



IE.X: NEXT GENERATION eIoT METERS.

ELECTRICITY
METERS

In order to stay up to date with the market demands, Iskraemeco is introducing the new IE.X generation: The ever-shifting trends keep evolving and have out-ran the basic requirements of the AMI overall.

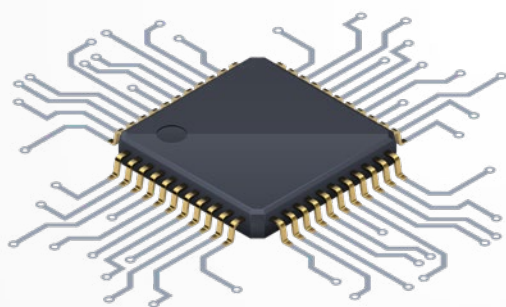
The new EIoT metering platform by Iskraemeco has a promising changeover in the Energy sector i.e. generation, transmission & distribution, and consumption. The platform has a significant impact on the future of metering systems and provides support

for all modern Energy IoT solutions in the smart digital grid and building smart cities and societies with a focus on sustainable development. The extraordinary IE.X generation has brought a variety of promising benefits to our energy utility customers to enhance the end-consumer's everyday energy needs.

The platform is designed through a modular and scalable FW architecture in order to optimize product delivery at a top-notch quality in terms of flexibility, meeting market needs and configuration. Supporting Iskraemeco's strategy in influencing the IoT world by providing greater flexibility to our customers. Our meters, based on the Modular platform eIoT, enable the provision of new functionalities related to modern business challenges. The scalable features vary in innovation, high modularity, and effective grid management with real-time data.



IE.X – intelligent energy meters based on eIoT modular platform.



THE eIoT PLATFORM



IE.X METER SERIES



THE eIoT PLATFORM

The eIoT modular platform is a foundation for the new generation of electricity meters and is designed for smart grids with an excellent modular technology and operational design. The platform is based on a modular architecture, has a significant impact on the future of metering systems, supports all current Energy IoT solutions in the smart digital grid environment, and the development of smart cities with a focus on sustainable development. Products based on the eIoT modular platform have Iskraemeco's Measuring Operating System (eMOS) embedded, which monitors and maintains the hardware's functionality and metrology. eMos as well provides a platform for applications that integrate our products into a wider energy IoT system, by combining an operating system technology and software development for meters. This enables efficient new functionalities related to modern electricity distribution challenges, thereby, gaining insights into network control, fault detection management, better energy efficiency, higher data security, forecasting energy consumption trends, lower operating costs and the possibility of organic and technological growth of electricity distribution (e.g. gradual replacement and upgrade of the network).

IE.X METER SERIES

The IE.X series consist of reliable and versatile metering devices that offer numerous applications in power generation, transmission, distribution and consumption. The series is based on an eIoT modular platform which offers utilities maximum flexibility ranging from hardware to software and various communication modules. The IE.X will shape the future of metering business in the IoT landscape. IE stands for Intelligent Energy and X represents the various products series available. These products are designed for residential applications i.e. Residential Stand-Alone meters, all the way to Smart Meters including grid-level applications. The IE.5 (for smart applications) and the IE.7 (for commercial applications). The meters are already on the market, all fitted with an integrated breaker, and pre-installed with the latest communications technologies. All IE.X meters are designed with flexibility in mind, ensuring that we're always able to meet the everchanging demands of a fast-moving sector, and tailor our products and services to the individual needs of every customer. Our product portfolio also caters to requirements at every possible scale, from simple residential meters all the way up to advanced, industrial-scale measuring systems, and everything in between.



Wondering how we adapt to market needs?

- By providing real-time data for grid application and RES (renewable energy resources).
- Guiding the end-consumers to make smarter decisions regarding their power usage and reduction of energy waste through the prosumer dashboard.
- Integrating and managing renewable energy.

Diving in the benefits

- Minimized Total Cost of Ownership.
- Reliant on an even dedicated, M2M connectivity through LTE NB-IoT. Following up the IoT development through having a support of CAT-M technology and NB-IoT communication.
- Flexibility through modularity and integration.
- Increased security complying with the industry's standards to serve the needs of the strategic infrastructure.
- Future-proofing – adding new functionalities by FW only, no meter replacement needed.

