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Company / Contractor Name: <i>[ENTER COMPANY / CONTRACTOR NAME]</i>	Doc No: <i>[DOC NO.]</i>

Document No.	<i>[ENTER DOCUMENT NUMBER]</i>		
Revision	<i>[00]</i>	Date	<i>[DD/MM/YYYY]</i>
Project Location	<i>[ENTER PROJECT LOCATION]</i>		
Project Name	<i>[ENTER PROJECT NAME]</i>		
Project No.	<i>[ENTER PROJECT NUMBER]</i>	Prepared By	<i>[ENTER NAME / DESIGNATION]</i>
Reviewed By	<i>[ENTER NAME / DESIGNATION]</i>	Approved By	<i>[ENTER NAME / DESIGNATION]</i>
Client / Owner	<i>[ENTER CLIENT / OWNER NAME]</i>	Main Contractor	<i>[ENTER MAIN CONTRACTOR NAME]</i>
Sub-Contractor	<i>[ENTER SUB-CONTRACTOR NAME]</i>	Applicable Standards	<i>[IEC 61439, IEC 60439, BS EN 60439]</i>

TEMPLATE NOTE: All fields in *[RED BRACKETS / ITALIC]* are placeholders. Replace each with your project-specific information before issue or use. Provided free of charge by HSE Documents for global HSE professionals.

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1. PURPOSE

This Method Statement establishes the technical work procedure, safety requirements, quality controls, and environmental measures applicable to the supply, installation, testing, and commissioning of Bus Duct and Bus Bar Trunking systems for the project identified in the title block above. It is applicable to all associated activities including support structure erection, mechanical jointing, electrical connection, earthing, insulation resistance testing, and protection of completed works.

This document shall be read in conjunction with the approved construction and shop drawings, the project electrical specifications, the Inspection & Test Plan (ITP), the Risk Assessment, and all requirements of [LOCAL AUTHORITY / REGULATORY BODY NAME]. All operatives and supervisory personnel shall be briefed on the contents of this Method Statement prior to commencement of works.

Primary applicable standards include IEC 61439 (Low-voltage switchgear and controlgear assemblies), IEC 60439, BS EN 60439, IEC 60364, and the manufacturer's published installation guidelines.

2. SCOPE OF WORK

The scope of works covered by this Method Statement includes, but is not limited to, the following activities:

- Receipt, inspection, and off-loading of bus duct units, bus bar trunking sections, joint kits, and associated accessories at site.
- Storage, handling, and protection of all materials in accordance with manufacturer recommendations and approved procedures.
- Setting out, fabrication, and installation of support steelwork, hangers, brackets, and cradles for bus duct and bus bar trunking runs.
- Installation of bus duct and bus bar trunking units along approved routes as indicated on construction drawings.
- Mechanical assembly and jointing of bus duct sections including application of specified torque values at all joint locations.
- Installation of tap-off units, plug-in boxes, and distribution boards where specified.
- Installation and connection of flexible sections and expansion joints at all structural and thermal movement locations.
- Earthing and bonding connections in accordance with IEC 60364-5-54 and project earthing drawings.
- Installation of fire-stopping assemblies at all penetrations through fire-rated walls, floors, and ceilings.
- Insulation resistance (IR) testing, earth continuity testing, and phase identification verification.
- Coordination and interface with civil, structural, mechanical, and other electrical trades.
- Completion of all QA/QC inspection records, test certificates, and as-built documentation.

3. RESPONSIBILITIES

Role / Designation	Responsibilities
Project / Site Engineer	Overall technical accountability for the bus duct and bus bar trunking installation; review and issue approved drawings; coordinate with the Main Contractor and Client; ensure compliance with specifications and applicable standards; approve method statements and ITPs.
Site Foreman / Supervisor	Direct day-to-day supervision of all bus duct and bus bar trunking installation activities; conduct daily toolbox talks; verify permit-to-work status before commencement; ensure correct installation sequence, safe use of lifting

	equipment, and accurate torque application at all joints; maintain site records and coordinate with other trade supervisors.
HSE Officer	Enforce compliance with the project HSE Plan and all applicable regulatory requirements; conduct pre-task HSE inspections; issue and close Permits to Work; investigate near-misses and incidents; maintain emergency response readiness; conduct random PPE audits.
QA/QC Inspector	Witness and record all hold-point and witness-point inspection activities per the Inspection & Test Plan (ITP); ensure all materials conform to approved submittals; verify calibration status of test instruments; complete and sign-off all quality records prior to energisation.

