



INDUSTRIAL MOTOR CONTROL

ELIGIBILITY

Open to active SkillsUSA members enrolled in programs with industrial motor control as the occupational objective.

CLOTHING REQUIREMENTS

Home school uniform or Official SkillsUSA khaki work shirt and pants, black or brown leather work shoes, and safety glasses with side shields or goggles. (Prescription glasses can be used only if they are equipped with side shields. If not, they must be covered with goggles.)

Note: At the district level if a student is not able to wear the official SkillsUSA attire he/she may wear an outfit that would be acceptable in their specific field of study. Please keep in mind that official SkillsUSA attire will be required at the state and national level.

EQUIPMENT AND MATERIALS SUPPLIED BY HOST

1. All wiring panels, electrical supplies and materials as required by the problem assigned

EQUIPMENT AND MATERIALS SUPPLIED BY CONTESTANT

1. All students must have a one-page, typewritten resume.
2. Proof of Training - signed
3. Safety Glasses
4. Hard Hat
5. Work Shoes
6. Diagonal pliers
7. Side-cutter/Line-man Pliers
8. Long-nose pliers
9. Pump pliers
10. Wire strippers
11. Electrician's knife/Utility knife
12. Assorted flat blade and Phillips screwdrivers
13. Tape measure/Folding Ruler
14. Electricians hammer
15. Hacksaw
16. Torpedo level
17. Pencils
18. Crimping tools
19. ½" EMT conduit bender
20. ½" EMT conduit reamer
21. Multi-meter (VOLT, OHM, AMP) or equivalent voltage and continuity testers
22. Current National Electrical Code Book
23. Calculator (NO CELL PHONES)
24. Cordless Drill with batteries and charger allowed

SCOPE OF THE CONTEST - (DEFINED BY THE NATIONAL COMPETITION REGULATIONS)

(District Competitions are meant to be a scaled down version of National Competition. It is important for the students to participate in a competition that will reflect a cross-section of the industry skills needed to prepare them for the state and national levels)

The contest will assess the ability to perform jobs or skills selected from the following list of competencies.

KNOWLEDGE PERFORMANCE

The contest will include a written knowledge exam assessing general knowledge of industrial wiring. Written portions may also exist during the skills portion of the contest. Knowledge of terms and principles used in industrial wiring will be required for the skill demonstration portion of the contest.



INDUSTRIAL MOTOR CONTROL

SKILL PERFORMANCE

Skill Performance

The contest will include a series of testing stations designed to test the ability to perform jobs or skills selected from the following list of competencies as determined by the SkillsUSA Championships technical committee.

Standards and Competencies – *(Summary of national technical standards list)*

1. Demonstrate knowledge/application of basic academic, physical and employability skills
2. Follow OSHA rules and safety regulations to ensure job site and equipment safety
3. Apply knowledge of the National Electric Code
4. Interpret and draw wiring and diagrams
5. Read and interpret written and oral customer and manufacturer specifications/instructions
6. Perform electrical calculations, i.e.: sizing of circuits and conductors, and calculate conduit fill
7. Select materials and equipment to meet customer needs
8. Select and utilize hand, electrical and cutting tools properly
9. Select and install proper wiring methods, boxes and enclosures
10. Demonstrate the ability to properly install and connect devices and equipment
11. Troubleshoot and repair power and control circuits

INDUSTRIAL MOTOR CONTROL

Items Evaluated	Possible Points	Contestant Points
Written Test	50	
Parts ID	25	
National Electrical Code	30	
Box Heights and Mounting	30	
Device Locations	30	
Wiring Methods	50	
Grounding, Splices and Termination	30	
Overall Neatness	30	
EMT — Pipe Bending	30	



INDUSTRIAL MOTOR CONTROL

Function and Operation Test	30	
Job Site Material Acquisition	15	
Troubleshooting	50	
	Subtotal = 270	
No Resume	Deduction -10	
Safety Penalty	Deduction - 10	
Clothing Penalty	Deduction -10	
	TOTAL	

Note: No cell phones or other electronic devices may be used at any time during a competition; this includes using a calculator function on a cell phone for competitions in which calculators are permitted.

Note: Scorecards should only be used as guidance. Changes may occur.