



Liste des Flexiblen Geltungsbereichs
List of flexible scope
PSW-H (Prüffeld der Schaltwerke - Hochspannung)
DAKS D-PL-21472-05

Gruppe Testing field	Norm / Version Standard / Version	Titel der Norm Title of Standard
Allgemein / General		
	IEC 62271-1:2017	High-voltage switchgear and controlgear - Part 1: Common specifications for alternating current switchgear and controlgear
	IEC 62271-1 AMD 1:2021	High-voltage switchgear and controlgear – Part 1: Common specifications for alternating current switchgear and controlgear; Amendment 1
	IEEE 4:2013	IEEE Standard for High-Voltage Testing Techniques
	IEEE Std C37.20.2A:2020	IEEE Standard for Metal-Clad Switchgear
	IEEE Std C37.20.3:2013	IEEE Standard for Metal-Enclosed Interrupter Switchgear (1 kV-38 kV)
	IEEE Std C37.100:1992	IEEE Standard Definitions for Power Switchgear
	IEEE Std C37.100.1:2018	Common Requirements for High Voltage Power Switchgear Rated Above 1000 V
	GOST 1516.3-96	Electrical equipment for a.c. voltages from 1 to 750 kV - Requirements for electric strength of insulation
Leistungsschalter / Circuit-breakers		
	IEC 62271-100:2021	High-voltage switchgear and controlgear - Part 100: High-voltage alternating-current circuit-breakers
	IEC 62271-100:2021-12 Corrigendum 1:2021	High-voltage switchgear and controlgear - Part 100: High-voltage alternating-current circuit-breakers
	IEC 62271-100:2021 Corrigendum 2: 2022-07	High-voltage switchgear and controlgear - Part 100: High-voltage alternating-current circuit-breakers
	IEC 62271-101:2021	High-voltage switchgear and controlgear - Part 101: Synthetic testing
	IEC 62271-108:2020	High-voltage switchgear and controlgear - Part 108: High-voltage alternating current disconnecting circuit-breakers for rated voltages of 72,5 kV and above
	IEC 62271-109:2019	High-voltage switchgear and controlgear - Part 109: Alternating-current series capacitor by-pass switches
	IEC 62271-110:2017	High-voltage switchgear and controlgear - Part 110: Inductive load switching
	IEC 62271-111:2019 IEEE C 37.60:2019	High-voltage switchgear and controlgear - Part 111: Automatic circuit reclosers for alternating current systems up to and including 38 kV
	DIN EN 50152-1:2013 VDE 0115-320-1:2013 EN 50152-1:2012 DIN EN 50152-1/A1:2014 VDE 0115-320-1/A1:2014	Railway applications - Fixed installations - Particular requirements for AC switchgear - Part 1: Single-phase circuit-breakers with Un above 1 kV
	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