Additional roles may be added as required per [PROJECT / COMPANY ORGANISATIONAL CHART REFERENCE].

4. REQUIRED TOOLS & EQUIPMENT

The following tools, plant, and equipment shall be available on site prior to commencement of installation works:

1. Calibrated torque wrenches (range to suit manufacturer specified torque values, minimum 10–200 Nm)
2. Battery-powered or corded impact drivers with appropriate drive sockets
3. Insulation resistance (IR) tester — minimum 500 V / 1000 V DC, calibrated
4. Digital multimeter (CAT III rated, calibrated) for continuity and voltage verification
5. Phase rotation indicator / sequence tester
6. Laser alignment tool / optical level for alignment of bus duct runs
7. Steel measuring tape (5 m and 30 m) and spirit levels (600 mm and 1800 mm)
8. Percussion / rotary hammer drill with masonry and steel bits (SDS type)
9. Angle grinder with appropriate cutting and grinding discs (guards fitted at all times)
10. Electric or hydraulic crimping tool (where cable terminations are required at tap-off points)
11. Reciprocating saw / hacksaw for conduit and cable management works
12. Mobile elevating work platform (MEWP) / scissor lift or scaffold access (inspected and certified)
13. Cable block and tackle / chain block with certified rated capacity for heavy sections
14. Powder-actuated fixing tool (if applicable, with trained operator and permit)
15. Portable residual current device (RCD) protection for all 240 V portable tools
16. Calibration certificates for all measuring and testing instruments to be available on site

5. MATERIALS

All materials shall be in strict accordance with the approved material submittals and project specifications. No substitutions shall be made without prior written approval from the Engineer and Client. Materials shall comply with the applicable editions of IEC 61439 and BS EN 60439.

- Bus duct sections / bus bar trunking units — current rating, IP rating, and conductor material as specified
- Joint connection kits — supplied by bus duct manufacturer; include joint bus bars, insulation, hardware, and bolts
- Expansion / adjustment joint sections — installed at locations shown on drawings
- Tap-off units, plug-in units, and feeder boxes — as per distribution drawings and specifications
- End covers, blanking plates, and protective caps — for unused openings and run terminations

- Support steelwork — hot-dip galvanised (HDG) or stainless steel channels, brackets, and threaded rods
- Fixing hardware — stainless steel or HDG bolts, nuts, washers, and chemical anchors
- Earth bonding conductors — green/yellow PVC-insulated copper, sized to project specification
- Cable lugs and compression connectors — for tap-off and termination points (BS EN / IEC compliant)
- Fire-stopping materials — certified intumescent collars, pillows, or mortar for rated penetrations
- Phase identification labels, circuit tags, and cable markers — as per project labelling schedule

6. HANDLING & STORAGE

6.1 Fabrication / Pre-assembly (if applicable)

Where pre-assembly of support steelwork or prefabrication of bus duct sections is required, all works shall be carried out in a designated, clean, and dry area. Fabricated elements shall be clearly tagged with reference numbers matching approved drawings and marked with the correct installation location. Steel sections shall be deburred and treated for corrosion protection where cut. Pre-assembled components shall be protected with bubble wrap or foam padding prior to transportation to the installation area.

