

Best Practice Guide

4

**Electrical installation condition reporting:
Classification Codes for domestic and
similar electrical installations**

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Electrical installation condition reporting: Classification codes for domestic and similar electrical installations

Best Practice Guide 4

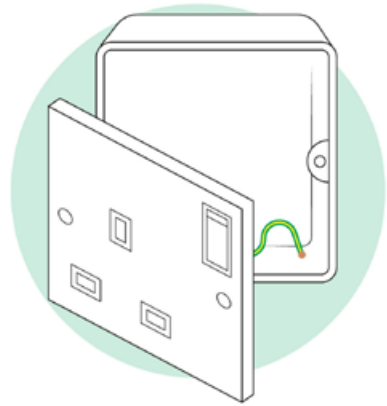
The aim of this Guide is to provide practical guidance for skilled persons competent in electrical inspection and testing on the use of the Classification Codes that need to be attributed to each observation recorded during the periodic inspection and testing of an electrical installation for the benefit of the person ordering the report.

The guidance is limited to the range of observations that are likely to be associated with domestic and similar electrical installations. It takes into account the publication of BS 7671.

Introduction

Every electrical installation deteriorates with use and time. Therefore, if the safety of the users is not to be put at risk, it is important that every installation is periodically inspected and tested by a competent person. Indeed, it is recommended in BS 7671 that every electrical installation is subjected to periodic inspection and testing (Regulation 135.1 refers).

The inspection and testing should be carried out at appropriate intervals in order to determine what, if anything, needs to be done to maintain the installation in a safe and serviceable condition.



Inspecting a socket-outlet

The results of the inspection and testing need to be detailed clearly in a report. Any observed damage, deterioration, defects, dangerous conditions and non-compliances with the requirements of the current edition of BS 7671 that may give rise to danger should be recorded (Regulation 653.2) and appropriately classified for remedial action.

It should be borne in mind that, as stated in the introduction to BS 7671, existing installations that have been installed in accordance with earlier editions of BS 7671 may not comply with the current edition in every respect, but this does not necessarily mean that they are unsafe for continued use or require upgrading.

Electrical Installation Condition Report

As its title indicates, this is a report and not a certificate. It provides an assessment of the current in-service condition of an electrical installation against the requirements of the edition of BS 7671 current at the time of the inspection, irrespective of the age of the installation.

The report is primarily for the benefit of the person ordering the work and of persons subsequently involved in additional or remedial work, or further inspections. The report may be required for one or more of a variety of reasons, each of which may impose particular requirements or limitations on the inspection and testing.

The report is required to include details of the extent of the installation and of any limitations of the inspection and testing (Regulation 653.2) including the reasons for any such limitations and the name of the person with whom those limitations were agreed. It should be noted that the greater the limitations applying, the lesser is the scope of the inspection and testing carried out, and hence the value of the report is correspondingly diminished. The report is also required to include a record of the inspection and the results of testing.

The report provides a formal declaration that, within the agreed and stated limitations, the details recorded, including the observations and recommendations, and the completed schedules of inspection and test results, give an accurate assessment of the condition of the electrical installation at the time it was inspected



A typical periodic inspection notice for an older installation

Purpose of periodic inspection, testing and reporting

The main purpose of periodic inspection and testing is to detect so far as is reasonably practicable, and to report on, any factors impairing or likely to impair the safety of an electrical installation.

The aspects to be covered include all of the following:

- Safety of persons against the effects of electric shock and burns
- Protection against damage to property by fire and heat arising from an installation defect
- Confirmation that the installation is not damaged or deteriorated so as to impair safety
- Identification of non-compliances with the current edition of BS 7671, or installation defects, which may give rise to danger.



Electrical installations in poor condition present risks of fire as well as electric shock

The inspector

All persons carrying out periodic inspection and testing of existing electrical installations must be competent (electrically skilled) to do so.



