

JOB DESCRIPTION

Released Date: 7/11/2022

Revised Date:

Functional Area: Electrical Engineering



POSITION: CAD Electrical Designer

REPORTS TO: VP of Engineering

General Description:

Design and develop electrical schematic drawings for layouts, mechanical components, and parts for conventional and robotic palletizing equipment. Tools include Solidworks, AutoCAD and Visio as needed. Generate design schemes, circuit/wiring diagrams and general arrangement layouts, including the generation of fabrication and production details and Bill of Materials parts lists. Present all drawings to the project lead Mechanical or Electrical Engineer for approval, utilize the company MIS (EPICOR) system to create and update part numbers and Bill Of Materials and distribute approved drawings to designated areas as required or requested.

Responsibilities:

- Work with engineering, purchasing and production departments to develop and modify drawings of electrical systems from concepts and “red-lined” drawings. These drawings may include schematics, point to point wiring diagrams, single line diagrams, key diagrams, cable tabulations, and logic diagrams.
- Specify electrical components for design - review electrical Bills of Materials as required for accuracy and appropriate component selection. Create and maintain sales order and engineering database files of all CAD electrical drawings and BOMs, file according to policy and inform designated lead person on project. These files are both generic templates and specific to sales order jobs.
- For specific sales order jobs, draw plant schematic layouts and diagrams and create and maintain Bill of Materials (BOM) for purchasing and fabrication purposes.
- Assist in the development and production of manuals for equipment (electrical content).
- Take sales order job tasks from concept to actual design, including identifying existing parts and part numbers and creating new part numbers as required.
- Work with CAD operators who will do the bulk of the hands-on CAD work. Provide technical guidance and redlines to CAD operators and review / check their work for accuracy. This is a technical oversight only function.
- Own the Electrical Design process and be responsible for providing accurate drawings.

Measures of Effectiveness:

- Drawings are created and maintained on schedule and in an accurate manner.
- Contributed to efficiency of CAD drawing Library; i.e., drawings can be easily located; drawings are complete and in required format.
- Mechanical and Electrical engineers and peers view individual as valuable team member.
- Creation and upkeep of standard design templates stored separately from specific system designs.

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Minimum Requirements:

- Two-year degree in CAD, with 3-5 years work experience using SolidWorks Electrical or equivalent to design and/or draft electrical schematics and parts for industrial equipment. Must include experience preparing electrical designs.
- Experience with Windows Microsoft Office products, including Word and Excel.
- Experience creating parts and Bill of Materials in a server MIS system environment.
- Work experience in similar manufacturing / automation industry is desirable.
- Good verbal and written communication skills, adaptability, flexibility, and the ability to understand how to develop a drawing with minimal direction.
- REQUIRED: Experience calculating and verifying all facets of industrial electrical design such as:
 - Reading and complying to detailed customer specifications.
 - Selecting and verifying components
 - Calculation of wire sizes, fuses, circuit breakers.
 - Heat dissipation calculation and cooling requirements.
 - Experience designing to NEC and NFPA industry standards
 - Must have experience in and understand the functionality of transformers, switchgear, motor control centers, distribution panels, control panels, and programmable logic controllers, sensors, servos.