6.2 Receipt & Inspection at Site

Upon delivery, the Site Foreman and QA/QC Inspector shall inspect all bus duct and bus bar trunking materials against the approved delivery note and material submittal. The inspection shall verify: correct type, rating, and quantity; manufacturer's identification markings; absence of transit damage including dents, cracked insulators, or contaminated bus bars; IP rating label intact; inclusion of all joint hardware, installation manuals, and test certificates. Non-conforming or damaged materials shall be clearly identified, tagged 'HOLD — DO NOT USE', segregated from accepted materials, and reported to the Site Engineer for disposition.

6.3 Unloading, Shifting & Storage

Bus duct sections shall be unloaded using a suitable lifting device. Lifting points shall only be those designated by the manufacturer. Spreader bars shall be used where section length requires to avoid point loading. No sections shall be dragged across abrasive surfaces. Materials shall be stored horizontally on timber bearers in a covered, weatherproof area, protected from direct moisture, dust, and chemical contact. Minimum clearance of 150 mm from ground level shall be maintained. Electrical joint hardware, torque bolts, and small accessories shall be stored in a locked, labelled container. Storage areas shall be kept clean and orderly throughout the project duration.

7. INSTALLATION / WORK PROCEDURE

7.1 Pre-Commencement Checks & Preparation

7.1.1 Verify that all relevant Permits to Work (PTW), including Electrical Isolation Certificates where adjacent live systems exist, are issued and active before any works commence.

7.1.2 Conduct a pre-task Toolbox Talk (TBT) covering the scope of work, identified hazards, PPE requirements, emergency procedures, and individual responsibilities.

7.1.3 Confirm that approved construction and shop drawings (latest revision) are available at the workface and that all dimensions, routing, and fixings match site conditions.

7.1.4 Verify that the civil and structural works (slabs, walls, penetrations, and embedded fixings) are complete and accepted by the relevant trade prior to bus duct installation in the affected zone.

7.1.5 Confirm all test instruments are within calibration validity and that calibration certificates are available on site.

7.1.6 Inspect the installation area for any obstructions, wet surfaces, or hazards. Ensure adequate lighting (minimum 200 lux at the workface) and ventilation.

7.1.7 Inspect MEWP or scaffold access platform: confirm current inspection certificate, stability on the working surface, and correct guardrail configuration.

7.2 Support & Hanger System Installation

7.2.1 Set out hanger and support positions from approved drawings using a laser level or chalk line. Mark anchor positions on the structural element.

7.2.2 Drill fixings using a percussion drill and appropriate bit diameter per the anchor manufacturer's specification. Blow out all drilling debris with compressed air and inspect the hole depth.

7.2.3 Install anchor bolts or chemical anchors and allow full cure time per manufacturer's datasheet before applying load (chemical anchors: minimum 24 hours at 20°C unless faster-cure type specified).

7.2.4 Fix HDG or stainless steel channel sections, threaded rods, and cradle brackets. Verify horizontal and vertical alignment using a spirit level or laser level before final tightening.

7.2.5 Ensure support spacing does not exceed the manufacturer's maximum specified span for the bus duct current rating and section dimensions. Install additional intermediate supports at any bend, offset, or elbow location.

7.2.6 Apply anti-vibration pads between the bus duct casing and the support cradle where specified by the manufacturer or where structurally transmitted vibration is anticipated.

7.3 Bus Duct / Bus Bar Trunking Installation

7.3.1 Begin installation from a defined datum point (typically from the main distribution board or incoming substation) and work progressively along the approved route, section by section.

7.3.2 Inspect each bus duct section immediately before installation: confirm cleanliness, absence of moisture on conductor surfaces, and integrity of insulators and casing.

7.3.3 Lift each section into the support cradle using appropriate lifting equipment. For heavy sections (>25 kg), a minimum of two operatives or mechanical assistance is mandatory. Sections shall not be dragged or levered against support edges.

7.3.4 Align sections using the internal alignment pins and external alignment aids provided by the manufacturer. Check horizontal level and vertical plumb continuously during installation using a spirit level. Correct any misalignment before progressing.

7.3.5 At bends, elbows, tees, and offset sections, verify the correct manufactured fitting is selected and oriented as per drawings. Do not force-fit sections — if resistance is met, re-check alignment and support positioning.

