



Power supplies
equipment and systems

#wearePremium





Premium
Powering Your Challenge



Power supplies
equipment
and systems



About us

Premium, S.A. was founded in 1981 and for over 40 years it has been engaged in the **design and manufacture** of Power Conversion Systems.

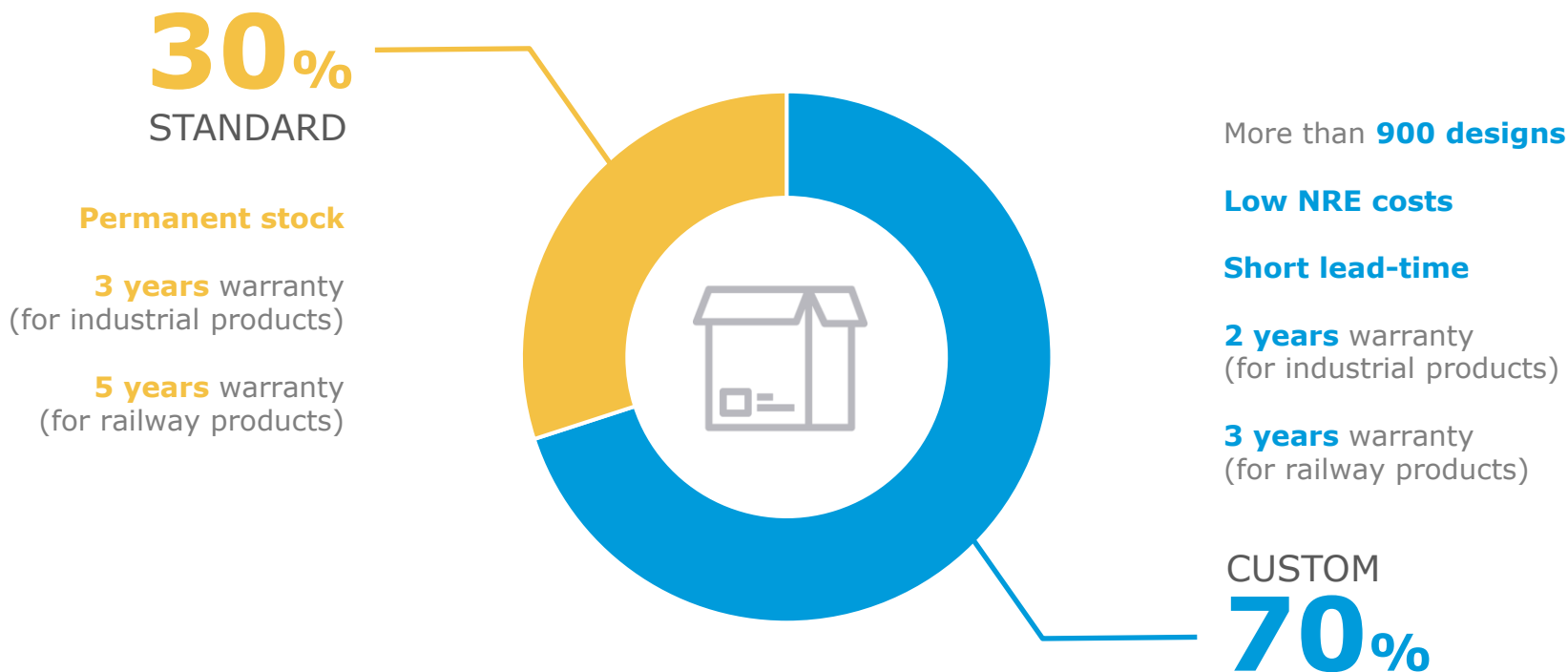
We create products that require **high-quality, reliability, and robustness** and are able to do so from scratch.

Our experience and know-how allows us to work with the most demanding markets.



