

QUALIFICATION FILE

Assembly and Wiring Assistant Operator - Standard Control Panel

☒ Short Term Training (STT) ☐ Long Term Training (LTT) ☐ Apprenticeship

☐ Upskilling ☐ Dual/Flexi Qualification ☐ For ToT ☐ For ToA

☒ General ☐ Multi-skill (MS) ☐ Cross Sectoral (CS) ☐ Future Skills ☐ OEM

NCrF/NSQF Level: 3

Submitted By:

Electronics Sector Skills Council of India (ESSCI)

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Section 1: Basic Details

1.	Qualification Name	Assembly and Wiring Assistant Operator -Standard Control Panel														
2.	Sector/s	Electronics														
3.	Type of Qualification: ☐ New ☒ Revised ☐ Has Electives/Options ☐ OEM	NQR Code & version of existing/previous qualification: (change to previous, once 2022/EHW/ESSC/05380 &V 3		Qualification Name of existing/previous version: Electrical Assembly Operator – Control Panel												
4.	a. OEM Name b. Qualification Name (Wherever applicable)	NA														
5.	National Qualification Register (NQR) Code & Version (Will be issued after NSQC approval)	QG-03-EH-044912025-V2-ESSCI	6. NCrF/NSQF Level: 3													
7.	Award (Certificate/Diploma/Advance Diploma/ Any Other (Wherever applicable specify multiple entry/exits also & provide details in annexure)	Certificate														
8.	Brief Description of the Qualification	The individual at work mounts and installs and connects internal electronic modules devices and components on the control panel.														
9.	Eligibility Criteria for Entry for Student/Trainee/Learner/Employee	a. Entry Qualification & Relevant Experience <table border="1"> <thead> <tr> <th>S. No.</th> <th>Academic/Skill Qualification (with Specialization - if applicable)</th> <th>Required Experience (with Specialization - if applicable)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>10th grade or equivalent</td> <td>NA</td> </tr> <tr> <td>2</td> <td>8th grade</td> <td>3 years of relevant experience</td> </tr> <tr> <td>3</td> <td>Certificate of NSQF level 2.5</td> <td>1.5 years of relevant experience</td> </tr> </tbody> </table> # Relevant Experience in Industrial Automation b. Age: NA			S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)	1	10 th grade or equivalent	NA	2	8 th grade	3 years of relevant experience	3	Certificate of NSQF level 2.5	1.5 years of relevant experience
S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)														
1	10 th grade or equivalent	NA														
2	8 th grade	3 years of relevant experience														
3	Certificate of NSQF level 2.5	1.5 years of relevant experience														
10.	Credits Assigned to this Qualification, Subject to Assessment (as per National Credit Framework (NCrF))	14	11. Common Cost Norm Category (I/II/III) (wherever applicable): I													

