

Deutsche Akkreditierungsstelle

Annex to the Accreditation Certificate D-PL-12072-01-00 according to DIN EN ISO/IEC 17025:2018

Valid from: 13.03.2024

Date of issue: 13.03.2024

Holder of accreditation certificate:

PEHLA GmbH
Beckstraße 15, 69469 Weinheim

with the location

PEHLA GmbH
PEHLA-Prüffeld Frankfurt/Main
Carl-Benz-Straße 22, 60386 Frankfurt am Main

The testing laboratory meets the requirements of DIN EN ISO/IEC 17025:2018 to carry out the conformity assessment activities listed in this annex. The testing laboratory meets additional legal and normative requirements, if applicable, including those in relevant sectoral schemes, provided that these are explicitly confirmed below.

The management system requirements of DIN EN ISO/IEC 17025 are written in the language relevant to the operations of testing laboratories and they conform to the principles of DIN EN ISO 9001.

Tests in the fields:

High-voltage switchgear and equipment,
Equipment for electrical power engineering
Environmental simulation

The testing laboratory is permitted, without being required to inform and obtain prior approval from DAkkS, to use standards or equivalent testing methods listed here with different issue dates.

This certificate annex is only valid together with the written accreditation certificate and reflects the status as indicated by the date of issue. The current status of any given scope of accreditation can be found in the directory of accredited bodies maintained by Deutsche Akkreditierungsstelle GmbH at <https://www.dakks.de>.

Abbreviations used: see last page

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This document is a translation. The definitive version is the original German annex to the accreditation certificate.

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The testing laboratory maintains a current list of all testing methods within the flexible scope of accreditation.

Testing field	Standard / In-House Procedure / Version	Title of Standard or In-House Procedure	Test Range / Restrictions
Electrical engineering	CSA C22.2 No 31:2018-01	Switchgear Assemblies	8.5.1, 8.5.2, 8.5.3
	CSA-C22.2 No. 58:1989-05	High-Voltage Isolating Switches	6.2, 6.3, 6.4, 6.5
	CSA-C22.2 No. 193:1986-05	High Voltage Full-Load Interrupter Switches	5.2, 5.3, 5.4, 5.7
	IEC 60060-1:2010-09	High-voltage test techniques – Part 1: General definitions and test requirements	ohne 4.4 und 4.5
Environmental simulation	IEC 60068-2-1:2007-03	Environmental testing - Part 2-1: Tests - Test A: Cold	5, 6
Environmental simulation	IEC 60068-2-11: 2021-03	Basic environmental testing procedures – Part 2-11: Tests – Test Ka: Salt Mist	5, 6, 8, 10, 11, 12, 13
Environmental simulation	IEC 60068-2-14:2009-01	Environmental testing – Part 2-14: Tests – Test N: Change of temperature	8
Environmental simulation	IEC 60068-2-17:1994-07	Basic environmental testing procedures – Part 2-17: Tests – Test Q: Sealing	8
Environmental simulation	IEC 60068-2-2:2007-07	Environmental testing - Part 2-2: Tests - Test B: Dry heat	5, 6
Environmental simulation	IEC 60068-2-30:2005-08	Environmental testing – Part 2-30: Tests – Test Db: Damp heat, cyclic (12 + 12 h cycle)	
Environmental simulation	IEC 60068-2-52: 2017-11	Environmental testing - Part 2-52: Tests – Test Kb: Salt mist, cyclic (sodium chloride solution)	Ohne 9.4.8 und 9.4.9
Environmental simulation	IEC 60068-2-78:2012-10	Environmental testing – Part 2-78: Tests – Test Cab: Damp heat, steady state	
Electrical engineering	IEC 60282-1: 2020-04	High-voltage fuses - Part 1: Current-limiting fuses	7.1, 7.3, 7.4 ohne 7.4.6, 7.5
	IEC 60529:2013-08	Degrees of protection provided by enclosures (IP code)	

