

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Low-voltage electrical installations –
Part 7-717: Requirements for special installations or locations – Mobile or
transportable units**

**Installations électriques à basse tension –
Partie 7-717: Règles pour les installations ou emplacements spéciaux – Unités
mobiles ou transportables**



THIS PUBLICATION IS COPYRIGHT PROTECTED

Copyright © 2009 IEC, Geneva, Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either IEC or IEC's member National Committee in the country of the requester.

If you have any questions about IEC copyright or have an enquiry about obtaining additional rights to this publication, please contact the address below or your local IEC member National Committee for further information.

Droits de reproduction réservés. Sauf indication contraire, aucune partie de cette publication ne peut être reproduite ni utilisée sous quelque forme que ce soit et par aucun procédé, électronique ou mécanique, y compris la photocopie et les microfilms, sans l'accord écrit de la CEI ou du Comité national de la CEI du pays du demandeur.

Si vous avez des questions sur le copyright de la CEI ou si vous désirez obtenir des droits supplémentaires sur cette publication, utilisez les coordonnées ci-après ou contactez le Comité national de la CEI de votre pays de résidence.

IEC Central Office
3, rue de Varembe
CH-1211 Geneva 20
Switzerland
Email: inmail@iec.ch
Web: www.iec.ch

About the IEC

The International Electrotechnical Commission (IEC) is the leading global organization that prepares and publishes International Standards for all electrical, electronic and related technologies.

About IEC publications

The technical content of IEC publications is kept under constant review by the IEC. Please make sure that you have the latest edition, a corrigenda or an amendment might have been published.

- Catalogue of IEC publications: www.iec.ch/searchpub

The IEC on-line Catalogue enables you to search by a variety of criteria (reference number, text, technical committee,...). It also gives information on projects, withdrawn and replaced publications.

- IEC Just Published: www.iec.ch/online_news/justpub

Stay up to date on all new IEC publications. Just Published details twice a month all new publications released. Available on-line and also by email.

- Electropedia: www.electropedia.org

The world's leading online dictionary of electronic and electrical terms containing more than 20 000 terms and definitions in English and French, with equivalent terms in additional languages. Also known as the International Electrotechnical Vocabulary online.

- Customer Service Centre: www.iec.ch/webstore/custserv

If you wish to give us your feedback on this publication or need further assistance, please visit the Customer Service Centre FAQ or contact us:

Email: csc@iec.ch
Tel.: +41 22 919 02 11
Fax: +41 22 919 03 00

A propos de la CEI

La Commission Electrotechnique Internationale (CEI) est la première organisation mondiale qui élabore et publie des normes internationales pour tout ce qui a trait à l'électricité, à l'électronique et aux technologies apparentées.

A propos des publications CEI

Le contenu technique des publications de la CEI est constamment revu. Veuillez vous assurer que vous possédez l'édition la plus récente, un corrigendum ou amendement peut avoir été publié.

- Catalogue des publications de la CEI: www.iec.ch/searchpub/cur_fut-f.htm

Le Catalogue en-ligne de la CEI vous permet d'effectuer des recherches en utilisant différents critères (numéro de référence, texte, comité d'études,...). Il donne aussi des informations sur les projets et les publications retirées ou remplacées.

- Just Published CEI: www.iec.ch/online_news/justpub

Restez informé sur les nouvelles publications de la CEI. Just Published détaille deux fois par mois les nouvelles publications parues. Disponible en-ligne et aussi par email.

- Electropedia: www.electropedia.org

Le premier dictionnaire en ligne au monde de termes électroniques et électriques. Il contient plus de 20 000 termes et définitions en anglais et en français, ainsi que les termes équivalents dans les langues additionnelles. Egalement appelé Vocabulaire Electrotechnique International en ligne.

- Service Clients: www.iec.ch/webstore/custserv/custserv_entry-f.htm

Si vous désirez nous donner des commentaires sur cette publication ou si vous avez des questions, visitez le FAQ du Service clients ou contactez-nous:

Email: csc@iec.ch
Tél.: +41 22 919 02 11
Fax: +41 22 919 03 00



IEC 60364-7-717

Edition 2.0 2009-07

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Low-voltage electrical installations –
Part 7-717: Requirements for special installations or locations – Mobile or
transportable units**

**Installations électriques à basse tension –
Partie 7-717: Règles pour les installations ou emplacements spéciaux – Unités
mobiles ou transportables**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

