

BUREAU OF INDIAN STANDARDS

Program of Work

ETD 16 : Transformers

Scope: To prepare standards on power and distribution transformers, reactors, onload tap changers, etc, without limitation on voltage or power. Transformer accessories and voltage stabilizers, testing transformers and furnace transformers are included. (Instrument transformers, welding transformers and traction transformers are excluded)

Liaison: **IEC TC-14 (P):** *Power transformers* **IEC TC-96 (P):** *Transformers, reactors, power supply units, and combinations thereof*

Published Standards

S.No	IS No.	TITLE	Reaffirm M-Y	No. of Amds	Eqv.
1	IS 10028 (Part 1):1985 <i>Reviewed In : 2021</i>	Code of practice for selection, installation and maintenance of transformers: Part 1 selection	July, 2021	-	Indigenous
2	IS 10028 (Part 2):1981 <i>Reviewed In : 2021</i>	Code of practice for selection, installation and maintenance of transformers: Part 2 installation	July, 2021	-	Indigenous
3	IS 10028 (Part 3):1981 <i>Reviewed In : 2018</i>	Code of practice for selection, installation and maintenance of transformers: Part 3 maintenance	July, 2018	1	Indigenous
4	IS 10161:2025	MOVING COIL VOLTAGE REGULATORS-SPECIFICATION (First Revision)		-	Indigenous
5	IS 10161:1982 <i>Reviewed In : 2021</i>	Specification for moving coil voltage regulators	July, 2021	-	Indigenous
6	IS 1180 (Part 1):2014 <i>Reviewed In : 2025</i>	Outdoor Type Oil Immersed Distribution Transformers Upto and Including 2 500 kVA, 33kV - Specification Part 1 Mineral Oil Immersed (Fourth Revision)	May, 2025	4	Indigenous
7	IS 1180 (Part 3):2021	Outdoor/Indoor Type Liquid Immersed Distribution Transformers Up to and Including 2 500 kVA, 33 kV — Specification Part 3 Natural/Synthetic Organic Ester Liquid Immersed		-	Indigenous
8	IS 12977:1990 <i>Reviewed In : 2025</i>	Arc furnace transformers specification	May, 2025	-	Indigenous
9	IS 13956:1994 <i>Reviewed In : 2025</i>	Testing transformers - Specification	May, 2025	-	Indigenous
10	IS 18284:2023	REPAIR OF DISTRIBUTION TRANSFORMERS - CODE OF PRACTICE		-	Indigenous
11	IS 18444 (Part 57/Sec 1202):2024	TRANSFORMERS PART 57 POWER TRANSFORMERS		-	Modified/Technically Equivalent

	60076-57-1202 : 2017	SECTION 1202 LIQUID IMMERSED PHASE SHIFTING TRANSFORMERS (IEC/IEEE 60076-57-1202 : 2017, MOD)			
12	IS 18444 (Part 57/Sec 129):2024 60076-57-129 : 2017	Transformers Part 57 Power Transformers Section 129 Transformers for HVDC Applications (IEC/IEEE 60076-57-129 : 2017, MOD)		-	Modified/Technically Equivalent
13	IS 18445:2024 62032 : 2012	Guide for the Application, Specification and Testing of Phase-Shifting Transformers		-	Modified/Technically Equivalent
14	IS 2026 (Part 1):2011 Reviewed In : 2021 IEC 60076-1 : 2000	Power transformers: Part 1 general (Second Revision)	November, 2021	1	Modified/Technically Equivalent
15	IS 2026 (Part 2):2010 Reviewed In : 2020 IEC 60076-2 : 1993	Power transformers: Part 2 temperature - Rise (First Revision)	March, 2020	-	Modified/Technically Equivalent
16	IS 2026 (Part 3):2018 IEC 60076-3 : 2000 Reviewed In : 2023 IEC 60076-3:2013	Power transformers: Part 3 insulation levels, dielectric tests and external clearances in air (Fourth Revision)	May, 2023	1	Identical under dual numbering
17	IS 2026 (Part 4):1977 IEC 60076 Reviewed In : 2021 IEC TR 60616:1978 , IEC 60076-4:1976	Specification for power transformers: Part 4 terminal markings, tapings and connections (First Revision)	November, 2021	2	Modified/Technically Equivalent
18	IS 2026 (Part 5):2011 Reviewed In : 2016 IEC 60076-5 : 2006	Power transformers: Part 5 ability to with stand short circuit (First Revision)	December, 2016	-	Modified/Technically Equivalent
19	IS 2026 (Part 6):2017 IEC 60076-6 : 2007 60076-6 : 2007	Power transformers: Part 6 reactors		-	Identical under dual numbering
20	IS 2026 (Part 7):2009 IEC 60076-7 Reviewed In : 2025 IEC 60076-7 : 2005	Power transformers: Part 7 loading guide for oil - Immersed power transformers	May, 2025	-	Identical under dual numbering
21	IS 2026 (Part 8):2009 IEC 60076-8 Reviewed In : 2025 IEC 60076-8 : 1997	Power transformers: Part 8 application guide	May, 2025	-	Identical under dual numbering
22	IS 2026 (Part 10):2025 IEC 60076-10:2016 IEC 60076-10:2016	Power transformers: Part 10 determination of sound levels (First Revision)		-	Identical under dual numbering
23	IS 2026 (Part 10/Sec 1):2018 IEC 60076 -10-1 : 2016 Reviewed In : 2023 IEC	Power Transformers Part 10 Determination of Sound Levels Section 1 Application guide	March, 2023	1	Identical under single numbering

