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REDLINE VERSION

~~Low-voltage switchgear and controlgear~~ Switchgear, controlgear and their assemblies for low-voltage - Product data and properties for information exchange -
Part 1: Catalogue data

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CONTENTS

FOREWORD 6
INTRODUCTION 8
1 Scope 10
2 Normative references 10
3 Terms and definitions 10
4 General 11
5 Properties 11
5.1 Criteria for naming properties 11
5.2 Attributes of a property 12
6 Block of properties 12
7 Device classes 14
7.1 Device class attributes 14
7.2 Classification of low-voltage switchgear and controlgear 14
7.3 Classification of low-voltage switchgear and controlgear assembly 24
7.4 Properties of circuit-breaker classes 29
7.4.1 General 29
7.4.2 Circuit-breaker 29
7.4.3 Release for circuit-breaker 31
7.4.4 Residual current release for circuit-breaker 32
7.4.5 Shunt release for circuit-breaker 33
7.4.6 Under-voltage release for circuit-breaker 34
7.4.7 Motor-operator for circuit-breaker 34
7.4.8 Plug-in base for circuit-breaker 35
7.4.9 Draw-out cradle for circuit-breaker 36
7.5 Properties of switch classes 36
7.5.1 General 36
7.5.2 Switch-disconnector 37
7.5.3 Switch-disconnector-fuse 38
7.5.4 Fuse-switch-disconnector 40
7.5.5 Operating handle (of a mechanical switching device) 42
7.5.6 Shaft of operating handle 43
7.6 Properties of contactors, starters and similar equipment classes 43
7.6.1 General 43
7.6.2 Motor ~~protection circuit-breaker~~ protective switching device 44
7.6.3 Motor management ~~device~~ starter 45
7.6.4 Motor management ~~device~~ starter, extension module 47
7.6.5 Motor management ~~device~~ starter, operator panel 48
7.6.6 Motor-starter combination 48
7.6.7 ~~AC~~ Semiconductor motor controller 50
7.6.8 Power contactor, AC switching 51
7.6.9 Capacitor contactor 53
7.6.10 Combination of contactors 54
7.6.11 Power contactor, DC switching 55
7.6.12 Thermal overload relay 56
7.6.13 Electronic overload relay 57
7.6.14 Relay for thermistor protection (PTC) 59

7.6.15 Electromechanical contactor for household and similar purposes 60
7.6.16 Motor-starter 61
7.6.17 Transient suppressor 62
7.6.18 Mechanical interlocking device 63
7.6.19 Motor-starter enclosure 63
7.6.20 Coil for contactor or contactor relay 64
7.6.21 Electromechanical latching device 65
7.6.22 Control interface for contactor 66
7.7 Properties of control switch classes 66
7.7.1 General 66
7.7.2 Inductive proximity switch 67
7.7.3 Capacitive proximity switch 68
7.7.4 Non-mechanical magnetic proximity switch 69
7.7.5 Ultrasonic proximity switch 71
7.7.6 Through beam photoelectric proximity switch 72
7.7.7 Emitter for through beam photoelectric proximity switch 74
7.7.8 Retroreflective photoelectric proximity switch 75
7.7.9 Diffuse reflective photoelectric proximity switch 76
7.7.10 Diffuse reflective photoelectric proximity switch with background suppression 78
7.7.11 Auxiliary contact block 79
7.7.12 Contactor relay 80
7.7.13 Position switch 81
~~7.6.13 Rotary limit switch ..... 83~~
7.7.14 Coded magnetic switch 83
7.7.15 Safety position switch with separate actuator 84
7.7.16 Guard locking safety position switch 85
7.7.17 Trip wire switch 87
~~7.6.17 Hinge switch ..... 88~~
7.7.18 Safety switch for hinge door 88
7.7.19 Push-button 89
7.7.20 Rotary button 91
7.7.21 Front element for rotary button 92
7.7.22 Joy stick 93
7.7.23 Foot switch 94
7.7.24 Emergency stop push-button 96
7.7.25 Indicator light 97
7.7.26 Indicating tower 98
7.7.27 Front element for push-button 99
7.7.28 Contact block for control circuit 100
7.7.29 Front element for emergency stop push-button 101
7.7.30 Module for indicating tower 102
7.7.31 Reflector for reflective photoelectric proximity switch 103
7.7.32 Lamp for control device 104
7.7.33 Label holder for push-button and indicator light 105
7.7.34 Label plate for control operation 105
7.7.35 Protective cover for control device 106
7.7.36 Pneumatic time delay auxiliary contact block 107
7.7.37 Electronic time delay auxiliary block 108

