

Electrical Safety Policy

A Bright Solution Ltd. is fully committed to the implementation of an Electrical Safety program.

This policy applies to all operations where employees used electrical equipment as part of their work duties.

It shall be the responsibility of every employee who used electrical equipment whilst on company business to ensure that they comply with the contents of this policy

It shall be the responsibility of line Management to ensure that this policy is implemented throughout the company.

ASSESSMENT OF RISKS ASSOCIATED WITH ELECTRICAL EQUIPMENT

A Risk Assessment of hazard associated with the use of electrical equipment has been performed and is retained electronically for distribution. These Risk Assessments give information relating to the associated hazards when using electrical equipment on company and customer premises, along with controlled measures to be implemented to minimize or reduce the likelihood of injury. It shall be the responsibility of line Management to ensure that the contents of these Risk Assessments are passed onto all employees

PREVENTION AND CONTROL TECHNIQUES

Competent Persons

- Persons carrying out the testing and/or repair of electrical equipment, or carrying out installation work on electrical equipment or its associated connections must have appropriate technical knowledge, training and information to enable them to work safely.

General Safety Precautions

- No live work is to be performed on electrical circuits operating over 50 volt except for test purposes
- Due care must always be exercised when switching off main power supplies to ensure that only the intended circuits are isolated. Lock Out/Tag Out (LOTO) systems must be used, where necessary.
- Switch off and withdraw the plug on items of portable electrical equipment prior to making any alterations or modifying any circuitry.
- Do not handle any equipment with wet hands and do not work in close proximity to water supplies or other earthed metalwork where there may be a risk of putting one hand on earthed metal and the other on live equipment. If equipment is suspected of being live, switch off, and have its electrical status tested by a competent person. Record the test.
- The external metal casing of electrical apparatus and associated cables and conduits must be earthed as a legal requirement. Water and gas pipes, however, must not be used as earth points. Such pipes must be effectively bonded, to ensure that they remain at an equal electrical potential. Checks should be carried out at least annually, to ensure that this continues to be the case.
- On no account must a three-phase socket outlet be used to supply single-phase apparatus.
- Standard types of electrical fittings, such as 3-pin plugs, sockets and switches, should always be used as specified by manufacturers and in accordance with good practice (e.g. switches

must not be mounted upside down and single pole switches must not be wired into the neutral lead.)

- Where possible to do so, always use low voltage battery operated equipment.

Do's and Don'ts

- DO** check that all electrical items have an "in date" sticker
- DO NOT** use any item where the PAT test is out of date
- DO NOT** use any item that does not have a label treat as untested
- DO** check the condition and integrity of any electrical item prior to use
- DO** check plugs and leads prior to use
- DO NOT** attempt to repair faulty electrical items or fit plugs
- DO NOT** use privately owned equipment unless tested
- DO NOT** "Jockey" extension leads
- DO NOT** over-ride or change fuses until the original fault has been repaired
- DO** isolate faulty equipment from the mains
- DO NOT** attempt to hardwire any equipment to the mains
- DO** use an RCB if necessary
- DO NOT** overload wall sockets
- DO NOT** use electrical extension cables whilst fully rolled up
- DO** not use any item that appears to be overheating
- DO** report any faults as soon as practicable to do so
- DO NOT** leave faulty items lying around for others to use

Earthed Equipment

- **Class 1** Electrical Equipment is provided with one layer of insulation over the live conductors, and exposed metalwork is bonded to earth so that it cannot become live in the event of an insulation failure. The external metal casing of any item of electrical equipment must be earthed as a legal requirement. With correctly earthed supply installations and equipment, the risk of electric shock is virtually nil.
- The external casings or screens of all electrical equipment must be secured so that it is impossible to touch electrically live parts. If the equipment is disconnected from earth, a notice must be attached which makes this quite evident to any unsuspecting person. Only persons with appropriate knowledge and experience, i.e. competent persons, may work on unearthed equipment.

Double Insulated Equipment

- **Class 2** Electrical Equipment has all exposed metalwork separated from the conductors by two layers of insulation, so that the metalwork cannot become live. There is no earth connection and the operator's safety depends upon the integrity of the two layers of insulation.
- British double insulated equipment is marked with the symbol:



Residual Current Devices (RCD)

- Due to the fact that only **Class 1** and **Class 2** portable electrical equipment is used in the UK and that all power circuits in premises are earthed, it has been identified that a 30mA RCD will afford adequate protection.

