



## Electrical Controls Engineer (Senior/Principal)-Plymouth, MN

**\*U.S. citizenship or U.S. permanent resident status required**

### About Uni-Systems Engineering

Uni-Systems Engineering is a premier provider of custom mechanization for iconic structures and attractions that create unforgettable experiences. We partner with engineers, architects, and construction managers to mitigate risk and deliver functionally integrated, reliable structures. Our team of mechanical, structural, and electrical controls engineers deliver custom, project-specific solutions to complex and unprecedented engineering challenges. With expertise spanning industries such as Aerospace, Amusement and Entertainment, Stadiums and Ballparks, Telescope Observatories, and Custom Cranes, we bring engineering excellence to every project. Visit our website ([www.uni-engineer.com](http://www.uni-engineer.com)) to learn more.

### Job Summary

We are seeking a dynamic and motivated Senior or Principal Electrical Engineer ready to take on a strategic role within our company. This is an exciting opportunity for a forward-thinking professional to make an immediate impact on diverse and challenging projects.

As a Senior or Principal Electrical Engineer, you will play a key role in leading the electrical design and providing expert engineering input on a project basis. You will be a vital contributor and engineer leader in all phases of our projects, including planning, design, programming, purchasing, integration, testing, training, and commissioning of electrical control systems

### Responsibilities

- Drive the concept and engineering design development of electrical control systems.
- Oversee and participate in schematic design, electrical panel design, PLC and HMI programming, implementation of Ethernet and other industrial LAN networks, field installation and project commissioning.
- Actively participate in scheduled design reviews with contractors, architects, engineering consultants, and other project team members and provide project status updates as required for Project Review and other company meetings.
- Develop, execute, supervise, and review prototype testing and debugging of control systems of new assemblies/structures.
- Visit manufacturing/vendor sites to inspect and test components before shipping to jobsite.
- Interface with field personnel and purchasing to determine and obtain required components.
- Stay current on advance technology in control software and hardware development, have basic electrician abilities and knowledge of codes (N.E.C., etc.).
- Provide advanced technical expertise to support Uni-Systems Engineering Inc.'s Sales and Marketing efforts.
- Takes on responsibility for all phases of the design-build, including design, production, and installation.

## Job Requirements

### Minimum Qualifications

- Must be a U.S. citizen or a U.S. permanent resident (current Green Card holder).
- B.S. Degree from an ABET-accredited institution in Electrical Engineering, Systems Engineering, Computer Engineering or equivalent control system design and programming skills.
- E.I.T. credential and planning to take the P.E. exam.
- 5+ years of experience with a B.S. or 3+ years with an M.S. in a related engineering field.
- Proven experience with PLCs, HMIs, VFDs, servo systems, and motor controllers.
- Strong proficiency of Rockwell Studio 5000 controls hardware and software.
- Ability to read and interpret electrical schematics and create detailed design documentation.
- Comprehensive understanding of control system architecture design and functional safety.
- Familiarity with the National Electrical Code (NEC).
- Experience with control system programming and creating software design documentation.
- Proven track record in developing and implementing standard electrical engineering practices, along with providing detailed documentation upon project completion.
- In-depth understanding of 3-phase motors and their control methods, including electromechanical and electronic controls, as well as commonly used sensors and measurement loops.
- Experience managing risks with unprecedented custom design projects.
- General knowledge of mechanical systems.
- At least 2+ years' experience collaborating with clients to innovate and creatively solve multifaceted problems.
- Strong analytical skills with logical approach to problem solving and an aptitude for innovative technical solutions.
- Ability to research, integrate, and apply innovative technologies in unprecedented ways with minimal oversight.
- Confidence to propose new ideas and the humility to accept the best idea, regardless of origin.
- Excellent time management skills with the ability to meet project deadlines.
- Effective communication skills, with the ability to effectively interact with clients, customers, or official contacts.
- Ability to work successfully within a team, cross-functionally, and independently.
- Willingness to travel (domestic and foreign) during installation and commissioning of projects, up to 5-10% of the time.

### Preferred Qualifications

- M.S. Degree from ABET accredited institution in Electrical Engineering, Systems Engineering, or Computer Engineering
- P.E. registration
- Proficiency with Siemens controls hardware/software.
- Proficiency with AutoCAD or other related drafting software.
- Proficiency with Visual Basic and/or C.

## Benefits of Employment

- Competitive salary and growth opportunities.
- Comprehensive benefits package including medical, dental, vision, life, and disability insurance.
- 401(k) plan with above-market company matching.
- Generous paid time off (PTO) and paid company holidays.
- HSA and FSA options.
- A collaborative culture built on integrity, respect, innovation, value, and enterprise.

If you are passionate about solving complex engineering challenges and shaping innovative solutions, we encourage you to apply for this exciting opportunity at Uni-Systems Engineering!

## Contact

Jane Otto  
HR Manager  
[jotto@uni-engineer.com](mailto:jotto@uni-engineer.com)