PART II — ENGLISH ROLE PROFILE

1. Role Purpose

The Automation Technician assembles MET's special-machine and robotic-cell electrical control cabinets and field connections in accordance with approved drawings and work instructions. Work spans material preparation, mechanical panel assembly, wiring and labeling, de-energized checks, supervised functional tests and installation assistance at customer sites.

What good performance looks like

The objective is not simply to connect wires. It is to install correct equipment, create reliable and neat terminations, maintain traceability of every connection, measure and record nonconformities, and report findings promptly and accurately.

2. Scope of the Role

- Check parts lists and schematics to identify DIN rails, ducts, terminals, protective devices, PLC/I/O, relays, drives and power supplies.
- Compare cabinet layouts, mounting positions, gland entries and ventilation requirements against approved drawings.
- Prepare and identify power, control, 24 VDC, sensor and field cables, using suitable termination methods.
- Connect sensors, valves, motors, safety switches and operator devices against the specified cable/terminal list.
- Complete visual and de-energized checks and support prescribed measurements and function tests under assigned supervision.
- Identify missing components, wrong cable length, schematic conflicts, labeling errors and assembly defects early.
- Coordinate with production, mechanical assembly, automation, electrical design and commissioning personnel.
- Keep work orders, test and handover checklists, cable labels, as-built markups and issue closure records current.

Outside the Role without Authorization

Unapproved schematic changes, bypassing safety devices, unauthorized energized measurements, disabling protective conductors or starting machinery without approval are not permitted.

3. Core Responsibilities — Panel Mechanical Assembly

3.1 Job Preparation and Material Verification

- Confirm the approved panel layout, schematic revision, parts list and work order before fabrication begins.
- Match device identification, electrical ratings and mounting accessories against ordered parts; quarantine damaged or incorrect items.
- Plan rail, duct, terminal, enclosure and gland space based on actual dimensions and servicing requirements.

3.2 Mounting Devices and Enclosures

- Mount DIN rails, ducts, terminals, MCB/MCCB, protection devices, contactors, safety relays, drives, PLCs and I/O in the specified arrangement.
- Measure and make neat, deburred entries for glands, operator devices and ventilation hardware without compromising enclosure protection.
- Follow manufacturer spacing and ventilation guidance and preserve wiring bend radius, access and future service clearance.

3.3 Workmanship and Final Assembly Check

- Use the correct tools and manufacturer-recommended terminal/fastener tightening torques, recording checks when required.
- Remove burrs, sharp edges, swarf and loose metal; prevent damage to insulation and keep enclosures clean.
- Match device tags, terminal order and installed hardware to the latest approved schematic and report discrepancies.

3.4 Tangible Deliverables

Checked parts list; correctly assembled mounting plate; identified devices; photos or inspection record; open issues requiring technical approval.

4. Wiring, Termination and Field Devices

4.1 Cable Preparation and Terminal Work

- Verify cable type, conductor cross-section, number of cores, identification, color/code and strip length from cable lists and approved instructions.
- Use the specified stripping, ferrule and crimp tools without cutting strands; inspect terminations and apply pull checks where required.
- Provide service loops, maintain cable bend radii and position identifiers where they remain readable during maintenance.

4.2 Segregating Power, Controls and Signals

- Identify AC supplies, 24 VDC, protective earthing, relay control, PLC DI/DO, AI/AO and field circuits using drawing references.
- Separate VFD/servo motor and high-power wiring from analog, sensor and communications circuits; follow approved shielding and PE termination designs.
- Do not assume a conductor function from color alone: check actual schematic, labeling and applicable country/project conventions.

4.3 Sensors, Valves, Motors and Operator Devices

- Distinguish PNP/NPN, two-/three-wire sensors, digital/analog inputs and 0–10 V or 4–20 mA interfaces using device datasheets.
- Wire valve coils, motors, drives, safety switches, light curtains, pushbuttons and limit sensors against approved terminal and cable schedules.
- Check pin assignments, mechanical locking, seals and strain relief on M12 and other industrial connectors and cable glands.

4.4 Tangible Deliverables

Identified/terminated cable sets; documented terminal checks; traceable cable labels; field cable route notes; as-built discrepancy reports as needed.

5. Measurements, Quality and Safe Verification

5.1 Before Power Is Applied

- Follow assigned safety competence, lockout/tagout and verification of de-energized conditions before work.
- Inspect for loose strands, exposed conductor, wrong terminals, metal swarf, missing blanks, poor clamping and labeling mistakes.
- Perform authorized continuity and protective-conductor checks against approved procedures and verified isolation.

5.2 Choosing and Using Instruments

- Distinguish continuity, resistance, AC and DC voltage functions; confirm meter range, lead sockets and applicable measurement safety ratings.
- Use a clamp meter on the correct conductor and suitable range and record observations against expected circuit behavior.
- Perform insulation or specialized electrical tests only under the approved method, appropriate equipment and competent supervision.

5.3 Controlled Functional Testing and Fault Reports

- Complete the agreed pre-energization checklist with the responsible commissioning engineer and document open hazards.
- Verify PLC I/O and field devices by tag and terminal; manage unexpected mechanical motion and electrical risk during tests.
- Record drawing page, terminal, device, test method/range, expected and measured values and the observation date for each fault.

Critical safety boundary

Never bypass safety relays/switches, work on energized equipment without authorization or enter a robot work envelope without controlled permission. Work is governed by competence, risk assessment and approved procedures.

