

Best Practice Guide

4



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

Issue 5

Best Practice Guide

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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.

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Feedback on any of the Best Practice Guides is always welcome - email: enquiries@electricalsafetyfirst.org.uk

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

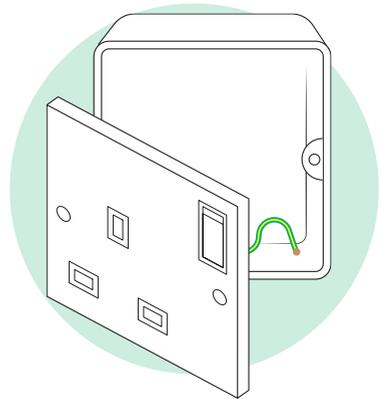
The aim of this Guide is to provide practical guidance for skilled persons competent in electrical inspection and testing on the use of the Classification Codes that need to be attributed to each observation recorded during the periodic inspection and testing of an electrical installation for the benefit 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: 2018.

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: 2018 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 clearly detailed 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 constructed in accordance with earlier editions of the Standard 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.

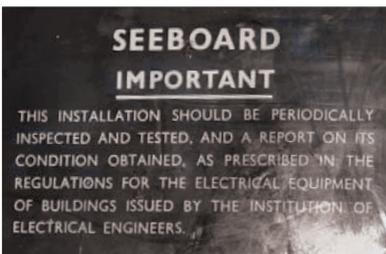
Electrical Installation Condition Report

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.



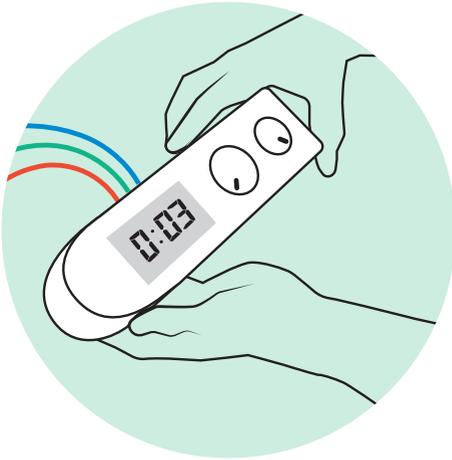
Electrical installations in poor condition present risks of fire as well as electric shock

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.

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 subject 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 www.electricalsafetyfirst.org.uk and the websites of some of the other contributing bodies.

Periodic inspection and testing procedures

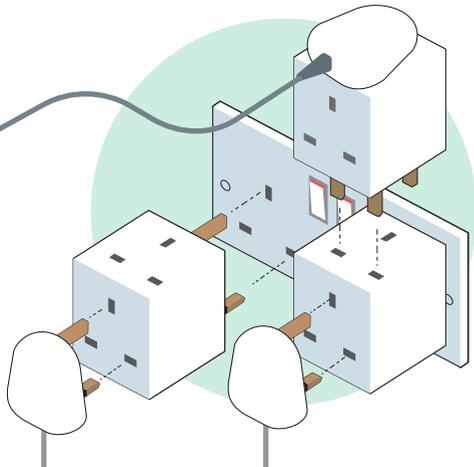
The procedures for periodic inspection and testing differ in some respects from those for the initial verification of new installation work. This is because the subject of an electrical installation condition report is usually an installation which has been energised and in use for some time. Particular 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 (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.

Inadequate provision for socket-outlets



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

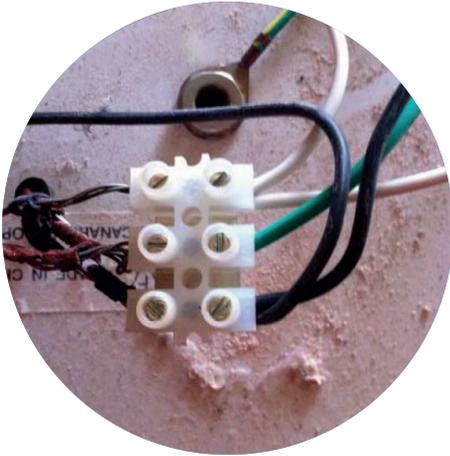
Where, during the course of inspection or testing, an immediate danger is found to be present in an installation (from an accessible exposed live part, for example), immediate action will be necessary to make it safe before continuing. However, the discovery of the dangerous condition should still be 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 endeavour 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.



An immediately dangerous situation - Line conductor connected to the metallic enclosure of a light fitting and thermal damage sufficient to permit access to live parts

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 deficiencies 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. For example, 'excessive damage to the consumer unit enclosure' would be appropriate, whereas 'consumer unit to be replaced' would not.

