

Deutsche Akkreditierungsstelle

Annex to the Accreditation Certificate D-PL-12072-08-00 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 Berlin-Siemensstadt
Nonnendammallee 104, 13629 Berlin

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 Switch and Controlgear
Power Engineering Equipment

Within the scope of accreditation marked with *), 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.

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

Testing field	Standard / In-House Procedure / Version	Title of Standard or In-House Procedure (Deviations / Modifications of Standard)	Test Range / Restrictions
Electrical engineering	IEC 62271-1:2017	High-voltage switchgear and controlgear - Part 1: Common specifications	
Electrical engineering	IEEE 4:2013	IEEE Standard Techniques for High-Voltage Testing	
Electrical engineering	IEEE Std C37.20.2:2015	IEEE Standard for Metal-Clad Switchgear	
Electrical engineering	IEEE Std C37.20.3:2013	IEEE Standard for Metal-Enclosed Interrupter Switchgear	
Electrical engineering	IEEE Std C37.100:1992	IEEE Standard Definitions for Power Switchgear	
Electrical engineering	IEEE Std C37.100.1:2018	Common requirements for high voltage power switchgear rated above 1000 V	
Electrical engineering	GOST 1516.3-96	Electrical equipment for a.c. voltages from 1 to 750 kV - Requirements for electric strength of insulation	
Circuit-breakers			
Electrical engineering	IEC 62271-100:2012 STL Guide:2017	High-voltage switchgear and controlgear - Part 100: High-voltage alternating-current circuit-breakers	
Electrical engineering	IEC 62271-101:2012 STL Guide:2018	High-voltage switchgear and controlgear - Part 101: Synthetic testing	
Electrical engineering	IEC 62271-110:2017	High-voltage switchgear and controlgear - Part 110: Inductive load switching	
Electrical engineering	IEC 62271-111:2019 IEEE Std C37.60:2019	High voltage switchgear and controlgear - Part 111: Overhead, pad-mounted, dry vault, and submersible automatic circuit reclosers and fault interrupters for alternating current systems up to 38 kV	
Electrical engineering	DIN EN 50152-1:2014 VDE 0115-320-1:2014 EN 50152-1:2013	Railway applications - Fixed installations - Particular requirements for AC switchgear - Part 1: Single-phase circuit-breakers with Un above 1 kV	
Electrical engineering	DIN EN 50152-2:2013 VDE 0115-320-2:2013 EN 50152-2:2012	Railway applications - Fixed installations - Particular requirements for a.c. switchgear - Part 2: Single-phase disconnectors, earthing switches and switches with Un above 1 kV	

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Electrical engineering	IEC 60077-1:2017	Railway applications - Electric equipment for rolling stock - Part 1: General service conditions and general rules	
Electrical engineering	IEC 60077-2:2017	Railway applications - Electric equipment for rolling stock - Part 2: Electrotechnical components - General rules	
Electrical engineering	IEC 60077-4:2017	Railway applications - Electric equipment for rolling stock - Part 4: Electrotechnical components; Rules for AC circuit-breakers	
Electrical engineering	DIN EN 61166:1994 VDE 0670-111:1994 EN 61166:1993	High-voltage alternating current circuit-breakers - Guide for seismic qualification of high-voltage alternating current circuit-breakers	
Electrical engineering	IEC/TR 62271-300:2006	High-voltage switchgear and controlgear - Part 300: Seismic qualification of alternating current circuit-breakers	
Electrical engineering	IEEE Std C37.04:2018 IEEE Std C37.04B:2010	IEEE Standard Rating Structure for AC High-Voltage Circuit Breakers	
Electrical engineering	IEEE C37.06:2009	AC High-Voltage Circuit Breakers Rated on a Symmetrical Current Basis - Preferred Ratings and Related Required Capabilities	
Electrical engineering	IEEE Std C37.09:2018 IEEE Std C37.09B:2010	IEEE Standard Test Procedure for AC High-Voltage Circuit Breakers Rated on a Symmetrical Current Basis	
Electrical engineering	IEEE Std C37.010:2016	IEEE Application Guide for AC High-Voltage Circuit Breakers Rated on a Symmetrical Current Basis	
Electrical engineering	IEEE Std C37.011:2019	IEEE Application Guide for Transient Recovery Voltage for AC High-Voltage Circuit Breakers	
Electrical engineering	IEEE Std C37.012:2014	IEEE Application Guide for Capacitance Current Switching for AC High-Voltage Circuit Breakers	
Electrical engineering	IEC/IEEE 62271-37-013:2015	High-voltage switchgear and controlgear - Part 37-013: Alternating current generator circuit breakers	