7.7.38 Time relay 109
7.7.39 Panel mounted audible signalling device 110
7.7.40 Rotary encoder 111
7.7.41 Linear encoder 112
7.7.42 Control station, empty 113
7.7.43 Control station, complete 114
7.7.44 Pendant control station, empty 115
7.7.45 Pendant control station, complete 116
7.7.46 Two-hand control device 117
7.7.47 Cable connection assembly for control device 118
7.7.48 Actuator for coded magnetic switch 119
7.8 Properties of multiple function equipment classes 119
7.8.1 Transfer switching equipment 119
7.8.2 Control and protective switching device (CPS) 119
7.9 Properties of terminal block classes 119
7.9.1 General 119
7.9.2 Feed-through terminal block 120
7.9.3 Disconnect terminal block 121
7.9.4 Protective conductor terminal block 122
7.9.5 Fuse terminal block 123
8 ~~Products~~Device properties 125
Bibliography 179

Figure 1 – Operating distances of inductive and capacitive proximity switches 172
Figure 2 – Ultrasonic proximity switch operating distance (IEC 60947-5-2:2019, Figure 2) 173
Figure 3 – Height of the device 173
Figure 4 – Width of the device 174
Figure 5 – Length of the device 174

Table 1 – Library of blocks used in the device classes of low-voltage switchgear and controlgear 12
Table 2 – Low-voltage switchgear and controlgear classification 14
Table 3 – Low-voltage switchgear and controlgear assembly classification 24
Table 4 – Circuit-breaker 29
Table 5 – Release for circuit-breaker 31
Table 6 – Residual current release for circuit-breaker 32
Table 7 – Shunt release for circuit-breaker 33
Table 8 – Under-voltage release for circuit-breaker 34
Table 9 – Motor-operator for circuit-breaker 34
Table 10 – Plug-in base for circuit-breaker 35
Table 11 – Draw-out cradle for circuit-breaker 36
Table 12 – Switch-disconnector 37
Table 13 – Switch-disconnector-fuse 38
Table 14 – Fuse-switch-disconnector 40
Table 15 – Operating handle (of a mechanical switching device) 42

Table 16 – Shaft of operating handle 43
Table 17 – Motor ~~protection circuit-breaker~~ protective switching device 44
Table 18 – Motor management ~~device~~ starter 45
Table 19 – Motor management ~~device~~ starter, extension module 47
Table 20 – Motor management ~~device~~ starter, operator panel 48
Table 21 – Motor-starter combination 48
Table 22 – ~~AC~~ Semiconductor motor controller 50
Table 23 – Power contactor, AC switching 51
Table 24 – Capacitor contactor 53
Table 25 – Combination of contactors 54
Table 26 – Power contactor, DC switching 55
Table 27 – Thermal overload relay 56
Table 28 – Electronic overload relay 57
Table 29 – Relay for thermistor protection (PTC) 59
Table 30 – Electromechanical contactor for household and similar purposes 60
Table 31 – Motor-starter 61
Table 32 – Transient suppressor 62
Table 33 – Mechanical interlocking device 63
Table 34 – Motor-starter enclosure 63
Table 35 – Coil for contactor or contactor relay 64
Table 36 – Electromechanical latching device 65
Table 37 – Control interface for contactor 66
Table 38 – Inductive proximity switch 67
Table 39 – Capacitive proximity switch 68
Table 40 – Non-mechanical magnetic proximity switch 69
Table 41 – Ultrasonic proximity switch 71
Table 42 – Through beam photoelectric proximity switch 72
Table 43 – Emitter for through beam photoelectric proximity switch 74
Table 44 – Retroreflective photoelectric proximity switch 75
Table 45 – Diffuse reflective photoelectric proximity switch 76
Table 46 – Diffuse reflective photoelectric proximity switch with background suppression 78
Table 47 – Auxiliary contact block 79
Table 48 – Contactor relay 80
Table 49 – Position switch 81
Table 50 – Coded magnetic switch 83
Table 51 – Safety position switch with separate actuator 84
Table 52 – Guard locking safety position switch 85
Table 53 – Trip wire switch 87
Table 54 – Safety switch for hinge door 88
Table 55 – Push-button 89
Table 56 – Rotary button 91
Table 57 – Front element for rotary button 92

