



**KEY BENEFITS**

- Multi-point energy demand data logging
- Revenue certifiable metering
- Meets ANSI C12.1 & C12.16 accuracy
- Wall mountable easy-to-install enclosures
- Local LCD viewing
- Communication over existing AC Power Lines (PLC) or Modbus RTU

**APPLICATIONS**

- Ideal for commercial, residential and industrial sub-metering applications requiring multi-point energy data logging. This includes multi-point high rise, garden style apartment, condos, or office suites.

**FEATURES**

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| <p><b>Monitoring and Metering</b></p> <ul style="list-style-type: none"> <li>■ Real-time per-phase viewing of voltage, current, power factor, phase angle, watts, VARs, VA, and frequency</li> <li>■ Event reporting with time and date stamps regarding power consumption, demand resets, power-ups/power downs, and is available via LCD for viewing</li> </ul> | <p><b>User Interface</b></p> <ul style="list-style-type: none"> <li>■ Modbus RS 485 (optional)</li> <li>■ Up to 48 pulse inputs (optional)</li> <li>■ IEC optical front panel interface for programming</li> </ul> |
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*Eta "Power Monitoring"*

**Multilin  
Partner**



## Standard Features

GE Multilin's EPM 4000 is an easy-to-use multi-tenant energy/demand data logging meter suitable for new construction or retrofit application. The integral LCD display provides access to electrical parameters in real-time or historical format. The EPM 4000 is available in residential packages (kWh) in 120/208V or 120/240V services, it is also available in commercial and industrial packages in 120/208V, 277/480V or 347/600V. Other optional packages include delta configuration for 480V or 600V configurations. CTs are available in solid or split core applications. The EPM 4000 can be ordered in specific circuit sizes depending on application and electrical service requirements.

### Mounting Versatility

EPM 4000 is wall mountable, tamper resistant and can be located away from the electrical circuit to be monitored. Its rugged metal enclosure is designed for fast installation.

### Metering

EPM 4000 meter provides local real-time viewing, per-phase of voltage, current, power factor, phase angle, watts, kVARs, kVA, and frequency. Event reporting with time and date stamps regarding consumption, demand resets, power ups/downs, and time changes is available through LCD Display. Non-volatile flash memory retains daily and interval metering data during power outages. Backup battery is also provided to maintain time during power outages.

- Ia Ib Ic
- Va Vb Vc Vab Vbc Vca
- PF
- W var VA
- Wh
- F

## Communications

The EPM 4000 provides standard communication over PLC (Power Line Communication) where the AC lines act as the communication medium - perfect for retrofit applications where placing new communication lines can be difficult and expensive. Data can be retrieved in a GE or a third-party software through use of a transponder. Modbus communication is also available as an option.

EPM 4000 utilizes a patented, two-way Power Line Communications technology as a standard feature to send and receive data over the existing power lines without the need of additional communication wiring. GE's PLC technology is an extremely reliable and cost-effective solution.

### Modbus Communication:

Optional RS-485 Modbus Open Protocol Communication is available for network to GE and third party systems.

### Transponder Communication:

The Transponder is the central data collector for the Power Line Communication (PLC) system. It is installed on the secondary of the utility transformer and will communicate with all meters installed on the load side of the transformer. The Transponder is typically installed in the main electric room close to the service entrance of the utility transformer secondary. In properties with multiple utility services, a Transponder is required for each transformer/ service and can handle as many as 240 metering points.

Multiple Transponders can be tied together as a Data Link network utilizing RS-485. In some applications, a wireless network approach can replace the Data Link network, and may be preferable. The Transponder network is accessed utilizing a telephone modem or local RS-232 connection to an on-site PC for data transfers.

Each Transponder has a database or "cross reference" of installed meters (by serial number) on its particular electrical service. The Transponder collects data for each of these meters and stores it in internal non-volatile flash memory for up to 40 days for typical billing requirements. This design provides data redundancy for the data stored in the meter.

Using the transponder the signal can communicate through distribution transformers. With the Transponder installed at the main (120/208, 277/480 or 347/600) distribution panel, the Transponder will communicate through any existing step-down transformer with any meter fed from that particular distribution panel.

GE PLC complies with IEC Signaling Standard (10-90Khz), and less than 4W is

transmitted. It does not interfere with any existing equipment. The system produces a round signal with no harmonics. The signal is sensed only by other GE devices.

### Local Viewing Display

Simple pushbutton access allows instant viewing of real-time and historical data on easy-to-read front LCD.

- Push button scroll
- 32 digit liquid crystal display (16 digit x 2 rows)
- 6 whole digit consumption register
- Data digit height: 0.31"
- Programmable display scroll & decimal place display

### Comprehensive Package

EPM 4000 is available with solid or split core current transformer options. A comprehensive packaged selection of CT sizes, amperes and dimensions, is available for new construction (solid core/lower cost options) or split core (for retrofit/existing) applications.

### EPM 4000 Package

Package includes wall mountable metal enclosure with built-in LCD, IEC optical port, fuse block and CT shorting assembly.

### Accuracy Requirements

EPM 1000 meets ANSI C12.1 and C12.16 revenue certifiable accuracy specifications, and the stringent requirements of Measurement Canada (AE-1148)

## Options

There are a variety of options available to the user, allowing a range of custom configurations:

### Pulse Inputs

Pulse Inputs: Up to 48 Form A Pulse Inputs are available for additional energy information inputs derived from water, gas, steam, and similar meters that utilize Form A outputs. Information can then be read on LCD display.

Energy Demand Logging: kW is programmable in 15 minutes time interval block demand. This feature also allows local reset of peak demand register.







