

BUREAU OF INDIAN STANDARDS

Program of Work

ETD 19 : High Voltage Engineering

Scope: To prepare standards for high voltage testing techniques and for different types of tests belonging there to such as high voltage ac, dc and impulse tests and high current impulse tests, definitions and basic principles of insulation coordination and insulation levels To prepare application guides recommending the insulation levels in relation to possibilities of over-voltage protection devices. The work also includes formulation of standards for clearances and creepage distances

Liaison: **IEC TC-109 (P):** *Insulation co-ordination for low-voltage equipment* **IEC TC-42 (P):** *High-voltage and high-current test techniques* **IEC TC-99 (P):** *Insulation co-ordination and system engineering of high voltage electrical power installations above 1,0 kV AC and 1,5 kV DC* **ISO TC-106 (P):** *Methods for the assessment of electric, magnetic and electromagnetic fields associated with human exposure*

Published Standards

S.No	IS No.	TITLE	Reaffirm M-Y	No. of Amds	Eqv.
1	IS 15382 (Part 1) : 2022 60664-1:2020 60664-1:2020	Insulation Coordination for Equipment Within Low-Voltage Systems Part 1 Principles Requirements and Tests		-	Identical under dual numbering
2	IS 15382 (Part 2/Sec 1) : 2014 IEC 60664- 2-1 : 2011 Reviewed In : 2024 IEC 60664-2-1 : 2011	Insulation coordination for equipment within low - Voltage systems: Part 2 application guide: Sec 1 explanation of the application of the IEC 60664 series, dimensioning examples and dielectric testing (First Revision)	September, 2024	-	Identical under dual numbering
3	IS 15382 (Part 2/Sec 2) : 2018 IEC 60664-2-2 : 2002 Reviewed In : 2024 IEC 60664-2-2 : 2002	Insulation Coordination for Equipment within Low-Voltage Systems Part 2 Interface Considerations Section 2 Application guide	September, 2024	-	Identical under dual numbering
4	IS 15382 (Part 3) : 2019 IEC 60664-3 : 2006 Reviewed In : 2024 IEC60664-3 :2003	Insulation coordination for equipment within low-voltage systems : Part 3 use of coating potting or moulding for protection against pollution	September, 2024	-	Identical under dual numbering
5	IS 15382 (Part 4) : 2017 IEC60664-4 : 2005 Reviewed In : 2024 IEC60664-4 :1997	Insulation Coordination for Equipment Within Low-voltage Systems Part 4 Consideration of High-frequency Voltage Stress (First Revision)	September, 2024	-	Identical under dual numbering

