



ARKENS DCS

Digital Control Substation

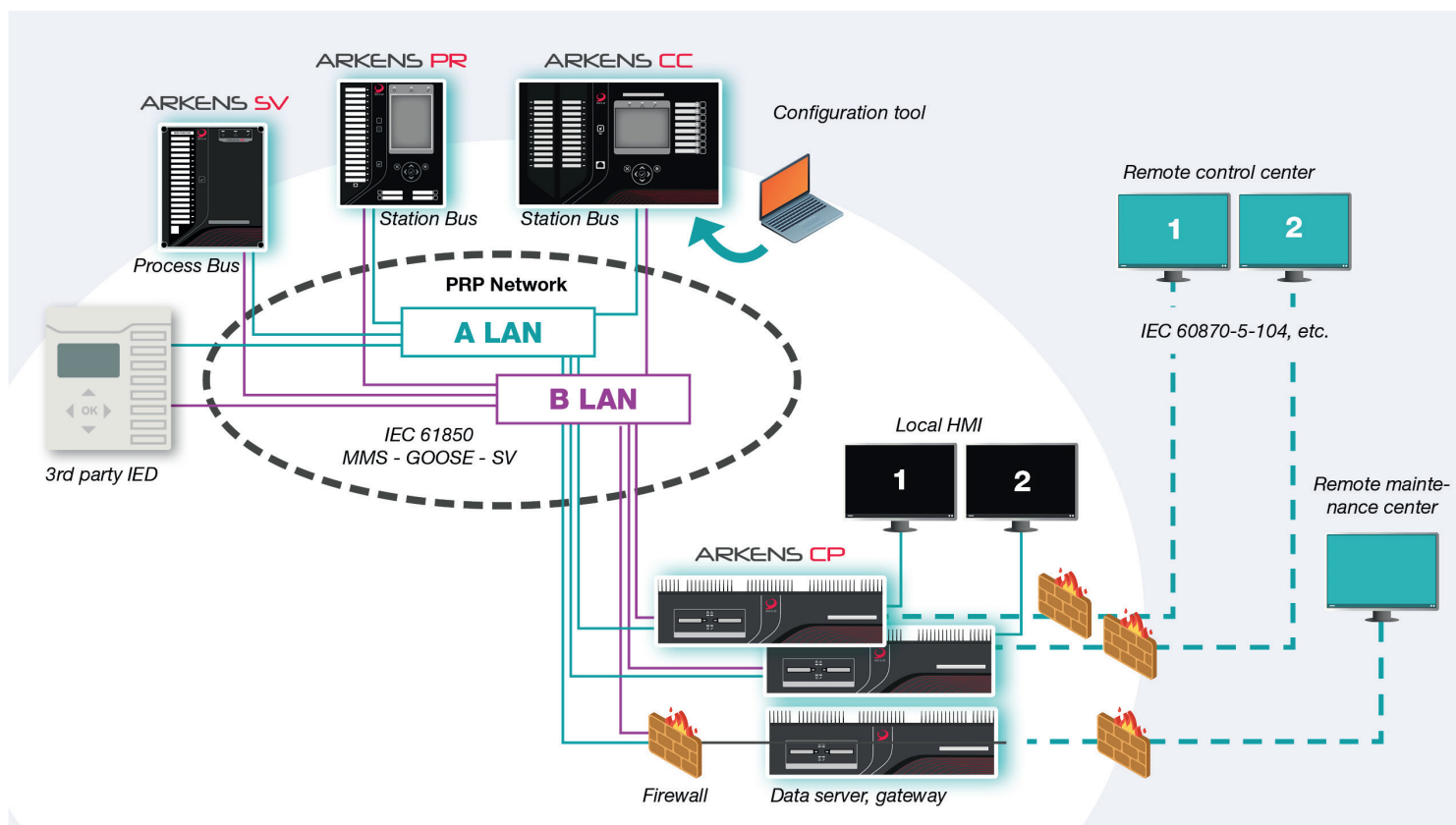
Digital protection and control system for HV / MV substations
IEC 61850 - Station Bus and Process Bus

ARKENS DCS

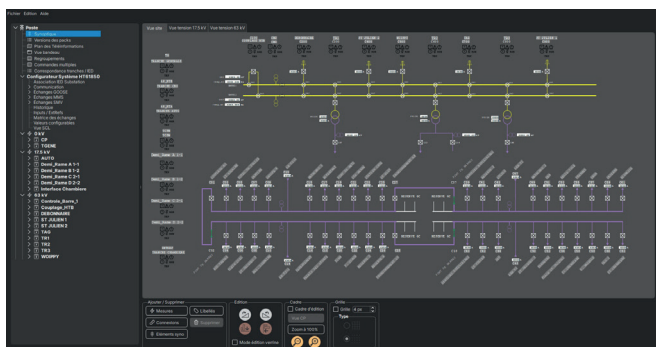
Digital protection and control system for HV / MV substations

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Architecture



ARKENS Studio, an all-in-one system configurator



The ARKENS Studio configurator enables all SCLE system equipment, protection relays, unit computers, operator stations and remote control gateways to be configured via a single software tool.

