

ADVICE SHEET #7



GLOSSARY

An explanation of some electrical terms

17th Edition

The current standard to which all electrical installation work should comply and which came into force on 1st July 2008. Published by the Institute of Electrical Engineers. Significant changes to increase safety have been incorporated since the 16th edition.

Accessory

A component of the electrical installation taking the form of a socket or a switch, etc.

Appliance

An item of current-using equipment other than a motor or a light e.g. a washing machine or plug-in heater, etc.

Builder's supply

A temporary, specific arrangement of socket outlets, protected by at least a 30mA RCD device, used to supply construction workers and other tradesmen with electricity during the process of building etc. and intended to lower the chances of electric shock and fire caused by inadvertent contact with and damage to the fixed wiring found within the property.

Cartridge fuse

A fuse element of given rating held in a sealed, often opaque, tube. Best recognized as the 'thing that blows' in a plug. Can also be found in some consumer units and in the service head.

Circuit

An assembly of electrical accessories (sockets or lighting points and switches) supplied from the same origin and protected against over current by the same protective device.

Close fitting light

A light fitting that encloses the lamp and that effectively 'sits' on the ceiling. Some are in the shape of a drum, others more like a ship's bulkhead light. Very useful where there is low head room or there is a need to protect the lamp from water, physical damage, etc.

Common parts

Those areas of a property shared by all the occupants and used to reach the individual rooms and spaces i.e the entrance lobby, hallways and staircases, etc.

Conductors

Wires found in a length of cable or flex and consisting, in a domestic situation, of LIVE, NEUTRAL and EARTH.

Conduit

A tube of plastic or metal used to carry electrical conductors where a degree of protection is required.

Consumer unit

The modern term for a fuse board. Contains a number of miniature circuit breakers (MCBs), each of which protects a single circuit within the property.

Cooker switch

A heavy duty double pole switch used to isolate the electric oven/hob only. Can be supplied incorporating a single socket outlet. Must be located above the work surface, in clear view of a person using the cooker and within 2 metres of the device.

Double pole switch

A switch that breaks both the live and the neutral conductors at the same time to give a very high level of isolation. It cuts all the power to the device in an emergency, or for maintenance. Some have a neon light to show that power is flowing.

Earthing

The process of linking together and connecting to the mass of earth all metalwork associated with an electrical installation e.g. metal switch plates and conduit, central heating and water pipes, that may perpetuate a shock hazard following an electrical fault. The intention being to create a fault loop that encourages the operation of a protective device to disconnect the electrical supply to the fault.

Electrical installation

Every part of the system within a property responsible for the distribution, management and control of electricity.

Electrical installation certificate

This certificate is issued when a new circuit has been added to the installation or there have been significant changes made to one or more circuits. This certificate should also be issued when a new consumer unit has been fitted or any changes have been made to the supply equipment or the earthing and bonding conductors.

Equipotential bonding

The use of specific electrical conductors to link together all of the exposed metalwork and the electrical accessories within a room or area, thereby creating a zone where the chance of significant electric shock is reduced.

Extra low voltage (ELV) lights

Any lamp that runs at less than 50 volts. Normally found in the tiny, bright, recessed spotlights favoured in modern hallways and kitchens. Supplied via a transformer which can, in turn, be either one to each light fitting or powerful enough to supply up to 8 light fittings from a single unit. All transformers need to be accessible somehow for maintenance and/or replacement.

Fan isolator switch

This switch is normally located outside the bathroom and is used to completely isolate a timed or humidity controlled extractor fan from the power supply. This would be for maintenance, repair or replacement reasons. All such fans have a permanent supply of electricity that allows them to carry on running even though the lights in the room have been turned off. It is this supply that the fan switch cuts.

Fault

A circuit condition in which current flows through an abnormal or unintended path.

Fire alarm certificate

A registered document that records the success of the commissioning procedure and the type/criteria and extent of the Smoke Detection and Fire alarm system installed in a property.

Fuse

A device for limiting the amount of electrical current that can pass into a conductor. Employed to automatically function if a significant fault occurs in the circuit so that physical damage to people and property is limited.

Fused connection unit (FCU)

An electrical accessory that allows a fuse to be inserted into a circuit at any given point. For example, a ring main rated at 32 Amps can be used to supply power for a light, which uses cable that can only carry 6 Amps at most. Place an FCU with a 5 Amp fuse into the ring main and the light and its cable will be suitably protected. Some have switches built in, some don't; some have a glowing neon when they are in use. All are the same size as a normal light switch fitting.

Fused spur

Another name for a fused connection unit.

'Henley' block

A device that acts as a sort of 'T' junction for electricity cables to allow the supply of power to more than one consumer unit.

Intermediate switch

The type of switch needed in three way switching. It is the unit that sits in the 'middle' of the run of switches. In theory, one could have as many intermediate switches as one wished, although four is normally the maximum.

Isolation

Removal of electrical power from a device to make it 'dead'.

Lamp

The correct term for a bulb. Lamp life can be as high as 4000 hours if the right brand of lamp is fitted.

Main Bonding conductor

A protective conductor providing equipotential bonding.

Main earthing terminal

The terminal or bar provided for the connection of protective earth conductors.

