

BUREAU OF INDIAN STANDARDS

Program of Work

ETD 20 : Electrical Installation

Scope: To prepare standards for safety and related matters in designing, erection and maintenance of electrical installations from the point of view of safety and good practice that would, amongst other things, promote compatibility between such standards and those concerning the equipment installed. The work includes electrical installations in buildings for different occupancies and outdoor sites of temporary or permanent nature and also installations in the ships.

Liaison: **IEC TC-18 (O):** *Electrical installations of ships and of mobile and fixed offshore units* **IEC TC-18 SC-18A (O):** *Electric cables for ships and mobile and fixed offshore units* **IEC TC-64 (P):** *Electrical installations and protection against electric shock* **IEC TC-73 (O):** *Short-circuit currents* **IEC TC-81 (P):** *Lightning protection* **IEC TC-81 (P):** *Application Guide of IEC 62305-3, Ed.3* **IEC TC-64 (P):** *Residential electrical installation in direct current not intended to be connected to Public Distribution Network*

Published Standards

S.No	IS No.	TITLE	Reaffirm M-Y	No. of Amds	Eqv.
1	IS 10118 (Part 1) : 2018 <i>Reviewed In : 2024</i>	Black page	September, 2024	-	Indigenous
2	IS 10118 (Part 2) : 1982 <i>Reviewed In : 2016</i>	Code of practice for the selection, installation and maintenance of switchgear and controlgear: Part 2 selection	March, 2016	-	Indigenous
3	IS 10118 (Part 3) : 1982 <i>Reviewed In : 2021</i>	Code of practice for selection, installation and maintenance of switchgear and controlgear: Part 3 installation	March, 2021	-	Indigenous
4	IS 10118 (Part 4) : 1982 <i>Reviewed In : 2016</i> BS 5405 : 1976, Doc : BS 79/28033	Code of practice for selection, installation and maintenance of switchgear and controlgear: Part 4 maintenance	March, 2016	-	Modified/Technically Equivalent
5	IS 10242 (Part 1/Section 1) : 2023 IEC 60092-101:2018 <i>IEC 60092-101:2018</i>	ELECTRICAL INSTALLATIONS IN SHIPS - SPECIFICATION PART 1 GENERAL Section 1 Definitions and General Requirements Second Revision		-	Identical under dual numbering
6	IS 10242 (Part 2/Section 1) : 2023 IEC 60092-201:2019 <i>IEC 60092-201:2019</i>	Electrical Installation in Ships $\geq 1/2$ Specification PART 2 System Design SECTION 1 General (First Revision)		-	Identical under dual numbering

7	IS 10242 (Part 2/Sec 2) : 2023 IEC 60092-202:2016 IEC 60092-202:2016	Electrical Installation in Ships $i_c^{1/2}$ Specification Part 2 System Design Section 2 Protection (First Revision)	-	Identical under dual numbering
8	IS 10242 (Part 3/Sec 1) : 2023 IEC 60092-301:1980 IEC 60092-301:1980	Electrical Installation in Ships $i_c^{1/2}$ Specification Part 3 Equipment Section 1 Generators and Motors (First Revision)	-	Identical under dual numbering
9	IS 10242 (Part 3/Sec 2) : 2023 IEC 60092-302-2:2019 IEC 60092-302-2:2019	Electrical Installation in Ships $i_c^{1/2}$ Specification Part 3 Equipment Section 2 Low Voltage Switchgear and Controlgear Assemblies - Marine Power (First Revision)	-	Identical under dual numbering
10	IS 10242 (Part 3/Sec 3) : 2023 IEC 60092-303:2023 IEC 60092-303:2023	Electrical Installation in Ships $i_c^{1/2}$ Specification Part 3 Equipment Section 3 Transformers for Power and Lighting (First Revision)	-	Identical under dual numbering
11	IS 10242 (Part 3/Sec 4) : 2023 IEC 60092-304:2022 IEC 60092-304:2022	Electrical Installation in Ships $i_c^{1/2}$ Specification Part 3 Equipment Section 4 Semiconductor Convertors (First Revision)	-	Identical under dual numbering
12	IS 10242 (Part 3/Sec 5) : 2023 IEC 60092-305:1980 IEC 60092-305:1980	ELECTRICAL INSTALLATION IN SHIPS PART 3 EQUIPMENT Section 5 Accumulator Storage Batteries - Specifications First Revision	-	Identical under dual numbering
13	IS 10242 (Part 3/Sec 6) : 2023 IEC 60092-306:2022 RLV IEC 60092-306:2022 RLV	Electrical Installation in Ships $i_c^{1/2}$ Specification Part 3 Equipment Section 6 Luminaires and Accessories (First Revision	-	Identical under dual numbering
14	IS 10242 (Part 3/Sec 7) : 2023 IEC 60092-307:1980 IEC 60092-307:1980	ELECTRICAL INSTALLATIONS IN SHIPS - SPECIFICATION PART 3 EQUIPMENT Section 7 Heating and Cooking Appliances First Revision	-	Identical under dual numbering
15	IS 10242 (Part 3/Sec 10) : 2023 IEC 60092-350:2020 IEC 60092-350:2020	ELECTRICAL INSTALLATION IN SHIPS PART 3 EQUIPMENT Section 10 General construction and test methods of power, control and instrumentation cables for shipboard and offshore applications First Revision	-	Identical under dual numbering
16	IS 10242 (Part 3/Sec 12) : 2023 IEC 60092-352:2005 IEC 60092-352:2005	Electrical Installation in Ships- Specification Part 3 Equipment Sec 12 Choice and installation of electrical cables (First Revision)	-	Identical under dual numbering
17	IS 10242 (Part 3/Sec 13) : 2023 IEC 60092-353:2016 RLV	Electrical installations in ships Part 353: Power cables for rated voltages 1 kV and 3 kV	-	Identical under dual numbering

