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Electrical Engineer – Automated Systems

Hiring organization
TurnKey Solutions

Employment Type
Full-time

Job Location
N117 W18200 Fulton Drive, 53022, Germantown, WI

Date posted
April 16, 2025

Description

Turn-Key Solutions is a growing automation company that designs and builds custom robotic systems, machine tending cells, assembly stations, welding systems, material-handling equipment, CNC fixturing, and production workholding solutions. Our projects are anything but cookie-cutter. One week may involve a robotic assembly cell, and the next may be a large-scale automated welding or material-handling system for an automotive, energy, or industrial customer.

We are looking for a motivated, hands-on **Electrical Engineer** to join our team. This person will be responsible for the electrical design and integration of custom automation equipment from concept through installation. The right candidate will enjoy solving real-world problems, collaborating with mechanical, controls, fabrication, and assembly teams, and seeing their designs come to life on the shop floor.

This is an excellent opportunity for an engineer who wants variety, ownership, and the chance to work on high-impact automation projects from the first drawing through customer startup.

Responsibilities

- Design complete electrical systems for custom automated machinery, robotic cells, assembly equipment, welding systems, and material-handling solutions.
- Create electrical schematics, panel layouts, wiring diagrams, cable schedules, BOMs, and installation drawings using electrical design software.
- Select and specify electrical components including PLCs, HMIs, VFDs, servo systems, sensors, safety devices, disconnects, power supplies, relays, pneumatic controls, and industrial networking hardware.
- Design industrial control panels and machine electrical systems in accordance with customer requirements, UL508A, NFPA 79, NEC, and applicable safety standards.
- Work closely with controls engineers to support PLC, HMI, robot, vision, and motion-control integration.
- Collaborate with mechanical engineers to ensure proper equipment layout, cable routing, operator access, guarding, and serviceability.
- Support panel build, machine wiring, debug, testing, runoff, Factory Acceptance Testing, and customer installation activities.
- Troubleshoot electrical and controls issues during machine build, startup, and field installation.
- Participate in technical discussions with customers, suppliers, and internal project teams throughout the project lifecycle.
- Provide technical support for equipment upgrades, service projects, change orders, and continuous-improvement opportunities.
- Help improve electrical design standards, documentation quality, and reusable engineering practices across the company.

Qualifications

- Bachelor’s degree in Electrical Engineering, Electrical Engineering Technology, Mechatronics Engineering, or a related field. Equivalent practical experience in industrial automation may also be considered.
- 3–7 years of experience designing electrical systems for industrial machinery, automation equipment, robotics, OEM machinery, or manufacturing systems.
- Strong ability to read, create, and interpret electrical schematics, panel layouts, wiring diagrams, and bills of materials.
- Experience designing industrial control panels and machine electrical systems.
- Knowledge of industrial electrical components, controls hardware, sensors, safety devices, motors, VFDs, servos, and industrial communications.
- Familiarity with UL508A, NFPA 79, NEC, NFPA 70E, and machine-safety best practices.
- Ability to work effectively in a fast-paced, project-based environment with multiple active projects.
- Strong troubleshooting skills, attention to detail, and practical problem-solving ability.
- Willingness to occasionally travel for customer installations, startup support, service work, and project meetings.

Preferred Skills

- Experience with AutoCAD Electrical, EPLAN, SolidWorks Electrical, or similar electrical design software.
- Familiarity with Allen-Bradley hardware, including CompactLogix and ControlLogix PLC platforms, PanelView HMIs, PowerFlex drives, and distributed I/O.
- Experience with FANUC, ABB, KUKA, or other industrial robotic systems.
- Knowledge of machine safety circuits, including safety PLCs, safety relays, light curtains, area scanners, safety gates, E-stops, and interlocks.
- Exposure to industrial networking, including Ethernet/IP, Profinet, DeviceNet, IO-Link, and remote I/O architectures.
- Experience with vision systems, servo systems, motion control, laser systems, resistance welding, or other specialized automation technologies.
- Field experience supporting equipment startup, customer acceptance testing, and production handoff.

Job Benefits

- Competitive salary based on experience.
- Health insurance, dental, vision, and 401(k) match.
- Paid vacation and holidays.
- Opportunities for overtime, travel compensation, and field per diem.
- A collaborative environment where engineers work directly with the people building and commissioning the equipment.
- Opportunity to work on advanced robotics, automation, welding, assembly, and material-handling projects for major manufacturing customers.
- Career growth, training, and the ability to take ownership of meaningful projects rather than being one small cog in a giant corporate machine.

Contacts

Apply here or email info@tksinc.net with questions or to apply.