ELECTRICITY

EDMI

X-Series 2 | **Mk6Es**
Class 0.2S

High Precision Meter for
GRID, Industrial and High-End Commercial Markets

Introducing the new X-Series 2

The sophisticated X-Series 2 delivers market-leading accuracy for Generation, Transmission and Distribution (GRID) applications to network, industrial and high-end commercial markets. Available in two models, the X-Series 2 are EDMI's newest technology for grid edge, substation and embedded generation projects.

The X-Series 2 Mk6Es model enables power quality monitoring of high energy loads and a range of SCADA functions for high-level supervision of generation, transmission and distribution, including substations and distributed energy sources.

The X-Series 2 range improves your management and control of embedded generation, helping you make better strategic infrastructure and investment decisions and reducing the Total Cost of Ownership.
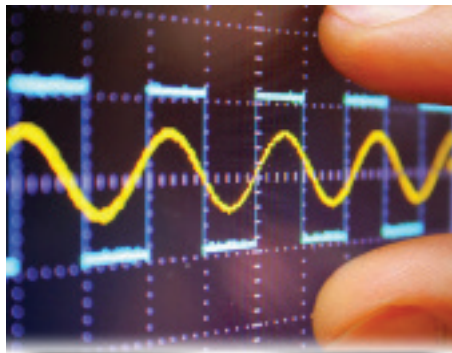
Highlights at a Glance

- **High-precision metering for GRID energy management**
- **Power quality measurement according to IEC61000-4-30 Class S**
- **Multi-level security and encryption**
- **Cellular IP communication**
- **Exchangeable SCADA and local control functionality**
- **Exceptional isolation of regulated metrology allows functional updates without recertification**
- **Design life of 15 years flows from high-quality components**
- **Safety standard compliant (IEC62052-31)**

Key Features

Class 0.2S Active / 0.5S Reactive

The X-Series 2 offers high precision metering in accordance with IEC Class 0.2S active and 0.5S reactive that are essential measurement accuracy for operation and management in GRID, Industrial and High-End Commercial markets.

Power Quality Measurement

The X-Series 2 Model Mk6Es provides Power Quality according to IEC 61000-4-30 (Latest Edition 3) Class S standard. Class S is Survey measurement, meaning a basic Power Quality functionality to log data and events quantitatively. It measures the following items:

- Power frequency
- Supply voltage magnitude
- Voltage unbalance
- Voltage dips/swells/interruptions
- Harmonics (up to 40th order)

IEC 61850 Substation Protocol

The X-Series 2 supports substation protocol (IEC 61850) that enables robust substation automation and real-time device integration applications. This allows for the implementation of distributed and multi-vendor applications inside electrical substations and part of Smart Grid architectures worldwide.

Delivering Advanced Capabilities for Distributed Energy Generation

Improved utility operations and service starts with the digital sensing and two-way communications provided by EDMI's smart metering technology. The X-Series provides a range of connectivity options increasing coordination and balance. By delivering real-time data and advanced metrics, the X-Series provides crucial insights that enable utilities to transform volatile distributed generation into stable grid assets.

"The X-Series helps you transform volatile distributed generation into stable grid assets"

Other Hardware Design Features and Benefits

HIGH SECURITY

Certified of DLMS suite 0 and suite 1 against the latest CTT3.1 requirements. The DLMS feature as a module adopts one of the most reliable and popular security library stacks Wolf SSL to enhance its robustness with multi-layered secured encrypted communication and image transfer.

MULTIPLE COMMS OPTIONS

Range of communication interface options are available for supervisory control and data acquisition (SCADA) – The meter supports up to 4 independently working communication ports: RS-232, RS-485, Ethernet, optical port.

WIDE OPERATING VOLTAGE

Supports both 57.7-240V and 57.7-277V operating options, while maintaining Class 0.2S accuracy throughout the range to adapt to various market needs.

FLEXIBLE FIRMWARE

Up- and down- gradeable firmware capability.

SAFETY STANDARD CERTIFIED

IEC 62052-31 Safety Standard certified to ensure that product offers high quality of protection against risks of human injuries and property damages to customers.

VARIOUS PROTOCOLS SUPPORTED

Communication protocols supported are EDMI Command line, DLMS (Suite 0 and 1), Ethernet (UDP/TCP), Modbus, DNP3 and DL/T-645, plus upcoming IEC 61850 and DL/T-698.

LARGE SAMPLING RATE

The sampling rate of 128 sample per cycle to provide precise measurement results for data analytics.

LARGE DATA STORAGE

Data Storage of 64MB, enabling a range of applications running in parallel and the execution of SCADA control and power quality outputs.

Applications and Target Customers

Power Generation Companies, who own generators seeking high accuracy metering to measure electricity generation, power quality analysis and operation and maintenance of systems.
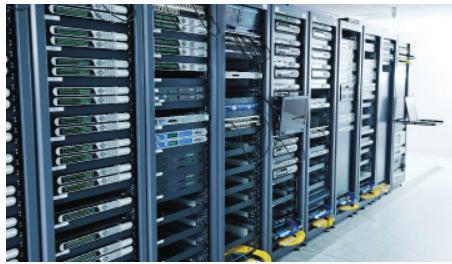

Transmission/Grid Companies, who transmit high voltage across countries at 250kV/500kV/50Hz/60Hz and seek high accuracy meters to measure interconnection points, substation energy use and embedded generation facilities feeding into the grid for effective grid management.

Distribution Companies, who take electricity from grid supply points and distribute it to lower voltage networks (132kV down to 11kV).

Construction Companies, who have remit on behalf of the transmission/distribution or generation company who might specify certain metering requirements.

Large Industrial Processing and Data Facilities, who generally are very focused on data, quality and risk management with the help of data analytics to monitor and maximize productivity, as well as predict and mitigate potential issues that might occur.

Installation Companies, who install cabinets/free-standing electrical cabinets for the installation at new facilities.

Available Variants

Items	Variants
Operating Voltage Range	57.7-240V L-N / 100-415V L-L 57.7-277V L-N / 100-480V L-L
Current Range	0.3(6)A CT 1(6)A CT 1(10)A CT 5(10)A CT 5(20)A CT
Remote Communications	Ethernet + RS-232 + 2 x RS-485 Ethernet + RS-232 + RS-485 + Fiber Optics

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