	IEC 60092-353:2016 RLV				
18	IS 10242 (Part 3/Sec 26) : 2023 IEC 60092-376-2017 RLV IEC 60092-376-2017 RLV	ELECTRICAL INSTALLATION IN SHIPS Part 3 Equipment Section 26 Cables for control and instrumentation circuits 150-250 V (300 V)		-	Identical under dual numbering
19	IS 10242 (Part 4) : 2023 IEC 60092-401:1980 IEC 60092-401:1980	ELECTRICAL INSTALLATION IN SHIPS PART 4 INSTALLATION AND TEST OF COMPLETED INSTALLATION - First Revision		-	Identical under dual numbering
20	IS 10242 (Part 5/Sec 1) : 2023 IEC 60092-501:2013 IEC 60092-501:2013	ELECTRICAL INSTALLATIONS IN SHIPS SPECIFICATION PART 5 SPECIAL FEATURES Section 1 Electric propulsion plant		-	Identical under dual numbering
21	IS 10242 (Part 5/Sec 2) : 2023 IEC 60092-502-1999 IEC 60092-502-1999	ELECTRICAL INSTALLATIONS IN SHIPS SPECIFICATION PART 5 SPECIAL FEATURES Section 2 Tankers		-	Identical under dual numbering
22	IS 10242 (Part 5/Sec 3) : 2023 IEC 60092-503-2021 IEC 60092-503-2021	ELECTRICAL INSTALLATIONS IN SHIPS SPECIFICATION PART 5 SPECIAL FEATURES Section 3 AC supply systems with voltages in the range of above 1 kV upto and including 36 kV First Revision		-	Identical under dual numbering
23	IS 10242 (Part 5/Sec 4) : 2023 IEC 60092-504-2016 RLV IEC 60092-504-2016 RLV	Electrical Installation in Ships i _c 1/2 Specification Part 5 Special Features Section 4 Automation, Control and Instrumentation (First Revision)		-	Identical under dual numbering
24	IS 10242 (Part 360) : 2023 IEC 60092-360:2021 IEC 60092-360:2021	Electrical Installation in Ships Part 360 INSULATING AND SHEATHING MATERIALS FOR SHIPBOARD AND OFFSHORE UNITS POWER CONTROL INSTRUMENTATION AND TELECOMMUNICATION CABLES		-	Identical under dual numbering
25	IS 10242 (Part 370) : 2023 IEC/TR 60092-370:2016 IEC/TR 60092-370:2016	ELECTRICAL INSTALLATIONS IN SHIPS PART 370: GUIDANCE ON THE SELECTION OF CABLES FOR TELECOMMUNICATION AND DATA TRANSFER INCLUDING RADIO-FREQUENCY CABLES		-	Identical under dual numbering
26	IS 13234 : 2017	Short - Circuit currents in three -		-	Identical under dual