Only observations that can be supported by one or more regulations in the edition of BS 7671 current at the time of the periodic inspection should be recorded. The particular regulation number(s) need not be entered in the report (unless specifically required by the client), but should serve to remind the inspector that it is only compliance with BS 7671 that is to be considered. Observations based solely on personal preference or 'custom and practice' should not be included.



Recessed luminaire above a bath (outside the zones) that is not IPX4 would not warrant a comment

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.



Live parts exposed to touch

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.

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 deficiency 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 deficiency 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 deficiency 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. Examples of observations that might possibly justify further investigation are given on page 16.

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

Examples of such non-compliances are given on page 17.

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
- 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, deficiencies 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.

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.



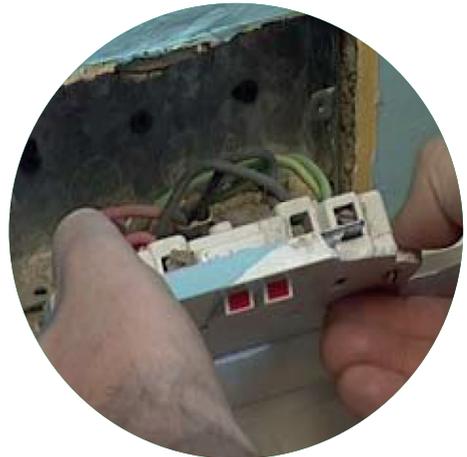
Unsatisfactory connection to a downlighter, requiring a Code C2

Examples of the use of Classification Codes

It is entirely a matter for the competent person conducting the inspection to decide on the Classification Code to be attributed to an observation. The inspector's own judgement 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. All references to RCD protection mean additional protection by an RCD having a rated operating (tripping) current ($I_{\Delta n}$) not greater than 30 mA.

Code C1 - Danger present

- Exposed live parts that are accessible to touch, such as where:
 - 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
 - terminations or connections have no (or damaged) barriers or enclosures
 - live conductors have no (or damaged) insulation
 - an accessory is badly damaged.
- Conductive parts have become live as the result of a fault
- Incorrect polarity.



Socket-outlet with broken face plate, requiring a Code C1

Code C2 - Potentially dangerous

- Absence of a reliable and effective means of earthing for the installation
- A public utility water pipe being used as the means of earthing for the installation
- A gas or oil pipe being used as the means of earthing for the installation
- Cross-sectional area of the earthing conductor does not satisfy adiabatic requirements (that is, does not comply with Regulation 543.1.1)
- Absence of a circuit protective conductor for a lighting circuit supplying items of Class I equipment, or connected to switches having metallic face plates¹
- Absence of a circuit protective conductor for a circuit, other than a lighting circuit, supplying Class I equipment



Unsatisfactory connection to a downlighter requiring a Code C2

- Absence of earthing at a socket-outlet
- Absence of effective main protective bonding of extraneous-conductive-parts entering the premises
- Inadequate cross-sectional area of a main protective bonding conductor where the conductor is less than 6 mm² or where there is evidence of thermal damage

- Absence of supplementary bonding where required², such as in a location containing a bath or shower, where any of the following three conditions are not satisfied:
 - All final circuits of the location comply with the requirements of Regulation 411.3.2 for automatic disconnection, and
 - All final circuits of the location have additional protection by means of a 30 mA RCD, and



Absence of reliable means of earthing due to inadequate connection

- All extraneous-conductive-parts of the location are effectively connected to the protective equipotential bonding (main earthing terminal)
- The main RCD or voltage-operated earth leakage circuit-breaker on a TT system fails to operate when tested with an instrument or integral test button
- Absence of RCD protection for portable or mobile equipment that may reasonably be expected to be used outdoors
- Absence of RCD protection for socket-outlets in a location containing a bath or shower, other than for SELV or shaver socket-outlets
- Socket-outlets other than SELV or shaver socket-outlets located less than 3 m horizontally from the boundary of zone 1 in a location containing a bath or shower

¹ See the Electrical Safety First Best Practice Guide No 1 – Replacing a consumer unit in domestic premises

² Where the presence of supplementary bonding cannot be confirmed by inspection it may be verified by a continuity test (<0.05 Ω)

