



YOUR GLOBAL PARTNER IN **ELECTRICAL POWER**



MERSEN : A GLOBAL EXPERT IN ELECTRICAL POWER

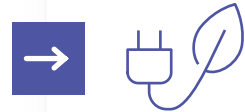
KEY FIGURES

 Sales
€1,2B

 R&D CENTERS
18

 COUNTRIES
33

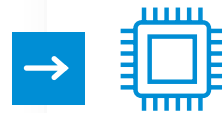
 EMPLOYEES
7,500



SUPPORTING
the transition to
renewable energies



CONTRIBUTING
to power conversion
& transmission



IMPROVING
power conversion
efficiency with
silicon carbide
semi-conductors



PARTICIPATING
in the development
of electric vehicles

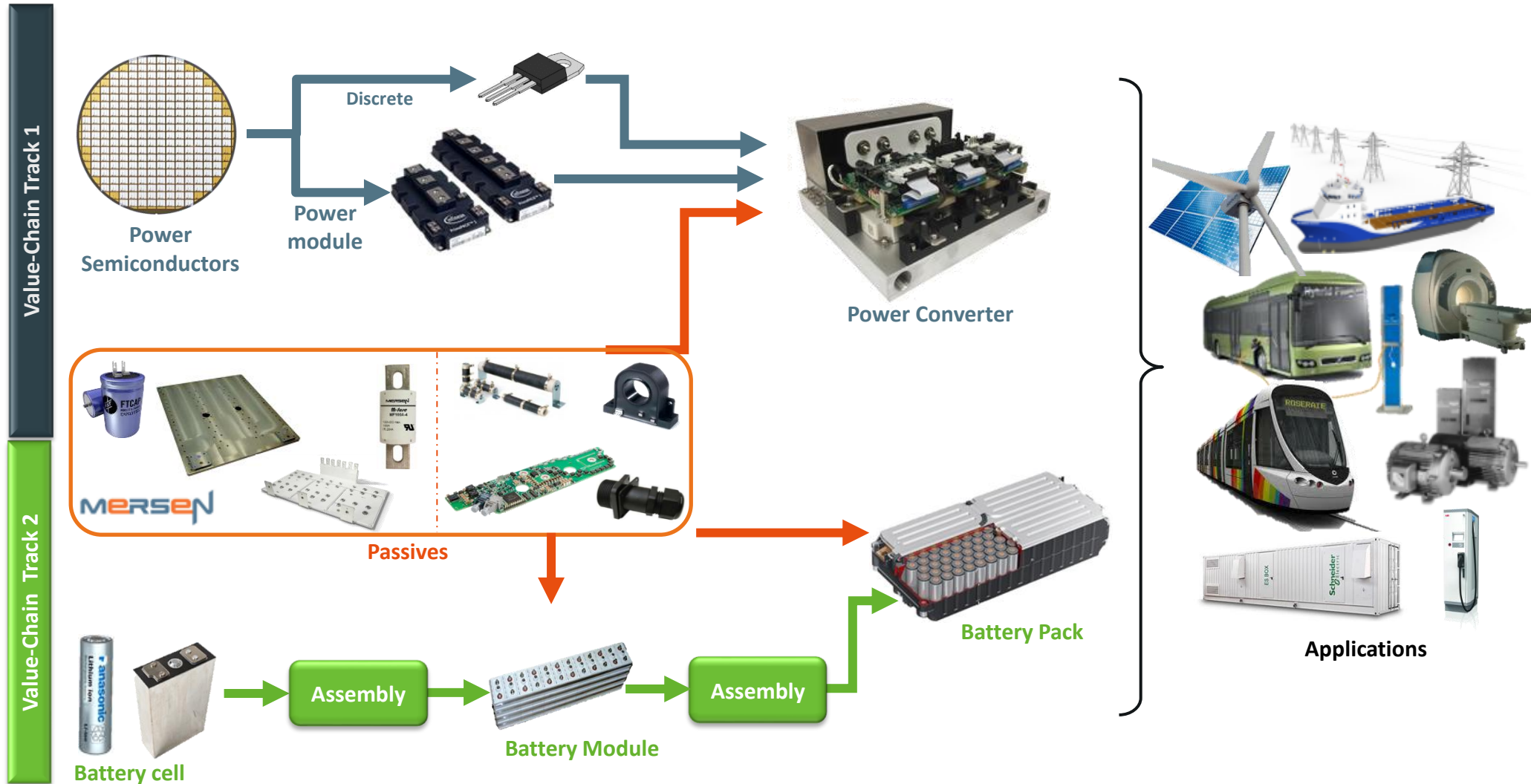
SPM: SOLUTION FOR POWER MANAGEMENT

A COMPLETE RANGE OF PASSIVES & SOLUTIONS TO CONVERT, MANAGE AND STORE ELECTRICAL ENERGY



SOLUTION FOR POWER MANAGEMENT - DESCRIPTOR:

PASSIVE, HYBRID AND ACTIVE DEVICES & SOLUTIONS FOR POWER CONVERSION AND BATTERY MANAGEMENT

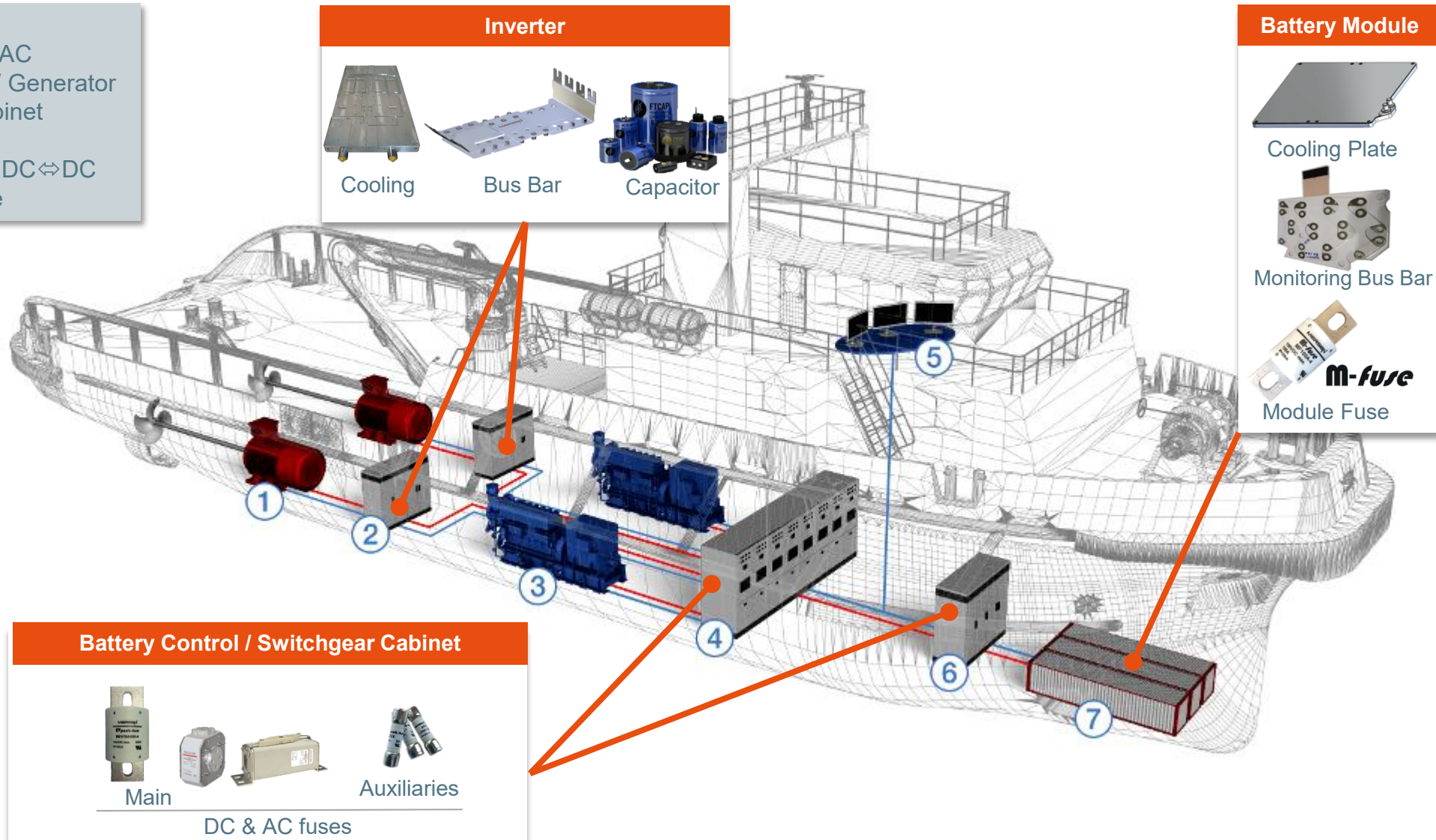




MARKETS AND APPLICATIONS OF MERSEN'S SOLUTIONS

MERSEN SOLUTIONS IN MARINE APPLICATIONS

1. Electric Motor
2. Inverter DC → AC
3. Diesel Engine / Generator
4. Switchgear cabinet
5. Control Desk
6. Battery control DC ↔ DC
7. Battery storage



MERSEN SOLUTIONS IN WIND APPLICATIONS

On board converter



Cooling plates, laminated Bus Bar, capacitors and fuses

Power generation



Power & grounding carbon brushes | Brush-holders | Slip ring assemblies

Surge & lighting protection

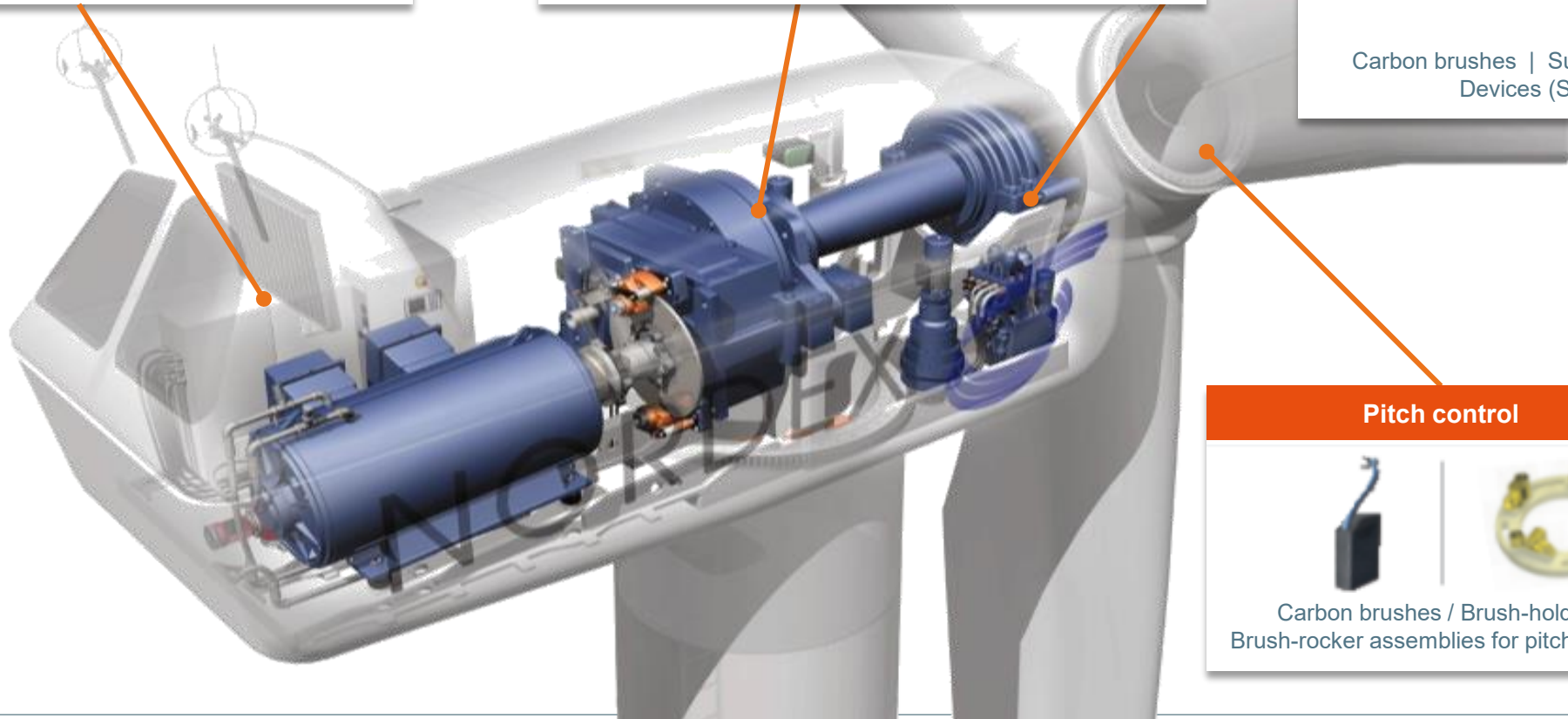


Carbon brushes | Surge Protective Devices (SPD)