Liste des Flexiblen Geltungsbereichs
List of flexible scope

PSW-H (Prüffeld der Schaltwerke - Hochspannung)
DAKS D-PL-21472-05

Stand:
28.03.2023

Gruppe Testing field	Norm / Version Standard / Version	Titel der Norm Title of Standard
	IEC 60077-1:2017	Railway applications - Electric equipment for rolling stock - Part 1: General service conditions and general rules
	IEC 60077-2:2017	Railway applications - Electric equipment for rolling stock - Part 2: Electrotechnical components - General rules
	IEC 60077-4:2017	Railway applications - Electric equipment for rolling stock - Part 4: Electrotechnical components; Rules for AC circuit-breakers
	IEC/TR 62271-300:2006	High-voltage switchgear and controlgear - Part 300: Seismic qualification of alternating current circuit-breakers
	IEC/TR 62271-302:2010	Alternating current circuit breakers with internationally non-simultaneous pole operation
	IEC/TR 62271-310:2008	High-voltage switchgear and controlgear - Part 310: Electrical endurance testing for circuit-breakers of rated voltage 72,5 kV and above
	IEEE C37.04:2018	IEEE Standard for Ratings and Requirements for AC High-Voltage Circuit Breakers with Rated Maximum Voltage Above 1000 V
	IEEE Std C 37.04 CORRIGENDUM 1:2021	IEEE Standard for Ratings and Requirements for AC High-Voltage Circuit Breakers with Rated Maximum Voltage Above 1000 V
	IEEE Std C37.06.1:2017	IEEE Recommended Practice for Preferred Ratings for High-Voltage (>1000 volts) AC Circuit Breakers Designated Definite Purpose for Fast Transient Recovery Voltage Rise Times
	IEEE Std C37.09:2018	IEEE Standard Test Procedures for AC High-Voltage Circuit Breakers with Rated Maximum Voltage Above 1000 V
	IEEE Std C37.09 CORRIGENDUM 1:2021	IEEE Standard Test Procedures for AC High-Voltage Circuit Breakers with Rated Maximum Voltage Above 1000 V
	IEEE Std C37.010:2016	IEEE Application Guide for AC High-Voltage Circuit Breakers Rated on a Symmetrical Current Basis
	IEEE Std C37.011:2019	IEEE Guide for the Application of Transient Recovery Voltage for AC High-Voltage Circuit Breakers with Rated Maximum Voltage above 1000 V
	IEEE Std C37.012:2014	IEEE Application Guide for Capacitance Current Switching for AC High-Voltage Circuit Breakers
	IEEE Std C37.012 CORRIGENDUM 1:2016	IEEE Application Guide for Capacitance Current Switching for AC High-Voltage Circuit Breakers
	IEEE Std. C37.012A:2020	IEEE Application Guide for Capacitance Current Switching for AC High-Voltage Circuit Breakers
	IEC/IEEE 62271-37-013:2021	High-voltage switchgear and controlgear – Part 37-013: Alternating current generator circuit-breakers
	IEEE Std C37.015:2017	IEEE Application Guide for Shunt Reactor Switching
	IEEE Std C37.016:2018	AC high-voltage circuit switchers rated 15.5 kV through 245 kV
	IEEE C 37.016 CORRIGENDUM 1:2021	AC high-voltage circuit switchers rated 15.5 kV through 245 kV



Gruppe Testing field	Norm / Version Standard / Version	Titel der Norm Title of Standard
	IEEE Std C37.11:2014	IEEE Standard Requirements for Electrical Control for AC High-Voltage Circuit Breakers Rated on a Symmetrical Current Basis
	ANSI C37.54:2003	Conformance Test Procedures for Indoor Alternating Current High-Voltage Circuit Breakers Applied as Removable Elements in Metal-Enclosed Switchgear Assemblies
	CSA C22.2 No. 31-18:2018	Switchgear assemblies
	GOST R 52565-2006	Alternating-Current Circuit-Breakers for Voltage from 3 to 750 kV
	IEC 62146-1:2013 IEC 62146-1 AMD1:2016	Grading capacitors for high-voltage alternating current circuit-breakers – Part 1: General
Lastschalter / Switches		
	IEC 62271-103:2021	High-voltage switchgear and controlgear - Part 103: Switches for rated voltages above 1 kV up to and including 52 kV
	IEC 62271-104:2020	High-voltage switchgear and controlgear - Part 104: Alternating current switches for rated voltages of 52 kV and above
	IEC 62271-105:2021	High-voltage switchgear and controlgear - Part 105: Alternating current switch-fuse combinations
Schütze und Motorstarter / Contactors and motorstarters		
	IEC 62271-106:2021	High-voltage switchgear and controlgear - Part 106: Alternating current contactors, contactor-based controllers and motor-starters
	UL347:2020 CSA C22.2 No. 253-20:2020 NMX-J-564/106-ANCE:2020	Medium-voltage AC contactors, controllers, and control centers
Trenn- und Erdungsschalter / Disconnectors and earthing switches		
Trenn- und Erdungsschalter / Disconnectors and earthing switches	IEC 62271-102:2018	High-voltage switchgear and controlgear - Part 102: Alternating current disconnectors and earthing switches
	IEC 62271-102 AMD1:2022	High-voltage switchgear and controlgear - Part 102: Alternating current disconnectors and earthing switches
	IEEE C37.30.1:2011	IEEE Standard Requirements for High-Voltage Switches
	IEEE C37.41:2016	IEEE Standard Requirements for High-Voltage Switches
	GOST R 52726-2007	Disconnectors and Earthing Switches for AC Voltage above 1 kV and their Drive Units
Schaltanlagen / Switchgear and controlgear		
	IEC 62271-200:2021	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
	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



