

BS 7657:2022



BSI Standards Publication

**Cut-out assemblies up to 100 A rating,
for power supply to buildings —
Specification**

bsi.

Publishing and copyright information

The BSI copyright notice displayed in this document indicates when the document was last issued.

© The British Standards Institution 2022

Published by BSI Standards Limited 2022

ISBN 978 0 539 12889 5

ICS 29.120.50; 91.140.50

The following BSI references relate to the work on this document:

Committee reference PEL/121/1

Draft for comment 21/30412431 DC

Amendments/corrigenda issued since publication

Date	Text affected
------	---------------

Contents

	Page
Foreword	ii
1 Scope	1
2 Normative references	1
3 Terms and definitions	2
4 Classification	4
5 Characteristics	5
5.1 General	5
5.2 Type of equipment	5
5.3 Rated and limiting values for the main circuits	5
5.4 Void	7
5.5 Void	7
5.6 Void	7
5.7 Void	7
5.8 Void	7
6 Product information	7
6.1 Void	7
6.2 Marking	7
6.3 Instructions for installation, operation and maintenance, decommissioning and dismantling	7
6.4 Void	8
7 Normal service and mounting and transport conditions	8
7.1 Normal service conditions	8
7.2 Void	8
7.3 Mounting	8
8 Constructional and performance requirements	8
8.1 Constructional requirements	8
8.2 Performance requirements	13
<i>Table 1 — Maximum temperature-rise at rated current</i>	13
9 Tests	14
9.1 Kinds of tests	14
<i>Table 2 — Type tests</i>	15
9.2 Conformity to constructional requirements	17
<i>Table 3 — Test values for terminal pull tests</i>	18
9.3 Performance	18
<i>Table 4 — Values of overload test current</i>	22
Bibliography	25

Summary of pages

This document comprises a front cover, an inside front cover, pages I to IV, pages 1 to 25, an inside back cover and a back cover.

Foreword

Publishing information

This British Standard is published by BSI Standards Limited, under licence from The British Standards Institution, and came into effect on 31 May 2022. It was prepared by Subcommittee PEL/121/1, *Low voltage switchgear and control gear*, under the authority of Technical Committee PEL/121, *Switchgear and Controlgear and their assemblies for low voltage*. A list of organizations represented on these committees can be obtained on request to the committee managers.

Supersession

This British Standard supersedes [BS 7657:2010](#), which is withdrawn.

Relationship with other publications

This British Standard is intended to be read in conjunction with BS EN IEC 60947-1:2021, *Low-voltage switchgear and controlgear — Part 1: General rules*. The provisions of the general rules dealt with in BS EN IEC 60947-1 are only applicable when specifically cited and they may be supplemented or modified as detailed in the standard.

The clause numbering of this British Standard follows that of BS EN IEC 60947-1 as closely as possible. Where a subclause of BS EN IEC 60947-1 is not relevant to this British Standard, it is marked as “Void”.

Information about this document

This is a full revision of the standard. The principal change it introduces is to align the content as closely as possible with changes to the principal reference standard, BS EN IEC 60947-1.

This publication can be withdrawn, revised, partially superseded or superseded. Information regarding the status of this publication can be found in the Standards Catalogue on the BSI website at bsigroup.com/standards, or by contacting the Customer Services team.

Where websites and webpages have been cited, they are provided for ease of reference and are correct at the time of publication. The location of a webpage or website, or its contents, cannot be guaranteed.

Hazard warnings

<p>WARNING. This British Standard calls for the use of substances and/or procedures that can be injurious to health if precautions are not taken. It refers only to technical suitability and does not absolve the user from legal obligations relating to health and safety at any stage.</p>

Use of this document

It has been assumed in the preparation of this British Standard that the execution of its provisions will be entrusted to qualified and experienced people, for whose use it has been produced.

Presentational conventions

The provisions of this standard are presented in roman (i.e. upright) type. Its requirements are expressed in sentences in which the principal auxiliary verb is “shall”.

Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.

Where words have alternative spellings, the preferred spelling of the Shorter Oxford English Dictionary is used (e.g. “organization” rather than “organisation”).

Contractual and legal considerations

This publication has been prepared in good faith, however no representation, warranty, assurance or undertaking (express or implied) is or will be made, and no responsibility or liability is or will be accepted by BSI in relation to the adequacy, accuracy, completeness or reasonableness of this publication. All and any such responsibility and liability is expressly disclaimed to the full extent permitted by the law.

This publication is provided as is, and is to be used at the recipient’s own risk.

The recipient is advised to consider seeking professional guidance with respect to its use of this publication.

This publication is not intended to constitute a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

1 Scope

This British Standard specifies requirements for cut-out assemblies up to 100 A rating, for power supply to buildings. Each cut-out assembly provides a means of terminating service cables, protection, a neutral facility and/or a means of earthing the supply, and anti-tamper protection. The primary purpose of the cut-out is to protect the service cable.

Cut-out assemblies are suitable for use on single-phase or three-phase low-voltage public electricity supply systems with a maximum voltage up to 440 V AC and at a frequency of 50 Hz, the neutral being effectively earthed.

The provisions of the general rules dealt with in BS EN IEC 60947-1 are applicable to this standard when specifically called for.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes provisions of this document.¹⁾ For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

[BS 5372](#), *Specification for dimensions of cable terminations for multi-core extruded solid dielectric insulated distribution cables of rated voltages 600/1000 V and 1900/3300 V having copper or aluminium conductors*

[BS 5467](#), *Electric cables — Thermosetting insulated, armoured cables for voltages of 600/1000 V and 1900/3300 for fixed installations — Specification*

[BS 6004](#), *Electric cables — PVC insulated and PVC sheathed cables for voltages up to and including 300/500 V, for electric power and lighting and internal wiring*

[BS 6231](#), *Electric cables — Single core PVC insulated flexible cables of rated voltage 600/1000 V for switchgear and controlgear wiring*

[BS 7870-3.10](#), *LV and MV polymeric insulated cables for use by distribution and generation utilities — Part 3: Specification for distribution cables of rated voltage 0.6/1 kV — Section 3.10: PVC insulated combined neutral and earth copper wire concentric cables with copper or aluminium conductors*

[BS 7870-3.11](#), *LV and MV polymeric insulated cables for use by distribution and generation utilities — Part 3: Specification for distribution cables of rated voltage 0.6/1 kV — Section 11: XLPE insulated combined neutral and earth copper wire concentric cables with copper or aluminium conductors*

[BS EN 13501-1:2018](#), *Fire classification of construction products and building elements — Classification using test data from reaction to fire tests*

BS EN 60060-1, *High-voltage test techniques — General definitions and test requirements*

BS EN 60068-2-75, *Environmental testing — Tests — Test Eh: Hammer tests*

BS EN 60085, *Electrical insulation — Thermal evaluation and designation*

BS EN 60216-1, *Electrical insulating materials — Thermal endurance properties — Part 1: Ageing procedures and evaluation of test results*

BS EN 60335-1:2012+A15:2021, *Household and similar electrical appliances — Safety — Part 1: General requirements*

¹⁾ Documents that are referred to solely in an informative manner are listed in the Bibliography.