Mains voltage lights

With all the appearance and characteristics of extra low voltage (ELV) lights but without the need for a 12 volt transformer, as they use 240 volt lamps.

Meter

A device for the measurement of the power consumed within a property over a period of time.

Miniature circuit breaker

A modern type of fuse, consisting of a rocker switch that can be re-set with ease by a person of no experience. Preferable to re-wireable fuses as they cannot be tampered with. They also show the presence of a permanent fault by refusing to be reset, in which case it's time to call the electrician. There can be up to 12 in a modern consumer unit, each protecting a different circuit.

Notifiable

Electrical work that must be brought to the attention of the local council, normally through the registration of a Minor Works or Electrical Installation Certificate with a recognised trade body such as NICEIC, NAPIT, ELECSA, etc.

NICEIC

The National Inspection Council for Electrical Installation Contractors

Over current

An electrical current in excess of the expected amount. Can be caused by short circuit or by simply plugging in too many electrical devices at the same time. An over current will cause the protective device to trip.

Part P

The specific section of the Building Regulations for England and Wales that relates to electrical installations in domestic properties. Part P provides safety regulations to protect householders, and requires most domestic electrical work to be carried out by government-registered electricians, or to be inspected by Building Control officers.

Pendant light fitting

Any light fitting that hangs from the ceiling, from the humble plastic bayonet fitting to a chandelier.

Periodic inspection report

A report, based on a thorough visual inspection of a significant part of the electrical installation and a series of meter tests, to determine the overall condition of the system. Presented with a series of graded recommendations describing the faults and deviations found.

Protective device

Commonly known as a 'fuse' and taking the form of a re-wireable fuse, a cartridge fuse or a miniature circuit breaker.

Public liability insurance

Insurance, for individuals and business owners, against liability exposure for accidental damage caused by them and/or their employees to people or property during the course of carrying out their work. A pre-requisite of Part 'P' registration.

RCD

A protective device that monitors the flow of electricity in any given cable and cuts the power in hundredths of a second if it detects a fault. Essential on all ground floor power circuits, on any socket that might supply equipment out doors and on all electric shower circuits. Can be incorporated into a socket, or located inside the consumer unit, where it can protect every socket in the property.

Re-wireable fuse

A fuse consisting of a device for holding a single strand of fuse wire of specific rating- normally 5Amp, 15Amp or 30Amp. The replacement wire is usually stored wrapped around a small card holder.

Re-wireable fuses are being replaced by Miniature Circuit Breakers in domestic installations.

Ring main

A circuit ('ring') of cable that starts and ends at the same protective device in the consumer unit, used to supply power to sockets and accessories in one particular part of the property e.g the sockets in the kitchen, or those of a particular floor. The cable must form an unbroken circle for the circuit to be safe, although the sockets etc. will still work even if there is damage or a loose connection.

Rocker switch

A standard light switch i.e. not a dimmer switch, which has a knob.

Service head

The name for the box that holds the largest fuse in the building and the property of the supply authority. Sometimes called the 'cut-out'. It protects the entire installation from overload etc.

Short circuit

A fault condition in which there is direct and unhindered contact between the live and neutral conductors in a circuit, causing severe overload. Normally checked by the operation of a protective device.

Split load board

A consumer unit whose circuits are arranged such that, although they are all protected by an RCD device, a fault is unlikely to cause the loss of all of the electrical power within the building. The circuits are divided between the two devices.

Supplementary bonding

The process of linking sinks, baths, taps and bathroom lights etc. with electrical cable to form a zone of reduced shock risk.

Supply Authority

The body in charge of all the equipment up to and including the electricity meter.

Supply equipment

Those parts of an electrical installation under the control of a Supply Authority i.e the incoming power cable, the service head and the meter.

Supply tails

The conductors that transfer electrical power from the meter to the consumer unit.

Temporary Disconnection of Supply

The temporary interruption of all electricity into a building to allow major work to be carried out e.g. the changing/addition of a consumer unit or the relocation of a meter. Must be arranged with the energy supplier e.g. Scottish Power, Powergen etc. by the account holder (normally the client) as a result of the Data Protection Act.

Transformer

A device for changing voltage from high to low values or vice versa.

Frequently employed in a domestic setting to allow the use of 12v lamps and shaver sockets in bathrooms.

Trunking

An enclosure of plastic or metal construction and usually square in section, used to protect and carry electrical conductors through a building. A removable lid usually allows for further installations at a later date.

Two way switching

The arrangement of light switches such that a light, or a number of lights, can be controlled from two positions e.g. the top and the bottom of a staircase.

Three way switching

The same as two way switching, except that the lights are controlled from three positions e.g. the top and the bottom of a staircase and also from a position by the front door, so that the hallway can be lit immediately upon entering the building at night.

Transformer

A device that, normally in a domestic situation, reduces the 240 volt standard current down to 12 volts for reasons of safety e.g. for an extractor fan situated close to a shower, or for the purpose of supplying a particular type of lamp.

Tripping

The operation of a protective device, breaking the circuit and leading to a loss of electrical power in part, or all of, the property.

Should you have any questions, please call me on 07812 000 658 to discuss them.

Arthur Hunt