12.	Any Licensing requirements for Undertaking Training on This Qualification <i>(wherever applicable)</i>	NA																					
13.	Training Duration by Modes of Training Delivery <i>(Specify Total Duration as per selected training delivery modes and as per requirement of the qualification)</i>	☐ Offline ☐ Online ☒ Blended <table border="1"> <thead> <tr> <th>Training Delivery Modes</th> <th>Theory (Hours)</th> <th>Practical (Hours)</th> <th>OJT Mandatory (Hours)</th> <th>OJT Recommended (Hours)</th> <th>Total (Hours)</th> </tr> </thead> <tbody> <tr> <td>Classroom (offline)</td> <td>00:00</td> <td>180:00</td> <td>90:00</td> <td>00:00</td> <td rowspan="2">420</td> </tr> <tr> <td>Online</td> <td>150:00</td> <td>00:00</td> <td>00:00</td> <td>00:00</td> </tr> </tbody> </table> <i>(Refer Blended Learning Annexure for details)</i>					Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	OJT Recommended (Hours)	Total (Hours)	Classroom (offline)	00:00	180:00	90:00	00:00	420	Online	150:00	00:00	00:00	00:00
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Classroom (offline)	00:00	180:00	90:00	00:00	420																		
Online	150:00	00:00	00:00	00:00																			
14.	Aligned to NCO/ISCO Code/s <i>(if no code is available mention the same)</i>	NCO-2015/8212.0402																					
15.	Progression path after attaining the qualification <i>(Please show Professional and Academic progression)</i>	Operator Electrical Assembly – Control Panel																					
16.	Other Indian languages in which the Qualification & Model Curriculum are being submitted	Hindi																					
17.	Is similar Qualification(s) available on NQR-if yes, justification for this qualification	☐ Yes ☒ No URLs of similar Qualifications:																					
18.	Is the Job Role Amenable to Persons with Disability	☐ Yes ☒ No If "Yes", specify applicable type of Disability:																					
19.	How Participation of Women will be Encouraged	No gender sensitization																					
20.	Are Greening/ Environment Sustainability Aspects Covered <i>(Specify the NOS/Module which covers it)</i>	☒ Yes ☐ No (Employability Skills (30 hours)																					
21.	Is Qualification Suitable to be Offered in Schools/Colleges	Schools ☐ Yes ☒ No Colleges ☒ Yes ☐ No																					
22.	Name and Contact Details of Submitting / Awarding Body SPOC <i>(In case of CS or MS, provide details of both Lead AB & Supporting ABs)</i>	Name: Saleem Ahmed Email: ceo@essc-india.org Contact No.: 011 – 8447738501 Website: https://www.essc-india.org/																					
23.	Final Approval Date by NSQC: 07.10.2025	24. Validity Duration: 3 Years			25. Next Review Date: 07.10.2028																		

Section 2: Module Summary

NOS/s of Qualifications

(In exceptional cases these could be described as components)

Mandatory NOS/s:

Specify the training duration and assessment criteria at NOS/ Module level. For further details refer curriculum document.

Th.-Theory **Pr.**-Practical **OJT**-On the Job **Man.**-Mandatory Training **Rec.**-Recommended Proj.-Project

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/ Non-Core	NCrF/NSQF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) (if applicable)
1	Control Panel Assembly - Preparation & Component Installation	ELE/N3193 & V1.0	Core	3	6.5	60	90	45	0	195	40	60	0	0	100	40
2	Control Panel Wiring, Testing & Compliance	ELE/N3194 & V1.0	Core	3	6.5	60	90	45	0	195	40	60	0	0	100	40
3	Employability Skills (30 hours)	DGT/VSQ/N0101 & V1.0	Non-core	3	1	30	0	0	0	30	20	30	0	0	50	20
Duration (in Hours) / Total Marks					14	150	180	90	0	420	100	150	0	0	250	100

Elective NOS/s:

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/ Non-Core	NCrF/NSQF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) (if applicable)
1.																
2.																
Duration (in Hours) / Total Marks																

Optional NOS/s:

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/ Non-Core	NCrF/NSQF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) (if applicable)
1.																
2.																
Duration (in Hours) / Total Marks																

Assessment - Minimum Qualifying Percentage

Please specify **any one** of the following:

Minimum Pass Percentage – Aggregate at qualification level: 50 % (Every Trainee should score specified minimum aggregate passing percentage at qualification level to successfully clear the assessment.)

Minimum Pass Percentage – NOS/Module-wise: ____% (Every Trainee should score specified minimum passing percentage in each mandatory and selected elective NOS/Module to successfully clear the assessment.)

Section 3: Training Related

1.	Trainer's Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)	Diploma/ITI (Electronics) with 2 years industrial and 1 year training experience in the field of Electrical panel assembly. Or Certified in relevant CITS Trade
2.	Master Trainer's Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)	Diploma/ITI (Electronics) with 3 years industrial and 2 year training experience in the field of Electrical panel assembly. Or Certified in relevant CITS Trade
3.	Tools and Equipment Required for Training	☒ Yes ☐ No (If "Yes", details to be provided in Annexure)
4.	In Case of Revised Qualification, Details of Any Upskilling Required for Trainer	NA

Section 4: Assessment Related

1.	Assessor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	Diploma/ITI (Electronics) with 3 years industrial and 2 year training experience in the field of Electrical panel assembly. Or Certified in relevant CITS Trade
2.	Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	Diploma/ITI (Electronics) with 3 years industrial and 2 year training experience in the field of Electrical panel assembly. Or Certified in relevant CITS Trade
3.	Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	Diploma/ITI (Electronics) with 4 years industrial and 3 year training experience in the field of Electrical panel assembly. Or Certified in relevant CITS Trade
4.	Assessment Mode (Specify the assessment mode)	Blended
5.	Tools and Equipment Required for Assessment	☒ Same as for training ☐ Yes ☐ No (details to be provided in Annexure-if it is different for Assessment)

Section 5: Evidence of the need for the Qualification

Provide Annexure/Supporting documents name.