PRICE CODE
CODE PRIX

ICS 29.020; 91.140.50

ISBN 2-8318-1051-2

CONTENTS

FOREWORD.....	3
INTRODUCTION.....	5
717 Mobile or transportable units.....	6
717.1 Scope.....	6
717.2 Normative references	6
717.30 Assessment of general characteristics.....	7
717.31 Purposes, supplies and structure.....	7
717.312 Conductor arrangement and system earthing.....	7
717.313 Supplies	7
717.4 Protection for safety	8
717.41 Protection against electric shock	8
717.413 Protective measure: electrical separation	9
717.415 Additional protection.....	9
717.43 Protection against overcurrent.....	10
717.431 Requirements according to the nature of the circuits	10
717.5 Selection and erection of electrical equipment.....	10
717.51 Common rules	10
717.514 Identification.....	10
717.52 Wiring systems	10
717.55 Other equipment.....	11
Annex A (informative) List of notes concerning certain countries.....	20
Bibliography.....	21
Figure 717.1 – Example of connection to a Class I or Class II low voltage generating set located inside the unit with or without an earth electrode.....	12
Figure 717.2 – Example of connection to a Class II low voltage generating set located outside the unit.....	13
Figure 717.3 – Example of connection to any type of earthing system of a fixed installation with automatic disconnection of supply by residual current device (RCD), with or without an earth electrode	14
Figure 717.4 – Example of connection to a fixed electrical installation with any type of earthing system using a simple separation transformer and an IT system with an earth electrode	15
Figure 717.5 – Example of connection with simple separation and an IT system with an insulation monitoring device and disconnection of supply after a first fault.....	16
Figure 717.6 – Example of connection with simple separation and a TN system with or without an earth electrode.....	16
Figure 717.7 – Example of connection to a fixed electrical installation with any type of earthing system by using an IT system without automatic disconnection in the event of first fault	17
Figure 717.8 – Example of connection to a fixed electrical installation with any type of earthing system using electrical separation provided by an isolating transformer	18

INTERNATIONAL ELECTROTECHNICAL COMMISSION

LOW-VOLTAGE ELECTRICAL INSTALLATIONS –**Part 7-717: Requirements for special installations or locations –
Mobile or transportable units**

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with an IEC Publication.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 60364-7-717 has been prepared by IEC technical committee 64: Electrical installations and protection against electric shock.

This second edition cancels and replaces the first edition published in 2001 and constitutes a technical revision.

The main changes with respect to the previous edition are as follows:

- The scope has been improved, providing more detail;
- The content of Clause 717.41 has been updated following the new edition of IEC 60364-4-41;
- Clauses concerning protection by automatic disconnection of the supply and additional protection have been introduced;
- All figures have been updated.

The text of this standard is based on the following documents:

FDIS	Report on voting
64/1675/FDIS	64/1684/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The reader's attention is drawn to the fact that Annex A lists all of the "in-some-country" clauses on differing practices of a less permanent nature relating to the subject of this standard.

IEC 60364 consists of the following parts, under the general title: *Low-voltage electrical installations*:

Part 1: Fundamental principles, assessment of general characteristics, definitions

Part 4: Protection for safety

Part 5: Selection and erection of electrical equipment

Part 6: Verification

Part 7: Requirements for special installations or locations

A list of all the parts in the IEC 60364 series can be found on the IEC website.

Future standards in this series will carry the new general title as cited above. Titles of existing standards in this series will be updated at the time of the next edition.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

INTRODUCTION

The requirements of this part of IEC 60364 supplement, modify or replace certain of the general requirements contained in Parts 1 to 6 of IEC 60364.

The clause numbering appearing after 717 refers to the corresponding parts or clauses of IEC 60364, Parts 1 to 6. Numbering of clauses does not, therefore, necessarily follow sequentially. Numbering of figures and tables takes the number of this part followed by a sequential number.

The absence of reference to a part or clause means that the general requirements contained in Parts 1 to 6 of IEC 60364 are applicable.

This document is a preview generated by EVS

LOW-VOLTAGE ELECTRICAL INSTALLATIONS –

Part 7-717: Requirements for special installations or locations – Mobile or transportable units

717 Mobile or transportable units

717.1 Scope

The particular requirements as specified in this part of IEC 60364 are applicable to mobile or transportable units.

For the purposes of this part, the term "unit" refers to a vehicle and/or mobile or transportable structure in which all or part of an electrical installation is contained.

Units are either of the mobile type or of the transportable type.

Examples are units for television and broadcasting, medical services, advertising, fire fighting, using special information technology, units for disaster relief, catering units and the like.

The requirements of this part also apply where two or more units are connected together to form a single electrical installation (see 717.551.6 and 717.551.7).

The requirements are not applicable to

- electrical circuits and equipment for automotive purposes,
- generating sets,
- units covered by other parts of Part 7 (e.g. caravan and motor-caravan),
- pleasure craft (see IEC 60092-507),
- mobile machinery in accordance with IEC 60204-1,
- traction equipment of electric vehicles,
- mobile or transportable homes, offices and the like for extended use at the same location (see general rules of IEC 60364).

Where applicable, additional requirements as laid down in other clauses of Part 7 are to be taken into consideration, e.g. for showers, medical locations, etc.

717.2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60227-3:1993, *Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V – Part 3: Non-sheathed cables for fixed wiring*

IEC 60245-4, *Rubber insulated cables – Rated voltages up to and including 450/750 V – Part 4: Cords and flexible cables*