

A3 ALPHA[®] Meter with EA_NIC



Available in single phase and polyphase meter forms, the A3 ALPHA meter with EA_NIC is an ideal solution for commercial, industrial, and high-end residential AMI metering.

Advanced electricity metering

As a component of the EnergyAxis System, the A3 ALPHA meter with the internal EnergyAxis network interface card (EA_NIC) brings advanced metering infrastructure capabilities to commercial and industrial metering applications and high end residential applications where real and reactive energy measurements are desired. Utilities can obtain interval data, real and reactive energy metering, critical tier, and time-of-use (TOU) data through the EnergyAxis network.

To function as an EnergyAxis System component, the A3 ALPHA meter is supplied with an internal network interface card with two-way 900 MHz communications capability. The EA_NIC mounts under the cover of the A3 ALPHA meter, allowing network deployment to be as simple as installing a meter. No special equipment is necessary because the EA_NIC automatically establishes two qualified communication paths to the gatekeeper. If network conditions change, the EA_NIC automatically and immediately uses the secondary qualified communication pathway to the gatekeeper.

The data you need

The A3 ALPHA meter is a highly accurate revenue meter with an ANSI C12.20 accuracy Class of 0.2. Current ALPHA meter users will find the basic A3 ALPHA meter types familiar. The A3D delivers basic real energy and demand, and the A3T provides real energy and demand where TOU rates are implemented. The A3R, A3K, and A3Q are used where real and reactive or bidirectional metering are required. Each measured quantity is stored in nonvolatile memory and includes energy, demand, TOU data, and interval recording.

As an element in the EnergyAxis network, the A3 ALPHA meter's EA_NIC reports meter readings, statuses, warning messages, and interval data to the gatekeeper that is then read by the EnergyAxis Management System (EA_MS).

Built on the strengths of the patented ALPHA meter design, the A3 ALPHA meter with EA_NIC provides highly accurate bidirectional real and reactive AMI metering functionality.

Depending on the meter type and programming, the electricity meter readings reported through the network can include:

- Total and 4-tier energy for two energy quantities, real or reactive
- 4-tier demand for two demand quantities, real or reactive. Each demand reading has an associated date and timestamp to indicate the time of the maximum demand.
- 4-tier coincident demand for two coincident demand quantities, real or reactive
- Per phase voltage
- 2 channels of interval data for any metered quantity in 5-, 15-, 30-, or 60-minute interval lengths

Additionally the A3 ALPHA meter can be configured to report whenever a programmable demand threshold has been exceeded.

Network functionality

The electricity meter data is communicated through the EnergyAxis local area network (EA_LAN) to the local area gatekeeper, where it is stored for retrieval by EA_MS.

In addition, all electricity meter data is available to the utility on request directly from the endpoint, allowing the highest level of customer support and billing accuracy.

All A3 ALPHA meters equipped with an EA_NIC in the EnergyAxis System are uniquely identified by a factory programmed ID. This ID links the meter data to a specific consumer account for accurate billing and enhanced customer support.

Outage and restoration functionality

The A3 ALPHA meter with EA_NIC provides support for utility outage and restoration management. This enables the utility to more quickly identify the scope of outages and to receive positive restoration messages to validate that power has been restored to every endpoint.

Technical specifications

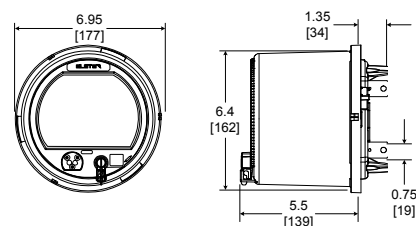
- FHSS RF technology in the unlicensed 902 MHz to 928 MHz band
- Compliant with FCC Rules, Part 15 and Industry Canada RSS-210
- Temperature range of -40 °C to +85 °C
- Humidity range of 0 % to 100 %
- Operating voltage range 96 V to 528 V
- ANSI C12.20 accuracy Class 0.2
- ANSI standards compliance C12.1, C12.10, C12.18, C12.19, C12.20, C12.21

The *A3 ALPHA Meter Technical Manual* and the *A3 ALPHA Meter Data Sheet* list additional meter specifications for the A3 ALPHA meter.

The EnergyAxis Network Interface Card is available on all A3 ALPHA meter types and meter forms for both single phase and polyphase services.

About Elster Group

Elster, a global leader in smart metering and smart grid solutions has delivered over 3 million smart metering devices worldwide with systems located in North America, Europe, Central America, Australia, New Zealand and the Caribbean. Elster smart metering system solutions provide utilities with energy conservation capabilities via demand response programs, smart grid applications, and operational efficiencies resulting in significant value creation across the utility enterprise. Elster has over 7500 staff and operates globally in North America, South America, Europe, Africa, Middle East, and Asia.



Dimensions in inches [millimeters]. For reference only. Do not use for construction.

Elster
208 S Rogers Lane
Raleigh, NC 27610-2144
United States

T +1 800 338 5251 (US toll free)
T +1 905 634 4895 (Canada)
F +1 919 212 4801

www.elster.com

© 2009 by Elster. All rights reserved.

Information contained herein is subject to change without notice. Product specifications may change. Contact your Elster representative for the most current product information. Printed in the United States.