7.3.6 Install flexible sections at all locations indicated on drawings including points where the bus duct crosses structural expansion joints, transitions between different structural elements, or where seismic separation is required.

7.4 Jointing & Connection Works

7.4.1 Clean all joint bus bar contact surfaces with an approved electrical contact cleaner and lint-free cloth immediately before assembly. Do not use abrasives unless specifically permitted by the manufacturer for oxidised surfaces. Apply anti-oxidant compound where specified.

7.4.2 Assemble the joint bus bar plates, insulation barriers, and hardware in the sequence specified in the manufacturer's installation manual. Confirm correct phase colour coding of bus bar connections: L1 (Brown), L2 (Black), L3 (Grey), Neutral (Blue), Earth (Green/Yellow) — or as per the project specification.

7.4.3 Insert all joint bolts finger-tight initially to allow minor alignment adjustment. Tighten bolts in a cross-pattern sequence using a calibrated torque wrench to the manufacturer's specified torque value. Record the torque value, bolt reference, and inspector's initials on the Torque Log Sheet.

7.4.4 After achieving the specified torque, apply a tamper-evident marker (paint pen or torque mark) across the bolt head and casing to confirm subsequent movement.

7.4.5 Install tap-off and plug-in units in the manufacturer-specified positions. Lock plug-in units in the engaged position and verify mechanical interlock operation where fitted. Install blank covers on all unused tap-off positions to maintain the IP rating of the system.

7.5 Earthing & Bonding

7.5.1 Install earth continuity conductors between adjacent bus duct sections at every joint, and at all support cradles and structural connections, in accordance with IEC 60364-5-54 and the approved earthing drawings.

7.5.2 Bond the bus duct casing to the main earthing terminal (MET) using a conductor sized per the project specification. All earth connections shall be made to clean, unpainted, and corrosion-free surfaces using approved crimped lugs and stainless steel or HDG hardware.

7.5.3 Verify earth continuity using a calibrated multimeter or earth loop impedance tester between each section and the MET. Record all readings on the Earth Continuity Test Record Sheet.

7.6 Quality Checks During Installation

7.6.1 The QA/QC Inspector shall witness and sign off all ITP hold points before work progresses past each stage. No section shall be closed in or concealed until the required inspection has been completed and documented.

7.6.2 A walk-down inspection shall be conducted after completion of each floor level or zone, verifying alignment, support fixing, joint integrity, and earth bonding continuity.

7.6.3 Insulation Resistance (IR) testing shall be performed prior to energisation, testing each phase conductor to earth and phase-to-phase at the applicable test voltage. Readings shall be recorded and compared against the minimum acceptance criteria stated in Section 9.

7.7 Protection of Completed Work

7.7.1 Temporary end caps and dust covers supplied by the manufacturer shall be installed on all open ends of bus duct sections during the construction phase.

7.7.2 Bus duct runs in areas subject to ongoing civil or mechanical works shall be protected with polythene sheeting, timber, or foam padding secured with ties — not adhesive tape applied directly to casing.

7.7.3 A physical or visual barrier with a warning notice ('ELECTRICAL EQUIPMENT — DO NOT DAMAGE') shall be installed in areas where mechanical works or other trades present risk of impact or damage.

7.8 Trade Interfaces

7.8.1 The Site Foreman shall notify the civil / structural trade supervisor at least 48 hours before drilling into any structural element. The Structural Engineer's approval shall be obtained for non-standard fixing locations.

7.8.2 Penetrations through fire-rated walls and floors shall be reinstated with certified fire-stopping materials immediately after the bus duct section is installed. The civil or passive fire protection trade shall execute fire-stopping works under the supervision of the QA/QC Inspector.

7.8.3 The bus duct installation team shall coordinate routing with the HVAC, plumbing, and secondary structural works teams to prevent clashes. BIM coordination or 2D clash-check drawings shall be used where provided by the project.

