



DRIVING THE FUTURE OF ELECTRIC VEHICLES

We are the world leader of in-wheel motors for passenger cars, light commercial vehicles and future transport solutions.

Protean Electric is an automotive technology firm with over 150 talented people globally. Our mission is to drive sustainable transport through innovation, and we are the imagination behind vehicles that travel further, perform better and use fewer components.

We believe that freedom of ideas, integrity of response, desire to improve, and collaborative thinking drive innovation. Joining Protean means working with talented experts across the organisation who value your ideas, empower you to make a difference, and encourage you to challenge yourself and others.

Senior Power Electronics Engineer

Farnham, UK

The Role

We are seeking the right individual to join our Electronics team.

Main Duties & Responsibilities

The role of Senior Power Electronics Engineer is key in the development of the electronics within Protean's in-wheel motor range, throughout the entire lifecycle of the products. Working alongside other Electronics Engineers, Mechanical Engineers and motor design engineers, you will be responsible for defining and designing the power electronics and verifying that the design meets the requirements set out by internal and external customers to ensure product delivery to time, quality and cost targets.

Reporting, Location & Travel

This role reports to the Electronics Manager and is based in Farnham, Surrey with occasional requirement for national and international travel, primarily to local suppliers / partners and China.

Key Responsibilities

Responsibilities include, although are not limited to the following:

- Full life cycle design from initial concept through to productionisation
- SMPS, PSU and inverter design
- Sensor and sensor conditioning design
- Insulation coordination

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- Circuit calculations and Simulations
- Schematic capture and designing/supporting PCB layout using Altium Designer
- Writing requirements, specifications and reports
- Driving test, validation and verification activities
- Supporting manufacturing activities
- Building and maintaining relationships with leading suppliers of power electronics components to ensure good knowledge of relevant technology developments

Relevant Skills & Behaviours

We value and measure ourselves against the following 'Best-Self' Behaviours:

- **Will to Win:** we succeed by delivering to customers; on time, on quality, and on cost
- **Pioneering:** we are passionate about the technology
- **Courageous:** we face our challenges
- **Working Together:** we can rely on each other and others can rely on us
- **Personally Responsible:** we do what needs doing, when it needs doing
- **With Integrity:** we are honest, open and respectful

Successful candidates should be able to demonstrate the following relevant skills and behaviours:

- Exercise discretion and independent judgment in the performance of duties set out above
- Ability to communicate verbally and through technical documentation in English
- Exhibit sound interpersonal skills including interfacing, coordinating and negotiating with company personnel, customers and suppliers
- Utilise computer skills to prepare and review appropriate reports and documents
- Make decisions using sound judgment while complying with policies, procedures, appropriate principles and applicable laws and regulations
- Ability to self-motivate and work with minimal oversight

Relevant Knowledge & Experience

Candidates should assess their suitability against the following essential and/or desirable relevant knowledge and experience:

Essential:

- Good degree in Power Electronic Engineering or other relevant subject
- Extensive experience in design and analysis of inverters for electric motors
- Test and evaluation of power electronics systems
- Electrical and thermal modelling and simulation
- Multiple journeys through complete development life cycles

Desirable:

- Experience in an automotive OEM or Tier 1 supplier
- Familiarity with relevant automotive legislation, standards and guidelines
- 10kW to 200kW, 200V to 800V inverter design experience
- Knowledge of Insulation Coordination
- Understanding of motor control and sensors
- Calculation of component stress & de-rating and reliability estimation
- Design for functional safety to ISO26262
- Design for EMC; Analysing and rectifying compliance issues
- Using and applying DFMEA
- Understanding of automotive power-train components
- Familiarity with Altium Designer



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Employee Benefits

In return for a rewarding and fulfilling career, all Employees can look forward to receiving a competitive salary, plus a number of additional employee benefits:

- **Core hours:** we offer a flexible approach to working hours, with core hours available to all Employees, requiring them to be in the office between 10:00 and 16:00 each day, from Monday to Friday. This provides Employees with the flexibility to start work, and finish work at a time that is convenient to them providing a little more freedom to take into account the journey to work and family commitments.
- **Discretionary Bonus:** Employees are eligible to receive discretionary bonus payments in connection with meeting certain targets.
- **Life Assurance:** Employees are automatically enrolled into the company's Life Assurance scheme; this provides the sum of four times annual basic salary in the event of death during employment.
- **Pension Scheme:** Employees are automatically enrolled into the Company's Group Personal Pension Scheme, with the company matching contributions from a minimum of 5% up to a maximum of 7%.
- **Private Healthcare:** subject to completion of probation, Employees, their partners and dependents, are able to join the company's private healthcare scheme with BUPA, in addition to an accompanying cash plan with BHSF.
- **Learning & Development:** Employees are encouraged to continue their career development with a variety of training courses and development opportunities available to them.
- **Relocation:** we are able to offer a relocation package to assist Employees and their families when relocating to within a designated distance/duration from the company's offices.

Full details of the Employee Benefits are available upon request, or will be made available on provision of an offer of employment.

Should you wish to apply for this role, please e-mail your CV, covering letter and salary expectations to: ukjobs@proteanelectric.com – please be sure to **quote the full Job Title in the subject line** and read our Privacy Notice.

Thank you for your interest, we wish you every success with your application.

