

## Software-Free AC/DC and DC/DC Converter for I&C Power Supply

### for Nuclear Power Plants

**Our redundant Software-Free AC/DC and DC/DC Instrumentation and Control (I&C) Power Supplies reduce costs and required space while increasing safety.**

### Challenge

Safety-related I&C systems require power at all times – especially during emergencies. Standard power supplies lack redundancy, contain software that is expensive to qualify, take up valuable space in the plant and are not capable of operating under harsh environmental conditions such as temperatures of 45°C.

Qualifying standard components is often very expensive. Full design redundancy implies two separate qualifications.

### Solution

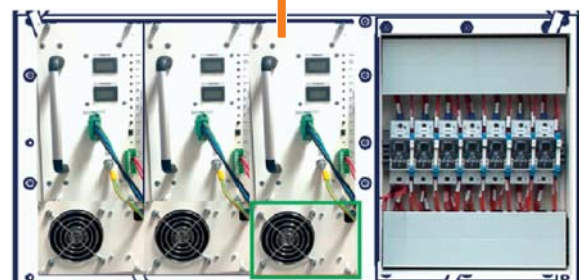
The modular Converter Cabinets for I&C Power Supply go beyond dual modular redundancy: the AC/DC and DC/DC converters are of two diverse designs. They are software error free and independently powered for extremely reliable operation. AC/DC and DC/DC supplies can also be purchased separately if needed.

### Customer benefits

- Perfect fit for power supply of safety-related I&C
- Advantage of a modular approach:
  - Fully independent dual modular redundancy – increased plant safety
  - Get flexibility of installation with high modularity
  - Reduce maintenance effort due to hot swap replacement of modules and fans
- Reduced required space by increasing energy density
- Reduced number of cabinets and qualification costs
- High resistance to harsh environments



Example of cabinet



Modules and out-going field

## Technical information

The improved power supply cabinet converts 400/230 V AC and/or 220 V DC input supply voltage into a stabilized and controlled 24 V DC output voltage which is then provided to the electrical loads via the internally monitored distribution field. By offering space for up to twelve modules and the possibility of up to four incoming feeders it is configurable to meet different project-specific demands. Due to its high energy density it provides a current capacity of 660 A while meeting the single failure criterion. It has been designed to create additional value for upgrade and new-build projects.

## Key figures

**4** configurable incoming feeders

**4** separate systems configurable in one cabinet

**28–68** output terminals for electrical loads

**28 V DC / 720 A** output

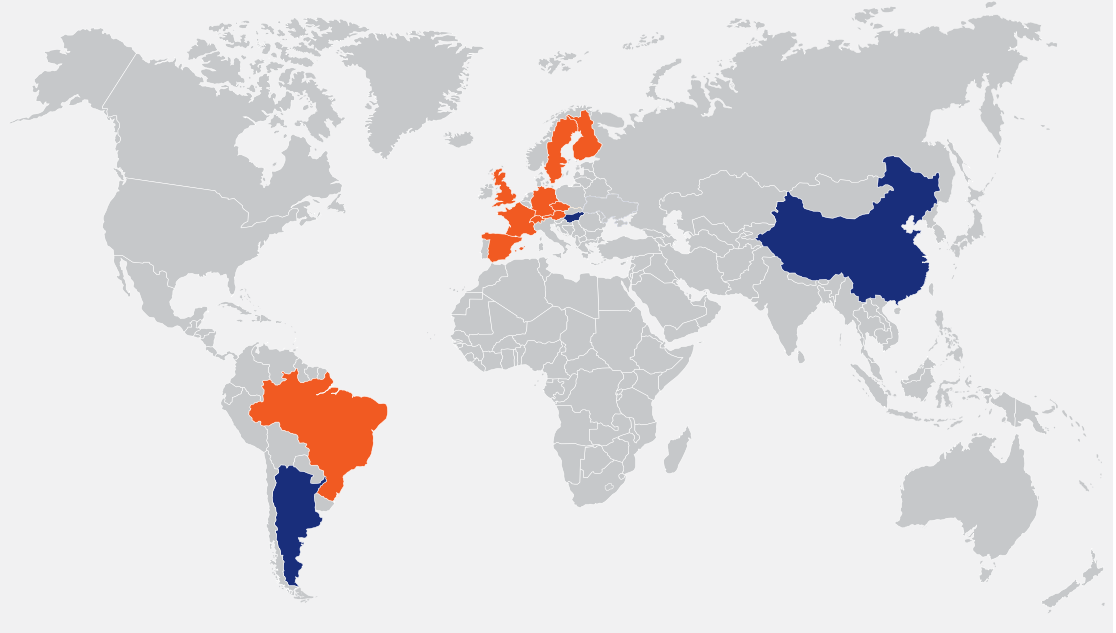
**45 °C** ambient working temperature

**400 x 900 mm** footprint size

## References

Experience in  
I&C Power Supply  
Solutions

Framatome  
Converter Cabinets



**Your performance**  
is **our** everyday **commitment**

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