



SMART METERING SOLUTIONS

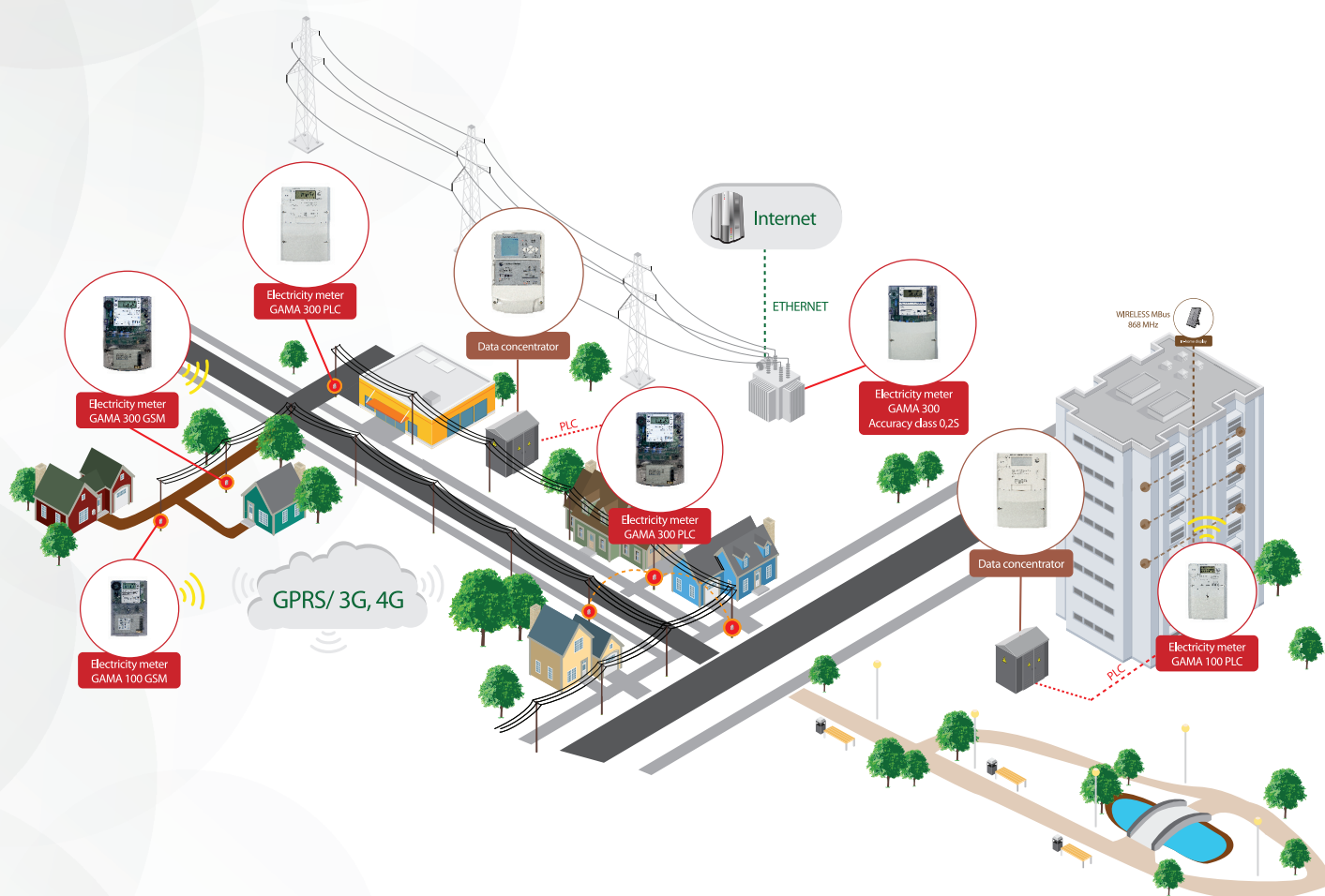


Solutions Overview

Smart Metering Solutions presented by Elgama-Elektronika Ltd. are end-to-end solutions for utilities to effectively control energy consumption by metering, data collection and monitoring as well as data validation and analysis. Solution comprises all the necessary constituents of an advanced metering infrastructure: meter data management software (MDMS), communication infrastructure and smart metering devices. Based on open standards, solutions are scalable and flexible that allows building of bi-directional metering and data collection infrastructure according to customer needs as well as market trends.