1.	Latest Skill Gap Study (not older than 2 years) (Yes/No): Yes
2.	Latest Market Research Reports or any other source (not older than 2 years) (Yes/No): Yes
3.	Government /Industry initiatives/ requirement (Yes/No): Yes
4.	Number of Industry validation provided: 20
5.	Estimated nos. of persons to be trained and employed: 500
6.	Evidence of Concurrence/Consultation with Line Ministry/State Departments: Yes If "No", why:

Section 6: Annexure & Supporting Documents Check List

Specify Annexure Name / Supporting document file name

1.	Annexure: NCrf/NSQF level justification based on NCrf level/NSQF descriptors <i>(Mandatory)</i>	Attached
2.	Annexure: List of tools and equipment relevant for qualification <i>(Mandatory, except in case of online course)</i>	Attached
3.	Annexure: Detailed Assessment Criteria <i>(Mandatory)</i>	Attached
4.	Annexure: Assessment Strategy <i>(Mandatory)</i>	Attached
5.	Annexure: Blended Learning <i>(Mandatory, in case selected Mode of delivery is "Blended Learning")</i>	Filled
6.	Annexure: Multiple Entry-Exit Details <i>(Mandatory, in case qualification has multiple Entry-Exit)</i>	Filled
7.	Annexure: Acronym and Glossary <i>(Optional)</i>	Attached
8.	Supporting Document: Model Curriculum <i>(Mandatory – Public view)</i>	Attached
9.	Supporting Document: Career Progression <i>(Mandatory - Public view)</i>	Attached
10.	Supporting Document: Occupational Map <i>(Mandatory)</i>	Attached
11.	Supporting Document: Assessment SOP <i>(Mandatory)</i>	
12.	Any other document you wish to submit:	

Annexure: Evidence of Level

NCrf/NSQF Level Descriptors	Key requirements of the job role/ outcome of the qualification	How the job role/ outcomes relate to the NCrf/NSQF level descriptor	NCrf/NSQF Level
Professional Theoretical Knowledge/Process	Demands a wide range of specialized technical skill, clarity of knowledge and practice in broad range of activity	An Assembly and Wiring Assistant Operator -Standard Control Panel is responsible for mounting, installation and connection of internal electronic modules devices and components on the control panel.	3

	involving standard and non-standard practices. · Perform the mounting, installation and connection of control panels. · Perform testing of components of the assembly. · Follow all guidelines and instructions. · Adhere to industry work practices to achieve productivity and quality standards. · Check the working of the appliances.	Hence Level 3	
Professional and Technical Skills/ Expertise/ Professional Knowledge	Factual and theoretical knowledge in broad contexts within a field of work or study. · Knowledge of assembly requirements, assembly process, working of various components. · Know the instructions and guidelines to achieve productivity and quality standards	An Assembly and Wiring Assistant Operator -Standard Control Panel should know the assembling process, their working and the guidelines to achieve productivity and quality standards. Also able to test the components of the assembly. Hence Level 3	3
Employment Readiness & Entrepreneurship Skills & Mind-set/Professional Skill	A range of cognitive and practical skills required to generate solutions to specific problems in a field of work or study. · Communicate with customer, team and supervisor to understand the work requirement · Identify the errors in orders · Maintain inventory · Complete the documentation of maintenance and service records	An Assembly and Wiring Assistant Operator -Standard Control Panel should be able to use basic tools in correct way to assemble and test the components. He/she works after getting work requirements from supervisor or other team members. Hence Level 3	3

