PR.E.SE.

DIGITALIZATION OF RENEWABLE ENERGY

Our PR.E.SE. solution has been selected by the expert panel as one of the Finalists in the category "Smart Renewable Energy" of The smarter E AWARD 2022.

PR.E.SE. is a cutting-edge solution for the real-time remote monitoring of thermal status of the main electrical equipment and junctions of renewable energy plants, through wireless and battery-less sensors deployed over the critical components and interconnections of the electrical network.

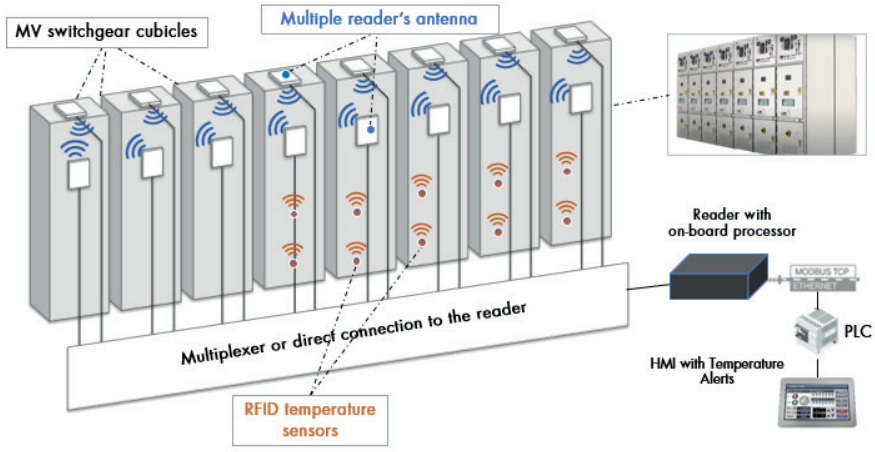
The solution is based on the EPC GEN2 Radio Frequency Identification (RFID) standard in the UHF band, which is currently recognized as a pillar for the implementation of physical/perception layer of the Industrial Internet of Thing (I-IoT) platforms, especially when active sensors are not acceptable in terms of size, costs and severe operating conditions (e.g. offshore plants) and whenever battery replacement is not easy.

C.R. Technology Systems has studied and implemented these sensors in the electrical sector, overcoming the limits imposed by traditional technologies, i.e. SAW (Sound Acoustic Wave), and wired IR and RTD solutions.

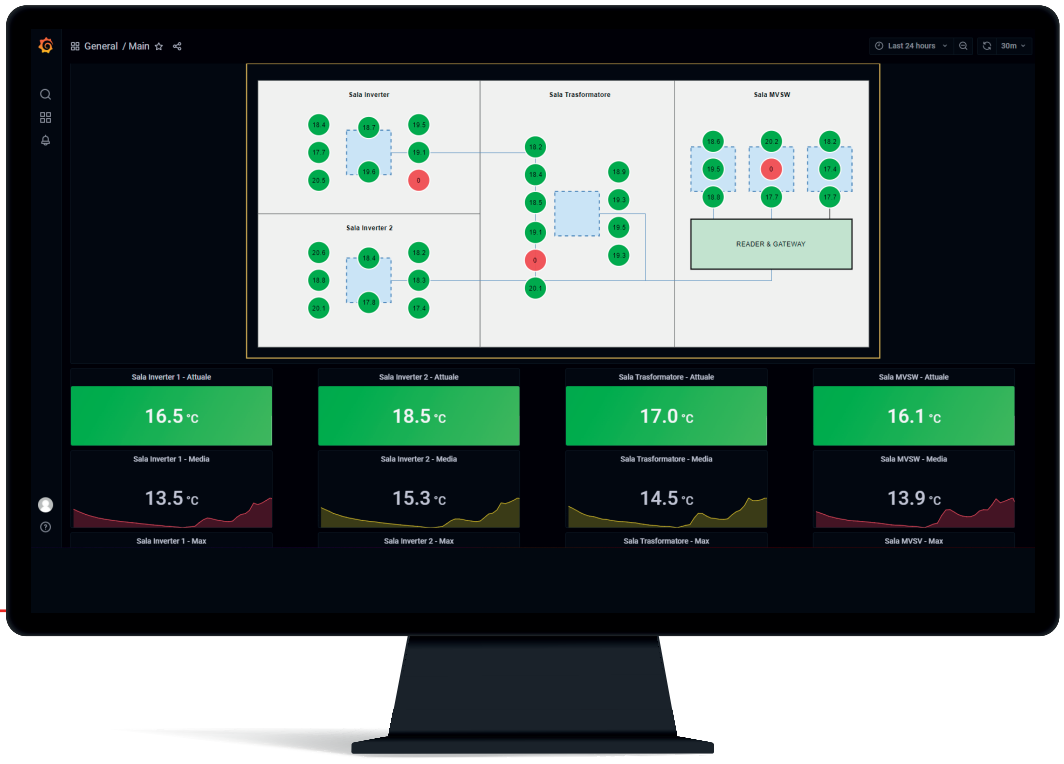
TECHNOLOGY FEATURES

- Small size
- Battery-less
- Zero-maintenance
- Wireless
- Reliable
- Modular
- Digital technology
- Remote monitoring

SWITCHGEAR 2.0 ARCHITECTURE



General interface
The colored points indicate the real-time temperature index, collected by sensors which monitor single components. The color varies according to the temperature situation.



WHAT PR.E.SE. SENSORS ENSURE?

Reduced time required for the installation of IoT platform

Permanent protection of electrical systems 24/7

Reduced maintenance costs for the IoT platform

Early detection of failure through ad-hoc machine learning algorithms

Avoidance of unplanned production downtimes

Timely troubleshooting and optimization of electrical equipment

Monitoring of remote plants (off-shore)

BENEFITS FOR THE ENVIRONMENT

PR.E.SE. answer to the challenge of electrical service efficiency: with their flexible and modular advantages represent a technological tool to achieve higher performances.

Extend the system life cycle and the use of equipment, whose dispersion would damage health and environment

Requalify the plant, through retrofitting, which modifies the structure of old plants in terms of performance

Protect workers against risks associated with any malfunctions of the system

Increase efficiency of the predictive maintenance system, limiting the interruption of service that causes a waste of energy

Continuous quality control during the life of the product

The remote monitoring allows less travels on-site and immediate intervention

#Greenattitude

Visit our website
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