

COMPETITIVE ADVANTAGES

- **Reduction of local energy consumption** in homes and SMEs / SMIs;
- **A simple, solid, highly compact, economical, long-life conditioner;**
- **Respect of electromagnetic compatibility standards** and harmonic interferences on the distribution network.

APPLICATIONS/MARKETS

- Domestic sphere and home automation;
- Light industry: Production of household appliances;
- Sector of general public electricity consumption.

INTELLECTUAL PROPERTY

- Patent application FR1255667;
- Collaboration sought: Licenses available for the industrialization of the device.

LABORATORY

- Laboratoire GREEN

CONTACT

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PRESENTATION

This power factor compensation circuit developed by the GREEN laboratory at the University of Lorraine can ensure an **almost unity power factor for each home**, even if the reactive energy consumed is highly variable. It contains a harmonic filter including a compensation capacitor to provide reactive power to the network, a static fully reversible power converter, an absorption coil, and a control module.

The reversibility allows the **converter to collect the surplus reactive power at the absorption coil**. The converter switching frequency is low enough to enable a loss reduction, thus increasing its performance.

