

BUREAU OF INDIAN STANDARDS

Program of Work

ETD 8 : High Voltage Switchgear And Controlgear

Scope: To prepare standards for switchgear and controlgear; such as circuit breakers, switches contactors, starters, disconnectors, busbars and any switchgear assemblies for voltages more than 1000 V ac

Liaison: **IEC TC-17 (P): High-voltage switchgear and controlgear IEC TC-17 SC-17A (P): Switching devices IEC TC-17 SC-17C (P): Assemblies**

Published Standards

S.No	IS No.	TITLE	Reaffirm M-Y	No. of Amds	Eqv.
1	IS 5561 : 2018 Reviewed In : 2023 ANSI/ NEMA CC1 : 2009, BS 159 : 1992, BS 3288-1 : 2014, IEC 61284 : 1997, IS/IEC 62271 (Part 1) : 20	Electric power connectors - Specification (First Revision)	March, 2023	1	Modified/Technically Equivalent
2	IS/IEC 62271-1 : 2017 IEC 62271-1:2017+AMD1:2021 CSV IEC 62271-1:2017+AMD1:2021 CSV	HIGH-VOLTAGE SWITCHGEAR AND CONTROLGEAR PART 1 COMMON SPECIFICATIONS FOR ALTERNATING CURRENT SWITCHGEAR AND CONTROLGEAR		-	Identical under single numbering
3	IS/IEC 62271-100 : 2021 IEC 62271-100:2021 IEC 62271-100:2021	High-voltage switchgear and controlgear Part 100 Alternating-current circuit-breakers		-	Identical under single numbering
4	IS/IEC 62271-101 : 2021 IEC 62271-101:2021 IEC 62271-101:2021	High-Voltage Switchgear and Controlgear Part 101: Synthetic Testing		-	Identical under single numbering
5	IS/IEC 62271-102 : 2018 IEC 62271-102 : 2018 IEC 62271-102 : 2018	High-Voltage Switchgear and Controlgear Part 102 Alternating Current Disconnectors And Earthing Switches		-	Identical under single numbering
6	IS/IEC 62271-103 : 2021 IEC 62271-103:	High-voltage switchgear and controlgear Part 103 Alternating current switches for rated voltages	October, 2023	-	Identical under single numbering

	2021 Reviewed In : 2023 IEC 62271-103: 2021	above 1 kV up to and including 52 kV (First Revision)			
7	IS/IEC 62271-104 : 2023 IEC 62271-104:2020 IEC 62271-104:2020	High-Voltage Switchgear and Controlgear : Part 104 Alternating Current Switches for Rated Voltages Higher than 52 kV		-	Identical under single numbering
8	IS/IEC 62271-105 : 2021 IEC 62271-105: 2021 IEC 62271-105: 2021	High-voltage switchgear and controlgear : Part 105 Alternating current switch-fuse combinations for rated voltages above 1 kV up to and including 52 kV		-	Identical under dual numbering
9	IS/IEC 62271-106 : 2021 IEC 62271-106: 2021 IEC 62271-106: 2021	High-voltage switchgear and controlgear Part 106: Alternating current contactors contactor-based controllers and motorstarters		-	Identical under single numbering
10	IS/IEC 62271-109 : 2019 IEC 62271-109: 2019 IEC 62271-109: 2019	High-Voltage switchgear and Controlgear: Part 109 Alternating-current series capacitor by-pass switches		-	Identical under single numbering
11	IS/IEC 62271-110 : 2023 IEC 62271-110:2023 IEC 62271-110:2023	High-voltage switchgear and controlgear Part 110: Inductive load switching		-	Identical under single numbering
12	IS/IEC 62271-111 : 2019 IEC 62271-111:2019 IEC 62271-111:2019	High Voltage Switchgear and Controlgear: Part 111 Automatic circuit reclosers for alternating current systems up to and including 38 kV		-	Identical under single numbering
13	IS/IEC 62271-200 : 2021 IEC 62271-200:2021 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		-	Identical under single numbering
14	IS/IEC 62271-201 : 2014 IEC 62271-201 : 2014 Reviewed In : 2024 IEC 62271-201 : 2014	High-Voltage Switchgear and Controlgear Part 201 ac Solid-Insulation Enclosed Switchgear and Controlgear for Rated Voltages Above 1 kV up to and Including 52 kV (First Revision)	March, 2024	-	Identical under single numbering
15	IS/IEC 62271-202 : 2014 IEC 62271-202 : 2014 IEC 62271-202:2014	High - Voltage switchgear and controlgear: Part 202 high - Voltage/low - Voltage prefabricated substation		-	Identical under single numbering
16	IS/IEC 62271-203 : 2022 IEC 62271-203:2022	High-voltage switchgear and controlgear Part 203: AC gas-insulated metal-enclosed		-	Identical under single numbering

