

## **JOB DESCRIPTION – Electrical Project Engineer**

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|-----------------|-----------------------------|
| Job Title       | Electrical Project Engineer |
| Date Reviewed   | October 2020                |
| Responsible To  | Head of Engineering         |
| Responsible For | None                        |
| Location        | Maidenhead, Berkshire       |

### **Business Profile**

AVK are the UK's leading provider of critical power systems and maintenance that guarantee your power. For 31 years we've been supplying UPS systems and standby diesel generators providing our clients with reliable back-up power solutions for their mission critical services & systems.

We are trusted by many of the UK's largest Data Centre operators, Finance & Banking providers and Telecommunications companies to design, install and maintain 100% power integrity by providing diesel generators, uninterruptible power systems, switchgear, protection relays and turnkey solutions.

AVK specialise in all aspects of the design, planning, implementation and on-going maintenance of critical power systems. We provide solutions for standard or bespoke applications, with UPS systems ranging in size from 1kVA to 800kVA to standby diesel generation ranging in size from 5kW up to 3MVA and covering all project sizes from £1k up to £30m. Our extensive and growing client base reflects our highly regarded reputation for both quality and service.

### **Role summary**

The Electrical Project Engineer is responsible for the design of electrical packages on UPS and Generator projects ensuring compliance with both project specifications and industry standards. The Electrical Project Engineer also assists in the development and improvement of engineering processes and best practices and supports the business development group. This role has responsibility for quality, process and the high standards our customers expect. The role is based at our Head Office in Maidenhead with frequent travel to client sites and supplier premises.

## Responsibilities

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|  | Provide up front technical support to the sales department on the specification and design of Generator systems, specifically focussing on electrical packages (i.e. control system philosophy, engine/alternator ratings, NER/NET specification, small lighting and power, generator protection, CT/VT specification, etc.) |
|  | Provide up front technical support to the sales department on the specification and design of UPS systems, specifically focussing on electrical packages (i.e. product selection, system configuration, battery sizing & selection, battery accommodation, DC isolator specification, cable sizing, etc.)                    |
|  | Assist sales department in the preparation of technical proposals & submissions including; review of client specifications, generation of technical compliance statements, development of proposal drawings and preparation of initial design documentation.   |
|  | Take responsibility for the specification & design of electrical packages on UPS & Generators projects from project handover to completion, providing technical support throughout.  |
|  | Assist in the development and UPS control systems  |
|  | Develop design documentation (drawings, technical data sheets, control philosophies, cable schedules, cable calculations, etc.) in line with project requirements and timescales.  |
|  | Assist Project Managers with generation of project specific Method Statements and Risk Assessments in accordance with project specifications.  |
|  | Generate Factory Witness Test procedures and associated test documentation in line with project specifications and industry standards.   |
|  | Attend Factory Witness Testing of generators & control systems in Europe and/or UK, along with client representatives (end user, consultant, etc.)   |
|  | Attend Factory Witness Testing of UPS systems in Italy along with client representatives and occasionally conduct Factory Witness Testing/Client Demonstrations at our Maidenhead Warehouse facility.  |
|  | Develop and write Site Acceptance Test procedures and associated test documentation in line with project specifications.   |
|  | Attend client and supplier design meetings as required thought out project cycle, from pre-sales to project completion.  |
|  | Provide Projects Administrator with the necessary technical documentation required to complete project O&M Manuals (i.e. as built drawings, datasheets, etc.)  |
|  | Provide regular and concise progress reports to the Head of Engineering.   |
|  | Prepare and issue detailed scope of works requirements for sub-contractors.  |
|  | Where necessary, provide onsite supervision of sub-contractors during live UPS migrations.   |

### Skill-set and Experience

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|---|-----------|
| A minimum qualification level of HNC Electrical or equivalent in Mechanical Engineering   | Essential |
| A degree level qualification in Electrical Engineering or Mechanical equivalent.  | Desired   |
| Qualified electrician to latest edition of BS7671 wiring regulations.   | Desired   |
| A minimum of 5-10 years' experience working in a technical position within either the UPS or Generator industry.  | Essential |
| A minimum of 5-10 years' experience working as a design engineer on electrical/mechanical packages in an engineering consultancy.   | Desired   |
| Good knowledge of UPS topologies, functionality, configurations and operating modes.  | Desired   |
| Some knowledge of Gas Generation  | Desired   |
| Good knowledge of diesel generator systems including configurations, control system philosophies, earthing arrangements, mains paralleling, ATS arrangements, breaker control and electrical system design. | Essential |
| Ability to generate technical design documentation for UPS & Generator systems including; drawings, technical data sheets, control philosophies, cable schedules, cable calculations, etc.)                 | Essential |
| A solid and robust understanding of LV & MV switchboards and their safe operation.  | Essential |
| Compelling and concise communication skills, able to professionally and calmly negotiate in high pressurised situations.  | Essential |
| Ability to manage time effectively, working on multiple projects on once, ensuring design documentation is produced in line with project requirements.  | Essential |
| Excellent MS Office and MS Project skills.  | Desired   |
| Able and willing to travel abroad Europe wide.  | Essential |
| Full UK driving licence   | Essential |