6	IS 15638 (Part 1) : 2023 IEC 61083 -1 : 2021 IEC 61083 -1 : 2021	Instruments And Software Used For Measurements In High-Voltage And High-Current Tests Part 1: Requirements For Instruments For Impulse Tests First Revision		-	Identical under dual numbering
7	IS 15638 (Part 2) : 2018 IEC 61083-2 : 2013 Reviewed In : 2024 IEC 60183-2	Instruments and software used for measurement in high - Voltage and high current tests: Part 2 requirements for software for tests with impulse voltages and currents (First Revision)	September, 2024	-	Identical under dual numbering
8	IS 15638 (Part 3) : 2022 61083-3:2020 61083-3:2020	INSTRUMENTS AND SOFTWARE USED FOR MEASUREMENT IN HIGH- VOLTAGE AND HIGH- CURRENT TESTS Part 3: Requirements for Hardware For Tests With Alternating And Direct Voltages and Currents		-	Identical under single numbering
9	IS 16803 : 2018 IEC 62478 : 2016 IEC 62478 : 2016	High Voltage Test Techniques - Measurement of Partial Discharges by Electromagnetic and Acoustic Methods		-	Identical under dual numbering
10	IS 16826 : 2018 IEC 61180 : 2016 Reviewed In : 2023 IEC 61180 : 2016	High - Voltage Test Techniques For Low-Voltage Equipment - Definitions, Test and Procedure Requirements, Test Equipment	May, 2023	-	Identical under dual numbering
11	IS 16828 : 2018 IEC 62475 : 2010 Reviewed In : 2023 IEC 62475 : 2010	High - Current Test Techniques - Definitions and Requirements for Test Currents and Measuring Systems	May, 2023	-	Identical under dual numbering
12	IS 17341 : 2020 IEEE Std 1227â„¢-1990 IEEE Std 1227™-1990	Guide for the Measurement of DC Electric-Field Strength and Ion Related Quantities		-	Identical under dual numbering
13	IS 1876 : 2005 Reviewed In : 2020 IEC 60052	Voltage measurement by means of standard air gaps (First Revision)	October, 2020	-	Identical under dual numbering
14	IS 2071 (Part 1) : 2016 IEC 60060-1 : 2010 Reviewed In : 2024 IEC 60060-1 : 2010	High - Voltage test techniques: Part 1 general definitions and test requirements (Third Revision)	September, 2024	-	Identical under dual numbering
15	IS 2165 (Part 1) : 1977 Reviewed In : 2016	Insulation co - Ordination: Part 1 phase to earth insulation co - Ordination, principles and rules (Second Revision)	March, 2016	1	Identical under dual numbering
16	IS/IEC 60060-2 : 2010 Reviewed In : 2024 IEC 60060-2:2010	High - Voltage test techniques: Part 2 measuring systems	September, 2024	-	Identical under single numbering
17	IS/IEC 60060-3 : 2006 Reviewed In : 2024 IEC 60060-3:2006	High - Voltage test techniques: Part 3 definitions and requirements for on - Site testing	September, 2024	-	Identical under single numbering
18	IS/IEC 60071-1 : 2019 60071-1:2019	Insulation Coordination Part 1 Definition Principles And Rules (First Revision)		-	Identical under single numbering

	60071-1:2019				
19	IS/IEC 60071-1 : 2006 Reviewed In : 2024 60071-1:2019	Insulation co - Ordination: Part 1 definitions, principles and rules	September, 2024	-	Identical under single numbering
20	IS/IEC 60071-2 : 2018 60071-2:2018 60071-2:2018	Insulation Coordination Part 2: Application Guide		-	Identical under single numbering
21	IS/IEC 60071-4 : 2004 IEC/TR 60071-4 : 2004 IEC/TR 60071-4 : 2004	Insulation Coordination Part 4 Computational Guide to Insulation Co-ordination and Modeling of Electrical Networks		-	Identical under dual numbering
22	IS/IEC 60270 : 2000 Reviewed In : 2024 IEC 60270:2000	High - Voltage test techniques - Partial discharge measurements	September, 2024	1	Identical under single numbering
23	IS/IEC 61786-1 : 2013 iec IEC 61786-1 : 2013 iec IEC 61786-1 : 2013	Measurement of DC Magnetic AC Magnetic and AC Electric Fields From 1 Hz to 100 kHz with Regard to Exposure of Human Beings Part 1: Requirements for measuring instruments		-	Identical under single numbering
24	IS/IEC 61786-2 : 2014 IEC 61786-2:2014 IEC 61786-2:2014	Measurement of DC Magnetic AC Magnetic and AC Electric Fields From 1 Hz to 100 kHz with Regard to Exposure of Human Beings Part 2 : Basic standard for measurements		-	Identical under single numbering
25	IS/IEC 61936-1 : 2021 IEC 61936-1:2021 IEC 61936-1:2021	Power installations exceeding 1 kV ac Part 1: Common Rules		-	Identical under single numbering
26	IS/IEC/TS 61936-2 : 2015 IEC TS 61936-2:2015 IEC TS 61936-2:2015	Power installations exceeding 1 kV ac and 15 kV dc Part 2: dc		-	Identical under single numbering
27	IS/IEC/TS 62993 : 2017 IEC TS 62993 : 2017 IEC TS 62993 : 2017	Guidance for Determination of Clearances, Creepage Distances and Requirements for Solid Insulation for Equipment with a Rated Voltage above 1 000 V AC and 1 500 V DC, and up to 2 000 V AC and 3 000 V DC		-	Identical under single numbering
28	IS 8690 : 1977 Reviewed In : 2016 IEC Dot : 42 (Central Office) 27 Draft	Application guide for measuring devices for high voltage testing	March, 2016	-	Modified/Technically Equivalent