8. HEALTH, SAFETY & ENVIRONMENT (HSE)

All works shall comply with the project HSE Plan, the applicable regulations of [LOCAL HSE AUTHORITY / REGULATORY BODY NAME], and the requirements listed below:

Toolbox Talk (TBT): A task-specific TBT shall be conducted by the Site Foreman prior to commencement of each working shift. Attendance shall be recorded on the TBT Register. TBT content shall cover identified hazards, control measures, PPE, and emergency procedures.

Mandatory PPE: Hard hat; safety footwear (steel-toed, anti-static); high-visibility vest; safety glasses with side shields; electrical-rated insulating gloves (Class 00 minimum where proximate to live parts); leather or cut-resistant gloves for handling bus duct sections; hearing protection in high-noise areas; dust mask (P2) during drilling operations.

Working at Height: All works at height above 1.8 m shall be carried out from an inspected MEWP or erected scaffold with full guardrail protection. Fall arrest harness and lanyard shall be worn by all operatives when working from a MEWP (anchor point on the MEWP basket). No improvised working platforms (e.g., standing on bus duct sections, ladders as working platforms) are permitted.

Electrical Safety: All portable 240 V tools shall be connected through an RCD. All power tools shall be PAT tested and tagged within validity. Where adjacent live systems are present, an Electrical Isolation Certificate and a Permit to Work shall be in place before works commence. Operatives shall maintain minimum approach distances from live conductors at all times.

Manual Handling: Mechanical lifting aids shall be used for bus duct sections exceeding 25 kg. Manual handling of heavy sections shall be by a minimum of two operatives using correct techniques. Manual handling risk assessments shall be reviewed at the TBT.

Chemical / SDS Compliance: Safety Data Sheets (SDS) for all chemicals (contact cleaners, anti-oxidant compounds, anchor adhesives) shall be available at the point of use. Appropriate chemical-resistant gloves shall be worn during handling. Waste solvents and chemical containers shall be disposed of through an approved waste contractor.

Waste & Environmental Controls: Waste shall be segregated into metal, general waste, chemical waste, and packaging streams in accordance with the project waste management plan. No waste shall be discharged to drainage systems. Cardboard and packaging from bus duct deliveries shall be removed daily.

Emergency Procedures: The location of the nearest first aid station, fire assembly point, and emergency contact numbers shall be communicated at every TBT. In the event of an electrical incident, the electrical supply shall be isolated at the nearest upstream isolation point before any casualty assistance. The emergency response procedure and first aid arrangements shall comply with the project HSE Plan.

Activity-Specific Hazard — Torquing Operations: Operatives applying torque to joint bolts in confined or overhead positions shall use a reaction bar or stabiliser to prevent wrench kick. The torque wrench shall be reset after each joint to avoid under or over-tightening.

Permit to Work Requirements: [ENTER PTW REQUIREMENTS]

Risk Assessment Reference: [ENTER RA REFERENCE]

9. QUALITY CONTROL & INSPECTION

All inspection hold points and witness points shall be formally conducted and signed off by the QA/QC Inspector and, where stipulated, the Client Representative or Engineer, prior to works proceeding past each inspection stage. Results shall be recorded on the appropriate quality record forms referenced in the ITP.

#	Inspection Activity	Reference Document	Acceptance Criteria
1	Material delivery inspection — verify bus duct units, bus bar	Approved Material Submittal; IEC 61439	All items match specification; no physical damage; correct IP rating and current rating confirmed.

