



POWER ELECTRONICS APPLICATION ENGINEER

Virelec is a progressive and rapidly growing company that is well positioned in the dynamic North American energy storage industry. Join our team of dedicated engineers, technologists, project managers and other professionals supplying products and services to this exciting industry. We are looking to add a self-motivated and results focused member to join our team as a Power Electronics Application Engineer.

The position of Power Electronics Application Engineer reports to the Software Engineering Manager.

Job functions include design, implementation, and packaging of power electronics systems for the energy storage market. This includes inverters, DC switchgear, fusing and overall system design.

Technical Requirements

Candidate should have relevant technical experience, including:

- High Frequency Switch mode power supply experience 2 KHz to 50 KHz
- Buck boost converter design experience
- DC/AC, AC/DC and DC/DC conversion
- Familiar with Variable Voltage and Variable Frequency circuits
- Current control design for charging mechanism
- 5KW to 500KW power range
- Fully familiar with CSA / UL / CE design standards and requirements
- Battery charging experience preferred Lithium ion and other.
- Zero voltage switching and power factor correction
- Circuit board design experience using CAD tools.
- Experience with 48V – 1500V DC battery systems
- Knowledge of cooling systems and thermal management for power modules and energy storage systems
- Design magnetic component of power converters, including transformers and inductors
- Design control circuits of power converters, including under voltage protection, over voltage protection, over current protection and loop control.
- Thorough knowledge of electrical and electronic engineering, especially high power/high efficiency design
- Understanding of grid tied and grid forming inverters
- Familiarity with UL1741 and UL1547
- Experience with busbar and flexible busbar design
- High current DC protection i.e. for battery systems
- Microgrid design and implementation experience



Education Requirements

Candidate requires a degree/diploma from one of the following programs:

- BS in Electrical or Computer Engineering, or Computer Science is required;
- Masters or PHD degree in Power Electronics is a definite asset

Experience required

3-5 of extensive experience

Personal Attributes

- Analytical skills to follow logic of electronic circuits and interface with software
- Advanced practical skills
- Good interpersonal skills and attention to detail
- Effective problem solving, good engineering judgment and decision making

If you think you can add value to Virelec and are interested in this exciting career opportunity, you are invited to send your resume to Human Resources at careers@virelec.com. Please quote "**Power Electronics Application Engineer**" in the subject line.

Please note that part of our recruitment and selection process includes references and background checks

We thank all applicants for their interest; however, only those selected for an interview will be contacted. Virelec is committed to an inclusive, barrier-free recruitment and selection processes. If contacted to participate in the recruitment and selection process, please advise Human Resources if you require an accommodation.