



Electrical/Controls Engineer (Senior or Principal)

***This position requires access to export-controlled technical data subject to U.S. export control laws (including ITAR). Therefore, candidates must qualify as a U.S. person under ITAR (U.S. citizen or lawful permanent resident).**

About Uni-Systems Engineering

Uni-Systems Engineering is a premier provider of custom mechanization systems for iconic structures and attractions that create unforgettable experiences. We partner with engineers, architects, and construction managers to mitigate risk and deliver fully integrated, highly reliable systems.

Our multidisciplinary team—spanning mechanical, structural, and electrical engineering—develops project-specific solutions to complex, often unprecedented challenges. Our work spans aerospace, themed entertainment, stadiums and ballparks, telescope observatories, and custom cranes.

Visit our website (www.uni-engineer.com) to learn more.

Job Summary

We are seeking a highly motivated Senior or Principal Electrical Controls Engineer to join our Orlando-based team. This role offers a unique opportunity to help shape the growth and success of our Florida office while leading the execution of highly complex, custom-engineered systems across sports architecture, themed entertainment, and other industries requiring innovative mechanization solutions.

This position is ideal for an engineer who thrives on solving challenging, real-world problems and is eager to take ownership from concept through commissioning. You will lead the design, integration, and field execution of advanced control systems, playing a critical role in bringing large-scale, one-of-a-kind systems to life.

This role requires a strong field presence, including significant travel to support commissioning, troubleshooting, and customer-facing activities. You will work directly on-site to resolve issues, support installations, and ensure successful system performance.

The ideal candidate is a hands-on leader with deep technical expertise, strong problem-solving instincts, and the ability to operate effectively in dynamic environments, both independently and as part of a multidisciplinary team.

Responsibilities

- Lead the concept, design, and implementation of advanced electrical control systems, including PLCs, HMIs, VFDs, servo systems, and network architecture.
- Own system performance from initial design through commissioning, troubleshooting, and turnover.
- Lead and participate in design reviews (PDR, CDR, FDR), ensuring technical rigor and alignment across disciplines.
- Develop and execute test plans, commissioning procedures, and system validation activities for complex assemblies and structures.
- Provide hands-on field support, including installation oversight, system debugging, and real-time problem resolution.
- Serve as a technical lead in customer-facing situations, including warranty support and sustaining engineering efforts.
- Conduct inspections and acceptance testing at vendor facilities and support equipment integration in the field.
- Collaborate with mechanical, structural, and project teams to ensure seamless system integration.
- Prepare and review design documentation, including schematics, control narratives, and functional descriptions.
- Support proposal development and technical scope definition for new opportunities.
- Stay current with advancements in controls hardware and software, integrating new technologies where appropriate.

Job Requirements

Minimum Qualifications

- B.S. in Electrical Engineering, Systems Engineering, Computer Engineering, or related field from an ABET-accredited institution.
- 5+ years of experience (B.S.) or 3+ years (M.S.) in controls engineering or a related field.
- Proven experience with PLCs, HMIs, VFDs, servo systems, and motor control.
- Strong proficiency with Rockwell Studio 5000 (or equivalent PLC platforms).
- Experience with control system architecture, integration, and functional safety principles.
- Demonstrated experience in system commissioning, troubleshooting, and field support.
- Ability to read and develop electrical schematics and technical documentation.
- Familiarity with the National Electrical Code (NEC).
- Strong analytical and problem-solving skills with the ability to work through complex technical challenges.
- Excellent communication and organizational skills.
- Willingness and ability to travel significantly to support field activities and project execution.
- Must qualify as a U.S. person under ITAR due to access to export-controlled technical data.

Preferred Qualifications

- M.S. in a related field.
- Florida E.I.T. or P.E. license (or ability to obtain).
- Experience in themed entertainment, amusement, or large-scale custom mechanization systems.
- Proficiency with AutoCAD, EPLAN, or similar electrical design tools.
- Experience with three-phase power systems and industrial electrical infrastructure.
- Experience managing technical risk on complex, custom-engineered systems.
- Familiarity with industry standards such as ASTM F2291.
- Demonstrated ability to lead field activities and coordinate with clients, contractors, and vendors.
- Enjoys hands-on, field-based engineering work.

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