

BUREAU OF INDIAN STANDARDS

Program of Work

ETD 29 : Power Capacitors

Scope: To prepare standards for: a) Shunt Capacitors, Series capacitors for ac power systems b) Capacitors for surge protection for use in voltage system c) Shunt capacitors for the self-healing type and nonself-healing type for ac power systems. d) Capacitors for electric fan motors, A.C. motor capacitors, Capacitors for microwave ovens e) Internal fuses and internal overpressure disconnectors for shunt capacitors & , series capacitors and power electronic capacitors f) Coupling capacitor and capacitor dividers, Voltage grading capacitor Grading capacitors for high voltage alternating current circuit-breaker g) Capacitors for inductive heat generating plants, & induction heating installations h) Power electronics capacitors, Energy storage capacitors i) Automatic power factor correction (APFC) panels

Liaison: **IEC TC-33 (P):** *Power capacitors and their applications*

Published Standards

S.No	IS No.	TITLE	Reaffirm M-Y	No. of Amds	Eqv.
1	IS 11548 : 1986 <i>Reviewed In : 2021</i>	Specification for capacitors for surge protection for use in voltage system above 650 V and up to 33 KV	November, 2021	2	Indigenous
2	IS 13203 : 1991 IEC 60996:1989 <i>Reviewed In : 2021</i> <i>IEC 60996:1989</i>	Method for verifying accuracy of tan delta measurements	October, 2021	-	Modified/Technically Equivalent
3	IS 13340 (Part 1) : 2012 IEC 60831 - 1 : 2002 <i>Reviewed In : 2017</i> <i>IEC 60831-1: 2014</i>	Shunt power capacitors of the self - Healing type for ac systems having a rated voltage up to and including 1000 V: Part 1 general - Performance, testing and rating - Safety requirements - Guide for installation and operation (First Revision)	May, 2022	-	Identical under dual numbering
4	IS 13340 (Part 1) : 2024 IEC 60831-1: 2014 <i>IEC 60831-1: 2014</i>	Shunt Power Capacitors of the Self-Healing Type for a.c. Systems Having a Rated Voltage up to and Including 1 000 V Part 1 General - Performance, Testing and Rating - Safety Requirements - Guide for Installation and Operation (Second Revision)		-	Identical under dual numbering
5	IS 13340 (Part 2) : 2024 IEC 60831-2: 2014 <i>IEC 60831-2: 2014</i>	Shunt Power Capacitors of the Self-Healing Type for a.c. Systems Having a Rated Voltage up to and Including 1 000 V Part 2 Ageing Test, Self-Healing Test and		-	Identical under dual numbering