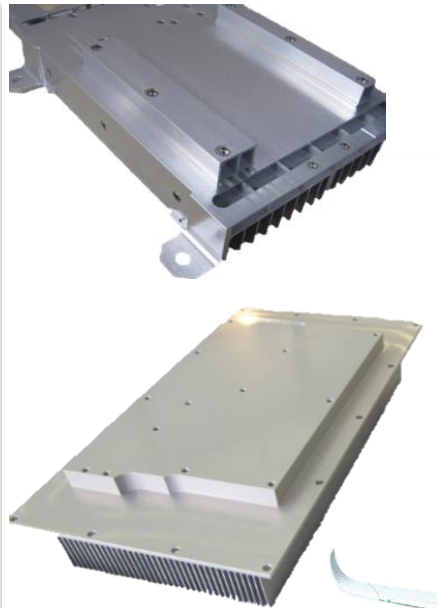
Pitch control



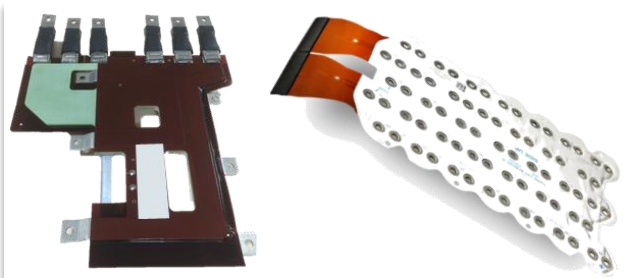
Carbon brushes / Brush-holders
Brush-rocker assemblies for pitch motors



