

# PROTECTION OF HV/MV ELECTRICAL NETWORKS

Industrial Solutions



TRADEMARKS



TECHNIREL

Protection & Control  
**ice**  
Our energy at your service

Since 1947, ICE is a company specialised in **the design, manufacturing, installation and marketing of protective relays and control/monitoring systems** for your electrical networks.

Our trademarks:



ICE: 600,000 PROTECTIVE RELAYS INSTALLED WORLDWIDE.

## DIGITAL PROTECTIVE RELAYS

ICE offers a wide range of digital protective relays designed to meet all protection requirements.

### NP900 & AP900 RANGE



#### NP900 - PROTECTIVE RELAYS

**Comprehensive digital protective IEDs** for feeders, transformers, generators, motors and busbars.

- Customisable and intuitive HMI (measurement display, control, MIMIC)
- Modular system (I/O cards, RTD, Arc Flash)
- True RMS disturbance records up to 31st harmonic
- Communication protocols including IEC 61850 and Modbus.
- Licence free software



#### AP900 - ARC FAULT DETECTORS

Complete solution to **arc flash protection**.

- Optimised protection and safety of employees and equipment
- Fast installation and commissioning time
- Easy adaptation to any switchgear and busbars
- Ultra-fast trip time (<5ms)
- Trigger on current fault, pressure and light combined

## STATIC PROTECTIVE RELAYS

### 7000 RANGE

**Static protective relays** range including ITG, TTG, PTG, IAG... series.

Qualified products dedicated for nuclear activities.

*ICE maintains the manufacturing and selling of 7000 series relays by specific management of component obsolescence.*



The NP800R range of relays can be supplied in an R type case, to easily **replace** 7000 Series CEE relays without any mechanical modification.

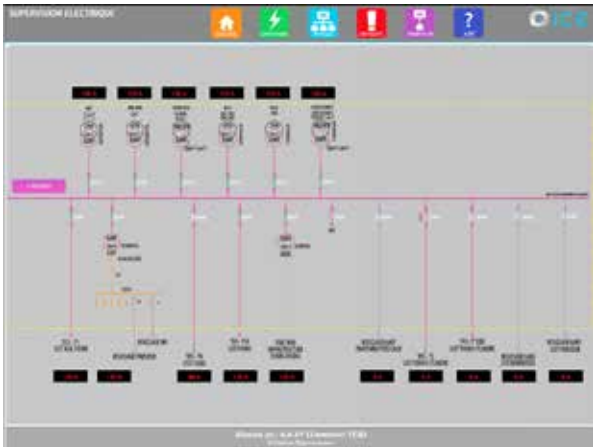


## PS800 & PS8000 SUPERVISION SYSTEMS

**Process optimisation** is at the centre of your concerns and the growing number of connected objects is an opportunity for better management of your substations.

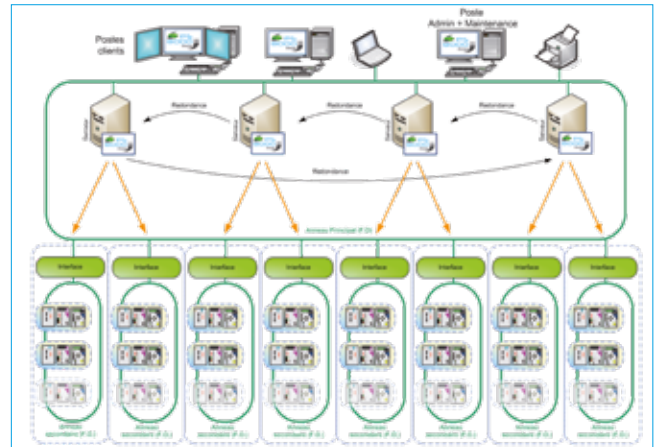
Our supervision systems can **monitor and control** all parts of an electrical network. These systems provide **load management information** in real time.

### PS800 - SUPERVISOR



- Economic and easy implementation
- Licence free customisable web-based interface
- Identifies and locates faults
- Modbus protocol

### PS8000 - SCADA



- Global vision of the whole electrical network
- Trigger protection systems
- Distribution of loads
- Identifies and locates faults

## REGULATION RANGE

Designed for the **control and synchronism of rotating machines**, our products offer a wide range of solutions to ensure reliable operation of synchronous machines (alternators and motors).



## AUXILIARY RELAYS

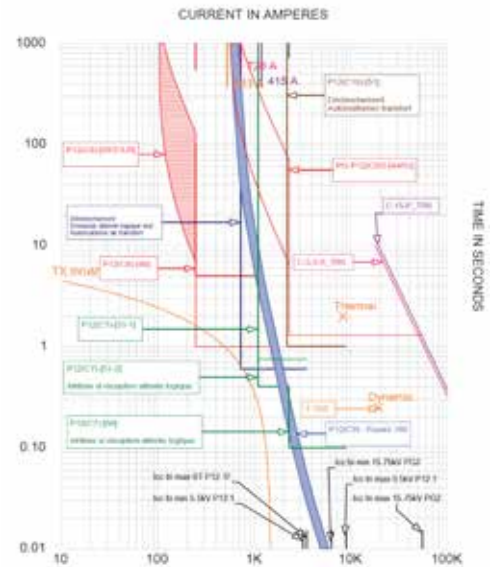


Range of **instantaneous, bistable, timer relays, and converters** for all protection and automation applications.

ICE supports you in the specification and **realisation of your projects**, regardless their nature: **new, retrofit or extension.**

**NETWORK AND SELECTIVITY STUDIES**

- Definition of a protection plan according to the mode of operation
- Updating of your protection plan when your existing network is updated
- Studies of the dynamic stability of your network
- Harmonic studies of your network
- Execution of ArcFlash studies
- Sizing of the power elements for an excitation system
- Simulation and calculation tools: SKM Power\*Tools®, Etap®, Matlab®



**INSTALLATION, COMMISSIONING AND MAINTENANCE**

We provide support and essential skills to meet your needs:

- Assistance to the use of our products and systems
- Experts able to react around the world
- Repairs and fast interventions for all types of protective relays
- Modification of your installations
- Maintenance, repair and operations



**TRAINING**

Whether you are prescribers, consulting engineers, equipment manufacturers, installers or end users, we will offer you training suitable to your needs.

In its training centre or on a customer's site, we offer you a full range of content to meet the needs of training in the field of electrical protection.

Our Training Catalogue is available on [www.icelec.com](http://www.icelec.com).



GENERATION TRANSMISSION DISTRIBUTION REGULATION INDUSTRY RAILWAY



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