Standards under Development

Projects Approved

SI. No.	Doc No.	Title
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No Records Found

Preliminary Draft Standards

SI. No.	Doc No.	Title
1	ETD 19 (26780)	Power installations exceeding 1 kV AC and 15 kV DC Part 0 Principles to be observed in the design and erection of high voltage installations- Safety of high voltage installations
2	ETD 19 (26781) Revision of: IS/IEC/TS 61936:2015	Power Installations Exceeding 1 kV ac and 15 kV dc Part 2 dc

Drafts Standards in WC Stage

SI. No.	Doc No.	Title
No Records Found		

Draft Standards Completed WC Stage

SI. No.	Doc No.	Title
No Records Found		

Finalized Draft Indian Standard

SI. No.	Doc No.	Title
No Records Found		

Finalized Draft Indian Standards under Print

SI. No.	Doc No.	Title
1	ETD 19 (23933) Revision of: IS 15382:2017	INSULATION COORDINATION FOR EQUIPMENT WITHIN LOW-VOLTAGE SYSTEMS Part 4 Consideration of High-Frequency Voltage Stress Second Revision
2	ETD 19 (23935) Revision of: IS 15382:2019	INSULATION COORDINATION FOR EQUIPMENT WITHIN LOW-VOLTAGE SYSTEMS Part 3 Use of Coating Potting or Molding for Protection against Pollution Second Revision
3	ETD 19 (23936) Revision of: IS/IEC 60071:2018	INSULATION CO-ORDINATION Part 2 Application Guidelines Second Revision

Total Published Standards:25 Total Standards Under development:5

Aspect Wise Report

Product : 1
Code of Practices : 9
Methods of Test : 15
Terminology : 0
Dimensions : 1
System Standard : 0
Safety Standard : 0
Others : 1
Service Specification : 0
Process Specification : 0
Unclassified : 0

Annexure-I :List of Indian Standards Withdrawn/Superseded

SI. No.	IS No. & Year	Title
1	IS 11349 : 1985 IEC 60790 Reviewed In : 2006	Oscilloscopes and Peak Voltmeters for Impulse Tests
2	IS 2070 : 1962	Methods Of Impulse Voltage Testing

3	IS 2071 (Part 2) : 1974 Reviewed In : 2006	Methods of High Voltage Testing - Part II Test Procedures
4	IS 2071 (Part 3) : 1976 Reviewed In : 2016	Methods of high voltage testing Part 3 Measuring devices
5	IS 2165 (Part 2) : 1983 Reviewed In : 2016	Insulation coordination Part 2 Phase to phase insulation coordination principles and rules
6	IS 3716 : 1978 IEC 60071-2 Reviewed In : 2006	Application guide for insulation coordination
7	SP 39 : 1987 Reviewed In : 2006	Special Publication - Guide for insulation coordination within low voltage systems
8	IS 6209 : 1982 Reviewed In : 2006	Methods for Partial Discharge Measurements

Annexure-II :List of Indian Product Standards

SI. No.	IS No. & Year	Title
1	IS 2071 (Part 1) : 2016 IEC 60060-1 : 2010 Reviewed In : 2024 IEC 60060-1 : 2010	High - Voltage test techniques Part 1 general definitions and test requirements Third Revision