Table 58 – Joy stick 93
Table 59 – Foot switch 94
Table 60 – Emergency stop push-button 96
Table 61 – Indicator light 97
Table 62 – Indicating tower 98
Table 63 – Front element for push-button 99
Table 64 – Contact block for control circuit 100
Table 65 – Front element for emergency stop push-button 101
Table 66 – Module for indicating tower 102
Table 67 – Reflector for reflective photoelectric proximity switch 103
Table 68 – Lamp for control device 104
Table 69 – Label holder for push-button and indicator light 105
Table 70 – Label plate for control operation 105
Table 71 – Protective cover for control device 106
Table 72 – Pneumatic time delay auxiliary contact block 107
Table 73 – Electronic time delay auxiliary block 108
Table 74 – Time relay 109
Table 75 – Panel mounted audible signalling device 110
Table 76 – Rotary encoder 111
Table 77 – Linear encoder 112
Table 78 – Control station, empty 113
Table 79 – Control station, complete 114
Table 80 – Pendant control station, empty 115
Table 81 – Pendant control station, complete 116
Table 82 – Two-hand control device 117
Table 83 – Cable connection assembly for control device 118
Table 84 – Actuator for coded magnetic switch 119
Table 85 – Feed-through terminal block 120
Table 86 – Disconnect terminal block 121
Table 87 – Protective conductor terminal block 122
Table 88 – Fuse terminal block 123
Table 89 – Library of properties used in the device classes 125
Table 90 – Value lists of properties 174

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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~~Low-voltage switchgear and controlgear~~ Switchgear, controlgear and their assemblies for low-voltage - Product data and properties for information exchange - Part 1: Catalogue data

FOREWORD

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This redline version of the official IEC Standard allows the user to identify the changes made to the previous edition IEC 62683-1:2017. A vertical bar appears in the margin wherever a change has been made. Additions are in green text, deletions are in strikethrough red text.

IEC 62683-1 has been prepared by committee 121: Switchgear and controlgear and their assemblies for low voltage. It is an International Standard.

This second edition cancels and replaces the first edition published in 2017. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition for reflecting the content of the IEC CDD 62683DB which has been updated with the change requests C00073, C00074, C00081, C00087, C00089, C00098, C00100, C00107, C00111, C00116, C00119, C00122, C00146, C00148, C00159, C00167, C00174 and C00135:

a) New device class descriptions: ACC304, ACC305, ACC413, ACC417, ACC503, ACC504, ACC505, ACC512, ACC516, ACC536, ACC537, ACC538, ACC540, ACC541, ACC542, ACC543, ACC544, ACC545, ACC546, ACC547, ACC548.

b) New associated properties.

c) New assembly class structure: ACC101, ACC102, ACC103, ACC104, ACC106, ACC110, ACC111, ACC112, ACC113, ACC114, ACC115, ACC116, ACC117, ACC118, ACC119, ACC120, ACC121, ACC123, ACC124, ACC125, ACC126, ACC127, ACC131, ACC132, ACC133, ACC135, ACC141, ACC142, ACC143, ACC144, ACC145, ACC146, ACC147, ACC148, ACC150, ACC151, ACC152, ACC153, ACC154, ACC155, ACC156, ACC157, ACC158, ACC159, ACC160, ACC161, ACC162, ACC163, ACC164, ACC165, ACC166, ACC167, ACC170, ACC171, ACC172, ACC173, ACC174, ACC175.

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

Draft	Report on voting
121/237/FDIS	121/241/RVD

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 International Standard 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.

A list of all parts in the IEC 62683 series, published under the general title *Switchgear, controlgear and their assemblies for low-voltage - Product data and properties for information exchange*, can be found on the IEC website.

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 in the data related to the specific document. At this date, the document will be

– reconfirmed,

– withdrawn, or

– revised.

INTRODUCTION

Mainly large customers and wholesalers are requesting standardized product descriptions and product properties to product manufacturers. However, all stakeholders ~~will~~ can benefit from this standardised presentation and data exchange.

