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# Electrical Infrastructures

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Décembre 2020



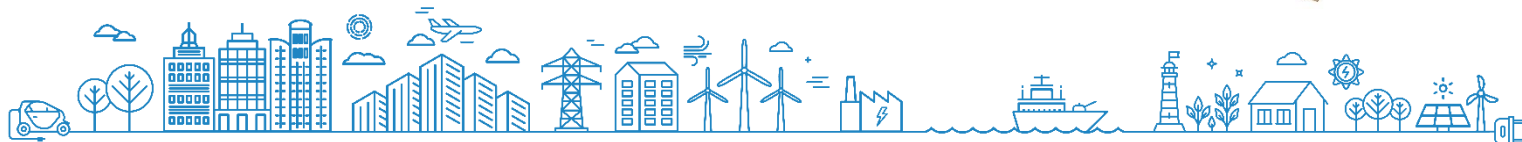
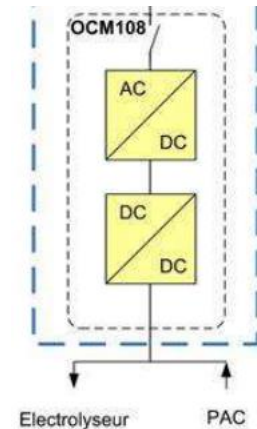
# Electrical Infrastructures

### ➤ Main features :

- ✓ Reversible
- ✓ Configurable On or Off grid
- ✓ Possible to parallelize for more power
- ✓ Single phase uninsulated network
- ✓ CAN connectivity

### ✓ Electrical characteristics :

- ✓ Input voltage range : 80 Va – 265 Va
- ✓ Frequency : 47 to 63 Hz
- ✓ Output voltage range : 100 – 450 Vdc
- ✓ Max continuous output power : 6 – 10 kW
- ✓ Max continuous output current : 40 A
- ✓ Efficiency : Up to 96,5 %

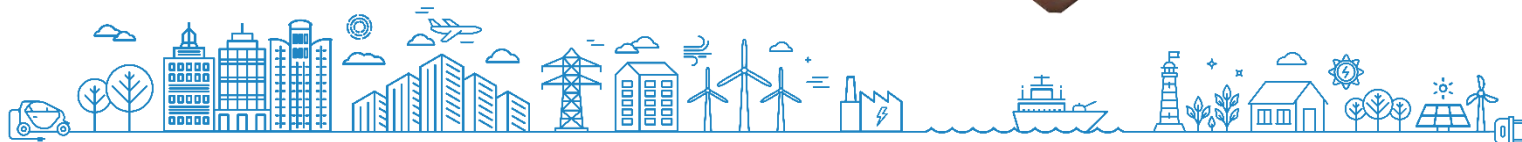


### ➤ **Main features :**

- ✓ Interlaced convertor with IGBTs
- ✓ Advanced control algorithm for optimal power module usage and efficiency
- ✓ Bootloader for field upgradeable firmware
- ✓ Liquid cooled
- ✓ IP Protection : 5K4K
- ✓ Can work in mode buck or boost

### ✓ **Electrical characteristics :**

- ✓ Input voltage range : 150 Vdc – 750 Vdc
- ✓ Output voltage range : 40 – 550 Vdc
- ✓ Max continuous output power : 120 kW
- ✓ Max continuous output current : 300 A
- ✓ Efficiency : Up to 97 %



## HOME ESS + UPS 6kVA/15kWH



Location: Britain - Quebec - Africa

Inverters: BAT001 - 50 pcs

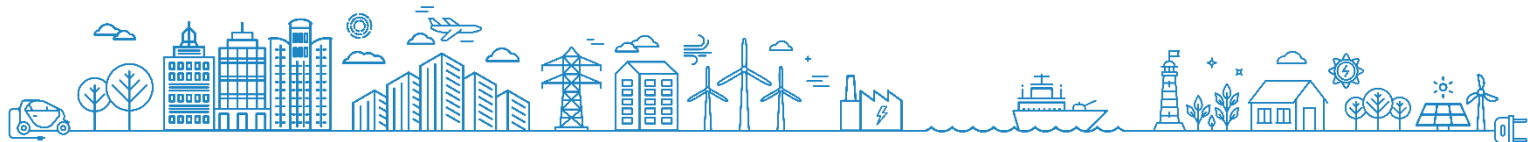
Coupling: PV with DC coupling

Battery: LMP BlueSolution 150 to 220V

Mains: 230V 50Hz

Missions:

- UPS with lithium battery
- Solar self-consumption
- Site consumption management





**ESS 1,2MVA/1,5MWH**

Location: SCLE – Toulouse, France

Inverters: Smart AC – 3 cabinets 400kVA

Coupling: No

Battery: 650 to 820V

Mains: High Voltage 20kV with transformer

**Missions:**

- Grid regulation
- Site consumption management





**ESS 2, 4 MVA / 4,5 MWh**



Location: Alata – Corsica (France)

Inverters: Smart AC – 6 cabinets 400kVA

Coupling: with 3<sup>rd</sup> party inverters

Battery: 710 to 880 V

Grid: High Voltage 20 kV with transformer

Missions:

- Renewable energies smoothing
- Grid injection with contractual pattern
- 1000 houses supply



## SMART GRID ON DC BUS



Location: SCLE – Toulouse, France

### Converters:

- Smart AC TL 125kVA (97,7%)
- DC-DC for Battery LG 33kW (99,4%)
- DC-DC for PV with MPPT 33kW (99,4%)
- Drives for Flywheel 10kW (99%)

Coupling: DC bus 650V

Mains: 400 V<sub>AC</sub> without transformer to the grid

### Missions:

- Renewable energies smoothing
- Grid injection with contractual pattern

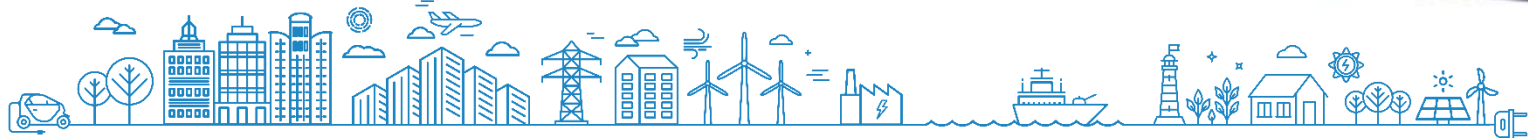
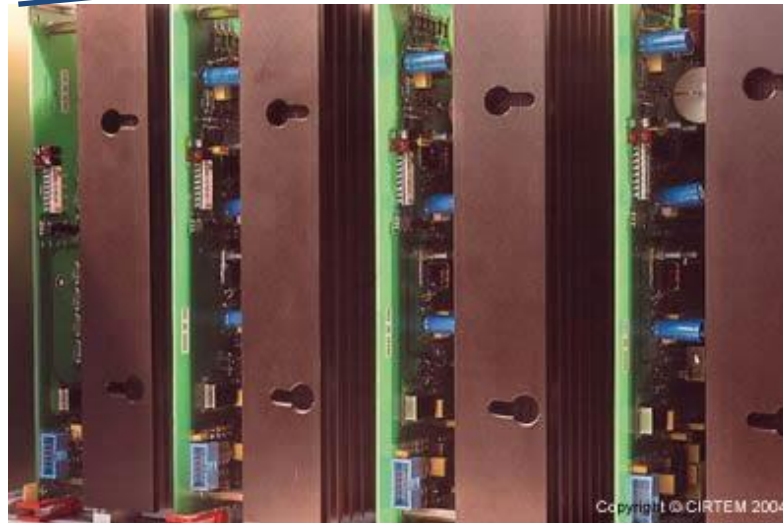


WEB : <http://www.smartgrids-cre.fr/index.php?p=smart-zae>





- Price signal generator for EdF
- 63 kVA three-phase inverter 24-hour power-on
- Customer : SCLE SFE (GdF-Suez group)
- 400 generators produced since 1998





## Contact

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