BORN AND MADE IN BARCELONA. POWERING THE WORLD

Products and Solutions



Custom-made solutions

+900 CUSTOM
DESIGNS

Able to design from scratch

Capable to design following strict specifications

Experience in a wide variety of applications



Power from 50W up to 50kVA
(very high power density, high frequency)



Up to IP68



Efficiencies up to 95%



Wide operating temperatures (-40°... 85°)



Input voltages up to 460Vac (1...3-Ph)
and 1500Vdc



10kV isolation (surges of $\pm 20\text{kV}$ 1,2/50 μs)

Output voltages up to 440Vac (1...3-Ph)
and 750Vdc

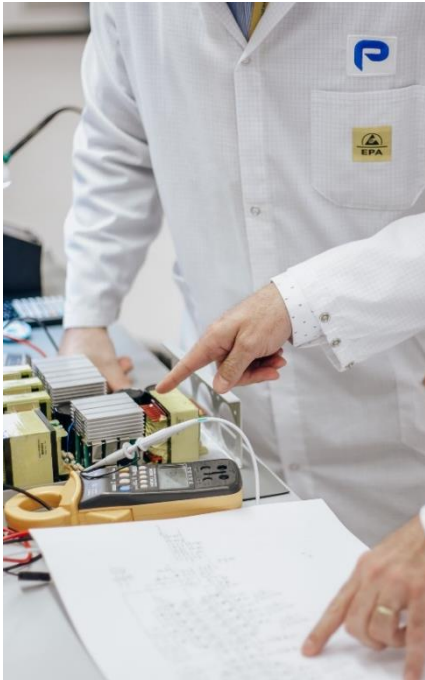


Multiple and Wide input and output voltages



RS232, RS485, I2C, Modbus, CANbus,
Ethernet, Web Embedded Server, Profibus,
etc.

R&D+I Department

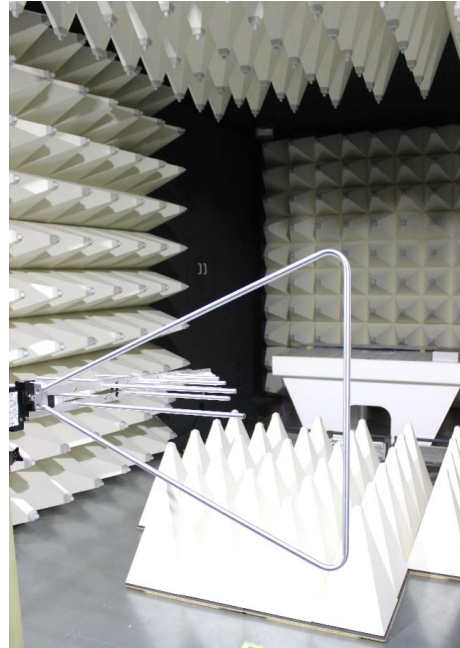


- We design, assemble and verify prototypes in our Research and Development Center
- We also redesign and make product modifications according to every project needs

R&D+I Department

Testing available:

- Electrical and functional tests
- Climatic tests through a climatic chamber
- Electrical safety: insulation resistance tests and dielectric strength to ensure compliance with safety directives
- EMC tests: electromagnetic compatibility tests in our semi-anechoic chamber
- We also work with external laboratories when necessary



