



Electrical Isolation Policy

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Contents

Introduction.....	4
1.0 Purpose	5
2.0 Legislation/Guidance	5
3.0 Definitions	6
4.0 PERMIT TO WORK	7
5.0 GENERAL ELECTRICAL WORK	7
6.0 Safe System Of Work.....	8
7.0 Planning Work On Electrical Equipment.....	8
8.0 Procedure For Working On Dead Electrical Equipment.....	8
9.0 Safety Equipment	9
10.0 Safety Locks, Caution Notices & Danger Notices	9
11.0 Operation Of Low Voltage Switchgear.....	10
12.0 Remote & Automatically Controlled Switchgear	10
13.0 Live Working	10
Appendix A : Management Organogram.....	11

Introduction

This policy document establishes the minimum requirements for safely isolating potentially hazardous electrical energy sources

The policy and its associated documents apply as defined to all colleagues employed or contracted to the Company as appropriate to the work being undertaken. It is the duty of all colleagues so involved to apply the requirements of these documents to their work.

Signed:



Name: David Dignam

Position: CEO Sigma Group

Date: 20th May 2026

1.0 Purpose

This document forms part of Sigma GRP Ltd safety management arrangements and sets the minimum mandatory requirements for planning, authorising, isolating, proving dead, locking off, working on and re-energising electrical systems and equipment under Sigma control or where Sigma personnel/contractors may be exposed to electrical risk.

The policy applies to Sigma employees, subcontractors and authorised contractors without exception. It applies to offices, projects, client premises, temporary works, maintenance activities and any work on or near electrical systems, including systems with alternative, secondary or stored energy sources.

2.0 Legislation/Guidance

2.1 Primary statutory requirements

The policy shall be applied in accordance with the Health and Safety at Work etc. Act 1974, the Management of Health and Safety at Work Regulations 1999, the Electricity at Work Regulations 1989, the Construction (Design and Management) Regulations 2015 where construction activities apply, and the Provision and Use of Work Equipment Regulations 1998 where electrical work equipment is selected or used.

2.2 Electricity at Work Regulations 1989

The Electricity at Work Regulations require systems to be constructed, maintained and operated so as to prevent danger so far as is reasonably practicable. Work on or near live conductors is prohibited unless the Regulation 14 tests are satisfied: it is unreasonable in all the circumstances for the conductor to be dead, it is reasonable in all the circumstances for the work to be carried out live, and suitable precautions are taken to prevent injury.

2.3 Recognised electrical guidance and technical standards

The following recognised guidance and standards shall be used where relevant to the work:

- HSE HSR25 Memorandum of Guidance on the Electricity at Work Regulations;
- HSE HSG85 Electricity at Work - Safe Working Practices;
- HSE GS38 Electrical test equipment for use on low voltage electrical systems;
- Electrical Safety-First Best Practice Guide 2 Issue 4 - Safe Isolation Procedures;
- BS 7671:2018+A4:2026 Requirements for Electrical Installations;
- IET Guidance Note 3 Inspection and Testing, 10th Edition; and the Electrotechnical Assessment Specification (EAS) competence framework.

2.4 Healthcare, critical environments and client specific systems

Where works are undertaken in healthcare or other critical environments, the applicable client electrical safety rules and NHS Health Technical Memoranda shall also be followed, including

- HTM 06-01 Electrical services supply and distribution,
- HTM 06-02 Electrical safety guidance for low voltage systems and
- HTM 06-03 Electrical safety guidance for high voltage systems.

The client Authorised Person/Senior Authorised Person arrangements take precedence for controlled LV/HV systems.

2.5 Low carbon, stored energy and alternative sources

Isolation planning shall consider all possible sources of electrical energy, including DNO/mains supplies, generators, UPS, solar PV, battery/EESS, EV charging systems, back feeds, control supplies, PoE, capacitors, induced voltages and any client or tenant supplies. Where PV, battery storage or EV charging equipment is involved, relevant manufacturer instructions, MCS/IET Codes of Practice and BS 7671:2018+A4:2026 requirements shall be applied.