		Destruction Test (First Revision)			
6	IS 13340 (Part 2) : 2012 IEC 60831-2 : 1995 Reviewed In : 2022 IEC 60831-2: 2014	Shunt power capacitors of the self - Healing type for ac systems having a rated voltage up to and including 1000 V: Part 2 ageing test, self - Healing test and destruction test	April, 2022	-	Identical under dual numbering
7	IS 13585 (Part 1) : 2012 IEC 60931-1 : 1996 Reviewed In : 2017 IEC 60931-1:1996	Shunt power capacitors of the non - Self - Healing type for ac systems having a rated voltage up to and including 1 000 v: Part 1 general - Performance, testing and rating - Safety requirements - Guide for installation and operation (First Revision)	April, 2022	-	Identical under dual numbering
8	IS 13585 (Part 2) : 2013 IEC 60931-2: 1995 Reviewed In : 2023 IEC 60931-2:1996	Shunt power capacitors of the non - Self - Healing type for a.c. systems having a rated voltage up to and including 1 000 v: Part 2 ageing test and destruction test	February, 2023	-	Identical under dual numbering
9	IS 13585 (Part 3) : 2013 IEC 60931-3: 1996 Reviewed In : 2023 IEC 60931-3:1996	Shunt power capacitors of the non - Self - Healing type for a.c. systems having a rated voltage up to and including 1 000 V: Part 3 internal fuses	February, 2023	-	Identical under dual numbering
10	IS 13666 : 1993 Reviewed In : 2018	Energy storage capacitors - Specification	May, 2023	-	Indigenous
11	IS 13925 (Part 1) : 2012 IEC 60871-1 : 2005 Reviewed In : 2017 IEC60871-1 : 2005	Shunt capacitors for a.c. power systems having a rated voltage above 1000 V: Part 1 general (First Revision)	April, 2022	-	Identical under dual numbering
12	IS 13925 (Part 2) : 2002 IEC 60871-2:1999 Reviewed In : 2017 IEC60871-2:1999	Shunt capacitors for a.c. power systems having a rated voltage above 1000 V: Part 2 endurance testing (First Revision)	March, 2022	-	Identical under dual numbering
13	IS 13925 (Part 3) : 2002 IEC 60871-3:1996 Reviewed In : 2017 IEC 60871-3:1996	Shunt capacitors for a.c. power systems having a rated voltage above 1000 V: Part 3 protection of shunt capacitors and shunt capacitor banks	March, 2022	-	Identical under dual numbering
14	IS 13925 (Part 4) : 2013 IEC 60871-4: 1996 Reviewed In : 2018 IEC 60871-4:1996	Shunt capacitors for a.c. power systems having a rated voltage above 1000 V: Part 4 internal fuses	February, 2023	-	Identical under dual numbering
15	IS 15395 : 2003 IEC 61642:1997 Reviewed In : 2023 IEC 61642:1997	Industrial AC networks affected by harmonics application of filters and shunt capacitors	October, 2023	-	Identical under dual numbering
16	IS 15406 (Part 1) : 2003 IEC 61270-1:1996 Reviewed In : 2023 IEC 61270-1: 1996	Capacitors for microwave ovens: Part 1 general	October, 2023	-	Identical under dual numbering
17	IS 16636 : 2017	Automatic power factor correction (APFC) panels for voltage rating up to and including 1000 V	March, 2022	-	Indigenous
18	IS 1709 : 1984	Specification for capacitors or	December, 2024	3	Modified/Technically

	iec 252 Reviewed In : 2021 IEC 252:1975	electric fan motors (First Revision)			Equivalent
19	IS 2993 (Part 1) : 1998 IEC 252 Reviewed In : 2022 IEC 60252-1: 2010+AMD1:2013	A.C. motor capacitors (Second Revision)	July, 2023	-	Identical under dual numbering
20	IS 2993 (Part 1) : 2024 IEC 60252-1:2010 IEC 60252-1: 2010+AMD1:2013	a.c. Motor Capacitors Part 1 General - Performance, Testing and Rating - Safety Requirements - Guidance for Installation and Operation (Third Revision)		-	Identical under dual numbering
21	IS 2993 (Part 2) : 2024 IEC 60252-2:2010 IEC 60252-1: 2010+AMD1:2013	a.c. Motor Capacitors Part 2 Motor Start Capacitors (Third Revision)		-	Identical under dual numbering
22	IS/IEC 60110-1 : 1998 IEC 60110-1 : 1998 Reviewed In : 2021 IS/IEC 60110-1 : 199	Power Capacitors for Induction Heating Installations Part 1 General (First Revision)		-	Identical under single numbering
23	IS/IEC/TS 60110-2 : 2000 IEC TS 60110-2 : 2000 IEC 60110-2 : 2000	POWER CAPACITORS FOR INDUCTION HEATING INSTALLATIONS PART 2 : AGEING TEST DESTRUCTION TEST AND REQUIREMENTS FOR DISCONNECTING INTERNAL FUSES		-	Identical under single numbering
24	IS/IEC 60143-1 : 2015 IEC 60143-1:2015 IEC 60143-1:2015	SERIES CAPACITORS FOR POWER SYSTEMS PART 1 : GENERAL (Second Revision)		-	Identical under single numbering
25	IS/IEC 60143-2 : 2012 IEC 60143-2:2012+ AMD1:2021 IEC 60143-2:2012+ AMD1:2021	Series Capacitors for Power Systems Part 2: Protective Equipment for Series Capacitor Banks		-	Identical under single numbering
26	IS/IEC 60143-3 : 2015 IEC 60143-3:2015 IEC 60143-3:2015	SERIES CAPACITORS FOR POWER SYSTEMS PART 3: INTERNAL FUSES (First Revision)		-	Identical under single numbering
27	IS/IEC 60143-4 : 2010 IEC 60143-4:2010 IEC 60143-4:2010	SERIES CAPACITORS FOR POWER SYSTEMS PART 4: THYRISTOR CONTROLLED SERIES CAPACITORS		-	Identical under single numbering
28	IS/IEC 60358-1 : 2012 IEC 60358-1:2012 60358-1:2012	COUPLING CAPACITORS AND CAPACITOR DIVIDERS PART 1 GENERAL RULES (Second Revision)		-	Identical under single numbering
29	IS/IEC 60358-2 : 2013 IEC 60358-2:2013 IEC 60358-2:2013	COUPLING CAPACITORS AND CAPACITOR DIVIDERS PART 2 a.c. or d.c. SINGLE-PHASE COUPLING CAPACITOR CONNECTED BETWEEN LINE		-	Identical under single numbering

