GE Energy

I-210+ and I-210+c Meters

February 2007
The I-210+* is GE’s latest singlephase basic energy meter with several key features

Optional remote connect/disconnect capability with a fully integrated, factory installed switch under the cover.

Compatible with a suite of third party AMR solutions.

Available in 12S and 25S forms for network applications.

Option for obtaining IEEE® reliability data to help the utility measure and monitor quality of service.

Incorporates a patented firmware algorithm to detect tamper-by-meter inversion.
The I-210+* has functionality and flexibility provided by softswitches

O: AMR communications (AMR interface formats include quadrature pulse, PSEM, SPI Format-1 data, SPI Format-2 data)

V2: Simple Voltage Event monitor in addition to a display of RMS momentary voltage on the three lower LCD digits, IEEE® reliability data
I-210⁺ technology has created new choices

I-210⁺ has the option of housing a factory installed, 200A remote disconnect device with a choice of two-way AMR transponder under its cover.

This functionality fits within the existing footprint of the meter.
Remote Connect / Disconnect technology can be used in both traditional and new applications

Nonpayments
Move-ins and move-outs
Demand side management
Remote prepayment systems
Controlled outage restoration
Customer premises protection from system problems
The I-210+ is supported by a robust version of MeterMate™ with several advanced features.

Utilities have the ability 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
- Upgrade and downgrade AMR and voltage event monitoring capability
- Set AMR communication type to (1) PSEM, (2) SPI Format 1 data, (3) SPI Format 2 Data or (4) Quad Pulse Data Output
I-210+* specifications and related information

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

Available forms include: 1S, 2S, 3S, 4S, 12S*, 25S* (* indicates network forms)

Operating Range:
- Voltage: ±20%
- Temperature: -40°C through +85°C
- Typical Starting Watts: <=5.0 Watts
- Typical Watts Loss: 0.7 Watts
- Typical Accuracy: Within +/- 0.2%

One standard polycarbonate cover needed for units with or without AMR communications.
The I-210+ c* is GE’s most robust and flexible meter, with the ability to customize advanced metering options to suit every need

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

• 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.

• The meter has enhanced features to help utilities improve the level of service they provide their customers.
The I-210+c* is highly versatile, offering plug-n-play capabilities for many features

**Softswitches**

With the addition of a softswitch, the I-210+c can become compatible with a suite of third-party AMR/AMI solutions and become enabled with advanced functionality such as: time-of-use, cycle insensitive demand, load profile recording, and event logging can be added via softswitches.

**Available softswitches include:**

**T2:** Time-of-Use

**R2:** Demand and load profile recording (2-channel)

**K2:** Second measure

**A2:** Alternate communications (AMR modules or other communication devices)

**E2:** Event logging of up to 200 events

**Q2:** Power quality activates low potential monitoring
I-210+c* plug-n-play capabilities continued

AMR/AMI Plug-n-Play

The I-210+c has been designed to allow for the interchangeability of AMR/AMI modules. Modules can be added at the GE factory, after the fact, or replaced with another compatible module if the meter is redeployed.

MeterMate™ Meter Reading and Programming

This software is compatible with the I-210+c and provides unparalleled flexibility for customers to read and customize their meter.

Cycle Insensitive Demand

A GE-proprietary algorithm gives the I-210+c the ability to provide an alternative method for calculating max demand where 1-way AMR systems are employed.

This eliminates the need for manual demand reset with 1-way AMR systems.
The I-210+c* can help utilities address safety concerns and maximize profits

**Remote Connect/Disconnect**
The I-210+c has the option of a factory installed, 200A remote disconnect device with a choice of two-way AMR. This functionality fits within the existing footprint of the meter.

This feature can be used to address issues such as: nonpayments, move-ins/move-outs, demand side management, remote prepayment systems, controlled outage restoration, and customer premise protection from system problems.

**State-of-the–Art Tamper Detection**
The I-210+c has an optional Event Log feature which captures information about recent events, including reverse energy flow (caused by meter inversion), which can be used to detect electricity theft.
The 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 that provides support for calculating IEEE reliability indices (such as MAIFI, SAIFI, etc.).

**Interval Recording**
The interval recording option, 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 energy consumption.
I-210+c* specifications and related information

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Operating Range:
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- Typical Accuracy: Within +/- 0.2%

One standard polycarbonate cover with 2 variants: with or without reset latch and optocom “D”ring
An eye on the future

GE Energy has a comprehensive portfolio of products and services that enable intelligent grid processes, which help decision makers drive greater productivity and profitability.

As metering technology becomes more advanced, the meter becomes a powerful diagnostic tool that can help provide better grid performance and support other utility business processes especially service delivery and customer service.
A comprehensive source of metering information

There are several documents focused on our I-210+* and I-210+c* meters. Please consult our website for more information.

www.ge-energy.com\meters
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