

EnergyAxis® REX2-EA™ meter



The robust feature set and flexible architecture of the REX2-EA meter provides a solid foundation for implementing the smart grid of the future.

REX2-EA meters bring to the REX meter family many enhancements designed to support emerging needs of smart grid initiatives. REX2 meters include enhanced memory, greater security, remote upgradeability, and additional capabilities to support smart grid needs such as outage and voltage monitoring.

Developed with technology and communications flexibility in mind, the REX2 platform is both a smart metering endpoint and gateway into the home supporting both 900 MHz and 2.4 GHz ZigBee communications. It also provides an open architecture framework for third party technology innovation supporting the Advanced Grid Infrastructure Initiative.

Optimal functionality

- Proven 2-way communications using EnergyAxis 900 MHz FHSS RF technology, providing the ideal combination of speed, penetration, and RF power
- On request energy, demand, status, and instrumentation data read support
- 2 configurable metered quantities supporting bidirectional metering, ideal for net metering and co-generation applications
- 3 demand quantities with 5, 15, 30, or 60 minute block demand, including remote demand reset and demand limiting
- Support for up to 4-tier, 4-season time-of-use energy and demand with critical tier pricing
- 2 channel interval data collection with EOI energy snapshot for improved data validation
- Flexible water, gas, and third party device support through integrated or add-in communication modules
- Advanced energy theft and meter tampering detection technology
- Wide array of status, warning, and error conditions reportable through the network
- Future upgradeability for reactive metering, rolling demand, and other feature enhancements
- Advanced security with full 128-bit AES encryption
- Support for metering and network communication standards including ANSI C12.19 and C12.22
- Nonvolatile memory rated for 1,000,000 write cycles, ensuring data integrity for the life of the meter

Built on the proven REX meter design with enhanced technology and communications flexibility, the REX2 meter platform provides an optimum combination of future-proofed innovation with real world field experience.

Internal service control switch

REX2 meters are available with an optional 200 A integrated service control switch. Based on significant field experience, the REX2 service control switch has been optimized to provide low contact resistance for increased life. REX2 meters with switches are externally indistinguishable from REX2 meters without switches, thereby protecting utilities from consumer concerns about deployment. REX2 meters support advanced demand limiting and lockout functionality, and switches may be operated by authorized utility personnel through the network or locally at the meter.

Over the air upgrades

Using proven code management architecture, REX2 technology allows remote upgrade of meter and communications firmware while ensuring endpoint network functionality remains intact without loss of metering data. Remote upgradeability of the entire firmware image protects your AMI investment and allows you to meet future requirements of the smart grid without concern of technology obsolescence. In addition to remote firmware upgradeability, the meter also supports remote reconfiguration of many metering parameters.

Operating ranges

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
	120 V	96 V to 144 V	
	Form 3S and 4S	240 V	192 V to 288 V
Current	0 to Class ampere rating		
Frequency	Nominal 50 Hz or 60 Hz \pm 5 %		
Temperature	-40 °C to +85 °C (inside meter cover)		
Humidity	0 % to 100 % (noncondensing)		

General performance characteristics

Starting current	Forms 1S, 2S, and 12S	100 mA for Class 200 160 mA for Class 320
	Forms 3S and 4S	10 mA for Class 20
Creep 0.000 A (no current)	No more than 1 pulse measured per quantity, conforming to ANSI C12.1 requirements	
Burden	Less than 1.5 W	
Primary time base	Relative time is maintained by a crystal; real time is provided by the EnergyAxis network	
Communication frequency	902 MHz to 928 MHz (unlicensed)	

Outage and restoration functionality

The REX2 meter provides advanced outage and restoration support, enhancing the utility's ability to more quickly identify the scope of outages and to receive positive restoration messages to validate that power has been restored to every endpoint. Information needed to determine important outage indices is also available.

Features include the following:

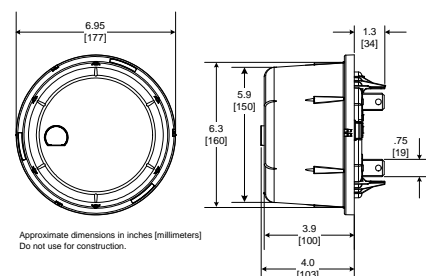
- Count of momentary and sustained outages
- Total cumulative time of sustained outages
- Outage time and date stamp
- Outage notification, with advanced tamper alert for outage classification
- Qualified restoration notification with service voltage

Available forms

REX2 meters are available in standard residential metering form factors (1S, 2S, 3S, 4S, and 12S).

About Elster Group

Elster Group is a world leader in Advanced Metering Infrastructure (AMI) and integrated metering and utilization solutions to the gas, electricity and water industries. Elster's high quality AMI and AMR products, systems, and solutions reflect the wealth of knowledge and experience gained from over 170 years of dedication to measuring precious resources and energy. Elster provides world class solutions and advanced technologies to help utilities more easily, efficiently and reliably obtain and use advanced metering intelligence to improve customer service, enhance operational efficiency, and increase revenues. Elster's AMI solutions enable utilities to cost-effectively generate, deliver, manage and conserve the life-essential resources of gas, electricity and water. The group has over 7,500 staff and operations in 38 countries, focused in North and South America, Europe, and Asia.



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