	IEC 62271-203:2022	switchgear for rated voltages above 52 kV			
17	IS/IEC 62271-207 : 2012 IEC 62271-207 : 2012 Reviewed In : 2016 IEC 62271-207:2012	High - Voltage switchgear and controlgear: Part 207 seismic qualification for gas - Insulated switchgear assemblies for rated voltages above 52 kV (First Revision)	March, 2016	-	Identical under single numbering
18	IS/IEC 62271-300 : 2006 IEC 62271-300 : 2006 Reviewed In : 2024 IEC 62271-300 : 2006	High-Voltage Switchgear and Controlgear Part 300 Seismic Qualification of Alternating Current Circuit-Breakers	March, 2024	-	Identical under dual numbering
19	IS/IEC 62271-301 : 2009 Reviewed In : 2023 62271 : Part 301 : 2009	High Voltage Switchgear & Controlgear Part 301 Dimensional Standardization of High Voltage Terminals	March, 2023	-	Identical under single numbering
20	IS 8084 : 1976 Reviewed In : 2017 B.S. 159 : 1957	Specification for interconnecting bus - Bars for ac voltage above 1 kV up to and including 36 kV		3	Modified/Technically Equivalent

Standards under Development

Projects Approved

SI. No.	Doc No.	Title
1	ETD 8 (27174)	Code of Practice for on-site Diagnostic Tests and Condition Monitoring of High Voltage Substation Equipment

Preliminary Draft Standards

SI. No.	Doc No.	Title
<i>No Records Found</i>		

Drafts Standards in WC Stage

SI. No.	Doc No.	Title
<i>No Records Found</i>		

Draft Standards Completed WC Stage

SI. No.	Doc No.	Title
<i>No Records Found</i>		

Finalized Draft Indian Standard

SI. No.	Doc No.	Title
<i>No Records Found</i>		

Finalized Draft Indian Standards under Print

SI. No.	Doc No.	Title
1	ETD 8 (23461) Revision of:	Interconnecting Bus-Bars for a c Voltage Above 1 kV up to and Including 36 kV Specification

	IS 8084:1976	First Revision
2	ETD 8 (25993) Revision of: IS/IEC 62271:2012	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 Second Revision
3	ETD 8 (25995) Revision of: IS/IEC 62271:2014	High-voltage switchgear and controlgear Part 202 AC prefabricated substations for rated voltages above 1 kV and up to and including 52 kV First Revision

Total Published Standards:19 Total Standards Under development:4

Aspect Wise Report

Product : 17
Code of Practices : 1
Methods of Test : 1
Terminology : 0
Dimensions : 0
System Standard : 0
Safety Standard : 0
Others : 0
Service Specification : 0
Process Specification : 0
Unclassified : 1