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Electrical engineering	IEC 61180:2016-06	High-voltage test techniques for low-voltage equipment Definitions, test and procedure requirements, test equipment	4, 6
	IEC 62262: 2002-02 + AMD1: 2021-09	Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts	4, 5, 6 ohne IK 11, 7
	IEC 62271-1: 2017-07 + AMD1: 2021-10	High-voltage switchgear and controlgear – Part 1: Common specifications	7.2 ohne 7.2.3, 7.2.8 und 7.2.9 7.4 ohne 7.4.1 und 7.4.2 7.5 7.6 7.7 7.8 ohne 7.8.2 und 7.8.5 7.10 ohne 7.10.3.3, 7.10.3.4 und 7.10.4.5
	IEC 62271-100: 2021-07	High-voltage switchgear and controlgear - Part 100: Alternating-current circuit-breakers	7.2 ohne 7.2.3 und 7.2.8 und 7.2.9 7.4, 7.5, 7.6, 7.7, 7.8, 7.10, 7.101 ohne 7.101.5
	IEC 62271-102: 2018-05 + AMD1: 2022-04	High-voltage switchgear and controlgear - Part 102: Alternating current disconnectors and earthing switches	7.2 ohne 7.2.3 und 7.2.8 und 7.2.9; 7.4, 7.5, 7.6 ohne 7.6.2.103; 7.7, 7.8, 7.102 ohne 7.102.2 und 7.102.4; 7.104, 7.105

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Electrical engineering	IEC 62271-103: 2021-05	High-voltage switchgear and controlgear - Part 103: Alternating current switches for rated voltages above 1 kV up to and including 52 kV	7.2 ohne 7.2.3 und 7.2.8 und 7.2.9 7.4, 7.5, 7.6, 7.7, 7.8, 7.10, 7.102 ohne 7.102.5
	IEC 62271-105: 2021-06	High-voltage switchgear and controlgear - Part 105: Alternating current switch-fuse combinations for rated voltages above 1 kV up to and including 52 kV	7.2, 7.4, 7.5, 7.7, 7.8, 7.10, 7.102, 7.103, 7.104
	IEC 62271-106: 2021-04	High-voltage switchgear and controlgear - Part 106: Alternating current contactors, contactor-based controllers and motor-starters	7.2 ohne 7.2.3; 7.4, 7.5 ohne 7.5.6.101 bis 7.5.6.104; 7.6, 7.7, 7.8, 7.10, 7.102
	IEC 62271-200: 2021-05	High-voltage switchgear and controlgear - Part 200: AC metal-enclosed switchgear and controlgear for rated voltages above 1 kV and up to and including 52 kV	7.2 ohne 7.2.3 und 7.2.8 und 7.2.9 7.4, 7.5, 7.6, 7.7, 7.8, 7.10, 7.102, 7.103, 7.104 ohne 7.104b, 7.105
	IEC 62271-201:2014-03	High-voltage switchgear and controlgear - Part 201: AC insulation-enclosed switchgear and controlgear for rated voltages above 1 kV and up to and including 52 kV	6.2 ohne 6.2.7 und 6.2.8; 6.4, 6.5, 6.6, 6.7, 6.8, 6.10, 6.102, 6.103, 6.104, 6.105, 6.106
	IEC 62271-202:2014-03	High-voltage switchgear and controlgear - Part 202: High-voltage/low-voltage prefabricated substation	6.6, 6.7, 6.10 ohne 6.10.5 und 6.10.6; 6.101.3, 6.102
	IEC CDV 62271-207: 2022-03	High-voltage switchgear and controlgear - Part 207: Seismic qualification for gas-insulated switchgear assemblies, metal enclosed and solid-insulation enclosed switchgear for rated voltages above 1 kV	5.4.2 ohne l) und j)