	60076-10-1:2016				
24	IS 2026 (Part 11):2021 IEC 60076-11 : 2018 IEC 60076-11 : 2018	Power Transformers Part 11 Dry-Type Transformers		-	Identical under dual numbering
25	IS 2026 (Part 12):2018 IEC 60076-12 : 2008 Reviewed In : 2023 IEC 60076-12:2008	Power transformers: Part 12 loading guide for dry - Type power transformers	March, 2023	-	Identical under dual numbering
26	IS 2026 (Part 14):2018 IEC 60076-14 : 2013 Reviewed In : 2023 IEC 60076-14:2013	Power transformers: Part 14 liquid - Immersed power transformers using high - Temperature insulation materials	March, 2023	-	Identical under dual numbering
27	IS 2026 (Part 15):2018 IEC 60076-15 : 2015 Reviewed In : 2023 IEC 60076-15:2015	Power transformers: Part 15 gas - Filled power transformers	March, 2023	-	Identical under dual numbering
28	IS 2026 (Part 16):2023 60076-16 : 2018 60076-16 : 2018	Power transformers: Part 16 transformers for wind turbine applications		-	Identical under dual numbering
29	IS 2026 (Part 18):2018 IEC 60076-18 : 2012 Reviewed In : 2024 IEC 60076-18:2012	Power transformers: Part 18 measurement of frequency response	December, 2024	-	Identical under dual numbering
30	IS 2026 (Part 19):2018 IEC 60076-19 : 2013 IEC 60076-19:2013	Power Transformers Part 19 Rules for the Determination of Uncertainties in the Measurement of the Losses on Power Transformers and Reactors		-	Identical under dual numbering
31	IS 2026 (Part 21):2018 IEC 60076-21 : 2011 IEC 60076-21:2011	Power transformers: Part 21 standard requirements, terminology and test code for step - Voltage regulators		-	Identical under dual numbering
32	IS 3639:1966 Reviewed In : 2021	Specification for fittings and accessories for power transformers	July, 2021	-	Indigenous
33	IS 5142:1969 Reviewed In : 2021 Reaffirmed but not taken up for revision	Specification for continuously variable voltage auto - Transformers	July, 2021	2	Indigenous
34	IS/IEC 60076-4:2002 60076-4 : 2002 60076-4 : 2002	Power Transformers Part 4 Guide to the Lightning Impulse and Switching Impulse Testing $i_c^{1/2}$ Power Transformers and Reactors		-	Identical under single numbering
35	IS/IEC 61558-1:2017 61558-1 61558-1	Safety of Transformers, Reactors, Power Supply Units and Combinations Thereof Part 1 General Requirements and Tests (First Revision)		-	Identical under single numbering
36	IS/IEC 61558-2-4):2021 61558-2-4 61558-2-4	Safety of Transformers, Reactors, Power Supply Units and Combinations Thereof Part 2 Particular Requirements and Tests		-	Identical under single numbering

