JOB DESCRIPTION

Released Date: 08.21.2021

Revised Date: 03.23.2022

Functional Area: Engineering

Robogistics

Robotic - Automation - Logistics

TITLE - POSITION: Controls Engineer 2

REPORTS TO: Controls Manager, Engineering & with dotted line to VP of Engineering

General Description:

Responsible for simple to moderate controls systems design-modifications, specification, programming, simulation and testing, and start-up assistance to support the engineering, manufacturing and service team of Robogistics. Perform duties primarily in industry standard programs in PLC logic languages specified in IEC 61131-3, primarily utilizing Allen Bradley/Rockwell or Siemens PLC and PC, where applicable. Apply electrical and electronic theory and related knowledge to develop equipment design plans/prints, prepare wiring diagrams, circuit board assembly diagrams and layout drawings. Work with Robogistics team in supporting the designing building, installing and repairing Robogistics and customer gantry and associated automation components, such as articulated robotic arms and end-of-arm-tools, within various material handling systems.

Assure customer satisfaction and minimize development costs by accurately and efficiently using controls software to translate customer application requirements into functional and controls design engineering specifications and project solutions. Assist mechanical and controls development engineering, manufacturing and service departments in all areas related to controls engineering solutions for company products and systems.

Essential Responsibilities:

- Complete system automation configuration, programming and set up, including communicating with SCADA and HMI systems. This work is typically done using standard PLCs programs such Rockwell (Allen Bradley) or Siemens PLC/WinCC.an/,
- Effectively utilize industrial Ethernet communication networking protocols such as: Ethernet I/P, and/or ProfiNet, OPC-UA to provide the necessary responsiveness between automation systems and drives.
- Program servo motion drives on an existing code platform for Company multi-axis gantry crane system to position product, synchronize all company and ancillary elements, position products and control stop and start motion of yz axis in a effective and noise-free manner.
- Achieve very closely coordinated multi-axis control as required in demanding applications.
- Program movements of products and pallets along conveyors, including managing vision/ barcode reading, product tracking and product sorting.
- Create customer user-friendly HMI screens in a SCADA package such as Ignition, WinCC and/or Rockwell PanelView.
- Integrate Fanuc, Motoman, KUKA robotic arms with overall Ganty system.

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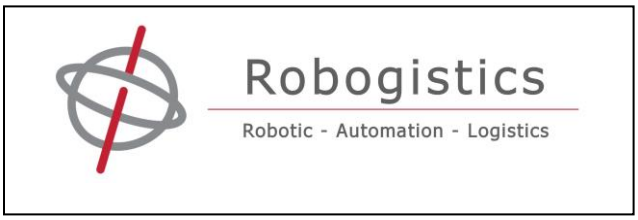

- Start-up, commissioning of single and multiple machine automation and provide customer-site acceptance support.
- Provide electrical panel design and layout, bill of materials, and wiring schematic support for all company machinery, including reading and red-lining drawings when required.
- Utilize PackML (Packing Machine Language) and other Robogistics coding standards to complete controls design and programming of machines in order to ensure a common look and feel across all machines and customer applications
- Complete excellent documentation, as appropriate, on controls logic flow and HMI interface screens following company standards.
- Confer with engineers, manufacturing production, management, and appropriate personnel to observe, test and evaluate the operation of machinery and equipment in order to identify causes of malfunction and implement design improvements
- Assist, with Production and Onsite Installation/Commissioning Team Leader, for final in-plant testing of machines prior to and during Customer FAT & SAT, including completing customer sign-off forms as required
- Install, repair and/or adjust the electrical, industrial PC and PLC components of customer machinery as required, including the installation of equipment and startup at customer facility
- Provide updated information to appropriate Department Manager and other Managers on a daily or other requested basis.
- Maintain completed records as required, on customer problems, problem causes, repairs and maintenance performed as requested
- These activities will normally be carried out under the direct supervision of a senior controls engineer. The goal is to execute these duties with increasing speed, accuracy, and efficiency, while requiring decreasing amounts of detailed supervision and direction.

Training Objectives:

- Through on-the-job training, have solid electrical/technical understanding of all Robogistics products mainly Gantry Robots, markets and customers and be capable of programming most low and mid-level controls and HMI robotic operator interfaces
- Capable to support software developer on new software and support start up team
- Attend designated robot basic training and demonstrate ability to complete basic robotic manipulation
- Attend PackML training within 4 months of start date

Measures of Effectiveness:

- Work effectively with engineering, , production and service managers to complete projects on schedule and within budget

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- Successfully follow the direction per the assigned manager to you to execute coding to the accepted Robogistics standards
- Effectively inspect and diagnose equipment and control systems to identify electrical, control, PC and PLC/ladder logic problems and then repair, service, adjust and test machines
- Carry out work processes and procedures and implement ideas in accord with information and policies provided by the company
- Work as a team member with others and give and receive positive customer (sales, peer, manager and end customer) feedback

Minimum Requirements:

- Electrical/Controls Engineering Bachelor degree with three (3) to five (5) years' work experience in PLC logic languages specified in IEC 61131-3; primarily utilizing Allen Bradley/Rockwell or Siemens programmable automation controller.
- Excellent knowledge of standard controls engineering practices, machines, tools and electrical technology, including solid understanding of equipment construction, design, use, troubleshooting, testing installation and operations monitoring
- Able to program gantry system servos and motion controls to control robotic movements and provide detailed technical documentation upon job completion including for articulating robots such as ABB, Fanuc, Kuka, or Yaskawa/Motoman)
- Creating HMI screens in a SCADA package such as Ignition, WinCC and/or Rockwell PanelView; Ignition highly desired.
- Ability to travel nationwide and, occasionally, internationally
- Able to verbally or in writing, effectively gather information and assimilate information to document and resolve design and/or customer problems in English, Spanish or German desired but not a must
- Excellent interpersonal and customer service and project management skills.