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Safe management and operation of electrical installations

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CONTENTS

FOREWORD....6
1 Scope....8
2 Normative references....8
3 Terms and definitions....9
3.1 General....9
3.2 Personnel, organization and communication....10
3.3 Working zone....12
3.4 Working....12
3.5 Protective devices....14
3.6 Voltages....15
3.7 Distances....15
3.8 Miscellaneous....17
3.9 Symbols....17
4 Basic principles....18
4.1 Safe operation (3.1.2)....18
4.2 Personnel....19
4.3 Organization....19
4.3.1 General....19
4.3.2 The installation manager (3.2.1)....20
4.3.3 The operation controller (3.2.2)....20
4.3.4 The work controller (3.2.3)....20
4.3.5 The worker (3.2.4)....20
4.3.6 Skilled person in electricity....21
4.3.7 Instructed person in electricity....21
4.3.8 ordinary person (3.2.7) in electricity....21
4.3.9 Complexity of work activity (3.4.1)....21
4.3.10 Objections for safety....21
4.4 Communication (transmission of information)....22
4.5 Work location....22
4.6 Tools, equipment and devices....22
4.7 Drawings and records....23
4.8 Signs....23
4.9 Emergency arrangements....23
4.10 Types of supervision (3.4.11)....24
4.11 Determination of distances....24
4.11.1 General....24
4.11.2 Limit distances....24
4.11.3 Determination of working distances....28
4.12 Assessment of competence (3.8.2) and authorization (3.4.9) of persons....28
4.13 Planning the work....29
4.14 electrical safety rules (3.2.9)....30
5 Operational procedures....31
5.1 General....31
5.2 Operating activities....31
5.3 Measurement....32
5.4 Testing....32
5.5 Inspection....32

6 Working procedures 33
6.1 General 33
6.1.1 General requirements 33
6.1.2 Specific requirements in case of induction 35
6.1.3 Specific requirements according to weather conditions 35
6.2 Dead working (3.4.8) 35
6.2.1 General 35
6.2.2 Disconnect completely 36
6.2.3 Secure against re-connection 36
6.2.4 Verify absence of operating voltage (3.6.4) 36
6.2.5 Earthing and short-circuiting 37
6.2.6 Protection against adjacent live parts 39
6.2.7 permission to start work (3.4.10) 39
6.2.8 Re-energizing after work 39
6.3 Live working (3.4.4) 39
6.3.1 General 39
6.3.2 Training and qualification 40
6.3.3 Maintenance of personnel ability 40
6.3.4 Working methods 40
6.3.5 Working instructions 41
6.3.6 Tools, equipment and devices 41
6.3.7 Environmental conditions 41
6.3.8 Organization of work 42
6.3.9 Specific requirements for extra-low voltage installations 43
6.3.10 Specific requirements for low voltage installations 43
6.3.11 Specific requirements for high voltage installations 43
6.3.12 Specific works on live parts 43
6.4 Working within the vicinity zone (3.4.5) 43
6.4.1 General 43
6.4.2 Protection by screen (3.5.1), barrier (3.5.2), enclosure (3.5.4) or protective cover (3.5.3) 44
6.4.3 Protection by safe distance and supervision (3.4.11) 45
6.5 Working outside the vicinity zone (3.3.3) 45
6.5.1 General 45
6.5.2 Specific requirements for non-electrical work (3.4.3), e.g. construction work, and electrical work (3.4.2) 45
7 Maintenance procedures 46
7.1 General 46
7.2 Personnel 47
7.3 Repair work 47
7.4 Replacement work 48
7.4.1 Replacement of fuses 48
7.4.2 Replacement of lamps and accessories 48
7.5 Temporary interruption of maintenance work 48
7.6 End of maintenance work 48
Annex A (informative) Guidance for distances in air for working procedures 49
A.1 Limit distances 49
A.2 Working distances 49
A.2.1 General 49