Electrical tests being carried out

To be competent, persons must as a minimum:

- Have sufficient knowledge and experience of electrical installation matters to avoid injury to themselves and others
- Be familiar with, and understand, the requirements of the current edition of BS 7671 including those relating to periodic inspection, testing and reporting
- Be skilled in the safe application of the appropriate test instruments and test procedures
- Have a sound knowledge of the particular type of installation to be subjected to periodic inspection and testing
- Have sufficient information about the function and construction of the installation to allow them to proceed in safety.

Guidance on safe isolation procedures is available in another Best Practice Guide No.2 'Guidance on the management of electrical safety and safe isolation procedures for low voltage installations' published by Electrical Safety First, which can be downloaded free of charge from **electricalsafetyfirst.org.uk** and the websites of some of the other contributing bodies.

Periodic inspection and testing procedures

The procedures for periodic inspection and testing differ in some respects from those for the initial verification of new installation work. This is because the subject of an electrical installation condition report is usually an installation which has been energised and in use for some time. Particular attention therefore needs to be given during the inspection process to assessing the condition of the installation in respect of:

- Safety
- Wear and tear
- Corrosion
- Damage and deterioration
- Excessive loading
- Age
- External influences
- Suitability for purpose (taking account of any changes in use or building extensions etc).

Also, for reasons beyond the inspector's control, the inspector may be unable to gain access to parts of the existing installation. For example, it is usually impracticable to inspect cables that have been concealed within the fabric of the building.

Such restrictions are likely to result in the inspection and testing of those parts of the installation being limited, or being omitted entirely from the process.

Where a limitation exists - whether agreed or operational - it should be recorded on the Electrical Installation Condition Report

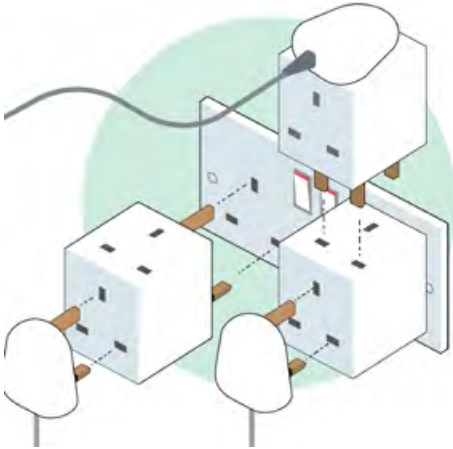
Where, during the course of inspection or testing, an immediate danger is found to be present in an installation (from an accessible exposed live part, for example), immediate action, even if only of a temporary nature, will be necessary to make it safe before continuing. However, the discovery of the dangerous condition should still be recorded in the report and classified accordingly.

Inspectors should note that, even in domestic premises, Section 3 of the Health and Safety at Work etc Act 1974 and the Electricity at Work Regulations 1989 effectively require them, with the agreement of the user or owner, to make every effort to make safe, before leaving site any dangerous conditions found in an installation.

For example, where there are accessible, exposed live parts due to blanks missing from a consumer unit, suitable temporary barriers should be provided to protect persons from direct contact with those live parts.

As persons using the installation are at risk, it is not sufficient simply to draw attention to the danger when submitting the electrical installation condition report. At the very least, the inspector must ensure that the client is made aware, at the time of discovery, of the danger that exists. An agreement should be made with the client as to the appropriate action to be taken to remove the source of danger (for example, by switching off and isolating the affected part of the installation until remedied), before continuing with the inspection or testing. In some cases, this may prevent inspection and testing work from continuing.

Some certification, registration and membership bodies make available 'dangerous condition notification' forms. These assist inspectors to record, and then to communicate immediately to the person responsible for the safety of the installation, any dangerous condition discovered.



Inadequate provision of socket-outlets

Observations

The periodic inspection and testing procedures should identify any damage, deterioration, defects and conditions within the installation that give rise, or potentially give rise, to danger. The procedures should also identify any inadequacies for which remedial action would contribute to a significant improvement in the safety of the electrical installation.

