

Charles Bush

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SUMMARY

Industrial electrical maintenance professional with eight years supporting high volume manufacturing equipment, plant **power systems**, and automated production assets. Troubleshoots PLC controlled machinery, CNC equipment, AC and DC drives, servo systems, robotics, motors, control panels, and **electrical distribution** systems through schematics, ladder logic, and online diagnostics. Journeyman level experience covers **high voltage circuits**, **load balancing**, transformers, switchboards, automated controls, building electrical systems, and safety code application. Plans isolation steps, selects tools and materials, restores equipment operation, and coordinates repairs with production, maintenance, and mechanical teams. Work includes installation, modification, preventive maintenance, fault isolation, and repair under limited supervision. Supports safe, orderly production through practical diagnostics, clear handoffs, and reliable equipment performance.

EXPERIENCE

Senior Industrial Electrician

October 2023 - Present

Prairie Ridge Components

Davenport, IA

Owns electrical maintenance for automated machining and assembly cells, plant distribution, **control systems**, and production support operations. Leads fault isolation, safe work planning, technician guidance, and repair coordination across active manufacturing lines.

- Traced PLC, CNC, servo, robotics, and drive faults, restoring safe operation across automated production cells.
- Used schematics, **wiring diagrams**, prints, and **online diagnostics** to guide accurate repairs and restart decisions.
- Maintained motors, **transformers**, switchboards, **control panels**, disconnects, lighting, and plant distribution equipment.
- Planned isolation steps, tools, materials, access, and job sequences around active production and building structures.
- Performed high voltage maintenance with approved access and rigging methods for elevated equipment locations.
- Mentored technicians on **ladder logic**, servo diagnostics, systematic fault isolation, and safe verification practices.

Industrial Maintenance Electrician

July 2021 - September 2023

Midwest Motion Products

Rock Island, IL

Supported CNC machining centers, automated manufacturing equipment, motion systems, power circuits, and equipment upgrades. Managed assigned electrical repairs from diagnosis through testing while coordinating with mechanics, production leads, and maintenance partners.

- Diagnosed CNC, controller, drive, motor, and motion faults during production equipment breakdowns.
- Applied PLC **ladder logic** and **online diagnostics** to isolate failed inputs, outputs, interlocks, and sequences.
- Installed AC and DC motors, **servo systems**, transformers, switches, control panels, and **automatic controls**.
- Balanced loads and modified branch circuits during cell changes, validating connections against prints and safety codes.
- Resolved recurring welding, **lighting**, and machine control faults through testing and documented corrective actions.
- Coordinated electrical repairs with mechanics and production leads through functional verification and equipment release.

Maintenance Electrician

June 2019 - June 2021

Riverbend Fabrication

Moline, IL

Maintained electrical systems for metal fabrication production, including **motors**, generators, welding equipment, lighting, electronic controls, and distribution components. Supported planned repairs, breakdown response, circuit rewiring, and shift communication under senior electrician guidance.

- Maintained motors, **generators**, **welding equipment**, lighting, electronic controls, and distribution components in production.
- Read schematics, sketches, prints, and electrical symbols while tracing power, control, and measurement circuits.
- Rewired machine circuits and replaced **switches**, contactors, transformers, and controls while preserving interlocks.
- Supported PLC sequences, motor starters, drives, and servo components during automated equipment repairs.
- Prepared tools and materials before shutdown work, reducing avoidable interruptions during planned repairs.
- Communicated equipment conditions, follow up needs, and repair status during maintenance and production handoffs.

Electrical Maintenance Technician

October 2017 - May 2019

Hawkeye Industrial Services

Bettendorf, IA

Performed supervised electrical maintenance across manufacturing client sites, supporting motors, lighting, control panels, production equipment, machine moves, and facility modifications. Built strong troubleshooting, documentation, access, and escalation practices under journeyman direction.

- Performed supervised maintenance on motors, lighting systems, **control panels**, switches, and production equipment.
- Traced **electrical faults** with **wiring diagrams** and test equipment across power and control circuits.
- Installed conduit, wiring, disconnects, and components for machine moves and facility modifications.
- Supported preventive maintenance on motors, transformers, panels, and automated controls before equipment failure.
- Used **ladders** and approved access equipment for elevated work under energy control and safety procedures.

- Documented repairs and unresolved conditions, giving journeyperson electricians clear escalation information.

PROJECTS

Automated Cell Fault Recovery 📅 2024

A recurring production stop began with a confusing controller alarm. Traced PLC logic, CNC controls, servo feedback, and drive signals, then restored a safer restart path through coordinated electrical testing.

Plant Distribution Load Review 📅 2022

A production cell expansion created new power demands. Balanced branch loads, modified circuits, checked prints, and verified connections so equipment changes could proceed safely.

LEADERSHIP & AWARDS

- Journeyperson Recognition, Iowa electrical maintenance qualification received in 2020.
- Production Reliability Recognition, selected for dependable troubleshooting and repair coordination at Prairie Ridge Components.
- Maintenance Team Leadership, trusted to mentor technicians on diagnostics, ladder logic, and safe verification.

EDUCATION

Associate of Applied Science in Industrial Electrical Technology

2017

Eastern Iowa Community Colleges GPA: 3.5

Davenport, IA

Coursework: Electrical circuits, industrial controls, motor systems, electrical safety codes

CERTIFICATIONS

- Electrical Journeyperson Card, Iowa 📅 2020
- National Career Readiness Certificate 📅 2017

TECHNICAL SKILLS

- **PLC Systems:** Ladder logic, online diagnostics, PLC troubleshooting
- **CNC Controls:** CNC controllers, machine tools, controller fault tracing
- **Drive Systems:** AC drives, DC drives, variable frequency drives
- **Motion Systems:** Servo systems, motion control, servo diagnostics
- **Robotics:** Industrial robotics, robot cells, automated handling
- **Electrical Distribution:** Switchboards, transformers, load balancing
- **Control Equipment:** Control panels, automatic controls, disconnects
- **Power Equipment:** Motors, generators, welding equipment
- **Electrical Documentation:** Wiring diagrams, schematics, equipment prints
- **Safety Standards:** National electrical code, local electrical codes, energy control
- **Building Systems:** Building automation systems, lighting circuits, power lines
- **Access Equipment:** Rigging, ladders, elevated equipment access

SKILLS

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|-----------------------|--------------------|-------------------------|---------------------------|
| • PLC troubleshooting | • Servo systems | • High voltage circuits | • Wiring diagrams |
| • Ladder logic | • Motion control | • Power distribution | • Building automation |
| • Online diagnostics | • Robotics | • Load balancing | • Electrical safety codes |
| • CNC controllers | • AC and DC drives | • Electrical schematics | |

PROFESSIONAL AFFILIATIONS

- Iowa electrical maintenance community, active journeyperson practitioner since 2020.
- Manufacturing maintenance teams, collaborative partner across production, mechanical, and electrical operations.

LANGUAGES

- English (Native)
- Spanish (Intermediate)

ADDITIONAL INFORMATION

Work Status : Authorized to work in United States. No sponsorship required.

REFERENCES

AVAILABLE ON REQUEST