EnergyAxis® REX® meter

The EnergyAxis REX meter is a state-of-the art AMI meter that provides significant value in residential applications by lowering operating costs and improving customer satisfaction.

Residential excellence

As a component of the EnergyAxis System, the REX meter brings advanced metering infrastructure capabilities to residential metering applications. Utilities can obtain interval data, bidirectional energy, critical tier, and time-of-use (TOU) data through the EnergyAxis network. REX meters are available in standard residential metering form factors (1S, 2S, 3S, 4S, and 12S).

Utilities can also reduce or eliminate the need to send out technicians to connect or disconnect electrical service by ordering REX meters with the optional internal service control switch.

The data you need

As a residential endpoint in the EnergyAxis System, the REX meter offers the following information:

- Total and 4-tier energy for the primary metered quantity, selected as one of kWh-delivered, kWh-sum (delivered + received), or kWh-net (delivered – received)
- Total kWh-received
- Demand data for two quantities, each configured as total demand or demand for a specific TOU tier
- Per phase voltages
- Interval data for the primary metered quantity in 15-, 30-, or 60-minute interval lengths

Additionally, the meter reports numerous status, warning, and error conditions. All measured data is stored in nonvolatile memory.

Internal service control

Instead of manually removing or installing a meter for service changes, the optional service control switch can remotely connect and disconnect power to a consumer.

Additionally, the REX meter can be programmed to automatically disconnect power when the demand reaches a programmed threshold and to restore power a set number of minutes after the end of the demand interval. To ensure safety, the REX meter verifies that no load side voltage is present before it re-closes the service control switch.

The service control switch is available for Forms 1S, 2S, and 12S meters, and it must be specified at the time of ordering.

Through its open architecture, the REX meter is able to integrate with third party load control devices, demand-side management devices, in-home displays, programmable thermostats, and pre-payment services.

Network functionality

Electricity meter data is directed through the mesh network to the local area collector, where it is stored for retrieval by Metering Automation Server (MAS). 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.

To optimize EnergyAxis network communications, each REX meter may act as a repeater. This enhances the robust, mesh communication network, maximizing the communication range of each collector.

The meter obtains time directly from the EnergyAxis collectors. This reduces the initial cost and future maintenance expenses because a battery is not required in each meter.

All REX meters in the EnergyAxis System are uniquely identified by a factory programmed ID. The ID links the meter data to a specific consumer account for accurate billing and enhanced customer support. A second unique identifier is implemented across EnergyAxis to assure the utility's meters are all on the same mesh network.

Outage and restoration functionality

The REX meter provides support for utility outage and restoration management, enabling 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.

The REX meter also provides the following information that may be used to calculate outage indices:

- Total number of momentary outages, where the definition of a momentary versus sustained outage is configurable
- Total number and cumulative time of sustained outages

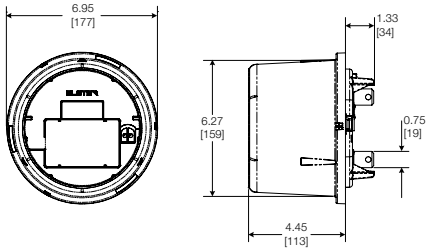
About Elster Group

Elster Group is the world's leading manufacturer and supplier of highly accurate, high quality, integrated metering and utilization solutions to the gas, electricity, and water industries. In addition, through its subsidiary Ipsen International, it is the leading global manufacturer of high-level thermo-chemical treatment equipment.

The group has over 8,500 staff and operations in 38 countries, focused in North and South America, Europe, and Asia. Elster's high quality products and systems reflect the wealth of knowledge and experience gained from over 170 years of dedication to measuring energy and scarce natural resources.

Meter specifications

Operating ranges		
Voltage	Nameplate nominal	Operating
Forms 1S and 12S	120 V	96 V to 144 V
Form 2S	240 V	192 V to 288 V
Forms 3S and 4S	120 V to 240 V	96 V to 288 V
Current	0 to Class ampere rating	
Frequency	Nominal 50 Hz or 60 Hz ±5 %	
Temperature	-40 °C to +85 °C (inside meter cover)	
Humidity	0 % to 100 % (noncondensing)	
General performance characteristics		
Starting current	Forms 1S and 3S	10 mA for Class 20 100 mA for Class 200
	Form 2S	80 mA for Class 320
	Forms 2S and 12S	50 mA for Class 200
	Form 4S	5 mA for Class 20
Startup delay	Less than 2 seconds from power application to pulse accumulation	
Creep 0.000 A (no current)	No more than 1 pulse measured per quantity, conforming to ANSI C12.1 requirements.	
Primary time base	Relative time is maintained by a crystal; real time is provided by the network	
Communication frequency	902 MHz to 915 MHz (unlicensed)	
Communication rate	900 MHz radio 17,600 bps	



Form 2S 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

support@us.elster.com
www.elster.com

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