

2015 PROVINCIAL SKILLS COMPETITION CONTEST DESCRIPTION



COMPETITION: **Automation and Control**
LOCATION: NBCC– **St. Andrews Campus**
DURATION OF THE COMPETITION: **Approximately 6 hours**
START/END TIME: **Wednesday, April 29, 2015 (8:30 am – 3:00 pm) Panel Assembly / PLC Programming**

PURPOSE OF THE CHALLENGE:

- To evaluate competitor's skills and knowledge, and to recognize outstanding performance and professionalism in the field of automation and control.

SKILLS AND KNOWLEDGE TO BE TESTED:

- Safety practices and acceptable principles used in electric motor and control installations.
- Application of Canadian Electrical Code and regulations relative to electric motor control.
- Proper use of tools, materials and equipment used in the assigned task.
- Basic electrical theory related to electric motor control equipment and wiring methods.
- Ability to read schematic and wiring diagrams.
- Demonstrate the use of measuring and testing equipment.
- Installation and wiring of motor control schemes.
- Maintenance and troubleshooting of motor control circuitry.
- Writing a PLC ladder logic program to control system equipment.
- Apply troubleshooting and commissioning procedures for PLC installations.

JUDGING CRITERIA

- Design of a PLC control system based on a functional description.
- Panel assembly: The PLC will be wired, programmed and tested for proper functionality. Proper wiring practices, time to complete the task and functionality will form the criteria for evaluation. An Allen Bradley CompactLogix L32E PLC will be used in combination with RSLogix5000 software for the competition.
- In the event of a tie, a judge's decision will determine the winner on the basis of project aesthetics.

EQUIPMENT/TOOLS/MATERIALS:

Supplied by Competitor:

Work pants and shirt	Work boots or shoes	Safety glasses or goggles
Standard blade screwdrivers	Phillips screwdriver	Wire strippers
Needle nose pliers	Pen, pencil, ruler, eraser	Wire cutters
2.5mm terminal driver	Red & green Robertson screwdrivers	Multimeter
Torpedo Level	Measuring tape (includes metric)	Cordless drill

TECHNICAL COMMITTEE MEMBERS:

- Mike McGaw (Judge and Technical Advisor)
- John Roussy (Judge and Technical Advisor)
- Éric Arseneau (Judge and Technical Advisor)
- TBA (Judge and Technical Advisor)