Broad Learning Outcomes/Core Skill	· Assembly procedures · Working and testing of various components. · Guidelines and instructions for repairing	An Assembly and Wiring Assistant Operator -Standard Control Panel needs to know the assembling procedures, working of various components and testing the same. The technician should keep the workplace clean and managed. Hence Level 3	3
Responsibility	Responsibility of completing the work assigned and reporting the same as per standards. · Understand the job role and follow the organizational policy · Record and report about the work status · Follow safety regulations at work place · Work along with colleagues and supervisors	An Assembly and Wiring Assistant Operator -Standard Control Panel should record the issues and report about the same to supervisor and also update the status of the work as per organizations policy. Hence Level 3	3

Annexure: Tools and Equipment (Lab Set-Up)

List of Tools and Equipment

Batch Size: 30

S. No.	Tool / Equipment Name	Specifications	Quantity for specified Batch size
1	Stepper Motor	Standard	1
2	Battery	Standard	2
3	Large Wire Cutters	Standard	2
4	control panel	Standard	3
5	Drill (or screw gun) to mount panel and OSB	Standard	3
6	Ammeter	Standard	5
7	Capacitors	Standard	5
8	Electrical cabinets	Standard	5
9	IC	Standard	5
10	Inductors	Standard	5
11	Insulation Tape	Standard	5
12	LED	Standard	5
13	Needle Nose Pliers	Standard	5
14	Plier	Standard	5

15	Resistors	Standard	5
16	Romex wire stripper	Standard	5
17	Screw driver set	Standard	5
18	Transformer	Standard	5
19	Transistors	Standard	5
20	Utility knife	Standard	5
21	Watt hour meter	Standard	5
22	Wire cutter	Standard	5
23	Wire stripper/crimper	Standard	5
24	Circuit breaker	Standard	10
25	Electrical connector switch	Standard	10
26	Jumper Wires	Standard	30
27	Output cable connectors	Standard	30
28	Electrical cables	Standard	18 meter spool
29	Safety Shoes	Standard	6
30	Line Tester	Standard	10
31	Desoldering Pump	Standard	6
32	Shear Cutters	Standard	6
33	wire labelling strips	Standard	10

Classroom Aids

The aids required to conduct sessions in the classroom are:

1. Whiteboard
2. Projector
3. Computer/Laptop
4. Chairs
5. Tables
6. Whiteboard marker

Annexure: Industry Validations Summary

Provide the summary information of all the industry validations in table. This is not required for OEM qualifications.

S. No	Organization Name	Representative Name	Designation	Contact Address	Contact Phone No	E-mail ID	LinkedIn Profile (if available)
1	Nagdeo Education Welfare Society	Vijay Nagdeo	General Manager	Ward No. 11 Junnardeo Dist. Chhindwara M.P. 480551	9425461093	Vijaynagdeo02@gmail.com	
2	Access Edutech Pvt. Ltd.	Sanjay Kumar Mishra	Director	96, Vrindavan Nagar Ayodhya Bypass Road Bhopal	7000650224	sanjaymishra@accessedutech.com	
3	SHIV SHAKTI TECKNIKI EVAM SAMANAYA SHIKSHAN SANSTHAN	Jitendra Kumar Garg	President	B 32 MAHESH NAGAR JAIPUR RAJASTHAN- 302015	9782912782	jitendra.garg303@gmail.com	
4	Ephicacy Lifescience Analytics	Rahul Kumar Kaushik	Senior Software Engineer	2nd Main Rd, Sarvobhogam Nagar, Arekere, Bengaluru, Karnataka 560076	8859885973	Rahul.Kaushik@ephicacy.com	
5	Nagravision India Pvt Ltd	Avinash Yadav	Manager System Administrator	RMZ Centennial, Tower C unit 301 and 302, Mahadevapura Post ITPL Road, Bangalore	9808326626	avinash.yadav@nagra.com	
6	Sri Venkateswara College of Engineering	Dr C Chandrasekhar	Head R and D and Professor in ECE	Karakmbadi Road,Tirupati 517507	9177217190	dr.chandrasekhar.c@svcolleges.edu.in	
7	Rastriya Khushali Sansthan	Ramkaran Sinsinwar	President	VOP Tajsar Fatehpur Rajasthan	6350658040	Rkstajsar1998@gmail.com	