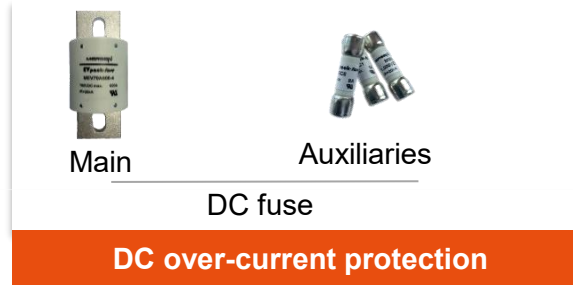
MERSEN SOLUTIONS IN AERONAUTICS



Air cooled heat sink

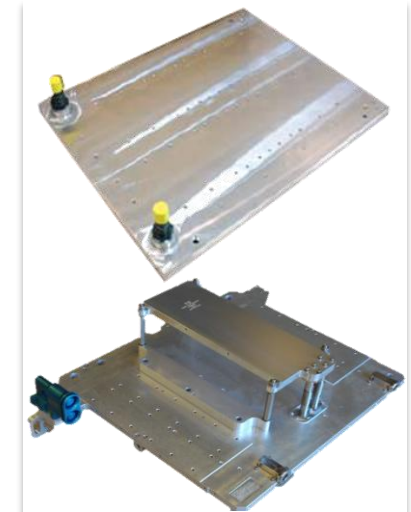


Laminated Bus Bar for inverter and battery



