

Contest Description

COMPETITION DATE: TBD during April 19 – 24, 2021	CONTEST AREA NAME: Industrial Control
CONTEST AREA NUMBER: Trade 20	LEVEL: Post - Secondary
DURATION OF CONTEST: Approximately 12 hours over 2 days	LOCATION: TBD

CONTEST INTRODUCTION

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 logic program to control system equipment.
- Apply troubleshooting and commissioning procedures for PLC installations.

CONTEST DESCRIPTION

List of documents produced and timeline for when competitors have access to the documents.

DOCUMENT	DATE OF DISTRIBUTION VIA WEBSITE
SCNC21-19 - Provincial	TBD
SCNC21-19 - Project Drawings	TBD



It is assumed that the following may be performed during the contest.

- Proper use of tools, materials and equipment used in the assigned task.
- Application of basic electrical theory related to electric motor control equipment and wiring methods.
- Reading and application of schematic and wiring diagrams.
- Use of measuring and testing equipment.
- Installation and wiring of motor control schemes.
- Maintenance and troubleshooting of motor control circuitry.
- Writing a PLC logic program to control system equipment.
- Troubleshooting and commissioning procedures for PLC installations.

EQUIPMENT, MATERIAL, CLOTHING

Equipment and Material supplied by Skills Canada-Newfoundland and Labrador

- Cabinet
- Programmable Logic controller
- All wire
- All switches and lamps
- All terminal blocks
- All relays
- All conduit

Equipment and Material Competitor must supply:

- Standard blade screwdrivers
- Phillips screwdriver
- Wire strippers
- Needle nose pliers
- Pen, pencil, ruler, eraser
- Wire cutters
- Stakon type pliers
- Red & Green Robertson screwdrivers
- Multimeter

Required clothing (Provided by competitor)

- Work pants and shirt
- Work boots or shoes
- Safety glasses or goggles
- Safety gloves
- Hard hat

SAFETY REQUIREMENTS

The health, safety and welfare of all individuals involved with Skills Canada NL are of vital importance. Safety is a condition of participation and shall not be sacrificed for the sake of expediency. At the discretion of the judges and technical committees, any competitor can be denied the right to participate should they not have the required proper safety equipment and/or act in an unsafe manner that can cause harm to themselves or others.

Each competitor must wear the following during the competition:

- | | | |
|--|---|--|
| <input checked="" type="checkbox"/> Safety Glasses | <input checked="" type="checkbox"/> CSA Approved Safety Shoes | <input type="checkbox"/> Latex Gloves |
| <input checked="" type="checkbox"/> Safety Gloves | <input type="checkbox"/> Welding Helmet | <input type="checkbox"/> Dust Mask |
| <input checked="" type="checkbox"/> Hard Hat | <input type="checkbox"/> Welding Gloves | <input type="checkbox"/> Leather Gloves |
| <input type="checkbox"/> Hearing Protection | <input type="checkbox"/> Respiratory Protection | <input type="checkbox"/> No PPE required |

List of required personal protective equipment (PPE) supplied by Competitors:

- Safety Glasses
- CSA Approved Safety Shoes
- Safety Gloves
- Hard Hat

Note: Competitors will not be allowed to compete if the above items are not brought and used.

EVALUATION/JUDGING CRITERIA

Point Breakdown

POINT BREAKDOWN	/1000
Personal Safety	70
Wire Installation	150
Component Use	150
Functionality and Programming	530
Organization	100

ADDITIONAL INFORMATION

Tie (No ties are allowed)

In the event of a scoring tie, the fastest completion time will determine the winner.

Competition Rules

Please refer to the competition rules for all general SCPC information.

PROVINCIAL TECHNICAL COMMITTEE MEMBERS

NAME	EMAIL ADDRESS
John Dalley (Chair)	jdalley@ieas.ca
Terry Dale (Judge and Technical Advisor)	terrydale@bellaliant.net