

GE
Energy

I-210+c Singlephase Meter



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The I-210+c is the latest addition to GE Energy's singlephase advanced meter family offering features beyond basic energy — such as demand, time of use, and load profile recording. It is GE's most robust and flexible meter, designed to offer utilities the ability to customize to suit their specific needs—adding or subtracting as much functionality as conditions require. The I-210+c also comes with the option of an integrated, factory-installed remote disconnect switch to help utilities more efficiently address issues such as non-payments, move-in, move-outs, and demand side management. The meter is also offered in network forms allowing utilities to more cost-effectively meter network services.

The meter's hardware and software platforms are designed to be highly versatile, offering plug-n-play capabilities for many features.

In its simplest configuration, the I-210+c can act as a basic energy meter, with no additional functionality. The design of the meter allows for easy upgrade of virtually all of the additional metering functionality available (with the exception of remote connect/disconnect, which must be installed at the time of order, at the GE factory). In its most robust configuration, the I-210+c acts as a flexible, advanced meter uniquely qualified to suit the needs of a dynamic utility environment.

Softswitches

With the addition of a softswitch, the I-210+c can be enabled with advanced metering functionality and/or become compatible with a suite of third-party AMI solutions. The softswitch, which is a software application used to enable the meter with additional functionality, can be loaded onto the meter at the time of order or after the meter has been put in service to add additional functionality to the meter. Features such as time-of use, cycle insensitive demand, load profile recording, AMI communications, and event logging can be added.

I-210+c Available Softswitches:

- **T₂**: Time-of-Use
- **R₂**: Demand and load profile recording (2-channel)
- **K₂**: Second measure
- **A₂**: Alternate communications (AMI modules or other communication devices)
- **E₂**: Event logging of up to 200 events
- **Q₂**: Power quality activates low voltage monitoring

AMI Plug-n-Play

Many utilities are in the process of making AMI related decisions and many have chosen to utilize more than one AMI solution to effectively manage the needs of their service territory. For these reasons, the I-210+c has been designed to allow for the interchangeability of AMI modules (that GE is compatible with). AMI communications can be added at the GE factory, added after the fact, or changed out and replaced with another compatible AMI module should the meter be redeployed to another part of the service territory.

Cycle Insensitive Demand

With the appropriate softswitches enabled, the meter can be set to calculate "Cycle Insensitive Demand" based on a GE-proprietary algorithm. This provides an alternative method for calculating the maximum demand where one-way AMI systems are employed, and eliminates the need for manual demand reset with 1-way AMI systems. This feature eliminates a significant limitation impacting utilities that have implemented, or who are considering implementing one-way AMI systems.

MeterMate* Meter Reading and Programming

GE Energy's MeterMate software is compatible with the I-210+c and provides unparalleled flexibility for customers to read and customize their I-210+c. Some advanced features allow the user to:

- Change factory program defaults including measurement detents
- Set or change sag and swell thresholds
- Perform a master reset to clear energy values, voltage event and power fail counters
- Obtain a meter program and data summary report
- Select Demand, Demand/LP or TOU modes of operation and the use of the program manager to create and edit programs for the selected modes of the meter
- Transfer programs created in the MeterMate system to the I-210+c meter using MM Comm*

The meter is equipped with technology to more fully address a utility's safety concerns while ensuring the most efficient use of resources and protecting its revenues.

Remote Connect/Disconnect

The I210+c can be ordered with an integrated remote connect/disconnect switch mounted under the meter's cover. This is a factory installed option that must be specified at the time of order. To take advantage of all of the functionality this option offers, a two-way AMI device and system should be employed. This functionality is ideal for:

- Locations with frequent move-in/move-outs and locations that are undesirable or dangerous. With this switch, the utility will be able to remotely connect or disconnect service and avoid sending a technician to the site
- Situations involving non-paying customers
- New applications such as demand side management, emergency conservation, prepayment systems, customer system premises protection, and controlled outage restoration

State-of-the-Art Tamper Detection

The I-210+c has an optional Event Log feature which captures information about the 200 most recent events that happen in the meter including reverse energy flow (caused by meter inversion). This can be used to check for confirmation of meter action or evidence of tampering.

I-210+c has enhanced features to help utilities improve the level of service they provide their customers.

IEEE Reliability Indices

The I210+c has an optional power quality feature (activated when appropriate softswitches are added) that provides support for calculating IEEE® reliability indices (such as MAIFI, SAIFI, etc.) by collecting momentary and sustained interruptions and the accumulated duration of sustained interruptions.

Interval Recording

The interval recording option (which is enabled via a softswitch), in addition to being used as a billing tool for the utility, can be used as a customer service tool which can provide the customer with useful data regarding their energy consumption.

Meter specifications and related information

I210+c Meter ANSI® forms:

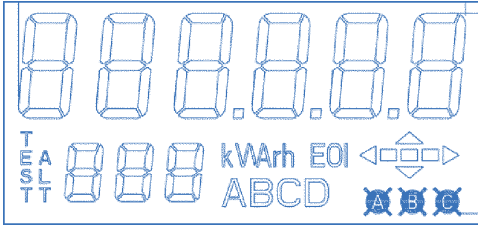
| Form | Class | Volts |
|----------|-----------|-----------|
| 1S | 100 | 120 & 240 |
| 2S | 200 & 320 | 240 |
| 3S & 3CS | 20 | 120 & 240 |
| 4S | 20 | 240 |
| 12S | 200 & 320 | 120 & 240 |
| 25S | 200 & 320 | 120 & 240 |

A single polycarbonate cover is available with either of two variants including:

- With RESET latch and Optocom "D" ring
- Plain cover without RESET or "D" ring

I-210+c Display

Performance meets or exceeds ANSI C12.1, C12.10, C12.20, C37.90.1



Operating Range:

- Voltage: +20% -20% (or $\pm 20\%$)
- Typical Watts Loss: 0.7 Watts
- Temperature: -40°C through +85°C
- Typical Accuracy: Within +/- 0.2%
- Typical Starting Watts: ≤ 5.0 Watts (Form 2S 240V CL200)



For more information, please contact us via e-mail at energy.tdsolutions@ge.com, or visit our web site at ge.com/energy

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