Gruppe <i>Testing field</i>	Norm / Version <i>Standard / Version</i>	Titel der Norm <i>Title of Standard</i>
	IEC 62271-203:2011 CORRIGENDUM 1:2013	High-voltage switchgear and controlgear - Part 203: Gas-insulated metal-enclosed switchgear for rated voltages above 52 kV
	IEC 62271-203:2022	High-voltage switchgear and controlgear - Part 203: Gas-insulated metal-enclosed switchgear for rated voltages above 52 kV
	IEC 62271-205:2008	High-voltage switchgear and controlgear - Part 205: High-voltage switchgear assemblies for operation at rated voltages above 52 kV
	IEC 62271-209:2019	High-voltage switchgear and controlgear - Part 209: Cable connections for gas-insulated metal-enclosed switchgear for rated voltages above 52 kV - Fluid-filled and extruded insulation cables - Fluid-filled and dry-type cable-terminations
	IEC 62271-209 AMD1:2022	High-voltage switchgear and controlgear - Part 209: Cable connections for gas-insulated metal-enclosed switchgear for rated voltages above 52 kV - Fluid-filled and extruded insulation cables - Fluid-filled and dry-type cable-terminations
	IEC 62271-211:2014	High-voltage switchgear and controlgear - Part 211: Direct connection between power transformers and gas-insulated metal-enclosed switchgear for rated voltages above 52 kV
	IEEE Std C37.122:2021	IEEE Standard for High Voltage Gas-Insulated Substations Rated Above 52 kV
	IEEE Std C37.122.1:2014	IEEE Guide for Gas-Insulated Substations Rated Above 52 kV
	GOST R 54828-2011	Gas-insulated metal-enclosed switchgear for nominal voltages above 110 kV. General technical specification
Überspannungsschutzgeräte / Surge arresters		
	DIN EN 50526-1:2012 VDE 0115-526-1:2012 EN 50526-1:2012	Railway applications - Fixed installations - D.C. surge arresters and voltage limiting devices - Part 1: Surge arresters
	DIN EN 60099-1:2000 VDE 0675-1:2000 EN 60099-1:1999	Surge arresters; part 1: non-linear resistor type gapped surge arresters for a.c. systems
	IEC 60099-4:2014	Surge arresters - Part 4: Metal-oxide surge arresters without gaps for a.c. systems
	GB/T 11032-2020	Surge arresters - Part 4: Metal-oxide surge arresters without gaps for a.c. systems
	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
	IEC 60099-9:2014	Surge arresters - Part 9: Metal-oxide surge arresters without gaps for HVDC converter stations
	IEC 61643-11:2011	Low-voltage surge protective devices - Part 11: Surge protective devices connected to low-voltage power distribution systems - Requirements and testing methods
	IEEE Std C62.11:2020	IEEE Standard for Metal-Oxide Surge Arresters for AC Power Circuits (>1 kV)
	CIGRE WG 33/14-05:1989	Application Guide for Metal oxide Arresters without gaps for HVDC Converter Stations



Gruppe <i>Testing field</i>	Norm / Version <i>Standard / Version</i>	Titel der Norm <i>Title of Standard</i>
	GOST R 52725-2007	Surge arresters for AC electrical installations for voltage from 3 kV to 750 kV - General specifications
Übertragungsleitungen / <i>Transmission lines</i>		
	IEC 62271-204:2011	High-voltage switchgear and controlgear - Part 204: Rigid gas-insulated transmission lines for rated voltage above 52 kV
	IEC 62271-204:2022	High-voltage switchgear and controlgear - Part 204: Rigid gas-insulated transmission lines for rated voltage above 52 kV
	IEC 60353:1989 IEC 60353 AMD1: 2002	Line traps for a.c. power systems
	IEC 61284:1997	Overhead lines - Requirements and tests for fittings
	CISPR/TR 18-2:2017	Radio interference characteristics of overhead power lines and high-voltage equipment – Part 2: Methods of measurement and procedure for determining limits
	IEC 60358-1:2012 CORRIGENDUM 1:2013	Coupling capacitors and capacitor dividers - Part 1: Common clauses
Transformatoren, Drosselpulen / <i>Transformers, Reactors</i>		
	IEC 60076-6:2007	Power transformers - Part 6: Reactors
Strom- und Spannungswandler / <i>Instrument transformers</i>		
	IEC 61869-1:2007	Instrument transformers - Part 1: General requirements
	IEC 61869-2:2012	Instrument transformers - Part 2: Additional requirements for current transformers
	IEC 60044-7:1999	Instrument transformers - Part 7: Electronic voltage transformers
	IEC 60044-8:2002	Instrument transformers - Part 8: Electronic current transformers
	IEEE Std C57.13:2016	Requirements for instrument transformers
Isolierkörper, Durchführungen / <i>Insulators, Bushings</i>		
	IEC 60383-1:1993	Insulators for overhead lines with nominal voltage above 1000 V; part 1: ceramic or glass insulator units for a.c. systems; definitions, test methods and acceptance criteria
	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
	IEC 60137:2017	Insulated bushings for alternating voltages above 1000 V
	IEC 60168:1994 IEC 60168 AMD1:1997 IEC 60168 AMD2:2000	Tests on indoor and outdoor post insulators of ceramic material or glass for systems with nominal voltages greater than 1000 V
	IEC 61109:2008	Insulators for overhead lines - Composite suspension and tension insulators for a.c. systems with a nominal voltage greater than 1000 V - Definitions, test methods and acceptance criteria