A.2.2 Determination of the distance value related to the voltage level....49
A.2.3 Considerations of tools, devices or equipment....49
A.2.4 Ergonomic considerations....50
A.2.5 Working distance for live working....50
A.2.6 Working distance for working within the vicinity zone....51
A.2.7 Working distance for working outside the vicinity zone....52
Annex B (informative) Additional information for safe working....54
B.1 Example for responsibility levels....54
B.1.1 General scheme....54
B.1.2 Domestic....54
B.1.3 Small company or craftsman....55
B.1.4 Large or Industrial company....55
B.2 Example of application of live working....55
B.3 Atmospheric conditions that are part of environmental conditions to be assessed....55
B.3.1 Precipitation....55
B.3.2 Thick fog....55
B.3.3 Thunderstorms....55
B.3.4 Violent wind....56
B.3.5 Salt storms....56
B.3.6 Extra low temperature....56
B.4 Fire protection and fire fighting....56
B.5 Work location presenting explosion risks....56
B.6 Emergency arrangements....57
Annex C (informative) Hazards of electricity....58
C.1 Introduction....58
C.2 Electric shock hazard....59
C.3 Arc hazard....60
C.3.1 General....60
C.3.2 Hazards....61
C.3.3 Arc flash risk assessment....61
C.4 Electromagnetic fields....62
Annex D (informative) Risk assessment....63
D.1 General....63
D.2 Principles of prevention....64
D.3 Hierarchy of controls....64
D.4 Categories of risk assessment....65
D.4.1 General....65
D.5 Design risk assessment....65
D.5.1 General....65
D.5.2 Electrical installation risk assessment....65
D.5.3 Work plan risk assessment....66
D.5.4 Work location risk assessment....66
D.5.5 Work start risk assessment....66
D.5.6 Specific risk assessment....67
D.6 Risk assessment formats....67
D.6.1 General....67
D.6.2 As low as reasonably practicable (ALARP)....67
D.6.3 Consequence/likelihood matrix (risk matrix or heat map)....71

Annex E (informative) Safe system of work and safety documents 72
E.1 Safe system of work 72
E.2 Safety documents for dead working (3.4.8) (6.2) 72
E.2.1 General 72
E.2.2 Switching plan 73
E.2.3 Request for dead working 73
E.2.4 Authorization for dead working 73
E.2.5 Definition of the work location 74
E.2.6 Authorization for electrical test, measurement and verification 74
E.2.7 Permission to start work 75
E.2.8 Cancellation of permission to start work 75
E.2.9 Notification of readiness to re-energize 75
E.3 Safety documents for live working (3.4.4) (6.3) 76
E.3.1 General 76
E.3.2 Request for live working 76
E.3.3 Authorization for live working 77
E.3.4 Definition of work location 77
E.3.5 Authorization for equipment used if required 77
E.3.6 Permission to start work 78
E.4 Safety documents for working within the vicinity zone (3.3.3) (sub-clause 6.4) 78
E.4.1 General 78
E.4.2 Switching plan (3.8.3) (if necessary) 79
E.4.3 Request for working within the vicinity zone (3.3.3) 80
E.4.4 Authorization for working within the vicinity zone (3.3.3) 80
E.4.5 Definition of work location (3.3.1) 80
E.4.6 Authorization for electrical test, measurement and verification (if necessary) 81
E.4.7 Permission to start work 81
E.4.8 Notification of readiness to re-energize (if necessary) 82
E.5 Safety documents for working outside the vicinity zone (6.5) 82
Annex F (informative) Terms and definitions in alphabetic order 83
F.1 General 83
F.2 English 83
F.3 French 84
F.4 German 86
Bibliography 88

Figure 1 – Distances in air and zones 25
Figure 2 – Example of eliminating limit zones by the use of an insulating protective device 26
Figure 3 – Example of eliminating limit zones by the use of a barrier (3.5.2) (insulating or non-insulating) 27
Figure 4 – Flowchart "planning working procedure" 34
Figure A.1 – Example for determination of the minimum working distance for working within the vicinity zone (3.4.5) 52
Figure A.2 – Example for determination of the minimum working distance for working outside the vicinity zone (3.3.3) 53
Figure B.1 – Responsibility levels 54

Figure C.1 – Time and current zones for effects of alternating and direct current through human body 60
Figure D.1 – Hierarchy of risk controls: the most efficient way is to remove the hazard, and the least effective is using PPE 64
Figure D.2 – A graphical tool for visualising the risk (3.1.3) 68
Figure D.3 – Example of consequence/likelihood matrix (IEC 31010 [15]) 71

Table 1 – Estimated values for distances D_L and D_V 28
Table C.1 – Summarized impacts of AC and DC current through human body (see Figure C.1 60
Table D.1 – Risk classification for personal injuries 68
Table D.2 – A matrix for assessing design risk with ALARP 70
Table F.1 – Terms in English 83
Table F.2 – Terms in French 84
Table F.3 – Terms in German 86

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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Safe management and operation of electrical installations

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IEC TS 63527 has been prepared by IEC project committee 128: Operation of electrical 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. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

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– reconfirmed,
– withdrawn, or
– revised.

1 Scope

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*

IEC 60364-4-41, *Low-voltage electrical installations - Part 4-41: Protection for safety - 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*