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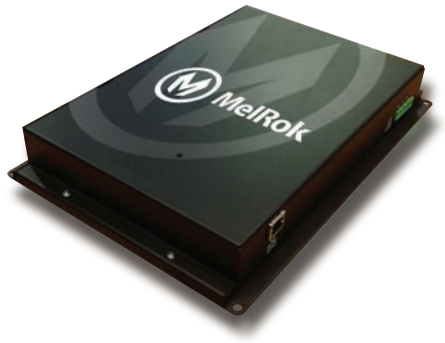
Product Datasheet

EnergiStream
Energy M&V and Demand Management Gateway
EMG-1212/EMG-2412 Series



APPLICATIONS

- Energy Measurement & Verification
- Real time efficiency metrics
- 24/7 Peak demand management
- Automated Demand Response (ADR)
- Direct load control
- Time-of-Usage (TOU) energy accounting
- Energy cost allocation
- Benchmarking
- PUE / PUI monitoring
- Power capacity monitoring
- Energy alerts
- Energy report generation and distribution

FEATURES

Power Metering Features

- 12 / 24-channel smart meter
- Single model used for 120-480VAC systems
- Single model accommodates 10A – 10,000A split core and flexible CTs
- Built in integrator for flexible CTs (Rogowski coils)
- Single model configurable for single-, split-, and three-phase configurations
- Monitored metrics: RMS Voltage, RMS Current, Power (kW), Energy (kWhr),Total Energy (kVAhr) and Power Factor
- Rolling Demand (kW, 15-minute window)
- Sampling frequency up to 1 Hz (1-minute standard)

Data Gateway Features

- Interoperable with BAS and EMS systems (BACnet/IP, Modbus IP, SNMP)
- Real time streaming of energy data to the cloud
- Acquires and forwards data from existing meters and sensors
- Pulsed input via Ethernet
- Downloads controls to local systems
- Auto-download of system configuration
- Auto-update of firmware
- Auto-Reporting of an non-responsive channel
- Embedded ADR DRAS client
- Built-in web-server
- Automated data sharing via web services
- Data viewing, reporting and download via web-enabled application

DESCRIPTION

The EnergiStream Metering Gateways are the preferred solution for energy measurement & verification, and/or demand management. The EMG series natively combines the functionality of multiple hardware systems, including up to 24 meters, integrators for flexible CTs, data acquisition software, a data logger, a 600 MHz CPU, multi-protocol drivers (BACnet, Modbus, etc.), and a data server to stream real time energy information to cloud-based servers. The EMG also includes a built-in Automated Demand Response (ADR) Client to obtain ADR event notification and pricing information from utility servers.

The built-in multi-protocol drivers allow the EMG to serve as an interface with existing building automation systems (BAS) or energy management systems (EMS) for peak demand management and demand response controls.

The built-in data acquisition software allows for the collection of data from existing sensors (power, gas, water, temperature, occupancy) and the uploading of that data to the cloud servers for analysis and reporting.

The energy data is protected and stored on MelRok's secure cloud-based servers. The EMG comes with a web-enabled application to view the energy information in real time, and a reporting engine to automatically generate and distribute (via email) intuitive, concise and informative reports to an unlimited number of stakeholders.

The EMG's integrated capabilities shatter the cost of energy metering, making detailed and real time energy monitoring, analysis, reporting and control an affordable and value added proposition for ALL businesses.

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SPECIFICATIONS

Device
- AM3571 CPU @ 600 MHz
- Linux Distribution OS
- 256 MB DDR2 Memory

Accuracy
- + / - 0.5% of reading

Power Rating
- Single-phase loads: 10 to 10,000 Amps, 120/277 VAC
- Three-phase loads: 30,000 Amps (3 x 10,000A), 480Delta, 480Wye, 208Wye

Communications
- Wired Ethernet communication (standard)
- MODBUS IP
- BACnet/IP
- SNMP
- OpenADR compliant
- TCP/IP control of Control interfaces (relays)
- Wireless 900 MHz Ethernet option
- 3G/4G LTE option for wireless connection to the cloud

Packaging
- Wall mountable, metallic enclosure
- Custom enclosures available

Environmental
- Operating Temperature -20° C (-4°F) to 55° C (131°F)
- Storage Temperature 60° C
- 95% non-condensing humidity

Duty Cycle
- 100% duty cycle

Certifications
- CE
- EN-61010-1
- RoHS compliant

Dimensions & Weight
- 13.9" x 11" x 2.1" (353mm x 273mm x 53mm)
- Weight 8 lbs. (3.6kg)

Communications to Cloud database
- RJ 45, Ethernet 10 Base T and 100Base-TX (Autosensing)

CT Connectors
- Plug-in terminal blocks for external CT sensors and Rogowski coils
- Built-in integrator for Rogowski coil sensors
- 12 / 24 measurement points

ORDERING INFORMATION

METERING GATEWAYS:

MODEL	DESCRIPTION
EMG-1212	EnergiStream12 Metering Gateway. Accommodates up to 12 power sensors. 600 MHz CPU, 256MB, Linux OS, Ethernet interface, 120 - 480 VAC, streaming data server.
EMG-2412	EnergiStream24 Metering Gateway. Accommodates up to 24 power sensors. 600 MHz CPU, 256MB, Linux OS, Ethernet interface, 120 - 480 VAC, streaming data server.

ACCESSORIES:

SCT-60	60A CT. Split core CT sensor, 60A rating. 1.0cm window size. +/- 1% linearity @ 10 to 130% of rated current.
DCT-200	200A CT. Detachable head CT. 3m / 10ft lead wire, 1.9cm window size. +/- 1% linearity @ 10 to 130% of rated current.
DCT-400	400A CT. Detachable head CT. 3m / 10ft lead wire, 3.2cm window size. +/- 1% linearity @ 10 to 130% of rated current.
DCT-600	600A CT. Detachable head CT. 2.4m / 8 ft lead wire, 3.2cm window size. +/- 1% linearity @ 10 to 130% of rated current.
DCT-1000	1000A CT. Detachable head CT. 2.4m / 8 ft lead wire, 5.1cm window size. +/- 1% linearity @ 10 to 130% of rated current.
FCT-3KXS	3000A XS Flex CT. 100A - 3000A linear range. 20 cm diameter, 3m / 10ft lead wire, 5.5cm window size. Linearity 1%. Positioning 2%.
FCT-3KM	3000A S Flex CT. 100A - 3000A linear range. 60 cm diameter, 3m / 10ft lead wire, 17.9 cm window size. Linearity 1%. Positioning 2%.
FCT-3KL	3000A L Flex CT. 100A - 3000A linear range. 100 cm diameter, 3m / 10 ft lead wire, 30.6cm window size. Linearity 1%. Positioning 2%.
FCT-5K	5000A Flex CT. 250A - 5000A linear range. 45 cm diameter, 2.4m / 8ft lead wire, 15.0cm window size. Linearity 1%. Positioning 2%. [*Other CT sizes available.*]

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