

GRIDSPERTISE FORGES AHEAD UNVEILING TWO INNOVATIVE EDGE SOLUTIONS TO SHAPE THE GRID OF THE FUTURE

A new modular and flexible smart meter platform that provides flexibility to Grid operators as well as a low-voltage grid monitoring and control suite are presented at Enlit Europe 2023, they will help Distribution System Operators in the challenge of accelerating low voltage grid digitalization.

Paris, 28 November 2023 - Gridspertise, a global player dedicated to supporting distribution system operators worldwide in accelerating the digital transformation of electricity grids, has just revealed two new cutting-edge solutions at Enlit Europe 2023, the major event dedicated to the European energetic scenario.

In Paris, the company has showcased for the first time its **new modular smart meter platform, Globy** which offers DSOs maximum flexibility hardware and software and various communication modules, and the ecosystem of solutions for **Low Voltage Edge Grid Monitoring and Control based on Gridspertise Quantum Edge® device technologies**, the perfect allies in making low voltage grid more efficient and reliable.

It is for supporting DSOs in facing the challenges at the low-voltage grid level that Gridspertise has designed the new solutions unveiled at Enlit Europe 2023. The rapid growth of electricity demand, the need to accommodate and integrate new charging loads, including electric vehicles, the increasing penetration of Distributed Energy Resources (DER), are bringing more complexity in the grid due to new bidirectional power flows and fluctuating demand patterns, therefore, Distribution System Operators' (DSOs) interest has shifted from high and medium-voltage (MV) monitoring towards real-time visibility for low-voltage (LV) network.

The new generation of smart meters plays a crucial role in enhancing LV grid visibility, acting as distributed intelligent sensors to provide real-time data on energy consumption, enhance remote monitoring of grid performance and enable the integration of renewable energy sources.

As smart meters represent a first important tool, DSOs have the urge to integrate other sources of information to determine if the LV networks are performing within capability: extending monitoring and remote control from MV to LV is mandatory to improve the reliability and quality of service to final users, decrease System Average Interruption Duration Index (SAIDI) as well as reducing total costs.

“With the latest additions in our portfolio, Gridspertise is taking a leap forward in building the digital and clean energy system of the future. Low voltage grid digitalization is essential to integrate more renewables, decarbonize power generation and reap the full benefits of electrification” said **Robert Denda**, Gridspertise CEO. “Our new flexible and modular meter Globy and our suite of solutions for LV Monitoring and Control condense state-of-art technology,

a future-oriented approach and decades of expertise in grid digitalization, testified also by the recent milestone of 100 million of smart meters delivered worldwide. Our solutions enable DSOs to observe, reconfigure and optimize energy flows to integrate more renewables and keep the grid stable, improving final user experience and system sustainability”.

Globy: a new flexible and interoperable meter, built to last

The newest addition of Gridspertise smart meters portfolio not only helps to tackle the aforementioned challenges at LV grid level, it is also a flexible device, adaptable to customer needs and interoperable according to DLMS international standards.

The new device has been designed taking in consideration a high number of international requirements, that make it flexible to adapt to different contexts and communication protocols: for these reasons it has been named **Globy**. Depending on the DSO’s location and requirements, it enables them to switch or adapt the communication technology directly in the field, allowing them to choose the most appropriate solution from a variety of communication protocols (including G3 Hybrid PLC and RF Mesh, Cellular LTE-M and NB-IoT) to maximize coverage and connectivity even in rural areas, enabling devices to connect in remote locations with weak signals.

Globy is also interoperable with third-party vendor solutions, allowing backward compatibility and integration with existing installations, breaking down technology constraints related to proprietary frameworks and vendor-specific ecosystems. Together with Globy, Gridspertise offer also includes compatible Head-End System (HES) and Meter Data Management System (MDMS) as well as a pool of technical services and support activities, consisting of planning, installation, logistics, maintenance, up to the full operations of a control room, data reporting and billing, with a Metering-as-a-Service approach.

An all-in-one suite for LV Grid Monitoring and Control

Today, the “as-built” topology for distribution grids is often not completely or accurately known. In particular, the segment from secondary substation and its downstream connected LV network is very often not monitored or controlled. This year at Enlit Europe, Gridspertise has presented a new suite of hardware and software solutions for LV Grid Monitoring and Control.

Gridspertise has extended the family of Quantum Edge® device solutions with a new smaller form factor version of the iconic edge device, designed for DSOs who need an effortless, integrated solution for low-voltage management, incorporating in one single solution several use cases related to the MV/LV distribution substation. Thanks to its virtualization technology, it can act as an interoperable meter data concentrator supporting multiple RF/PLC protocols (Meters & More, PRIME, G3, DLMS, etc), a Remote Terminal Unit (RTU) to extend remote control to the LV grid, as well as a virtual router to enable seamless communication. By integrating multiple merging units, this device is able to monitor the status of LV feeders and any faults occurring; temperature, current and voltage level of the transformer; environmental parameters (temperature, humidity, flooding etc.).

In order to exploit the new QEd version’s cloud-edge potential to the fullest, the solution can be integrated with Gridspertise’s new centralized Low Voltage Supervisory Control and Data Acquisition (**LV SCADA**) platform. This powerful software enables to furtherly improve visibility on the real-time status of LV grid and to perform remote control functions by leveraging on the virtualized RTU embedded in the device, without the need of field-crew intervention.

LV SCADA enables to collect, integrate and visualize real-time data and measurements from several smart components installed across the low-voltage network (smart street boxes, LV switches, sensors and smart meters' last gasp).

Thanks to the interconnection with external GIS (Geographic Information System), MV and LV networks are shown on a cartographic map, enabling a sort of grid digital twin, tracking how network configuration changes in real time.

Through LV Grid Modelling and Analytics tools, it can support DSOs in identifying critical grid segments. This software is also interoperable with workforce management tools, enabling to optimize field work operations as well as to track any changes of the network configuration. The solution also permits to run operations directly in the field and to eliminate paper-based handling, while increasing operational efficiency.

Gridspertise offers grid intelligent devices, end-to-end cloud-edge platform solutions and services to accelerate the digital transformation of electricity distribution grids across three main areas: metering and grid edge digitalization, network infrastructure digitalization, field operation digitalization. The Company's portfolio is designed as an open ecosystem, easy to integrate with Distribution System Operators' existing infrastructure, combining intelligent and automated grid devices with ready-to-use modular applications, running at central level as well as on the edge. The Company was set up in 2021 as a carve-out of Enel's twenty-year-long experience in developing, testing, and scaling up digital technologies to transform legacy distribution networks into smart grids. Gridspertise is today jointly controlled by the Enel Group and the leading global alternative investment manager CVC Capital Partners. The Company has inherited a significant intellectual property portfolio of over 350 patents and combines its expertise in grid digitalization with cutting-edge solutions from leading technology partners to tackle the evolving digitalization needs of the energy market. Gridspertise is headquartered in Italy with subsidiaries in Spain, Brazil, India and the United States. Current target markets include Europe, Latin America and North America, expanding towards Asia-Pacific and Africa, where investments in power grids will drive infrastructure upgrade projects in the near future. For further information, visit www.gridspertise.com