Main
Auxiliaries
DC fuse

DC over-current protection



Liquid cold plate and chassis



Power Capacitors

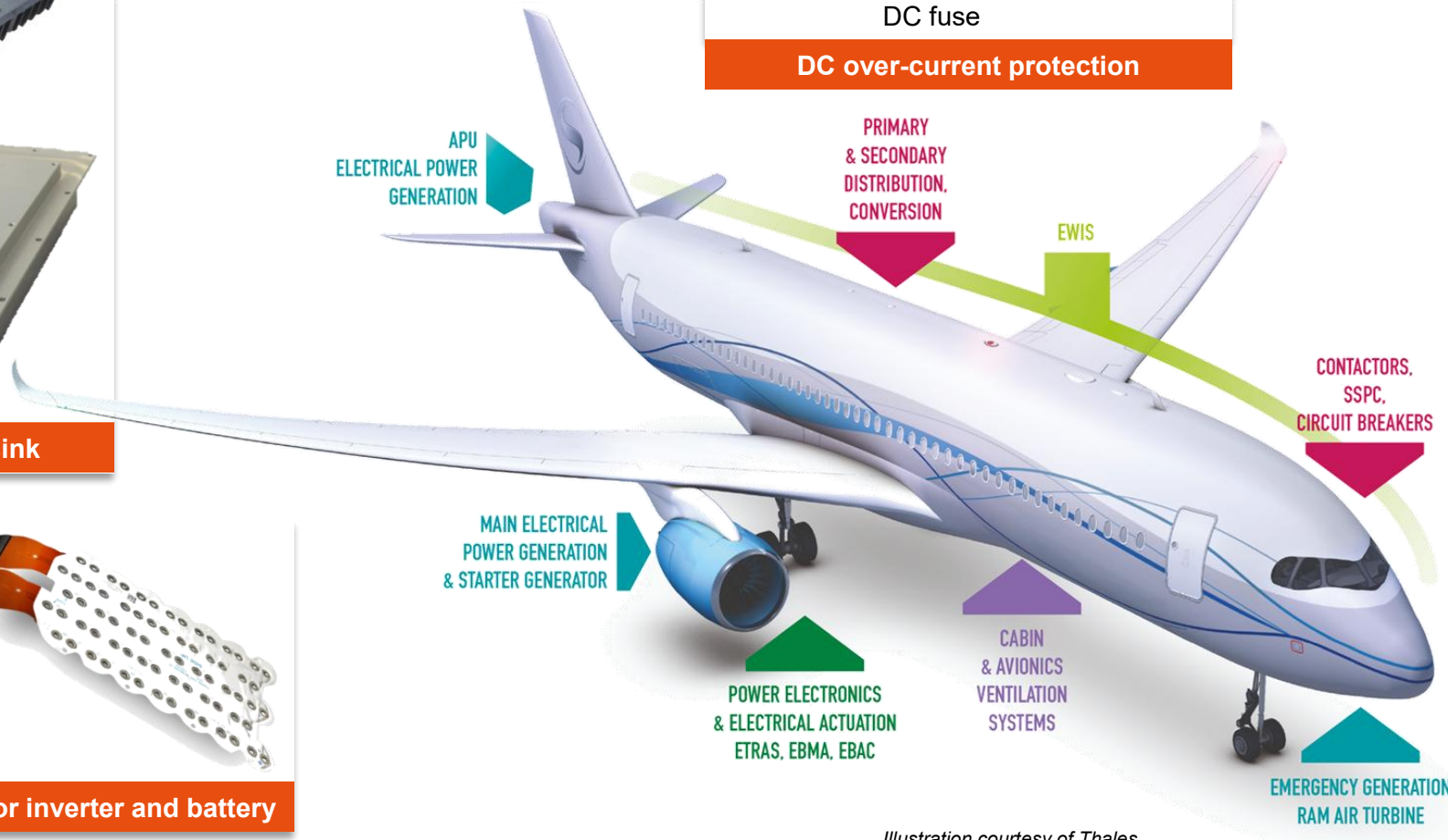
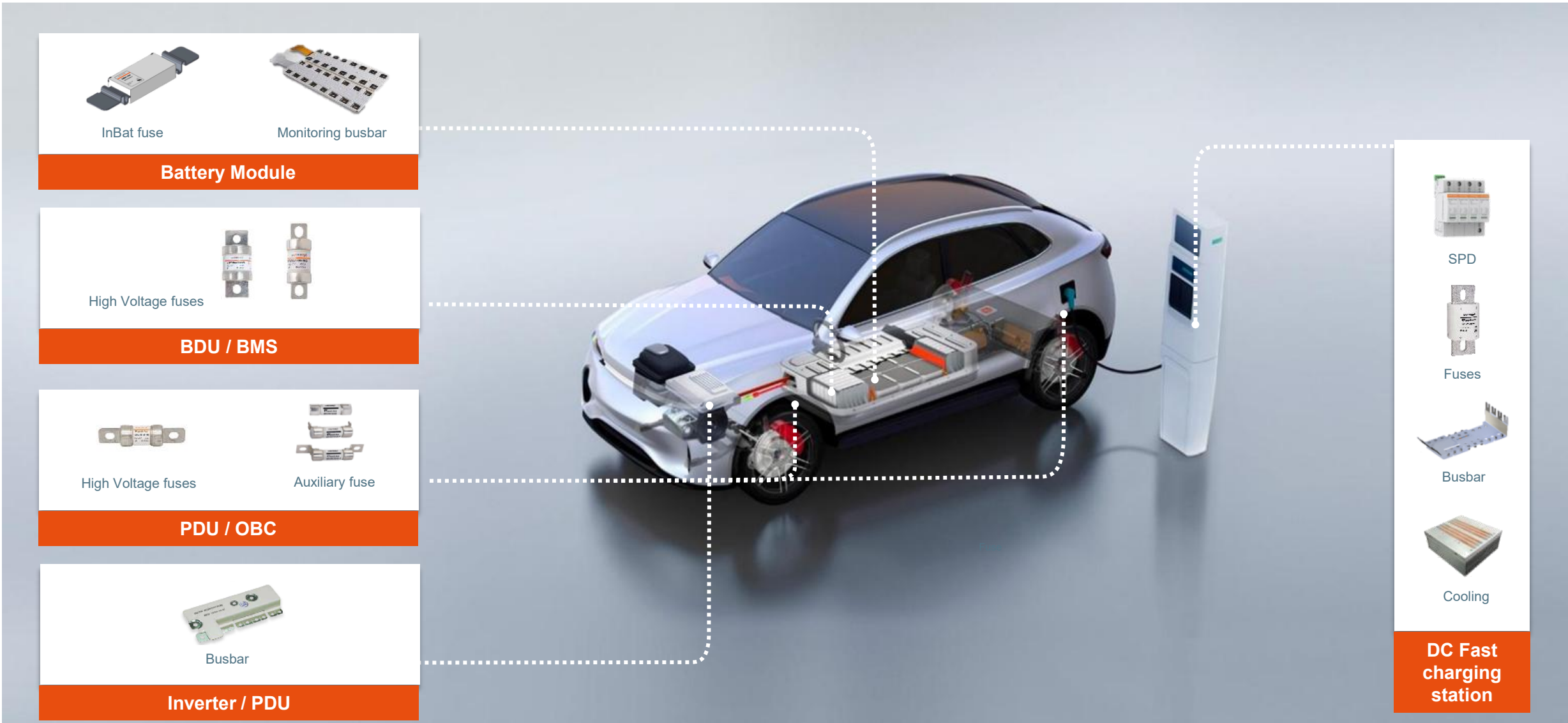