After due consideration, each such observed safety issue should be recorded at the appropriate point in the inspection or test results schedule, and further detailed in the 'observations' section of the report.

The observations should be based on the requirements of the edition of BS 7671 current at the time of the inspection, not on the requirements of an earlier edition current at the time the installation was constructed.

Each observation should be written in a clear, accurate and concise manner that is likely to be understood by the person ordering the work.

Technical terms should be avoided or explained unless it is known that the recipient is an electrical engineer or electrician, for example.

An electrical installation condition report is intended to be a factual report on the condition of an installation, not a proposal for remedial work.

Therefore, each recorded observation should describe a specific defect, omission or item for which improvement is recommended.

The observation should detail what the situation is, and not what is considered necessary to put it right.

Classification Codes

Each observation relating to a concern about the safety of the installation should be attributed an appropriate Classification Code selected from the standard codes C1, C2, C3 and FI. Each code has a particular meaning:

Code C1	'Danger present'. Risk of injury. Immediate remedial action required
Code C2	'Potentially dangerous'. Urgent remedial action required
Code C3	'Improvement recommended'
Code FI	'Further investigation required'

Only one of the standard Classification Codes should be attributed to each observation. If more than one Classification Code could be attributed to an observation, only the most serious one should be used (Code C1 being the most serious). Where the inspection and testing procedures identify an item which is dangerous or potentially dangerous, it should be identified in the inspection or test results schedule of the report by attributing to it a Classification Code C1 or C2, as appropriate, in the 'outcome' column of the inspection schedule or, where provided, the 'remarks' column of the test schedule.

Where the inspection and testing procedures identify an item which is not dangerous or potentially dangerous, but for which improvement is recommended, it should be identified in the inspection or test results schedule of the report by attributing to it a Classification Code C3 in the 'outcome' column of the inspection schedule or, where provided, the 'remarks' column of the test schedule.

Where during inspection and testing an immediate danger is observed that puts the safety of those using the installation at risk, Classification Code C1 (danger present) must be given.

Where a Classification Code C1 is considered appropriate, the client is to be advised immediately, and also in writing, that immediate remedial action is required (or has been taken) to remove the danger.

As previously indicated, this action is necessary to satisfy the duties imposed on the inspector and other duty holders by the Health and Safety at Work etc Act 1974 and the Electricity at Work Regulations 1989.

Wherever an item in the inspection or test results schedule has been attributed a Classification Code C1, C2, C3 or FI, there should be a corresponding observation in the 'observations' section of the report.

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In general terms, the Classification Codes should be used as follows:

Code C1 - Danger present Risk of injury (Immediate remedial action required)

This code should be used to indicate that danger exists, requiring immediate remedial action. The persons using the installation are at immediate risk. The person ordering the report should be advised to take action without delay to remedy the observed inadequacy in the installation, or to take other appropriate action (such as switching off and isolating the affected parts of the installation) to remove the danger. The inspector should not wait for the full report to be issued before giving this advice. As previously indicated, some certification, registration and membership bodies make available 'dangerous condition notification' forms to enable inspectors to record, and then to communicate immediately to the person ordering the report, any dangerous condition discovered.

Code C2 - Potentially dangerous (urgent remedial action required)

This code should be used to indicate that, whilst an observed inadequacy is not considered to be dangerous at the time of the periodic inspection, it would become an immediate danger if a fault or other foreseeable event was to occur in the installation or connected equipment. The person ordering the report should be advised that, whilst the safety of those using the installation may not be at immediate risk, remedial action should be taken as a matter of urgency to remove the source of potential danger.

Code C3 - Improvement recommended

This code should be used to indicate that, whilst an observed inadequacy is not considered to be a source of immediate or potential danger, improvement would contribute to a significant enhancement of the safety of the electrical installation.

FI - Further investigation required without delay

Usually, it should be possible to attribute a Classification Code to each observation without the need for further investigation.