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Electrical engineering	IEC/TS 62271-210:2013-02	High-voltage switchgear and controlgear - Part 210: Seismic qualification for metal enclosed and solid-insulation enclosed switchgear and controlgear assemblies for rated voltages above 1 kV and up to and including 52 kV	5.4.2
	IEC 62271-213:2021-06	High Voltage switchgear and controlgear – Part 213: Voltage detecting and indicating system	7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.7 ohne 7.7.4, 7.9, 7.10, 7.11, 7.12, 7.13, 7.14, 7.15, 7.18
	IEC/TS 62271-304: 2019-03	High-voltage switchgear and controlgear - Part 304: Design classes for indoor enclosed switchgear and controlgear for rated voltages above 1 kV up to and including 52 kV to be used in severe climatic conditions	
	IEC 62505-1:2016-02	Railway application – Fixed installations – Particular requirements for AC switchgear - Part 1: Circuit-breakers with nominal voltage above 1 kV	7.2 ohne 7.2.4 7.4
	IEC 62505-2:2016-02	Railway application – Fixed installations – Particular requirements for AC switchgear - Part 2: Disconnectors, earthing switches and switches with nominal voltage above 1 kV	7.2, 7.5
	IEEE C37.09: 2018	IEEE Standard Test Procedure for AC High-Voltage Circuit Breakers Rated on a Symmetrical Current Basis	4.4, 4.5.4, 4.5.4.1, 4.5.5, 4.13, 4.15, 4.18.
	IEEE C37.100.1: 2018	IEEE Standard of Common Requirements for High Voltage Power Switchgear Rated Above 1000 V	7.3.7.2, 7.3.7.3, 7.3.10, 7.3.12, 7.5, 7.6, 7.7, 7.8, 7.9
	IEEE C37.20.2:2015	IEEE Standard for Metal-Clad Switchgear	6.2.1, 6.2.1.1, 6.2.1.2, 6.2.1.3, 6.2.2, 6.2.3, 6.2.4, 6.2.6

Testing field	Standard / In-House Procedure / Version	Title of Standard or In-House Procedure	Test Range / Restrictions
	IEEE C37.20.3:2013	IEEE Standard for Metal-Enclosed Interrupter Switchgear	6.2.6.1, 6.2.6.2, 6.2.9, 6.4, 6.5, 6.6, 6.12, 6.14
Electrical engineering	IEEE C37.20.4:2013	IEEE Standard for Indoor AC Switches (1 kV - 38 kV) for Use in Metal-Enclosed Switchgear	6.2.6.1, 6.2.6.2, 6.4, 6.5, 6.6, 6.8, 6.12
	IEEE C37.20.7: 2017	IEEE Guide for Testing Switchgear Rated Up to 52 kV for Internal Arcing Faults	5 ohne 5.3.6.3; ANNEX C, E, F, G und L
	IEEE C37.20.9: 2019	IEEE Approved Draft Standard for Metal-Enclosed Switchgear Rated 1 kV to 52 kV Incorporated Gas Insulating Systems	7.2.7.2, 7.2.7.3, 7.2.10, 7.2.12, 7.4, 7.5, 7.6, 7.8, 7.12
	NEMA C37.55: 2020	Medium-Voltage Metal-Clad Switchgear Assemblies - Conformance Test Procedures	5.4, 5.5, 5.6, 5.7, 5.8
	NEMA C37.57:2003	Metal-Enclosed Interrupter Switchgear Assemblies - Conformance Testing	4.5.2, 4.5.3, 4.6, 4.7, 4.8, 4.9
	NEMA C37.58: 2020	Indoor AC Medium-Voltage Switches for Use in Metal-Enclosed Switchgear - Conformance Test Procedures	4.5, 4.6, 4.7, 4.8, 4.9, 4.10
	NEMA/ANSI C37.54:2002	For Indoor Alternating Current High-Voltage Circuit Breakers Applied as Removable Elements in Metal-Enclosed Switchgear - Conformance Test Procedures	3.5, 3.6, 3.7, 3.9, 6.2

Abbreviations used:

- ANSI American National Standards Institute
- CDV Committee draft for vote
- CSA Canadian Standards Association
- DIN German Institute for Standardisation Registered Association
- EN European Standard
- IEC International Electrotechnical Commission
- IEEE Institute of Electrical and Electronics Engineers
- ISO International Organization for Standardization
- NEMA National Electrical Manufacturers Association
- TS Technical Specification