- Absence of fault protection (protection against indirect contact) by RCD where required, such as for a socket-outlet circuit in an installation forming part of a TT system
- Circuits with ineffective overcurrent protection (due, for example, to oversized fuse wire in rewirable fuses)
- A protective device installed in a neutral conductor only
- Separate protective devices in line and neutral conductors (for example, double-pole fusing)
- 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/IEE/IET Wiring Regulations or manufacturers' published data current at the time of installation
- A ring final circuit having a discontinuous conductor
- A ring final circuit cross-connected with another circuit (including live and circuit protective conductors)
- Unsatisfactory electrical connection, such as:
 - a loose connection showing signs of overheating,
 - type, number and/or size of conductors unsuitable for the means of connection,
 - conductors incorrectly inserted or located in terminals, or
 - termination secured on insulation
- 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)
- Insulation resistance of less than 1 M Ω between live conductors connected together

and Earth

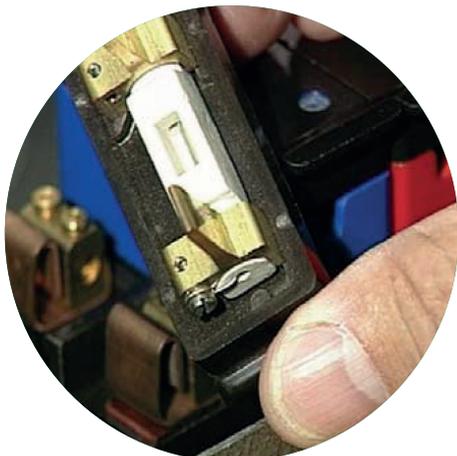
- Insulation of live conductors deteriorated to such an extent that the insulating material readily breaks away from the conductors
- Sheath of an insulated and sheathed non-armoured cable not taken inside the enclosure of an accessory, such as at a socket-outlet or lighting switch, where the unsheathed cores are accessible to touch and/or likely to come into contact with metalwork. (Note: Code C3 would apply if the unsheathed cores are not accessible to touch nor likely to come into contact with metalwork)
- Unenclosed electrical connections, such as at luminaires. (Such a defect can contribute to a fire, particularly where extra-low voltage filament lamps are used)
- Fire risk from incorrectly installed electrical equipment, including incorrectly selected or installed downlighters
- Fire risk from lamps exceeding the maximum rated wattage for the luminaires, or placed too close to combustible materials³
- Evidence of excessive heat (such as charring from electrical equipment causing damage to the installation or its surroundings)
- Unsatisfactory functional operation of equipment where this might result in danger



Crumbling vulcanised rubber insulation

³ See *Electrical Safety First Best Practice Guide No5 - Electrical installations and their impact on the fire performance of domestic premises used as single family houses*

- 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
- 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
- Absence of warning notices indicating the presence of an alternative or secondary source of electricity, such as a standby generator or microgenerator
- 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
- Consumer unit without a lockable lid, a blank not suitably secured or durable with possible access to live parts.



Checking a fuse carrier (base missing)

Code C3 - Improvement recommended

- Absence of RCD protection for a socket-outlet that is unlikely to supply portable or 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. *(Note: Code C2 would apply if the circuit supplied a socket-outlet in a location containing a bath or shower in accordance with Regulation 701.512.3)*
- 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.
- Absence of RCD protection for AC final circuits supplying luminaires in domestic household premises
- Absence of RCD protection for circuits of a location containing a bath or shower where satisfactory supplementary bonding is present
- Mixed branded switchgear components within a consumer unit or distribution board where:
 - there are no signs of thermal damage to component or associated connections
 - the enclosure/assembly hasn't been modified



Older immersion heater without thermal cut-out

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

Note:

If any of the above criteria is not met, this would warrant a code C2 classification to be recorded.

The following provide further guidance:

<http://www.beama.org.uk/resourceLibrary/beama-esf-consumer-unit-connections-technical-guide.html>

and <http://www.beama.org.uk/asset/90FFDCC1-0E3A-4756-80BDB1BB024E09CD/>

- Reliance on a voltage-operated earth-leakage circuit-breaker for fault protection (protection against indirect contact), subject to the device being proved to operate correctly. *(Note: If the circuit-breaker relies on a water pipe not permitted by Regulation 542.2.6 as the means of earthing, this would attract a Code C2 classification.)*
- Absence of circuit protective conductors in circuits having only Class II (or all insulated) luminaires and switches³
- Absence of 'Safety Electrical Connection Do Not Remove' notice at a required location
- 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. *(Note: Code C2 would apply if unsheathed cores are accessible to touch and/or likely to come into contact with metalwork)*
- Use of unsheathed flex for lighting pendants
- 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
- Socket-outlet mounted in such a position as to

result in potential damage to socket, plug and/or flex

- Cables including consumer meter tails not adequately supported to prevent undue strain on terminations
- Absence of a notice indicating that the installation has wiring colours to two versions of BS 7671 (if appropriate)
- Absence of circuit identification details
- 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:
 - Located under wooden staircase, or
 - within a sole route of escape from the premises *(Note: If unsatisfactory connections are found during inspection, this would warrant a code C2 classification to be recorded)*
- 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)*
- 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.*
- An existing Electric Vehicle charging installation capable of charging a vehicle outside and connected to PME earth