Illustration courtesy of Thales

MERSEN SOLUTIONS IN EV/HEV APPLICATIONS

BDU: Battery Disconnect Unit
BMS: Battery Management System

PDU: Power Distribution Unit
OBC: On-Board Charger





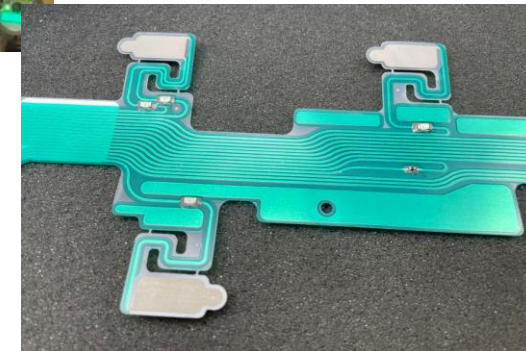
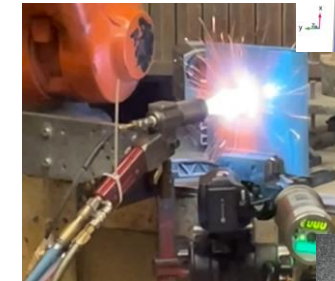
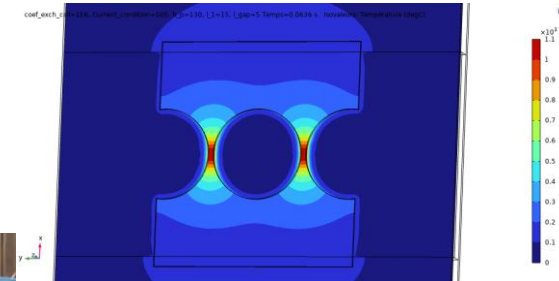
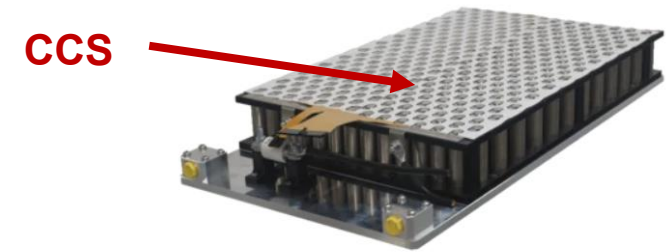
MERSEN'S KEY OBJECTIVES