Multiple associations or groups of actors launched different initiatives to try to respond to this demand but, due to the lack of standardisation of classes and properties, the situation remains unsatisfactory for both customers and manufacturers.

In order to keep the lead of product description, IEC proposes a consistent solution within its product standards.

The purpose of this document is to:

– define device classes and properties for low-voltage switchgear and controlgear and their assemblies in a dedicated standard,

– provide a basis ~~for introduction~~ of classes of the low-voltage switchgear and controlgear ~~classes~~ and their assemblies, and properties introduced into the IEC 61360 database maintained by IEC/SC3D (see http://std.iec.ch/iec61360).

This document is not intended to establish a hierarchy of product classes called classification.

The intended benefits of this document are to:

– reduce the costs, time and efforts of mapping data for each customer request;

– optimize the workflow of B2B exchanges;

– minimize duplication of articles in customer inventories and in databases;

– minimize losses and misinterpretation of data during exchanges;

– facilitate the selection of a product, especially regarding reliability and safety;

– give access to product data everywhere regardless of country, language and culture;

– provide product data related to environmental aspects such as material declaration;

– contribute to the fast growth of the e-business by simplifying the development of:

  • e-Catalogue allowing the differentiation of products performances, certificates, etc;

  • e-Commerce: use of electronic networks to exchange information, products, services and payments for commercial and communication purposes between individuals (consumers) and businesses, between businesses themselves.

The output of this document consists of:

– reference dictionary of low-voltage switchgear and controlgear and their assemblies using existing terms from IEC documents. However, terminology used in e-business ~~may~~ can be relevant for the purpose of naming classes in this document to get a high level of acceptance;

– properties for e-commerce purposes, conformity of properties with product standards being the main goal of this document.

NOTE The classes "under consideration" are for information only and are intended to be completed during the next maintenance cycle.

~~For this project, the introduction~~The description of low-voltage switchgear and controlgear and their assemblies within the IEC 61360 database ~~needs to address~~ addresses the following technical aspects:

– IEC 61360 requires mandatory attributes. ~~The complete set of mandatory attributes with additional relevant attributes for low-voltage switchgear and controlgear will be available within the IEC 61360 database. At the development stage, the CDD 62683 database is available at the following address: https://cdd.iec.ch/cdd/iec62683/iec62683.nsf.~~ The complete sets of attributes for low-voltage switchgear and controlgear and their assemblies are available in the IEC 62683DB domain at https://cdd.iec.ch/cdd/iec62683/iec62683.nsf/TreeFrameset?OpenFrameSet. Within the present document, only the most useful attributes are presented.

– The switchgear and controlgear and their assemblies data models are implemented in ~~an appropriate~~ the IEC 62683DB domain of the IEC Component Data Dictionary (CDD), ~~IEC 61360,~~ by creating dictionaries of blocks, classes and properties.

1 Scope

This part of IEC 62683 establishes the reference dictionary of the general description of classes of low-voltage switchgear and controlgear ~~classes~~ and their assemblies based on defined properties.

This dictionary is used to facilitate the exchange in electronic format of data describing low-voltage switchgear and controlgear, their accessories and their assemblies.

This document provides clear and unambiguous definitions of a limited number of properties and classes which are mainly used for presentation, selection and identification of products particularly in electronic catalogues.

Each property has an unambiguously defined meaning and ~~naming~~ name, and where relevant, a defined value list, a defined format, and a defined unit.

~~The intention is not to cover manufacturer-specific features.~~

Manufacturer specific features are not covered.

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 60947-1:~~2007~~2020, *Low-voltage switchgear and controlgear - Part 1: General rules*
~~IEC 60947-1:2007/AMD1:2010~~
~~IEC 60947-1:2007/AMD2:2014~~

IEC 61360-1, *Standard data element types with associated classification scheme ~~for electric items~~ - Part 1: Definitions - Principles and methods*

IEC 61439-1:2020, *Low-voltage switchgear and controlgear assemblies - Part 1: General rules*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60947-1, IEC 61439-1 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

– IEC Electropedia: available at https://www.electropedia.org/

– ISO Online browsing platform: available at https://www.iso.org/obp

3.1
attribute
data element for description of a property, a relation or a device class

EXAMPLE The name of a property, the code of a class, the measure unit of a property