Annexure-I :List of Indian Standards Withdrawn/Superseded

Sl. No.	IS No. & Year	Title
1	IS 10601 : 1983 Reviewed In : 2015	Dimensions of terminals of high voltage switchgear and controlgear
2	IS 12661 (Part 1) : 1988 Reviewed In : 2005	High Voltage Motor-starter Part 1 Direct-on-line full Voltage Ac Starters
3	IS 12729 : 2004 Reviewed In : 2014	Common High-Voltage Switchgear and Controlgear Standards
4	IS 13118 : 1991 Reviewed In : 2012	High-Voltage Alternating-Current Circuit-Breakers
5	IS 13516 : 1993 Reviewed In : 2013	Methods of Synthetic Testing of High Voltage Alternating Current Circuit-breakers
6	IS 14657 : 1999 Reviewed In : 2013	Gas insulated metal enclosed switchgear for rated voltages 72.5 kV and above - requirements for switching of bus-charging currents by disconnectors
7	IS 14658 : 1999 Reviewed In : 2014	High Voltage Alternating Current Circuit Breakers - Guide for Short-circuit and Switching Test Procedures for Metal-enclosed and Dead Tank Circuit Breakers
8	IS 14659 : 1999 Reviewed In : 2014	A C Insulation-Enclosed Switchgear and Controlgear for Rated Voltages Above 1 kV and up to and Including 38 Kv
9	IS 14666 : 1999 Reviewed In : 2014	High-voltage Alternating Current Switch-fuse Combinations
10	IS 14674 : 1999 Reviewed In : 2014	High Voltage Alternating Current Circuit-breakers-guide for Seismic Qualification of High Voltage Alternating Current Circuit-breakers
11	IS 14786 : 2000 Reviewed In : 2015	High-Voltage Low-Voltage Prefabricated Substations
12	IS 1818 : 1972	Alternating current isolators disconnectors and earthing switches
13	IS 2516 (Part 1/Sec 2) : 1980	Circuit-breakers Part 1 General and definitions Sec 2 For voltages above 1000V ac
14	IS 2516 (Part 1/Sec 3) : 1972	Circuit breakers Part 1 General and definitions Sec 3 Voltages above 11 kV
15	IS 2516 (Part 2/Sec 2) : 1980	Circuit breakers Part 2 Rating Sec 2 For voltages above 1000 V ac

16	IS 2516 (Part 3/Sec 2) : 1980	Circuit breakers Part 3 Design and construction Sec 2 for Voltages above 1000 V ac
17	IS 2516 (Part 4/Sec 2) : 1980	Circuit Breakers Part 4 Type Tests and Routine Tests Sec 2 For Voltages Above 1000 V ac
18	IS 2516 (Part 5/Sec 2) : 1980	Circuit Breakers Part 5 Information to be given with enquiries Tenders and Orders and Ruls of Transport Erection and Maintenance Sec 2 for Voltages above 1000 V ac
19	IS 3427 : 1997 IEC 298 :1990 Reviewed In : 2012 IEC 298 :1990	A C Metal Enclosed Switchgear and Controlgear for Rated Voltages Above 1 kV and Up to and Including 52 kV
20	IS 4710 : 1968	Switches and switch-isolators above 1000 V but not exceeding 11000 V
21	IS/IEC 517 : 1990 Reviewed In : 2012 IEC 517	Gas Insulated Metal Enclosed Switchgear for Rated Voltages of 72.5 kV and above
22	IS/IEC 60470 : 2000 Reviewed In : 2014 IEC 60470:2000	High-Voltage Switchgear Alternating Current Contactors and Contactor-Based Motor Starters
23	IS 7567 : 1993 Reviewed In : 2012	Automatic circuit reclosers
24	IS 7987 : 1976	Guide for selection of high voltage ac circuit breakers
25	IS 9046 : 1978 Reviewed In : 2007	AC contactors of voltage above 1000 V upto and including 11000 V
26	IS 9135 : 1979 Reviewed In : 2017 IEC Pub 56-4 (1972), IEC Pub 267 (1968)	Guide for testing of circuit - Breakers with respect to out - Of - Phase switching
27	IS 9920 (Part 1) : 2002 Reviewed In : 2012	High Voltage Switches - Part I Switches for Rated Voltages Above 1 kV and Less Than 52 Kv
28	IS 9920 (Part 2) : 2001 Reviewed In : 2016	High Voltages Switches Part II High Voltage Switches for rated Voltages of 52kV and above Rating
29	IS 9920 (Part 3) : 1982 Reviewed In : 2012	Alternating Current Switches for Voltages Above 1 000 V - Part III Design and Construction
30	IS 9920 (Part 4) : 1985 Reviewed In : 2012	Alternating Current Switches for Voltages Above 1000 V - Part 4 Type Tests and Routine Tests
31	IS 9921 (Part 1) : 1981 Reviewed In : 2012	Alternating Current Disconnectors Isolators and Earthing Switches for Voltages Above 1 000 V - Part I General and Definitions
32	IS 9921 (Part 2) : 1982 Reviewed In : 2012	Alternating current disconnectors isolators and earthing switches for voltages above 1000 V Part 2 Rating
33	IS 9921 (Part 3) : 1982 Reviewed In : 2012	Alternating Current Disconnectors Isolators and Earthing Switches for Voltages Above 1000 V - Part III Design and Construction
34	IS 9921 (Part 4) : 1985 Reviewed In : 2012	Alternating Current Disconnectors isolators and Earthing Switches for Voltages Above 1000 V - Part 4 Type Tests and Routine Tests
35	IS 9921 (Part 5) : 1985 Reviewed In : 2012	Alternating Current Disconnectors Isolators and Earthing Switches for Voltages Above 1 000 v - Part 5 Information to be Given with Tenders Enquiries and Orders