The purpose of periodic inspection, as previously stated, is not to carry out a fault-finding exercise, but to assess and report on the condition of an installation within the agreed extent and limitations of the inspection. Therefore, where an observation can be attributed a Classification Code, further investigation would not be required for the purposes of completing the condition report.

Further investigation should be called for in respect of any observation that could reasonably be expected to reveal danger or potential danger. Further investigation should not be called for simply because it would be 'nice to know' – for example, why a socket-outlet is unearthed.

If an observation cannot be attributed a Classification Code due to reasonable doubt as to whether danger or potential danger exists, the outcome of the assessment must be reported to be unsatisfactory.

The person ordering the report should be advised that the inspection and/or testing has revealed a potential safety issue which could not, due to the agreed extent or limitations of the inspection, be fully determined, and that the issue should be investigated as soon as possible.

Non-compliances with the requirements of the current edition of BS 7671 that do not give rise to danger and do not require reporting.

Summary of the conditions of the installation

The summary should adequately describe the general condition of the installation in terms of electrical safety, taking into account the specific observations made. It is essential to provide a clear summary of the condition of the installation having considered, for example:

- The adequacy of the earthing and bonding arrangements
- The suitability of the consumer unit and other control equipment
- The type(s) of wiring system, and its/their condition
- The serviceability of equipment, including accessories
- The presence of adequate identification and notices, where required
- The extent of any wear and tear, damage or other deterioration
- Changes in use of the premises that have led to, or might lead to, inadequacies in the installation.

Minimal descriptions such as ‘poor’, and superficial statements such as ‘recommend a rewire’, are considered unacceptable as they do not indicate the true condition of an installation.

It will often be necessary or appropriate to explain the implications of an electrical installation condition report in a covering letter, for the benefit of recipients who require additional advice and guidance about their installation.

For example, where an installation has deteriorated or been damaged to such an extent that its safe serviceable life can be reasonably considered to be at an end, a recommendation for renewal should be made in a covering letter, giving adequate supporting reasons. Reference to the covering letter should be made in the report.

After due consideration, the overall condition of the installation should be given as either ‘satisfactory’ or ‘unsatisfactory’ in the appropriate place on the condition report.

If any observation in the report has been given a Code C1 or Code C2 classification as categorised in this Guide, or if any observations require further investigation (FI) to determine whether danger or potential danger exists, the overall assessment of the condition of the installation must be reported to be ‘unsatisfactory’.

If there are no observations in the report classified as C1, C2 or FI, it would not be reasonable to report the overall condition of the installation as unsatisfactory.



*Unsatisfactory connections to a downlighter,
requiring a Code C2*

The recommended interval until the next inspection should be made conditional upon all observations that have been given a Classification Code C1 (danger present) being remedied immediately and all observations that have been given a Code C2 (potentially dangerous) or that require further investigation being remedied or investigated respectively as a matter of urgency.

Where the space provided for the description of the general condition of the installation is insufficient for the purpose, the page numbers of any additional pages used should be recorded.

Distributor and Supplier Equipment

Electrical equipment owned by the distribution network operator (DNO / IDNO) or energy supplier are outside the scope of BS 7671 and therefore fall outside the scope of the periodic inspection and test. Any observations associated with the intake supply or metering equipment considered to put users of the installation at risk should be reported immediately to the person responsible for electrical safety of the installation.

Such dangerous conditions should be reported to the network operator or energy supplier, as appropriate, by calling 105



www.powercut105.com

Examples of the use of Classification Codes

This guide - and in particular this section on classification codes - **must be** followed and if not, the electrician must provide evidence why they have deviated from it. The inspector's own judgment as a competent person should not be unduly influenced by the person ordering the work. The person(s) signing the report are fully responsible for its content and accuracy.

The following examples are not exhaustive.

