



SHARPE ENGINEERING & EQUIPMENT, LLC

431 LINNERTUD DRIVE
SUN PRAIRIE, WI 53590
(608) 837-2480

381 ALLEN STREET
AMHERST, WI 54406
(715) 824-7224

JOB DESCRIPTION

JOB TITLE	Senior Electrical & Controls Engineer
REPORTS TO	Electrical Engineering Manager
OFFICE LOCATION	Madison, WI
TRAVEL	30%
FLSA STATUS	Exempt

Position Summary

The Senior Electrical and Controls Engineer will lead the design, programming, integration, and commissioning of advanced electrical and automation systems. This role requires proven technical expertise, project leadership, and the ability to deliver high-quality solutions on schedule. The ideal candidate will have 7+ years of experience in industrial electrical engineering and controls, with deep knowledge of Rockwell Automation platforms, applicable electrical codes, and strong experience collaborating with contractors and integrators. This senior-level engineer embodies our core values: Commitment to Stakeholders, Integrity, Collaboration, People-Centric Focus, and Responsibility.

Key Responsibilities

Electrical Engineering & Design

- Lead development and peer review of electrical design packages, including schematics, panel layouts, and interconnection diagrams
- Design power distribution, motor controls, and machine safety system integration
- Ensure compliance with NEC, NFPA 70E, UL 508A, and other applicable codes and standards
- Deliver complete project documentation including BOMs, installation drawings, and as-built redlines

Automation & Programming

- Develop and implement PLC, HMI, and SCADA programming with emphasis on Rockwell Automation platforms
- Collaborate with external integrators on PLC/HMI programming, configuration, and system integration
- Generate functional descriptions, control narratives, and I/O documentation

Contractor & Vendor Coordination

- Oversee performance of electrical contractors and system integrators, ensuring adherence to scope, schedule, and quality standards
- Act as primary liaison for contractor coordination during installation, testing, and startup activities

Project & Client Support

- Partner with project managers, mechanical engineers, and vendors to deliver fully integrated engineering solutions
- Support client meetings, design reviews, and on-site activities as required

Standards & Continuous Improvement

- Maintain and improve internal electrical and controls design standards
- Participate in design reviews, technical audits, and process improvement initiatives
- Research and recommend new technologies to enhance performance, safety, and reliability

Leadership & Team Development

- Mentor junior engineers, designers, and support staff to foster technical growth and professional development
- Promote a culture of safety, quality, and innovation within the engineering team and across the organization

Work Conditions & Physical Demands

All the above duties and responsibilities are essential to successfully perform this job. The work conditions and physical demands listed below are representative of the knowledge, skill and/or ability required to perform this job. Reasonable accommodations may be made to enable individuals with disabilities to perform these essential functions.

- Overtime may be required as workload or project dictates. This may include nights, weekends and/or holidays.
- Be physically able to participate in training sessions, presentations, meetings and make site visits as required
- Job will generally be performed in an office environment, but regularly requires travel to a client's office, production facility or industrial/construction job site. Conditions will vary at each location.
- May be assigned to work at client's office, facility, or site for extended periods. Specific terms will be discussed prior to scheduling. When performing outside Sharpe Engineering's office, appropriate safety training and equipment will be provided by Sharpe Engineering and/or the client as required.
- While performing the duties of this position, you may be required to occasionally stand, walk, sit, reach with hands and arms, climb or balance, stoop or kneel, talk and hear, use fingers and hands to feel objects, tools or controls

- Noise levels will vary in each location; however, noise levels are usually loud in production facilities and at industrial/construction sites

Qualifications

Education & Experience

- Bachelor's degree in electrical engineering or related STEM field (required)
- Minimum 7 years of progressive experience in electrical engineering, industrial automation, and controls integration
- Proven background in electrical construction, system integration, and contractor coordination

Technical Skills

- Expertise in electrical design, Rockwell Automation (PLC/HMI/SCADA) programming, and safety systems
- Proficiency in AutoCAD Electrical and Microsoft Office tools
- Strong project management, communication, and cross-functional collaboration skills
- In-depth knowledge of UL, NEC, NFPA 70E, OSHA, and other relevant standards

Certifications & Requirements

- Valid U.S. driver's license (required)
- Ability to obtain a passport for international travel if required