Annexure-II :List of Indian Product Standards

Sl. No.	IS No. & Year	Title
1	IS 5561 : 2018 Reviewed In : 2023 ANSI/NEMA CC1 : 2009, BS 159 : 1992, BS 3288-1 : 2014, IEC 61284 : 1997, IS/IEC	Electric power connectors - Specification First Revision

	62271 (Part 1) : 20	
2	IS/IEC 62271-1 : 2017 IEC 62271-1:2017+AMD1:2021 CSV	HIGH-VOLTAGE SWITCHGEAR AND CONTROLGEAR PART 1 COMMON SPECIFICATIONS FOR ALTERNATING CURRENT SWITCHGEAR AND CONTROLGEAR
3	IS/IEC 62271-100 : 2021 IEC 62271-100:2021	High-voltage switchgear and controlgear Part 100 Alternating-current circuit-breakers
4	IS/IEC 62271-102 : 2018 IEC 62271-102 : 2018	High-Voltage Switchgear and Controlgear Part 102 Alternating Current Disconnectors And Earthing Switches
5	IS/IEC 62271-103 : 2021 IEC 62271-103: 2021 Reviewed In : 2023	High-voltage switchgear and controlgear Part 103 Alternating current switches for rated voltages above 1 kV up to and including 52 kV First Revision
6	IS/IEC 62271-104 : 2023 IEC 62271-104:2020	High-Voltage Switchgear and Controlgear Part 104 Alternating Current Switches for Rated Voltages Higher than 52 kV
7	IS/IEC 62271-105 : 2021 IEC 62271-105: 2021	High-voltage switchgear and controlgear Part 105 Alternating current switch-fuse combinations for rated voltages above 1 kV up to and including 52 kV
8	IS/IEC 62271-106 : 2021 IEC 62271-106: 2021	High-voltage switchgear and controlgear Part 106 Alternating current contactors contactor-based controllers and motorstarters
9	IS/IEC 62271-109 : 2019 IEC 62271-109: 2019	High-Voltage switchgear and Controlgear Part 109 Alternating-current series capacitor by-pass switches
10	IS/IEC 62271-110 : 2023 IEC 62271-110:2023	High-voltage switchgear and controlgear Part 110 Inductive load switching
11	IS/IEC 62271-111 : 2019 IEC 62271-111:2019	High Voltage Switchgear and Controlgear Part 111 Automatic circuit reclosers for alternating current systems up to and including 38 kV
12	IS/IEC 62271-200 : 2021 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
13	IS/IEC 62271-201 : 2014 IEC 62271-201 : 2014 Reviewed In : 2024 IEC 62271-201 : 2014	High-Voltage Switchgear and Controlgear Part 201 ac Solid-Insulation Enclosed Switchgear and Controlgear for Rated Voltages Above 1 kV up to and Including 52 kV First Revision
14	IS/IEC 62271-202 : 2014 IEC 62271-202 : 2014 IEC 62271-202:2014	High - Voltage switchgear and controlgear Part 202 high - Voltage low - Voltage prefabricated substation
15	IS/IEC 62271-203 : 2022 IEC 62271-203:2022	High-voltage switchgear and controlgear Part 203 AC gas-insulated metal-enclosed switchgear for rated voltages above 52 kV
16	IS/IEC 62271-301 : 2009 Reviewed In : 2023 62271 : Part 301 : 2009	High Voltage Switchgear Controlgear Part 301 Dimensional Standardization of High Voltage Terminals
17	IS 8084 : 1976 Reviewed In : 2017 B.S. 159 : 1957	Specification for interconnecting bus - Bars for ac voltage above 1 kV up to and including 36 kV