Badge Details

Name	3956-Mechatronics - Industrial Electricity 2
Description	The Industrial Electricity 2 certificate builds upon the Industrial Electricity 1 certificate. Candidates should understand more complex motor starting circuits such as jogging, hand-off-automatic, reversing, and reduced voltage starting. They should be familiar with time-based, count-based and sequential control of multiple output loads utilizing control relay logic and automatic input devices such as limit, flow and pressure switches to provide feedback. They should understand basic electro-fluid power circuits where relay logic is used to operate devices such as pneumatic or hydraulic cylinders through electrically piloted directional control valves. Basic understanding of the various types of electronic sensors, timers and counters used in industrial control is required. Candidates should be familiar with the sizing and installation of various types of electrical conductors and raceways used in or around industrial machinery and should be able to properly wire an industrial control panel. Finally, candidates should understand basic troubleshooting techniques and practices, not only for the individual components but also for systems of components.

Criteria	***Candidates receiving this certification will take an exam with the following criteria:*** The exam is composed of 100 questions. • Electricity and Electrical Circuits • Practice of Troubleshooting • Reversing and Jogging Motor Control • Automatic Input Devices • Timer Control Functions • Solenoid Activated Valves • Control Relays • Sequential Control • Introduction to Electronic Sensors • Counters • Electrical Control System Wiring • Raceways and Conduits • Conductors, Disconnects and Overcurrent Protection • Counters • Control Transformers • Power Transformers • Electrical Safety