Category	Code	Description
Access to Live Parts	1	A fuse carrier or circuit-breaker is missing from a consumer unit and a suitable and securely fitted blanking piece is not in its place - exposed live parts accessible to touch
Access to Live Parts	1	An accessory is badly damaged - exposed live parts accessible to touch
Access to Live Parts	1	Live conductors (line and/or neutral) have no (or damaged) insulation - exposed live parts accessible to touch
Access to Live Parts	1	Terminations or connections have no (or damaged) barriers or enclosures - exposed live parts accessible to touch
Access to Live Parts	1	Conductive parts have become live as the result of a fault
Polarity	1	Incorrect polarity at Origin
Earthing	2	Absence of a reliable and effective means of earthing for the installation
Earthing	2	A gas or oil pipe being used as the means of earthing for the installation
Earthing	2	A public utility water pipe being used as the means of earthing for the installation
Earthing	2	Absence of a circuit protective conductor for a circuit supplying items of Class I equipment or connected to switches having metallic face plates
Earthing	2	Absence of earthing at a socket-outlet

Category	Code	Description
Earthing	2	Cross-sectional area of the earthing conductor does not satisfy adiabatic requirements (that is, does not comply with Regulation 543.1.1)
Main Bonding	2	Absence of effective main protective bonding of extraneous-conductive-parts entering the building
Main Bonding	2	Inadequate cross-sectional area of a main protective bonding conductor where the conductor is less than 6 mm ² or where there is evidence of thermal damage
RCD	2	Absence of fault protection by RCD where required, such as for a socket-outlet circuit in an installation forming part of a TT system
RCD	2	Absence of RCD protection for mobile equipment that may reasonably be expected to be used outdoors
RCD	2	The main RCD for the installation or voltage-operated earth leakage circuit-breaker on a TT system fails to operate when tested with an instrument or integral test button
Polarity	2	Incorrect polarity at final circuit, equipment or accessory
Fault/overcurrent protection	2	A protective device installed in a neutral conductor only
Fault/overcurrent protection	2	Circuits with ineffective overcurrent protection (due, for example, to oversized fuse wire in rewirable fuses)
Fault/overcurrent protection	2	Earth fault loop impedance value greater than that required for operation of the protective device within the time prescribed in the version of BS 7671 or manufacturers' data current at the time of installation and where no RCD for the circuit installed
Fault/overcurrent protection	2	Separate protective devices in line and neutral conductors (for example, double-pole fusing)
Fault/overcurrent protection	2	Reliance on a voltage-operated earth-leakage circuit-breaker for fault protection where the circuit-breaker relies on a water pipe not permitted by Regulation 542.2.6 as the means of earthing
Bathrooms	2	Socket-outlets other than SELV or shaver socket-outlets located less than 2.5 m horizontally from the boundary of Zone 1 in a location containing a bath or shower

Category	Code	Description
Bathrooms	2	Absence of supplementary bonding where required, in a location containing a bath or shower, unless all of the requirements of Regulation 701.415.2 permitting omission are met
Bathrooms	2	Absence of RCD protection for socket-outlets in a location containing a bath or shower, other than for SELV or shaver socket-outlets
Bathrooms	2	Absence of RCD protection for a circuit supplying a socket-outlet in a location containing a bath or shower in accordance with Regulation 701.512.3
Installation Faults	2	Unsatisfactory electrical connection - conductors incorrectly inserted or located in terminals
Installation Faults	2	Unsatisfactory electrical connection - termination secured on insulation
Installation Faults	2	Unsatisfactory electrical connection - type, number and/or size of conductors unsuitable for the means of connection,
Installation Faults	2	Unsatisfactory electrical connection - a loose connection showing signs of overheating,
Installation Faults	2	A 'borrowed neutral', for example where a single final circuit neutral is shared by two final circuits (such as an upstairs lighting circuit and a separately-protected downstairs lighting circuit)
Installation Faults	2	A ring final circuit having a discontinuous conductor
Installation Faults	2	Insulation of live conductors deteriorated to such an extent that the insulating material readily breaks away from the conductors
Installation Faults	2	Insulation resistance of less than 1 MΩ between live conductors connected together and Earth
Installation Faults	2	Sheath of an insulated and sheathed non-armoured cable not taken inside the enclosure of an accessory, such as at a socket-outlet or lighting switch, where the unsheathed cores are accessible to touch and/or likely to come into contact with metalwork.
Installation Faults	2	Unenclosed electrical connections, such as at luminaires. (Such a defect can contribute to a fire, particularly where extra-low voltage filament lamps are used)