		for Safety Isolating Transformers and Power Supply Units Incorporating Section 4 Isolating Transformers for General Applications			
37	IS/IEC 61558-2-6:2021 61558-2-6 61558-2-6	Safety of Transformers, Reactors, Power Supply Units and Combinations Thereof Part 2 Particular Requirements and Tests for Safety Isolating Transformers and Power Supply Units Incorporating Section 6 Safety Isolating Transformers for General Applications		-	Identical under single numbering
38	IS/IEC 61558-2-7:2007 IEC 61558_2_7 Reviewed In : 2021 IEC 61558-2-7 : 2007	Safety of power transformers, power supplies reactors and similar products: Part 2 - 7 particular requirements and tests for transformers and power supplies for toys	August, 2021	-	Identical under single numbering
39	IS 8447:1989 Reviewed In : 2018 Reaffirmed but not taken up for revision	Manually operated voltage regulators for domestic use - Specification (First Revision)	April, 2018	1	Indigenous
40	IS 8448:1989 Reviewed In : 2025	Automatic line voltage correctors (Step Type) for domestic use - Specification (First Revision)	June, 2025	2	Indigenous
41	IS 8468 (Part 1):2018 IEC 60214-1 : 2014 IEC 60214-1 : 2014	Tap - Changers Part 1 Performance Requirements and Test Methods (First Revision)		-	Identical under dual numbering
42	IS 8478:1977 Reviewed In : 2021 IEC DOC: 14 (Central Office) 9	Application guide for on - Load tap - Changers	July, 2021	-	Modified/Technically Equivalent
43	IS 9147:1979 Reviewed In : 2021 BS : 2562	Specification for cable sealing boxes for oil - Immersed transformers suitable for paper - Insulated lead sheathed cables for highest system voltages from 12 kV up to and including 36 kV	July, 2021	-	Modified/Technically Equivalent
44	IS 9815 (Part 1):2025	Servo-Motor Operated Automatic Line Voltage Correctors Part 1 Correctors for Single-Phase Applications - Specification (Third Revision)		-	Indigenous

Standards under Development

Projects Approved

Sl. No.	Doc No.	Title
No Records Found		

Preliminary Draft Standards

Sl. No.	Doc No.	Title
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1	ETD 16 (27152)	Solar Inverter Duty Transformer for Distributed Photovoltaic Power Generation System
2	ETD 16 (27287)	OUTDOORINDOOR TYPE DISTRIBUTION TRANSFORMERS UPTO AND INCLUDING 3 150 kVA 33 kV SPECIFICATION PART 4 DRY TYPE
3	ETD 16 (27293)	OUTDOORINDOOR TYPE LIQUID IMMERSED DISTRIBUTION TRANSFORMERS UPTO AND INCLUDING 2500 kVA 33 kV SPECIFICATION PART 5 Submersible Duty Transformers with NATURALSYNTHETIC ORGANIC ESTER LIQUID IMMERSED
4	ETD 16 (27336)	Voltage Regulating Distribution Transformers
5	ETD 16 (27340)	Converter Transformers Part 1-Transformers for Industrial Applications
6	ETD 16 (27346)	Tap Changers Part 2-Application Guidelines

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 16 (23039)	Onsite diagnostic testing of power transformers for condition health assessment

Total Published Standards:39	Total Standards Under development:7
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Aspect Wise Report		
	Product : 24	
	Code of Practices : 11	
	Methods of Test : 6	
	Terminology : 0	
	Dimensions : 1	
	System Standard : 0	
	Safety Standard : 1	
	Others : 0	
	Service Specification : 0	
	Process Specification : 0	
	Unclassified : 0	

Annexure-I :List of Indian Standards Withdrawn/Superseded		
SI. No.	IS No. & Year	Title
1	IS 10561:1983 IEC 606 91978) Reviewed In : 2011	Application guide for power transformers
2	IS 11171:1985 IEC 60727 Reviewed In : 2016 IEC 60726 : 1982	Specification for dry - Type power transformers
3	IS 1180 (Part 2):1989 Reviewed In : 2008	Outdoor Type Three-phase Distribution Transformers Up To And Including 100 Kva 11 Kv part 2 Sealed Type

4	IS 13964:1994 IEC 551 Reviewed In : 2019 IEC 60551 (1976)	Methods of measurement of transformer and reactor sound levels
5	IS 1496:1959	Transformers used in vibrator power supplies
6	IS 1886:1961	Code of practice for installation and maintenance of transformers
7	IS 3151:1982 IEC 60289 Reviewed In : 2016	Earthing transformers
8	IS 5553 (Part 1):1989 IEC 60289 Reviewed In : 2013	Reactors - Part 1 General
9	IS 5553 (Part 2):1990 IEC 60289 Reviewed In : 2013	Reactors Part 2 Shunt reactors
10	IS 5553 (Part 3):1990 IEC 60289 Reviewed In : 2013	Reactors Part 3 Current limiting reactors and neutral earthing reactors
11	IS 5553 (Part 4):1989 IEC 60289 Reviewed In : 2014	Reactors Part 4 Damping reactors
12	IS 5553 (Part 5):1989 IEC 60289 Reviewed In : 2014	Reactors Part 5 Tuning reactors
13	IS 5553 (Part 6):1990 IEC 60289 Reviewed In : 2016	Reactors Part 6 Earthing transformers Neutral couplers
14	IS 5553 (Part 7):1990 IEC 60289 Reviewed In : 2014	Reactors Part 7 Arc suppression reactors
15	IS 5553 (Part 8):1990 IEC 60289 Reviewed In : 2014	Reactors Part 8 Smoothing reactors
16	IS 6600:1972 Reviewed In : 2011	Guide for loading of oil immersed transformers
17	IS 8468:1977 Reviewed In : 2016 IEC 60214 : 1966	On-load Tap Changers

