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Powertrack systems –
Part 1: General requirements

Systèmes de conducteurs préfabriqués –
Partie 1: Exigences générales

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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POWERTRACK SYSTEMS –

Part 1: General requirements

FOREWORD

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This consolidated version of the official IEC Standard and its amendments has been prepared for user convenience.

IEC 61534-1 edition 2.2 contains the second edition (2011-05) [documents 23A/630/FDIS and 23A/631/RVD], its amendment 1 (2014-06) [documents 23A/700A/FDIS and 23A/706/RVD] and its amendment 2 (2020-07) [documents 23A/903/FDIS and 23A/908/RVD].

This Final version does not show where the technical content is modified by amendments 1 and 2. A separate Redline version with all changes highlighted is available in this publication.

International Standard IEC 61534-1 has been prepared by subcommittee 23A: Cable management systems, of IEC technical committee 23: Electrical accessories.

The main changes from the previous edition are as follows:

- updated normative references (Clause 2);
- changes to the number of samples to be tested (Subclause 5.3);
- inclusion of a short circuit test (New Clause 18);
- changes to external influences (Clause 21).

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

A list of all the parts in the IEC 61534 series, under the general title *Powertrack systems*, can be found on the IEC website.

The following difference exists in the countries indicated below:

– Table 4, first column, first line: the 10 A rated terminal should be capable of clamping 1 mm^2 as a minimum (UK);
– Australia has specific wiring rules covering socket-outlets to be switched. In Australia, AS/NZS 3000 contains requirements for switching devices to be used in Australian and New Zealand electrical installations;
– 9.5: in Australia, fuses and fuse-links are not to be used.

The committee has decided that the contents of the base publication and its amendments will remain unchanged until the stability 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- withdrawn,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

Particular requirements for specific types of powertrack systems will be specified in the relevant parts 2 of IEC 61534.

For a specific type of powertrack system the requirements of Part 1 of the standard are to be considered, together with the particular requirements of the appropriate Part 2, which will supplement or modify some of the corresponding clauses in Part 1 to provide the complete requirements for that type of system.

Part 1 shall apply unless supplemented or modified by an appropriate Part 2.

POWERTRACK SYSTEMS –

Part 1: General requirements

1 Scope

1.1 This part of IEC 61534 specifies general requirements and tests for powertrack (PT) systems with a rated voltage not exceeding 277 V a.c. single phase, or 480 V a.c. two or three phase 50 Hz or 60 Hz with a rated current not exceeding 63 A. These systems are used for distributing electricity in household, commercial and industrial premises.

1.2 Powertrack systems, according to this standard, are intended for use under the following conditions:

– an ambient temperature in the range –5 °C to + 40 °C, the average value over a 24 h period not exceeding 35 °C;

– a situation not subject to a source of heat likely to raise temperatures above the limits specified above;

– an altitude not exceeding 2000 m above sea level;

– an atmosphere not subject to excessive pollution by smoke, chemical fumes, prolonged periods of high humidity or other abnormal conditions.

In locations where special conditions prevail, as in ships, vehicles and the like and in hazardous locations, for instance, where explosions are liable to occur, special constructions may be necessary.

This standard does not apply to

– cable trunking systems and cable ducting systems covered by IEC 61084 [8] [1];

– busbar trunking systems covered by IEC 60439-2 [5];

– electrical supply track systems for luminaires covered by IEC 60570 [6].

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 60038:2009, *IEC standard voltages*

IEC 60060-1:2010, *High-voltage test techniques – Part 1: General definitions and test requirements*

IEC 60068-2-52:2017, *Environmental testing – Part 2-52: Tests - Test Kb: Salt mist, cyclic (sodium, chloride solution)*

IEC 60068-2-75:2014, *Environmental testing – Part 2-75: Tests – Test Eh: Hammer tests*

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[1] Figures in square brackets refer to the bibliography.