		AND GROUND FOR POWER LINE CARRIER-FREQUENCY (PLC) APPLICATION			
30	IS/IEC 61071 : 2017 IEC 61071:2017 IEC 61071:2017	CAPACITORS FOR POWER ELECTRONICS (First Revision)		-	Identical under single numbering
31	IS/IEC 62146-1 : 2013 IEC 62146-1: 2013 + AMD 1: 2016 IEC 62146-1: 2013 + AMD 1: 2016	Grading capacitors for high-voltage alternating current circuit-breakers Part 1: General		-	Identical under single numbering
32	IS/IEC 62146-2 : 2023 IEC 62146-2:2023 IEC 62146-2:2023	Capacitors for High Voltage Alternating Current Circuit Breakers Part 2: TRV capacitors		-	Identical under single numbering
33	IS 9835 (Part 2) : 2021 IEC 60143-2:2012 IEC 60143-2:2012	SERIES CAPACITORS FOR POWER SYSTEMS PART 2: PROTECTIVE EQUIPMENT FOR SERIES CAPACITOR BANKS		-	Identical under single numbering

Standards under Development

Projects Approved

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

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 29 (26603)	a c Motor Capacitors Part 1 General - Performance Testing and Rating - Safety Requirements - Guidance for Installation and Operation Third Revision Amendment - 1
2	ETD 29 (26604)	a c Motor Capacitors Part 2 Motor Start Capacitors Third Revision Amendment - 1

Total Published Standards:26 Total Standards Under development:2

Aspect Wise Report

Product : 16
 Code of Practices : 0
 Methods of Test : 7
 Terminology : 0
 Dimensions : 0
 System Standard : 0
 Safety Standard : 1
 Others : 5
 Service Specification : 0
 Process Specification : 0
 Unclassified : 0

Annexure-I :List of Indian Standards Withdrawn/Superseded

Sl. No.	IS No. & Year	Title
1	IS 11530 : 1985 Reviewed In : 2021	Specification for voltage grading capacitor
2	IS 12672 : 1989 IEC 60593 Reviewed In : 2021 IEC 60593:1977	Internal fuses and internal overpressure disconnectors for shunt capacitors - Specification
3	IS 12677 : 1989 IEC 60595 Reviewed In : 2021 IEC 60595 :1977	Internal fuses for series capacitors - Specification
4	IS 12730 : 1989 IEC 60594 Reviewed In : 2021 IEC 594:1977	Internal fuses and internal overpressure disconnectors for capacitors for inductive heat generating plants
5	IS 13340 : 1993 IEC 60831-1 Reviewed In : 2018 IEC Pub 831-1 (1988)	Power capacitors of self-Healing type for AC power systems having rated voltage up to 650 V - Specification
6	IS 13341 : 1992 IEC 60831-2 Reviewed In : 2008	Requirements for Ageing Test Self-healing Test and Destruction Test on Shunt Capacitors of the Self-healing Type for Ac Power Systems Having a Rated Voltage Upto and Including 650 V
7	IS 13580 : 1992 IEC 60594 Reviewed In : 2018 IEC 60931-1:1996	Internal fuses and internal overpressure disconnectors for power electronic capacitors
8	IS 13648 : 1993 IEC 61071 Reviewed In : 2018 IEC 61071-1 :1991	Power electronics capacitors
9	IS 2834 : 1986	Shunt capacitors for power systems
10	IS 9251 : 1979 iec 60110 Reviewed In : 2021 IS 9295 - 1979	Specification for capacitors for inductive heat generating plants operating at frequencies between 40 and 24 000 HZ
11	IS 9348 : 1998 IEC 358 Reviewed In : 2018 IEC 60358:1990	Coupling capacitors and capacitor dividers First Revision
12	IS 9835 : 1981 Reviewed In : 2017 iec 143:1972	Specification for series capacitors for power systems

