

Electrical Drafter – Power Distribution & Control Products (LV/MV)

Position Summary

The Electrical Drafter is responsible for creating, modifying, and maintaining electrical engineering documentation, schematics, wiring diagrams, panel layouts, interconnection drawings, cable schedules, and bills of material (BOMs) for low and medium voltage power distribution equipment and packaged electrical systems.

This position supports the mechanical design of:

○ Panelboards	○ Medium Voltage Metal-Clad Switchgear
○ Switchboard/Switchgear	○ Medium Voltage Metal-Enclosed Switchgear
○ Automatic/Manual Transfer Switches (LV/MV)	○ Medium Voltage Circuit Breakers
○ Disconnect Switches, Load-break Switches	○ Medium Voltage Load-Break and Disconnect Switches
○ Transformers	○ E-House & PDC
○ Motor Control Center (MCC)	○ Integrated Power Rack/Skid (LV/MV)
○ VFD & Soft Starter Packaged Solutions (LV/MV)	○ Energy Storage

The Electrical Drafter works closely with electrical engineers, mechanical engineers, manufacturing personnel, project managers, sourcing teams, and quality personnel to develop accurate engineering documentation that supports fabrication, assembly, testing, commissioning, and field installation activities.

Key Engineering Responsibilities

Product & Application

Experience with electrical drafting standards, CAD best practices, electrical documentation procedures, and configuration management principles to ensure drawing accuracy, consistency, and compliance with company and industry requirements.

- Create and maintain electrical engineering documentation utilizing:
 - AutoCAD Electrical
 - AutoCAD
 - SolidWorks Electrical
 - Equivalent CAD platforms
- Produce engineering documentation including:
 - One-line diagrams
 - Three-line diagrams
 - Schematic diagrams
 - Elementary diagrams
 - Wiring diagrams
 - Interconnection diagrams
 - Terminal diagrams
 - Panel layouts
 - Cable schedules
 - Control panel drawings
- Generate and maintain accurate Bills of Material (BOMs).
- Develop equipment layout drawings based on electrical engineering requirements.
- Create enclosure and panel layouts for electrical equipment installations.
- Produce detailed point-to-point wiring and termination documentation.
- Prepare manufacturing documentation packages for production release.
- Incorporate engineering markups and revision changes into electrical drawings.
- Verify documentation completeness and drawing consistency before release.

- Generate customer submittal and approval drawing packages.
- Maintain engineering drawing libraries and standard templates.

CAD Design & Electrical Documentation Support

- Assist electrical engineers in development of:
 - Power distribution schematics
 - Control schematics
 - Relay protection drawings
 - Control panel layouts
 - PLC interface drawings
 - Instrumentation diagrams
- Develop electrical drawings for:
 - Switchgear assemblies
 - MCCs
 - Transfer switches
 - Relay panels
 - Battery systems
 - Power distribution skids
- Create and maintain terminal schedules, wiring schedules, and cable schedules.
- Prepare conduit and cable routing drawings where applicable.
- Support development of equipment interconnection diagrams for field installation activities.
- Ensure electrical documentation accurately reflects engineering intent and approved equipment configurations.
- Coordinate drawing updates and design revisions throughout project execution.
- Support standardization of drafting practices and documentation templates.

Manufacturing Support

- Support manufacturing and assembly teams by providing accurate electrical documentation.
- Update drawings and BOMs to reflect approved engineering and manufacturing changes.
- Assist in resolving production questions related to:
 - Wiring details
 - Component identification
 - Device locations
 - Terminal assignments
 - Cable schedules
 - Equipment configurations
- Support engineering change order (ECN/ECR) implementation activities under electrical engineer guidance.
- Maintain revision control and document traceability.
- Participate in manufacturing reviews and design review meetings.
- Support generation of as-built documentation packages.
- Coordinate with purchasing and manufacturing personnel regarding electrical documentation discrepancies.
- Assist manufacturing teams during panel wiring, assembly, testing, and inspection activities.

Internal Customer Support

- Support preparation of customer approval drawing packages.
- Assist engineering teams in responding to customer comments and drawing revisions.
- Prepare revised drawings based on engineering review feedback and approved customer comments.
- Support development of installation and commissioning documentation packages.
- Support factory acceptance testing (FAT) documentation requirements.
- Maintain professional communication with customers, suppliers, and internal departments regarding documentation-related matters.

Required Qualifications

- Associate Degree in Electrical Drafting, Electrical Design Technology, Engineering Technology, CAD Technology, or equivalent experience.
- 1+ years of drafting or CAD experience in electrical equipment, industrial control systems, power distribution equipment, or related industries.
- Proficiency with:
 - AutoCAD Electrical
 - AutoCAD
 - Microsoft Office
- Knowledge of:
 - Electrical drafting principles
 - Power distribution equipment
 - Control panel documentation
 - Manufacturing documentation practices
- Understanding of:
 - Electrical symbols and schematics
 - One-line diagrams
 - Three-line diagrams
 - Wiring diagrams
 - BOM development
 - Revision control processes
- Ability to read and interpret:
 - Electrical one-line diagrams
 - Control schematics
 - Wiring diagrams
 - Protection schematics
 - Equipment layout drawings
 - Technical specifications
- Strong attention to detail and organizational skills.
- Ability to manage multiple assignments in a fast-paced engineering environment.

Preferred Qualifications

- Experience supporting:
 - Switchgear
 - Switchboards
 - MCCs
 - E-Houses
 - PDCs
 - Integrated Power Skids
 - Battery Energy Storage Systems
- Experience with:
 - AutoCAD Electrical
 - EPLAN Electric P8
 - SolidWorks Electrical
 - ERP-integrated engineering systems
- Familiarity with:
 - UL 891
 - UL 1558
 - UL 845
 - UL 508A
 - UL 1008
 - ANSI/IEEE C37 Standards

- Exposure to:
 - UL-listed equipment
 - Utility power systems
 - Industrial control systems
 - Utility equipment
 - Data center infrastructure products

Core Competencies

- Advanced electrical drafting and CAD skills
- Schematic and wiring diagram development
- Power distribution documentation knowledge
- Electrical BOM development and management
- Revision and configuration control
- Electrical drawing accuracy and attention to detail
- Control panel and equipment layout development
- Manufacturing documentation support
- Technical specification interpretation
- Cross-functional collaboration
- Time management and project execution
- Quality-focused work habits

Key Performance Expectations

Success in this position will be measured by the accuracy and completeness of electrical engineering documentation, timely completion of assigned drawing packages, effective support of engineering and manufacturing teams, proper implementation of revisions and engineering changes, maintenance of drafting and document control standards, and contribution to delivering high quality, manufacturable, and compliant power distribution products.