



**Seamless
Communication from
Drivers and Interfaces**
within ISO 50001 certified
Energy Management Systems



© 2013 Ing. Punzenberger COPA-DATA GmbH

All rights reserved.

Distribution and/or reproduction of this document or parts thereof in any form is permitted solely with the written permission of the COPA-DATA company. The technical data contained herein have been provided solely for informational purposes and are not legally binding. Subject to change, technical or otherwise

Seamless exchange of data within an ISO 50001 system

The global energy situation is forcing more and more companies to adopt sustainable production policies. Furthermore, public awareness of CO2 emissions is growing. For this reason, many companies are motivated to implement an energy management system and to use the energy available more efficiently. In order to create an official framework for an efficient energy management system, ISO 50001:2011 (abbreviated to: ISO 50001) was introduced.

ISO 50001 is a standard that certifies energy management systems. It provides framework conditions for the complete supply chain and creates transparency in energy consumption. This standard is based on the preceding standard EN 16001 for energy management, which was superseded in 2011 by ISO 50001.

In contrast to other environmental standards, ISO 50001 is recognized internationally. It helps organizations to measure the energy consumption of their machines better and more effectively. ISO 50001 therefore helps companies to develop systems and processes that are necessary to improve their energy efficiency. This includes energy efficiency, use and consumption.

Communication with the control system

The functionality of an energy management system is generally integrated into the control system of the production factory. One of the basic tools of a control system is its communication via drivers and interfaces. The data that is to be worked with must arrive at the control system reliably. The variety of communication possibilities and the simplicity or complexity with which the communication works is an indicator for the competence of the control system manufacturer and determines how productively the system can be used.

COPA-DATA places great value on these basic skills and has equipped its SCADA/HMI system zenon with many possibilities for communication since the first version. Without the corresponding protocols, seamless communication and exchange of data would be inconceivable. Variety of communication is the uppermost priority at COPA-DATA. In doing so, each connection is developed in-house – regardless of whether it is IEC standards 60870 or 61850, DNP3 standard or an "exotic" driver. Our own driver specialists in the COPA-DATA labs work solely on the development and upkeep of high-performance drivers that support the standards in full. They avoid having to go through third-party providers unnecessarily, purchased libraries or superfluous interfaces and thus provide the customer with perfect communication protocols.



With zenon, users receive drivers that have been developed in-house and are in line with standards. With over 300 possibilities for connection, virtually the whole hardware world is available. This know-how guarantees that it is up to date and allows quick reactions to new developments. COPA-DATA was the first provider to supply its customers with a fully-developed IEC 61850 driver.

A suitable driver for every requirement

zenon is equipped for the creation of an energy management system in a control room and can guarantee seamless exchange of data from individual smart meters (in a "smart grid") through to load distributors. The sensors are often directly connected to these systems – without the intermediate layer of a PLC as a data connector.

In doing so, direct drivers that support current standards offer many advantages. In addition to the "classic" protocols such as OPC or Modbus, more and more devices on the market are using standardized IEC protocols – such as IEC 61850 or IEC 60870.

COPA-DATA uses zenon Logic for simple implementation of a driver. The soft-PLC integrated into zenon allows direct access to serial interfaces or network interfaces. Functional modules can be used to implement ASCII protocols or binary protocols as PLC code itself. It is of course also possible for you to develop your own interface applications using VBA or .NET, which provide data directly to zenon Runtime.

Whether DNP3, IEC 61850 or IEC 60870: zenon lets users send data to remote control centers via the driver and Process Gateway, regardless of what mix of communication standards is used.

Easy to use – secure transfer

Any system integrator or control system supplier that offers zenon in energy-specific applications can guarantee to end customers that all requirements for seamless communication between the control system and substations are covered with a single product. Configuration of the communication settings is completely embedded in the development tool – the zenon Editor. The zenon drivers reconnect automatically in the event of a loss of connection.

With zenon, different machines and devices can be connected easily and directly. Data arrives at the control system without being rerouted and is available there

Easy to use – secure transfer



both online and as historic data. Open interfaces allow you to develop your own expansions.

Is connection of components using IEC standards an issue for your projects? Are you planning to introduce an energy management system? Benefit by sharing experiences with our experts and write to automotive@copadata.com