13	IS 9835 (Part 1) : 2001 IEC 60143-1 Reviewed In : 2021 IEC 60143-1:1992	Series Capacitors for Power Systems - Part 1 General Performance Testing and Rating - Safety Requirements - Guide for Installation
14	IS 9835 (Part 3) : 2012 IEC 60143 Part 3 Reviewed In : 2017 IEC 60143-3 : 1998	Series capacitors for power systems Part 3 internal fuses

Annexure-II :List of Indian Product Standards

SI. No.	IS No. & Year	Title
1	IS 11548 : 1986 Reviewed In : 2021	Specification for capacitors for surge protection for use in voltage system above 650 V and up to 33 KV
2	IS 13340 (Part 1) : 2024 IEC 60831-1: 2014	Shunt Power Capacitors of the Self-Healing Type for a c Systems Having a Rated Voltage up to and Including 1 000 V Part 1 General - Performance Testing and Rating - Safety Requirements - Guide for Installation and Operation Second Revision
3	IS 13585 (Part 3) : 2013 IEC 60931-3: 1996 Reviewed In : 2023 IEC 60931-3:1996	Shunt power capacitors of the non - Self - Healing type for a c systems having a rated voltage up to and including 1 000 V Part 3 internal fuses
4	IS 13666 : 1993 Reviewed In : 2018	Energy storage capacitors - Specification
5	IS 13925 (Part 4) : 2013 IEC 60871-4: 1996 Reviewed In : 2018 IEC 60871-4:1996	Shunt capacitors for a c power systems having a rated voltage above 1000 V Part 4 internal fuses
6	IS 16636 : 2017	Automatic power factor correction APFC panels for voltage rating up to and including 1000 V
7	IS 1709 : 1984 iec 252 Reviewed In : 2021 IEC 252:1975	Specification for capacitors or electric fan motors First Revision
8	IS 2993 (Part 2) : 2024 IEC 60252-2:2010	a c Motor Capacitors Part 2 Motor Start Capacitors Third Revision
9	IS/IEC 60110-1 : 1998 IEC 60110-1 : 1998 Reviewed In : 2021	Power Capacitors for Induction Heating Installations Part 1 General First Revision
10	IS/IEC 60143-1 : 2015 IEC 60143-1:2015 ISO 14627 : 2012	SERIES CAPACITORS FOR POWER SYSTEMS PART 1 GENERAL Second Revision
11	IS/IEC 60143-2 : 2012 IEC 60143-2:2012+AMD1:2021	Series Capacitors for Power Systems Part 2 Protective Equipment for Series Capacitor Banks
12	IS/IEC 60143-4 : 2010 IEC 60143-4:2010	SERIES CAPACITORS FOR POWER SYSTEMS PART 4 THYRISTOR CONTROLLED SERIES CAPACITORS
13	IS/IEC 61071 : 2017 IEC 61071:2017 ISO 14705 : 2016	CAPACITORS FOR POWER ELECTRONICS First Revision
14	IS/IEC 62146-1 : 2013 IEC 62146-1: 2013 + AMD 1: 2016	Grading capacitors for high-voltage alternating current circuit-breakers Part 1 General
15	IS/IEC 62146-2 : 2023 IEC 62146-2:2023	Capacitors for High Voltage Alternating Current Circuit Breakers Part 2 TRV capacitors

16	IS 9835 (Part 2) : 2021 IEC 60143-2:2012 ISO 31073: 2022	SERIES CAPACITORS FOR POWER SYSTEMS PART 2 PROTECTIVE EQUIPMENT FOR SERIES CAPACITOR BANKS
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