



## Controls Engineer

<b>Department:</b>	<i>Engineering</i>
<b>Reports To:</b>	<i>Engineering Manager</i>
<b>Pay Grade:</b>	
<b>Supervises:</b>	<i>N/A</i>
<b>FLSA Classification:</b>	<i>Exempt</i>
<b>Approved By:</b>	<i>President</i>
<b>Revision Date:</b>	<i>May 2021</i>

### JOB PURPOSE:

Responsible for designing, documenting, and supporting electrical control systems for industrial and mobile machinery following the appropriate industry safety and design regulations to include programming various HMI, PLC, and motion control computers by performing the following duties.

### ESSENTIAL DUTIES and RESPONSIBILITIES:

#### Description of Tasks and Responsibilities:

1. Designs electrical control systems to best meet project requirements while meeting respective NEC code and safety regulations.
2. Creates and maintains detailed electrical drawings based on project requirements.
3. Develops detailed bill of material, work order instructions, test procedures, and related documentation for manufacturing.
4. Design of electrical, industrial manufacturing, and automation systems
5. Integrate motion and control (VFD, Servo, Stepper, etc)
6. Coordinates project activity and provides timely updates to customers and JMG personnel.
7. Assists in developing cost estimates for projects.
8. Supports production personnel during the project build and test phase.
9. Work with customers directly to develop automation and control solutions
10. Assists in customer presentations, service and support, traveling when required
11. Collaborates with engineering group to develop and maintain JMG design and manufacturing standards.
12. Keeps current with industry developments and new product releases.
13. Develops and maintains positive vendor relationships.



14. Participates in additional activities contributing to the overall goals of the company as the opportunities arise.

**Description of other duties that may be assigned:** Perform general office duties.

**Qualifications:**

To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. The requirements listed below are representative of the knowledge, skill, and/or ability required. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

**Math Ability:**

Ability to work with mathematical concepts such as probability and statistical inference, and fundamentals of plane and solid geometry. Ability to apply concepts such as fractions, percentages, ratios, and proportions to practical situations.

**Education/Experience:**

Bachelor's Degree in Electrical Engineering. Experience in hydraulic/industrial automation; 8-10 years related experience and/or training. Prior engineering, sales, or manufacturing experience required. Familiarity with hydraulic, pneumatic, and electrical control products and related Industry standards required.

**MINIMUM QUALIFICATIONS:**

- Strong mechanical aptitude and technical comprehension
- Electrical Design of Industrial Manufacturing and Automation Systems
- Software Design and PLC programming
- Hardware and Panel Design with CAD Software (AutoCAD, Solidworks)
- Manufacturing Prototype Design
- HMI Design and Programing
- Testing/Instrumentation
- Motion integration and control (VFD, Servo, Stepper etc.)
- Design of industrial computer/controls network solutions
- Startup services and testing of electrical installations
- Understanding of electrical and hydraulic symbols
- Knowledge of electrical and hydraulic components and their function in a circuit
- Knowledge of hydraulic/pneumatic components and their function in a circuit
- Understanding of basic electronic components and theories and electro-hydraulics
- Technical communication skills
- Oral and written communication skills
- Project management
- Ability to multi-task and function in a dynamic environment

**PREFERRED QUALIFICATIONS:**

- Allen Bradley product knowledge
- Understanding of UL and CE requirements
- Onsite and offsite troubleshooting experience
- Motion Control Experience (Electric actuators, servo motors, hydraulic actuators)



- Allen Bradley programming experience (Studio 5000, FactoryTalk View, RSLogix 5000, RSLogix 500, RSLinx Classic) including data collection, recipe control, and preventative maintenance.
- Project Management
- Design of control panels
- Programming of programmable logic controllers and human-machine interfaces
- Design of instrumentation systems and controls
- Design of industrial computer/controls network solutions
- Design of electrical power distribution systems
- Design of production line equipment and controls
- Preparation of operation and maintenance manuals

**PHYSICAL AND MENTAL DEMANDS:**

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is regularly required to use hands; reach with hands and arms and talk or hear. The employee is frequently required to stand; walk and sit. The employee is occasionally required to climb or balance and stoop, kneel, crouch or crawl. The employee must occasionally lift and/or move up to 50 pounds. Specific vision abilities required by this job include close vision, distance vision, peripheral vision, depth perception, ability to adjust focus and ability to see color.

**WORK ENVIRONMENT:**

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is occasionally exposed to wet or humid conditions (non-weather); work near moving mechanical parts; work in high, precarious places; fumes or airborne particles and risk of electrical shock. The noise level in the work environment is usually loud.

Will be required to travel to customer sites up to 50% of the time.

I have read and understand the duties, responsibilities and requirements for this position.\*

\_\_\_\_\_  
Employee Acknowledgement

\_\_\_\_\_  
Date

\*This document does not create an employment contract, implied or otherwise, other than an "at-will" employment relationship. J.M. Grimstad retains the discretion to add duties or change the duties of this position at any time.