measuring case can undergo detailed analysis: meter readings and energy usage can be clearly portrayed in diagrams. The software is simple to use with even long time periods being evaluated within a moment. Whether users are connected online to the measurement case or offline at the office PC, potentials for savings are quick to identify.