³ See the Electrical Safety First Best Practice Guide No 1 – Replacing a consumer unit in domestic premises.

FI - Further investigation required

- Characteristics of electricity supply (such as voltage or external earth fault loop impedance) do not conform to supply industry norms
- Presence of circuits that cannot be readily identified or traced
- Circuit protective device or other product suspected to be under a safety recall - see <https://www.electricalsafetyfirst.org.uk/product-recalls>



Main bonding connection not made before branch pipework



Consumer units having removable fuses can continue to provide satisfactory service (cover removed for illustrative purposes)

Items worthy of note that do not warrant a classification code (These comments should be recorded on the EICR in the observations section)

- The absence of a fire detection and alarm system (smoke/heat/carbon monoxide detectors etc)
- 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)
- Combustible materials stored in close proximity to the electrical intake equipment (consumer unit/meter/service head)
- 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 (*Note: if unsatisfactory connections are found during inspection, this would warrant a code C2 classification to be recorded*)
- 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.
- Bare protective conductor of an insulated and sheathed cable not sleeved with insulation, colour coded to indicate its function
- Inadequate cross-sectional area of a main protective bonding conductor provided that the conductor is at least 6 mm² and that there is no evidence of thermal damage.
- Absence of Surge Protection Device (SPD) (*Note: if medical or expensive electrical equipment installed, a Code C3 would apply*)
- Absence of Arc Fault Detection Device (AFDD) (*Note: for wooden constructed domestic premises e.g. barn conversion, a Code C3 would apply*)

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

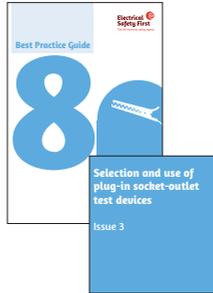
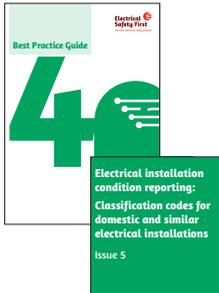
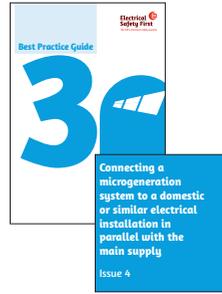
- Absence of a reliable earth connection to a recessed metallic back box of an insulated accessory, such as where there is no 'earthing tail' connecting the earthing terminal of the accessory to the box, and the box does not have a fixed lug that comes into contact with an earthed eyelet on the accessory
- 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
- 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
- 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)
- Installation not divided into an adequate number of circuits to minimise inconvenience for safe operation, fault clearance, inspection and testing
- Inadequate number of socket-outlets.
(Note: A Code C3 or, where appropriate C2, if extension leads run through doorways, walls or windows, or under carpets, or are otherwise being used in an unsafe manner)
- Cable core colours complying with a previous edition of BS 7671.

Items that should not be listed as non-compliances with BS 7671 and do not require reporting (Mythbusting)

- Absence of earthing and/or bonding to metallic sinks and baths (unless they are extraneous-conductive-parts in their own right)
- The use of rewirable fuses (where they provide adequate circuit protection)
- The use of circuit-breakers to BS 3871
- Absence of barriers inside a consumer unit (provided the cover is removable only with the use of a key or tool)
- Absence of bonding connections to boiler pipework (where the pipework is not an extraneous-conductive-part in its own right)
- Shaver supply units complying with BSEN 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
- Absence of switches on socket-outlets and fused connection units
- Any other observation not directly related to electrical safety and hence to the suitability of the installation for continued service.



Label warning against storing combustible materials near to electrical equipment



The latest versions of all the BestPracticeGuides are available to download from www.electricalsafetyfirst.org.uk

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Electrical Safety First is the UK charity dedicated to reducing deaths and injuries caused by electrical accidents. Our aim is to ensure everyone in the UK can use electricity safely

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