Category	Code	Description
Installation Faults	2	A ring final circuit cross-connected with another circuit (including live and circuit protective conductors)
Installation Faults	2	Wiring systems not adequately supported to prevent premature collapse in the event of a fire in locations such as communal areas forming part of an escape route
Installation Faults	2	Inadequate number of socket-outlets causing extension leads to be used in an unsafe manner, e.g. run through doorways, walls or windows, or under carpets
Installation Faults	2	Protected escape routes with inappropriate wiring
Equipment/ Accessories	2	Consumer unit without a lockable lid, a blank not suitably secured or durable with possible access to live parts.
Equipment/ Accessories	2	Electrical equipment having an inadequate degree of ingress protection (IP rating) for the external influences likely to occur in the location, if this results in potential danger
Equipment/ Accessories	2	Mixed branded switchgear components within a consumer unit or distribution board where any of the following apply: - there are signs of thermal damage to component or associated connections - the enclosure/assembly has been modified to allow installation of the component - the component is not securely fitted or all connections are not adequate - incorrect manual operation of the component - direction of use of toggles/switches is not the same as existing devices. The following provides further guidance:
Equipment/ Accessories	2	Fixed equipment does not have a means of switching off for mechanical maintenance, where such maintenance involves a risk of burns, or injury from mechanical movement
Equipment/ Accessories	2	Unsatisfactory functional operation of equipment where this might result in danger
Equipment/ Accessories	2	Electrical equipment having an inadequate degree of ingress protection (IP rating) for the external influences likely to occur in the location, if this results in potential danger
Equipment/ Accessories	2	Immersion heater does not comply with BS EN 60335-2-73 (that is, it does not have a built-in cut-out that will operate if the stored water temperature reaches 98 °C if the thermostat fails), and the cold water storage tank is plastic
Fire/Heat	2	Evidence of excessive heat (such as charring from electrical equipment causing damage to the installation or its surroundings)

Category	Code	Description
Fire/Heat	2	Fire risk from incorrectly installed electrical equipment, including incorrectly selected or installed downlighters - see BPG5
Fire/Heat	2	Fire risk from lamps exceeding the maximum rated wattage for the luminaires, or placed too close to combustible materials - see BPG5
Notices	2	Absence of warning notices indicating the presence of an alternative or secondary source of electricity, such as a standby generator or microgenerator
Supply	3	Single insulated cables in lockable meter cupboard which can only be opened with a key or tool
Earthing	3	Absence of circuit protective conductors in circuits having only Class II (or all insulated) equipment where they are unlikely to be exchanged for Class I equipment.
Main Bonding	3	Main protective bonding to gas, water or other installation pipe is inaccessible for inspection, testing and maintenance, or connection not made before any branch pipework. Note: The connection should preferably be within 600 mm of the meter outlet union or at the point of entry to the building if the meter is external.
RCD	3	A Type A or Type F RCD is used to supply an EVCP and no RCD-DD has been installed
RCD	3	Absence of RCD protection for an external lighting installation in a publicly accessible place
	3	A type A RCD installed where AC RCD required
RCD	3	Absence of RCD protection for a socket-outlet that is unlikely to supply mobile equipment for use outdoors, does not serve a location containing a bath or shower, and the use of which is otherwise not considered by the inspector to result in potential danger.
RCD	3	Absence of RCD protection for AC final circuits supplying luminaires in domestic household premises
RCD	3	Absence of RCD protection for cables installed at a depth of less than 50 mm from a surface of a wall or partition where the cables do not incorporate an earthed metallic covering, are not enclosed in earthed metalwork, or are not mechanically protected against penetration by nails and the like.