ARKENS Studio also performs IEC 61850 system configuration.

Modular, interoperable and sustainable IEDs



The ARKENS range is built around 4 **modular, complementary** devices which communicate in compliance with IEC61850 standards.

The hardware platform, designed by SCLE, guarantees our customers **long-term durability, flexibility and scalability**.

The functionalities provided by the range improve **assets and data protection**, widen **access to information**, and optimize **the operation and maintenance of infrastructures**, thanks in particular to the option to access them remotely.

Our systems provide **redundancy of critical functions** for greater availability.

The ARKENS range is certified «**Origine France Garantie**».

ARKENS PR

Station Bus digital protection relay



ARKENS PR provides all protection functions for high-voltage networks (transformers, lines, etc.), as well as automation and measurement functions.

ARKENS SV

IED Process Bus hardware platform



ARKENS SV provides all acquisition, protection and control functionalities (PIU, SAMU, SCU, BCU, BPU) on high-voltage Process Bus networks.

ARKENS CC

Bay controller unit



ARKENS CC manages auxiliaries, bus bar and GIS signals.

ARKENS CP

Substation server & gateway



ARKENS CP performs all the expected substation computer functions, local monitoring control, remote access for maintenance and control.

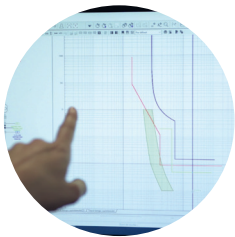


RELIABILITY - SUSTAINABILITY - SCALABILITY - MODULARITY - CONFIGURABILITY



Our expertises

Engineering



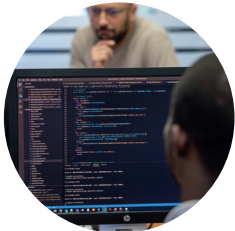
- Power grid modelling
- Protection philosophy
- Static studies (short-circuit, protection selectivity, load flow, voltage drop)
- Harmonic pollution studies
- Transient studies

Algorithmics



- Power grid simulation
- Creation & optimization of algorithms (modelling & simulation)
- Co-simulation of algorithms

Software



- Development of real-time embedded software
- Development of HMI applications for local and remote access of devices

Hardware



- Analog and digital electronics design
- FPGA design and testing
- EMC testing at COFRAC-accredited in-house laboratory

Network



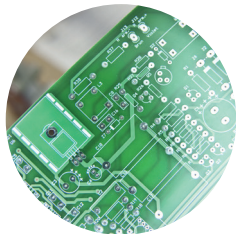
- Network architecture design
- Expertise in communication protocols

Cyber-security



- IEC 62443 & IEC 62351
- EBIOS risk assessment

SCLE SFE, Quality for a sustainable performance



Environment protection

Our goal is to reduce the impact of our products and systems on the environment: we rely on our **ISO 50001, ISO 14001 and MASE** certifications as well as on our **eco-conception good practices** and **life cycle analysis of products**.

All our electronic cards are designed by the R&D center. Our processes as well as our supplier processes are compliant with **RoHS** and **Reach directives**.

All along the production cycle, we **reduce the production of waste** thanks to returnable packages and reusable transport boxes. We also reduce the size of packages by adapting them to the products.

CO₂ emissions reduction is part of our daily objectives: we reduce the weight of our products, we optimise transport and deliveries and we facilitate remote operation and maintenance of our products.

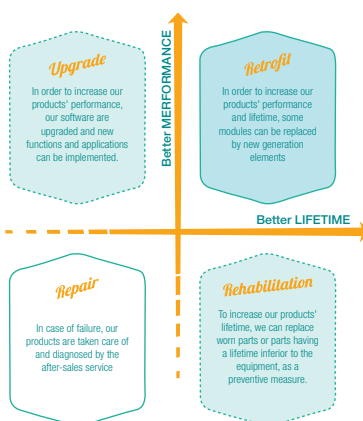


Quality approach

Our organisation is focused on the reliability and the sustainability of our equipment:

- **Reliability:** we design and manufacture 20-year service life equipment and more
- **Sustainability:** our ranges are designed to be marketed, maintained and improved for 40 years

The **EFQM model** is the cornerstone of our global management approach driven by Quality. This system optimises the implementation of other reference systems in each process (ISO 9001, ISO 14001, OHSAS 18001, MASE, ISO 17025, ISO 50001).



Zero fault policy

In order to guarantee the reliability of our systems, every device is 100% tested at each production step:

- Wiring of electronic cards (test benches)
- Assembly of calculators (test benches, baking, debugging)
- Wiring of electrotechnical cabinets (wiring and operational unitary control)
- System integration (FAT on test platform with final configuration of the cabinet, before shipping)
- SAT of the system by our teams directly at the customer's (corresponding to a second FAT under operational conditions)

Electromagnetic immunity tests are performed on our equipment every year, thanks to our **own Cofrac accredited EMC laboratory**.

A **traceability system** makes it possible to track the components of every product, device, software versions and all events during the operation of the system.





Commitment for a sustainable performance



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