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Electrical engineering	IEEE Std C37.11:2014	IEEE Standard Requirements for Electrical Control for AC High-Voltage Circuit Breakers Rated on a Symmetrical Current Basis	-
Electrical engineering	ANSI C37.54:2003	Conformance Test Procedures for Indoor Alternating Current High-Voltage Circuit Breakers Applied as Removable Elements in Metal-Enclosed Switchgear Assemblies	-
Electrical engineering	GOST R 52565-2006	Alternating-Current Circuit-Breakers for Voltage from 3 to 750 kV	
Switch			
Electrical engineering	IEC 62271-103:2013 STL-Guide:2018	High-voltage switchgear and controlgear - Part 103: Switches for rated voltages above 1 kV up to and including 52 kV	
Electrical engineering	IEC 62271-105:2012	High-voltage switchgear and controlgear - Part 105: Alternating current switch-fuse combinations	-
Contactors and motorstarters			
Electrical engineering	IEC 62271-106:2011	High-voltage switchgear and controlgear - Part 106: Alternating current contactors, contactor-based controllers and motor-starters	
Electrical engineering	UL347:2016 CSA C22.2 No. 253-16:2016 NMX-J-564/106-ANCE:2016	Medium-Voltage AC Contactors, Controllers and Control Centers	

Disconnectors and earthing switches			
Electrical engineering	IEC 62271-102:2018 STL Guide:2018	High-voltage switchgear and controlgear - Part 102: Alternating current disconnectors and earthing switches	
Electrical engineering	IEEE C37.30.1:2011	IEEE Standard Requirements for High-Voltage Switches	

Testing field	Standard / In-House Procedure / Version	Title of Standard or In-House Procedure (Deviations / Modifications of Standard)	Test Range / Restrictions
Electrical engineering	IEEE C37.41:2016	IEEE Standard Requirements for High-Voltage Switches	
Switchgear and controlgear			
Electrical engineering	IEC 62271-200:2011 STL Guide:2013	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	
Electrical engineering	IEC 62271-201:2014	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	
Surge arresters			
Electrical engineering	IEC 60099-4:2014 GB11032-2010	Surge arresters - Part 4: Metal-oxide surge arresters without gaps for a.c. systems	
Electrical engineering	IEC 60099-8:2017	Surge arresters - Part 8: Metal-oxide surge arresters with external series gap (EGLA) for overhead transmission and distribution lines of a.c. systems above 1 kV	
Electrical engineering	IEEE Std C62.11:2012	IEEE Standard for Metal-Oxide Surge Arresters for AC Power Circuits (> 1 kV)	
Insulators, Bushings			
Electrical engineering	IEC 60383-2:1993	Insulators for overhead lines with a nominal voltage above 1000 V; part 2: insulator strings and insulator sets for a.c. systems; definitions, test methods and acceptance criteria	
Electrical engineering	IEC/TS 60815-1:2008	Selection and dimensioning of high-voltage insulators intended for use in polluted conditions - Part 1: Definitions, information and general principles	
Electrical engineering	IEC/TS 60815-2:2008	Selection and dimensioning of high-voltage insulators intended for use in polluted conditions - Part 2: Ceramic and glass insulators for a.c. systems	
High-voltage test techniques			
Electrical engineering	IEC 60060-1:2010 STL-Guide:2016	High-voltage test techniques; Part 1: General definitions and test requirements	

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Electrical engineering	IEC 60060-2:2010 STL-Guide:2016	High-voltage test techniques - Part 2: Measuring systems	
Electrical engineering	IEC 60270:2015	High-voltage test techniques - Partial discharge measurements	
Mechanical testings, environment- and guardtesting			
Electrical engineering	IEC 60529:2013	Degrees of protection provided by enclosures (IP code)	-
Electrical engineering	IEC 60068-2-1:2007	Environmental testing - Part 2-1: Tests - Tests A: Cold	
Electrical engineering	IEC 60068-2-2:2007	Environmental testing - Part 2-2: Tests - Test B: Dry heat	
Electrical engineering	IEC 60068-2-14:2009	Environmental testing - Part 2-14: Tests - Test N: Change of temperature	
Electrical engineering	IEC 60068-2-17:1994	Basic environmental testing procedures - Part 2: Tests - Test Q: Sealing	

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