



NEGARA BRUNEI DARUSSALAM

**BRUNEI DARUSSALAM STANDARD
PIAWAI BRUNEI DARUSSALAM**

PBD IEC 60364-7-753:2006

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Edition 1.0

**LOW-VOLTAGE ELECTRICAL INSTALLATIONS -
PART 7-753: REQUIREMENTS FOR SPECIAL INSTALLATIONS
OR LOCATIONS - FLOOR AND CEILING HEATING SYSTEMS**

**ENERGY DIVISION, PRIME MINISTER'S OFFICE
IN COLLABORATION WITH MINISTRY OF DEVELOPMENT
NEGARA BRUNEI DARUSSALAM**

FOREWORD

This Brunei Darussalam Electrical Standard was prepared by the Technical Committee on Electrical Standards (TECO), Energy Division at Prime Minister's Office in collaboration with the Authority for Building and Construction Industry (ABCI), Ministry of Development, Brunei Darussalam with the objective of developing the National Electrical Standards for electrical products, systems, equipments and facilities for the local industry and consumers with reference to international standards, guidelines and procedures. In developing the national electrical standards, the aim is to promote quality, technical integrity, health, safety and environmental standards for the local industries and consumers.

This Brunei Darussalam Electrical Standard is an adoption of the International Electro Technical Commission IEC 60364-7-753: 2006 (Edition 1.0) standard and implements it as the Brunei Darussalam National Standard.

Attention is drawn to the fact that this Brunei Darussalam Electrical Standard does not confer any immunity from legal obligations in any contract for compliance to the Standard.

The National Electrical Standards are subject to periodical review according to the current needs of the local industries and consumers to keep abreast of progress in the industries and consumers concerned. Suggestions of amendments will be recorded and in due course brought to the notice of the committees concerned.

COMMITTEE MEMBERS

The Technical Committee on Electrical Standards (TECO) was tasked by the Energy Division at the Prime Minister's Office in collaboration with the Authority for Building and Construction Industry (ABCI), Ministry of Development, Brunei Darussalam for the preparation of this Brunei Darussalam Electrical Standard. The members of the Technical Committee are as follows:

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|---|---|
| 1. Awg Haji Abd Shawal Yaman
(Chairman) | Department of Electrical Services, PMO |
| 2. Awg Liaw Wai Khiong
(Co-Chairman) | Brunei Shell Petroleum Co. Sdn Bhd /
Institution of Engineering and Technology,
Brunei Darussalam |
| 3. Pg Shaharuddin Pg Haji Yusoff
(Secretary) | ABCI, Ministry of Development |
| 4. Awg William Voon
(Assistant Secretary 1) | Berakas Power Management Company, |
| 5. Awg Simon K A Leong
(Assistant Secretary 2) | KR Kamarulzaman & Associates |
| 6. Awg Haji Md Azrul Azrin Hj Md Zain | Department of Electrical Services, PMO |
| 7. Awg Md Amir Sharifuddin Haji Ali | Department of Electrical Services, PMO |
| 8. Awg Khairul Ezam Hj Mohd Zain | ABCI, Ministry of Development |
| 9. Awg Dennis Wong Tet Yin | Department of Mechanical & Electrical
Services, PWD |
| 10. Awg Nohi Irwan Surkarki Haji Pawi | Department of Fire & Rescue Services |
| 11. Awg Haji Morsidi Haji Kassim | Institut Teknologi Brunei |
| 12. Awg Haji Ismit Haji Mohamad | Institut Teknologi Brunei |
| 13. Awg Matyassin Haji Masri | Maktab Kejuruteraan Jefri Bolkiah |
| 14. Awg Sylvester Kong | Brunei Shell Petroleum Co. Sdn Bhd |
| 15. Dyg Seri Malati OKIP Hj Zolkeflee | Brunei Shell Petroleum Co. Sdn Bhd |
| 16. Awang Aristoteles Momin | Brunei LNG Sdn Bhd |
| 17. Awg Rick Liaw | Hamzah Hassan Consultant |

