DAkkS
Deutsche
Akkreditierungsstelle

Deutsche Akkreditierungsstelle GmbH

Entrusted according to Section 8 subsection 1 AkkStelleG in connection with Section 1 subsection 1 AkkStelleGBV
Signatory to the Multilateral Agreements of EA, ILAC and IAF for Mutual Recognition

Accreditation

The Deutsche Akkreditierungsstelle GmbH attests that the testing laboratory

PEHLA - Gesellschaft für elektrische Hochleistungsprüfungen
Hallenweg 40, 68219 Mannheim-Rheinau

Location:
PEHLA - Prüffeld Berlin (Be)
Nonnendammallee 104, 13629 Berlin

is competent under the terms of DIN EN ISO/IEC 17025:2018 to carry out tests in the following fields:

High-Voltage Switch and Controlgear
Power Engineering Equipment

The accreditation certificate shall only apply in connection with the notice of accreditation of 15.07.2020 with the accreditation number D-PL-12072-04. It comprises the cover sheet, the reverse side of the cover sheet and the following annex with a total of 6 pages.

Registration number of the certificate: **D-PL-12072-04-00**

Frankfurt am Main, 15.07.2020	Dipl.-Ing. (FH) Ralf Egner Head of Division	Translation issued: 15.07.2020	Head of Division

The certificate together with its annex reflects the status at the time of the date of issue. The current status of the scope of accreditation can be found in the database of accredited bodies of Deutsche Akkreditierungsstelle GmbH.
https://www.dakks.de/en/content/accredited-bodies-dakks

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

See notes overleaf.

Deutsche Akkreditierungsstelle GmbH

Office Berlin
Spittelmarkt 10
10117 Berlin

Office Frankfurt am Main
Europa-Allee 52
60327 Frankfurt am Main

Office Braunschweig
Bundesallee 100
38116 Braunschweig

The accreditation was granted pursuant to the Act on the Accreditation Body (AkkStelleG) of 31 July 2009 (Federal Law Gazette I p. 2625) and the Regulation (EC) No 765/2008 of the European Parliament and of the Council of 9 July 2008 setting out the requirements for accreditation and market surveillance relating to the marketing of products (Official Journal of the European Union L 218 of 9 July 2008, p. 30). DAkkS is a signatory to the Multilateral Agreements for Mutual Recognition of the European co-operation for Accreditation (EA), International Accreditation Forum (IAF) and International Laboratory Accreditation Cooperation (ILAC). The signatories to these agreements recognise each other's accreditations.

The up-to-date state of membership can be retrieved from the following websites:
EA: www.european-accreditation.org
ILAC: www.ilac.org
IAF: www.iaf.nu

Deutsche Akkreditierungsstelle GmbH

Annex to the Accreditation Certificate D-PL-12072-04-00 according to DIN EN ISO/IEC 17025:2018

Valid from: 15.07.2020

Date of issue: 15.07.2020

Holder of certificate:

PEHLA - Gesellschaft für elektrische Hochleistungsprüfungen
Hallenweg 40, 68219 Mannheim-Rheinau

Location:
PEHLA - Prüffeld Berlin (Be)
Nonnendammallee 104, 13629 Berlin

Tests in the fields:

High-Voltage Switch and Controlgear
Power Engineering Equipment

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.

The testing laboratory maintains a current list of all testing standards / equivalent 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	

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

Testing field	Standard / In-House Procedure / Version	Title of Standard or In-House Procedure (Deviations / Modifications of Standard)	Test Range / Restrictions
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	
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	

Testing field	Standard / In-House Procedure / Version	Title of Standard or In-House Procedure (Deviations / Modifications of Standard)	Test Range / Restrictions
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 C37.09:2007 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	IEEE Std C37.013:1997 IEEE Std C37.013A:2007	IEEE Standard for AC High-Voltage Generator Circuit Breakers Rated on a Symmetrical Current Basis	
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	-

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Valid from: 15.07.2020
Date of issue: 15.07.2020

Testing field	Standard / In-House Procedure / Version	Title of Standard or In-House Procedure (Deviations / Modifications of Standard)	Test Range / Restrictions
Electrical engineering	CSA C22.2 No. 31-18:2018	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	
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	
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	

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Testing field	Standard / In-House Procedure / Version	Title of Standard or In-House Procedure (Deviations / Modifications of Standard)	Test Range / Restrictions
Electrical engineering	IEEE Std C37.122:2011 IEEE Std C37.122.1:2014	IEEE Standard for Gas-Insulated Substations	
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	
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	

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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 - Test 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	Environmental testing - Part 2: Tests - Test Q: Sealing	