3.0 Definitions

Electrical equipment: Anything used, intended to be used or installed for use to generate, provide, transmit, transform, rectify, convert, conduct, distribute, control, store, measure or use electrical energy.

- **Live:** Connected to a source of electrical energy or otherwise at a voltage. Uninsulated or exposed live parts are hazardous where they can be touched directly or indirectly, or where the available fault energy could cause electric shock, burns, arcing or explosion.
- **Live work:** Work on or near live conductors or exposed live parts where danger may arise. This includes live testing and fault finding. Live work is not routine work and must only be authorised where the Regulation 14 justification is recorded and suitable precautions are in place.
- **Dead:** Not electrically live and not electrically charged. Dead status must be proven using an approved voltage indicator and proving unit/known live source immediately before work starts and, where the work area changes, at the point of work.
- **Isolated:** Disconnected and separated from every source of electrical energy, secured to prevent inadvertent re-energisation and verified dead at the point of work.
- **Lockout/Tagout (LOTO):** A control process using personal locks, lock-off devices, tags and, where required, group lock boxes to prevent unauthorised or inadvertent operation of an isolation point. Tags alone do not provide isolation security.
- **Permit to Work / Electrical Isolation Permit:** A formal safety control document used where required by this policy, client rules or risk assessment. A permit is not a substitute for competence, risk assessment, method statement, safe isolation, supervision or testing; it records the authorised scope, isolation, precautions, handover and cancellation arrangements.
- **Low Voltage (LV):** Voltage exceeding extra-low voltage but not exceeding 1,000 V AC or 1,500 V DC between conductors, or 600 V AC or DC between conductors and earth, unless a client rule defines a lower operational threshold.
- **High Voltage (HV):** Voltage exceeding LV. In healthcare and client-controlled systems, HV rules and Authorised/Senior Authorised Person arrangements may apply at thresholds defined by the client safety rules.
- **Competent Person (Electrical):** A person with suitable electrical knowledge, training, qualification, experience, supervision and understanding of the specific system and risks to prevent danger. Competence shall be task-specific and evidenced.
- **Authorised Person (Electrical):** A person formally appointed by Sigma or the client to control specified electrical operations, issue/cancel safety documents, and authorise isolation, switching, live testing or energisation within the limits of their appointment.

- **Arc flash:** A fault condition involving electric arc energy capable of causing burns, blast, pressure wave, molten metal and fire. Arc flash risk shall be considered for switching, testing, fault finding, switchgear work and work near exposed live parts.

4. Permit To Work

The Electrical Isolation Permit available on Novade shall be used for any activity where electrical work presents a significant risk, may affect safety-critical services, involves distribution or switchgear systems, involves multiple or alternative sources of supply, requires live testing or fault finding, or where a permit is required by client rules, project RAMS or the project risk assessment.

Permit-controlled activities include: isolation of electrical distribution systems; switching/operation of main incoming supplies, MCCBs, ACBs, bus-section switches, switch-fuses, distribution boards or mains circuit boards where persons or safety-critical systems may be affected; work on or near exposed conductors; work involving barriers, covers, interlocks or shrouds being removed from distribution equipment; CT metering works; work on earthing where the supply remains live; work on UPS, generator, PV, EESS, EV charging or other back feed systems; remote/automatic switchgear; and work in healthcare or other critical environments.

Live working is prohibited unless specifically authorised in writing under the Live Working section of this policy. Live testing and fault finding shall only be undertaken by competent persons using GS38 compliant equipment, suitable PPE, barriers, supervision/assistance and a documented risk assessment.

Permits shall identify the authorised person, competent person, exact equipment/circuit, isolation points, locking arrangements, test-for-dead requirements, residual/stored energy controls, adjacent live equipment, time limits, hand back requirements and cancellation/sign-off arrangements.

5. General Electrical Work

A permit may not be required for low-risk, non-intrusive electrical work carried out by a competent electrical person where the circuit is newly installed and not connected to a source of energy, or where like-for-like accessory replacement is carried out on a correctly identified, isolated, locked-off and proven-dead final circuit with no effect on critical systems. This shall still be controlled by risk assessment, method statement, safe isolation and appropriate supervision.