- A 30mA Residual Current Device (RCD) is to be implemented where 240v portable electrical equipment is used in field operations.
- RCD's are to be examined for any signs of damage and tested (as per manufacturers recommendation) to ensure that the trip mechanism operated correctly, before issue by line management and before use by employee.
- All RCD's are to be Portable Appliance Tested every 12 months by a competent person.

Plugs

- Plugs which are incorrectly wired. All plugs must be wired by a competent person who should observe the following requirements:
 - The earth wire, striped green and yellow, is connected to the terminal marked E; this should be the longest of the three wires so that it is the last to become detached if the cable is strained.
 - The live wire (**brown**) is connected to the terminal marked L.
 - The neutral wire (**blue**) is connected to the terminal marked N.
 - The bared ends of the wires should be hidden under the retaining screws which should be screwed down tightly and no uninsulated wires should be visible in the plug top.
 - The cable should be firmly attached in place by clamping the outer insulating cover of the cable.
 - Never connect two items of electrical equipment to one plug.
- Equipment which is double insulated, or has an insulated exterior, is connected by 2-core cable, without an earth lead.

Fuses

- Fuses are intended to protect equipment against current overload. Other measures are necessary to protect against electric shock (see Residual Current Devices).
- A fuse must be located in the live conductor and must be of the correct rating, which is usually the lowest rating that will carry the appliance current continuously. Fuses in fixed distribution boards must be replaced by a competent person.
- The reason for a fuse blowing, or a circuit breaker tripping, must always be investigated by a competent person and replacement fuses must always be of the correct rating.

Cables and Extension Cables

- Cables on old or foreign equipment which are not colour-coded in the brown, blue, yellow/green colours (EC Convention) must be replaced by a competent person before bringing the equipment into use. Cables must be chosen so that their rating is sufficient to carry the current which will flow through them in both normal and abnormal conditions.
- Cables carrying power to and from equipment must be fitted with connecting plugs and sockets which do not leave bare live pins on disconnection, and insulating grommets must be used to secure cables passing through holes in metal chassis. As a further safeguard, flexible leads to portable equipment should be as short as possible; they should not cross gangways either to be walked on or run over by trolleys. Under no circumstances are flexible leads to be taken under doors or carpets. Wherever possible, trailing cables should be located within an appropriate cable duct, in order to achieve good housekeeping standards. Rubber and plastic covered cables should be kept well away from hot surfaces.
- Never use a coiled extension cable without first fully un-reeling the cable. The heat generated in a coiled cable carrying power can lead to the insulation melting. If there is no alternative to taking cables across a floor, then they should be protected with a suitable cable guard.

Hard Wired Equipment

- The periodic maintenance of hard wired electrical equipment should be undertaken by a competent person. The competent person or manufacturer of a piece of equipment will normally be in a position to specify what periodic inspection and maintenance (including tests for electrical safety) is required and which of these functions, if any, can be carried out by the user. Careful consideration must always be given to the means of isolating such equipment from the supply system prior to testing by means of correct isolation procedures.

Mains Electric Circuit Testing

- This is to be performed by a competent person at office premises at intervals not exceeding 5 years to ensure compliance with BS 7671.
- New electrical circuitry is to be installed and commissioned so as to ensure compliance with BS 7671.

Portable Equipment

- The term "portable" is not restricted to equipment which is normally moved around; it refers to all equipment which can be attached to an electrical system by a cable and plug.
- Within company premises line management/equipment users will perform a visual inspection of equipment on a regular basis for any obvious signs of damage to the equipment itself or the cable and plug, and when the equipment is moved or re-sited.
- Portable Appliance Testing (**PAT**) shall be performed on all portable electrical equipment by an internally appointed competent person.