Category	Code	Description
Fault/overcurrent protection	3	Reliance on a voltage-operated earth-leakage circuit-breaker for fault protection, subject to the device being proved to operate correctly.
Bathrooms	3	Absence of RCD protection for circuits (other than socket-outlet circuits - Code 2) of a location containing a bath or shower where satisfactory supplementary bonding is present
Installation Faults	3	Cables including consumer meter tails not adequately supported to prevent undue strain on terminations
Installation Faults	3	Sheath of an insulated and sheathed non-armoured cable not taken inside the enclosure of an accessory, such as at a socket-outlet or lighting switch - where unsheathed cores are not accessible to touch and/or not likely to come into contact with metalwork
Installation Faults	3	Use of unsheathed flex for lighting pendants
Installation Faults	3	Wiring systems not adequately supported to prevent premature collapse in the event of a fire. Note: In locations other than in individual dwellings, such as communal areas forming part of an escape route, this would warrant a code C2 classification to be recorded)
Installation Faults	3	Green/yellow insulated conductor of multicore conductor oversleeved and used as live conductor
Installation Faults	3	Inadequate current rating where an assembly fed from more than source of supply 551.7.2
Installation Faults	3	Inadequate number of socket-outlets - where extension leads do not run through doorways, walls or windows, nor under carpets, nor are otherwise being used in an unsafe manner)
Installation Faults	3	PVC/PVC cables installed externally and exposed to sunlight and the elements.
Equipment/ Accessories	3	Consumer unit with a lockable lid, a blank not suitably secured or durable with possible access to live parts.
Equipment/ Accessories	3	Electrical equipment having an inadequate degree of ingress protection (IP rating) for the external influences likely to occur in the location, if this does not result in potential danger

Category	Code	Description
Equipment/ Accessories	3	Mixed branded switchgear components within a consumer unit or distribution board where all the following apply: - there are no signs of thermal damage to component or associated connections - the enclosure/assembly hasn't been modified to allow installation of the component - the component is securely fitted and all connections are adequate - correct manual operation of the component - direction of use of toggles/switches is the same as existing devices The following provide further guidance:
Equipment/ Accessories	3	Socket-outlet mounted in such a position as to result in potential damage to socket, plug and/ or flex
Fire/Heat	3	Presence of a consumer unit or similar switchgear made from combustible material (e.g. plastic) that is not inside a noncombustible enclosure and which is:- located under a wooden staircase, or - within a sole route of escape from the premises
AFDD	3	Absence of Arc Fault Detection Device (AFDD) in areas listed as of increased risk.
SPD	3	Absence of Surge Protective Device (SPD) where required
EV	3	An existing Electric Vehicle charging installation capable of charging a vehicle outside and connected to PME earth where requirements of 722.411.4.1 have not been met
Notices	3	Absence of 'Safety Electrical Connection Do Not Remove' notice at a required location
Notices	3	Absence of appropriate identification of circuits protected by individual protective devices on Consumer unit
Supply	FI	Characteristics of electricity supply (such as voltage or external earth fault loop impedance) do not conform to supply industry norms
Fault/overcurrent protection	FI	Circuit protective device or other product suspected to be under a safety recall – see ESF guidance:
Installation Faults	FI	Presence of circuits that cannot be readily identified or traced
Earthing	NC only	Absence of a reliable earth connection to a recessed metallic back box of an insulated accessory, such as where there is no 'earthing tail' connecting the earthing terminal of the accessory to the box, and the box does not have a fixed lug that comes into contact with an earthed eyelet on the accessory