Annexure-II :List of Indian Product Standards

Sl. No.	IS No. & Year	Title
1	IS 10161:2025	MOVING COIL VOLTAGE REGULATORS-SPECIFICATION First Revision
2	IS 1180 (Part 1):2014 Reviewed In : 2025	Outdoor Type Oil Immersed Distribution Transformers Upto and Including 2 500 kVA 33kV - Specification Part 1 Mineral Oil Immersed Fourth Revision
3	IS 1180 (Part 3):2021 IEC 60580:2019	Outdoor Indoor Type Liquid Immersed Distribution Transformers Up to and Including 2 500 kVA 33 kV Specification Part 3 Natural Synthetic Organic Ester Liquid Immersed
4	IS 12977:1990 Reviewed In : 2025	Arc furnace transformers specification
5	IS 13956:1994 Reviewed In : 2025	Testing transformers - Specification
6	IS 18444 (Part 57/Sec 1202):2024	TRANSFORMERS PART 57 POWER TRANSFORMERS SECTION 1202 LIQUID IMMERSED PHASE SHIFTING TRANSFORMERS IEC IEEE 60076-57-1202 2017 MOD
7	IS 18444 (Part 57/Sec 129):2024	Transformers Part 57 Power Transformers Section 129 Transformers for HVDC Applications IEC IEEE 60076-57-129 2017 MOD

8	IS 2026 (Part 1):2011 Reviewed In : 2021 IEC 60076-1 : 2000	Power transformers Part 1 general Second Revision
9	IS 2026 (Part 6):2017 IEC 60076-6 : 2007 60076-6 : 2007	Power transformers Part 6 reactors
10	IS 2026 (Part 11):2021 IEC 60076-11 : 2018 ISO 5636-4	Power Transformers Part 11 Dry-Type Transformers
11	IS 2026 (Part 14):2018 IEC 60076-14 : 2013 Reviewed In : 2023 IEC 60076-14:2013	Power transformers Part 14 liquid - Immersed power transformers using high - Temperature insulation materials
12	IS 2026 (Part 15):2018 IEC 60076-15 : 2015 Reviewed In : 2023 IEC 60076-15:2015	Power transformers Part 15 gas - Filled power transformers
13	IS 2026 (Part 16):2023 60076-16 : 2018	Power transformers Part 16 transformers for wind turbine applications
14	IS 2026 (Part 21):2018 IEC 60076-21 : 2011 IEC 60076-21:2011	Power transformers Part 21 standard requirements terminology and test code for step - Voltage regulators
15	IS 3639:1966 Reviewed In : 2021	Specification for fittings and accessories for power transformers
16	IS 5142:1969 Reviewed In : 2021 Reaffirmed but not taken up for revision	Specification for continuously variable voltage auto - Transformers
17	IS/IEC 61558-1:2017 61558-1	Safety of Transformers Reactors Power Supply Units and Combinations Thereof Part 1 General Requirements and Tests First Revision
18	IS/IEC 61558-2-4):2021 61558-2-4	Safety of Transformers Reactors Power Supply Units and Combinations Thereof Part 2 Particular Requirements and Tests for Safety Isolating Transformers and Power Supply Units Incorporating Section 4 Isolating Transformers for General Applications
19	IS/IEC 61558-2-6):2021 61558-2-6	Safety of Transformers Reactors Power Supply Units and Combinations Thereof Part 2 Particular Requirements and Tests for Safety Isolating Transformers and Power Supply Units Incorporating Section 6 Safety Isolating Transformers for General Applications
20	IS 8447:1989 Reviewed In : 2018 Reaffirmed but not taken up for revision	Manually operated voltage regulators for domestic use - Specification First Revision
21	IS 8448:1989 Reviewed In : 2025	Automatic line voltage correctors Step Type for domestic use - Specification First Revision
22	IS 8468 (Part 1):2018 IEC 60214-1 : 2014 IEC 60214-1 : 2014	Tap - Changers Part 1 Performance Requirements and Test Methods First Revision
23	IS 9147:1979 Reviewed In : 2021 BS : 2562	Specification for cable sealing boxes for oil - Immersed transformers suitable for paper - Insulated lead sheathed cables for highest system voltages from 12 kV up to and including 36 kV
24	IS 9815 (Part 1):2025	Servo-Motor Operated Automatic Line Voltage Correctors Part 1 Correctors for Single-Phase Applications - Specification Third Revision