8	Sri Rajaram Shikshan Sansthan	Rajendra Parsad	Principle		8808696968	rajendraitjnp@gmail.com	
9	Nexgen Exhibitions Pvt Ltd	Saurabh Purwar	Director	1201/1206 Pragati Tower, 26 Rajendra Place, New Delhi-110008, India	9457306691	fbvidgo@gmail.com	
10	Siemens Limited	Manoj Belgaonkar	Head – Regulations, Standards and QM	R&D Centre, Thane Belapur Road, Airoli, Navi Mumbai 400708	9820682825	manoj.belgaonkar@siemens.com	
11	Tata Consultancy Services	Sheepra Kaushik	Consultant Product Development	Kensington B Wing, Hiranandani SEZ, Powai, Mumbai 400076	8433595090	sheepra.sharma@tcs.com	
12	Conduent- https://www.conduent.com	Prince Jain	Senior Business Analyst	7 to 9th Floor & 6 to 9th Floor, Building No.5 & 6, Plot No 20&21, Candor Tech Space, IT/ITES SEZ., Noida, Uttar Pradesh 201304	8439385780	prince.jain@conduent.com	
13	Artificial Intelligence Technologies	Rohit Kumar Sharma	Manager Product Development	A-21, sector 4, Block A, Kailash Colony, Greater Kailash, New Delhi	9927564461	rohit.sharma@aituniversal.com	
14	Shri Prasad Sharma Shikshan Sansthan Myana	Suresh		Gautam Budha Nagar UP	8433476571		
15	Rastriya Khushali Sansthan	Ramkaran Sinsinwar	President	VOP Tajsar Fatehpur Rajasthan	6350658040	Rkstajsar1998@gmail.com	

16	Evergreen Education Trust	Faizanbazaz	Director	217, Pehari Colony Jammu 180005	7006341193	eetturst@gmail.com	
17	Bergen Associates Pvt Ltd	Soubam Sunil	Manager	305-306, Magnum House-I, Commercial Complex, Karampura, New Delhi – 110015	931178083 2	s.soubam@bergengroupindia.com	
18	Sankalp Education and development socity	Jafruddin Khan	SPOC		810404952 2		
19	Ramyash Pvt ITI	Ramyash	Principel	Jamalpur	945473829 8	Yashvantyadav964@gmail.com	
20	Shri Solasar Balaji Shikshan	Nand Kishor Gurjar	SPOC	Rajasthan	935873446 6	shribalajiitisujangarh@gmail.com	

Annexure: Training Details

Training and Employment Projections:

Year	Total Candidates	Women	People with Disability
	Estimated Training # Total	Estimated Training # Women	Estimated Training # PwD
2025-26	150	NA	NA
2026-27	150	NA	NA
2027-28	200	NA	NA

Data to be provided year-wise for next 3 years

Training, Assessment, Certification, and Placement Data for previous versions of qualifications:

Qualification Version	Year	Total Candidates				Women				People with Disability			
		Trained	Assessed	Certified	Placed	Trained	Assessed	Certified	Placed	Trained	Assessed	Certified	Placed
3.0	2022-23	139	115	113	NA	NA	NA	NA	NA	NA	NA	NA	NA
3.0	2023-24	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA
3.0	2024-25	162	128	122	NA	NA	NA	NA	NA	NA	NA	NA	NA

Applicable for revised qualifications only, data to be provided year-wise for past 3 years.

List Schemes in which the previous version of Qualification was implemented:

1. PMKVY
- 2.

Content availability for previous versions of qualifications:

☒ Participant Handbook ☒ Facilitator Guide ☐ Digital Content ☐ Qualification Handbook ☐ Any Other:

Languages in which Content is available:

1. Hindi
2. English

Annexure: Blended Learning

Blended Learning Estimated Ratio & Recommended Tools:

Refer NCVET “Guidelines for Blended Learning for Vocational Education, Training & Skilling” available on:

<https://ncvet.gov.in/sites/default/files/Guidelines%20for%20Blended%20Learning%20for%20Vocational%20Education,%20Training%20&%20Skilling.pdf>

