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FOREWORD

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International Standard IEC 62848-2 has been prepared by IEC technical committee 9: Electrical equipment and systems for railways.

This document is based on EN 50526-2:2014.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
9/2492/FDIS	9/2503/RVD

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

A list of all parts in the IEC 62848 series, published under the general title *Railway applications – DC surge arresters and voltage limiting devices*, can be found on the IEC website.

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

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- withdrawn,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.

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

RAILWAY APPLICATIONS – DC SURGE ARRESTERS AND VOLTAGE LIMITING DEVICES –

Part 2: Voltage limiting devices

1 Scope

This document applies to Voltage Limiting Devices (VLDs) to be applied in DC traction systems in order to comply with protective provisions against electric shock from DC, and combined AC – DC voltages, in accordance with the IEC 62128 series, taking into account stray current provisions.

VLDs operate in such a way as to connect the track return circuit of DC railway systems to the earthing system or to conductive parts within the overhead contact line zone or current collector zone.

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

IEC 60085, *Electrical insulation – Thermal evaluation and designation*

IEC 60529:1989, *Degrees of protection provided by enclosures (IP Code)*

IEC 60850:2014, *Railway applications – Supply voltages of traction systems*

IEC 61643-311, *Components for low-voltage surge protective devices – Part 311: Performance requirements and test circuits for gas discharge tubes (GDT)*

IEC 61992-1:2006, *Railway applications – Fixed installations – DC switchgear – Part 1: General*
IEC 61992-1:2006/AMD1:2014

IEC 61992-7:2006 (all parts), *Railway applications – Fixed installations – DC switchgear – Part 7-x: Measurement, control and protection devices for specific use in d.c. traction systems*

IEC 62128-1:2013, *Railway applications – Fixed installations – Electrical safety, earthing and the return circuit – Part 1: Protective provisions against electric shock*

IEC 62128-3:2013, *Railway applications – Fixed installations – Electrical safety, earthing and the return circuit – Part 3: Mutual Interaction of a.c. and d.c. traction systems*

IEC 62497-1, *Railway applications – Insulation coordination – Part 1: Basic requirements – Clearances and creepage distances for all electrical and electronic equipment*

IEC 62498-2, *Railway applications – Environmental conditions for equipment – Part 2: Fixed electrical installations*

IEC 62848-1:2016, *Railway applications – DC surge arresters and voltage limiting devices – Part 1: Metal-oxide surge arresters without gaps*

ISO 4287:1997, *Geometrical Product Specifications (GPS) -Surface texture: Profile method – Terms, definitions and surface texture parameters*

ISO 4892-1, *Plastics – Methods of exposure to laboratory light sources – Part 1: General guidance*

ISO 4892-2, *Plastics – Methods of exposure to laboratory light sources – Part 2: Xenon-arc lamps*

ISO 4892-3, *Plastics – Methods of exposure to laboratory light sources – Part 3: Fluorescent UV lamps*