PAT of Portable Equipment

- All 3-phase and hard-wired electrical equipment is to be electrically safety tested by a competent and qualified electrician on installation, and then every five years after that. It is the responsibility of the health and safety director to ensure these inspections are carried out and that test certificates are provided and maintained on file as evidence. All new electrical equipment brought onto company premises for the use in work activities shall be thoroughly inspected before use and then subject to PAT testing.
- All mains connected electrical equipment is subject to Portable and Transportable (PAT) electrical safety testing in accordance with the companies PAT test policy. The period between testing and inspection is dependant upon the type of equipment, its use, its portability and its environment, but as a maximum will be every 2 years.
- All users of electrical equipment must check that the equipment is not damaged in any way as well as having a PAT sticker or label on it that has a Test Expiry Date which is still current. If not, the equipment should not be used and should be quarantined or marked 'Do Not Use' when quarantine is impractical. Repair or retesting can then be arranged.
- Any employees bringing personal electrical equipment (radios, desk lights, kettles, computers etc) onto company premises must first have the equipment PAT Tested prior to use.

Recommended Frequencies for Inspection and Testing

The recommended intervals between electrical tests are tabled below. These frequencies are based on the Institution of Engineering and Technology (IET), 'Code of Practice for In-Service Inspection and Testing of Electrical Equipment' and the Health and Safety Executive's HSG 107 'Maintaining Portable and Transportable Electrical Equipment'.

EQUIPMENT TO BE TESTED/VISUALLY EXAMINED	PAT & FORMAL VISUAL EXAM BY COMPETENT PERSON
Hand held Power tools (drills, etc.) and workshop equipment used in install, service, repair, manufacture,	3 months
110v power tools for grinding, cutting etc	3 months
Power Cleaning equipment (Vacuum cleaners, polishers, etc.)	12 months
Office equipment including, faxes, printers, photocopiers, laminators, IT equipment.	12 months
RCD's 30ma	12 months

New Equipment

- There is no requirement to carry out **PAT** on new items of electrical equipment prior to the equipment being put into first use; however a user check should be carried out to identify any obvious visual evidence of damage. If there are any signs of damage, the equipment must not be used and referred back to the supplier/manufacturer, and/or thoroughly tested for electrical safety.

Recording the Results

- The Electricity at Work Regulations requires that the results of electrical safety tests are recorded.
- For **PAT**, a register is to be produced by the competent person performing the tests and retained by the building custodian.
- For 5 yearly testing and inspection of the mains electric circuit, a Certificate of Conformity is to be issued by the competent person performing the inspection and retained by the building custodian.
- For hard wired electrical equipment testing and inspection, a Certificate of Conformity is to be issued by the competent person performing the inspection and retained by the building custodian.
- All "failed" equipment should be removed immediately for repair or disposal.

User Checks

Item	Area to check/examine	Line management/user check	Formal Visual Inspection by competent person
	<ul style="list-style-type: none"> • Signs of mechanical damage, overheating or corrosion 	x	x
	<ul style="list-style-type: none"> • Hardening of outer insulation 	x	x
	<ul style="list-style-type: none"> • Kinking of cable 	x	x

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Cable	<ul style="list-style-type: none"> Coiling of long lengths of cable 	x	x
	<ul style="list-style-type: none"> A situation where future mechanical damage or corrosion is likely 	x	x
Plug	<ul style="list-style-type: none"> Signs of mechanical damage or corrosion 	x	x
	<ul style="list-style-type: none"> Signs of overheating, e.g. discolouration or distortion 	x	x
	<ul style="list-style-type: none"> Cable clamp holding cable securely, where appropriate 	x	x
	<ul style="list-style-type: none"> Wires connected to correct terminals and of the correct length 	n/a	x
	<ul style="list-style-type: none"> Un-insulated ends of wires completely covered by the screws 	n/a	x
	<ul style="list-style-type: none"> Securing screws suitably tight 	n/a	x
	<ul style="list-style-type: none"> Fuse of correct rating fitted 	n/a	x
Equipment	<ul style="list-style-type: none"> Metal casing damaged 	x	x
	<ul style="list-style-type: none"> Grommet, or other protection at place where cable passes 	x	x

	through the casing, damaged or missing		
	<ul style="list-style-type: none"> Plastic casing of double insulated equipment damaged 	X	X
	<ul style="list-style-type: none"> Damaged or defective switches 	x	x



Signed.....
Mick Barrett
Director
8th August 2025



Signed.....
Sam Pailor
Director
8th August 2025