Category	Code	Description
Bathrooms	NC only	Absence of supplementary bonding for installed Class II equipment where required (such as in a location containing a bath or shower), in case the equipment is replaced with Class I equipment in the future
Installation Faults	NC only	Cable core colours complying with a previous edition of BS 7671.
Installation Faults	NC only	Installation not divided into an adequate number of circuits to minimize inconvenience for safe operation, fault clearance, inspection and testing e.g. one RCD covering the whole installation
Installation Faults	NC only	Inadequate number of socket-outlets - where extension leads are not being used in an unsafe manner
Installation Faults	NC only	Protective conductor of a lighting circuit not (or incorrectly) terminated at the final circuit connection point to a Class II (or insulated) item of equipment, such as at a switch mounting box or luminaire
Installation Faults	NC only	Switch lines not identified as line conductors at terminations (for example, a conductor having blue insulation is not sleeved brown in switches or lighting points)
Main Bonding	Obs - no code	Undersized cross-sectional area of a main protective bonding conductor provided that the conductor is at least 6 mm ² and that there is no evidence of thermal damage.
Fault/overcurrent protection	Obs - no code	Meter tails exceed 3m in length, and no overcurrent protection has been provided on the consumer side of the installation.
Installation Faults	Obs - no code	Bare protective conductor of an insulated and sheathed cable not sleeved with insulation, colour coded to indicate its function
Installation Faults	Obs - no code	Circuit protective conductors or final circuit conductors in a consumer unit not arranged or marked so that they can be identified for inspection, testing or alteration of the installation.
Equipment/ Accessories	Obs - no code	Consumer unit is accessible for operation, inspection, testing, fault detection, maintenance and repair, but is located at height.
Fire/Heat	Obs - no code	Combustible materials stored in close proximity to the electrical intake equipment (consumer unit/meter/service head)

Category	Code	Description
Fire/Heat	Obs - no code	Presence of a consumer unit or similar switchgear made from combustible material (e.g. plastic) that is not inside a non-combustible enclosure and which is NOT: Located under wooden staircase, or within a sole route of escape from the premises
AFDD	Obs - no code	Absence of Arc Fault Detection Device (AFDD) - in areas not listed as of increased risk.
SPD	Obs - no code	Absence of Surge Protection Device (SPD) where risk is deemed tolerable by the client
FA/EL	Obs - no code	The absence of a fire detection and alarm system (smoke/heat/ carbon monoxide detectors etc)
FA/EL	Obs - no code	The absence of an emergency lighting system in a location normally requiring such a system (for example in a communal area of a block of flats)
Main Bonding		Absence of earthing and/or bonding to metallic sinks and baths (unless they are extraneous-conductive-parts in their own right)
Main Bonding		Absence of bonding connections to boiler pipework (where the pipework is not an extraneous-conductive-part in its own right)
Fault/overcurrent protection		The use of circuit-breakers to BS 3871
Fault/overcurrent protection		The use of rewirable fuses (where they provide adequate circuit protection)
Bathrooms		Shaver supply units complying with BS EN 61558-2-5 installed in zone 2 of a location containing a bath or shower and located where direct spray from a shower is unlikely
Installation Faults		Absence of barriers inside a consumer unit (provided the cover is removable only with the use of a key or tool)
Installation Faults		Absence of switches on socket-outlets and fused connection units
Installation Faults		Any observation not directly related to electrical safety and hence to the suitability of the installation for continued service.

Best Practice Guide

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AESM
aesm.uk.com

In electronic format, this Guide is intended to be made available free of charge to all interested parties. Further copies may be downloaded from the websites of some of the contributing organisations.



BEAMA
beama.org.uk

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NICEIC
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EAL
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Published by:

Electrical Safety First



ECA
eca.co.uk

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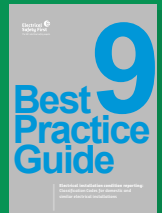
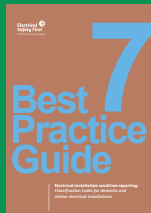
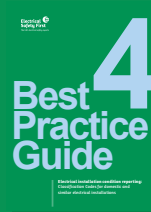
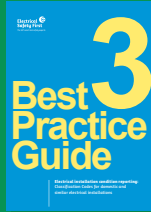
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Registered Charity (England and Wales) No. 257376
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