# PROTECTION OF HV/MV ELECTRICAL NETWORKS

Industrial Solutions



# **EXPERT IN HV/MV PROTECTION NETWORKS**

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:







## 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 eauipment
- Fast installation and commissioning time
- Easy adaptation to any switchgear and busbars
- Ultra-fast trip time (<5ms)</li>
- Trigger on current fault, pressure and light combined

## STATIC PROTECTIVE RELAYS

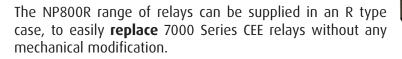
### **7000 RANGE**

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.







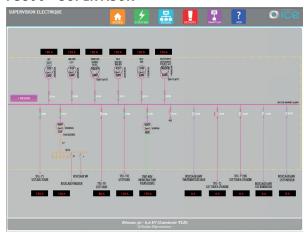
# **EXPERT IN HV/MV PROTECTION NETWORKS**

## **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.

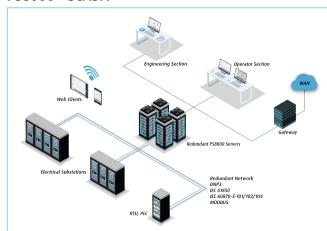
Our supervision systems can **monitor and control** all parts of an electrical network. These systems provide load **management information** in real time.

**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**

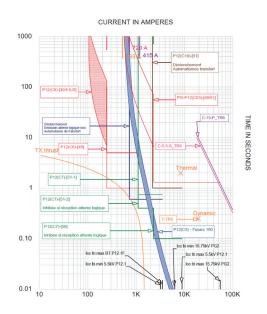


Range of **instantaneous**, **bistable**, **timer relays**, **and converters** for all protection and automation applications.

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.





GENERATION

**TRANSMISSION** 

**DISTRIBUTION** 

RAILWAY

**INDUSTRY** 

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Your contact