6. Field Installation, Integration and Commissioning Support

6.1 Preparing the Site

- Compare actual cable routes, ducts, conduits, carrier movement, gland entries, service access and cable allowance to field installation plans.
- Match cabinet, robot cabinet, valve island, motor/sensor junction and operator station tags to the final connection schedule.
- Follow customer-site work permits, lifting/handling rules, working-at-height requirements and site PPE policies.

6.2 Supporting I/O and Functional Checks

- Under instructions from PLC/robot engineers, confirm cable continuity, correct terminal arrival and sensor/actuator I/O states.
- Check shielding, protective earthing and communications cable termination against drawings without modifying controller parameters independently.
- Label temporary test arrangements clearly and ensure no unapproved temporary bypass or connection remains after commissioning.

6.3 Handover and Revisions

- Identify field nonconformities, track corrective actions and close them with appropriate engineering authorization.
- Provide annotated connection changes, cable/terminal markups and photos to the responsible documentation function.
- Complete cabinet clean-up, covers, gland checks, routing inspection and final production/field handover lists.

6.4 Field Deliverables

Traceable field connection checklist; I/O verification record; open/closed wiring issues; authorized correction log and handover photos.

7. Typical Daily, Weekly and Project-Cycle Activities

Cadence	Typical activities
Daily	Review work order/drawings; prepare parts; assemble and wire; inspect quality and safety; record work progress.
Weekly	Review assembly defects and missing stock; drawings/revisions; tests and delivery readiness; tool and safety routines.
At project gates	Material receipt → panel layout → wiring → de-energized check → supervised tests → field installation → as-built → handover.
As required	Coordinate with lead technician/engineer/site; trace cable faults; assist with suitable PCB or connector soldering.

8. Expected Tangible Deliverables

- Correctly installed cabinet devices, terminal strips and high-quality identification.
- Prepared and verified cable harnesses, terminations and field connections.
- Visual inspection, continuity and other approved test records.
- Documented wrong components, supply gaps, drawing discrepancies and assembly defects.
- As-built markups, pictures and work-order closeout notes.
- I/O checks and wiring-verification support during FAT/SAT.
- Clean, safe and organized workshop/site work and protected equipment.

Team Interfaces

Electrical designers own technical schematics and selection; PLC/robot engineers own control logic and supervised tests; mechanical/manufacturing teams coordinate mounting; logistics/procurement supports material availability. The technician provides clear, factual shop-floor and field feedback across these interfaces.

9. Decision Rights and Limits

Area	Technician contribution	Approval / escalation
Drawing/material mismatch	Identifies and records deviations; recommends a practical correction.	Electrical engineer approves schematic/BOM changes.
Wiring and testing	Builds per approved instructions and records results.	Energized or critical testing requires delegated permission.
Machine safety	Installs approved components, reports hazards.	No safety bypass or independent unapproved start-up.
Purchasing	Reports incorrect/missing items and technical requirements.	Commercial purchasing is approved by authorized personnel.

10. Candidate Profile

10.1 Core Qualifications

- Vocational/high-school or associate-degree background in electrical, electronics, mechatronics or automation, or equivalent practical experience.
- Ability to understand basic panel schematics, AC/DC supply, protective devices, relay and PLC I/O or sensor functions.
- Safe use of hand tools, wire-stripping, ferrule/crimp and common electrical measurement equipment.
- Careful workmanship, safe working habits, tracing connections to drawings and effective team communication.

10.2 Advantageous Experience

- Assembling complete automation cabinets from scratch, supporting field wiring and I/O checks.
- Soldering PCBs/electronic parts or connectors designed for solder joints; elementary rework or fault inspection.
- Practical exposure to VFD/servo systems, PLC/HMI, PNP/NPN/analog sensors, safety relays, shielding and panel testing.
- Reading EPLAN/AutoCAD Electrical schematics; technical English and ability to travel for approved site assignments.

11. Tools, Working Environment and Typical Tasks

Group	Typical use
Hand tools	Strippers, crimp/ferrule tools, torque screwdrivers, drills/punches and measurement tools.
Instruments	Multimeter, clamp meter, approved continuity/verification tools; specialist tests only under authorized procedures.
Equipment	Rails, ducts, terminals, switchgear, PLC I/O, 24 VDC, drives, sensors, valves and robotic-cell cabling.
Workplaces	Teknopark İzmir production/workshop, special-machine assembly and customer site where required.

12. How Success Is Assessed

Metric	Expectation
Reliable workmanship	Connections, identification, fastening, service access and cable routing match approved documentation.
Verification and traceability	Checklists are complete, tests are recorded and issues are accurately reported.
Safety and schedule	No unsafe shortcuts; risks and material shortages are flagged early.

13. First 90 Days — Expected Progress

Period	Focus	Expected progress
First 30 days	Workshop, safety, materials, schematics and identification.	Carry out defined wiring and assembly tasks under supervision.
Days 31–60	Own a cabinet section and its inspection checklist.	Increasingly independent and traceable workmanship.
Days 61–90	Prepare for panel/site tests and close assembly defects.	Consistent quality and safe work within an assigned scope.

14. Offer-Stage Clarifications

Confirm work shifts/hours, workshop-versus-site allocation, travel assignments, permitted electrical testing scope and training, reporting line, compensation/benefits and PPE provision in writing.