Lamp replacement by semi-skilled operatives shall only be permitted where the task has been risk assessed, the equipment is suitable for non-electrical replacement, access arrangements are safe, and there is no exposure to live parts. Where covers, fixed wiring or control gear are accessed, the work shall be carried out by a competent electrical person.

Waste electrical equipment, lamps, batteries and redundant components shall be segregated and disposed of in accordance with environmental legislation, WEEE requirements, client arrangements and project waste procedures.

6. Safe System Of Work

All electrical work shall be planned, risk assessed and undertaken under a suitable safe system of work. The normal policy is dead working. Live work is only permitted where the Regulation 14 justification has been documented and approved.

Risk assessments and method statements shall include: task scope; competence and supervision; system information and drawings; exact isolation points; all possible sources including PV, EESS, UPS, generator and control/back feed supplies; LOTO arrangements; prove-live/prove-dead/prove-live sequence; stored energy discharge; arc flash and shock controls; adjacent live equipment; PPE and insulated tools; emergency arrangements; communication; access/egress/lighting/working space; permits; reinstatement; inspection, testing and certification requirements; and record drawing/as-built updates.

The authorised person or project manager shall ensure persons undertaking electrical work are competent for the task, have received the relevant briefings, understand the limitations of the isolation, and have authority to stop work where the system condition differs from the RAMS or permit.

Point-of-work dynamic risk assessment shall be completed before work starts and repeated if the work area, circuit identification, client operations, access, environment or system status changes.

7. Planning Work On Electrical Equipment

Planning shall confirm the work scope, drawings and asset information, supply characteristics, earthing arrangement, prospective fault current where relevant, load criticality, shutdown window, affected stakeholders, safety-critical systems, emergency arrangements, competence, supervision and required permits.

The primary and secondary isolation points shall be identified before work starts. Secondary sources include generators, UPS, PV, batteries/EESS, EV chargers, capacitors, control supplies, fire/security/IT systems, tenant supplies, auto-changeover systems and any other potential back feed.

Client and building management approval shall be obtained before isolating any circuit that may affect life safety, fire alarm, security, medical, refrigeration, IT/EPOS, lifts, pumps, critical plant or business operations. Refusal to permit isolation shall not be treated as permission to work live.

Where work affects clinical, healthcare, critical or high-risk environments, notification and approval shall be obtained from the relevant Authorised Person, duty holder and affected department before isolation or energisation.

8. Procedure For Working On Dead Electrical Equipment

Before work starts, the competent person shall confirm adequate isolation, working space, access, lighting, barriers and control of adjacent live parts. Any uncertainty in circuit identification, labelling or system condition shall stop the work until resolved.

The circuit or equipment shall be positively identified using drawings, labels, tracing, test results and visual inspection. Labels shall never be relied upon as the sole means of identification.

The equipment shall be disconnected from every source of electrical energy, including alternative and back feed sources. Isolation shall be secured using suitable lock-off devices and personal locks. Keys shall remain under the control of the person carrying out the work or in an agreed group lock system.

The test instrument shall be GS38 compliant and proved on a proving unit or known live source immediately before use. The circuit shall then be tested at the point of work between all live conductors and between

each live conductor and earth/CPC as applicable. The test instrument shall be proved again immediately after testing.

Fuses or links shall be in safe keeping away from the isolator by an authorised person (Electrical) or competent person (Electrical). Under no circumstances must the fuse or links be left unattended by or near the isolator.

If a plug has been withdrawn, steps shall be taken to ensure that it cannot be reconnected to the electrical supply while work is taking place on the circuits or apparatus.

Where stored energy, induced voltage or back feed is possible, capacitors and equipment shall be discharged and, where required by risk assessment or HV/client rules, temporary earths shall be applied only after proving dead and using equipment rated for the available fault energy.

Caution notices shall be placed at isolation points and danger notices used to identify adjacent live equipment. Barriers, shrouds or temporary insulation shall be used where there is a risk of inadvertent contact with live parts nearby.