	trunking sections, joint kits, fasteners, and accessories against approved submittals.		
2	Support and hanger system check — spacing, alignment, and fixing method.	Approved Shop Drawings; IEC 61439	Spacing within manufacturer limits; fixings torqued to specification; no visible deformation.
3	Bus duct / bus bar trunking alignment and level check prior to jointing.	Approved Shop Drawings	Centreline deviation within ± 5 mm; level within 2 mm/m; no mechanical stress on sections.
4	Inspection of mechanical joint connections — bolt torque verification.	Manufacturer Installation Manual; IEC 61439	All joint bolts torqued to manufacturer-specified values; Torque Wrench Calibration Certificate on file.
5	Electrical continuity check of bus bar conductors (each phase and neutral).	IEC 61439; Project Specification	Continuity confirmed on each conductor; resistance within manufacturer tolerance.
6	Insulation Resistance (IR) test prior to energisation — each phase to earth and phase to phase.	IEC 60364-6; Project Specification	IR reading: minimum 1 M Ω (or as per project specification); tested at 500 V or 1000 V DC per manufacturer guidance.
7	Earthing and bonding continuity verification.	IEC 60364-5-54; Project Specification	Earth conductor continuity confirmed; bonding connections secure; resistance readings within specification.
8	Penetration and fire-stopping inspection at fire-rated barriers.	Approved Shop Drawings; NFPA 101; Local Fire Code	Certified fire-stopping materials correctly installed; no gaps; materials to match fire-rated assembly.
9	Inspection of expansion joints and flexible sections at thermal and structural movement points.	Manufacturer Manual; Approved Drawings	Expansion joints located at specified positions; correctly oriented; movement gaps match drawings.
10	Pre-energisation final visual inspection and documentation review.	IEC 61439; Project ITP	All connections complete; no loose hardware; all protective covers and end caps in place; QA records signed.

ITP Reference: **[ENTER ITP DOCUMENT REFERENCE NUMBER]**

10. REFERENCE DOCUMENTS

The following standards and project documents shall be referred to for this activity:

- IEC 61439 — Low-voltage switchgear and controlgear assemblies (all parts, latest edition)
- IEC 60439 / BS EN 60439 — Low-voltage switchgear and controlgear assemblies
- IEC 60364 — Low-voltage electrical installations (all applicable parts)
- IEC 60364-5-54 — Selection and erection of electrical equipment — Earthing arrangements and protective conductors
- IEC 60364-6 — Verification of electrical installations
- ISO 9001:2015 — Quality Management Systems
- ISO 14001:2015 — Environmental Management Systems
- ISO 45001:2018 — Occupational Health & Safety Management Systems

- IOSH — Managing Safely (risk assessment and method statement principles)
- NFPA 101 — Life Safety Code (for fire-stopping requirements at penetrations)
- BS EN 363 — Personal fall protection equipment
- OSHA 29 CFR 1926.502 — Fall protection systems criteria
- Bus duct / bus bar trunking manufacturer's installation manual (project-specific)
- Approved Material Submittals — Ref: **[ENTER REFERENCE]**
- Approved Shop / Construction Drawings — Ref: **[ENTER DRAWING REGISTER REFERENCE]**
- Project Specifications — **[RELEVANT SECTION / CLAUSE REFERENCE]**
- Project HSE Plan — Ref: **[ENTER REFERENCE]**
- Inspection & Test Plan (ITP) — Ref: **[ENTER REFERENCE]**
- Risk Assessment — Ref: **[ENTER REFERENCE]**

11. DOCUMENT REVISION HISTORY

Rev.	Date	Description of Change	Approved By
00	[DD/MM/YYYY]]	Initial Issue	[ENTER NAME / DESIGNATION]
01	[DD/MM/YYYY]]	[Description of revision]	ENTER NAME / DESIGNATION

12. APPROVAL & SIGN-OFF

Prepared By	Reviewed By	Approved By	Client / Owner Representative
Prepared By Name: [ENTER NAME] Designation: [ENTER DESIGNATION] Signature: _____ Date: [DD/MM/YYYY]	Reviewed By Name: [ENTER NAME] Designation: [ENTER DESIGNATION] Signature: _____ Date: [DD/MM/YYYY]	Approved By Name: [ENTER NAME] Designation: [ENTER DESIGNATION] Signature: _____ Date: [DD/MM/YYYY]	Client / Owner Representative Name: [ENTER NAME] Designation: [ENTER DESIGNATION] Signature: _____ Date: [DD/MM/YYYY]

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