Facilities



Applications



Rolling Stock & Ground Fix



HVAC - Transportation



Access sockets



Back-up fire protection



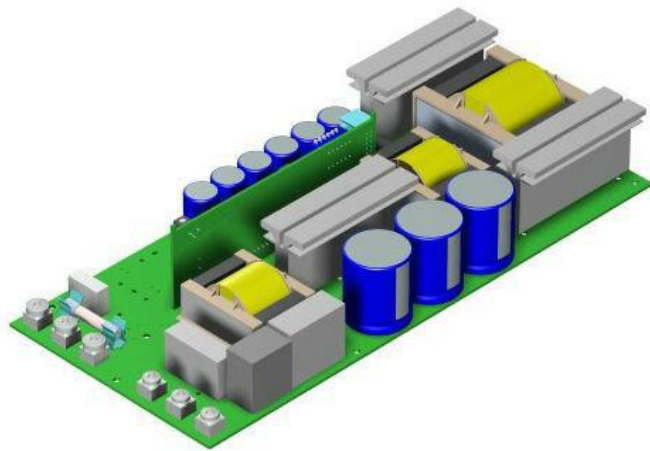
Defense - Communications



Energy generation

Case Study Military sector

3ph Inverter 28Vdc - 230Vac – 400VA



The Challenge

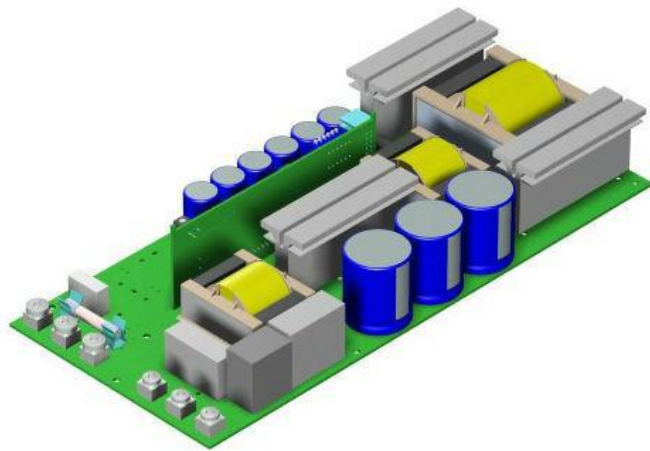
- Design 400VA single phase inverter
- Prototype ready in 10 weeks
- First military design for Premium

Powering The Challenge

- ✓ 28Vdc input and 230 Vac output
- ✓ Emission according to norm/s MIL-STD-461E
- ✓ More than 90 units sold
- ✓ Output filter modified to comply with MIL standards

Case Study Military sector

1ph Inverter 28Vdc - 230Vac – 400VA



The Challenge

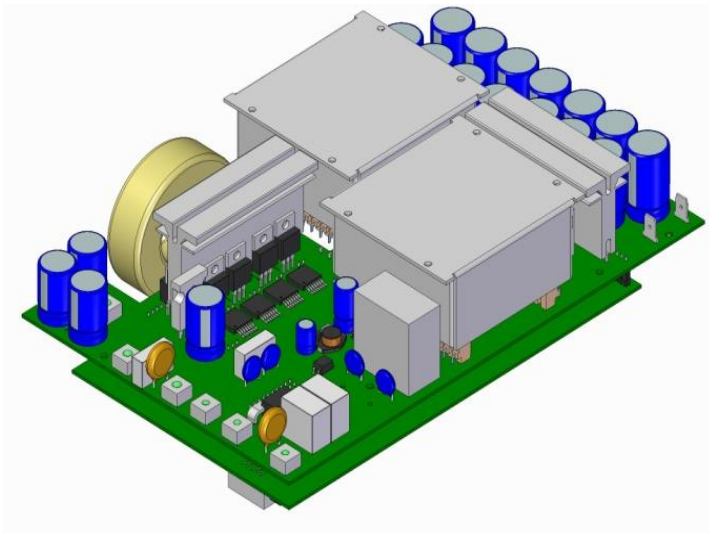
- Design 400VA single phase inverter
- Prototype ready in 10 weeks
- First military design for Premium

Powering The Challenge

- ✓ 28Vdc input and 230 Vac output
- ✓ Emission according to norm/s MIL-STD-461E
- ✓ More than 90 units sold
- ✓ Output filter modified to comply with MIL standards

Case Study Military sector

Isolated sinusoidal inverter 28Vdc – 230 Vac – 1200VA



The Challenge

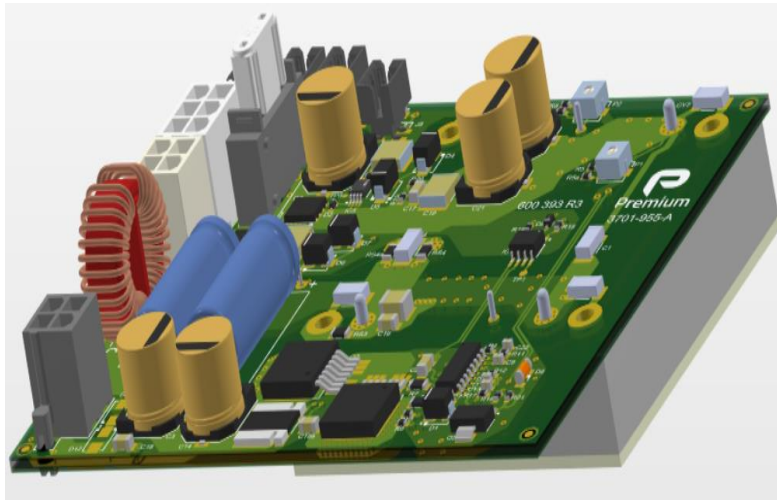
- Design 1200VA single phase inverter
- Open frame design – enclosure provided by final customer
- 14 weeks for design