S. No.	Select the Components of the Qualification	List Recommended Tools – for all Selected Components	Offline : Online Ratio
1	☒ Theory/ Lectures - Imparting theoretical and conceptual knowledge	● Books/ e-books ● Presentations ● Reference Material ● Audio / Video Modules	30:70
2	☒ Imparting Soft Skills, Life Skills, and Employability Skills /Mentorship to Learners	● Self-Learning Videos ● Broadcasts ● Mobile Learning ● Curated Digital content	30:70
3	☒ Showing Practical Demonstrations to the learners	● Video Content ● E-Resource library ● AR/ VR/ XR	30:70

4	☑Imparting Practical Hands-on Skills/ Lab Work/ workshop/ shop floor training	• Training tools (tools list attached) • Video Play • Presentations	30:70
5	☑Tutorials/ Assignments/ Drill/ Practice	• Online Question Bank • Mobile Quick test app • MCQ based tests	30:70
6	☑Proctored Monitoring/ Assessment/ Evaluation/ Examinations	• Assessment engine for Essays • Up-loadable file examinations • Mock test sessions	30:70
7	☑On the Job Training (OJT)/ Project Work Internship/ Apprenticeship Training	• Online tests • Offline assessments	30:70

Annexure: Detailed Assessment Criteria

Detailed assessment criteria for each NOS/Module are as follows:

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
ELE/N3193: Control Panel Assembly - Preparation & Component Installation	Introduction and Understanding Work Requirements	8	12	-	-
	PC1. Introduction of mount, install, and connect internal electronic modules, devices, and components on the control panel as per design specifications and safety standards.	2	3	-	-
	PC2. Communicate with the supervisor to understand the production schedule and daily targets and plan the production activities based on supervisor instructions and job priorities.	2	3	-	-
	PC3. Refer to updated drawings, job manuals, and work instructions for accuracy.	2	3	-	-
	PC4. Ensure the availability of materials, including modules and standard electrical components.	2	3	-	-
	Preparation & Component Installation	32	48	-	-
	PC5. Use digital BOM (Bill of Materials), and smart tools (like torque-controlled screwdrivers) to accurately mount components in modular enclosures.	2	3	-	-
	PC6. Visually inspect components for any physical damage or defects.	2	3	-	-

	PC7. Ensure proper positioning of the panel as per prescribed safety and ergonomic guidelines.	2	3	-	-
	PC8. Verify that slots and bases for plug-in devices are prepared as per design specifications.	2	3	-	-
	PC9. Check for drilled holes and mounting points before installing different components.	2	3	-	-
	PC10. Use recommended tools and test devices for precise assembly.	2	3	-	-
	PC11. Ensure tools and equipment are in good condition before starting assembly.	2	3	-	-
	PC12. Install terminal strips, neutral bus, and relays as per the provided schematics.	2	3	-	-
	PC13. Place transformers, power supplies, and other components in designated locations as per BOM.	2	3	-	-
	PC14. Follow the schematics to assemble the control panel accurately.	2	3	-	-
	PC15. Use proper insulation techniques to avoid electrical short circuits.	2	3	-	-
	PC16. Select appropriate wire gauges for interconnections between components.	2	3	-	-
	PC17. Secure all components using fasteners, screws, and connectors as per specifications.	2	3	-	-
	PC18. Follow local electrical codes and industry standards for safe installation.	2	3	-	-
	PC19. Return tools and equipment to storage after completing daily activities.	2	3	-	-
	PC20. Inspect the assembled panel to ensure all devices are securely installed.	2	3	-	-
	NOS Total	40	60	-	-
ELE/N3194: Control Panel Wiring, Testing & Compliance	Wiring & System Integration	16	26	-	-
	PC1. Route and arrange wiring using proper cable management techniques.	1	2	-	-
	PC2. Use color-coded wires to facilitate identification and troubleshooting.	1	2	-	-
	PC3. Perform wiring using automated wire cutting/stripping machines, digital wire labeling systems for accuracy and speed.	1	2	-	-
	PC4. Install wire ducts and conduits to ensure safe and organized wiring.	1	2	-	-
	PC5. Ground and shield electrical connections to minimize interference.	2	3	-	-
	PC6. Ensure proper insulation of high-voltage components to prevent electrical hazards.	2	3	-	-
	PC7. Implement measures to control overheating and ensure ventilation.	2	3	-	-
	PC8. Install control switches, push buttons, and indicator lamps as per specifications.	2	3	-	-

