

DATA CONCENTRATOR

CAM65



The data concentrator is a fully programmable device used in AMM systems for BUS communication management and for data collection from subordinate meters.

It is powered by an industrial microprocessor based on the LINUX operation system. The data concentrator manages both meter and superordinate system communication interfaces, executes automated meter read outs as well as relays HES data to meters. Collected data are stored in an internal database and modified when forwarded to superordinate systems. The data concentrator can also process commuting meter data, service and operational. The computational core handles calculations required and data pre-processing. A USB flash disc can be attached to extend memory capacity. Data collection tasks are programmed automatically and run by an internal scheduler. The data concentrator supports direct HES access to individual meters, a key functionality.

The data concentrator can manage hundreds of electricity meters. The exact number is limited by scope of data collected and communication technology used. PLC PRIME is the primary communication technology supported with other protocols implemented also. Modular structure enables implementation of new HW as well as protocol modules.

The data concentrator is housed in a conveniently robust case with a terminal block, commonly used in the utility field, and boasts an extended ambient temperature range.



TECHNICAL DATA

| Basic Data | |
|---|--|
| Nominal Voltage U_n | 3 x 230 V |
| Operational Voltage Range Limits | 0.75 U_n to 1.15 U_n |
| Actual Consumption | Typical 20 W, max. 36 W |
| Nominal Frequency | 50 Hz |
| Power Supply | |
| Power Terminals L1, L2, L3, N | Powered by any one phase |
| Terminals Diameter | 6.5 mm |
| Wire Cross-Section Max. | 25 mm ² |
| System Configuration | |
| Operating System | Debian 8 |
| Processor | AM335x 1GHz ARM® Cortex-A8 |
| RAM | 512 MB DDR3 |
| Internal Memory | 4 GB |
| Inputs and Outputs | |
| Ethernet Port | 1 x RJ45 |
| RS232 | 1 x RJ11 |
| RS485 | Rx,Tx,GND terminals with screws |
| Serial Service Console | Pin Service Connector |
| USB | 1 x USB type A, female |
| Galvanic Isolation | Yes, 4 kV/50 Hz/60 s |
| GSM Radio WAN | 4 band GPRS |
| Basic Features | |
| Automated Tasks | Readouts, meter scanning, exports, meter service communication |
| Direct Mode | Direct communication with meters |
| Configuration Via Built-In WebUI | |
| Single HES Interface, Protected By Authorization, With SSL Option | |
| Modular HW And SW Interfaces | |
| Intrinsic RTC bBcked Up By Internal Battery | Back up time up to 12 years |
| Internal Watchdog | |
| Extendable Memory (MicroSD) | e.g. 16 GB card, available 14 GB 400 meters, 6 values, 15 min profiles – 10 months 4,000 meters, 6 values, daily profiles – 8 years |
| Interfaces and Protocols for Data Collection | |
| Link Layer | PLC PRIME, RS485, RS232, WMBus |
| Application Protocol | DLMS, MBus, Flag (IEC1107), MODBUS, PROFIBUS, DLT645 |
| Direct Mode | Port 4059 – DLMS via PLC |
| Interfaces and Protocols to Data Center (HES) | |
| Ethernet/GPRS | |
| Console | |
| Single SOAP interface (serves HES and WebUI), user roles | |
| Push Mode | Unlimited selection of readouts of registers or events, profiles, consumptions, max. data CSV or XML, configurable as per HES requirement, compression option Can be sent to FTP or to SMTP (e-mail) |
| Impact of Surroundings | |
| Operation Temperature | -40 °C thru +70 °C |
| Storage Temperature | -40 °C thru +85 °C |
| Ingress Protection | IP53 as per EN 60529 |
| Mechanical Specification | |
| Weight | ca. 2.5 kg |
| Width x Height x Depth | 183 x 280 x 82 mm |