SUB-COMMITTEE NO. 5 MEMBERS

The Sub-Committee No. 5 (SC5) is the working groups for the Electrical Wiring Code of Practice who assisted in the preparation for the adoption of the Brunei Darussalam Electrical Standard. The members of the Sub-Committee No. 5 are :

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|---------------------------------------|---|
| 1. Awg William Voon
(Chairman) | Berakas Power Management Company, |
| 2. Awg Liaw Wai Khiong
(Secretary) | Brunei Shell Petroleum Co. Sdn Bhd
Institution of Engineering and Technology,
Brunei Darussalam |
| 3. Pg Shaharuddin Pg Haji Yusoff | ABCI, Ministry of Development |
| 4. Awg Khairul Ezam Hj Mohd Zain | ABCI, Ministry of Development |
| 5. Awg Simon K A Leong | KR Kamarulzaman & Associates |
| 6. Awg Dennis Wong Tet Yin | Department of Mechanical & Electrical
Services, PWD |
| 7. Dr Rohaniyati Salleh | Department of Mechanical & Electrical
Services, PWD |
| 8. Dyg Hajah Norhayati binti Ahmad | Department of Electrical Services, PMO |
| 9. Awg Abdul Azia bin Abdullah | Department of Electrical Services, PMO |
| 10. Awg Matyassin Haji Masri | Institut Teknologi Brunei |
| 11. Awg Haji Morsidi Haji Kassim | Maktab Kejuruteraan Jefri Bolkiah |
| 12. Awg Tony Ng | PKS Sdn Bhd |
| 13. Awg N. Sivakumar | LKH (B) Sdn Bhd |
| 14. Awg Tan Tau Minn | SEC Mashibah Sdn Bhd |

INTERNATIONAL STANDARD

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Low-voltage electrical installations –

Part 7-753:

**Requirements for special installations
or locations –**

Floor and ceiling heating systems



Reference number
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Negara Brunei Darussalam as a national standard under the IEC Affiliate Country Programme

INTERNATIONAL ELECTROTECHNICAL COMMISSION

LOW-VOLTAGE ELECTRICAL INSTALLATIONS –

Part 7-753: Requirements for special installations or locations –
Floor and ceiling heating systems

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.
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International Standard IEC 60364-7-753 has been prepared by IEC technical committee 64: Electrical installations and protection against electrical shock.

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

FDIS	Report on voting
64/1490/FDIS	64/1502/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.

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

Parts 2 and 3 are under consideration.

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 of IEC 60364.

The clause numbering of Part 7-753 follows the pattern and corresponding references of IEC 60364. The numbers following the particular number of Part 7-753 are those of the corresponding parts or clauses of IEC 60364.

The absence of reference to a part or a clause means that the corresponding general requirements are applicable.

LOW-VOLTAGE ELECTRICAL INSTALLATIONS –

Part 7-753: Requirements for special installations or locations – Floor and ceiling heating systems

753 Floor and ceiling heating systems

753.1 Fundamental principles, assessment of general characteristics and definitions

753.11 Scope

This standard applies to the installation of electric floor and ceiling heating systems which are erected as either thermal storage heating systems or direct heating systems. It does not apply to the installation of wall heating systems. Heating systems for use outdoors are not considered.

NOTE A ceiling located under the roof of a building down to a vertical height of 1,50 m measured from the finished floor surface is also regarded as a ceiling within the meaning of this standard.

753.12 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 60364 (all parts), *Low-voltage electrical installations*

IEC 60364-4-42, *Electrical installations of buildings – Part 4-42: Protection for safety – Protection against thermal effects*

IEC 60079-7: *Electrical apparatus for explosive gas atmospheres – Part 7: Increased safety “e”*

IEC 60335-2-96: *Household and similar electrical appliances – Safety – Part 2-96: Particular requirements for flexible sheet heating elements for room heating*

IEC 60800: *Heating cables with a rated voltage of 300/500 V for comfort heating and prevention of ice formation*

753.2 Terms and definitions

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

753.2.1

thermal storage floor heating system

heating system in which, due to a limited charging period, a restricted availability of electrical energy is converted into heat and dissipated mainly through the surface of the floor to the room to be heated with an intended time delay