JUPITER PRIME
Consulting • Training • Advisory
جوبيتر برايم للاستشارات والتدريب

COURSE BROCHURE

Power Cable Jointing and Termination Training Course

28 February – 4 March 2027
Cairo

jupiterprime.uk
info@jupiterprime.uk
Registered in the United Kingdom and Saudi Arabia

Power Cable Jointing and Termination Training Course

Ref: 3180_120856 **Date:** 28 February – 4 March 2027 **Location:** Cairo **Fees:** 4000 GBP

Power Cable Jointing and Termination is a 1-week training course for cable jointers, technicians and supervisors working on low and medium voltage circuits, built around a jointing method statement and inspection record. As networks expand and older paper insulated cables meet new polymeric ones, organisations need jointers whose work survives decades underground without partial discharge or moisture failure. Jupiter Prime Training presents power cable jointing and termination as a craft from cable end to energisation.

Why Power Cable Jointing and Termination Matters Now

Three pressures shape jointing work today. Distribution networks, solar farms and industrial plants are adding medium voltage circuits quickly, so more joints are made by less experienced hands. Many older circuits still carry paper insulated cable, and transition joints between old and new constructions demand careful technique. Asset owners also expect traceable records for every joint, because a single faulty termination can trip a feeder, damage switchgear or injure staff. The course rests on manufacturer jointing instructions and accepted electrical safety practice, described in general terms.

Who Gains Most from Power Cable Jointing and Termination

- Jointers preparing cable ends and fitting straight joints
- Technicians installing indoor and outdoor terminations on switchgear and transformers
- Supervisors checking workmanship and signing off joint records
- Maintenance staff repairing damaged cables after faults or excavation strikes
- Contractor crews working on utility, industrial and renewable energy sites

Cable crews gain most when jointers and their supervisors attend together and agree one standard of preparation and inspection.

Power Cable Jointing and Termination Capabilities

Participants read a cable's construction, control stress at every cut and prove a joint fit to energise.

- Identify conductor, insulation, screen and sheath layers on polymeric and paper cables — the jointer selecting the right kit
- Apply correct cutback dimensions and semiconductive screen removal — the supervisor accepting preparation quality
- Build straight joints and terminations with heat shrink and cold shrink components — the crew completing circuit repairs
- Specify screen and armour earthing arrangements at joints and terminations — the engineer protecting fault current paths
- Test finished joints with insulation resistance and sheath checks — the supervisor authorising energisation
- Prepare a jointing method statement with safe working controls — the site lead approving the task

Key Power Cable Jointing and Termination Terms

- Stress control — Use of tubes, cones or layers that spread the electric field where the cable screen ends.
- Semiconductive screen — A thin conductive layer over the insulation that keeps the electric field even and must be cut cleanly.
- Heat shrink — Polymer components that shrink tightly onto the cable when heated with a gas torch.
- Cold shrink — Pre-expanded rubber components held open by a core that is pulled out to let them contract.
- Screen earthing — Bonding the metallic screen to earth so fault and charging currents return safely.
- Transition joint — A joint connecting cables of different insulation types, such as paper to polymeric.

Power Cable Jointing and Termination Day by Day

Day 1: Cable Construction and Safe Working

- Conductor, Insulation, Screen and Sheath Layers — Identifying Cable Type Before Cutting
- Polymeric and Paper Insulated Constructions — Choosing Compatible Jointing Kits
- Permits, Isolation and Proving Dead — Safe Access to Cable Circuits
- Cable Spiking and Identification Checks — Confirming the Correct Cable
- Excavation, Joint Bay and Weather Protection — Controlling the Work Environment

Day 2: Cable Preparation and Stress Control

- Cutback Dimensions and Kit Instructions — Matching Preparation to Manufacturer Drawings
- Sheath, Armour and Screen Removal — Avoiding Nicks and Insulation Damage
- Semiconductive Screen Termination — Clean Edges That Prevent Discharge
- Stress Control Tubes, Cones and Mastics — Managing the Electric Field
- Cleaning, Solvents and Contamination Control — Keeping Interfaces Free of Moisture

Day 3: Straight Joints and Connectors

- Mechanical Shear Bolt Connectors — Torque and Contact Quality Decisions
- Compression Lugs and Ferrules — Die Selection and Crimp Inspection
- Heat Shrink Straight Joint Assembly — Sequencing Tubes and Sealing Layers
- Cold Shrink Straight Joint Assembly — Positioning Bodies Without Heat
- Transition Joints Between Paper and Polymeric Cables — Oil Barriers and Sealing

Day 4: Terminations, Earthing and Testing

- Indoor and Outdoor Terminations — Creepage, Sheds and Environment Choices
- Separable Connectors for Switchgear and Transformers — Interface Fit Checks
- Screen and Armour Earthing Arrangements — Fault Current Return Decisions
- Insulation Resistance and Sheath Integrity Tests — Accepting Finished Joints
- Common Joint Failure Modes — Learning from Discharge, Tracking and Water Ingress

Day 5: Practising the Jointing Method Statement

- Planning a Medium Voltage Straight Joint — Applying Preparation and Stress Control
- Planning an Outdoor Termination on a Pole or Transformer — Applying Termination Choices
- Planning a Fault Repair After an Excavation Strike — Applying Safe Working Controls
- Joint Inspection Records and Photographs — Traceable Evidence for Asset Owners
- Completing the Jointing Method Statement and Inspection Record — Sign-Off Before Energisation

Applying Power Cable Jointing and Termination After the Course

- Check the next joint's cutback and stress control steps against the kit drawing.
- Introduce a photographed inspection record for every joint made on site.

Power Cable Jointing and Termination Questions FAQ

What is power cable jointing and termination and why does it matter now?

It is the craft of connecting and ending power cables so they carry current and voltage safely for decades. It matters now because networks are growing quickly and many joints are made by newer staff.

Which roles gain most from power cable jointing and termination?

Jointers and termination technicians gain most, followed by supervisors who inspect and approve their work. Maintenance and contractor crews repairing damaged cables also benefit.

How does power cable jointing and termination differ from a cable design course?

It focuses on hands-on preparation, assembly and inspection of joints rather than cable sizing and route design.

What do you bring back from power cable jointing and termination?

You bring back a method statement and inspection record for jointing tasks. It covers safe access, preparation, assembly, earthing, testing and sign-off.

Power Cable Jointing and Termination: The Way Forward

The jointing method statement and inspection record first informs whether a crew may start work on a de-energised cable and whether the finished joint may be energised. Jointers follow it, supervisors sign it and asset owners keep it. After its first use, revisit the stress control steps, where small preparation errors cause most early failures.