DLMS Concentrator

Communication and processing of electrical meter and measuring instrument data

→ **Smart Metering solution**
→ **scalable functions**
→ **universal application**

The DLMS Concentrator is a modern element for processing commercial measurement data in the area of the production, transmission, distribution and consumption of electricity, gas, heat, water, and other media. It is intended for data acquisition, transmission and processing at all levels. It has a broad range of uses thanks to support for various communication standards in the area of measuring energy and other media, equipment control and exchanging data with database systems. Implementation of current security standards.

→ Basic Characteristics

- available in standard and custom configurations
- the base range of IEC 62056 communication protocols
- other communication protocols and interfaces from the energy industry, logistics, and general industry
- data and communications security according to the latest standards
- direct measurement of electrical quantities (PQUI) and electricity meter and measuring instrument pulse output (S0 interface) processing available
- special user-defined data processing functions can be added
- software for local and remote administration, maintenance and diagnostics
- supplied on a hardware platform suitable for installation in distribution boards
- can also be delivered as an OEM SW solution for the customer's HW

→ Typical Uses

- data concentrator for collecting data in various system types - Automatic Meter Reading (AMR), Automatic Meter Management (AMM), Advanced Metering Infrastructure (AMI)
- data concentrator and splitter for commercial metering data acquisition and distribution in substations, power plants, and other types of transfer points for traders, distributors, and other partners
- data acquisition for balance systems of local DSO operator, industrial businesses, building owners and owners and operators of commercial and industrial parks
- data collection solution for commercial control centres

→ Properties

Communication

- network and serial communication according to IEC 62056 (TCP-UDP/IP, DLMS/COSEM and other standards
- network protocols: IEC 60870-5-104, IEC 60870-6 TASE.2, Modbus TCP, DNP 3.0.TCP, OPC
- serial protocols communication: IEC 60870-5-101, Modbus RTU
- ODBC interface for data exchange with an SQL database
- the ability to communicate to/from multiple interfaces and to/from multiple directions simultaneously
- individual configuration and parameter-setting of the interface and communication direction
- data storage when communication links go down
- time sync using communication protocols or an (S)NTP server

Data Processing and Conversion

- data processing and conversion between communication protocols
- reading data and data groups from electricity meter (measuring instrument) registers
- conversion of aggregate data (for example load profiles) into time-stamped data
- merger of communication from multiple electricity meters (measuring instruments) on multiple interfaces
- splitting data to multiple interfaces and directions
- the ability to implement customer requests for data processing and conversion

→ Selected Hardware Parameters

- ICO300 HW, industrial PC, Intel® processor
- 2x Ethernet (10/100/1000 Mbps), Wi-Fi, 4x serial interface (RS-232/422/485)
- optional mobile communication (3G/GPRS, 4G)
- installation on a 35 mm distribution board DIN rail
- dimensions 48 (w) x 155 (h) x 110 (d) mm
- 12 - 24 V DC power, 48 - 230 V AC with an external power adapter