	PC9. Ensure compatibility of wiring with relays, circuit breakers, and control devices.	2	3	-	-
	PC10. Check surge protection and safety circuits to prevent voltage fluctuations.	2	3	-	-
	Reporting & Compliance	10	15	-	-
	PC11. Identify and report any errors or inconsistencies in the assembly process.	2	3	-	-
	PC12. Document defective components and inform the supervisor for replacements.	2	3	-	-
	PC13. Report shortages of consumables such as connectors, screws, and fasteners.	2	3	-	-
	PC14. Complete daily assigned tasks as per production schedule.	2	3	-	-
	PC15. Maintain compliance with electrical safety and quality standards.	2	3	-	-
	Productivity, Quality & Safety	14	19	-	-
	PC16. Meet daily and monthly production targets as per the company's work plan.	2	2	-	-
	PC17. Use digital multimeters and IoT-enabled test benches for real-time fault detection and quality validation	2	2	-	-
	PC18. Prevent electrostatic discharge (ESD) damage by using protective measures.	2	3	-	-
	PC19. Identify and correct repetitive defects during the assembly process.	2	3	-	-
	PC20. Maintain a clean and organized workstation for efficiency and safety.	2	3	-	-
	PC21. Identify and report assembly line issues to avoid production delays.	2	3	-	-
	PC22. Follow all workplace health, safety, and environmental regulations.	2	3	-	-
	NOS Total	40	60	-	-
DGT/VSQ/N0101 - Employability Skills (30 hours)	Introduction to Employability Skills	1	1	-	-
	PC1. understand the significance of employability skills in meeting the job requirements	-	-	-	-
	Constitutional values – Citizenship	1	1	-	-
	PC2. identify constitutional values, civic rights, duties, personal values and ethics and environmentally sustainable practices	-	-	-	-
	Becoming a Professional in the 21st Century	1	3	-	-
	PC3.explain 21st Century Skills such as Self Awareness, Behavior Skills, Positive attitude, self-motivation, problem-solving, creative thinking, time management, social and cultural awareness, emotional awareness, continuous learning mindset etc.	-	-	-	-

Basic English Skills	2	3	-	-
PC4. speak with others using some basic English phrases or sentences	-	-	-	-
Communication Skills	1	1	-	-
PC5. follow good manners while communicating with others	-	-	-	-
PC6. work with others in a team				
Diversity & Inclusion	1	1	-	-
PC7. communicate and behave appropriately with all genders and PwD	-	-	-	-
PC8. report any issues related to sexual harassment	-	-	-	-
Financial & Legal Literacy	3	4	-	-
PC9. use various financial products and services safely and securely	-	-	-	-
PC10. calculate income, expenses, savings etc.	-	-	-	-
PC11. approach the concerned authorities for any exploitation as per legal rights and laws	-	-	-	-
Essential Digital Skills	4	6	-	-
PC12. operate digital devices and use its features and applications securely and safely	-	-	-	-
PC13. use internet and social media platforms securely and safely	-	-	-	-
Entrepreneurship	3	5	-	-
PC14. identify and assess opportunities for potential business	-	-	-	-
PC15. identify sources for arranging money and associated financial and legal challenges	-	-	-	-
Customer Service	2	2	-	-
PC16. identify different types of customers	-	-	-	-
PC17. identify customer needs and address them appropriately	-	-	-	-
PC18. follow appropriate hygiene and grooming standards	-	-	-	-
Getting ready for apprenticeship & jobs	1	3	-	-
PC19. create a basic biodata	-	-	-	-
PC20. search for suitable jobs and apply	-	-	-	-
PC21. identify and register apprenticeship opportunities as per requirement	-	-	-	-
NOS Total	20	30	-	-
Grand Total	100	150	-	0

Annexure: Assessment Strategy

This section includes the processes involved in identifying, gathering, and interpreting information to evaluate the Candidate on the required competencies of the program.