Gruppe <i>Testing field</i>	Norm / Version <i>Standard / Version</i>	Titel der Norm <i>Title of Standard</i>
	IEC 62217:2012	Polymeric HV insulators for indoor and outdoor use – General definitions, test methods and acceptance criteria
	IEC 60437:1997	Radio interference test on high-voltage insulators
	IEC 62155:2003	Hollow pressurized and unpressurized ceramic and glass insulators for use in electrical equipment with rated voltages greater than 1000 V
	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
	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
	DIN 48113:1973	Post insulators for switchgears and substation with nominal voltages greater than 1000 V; co-ordination of the definitions for mechanical bending strength
	IEC 62231:2006	Composite station post insulators for substations with a.c. voltages greater than 1 000 V up to 245 kV - Definitions, test methods and acceptance criteria
	IEC 62231-1:2015	Composite station post insulators for substations with AC voltages greater than 1 000 V up to 245 kV - Part 1: Dimensional, mechanical and electrical characteristics
	IEC 61952:2008	Insulators for overhead lines – Composite line post insulators for A.C. systems with a nominal voltage greater than 1 000 V - Definitions, test methods and acceptance criteria
	IEC 61462:2007	Composite hollow insulators - Pressurized and unpressurized insulators for use in electrical equipment with rated voltage greater than 1000 V - Definitions, test methods, acceptance criteria and design recommendations
	ANSI C29.1:2018	Test Methods for Electrical Power Insulators
	ANSI C29.11:2020	Composite Insulators - Test Methods
	ANSI C29.12:2020	Insulators - Composite-Suspension Type
	ANSI C29.13:2012	Insulators - Composite - Distribution Deadend Type
	ANSI C29.17:2013	Composite Insulators - Distribution Line Post Type
Hochspannungsprüftechnik / <i>High-voltage test techniques</i>		
	IEC 60060-1:2010	High-voltage test techniques; Part 1: General definitions and test requirements
	IEC 60060-2:2010	High-voltage test techniques - Part 2: Measuring systems
	IEC 60270:2000 IEC 60270 AMD1:2015	High-voltage test techniques - Partial discharge measurements



Gruppe Testing field	Norm / Version Standard / Version	Titel der Norm Title of Standard
	IEEE Std C37.301:2009	IEEE Standard for High-Voltage Switchgear (Above 1000 V) Test Techniques—Partial Discharge Measurements
Mechanische Prüfungen, Umwelt- und Schutzprüfungen / Mechanical testings, environment- and guardtesting		
Mechanische Prüfungen, Umwelt- und Schutzprüfungen / Mechanical testings, environment- and guardtesting	IEC 60068-2-14:2009	Environmental testing - Part 2-14: Tests - Test N: Change of temperature
Mechanische Prüfungen, Umwelt- und Schutzprüfungen	IEC 60068-2-17:1994	Basic environmental testing procedures - Part 2: Tests - Test Q: Sealing
Mechanische Prüfungen, Umwelt- und Schutzprüfungen	IEC 60529:1989 IEC 60529 AMD1:1999 IEC 60529 AMD2:2013	Degrees of protection provided by enclosures (IP code)
Mechanische Prüfungen, Umwelt- und Schutzprüfungen	ISO 3744:2010	Acoustics - Determination of sound power levels of noise sources using pressure - Engineering method in an essentially free field over a reflecting plane
Mechanische Prüfungen, Umwelt- und Schutzprüfungen	DIN 45635-1:1984	Measurement of noise emitted by machines; airborne noise emission; enveloping surface method; basic method, divided into 3 grades of accuracy
Mechanische Prüfungen, Umwelt- und Schutzprüfungen	DIN 45635-12:1978	Measurement of noise emitted by machines; Airborne noise measurement, enveloping surface method; Electrical switchgear and control gear
Mechanische Prüfungen, Umwelt- und Schutzprüfungen	IEC/IEEE 62271-37- 082:2012 IEEE 62271-37-082:2012	High-voltage switchgear and controlgear - Part 37- 082: Standard practice for the measurement of sound pressure levels on alternating current circuit- breakers