In a nutshell

- Offering flexibility, by having the availability in order to tailor market needs through noticing energy transitions; therefore, being able to implement some functionalities or applications enabling a detection of future trends and reacting accordingly.
- Enhanced customer interface as the the platform enables participation in the energy community, meaning it will permit visualization and data management more efficiently.
- Data reading convenience, an emphasis dedicated to the customer's information area in order to allow the data to be easily readable, suggested actions to decrease consumption if exceeded, engagement through monitoring and managing energy consumption.
- Environmentally friendly and a sustainable path influencing the customer's lives positively through lowered carbon footprints.
- The new generation will support the IoT's constant trends by developing and providing greater solutions. Thereby, having the capability of edge computing, meaning an instantaneous value for the meter data, in addition to including the latest and most reliable bidirectional communication technology offered i.e. M2M communication – NB-IoT/LTE-M. Through a groundbreaking approach, Iskraemeco will ensure an astonishing data gathering to support the efficiency of your network, stability and an overall reliable power supply.

IE.X

SINGLE AND THREE PHASE ENERGY METERS.



Functionalities

- Modular hardware design (field exchangeable communication device).
- Modular firmware design.
- High integration: Multi-utility, HAN, LAN, IO's.
- Support for latest communication technology NB-IoT/LTE-M/2G. ESIM, Antenna couplers.
- Integrated breaker up to 100A.
- Exchangeable battery improved customer GUI interface.
- Integrated generic IO sets.
- Customer access to IO's (2x relay, P1 port).

Benefits

- + **Flexibility** in our product portfolio caters to also caters to requirements at every possible scale, from simple residential meters all the way up to advanced, industrial scale measuring systems, and everything in between.
- + **Scalability** is done through the architecture of the platform which allows products with specific features to easily be scaled for various applications. This serves the RSA, RSM, and ICG segments with a scalable hardware and an embedded software architecture (eMOS).
- + **Sustainability** is integrated in Iskraemeco's DNA and our portfolio, IE.X has a low power consumption and a design that together with optimized logistics services impacting the overall costs of the meter. The meter is made of recyclable material, making it easy to dismantle at the end of its life cycle.
- + **Connectivity** is guaranteed in huge time savings by supporting M2M connectivity – such as NB-IoT, CAT-M and LTE-M – and offering full backward compatibility with 2G, 3G, and 4G. A capability of a sub-metering water, heat and gas meters, and with an expansion of inputs and outputs to reflect their increasing importance for load management.
- + **Security** is ensured by fully complying with requirements of European and national legislation. There are two levels at which the security is guaranteed: physical and logical.

			IE.5-E Direct connected	IE.5-T Direct connected	IE.7-T Current transformer connected
TYPE OVERVIEW					
Connection type	Low voltage		•	•	•
	1P4W		•		
	3P4W			•	•
	3P3w			•	•
Communication	WAN		Point-to-point (2G/3G/4G, NB-IoT/LTE-M), RS485		
	Customer port		DMSR5 compliant; active or passive with RJ12 connector type		
	Multi-utility		wM-Bus		
	Local communication		Optical port		
TECHNICAL SPECIFICATIONS					
Nominal voltage U_n			230 V	3 x 230/400 V; 3 x 230 V	
Voltage range			0.8 – 1.15 U_n		
	Base current	I_b	5 A	5 A	1 A
	Maximal current	I_{max}	85 A	85 A, 100 A	10 A
Accuracy class	Active energy		Class 1 (IEC 62053 – 21) or B (EN 50470 – 3, EN 50470 – 1)		Class 0.5 (IEC 62953 – 21) or C (EN 50470 – 3, EN 50470 – 1)
	Reactive energy		Class 2 (IEC 62053 – 23)		Class 1 (IEC 62053 –23)
	Apparent energy		Calibrated up to 3 %		Calibrated up to 2 %
Temperature ranges (IEC 62052 – 11)	Operation		-40 °C ... +70 °C		
	Storage		-40 °C ... +80 °C		
Ingress protection IEC 60529			IP54		

ELECTRICITY METERS.

With our energy solutions, we connect buildings, industries, energy systems and people to improve the quality of life and community progress by creating an inspiring environment with smart infrastructure and the technology united in the IoT.



www.iskraemeco.com

ISKRAEMECO GROUP

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