Mention the detailed assessment strategy in the provided template.

1. Assessment System Overview:

- Batches assigned to the assessment agencies for conducting the assessment on SDMS/SIP or email
- Assessment agencies send the assessment confirmation to VTP/TC looping SSC
- Assessment agency deploys the ToA certified Assessor for executing the assessment
- SSC monitors the assessment process & records

2. Testing Environment:

- Confirm that the centre is available at the same address as mentioned on SDMS or SIP
- Check the duration of the training.
- Check the Assessment Start and End time to be as 10 a.m. and 5 p.m.
- If the batch size is more than 30, then there should be 2 Assessors.
- Check that the allotted time to the candidates to complete Theory & Practical Assessment is correct.
- Check the mode of assessment—Online (TAB/Computer) or Offline (OMR/PP).
- Confirm the number of TABs on the ground are correct to execute the Assessment smoothly.
- Check the availability of the Lab Equipment for the particular Job Role.

3. Assessment Quality Assurance levels / Framework:

- Question papers created by the Subject Matter Experts (SME)
- Question papers created by the SME verified by the other subject Matter Experts
- Questions are mapped with NOS and PC
- Question papers are prepared considering that level 1 to 3 are for the unskilled & semi-skilled individuals, and level 4 and above are for the skilled, supervisor & higher management
- Assessor must be ToA certified & trainer must be ToT Certified
- Assessment agency must follow the assessment guidelines to conduct the assessment

4. Types of evidence or evidence-gathering protocol:

- Time-stamped & geotagged reporting of the assessor from assessment location
- Centre photographs with signboards and scheme specific branding
- Biometric or manual attendance sheet (stamped by TP) of the trainees during the training period
- Time-stamped & geotagged assessment (Theory + Viva + Practical) photographs & videos

5. Method of verification or validation:

- Surprise visit to the assessment location
 - Random audit of the batch
 - Random audit of any candidate
6. Method for assessment documentation, archiving, and access
- Hard copies of the documents are stored
 - Soft copies of the documents & photographs of the assessment are uploaded / accessed from Cloud Storage
 - Soft copies of the documents & photographs of the assessment are stored in the Hard Drives

On the Job: Each module (which covers the job profile of Assembly and Wiring Assistant Operator -Standard Control Panel) will be assessed separately.

1. The candidate must score 50% in each module to successfully complete the OJT.
2. Tools of Assessment that will be used for assessing whether the candidate is having desired skills and etiquette of dealing with customers, understanding needs & requirements, assessing the customer and perform Soft Skills effectively:
 - Videos of Trainees during OJT
 - Answer Sheets of Question Banks
 - Assessing the Log Book entries of Trainees at Employer location
 - Employer Performance Feedback.
3. Assessment of each Module will ensure that the candidate is able to:
 - Understand the basic principles of AC, DC and electronic circuits.
 - Work effectively at the workplace
 - Basic health and safety practice.

Annexure: Acronym and Glossary**Acronym**

Acronym	Description
AA	Assessment Agency
AB	Awarding Body
ISCO	International Standard Classification of Occupations
NCO	National Classification of Occupations
NCrF	National Credit Framework
NOS	National Occupational Standard(s)
NQR	National Qualification Register
NSQF	National Skills Qualifications Framework
OJT	On the Job Training

Glossary

Term	Description
National Occupational Standards (NOS)	NOS define the measurable performance outcomes required from an individual engaged in a particular task. They list down what an individual performing that task should know and also do.
Qualification	A formal outcome of an assessment and validation process which is obtained when a competent body determines that an individual has achieved learning outcomes to given standards.
Qualification File	A Qualification File is a template designed to capture necessary information of a Qualification from the perspective of NSQF compliance. The Qualification File will be normally submitted by the awarding body for the qualification.
Sector	A grouping of professional activities on the basis of their main economic function, product, service or technology.
Long Term Training	Long-term skilling means any vocational training program undertaken for a year and above. https://ncvet.gov.in/sites/default/files/NCVET.pdf