



# TECHNICAL SPECIFICATION

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## Safe management and operation of electrical installations



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## Safe management and operation of electrical installations

### FOREWORD

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installations. It is a Technical Specification.

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

Draft	Report on voting
128/59/DTS	128/60/RVDTS

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this Technical Specification is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at [www.iec.ch/members\\_experts/refdocs](http://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are described in greater detail at [www.iec.ch/publications](http://www.iec.ch/publications).

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

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This document is applicable to the safe management and [operation \(3.1.2\)](#) of and [work activity \(3.4.1\)](#) on, with, or near electrical installations operating at voltage levels from, and including, extra-low voltage up to and including high voltage.

This latter term includes those levels commonly referred to as medium and extra-high voltage.

These electrical installations are designed for the generation, transmission, conversion, distribution and use of electrical power. Some of these electrical installations are permanent and fixed, such as a distribution installation in a factory or office complex. Others are temporary, such as on construction sites, and some are mobile or capable of being moved either whilst energized or whilst not energized nor charged, examples are electrically driven excavating machines in quarries or open-cast coal sites.

This document sets out the requirements for the safe management and [operation \(3.1.2\)](#) of and [work activity \(3.4.1\)](#) on, with, or near these electrical installations. The requirements apply to all operational, working and maintenance procedures. They apply to all [non-electrical work \(3.4.3\)](#) such as building work near to overhead lines or underground cables as well as [electrical work \(3.4.2\)](#), when there is a [risk \(3.1.3\)](#) of [electrical danger \(3.1.5\)](#).

This document does not apply to [ordinary persons \(3.2.7\)](#) when using installations and equipment, provided that the installations and equipment comply with relevant standards and are designed and installed for use by [ordinary persons \(3.2.7\)](#).

This document has not been developed specifically to apply to the electrical installations listed below. However, if there are no other rules or procedures, the principles of this document could be applied to them:

- on any aircraft and hovercraft moving under its own power, (international aviation laws can apply);
- on any sea going ship moving under its own power, or under the direction of the master, (international marine laws can apply);
- electronic telecommunications and information systems;
- electronic instrumentation, control and automation systems;
- at coal or other mines;
- on off-shore installations (international marine laws can apply);
- on vehicles;
- on electric traction systems;
- on experimental electrical research work.

## 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 60050-195:2021, *International Electrotechnical Vocabulary (IEV) - Part 195: Earthing and protection against electric shock*

IEC 60364-1, *Low-voltage electrical installations - Part 1: Fundamental principles, assessment of general characteristics, definitions*

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*Protection against electric shock*

IEC 60364-5-51, *Electrical installations of buildings - Part 5-51: Selection and erection of electrical equipment - Common rules*

IEC 61219, *Live working - Earthing or earthing and short-circuiting equipment using lances as a short-circuiting device - Lance earthing*

IEC 61230, *Live working - Portable equipment for earthing or earthing and short-circuiting*

IEC 61243-1, *Live working - Voltage detectors - Part 1: Capacitive type to be used for voltages exceeding 1 kV AC*

IEC 61243-2, *Live working - Voltage detectors - Part 2: Resistive type to be used for voltages of 1 kV to 36 kV a.c.*

IEC 61243-3, *Live working - Voltage detectors - Part 3: Two-pole low-voltage type*

IEC 61243-5, *Live working - Voltage detectors - Part 5: Voltage detecting systems (VDS)*

IEC 61472:2013, *Live working - Minimum approach distances for a.c. systems in the voltage range 72,5 kV to 800 kV - A method of calculation*

IEC 61472-2:2021, *Live working - Minimum approach distances - Part 2: Method of determination of the electrical component distance for AC systems from 1,0 kV to 72,5 kV*

IEC 61936-1, *Power installations exceeding 1 kV AC and 1,5 kV DC - Part 1: AC*

IEC 61936-1:2021, *Power installations exceeding 1 kV AC and 1,5 kV DC - Part 1: AC*

IEC 62271-1, *High-voltage switchgear and controlgear - Part 1: Common specifications for alternating current switchgear and controlgear*

IEC 62271-102, *High-voltage switchgear and controlgear - Part 102: Alternating current disconnectors and earthing switches*

IEC 62271-213, *High-voltage switchgear and controlgear - Part 213: Voltage detecting and indicating system*