IMPROVE SAFETY INTO BATTERIES

Building on previous experience with Horizon Europe in the field of batteries and power conversion, Mersen is looking for a consortium to address **cell interconnexion new challenges**

Objective 1 : Increase reliability and safety through safety devices and monitoring

- **Improve safety management in batteries, at pack, module and cells level:**
 - Development of smart breakers
 - Integration of fuse function at cell level, inside the CCS
- **Integrate fire-resistant materials inside CCS to reduce thermal runaway propagation**
- **Improve reliability and reduce cost of monitoring function**
 - Investigate new and innovative way to do monitoring function at the lowest cost
 - Work on stronger/smarter integration of monitoring into CCS

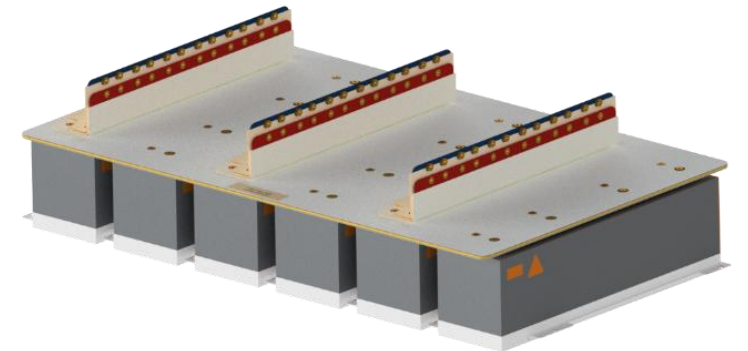


BUSBARS : REDUCE COST AND ENVIRONMENTAL IMPACT

Mersen develops all solutions for power distribution and conversion, for all type of market (rail, aeronautic, EV, marine, renewable energies, ...).

Objective 2 : Reduce weight, cost and environmental impact of power distribution and conversion

- Develop new design strategies and technologies to optimize use of conductive materials and limit overheating
- Adopt new cost-effective materials (example: aluminium) :
- Reduce environmental impact by optimization of materials, design and processes



CALLS OF INTEREST (CLUSTER 5)

Not exhaustive

Destination 2	HORIZON-CL5-2026-10-D2-03	Integrated Production and Product Development for Next-Generation Lithium-based Batteries for Mobility (BATT4EU and Made in Europe Partnerships)
Destination 3	HORIZON-CL5-2026-03-D3-01	Targeting key value chain components for increasing the competitiveness of renewable energy technologies in Europe
	HORIZON-CL5-2026-03-D3-20	Affordable and sustainable primary equipment for Future-Ready multi-terminal HVDC Systems
	HORIZON-CL5-2027-07-D3-28	Integrated Approaches for Retrofitting Infrastructures with Innovative Energy Storage Technologies
Destination 5	HORIZON-CL5-2026-05-D5-01	Large-scale demonstration of Heavy-Duty Battery Electric Vehicles (HD BEV) towards long-haul logistics operations (2ZERO Partnership)
	HORIZON-CL5-2027-03-D5-05	Higher Voltage, Megawatt Charging System compatible, modular powertrain for Heavy Duty Vehicles (HDV) (2ZERO Partnership)
	HORIZON-CL5-2026-06-Two-Stage-D5-10	Disruptive Technologies and Innovative Concepts for Energy Saving Onboard of long-distance ships (ZEWT Partnership)
	HORIZON-CL5-2027-03-D5-18	Enhanced electric operation and battery durability (ZEWT Partnership)