Before reinstatement, the work area shall be checked, covers and barriers reinstated, tools and temporary earths removed, terminations verified, inspection and testing completed, and all affected persons notified. Re-energisation shall be authorised, controlled, staged where appropriate and recorded.

9. Safety Equipment

Safety equipment shall be selected from the risk assessment and suitable for the voltage, prospective fault current, arc flash risk and working environment. PPE is a last line of defence and shall not replace isolation, barriers, covers or safe systems of work.

Minimum equipment shall include: GS38 compliant voltage indicator and proving unit; calibrated multifunction/test instruments where required; insulated tools to BS EN 60900; suitable lock-off devices, personal locks, tags and warning notices; barriers/shrouds/temporary insulation; and task-specific PPE.

Insulating gloves shall comply with BS EN 60903, be of a voltage class suitable for the task, inspected before use, electrically tested within the required interval and worn with suitable leather protectors where required. Damaged or out-of-test insulating PPE shall be removed from service.

Arc-rated clothing, face shield/hood, gloves and other arc flash PPE shall be determined by arc flash assessment, manufacturer guidance, client rules and task risk assessment. The spelling and terminology shall be 'arc flash', not 'arch flash'.

Contractors shall provide their own suitable PPE, calibrated instruments, insulated tools and LOTO equipment unless otherwise agreed, and shall provide evidence of inspection/calibration on request.

10. Safety Locks, Caution Notices & Danger Notices

Caution notices shall be fixed to every isolation point controlling equipment on which work is taking place. Danger notices shall be fixed on or adjacent to live apparatus and areas where adjacent live parts remain energised.

Safety locks shall be personal to the competent person or controlled through an agreed group lock-box system. Tags shall state the person responsible, date/time, circuit/equipment, reason for isolation and contact details.

Locks shall only be removed by the person who applied them, or under a documented emergency lock removal process authorised in writing by the Authorised Person/Authorising Engineer after confirming the person is safe, the work is complete or suspended, and re-energisation will not create danger.

Where fuses or links are removed for isolation, they shall be retained securely away from the point of isolation and shall not be left in or adjacent to the equipment.

11. Operation Of Low Voltage Switchgear

Main incoming supplies, switchboards, bus-section switches, ACBs/MCCBs, generator/UPS changeover equipment and distribution switchgear shall only be operated by competent and authorised persons familiar with the installation and authorised switching arrangements.

Switching operations shall be planned, risk assessed and, where necessary, controlled by switching schedule, permit, client approval and arc flash precautions. Covers and switchgear doors shall remain closed during operation unless a specific risk assessment authorises otherwise.

12. Remote & Automatically Controlled Switchgear

Before work on remote, automatic or interlocked switchgear, all remote control, automatic restart, BMS, PLC, timer, generator, UPS, fire alarm interface and other control features shall be identified and rendered inoperative where necessary to prevent unexpected energisation or movement.

Where control circuits, relays, interlocks or automatic features are worked on, the permit or method statement shall define exactly what may be worked on, what remains live, how inadvertent operation is prevented, and how functional testing/reinstatement will be controlled.

13. Live Working

The normal policy is dead working. Work on or near live conductors is strictly prohibited unless all three Regulation 14 conditions are satisfied and recorded: it is unreasonable in all the circumstances for the conductor to be dead; it is reasonable in all the circumstances for the work to be carried out live; and suitable precautions are taken to prevent injury.

Live testing and fault finding may be permitted only where dead testing cannot achieve the purpose of the work, and only by competent persons using GS38 compliant instruments, insulated probes/leads, barriers, suitable PPE, adequate lighting/access, no lone working, emergency arrangements and written authorisation proportionate to the risk.

A live work authorisation shall record the reason dead working is not practicable, persons involved, limits of work, shock and arc flash controls, rescue/emergency arrangements, communication method, supervision/standby person, and cancellation/hand back requirements.

No person shall be pressured by programme, client refusal to isolate, operational inconvenience or cost to undertake unjustified live work.

Appendix A : Management Organogram

