

TECHNICAL SPECIFICATION



**Recommendations for renewable energy and hybrid systems for rural
electrification –
Part 5: Protection against electrical hazards**



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IEC Central Office
3, rue de Varembe
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
Fax: +41 22 919 03 00
info@iec.ch
www.iec.ch

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TECHNICAL SPECIFICATION



Recommendations for renewable energy and hybrid systems for rural electrification – Part 5: Protection against electrical hazards

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CONTENTS

FOREWORD.....	5
INTRODUCTION.....	7
1 Scope.....	8
2 Normative references	8
3 Terms and definitions	9
4 Classification of decentralised rural electrification systems.....	11
5 Protection against electric shock	11
5.1 General.....	11
5.2 Requirements on the d.c. side of a DRES	11
5.3 Requirements on the a.c. side of a DRES	12
5.3.1 General	12
5.3.2 TT system.....	12
5.3.3 TN system	12
6 Protection against overcurrent.....	13
6.1 General.....	13
6.2 Protection against overload currents	13
6.3 Protection against short-circuits.....	13
7 Protection against risk of fire	13
8 Protection against effects of lightning	14
8.1 Principle	14
8.2 Examples.....	14
8.3 Protection against overvoltage.....	14
8.4 Protection against direct lightning	14
9 Determination of the pick up area of a rod or wire (see IEC 62305-3:2010).....	14
9.1 General.....	14
9.2 Operational conditions and external influences	14
9.3 Wiring system	15
9.4 Isolation and switching.....	15
9.4.1 Isolation.....	15
9.4.2 Over-current protective devices	16
9.4.3 Residual Current Devices (RCD)	17
9.5 Surge protective devices.....	17
9.6 Earthing arrangement, protective conductors and protective bonding conductors	18
9.6.1 Earth electrodes	18
9.6.2 Protective bonding conductors.....	19
10 Verification	19
11 Operation and maintenance.....	19
Annex A (informative) Protection against electric shock in electrical installations.....	20
A.1 Protection against electric shock.....	20
A.2 Automatic disconnection of supply	20
A.2.1 General	20
A.2.2 In TN systems	21
A.2.3 In TT systems.....	21
A.3 Double or reinforced insulation	22

A.4	Extra-low-voltage (SELV and PELV)	22
A.5	Electrical separation	22
A.6	Additional protection	23
Annex B (informative)	Types of LV distribution systems earthing	24
B.1	Terms and definitions.....	24
B.2	Types of system earthing used in DRES (Figures are from IEC 60364-1:2005)	25
B.2.1	General	25
B.2.2	AC TN systems.....	27
B.2.3	AC TT systems	34
B.2.4	DC distribution systems	36
Annex C (informative)	Classification of electrical equipment	41
C.1	Classification of residual current devices (RCDs) (see IEC 61008, IEC 61009, IEC 60755, IEC 60947-2, IEC 62423)	41
C.2	Classification of circuit breakers for a.c. operation (see IEC 60898-1, IEC 60947-2)	42
C.3	Classification of surge protective devices (see IEC 61643-11)	43
Annex D (informative)	General information concerning protection against lightning	44
D.1	General.....	44
D.2	Protection against lightning – Principles.....	45
Bibliography	46
Figure B.1	– General outline of the distribution system	24
Figure B.2	– Distribution system of the smallest type	25
Figure B.3	– TN-S system 3-phase, 4-wire with separate neutral conductor and protective conductor throughout the distribution system	28
Figure B.4	– TN-S system 3-phase, 3-wire with separate earthed line conductor and protective conductor throughout the distribution system	29
Figure B.5	– TN-S system 3-phase, 3-wire with protective conductor and no distributed neutral conductor throughout the distribution system	30
Figure B.6	– TN-C-S system 3-phase, 4-wire where the PEN conductor is separated into the protective conductor PE and the neutral conductor N elsewhere in the electrical installation	31
Figure B.7	– TN-C-S system 3-phase, 4-wire where the PEN conductor is separated into the protective conductor PE and the neutral conductor N at the origin of the electrical installation	32
Figure B.8	– TN-C-S system – single-phase, 2-wire where the PEN conductor is separated into the protective conductor PE and the neutral conductor N at the origin of the electrical installation	32
Figure B.9	– TN-C system 3-phase, 4-wire with neutral and protective conductor functions combined in a single conductor throughout the distribution system	33
Figure B.10	– TN-S multiple source system 3-phase, 4-wire with separate protective conductor and neutral conductor to current using equipment.....	34
Figure B.11	– TT system 3-phase, 4-wire with earthed protective conductor and neutral conductor throughout the distribution system	35
Figure B.12	– TT system 3-phase, 3-wire with earthed protective conductor and no distributed neutral conductor throughout the distribution system	35
Figure B.13	– TN-S d.c. system	37
Figure B.14	– TN-C d.c. system	38
Figure B.15	– TN-C-S d.c. system.....	39

Figure B.16 – TT d.c. system 40

Figure D.1 – Example of effects of a lightning stroke 44

Table 1 – Typology of decentralized electrification systems 11

Table 2 – Rated operating residual current of the protective device depending on the value of the earthing resistance 12

Table 3 – Number of protected poles with regard to the characteristics of the distribution system 16

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**RECOMMENDATIONS FOR RENEWABLE ENERGY
AND HYBRID SYSTEMS FOR RURAL ELECTRIFICATION –****Part 5: Protection against electrical hazards**

FOREWORD

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- the subject is still under technical development or where, for any other reason, there is the future but no immediate possibility of an agreement on an International Standard.

Technical specifications are subject to review within three years of publication to decide whether they can be transformed into International Standards.

IEC 62257-5, which is a technical specification, has been prepared by IEC technical committee 82: Solar photovoltaic energy systems.

This second edition cancels and replaces the first edition issued in 2005. It constitutes a technical revision.

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

- redefine the maximum AC voltage from 500 V to 1 000 V, the maximum DC voltage from 750 V to 1 500 V;
- removal of the limitation of 100 kVA system size. Hence the removal of the word “small” in the title and related references in this technical specification.

This technical specification is to be used in conjunction with the IEC 62257 series (specifically IEC TS 62257-1 to IEC TS 62257-6).

The text of this technical specification is based on the following documents:

Enquiry draft	Report on voting
82/950/DTS	82/1001A/RVC

Full information on the voting for the approval of this technical specification 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.

A list of all parts in the IEC 62257 series, published under the general title *Recommendations for renewable energy and hybrid systems for rural electrification*, 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 stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- transformed into an International standard,
- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

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INTRODUCTION

The IEC 62257 series intends to provide to different players involved in rural electrification projects (such as project implementers, project contractors, project supervisors, installers, etc.) documents for the setting up of renewable energy and hybrid systems with AC voltage below 1 000 V and DC voltage below 1 500 V.

These documents are recommendations:

- to choose the right system for the right place;
- to design the system;
- to operate and maintain the system.

These documents are focused only on rural electrification, concentrating on, but not specific to developing countries. They should not be considered as all inclusive to rural electrification. The documents try to promote the use of renewable energies in rural electrification; they do not deal with clean mechanisms developments at this time (CO₂ emission, carbon credit, etc.). Further developments in this field could be introduced in future steps.

This consistent set of documents is best considered as a whole with different parts corresponding to items for safety, sustainability of systems aiming at the lowest life cycle cost as possible. One of the main objectives is to provide the minimum sufficient requirements, relevant to the field of application, that is: renewable energy and hybrid off-grid systems.