Functionality

- Plug & Play. Automatic self-registration of metering devices on communication network for easy rollout of the system
- Bi-directional communication with meters, enabling meter data readout, as well as remote configuration of metering devices (e.g. flexible parameterization of time-of-use tariffs)
- Open communication protocols for interoperability with other solutions
- Real time tampering detection and automatic event reporting for revenue protection
- Remote disconnection of users and power limitation for demand side management
- Remote firmware update for investment protection
- Data encryption and authorization for security purposes
- Bi-directional energy metering, for distributed generation and employment of renewable energy resources



Products Overview

GAMA electricity meters

Single and three phase GAMA series static electricity meters provide perfect quality and reliability as well as full-scale functionality to satisfy arising challenges in smart metering. Meters can be equipped with various communication modems according to metering point position and available data transfer technology.



- Accuracy class 1.0 (B), 0.5s (C) or 0.2s
- Active & Reactive energy, Maximum demand
- Load profiles, instantaneous values
- Multi-utility display (can show values of other utility meters)
- Remote firmware update
- Independent communication interfaces
- Modular & integrated communication modems (PLC, Radio, GSM/GPRS)
- Open communication protocol (DLMS/COSEM)
- Internal mains relay for user disconnection and/or power limitation
- Plug & Play device
- Events logbook
- Extended anti-tamper features, including detection of terminal and main cover opening, magnetic field influence, neutral current dis-balance, time correction and parameterization
- High Level Security (encryption and authentication)

Data Concentrators

Intelligent data concentrators are used in smart multi-utility (electricity, water, gas) AMI systems. Concentrator acts as a gateway between metering devices connected to PLC (Power Line Communication) or Radio network and MDMS (Meter Data Management System), it collects and stores metering data and statistics.



- Communication with MDMS via Ethernet and GPRS/3G
- Runs automatic scheduled tasks and stores the data to an internal database or transfers it to MDMS
- Reports alarms and errors from meters to MDMS
- Supports self-registration of meters and their parameterization function
- Transfers control commands and messages from MDMS to the meters
- Performs an automatic meter clock synchronization
- Data encryption and authentication for safe communication with meters and MDMS (AES128/GCM)

Modems

The following modems can be integrated in the electricity meters of GAMA series:



- Radio Frequency modem is a bridge to transfer data from RS485 interface of the meter to the mesh radio network
- GSM/GPRS/3G modem is used in AMI system for remote automated data reading of electricity, gas, heat meters and other electronic devices and data transmission to MDMS using GSM cellular network. CSD/GPRS/2G/3G and TCP/IP technologies are used
- Power Line Communication modem is a bridge for the electricity and other meters to transfer data from RS485 interface to the PLC network. It is resistant to the pulse noise, linear and non-linear distortions. OFDM PRIME modulation is used

All modems integrated in the electricity meters are registered automatically in the system. Up to 32 electricity meters can be connected to a modem via RS485 interface. Modems can be mounted under terminal cover of electricity meter or fixed to 35 mm DIN rail.

Company Overview

Located in Vilnius (Lithuania) Elgama-Elektronika Ltd. is an engineering company and a manufacturer of advanced electricity metering products. The company offers smart electricity meters, portable meter testing devices, communication devices, software as well as services of meter verification and specialists training. It as well specializes in complete solutions for Advanced Metering Infrastructure enabling utilities to effectively control data with different technologies (Internet, Radio, GSM/GPRS, PLC). Established in 1992, today the company half of its top-quality products delivers to its customers in more than 25 countries worldwide. Having its commercial representations and technical support centers in foreign countries, "Elgama-Elektronika" Ltd. manufactures more than 250.000 meters per year and presents more than 200 product modifications that are constantly developed according to the customer demands. As the quality of management processes and products is of primary focus, company's activity is certified according to the international standards ISO 9001, ISO 14001, ISO/IEC 17025 and BS OHSAS 18001 and product type tests are carried out at independent foreign laboratories. "Elgama-Elektronika" Ltd. aims at sustainability which is integrated in all procedures – and processes promoting innovations and pursuing proficiency and efficiency in the smart metering.



ELGAMA-ELEKTRONIKA Ltd.

2 Visorių str. LT-08300,

Vilnius, Lithuania

Ph.: +37052375009

Fax: +37052375020

E-mail: marketing@elgama.eu

