YASA designs and manufactures compact, lightweight and powerful electric motors, motor controllers and dc-dc converters for use in advanced hybrid and electric vehicle powertrains. The company’s revolutionary electric motors and controllers enable cost-effective vehicle hybridization and electrification – especially when there is a desire for minimum powertrain size and weight. This is because the high-power density of the e-motors and controllers provide vehicle engineers with additional flexibility to increase electric vehicle range, load carrying capacity or performance without compromising cost.

About YASA.
The company was formed in 2009 to exploit electric motor technology developed by the company’s founder and current CTO, Dr. Tim Woolmer during his DPhil studies at the University of Oxford. The YASA motor (YASA stands for yokeless and segmented armature) was quickly adopted in motorsport and high-performance vehicles including the Jaguar CX-75 and Koenigsegg Regara. Today, YASA supplies custom and off-the-shelf e-motors and controllers primarily to automotive customers from its headquarters and 100,000 unit pa series production facility near Oxford in the UK.

YASA Power Electronics Technology
YASA’s focus on high-power density powertrain solutions is reflected in the development of revolutionary power electronics technology that leverages learning from YASA e-motor development, particularly for very efficient liquid cooling. Proprietary cooling architecture and YASA manufacturing technology enable the company to manufacture e-motor controllers with apparent power density in excess of 40 kVA / Litre.

YASA Product Example (Pictured)
The YASA 400V, 600A controller is an automotive grade controller / inverter designed for use with YASA and other motor types including permanent magnet and induction types. Control is via CAN bus with ISO 26262 functional safety support up to ASIL C. Multiple monitoring and control interfaces are provided.
- Input voltage range: 50 to 400 V dc
- Continuous Output current: 300 A RMS (3-phase)
- Mass: 4.9 kg
- Volume: 5.1 litres (excluding terminal area)