Powering The Challenge

- ✓ 28Vdc input and 230 Vac output
- ✓ Emission according to norm/s MIL-STD-461E
- ✓ Saving mode / Sleep mode enabled by DIP-switch
- ✓ Frequency selector from 50/60hz
- ✓ Output filter modified to comply with MIL standards

Case Study Military sector

Isolated DC/DC Converter wide input voltage (10-36VDC) and 24Vdc output – 350W



The Challenge

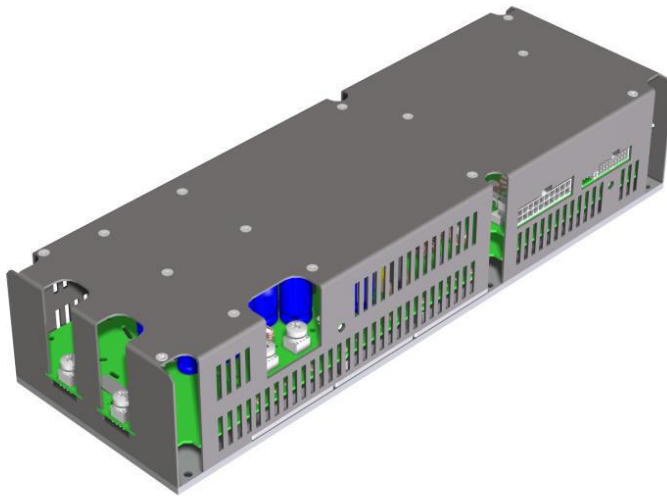
- Design 350W DC/DC converter
- Open frame design to fulfil a specific design – enclosure provided by final customer
- 10 weeks for design

Powering The Challenge

- ✓ Wide input voltage and 95% efficiency DC/DC converter
- ✓ Operating temperature range -30 to 75°C
- ✓ Emission according to norm/s MIL-STD-461E
- ✓ Protection to fulfil MIL-STD-1275
- ✓ Output filter modified to comply with MIL standards

Case Study Military sector

DC/DC converter 28Vdc – multiple outputs



The Challenge

- Design 1875W DC/DC converter
- Multiple outputs design
- Automatic ON/OFF protection depending on temperature control

Powering The Challenge

- ✓ 28Vdc input and multiple connectors for different outputs
 - ✓ (+85, +48, +24, +15, +9, +6, +3.3, -9, -15)
- ✓ Storage temperature -40°C to +85°C
- ✓ Emission according to norm/s MIL-STD-461E
- ✓ Vibrations according to STANAG 4370, AECTP 401A
- ✓ Noise according to STANAG 4370, AECTP 403A-1
- ✓ Visual signaling LEDs for each output voltage
- ✓ Safety according to norm/s EN60950-1

Case Study Military sector

DC/DC converter 9,5 to 36Vdc input – 24V output – 200W / 300W



The Challenge

- Design 200W DC/DC converter
- Wide input voltage
- Environmental protection IP68

Powering The Challenge

- ✓ 9,5 to 36Vdc input
- ✓ Operating temperature -40°C to +60°C
- ✓ Shock according to MIL-STD 810F – 514.4, 516.5
- ✓ Emission according to norm/s MIL-STD-461E
- ✓ Safety according to EN 62368-1 + EN 60950-1

Documentation

We provide a complete range of test reports and other information on request.

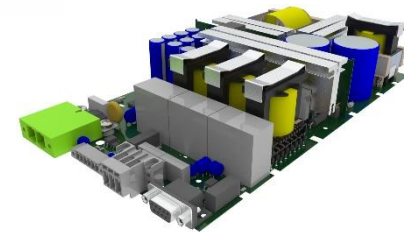
- Functional test report
- 3D Drawings
- EMC test report
- Stress review report
- Temperature test report
- HALT temperature test report
- Shock and vibrations test report
- CB test report and certificate
- Marine type test
- Schematics
- MTBF



Shock and vibrations test report



CB



3D drawings

Quality

- Our Quality Management System is certified according to the Standard UNE EN ISO9001 and has been recently integrated with the environmental standard ISO 14001, as a step forward in our commitment with the company's sustainability
- All series produced undergo a burn-in period, after which each unit is individually tested by an Automatic (computer-controlled) Test Equipment
- A printout report of the measurements obtained during the test is enclosed with each unit. The report is dated and identified by the serial number





Powering Your Challenge