



Universal Compressed Air  
3001 Emrick Blvd., Suite 320  
Bethlehem, PA 18020 USA  
Phone 610-559-7967 Fax: 610-515-0945

## ***JOB DESCRIPTION***

### **Process Control and Instrument Engineer**

Title/Scope:	Process Control and Instrument Engineer/Full-time
Department:	Engineering & Technology
Reports to:	Sr. Manager of Engineering & Technology
Location:	Bethlehem, PA
Date:	January 2022

**Universal Compressed Air** is a privately-owned and thriving high-technology business in Pennsylvania's Lehigh Valley focused on compressed air systems for industry. UCA brings decades of Industrial Gas expertise to Compressed Air Supply Systems (CAS). Our PIPELINE AIR™ CAS are designed, engineered, built, operated, and maintained to deliver compressed air as a utility and, in every case, an efficient, reliable, and application-tailored solution to maximize savings and optimize the end user's success.

### **POSITION SUMMARY**

The Process Control and Instrument Engineer is responsible for overall execution of CAS Process Controls and Instrument engineering activity during project execution, construction and ongoing plant operations. Candidate may also interact with the customer's representatives on a periodic basis along with developing a positive, productive working relationships with vendors and UCA's Operating and Maintenance team.

Travel will be necessary to build and maintain relationships with UCA personnel and customer representatives. Support will also be needed during system checkout and commissioning that will require dedicated focus remotely or at CAS location.

### **PRINCIPAL ACCOUNTABILITIES**

#### **1. Process Controls**

- Prepare detailed specification for SCADA system on all projects
- Interface extensively will all control system suppliers (SCADA as well as skid-based controls provided by equipment suppliers) to ensure system furnished is acceptable and meets UCA's needs
- Review all vendor supplied control system drawings and functional descriptions (SCADA and skid-based controllers)
- Ensure that SCADA I/O layout and overall architecture supports reliability strategy
- Define control strategies on the Process and Instrumentation Diagram (P&ID) based on supplier's design and overall project needs



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- Interface with Electrical Engineering to ensure electrical design supports plant reliability and ensure wiring design addresses all control system requirements (terminal layout, communications network, AC/DC segregation etc.)
  - Coordinate with SCADA system supplier to develop all required reporting, trending and data histories.
  - Lead Factory Acceptance Test (FAT) of control systems either at control system supplier's location or fabricator shop to ensure correct functionality, HMI display layout and detailed information (tag numbers, I/O layout, ranges, units, descriptors etc.)
  - Ensure cyber security requirements are aligned with industry standards for remote access and control along with "cloud" data storage.
  - Specify UPS requirements for control system
- 2. Instrumentation:**
- Write specifications (instrument data sheets) for all project instrumentation not supplied with equipment packages
  - Prepare instrument installation details for all instrumentation not already installed by an equipment supplier
  - Based on process conditions, work with flow element supplier to optimize flow meter selection and sizing. Prepare specification based on review and recommendations
  - Review and approve transmitter calibration records
  - Establish Vendor Data Requirements (VDR's) and review all supplier instrumentation documents
- 3. Process Systems:**
- Support project specific P&ID development ensuring all controls and instrument issues are properly reflected
- 4. Other:**
- Support commissioning and startup of new facilities
  - Provide operator training on SCADA system and HMI as required
  - Support ongoing plant operations through troubleshooting of control system, SCADA, HMI and instrumentation issues
  - Develop or contribute to development of, engineering work processes and operating procedures
  - Provide technical support and input to sales, business development and new technology development

## **JOB REQUIREMENTS**

1. BS degree in engineering preferred. Work experience concentrated on process control and instrument engineering.
2. Minimum 5 years work experience in an industrial process controls engineering or operations role
3. Working/" hands-on" knowledge of PLC's, SCADA systems and HMI software.



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4. Strong verbal and written communication skills along with ability to effectively interface with customers and vendors.
5. Travel up to 20% of time with extended time at site possible during staging, commissioning and startup.

## **COMPENSATION & BENEFITS**

Along with an exciting, growth-oriented work environment, we offer the following:

- Competitive compensation
- 401K with match
- Medical & Dental
- PTO and paid holidays
- Flexible spending account