PD IEC TS 61200-102:2020

BSI Standards Publication

Electrical installation guide

Part 102: Application guidelines for low-voltage direct current electrical installations not intended to be connected to a public distribution network

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National foreword

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The UK participation in its preparation was entrusted to Technical Committee JPEL/64, Electrical Installations of Buildings - Joint Committee.

A list of organizations represented on this committee can be obtained on request to its secretary.

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Published by BSI Standards Limited 2020

ISBN 978 0 580 99580 4

ICS 91.140.50

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This Published Document was published under the authority of the Standards Policy and Strategy Committee on 30 April 2020.

Amendments/corrigenda issued since publication

Date	Text affected

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IEC TS 61200-102

Edition 1.0 2020-03

TECHNICAL SPECIFICATION

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Electrical installation guide –
Part 102: Application guidelines for low-voltage direct current electrical installations not intended to be connected to a public distribution network

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

ICS 91.140.50

ISBN 978-2-8322-8013-3

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CONTENTS

FOREWORD 4
INTRODUCTION 6
1 Scope 7
2 Normative references 7
3 Terms and definitions 7
4 General 8
4.1 Concept of electrical installation 8
4.2 Architecture and operating modes of installation 9
5 Local power sources (supplies) 9
6 Loads 9
6.1 Possible nominal voltages 9
6.2 Minimum and maximum voltage values 10
7 Wiring systems 10
7.1 Type of wiring system 10
7.2 Identification of conductors and terminals 10
7.3 Cross-sectional areas of conductors 11
8 Earthing 11
8.1 Direction of touch current 11
8.2 Earthing arrangement 12
8.3 Protective conductors 12
8.4 Earthing conductors 12
9 Protection for safety 12
9.1 Protection against electric shock 12
9.1.1 General 12
9.1.2 Provision for basic protection 12
9.1.3 Provision for fault protection 12
9.2 Protection against thermal effects 16
9.2.1 Protection against electric arc 16
9.2.2 Risk of explosion with batteries 16
9.3 Protection against overcurrent 17
9.3.1 Overload protection 17
9.3.2 Short-circuit protection 17
9.4 Protection against overvoltage 18
10 Inspection 18
10.1 Initial inspection 18
10.2 Periodic inspection 18
Annex A (normative) Architecture and operating modes of installations 20
A.1 Architecture of installations 20
A.1.1 Individual installation 20
A.1.2 Collective installation 20
A.1.3 Shared installations 20
A.2 Operating modes 21
A.2.1 Direct feeding mode 21
A.2.2 Reverse feeding mode 21
A.2.3 Autonomous mode 22
Annex B (informative) Limitation of lengths of cables 23

AVA Documents
Document Sharing Hub

B.1 Limit of voltage drop in consumer installations 23
B.2 Estimation of voltage drop 23
Annex C (informative) List of notes concerning certain countries 24
Bibliography 25

Figure 1 – Concept of DC low-voltage electrical installation 9
Figure 2 – Colours used for identification of conductors in DC electrical installations 11
Figure 3 – Downward and upward direct current in human body 11
Figure 4 – Example of electrical installation in TN-S system 13
Figure 5 – Estimation of short-circuit level in TN system 14
Figure 6 – Examples of TN-S systems in DC installation 15
Figure 7 – Different types of arc fault to be considered 16
Figure A.1 – Example of an individual installation 20
Figure A.2 – Example of a collective installation 20
Figure A.3 – Example of a shared installation 21
Figure A.4 – DC electrical installation in direct feeding mode 21
Figure A.5 – DC electrical installation in reverse feeding mode 21
Figure A.6 – DC electrical installation in autonomous mode 22

Table 1 – Preferred nominal DC voltages 10

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ELECTRICAL INSTALLATION GUIDE –

Part 102: Application guidelines for low-voltage direct current electrical installations not intended to be connected to a public distribution network

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 TS 61200-102, which is a Technical Specification, has been prepared by IEC technical committee 64: Electrical installations and protection against electric shock.

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The text of this Technical Specification is based on the following documents:

Draft TS	Report on voting
64/2385/DTS	64/2406/RVDTS

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

A list of all parts in the IEC 61200 series, published under the general title *Electrical installation guide*, can be found on the IEC website.

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

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific document. At this date, the document will be

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

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INTRODUCTION

Many people in the world who still have no access to electricity would benefit from access to electrical power. This can now be achieved with distributed electrical sources using renewable energy. These electrical sources using renewable energy are all operating in direct current (e.g. photovoltaic system, wind turbines).

Supply from these renewable energies is not constant, photovoltaic panels do not operate at night, and wind turbines require wind for generating electrical energy. Therefore, the use of storage units becomes a necessity and manufacturers of stationary secondary batteries are investing in these technologies so that they can become affordable.

In addition, lighting with light emitting diodes (LED), mobile phones and other electronic devices generally operate using direct current.

All requirements and recommendations in this document comply with IEC 60364 (all parts).

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ELECTRICAL INSTALLATION GUIDE –

Part 102: Application guidelines for low-voltage direct current electrical installations not intended to be connected to a public distribution network

1 Scope

This part of IEC 61200 applies to low-voltage DC electrical installations entirely supplied by local power sources and having a nominal voltage lower or equal to the low-voltage limit. These installations can be connected to collective or shared private electrical installations.

This document also applies to DC installations according to use cases TIER 2 and TIER 3 of the World Bank defined in ESMAP 008/15 report: Beyond Connections Energy Access Redefined.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 60364-4-41, *Low-voltage electrical installations – Part 4-41: Protection for safety – Protection against electric shock*

IEC 60364-5-52, *Low-voltage electrical installations – Part 5-52: Selection and erection of electrical equipment – Wiring systems*

IEC 60445, *Basic and safety principles for man-machine interface, marking and identification – Identification of equipment terminals, conductor terminations and conductors*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at http://www.electropedia.org/
- ISO Online browsing platform: available at http://www.iso.org/obp

3.1
individual electrical installation
single consuming and/or producing electrical installation

3.2
collective electrical installation
set of consuming electrical installations sharing one common set of local power supplies and energy storage equipment

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