	IEC 60909-0 : 2016 IEC 60909-0:2001	Phase A.C. systems: Part 0 calculation of currents (First Revision)			numbering
27	IS 13234 (Part 1) : 2017 IEC 60909-1 : 2002 IEC 60909-1:2002	Short - Circuit currents in three - Phase A.C. systems: Part 1 factors for the calculation of short - Circuit currents according to is 13234 (Part 0)		-	Identical under dual numbering
28	IS 13234 (Part 2) : 2017 IEC 60909-2 : 2008 IEC 60909-2:2008	Short - Circuit currents in three - Phase A.C. systems: Part 2 data of electrical equipment for short - Circuit current calculations		-	Identical under dual numbering
29	IS 13234 (Part 3) : 2017 IEC 60909-3 : 2009 IEC 60909-3:2009	Short - Circuit currents in three - Phase A.C. systems: Part 3 current during two separate simultaneous line - To - Earth short circuits and partial short - Circuit currents flowing through earth		-	Identical under dual numbering
30	IS 13234 (Part 4) : 2017 IEC/TR 60909-4 : 2000 IEC 60909-4:2000	Short - Circuit currents in three - Phase A.C. systems: Part 4 examples for the calculation of short - Circuit currents		-	Identical under dual numbering
31	IS 13235 : 1991 IEC 865 Reviewed In : 2017 iEC Pub 885 (1988)	Calculation of the effects of short - Circuit currents		-	Identical under dual numbering
32	IS 13235 (Part 1) : 2019 IEC 60865-1 : 2001 IEC 60865-1 : 2001	Short-Circuit Currents "â€” Calculation of Effects Part 1 Definitions and Calculation Methods (First Revision)		-	Identical under dual numbering
33	IS 13235 (Part 2) : 2019 IEC 60865-2 : 2015 IEC 60865-2 : 2015	Short-Circuit Currents "â€” Calculation of Effects Part 2 Examples of Calculation (First Revision)		-	Identical under dual numbering
34	IS 14479 : 1998 iEC 60533 Reviewed In : 2017 Reaffirmed but not taken up for revision IEC Rub 533 (1977)	Electrotechnical compatibility of electrical and electronic installations in ships - Specification		-	Modified/Technically Equivalent
35	IS 16996 : 2018 IEC 60364-8-1 : 2014 IEC 60364-8-1 : 2014	Low-Voltage Electrical Installations "â€” Energy Efficiency		-	Identical under dual numbering
36	IS 16997 : 2018 IEC 60364-7-712 IEC 60364-7-712	Requirements for Low-Voltage Special Electrical Installations or Locations Solar Photovoltaic (PV) Power Supply Systems		-	Identical under dual numbering
37	IS 17512 : 2021 IEC 60364-7-710 : 20	Requirements for Electrical Installations in Medical Locations		-	Modified/Technically Equivalent
38	IS 18732 : 2023	GUIDE FOR IMPLEMENTATION OF ELECTRICAL INSTALLATION STANDARDS IN BUILDING		-	Indigenous
39	IS 2551 : 1982	Danger notice plates (First	March, 2020	-	Indigenous

	Reviewed In : 2020	Revision)			
40	SP 30 : 2023	NATIONAL ELECTRICAL CODE OF INDIA 2023 (Second Revision)		-	Indigenous
41	IS 3043 : 2018 IEC Pub 60364 (all Parts) E	Code of practice for earthing (Second Revision)	-	-	Modified/Technically Equivalent
42	SP 31 : 1986 Reviewed In : 2021	Treatment for electric shock	March, 2021	-	Indigenous
43	IS 4648 : 1968 Reviewed In : 2017	Guide for electrical layout in residential buildings		1	Indigenous
44	IS 5216 (Part 1) : 1982 Reviewed In : 2020	Recommendations on safety procedures and practices in electrical work: Part 1 general (First Revision)	March, 2020	-	Indigenous
45	IS 5216 (Part 2) : 1982 Reviewed In : 2020	Recommendation on safety procedures and practices in electrical work: Part 2 life saving techniques	March, 2020	-	Indigenous
46	IS/IEC 60479 : 2018 IEC 60479-1 : 2018 IEC 60479-1 : 2018	Effects of current on human beings and livestock - Part 1: General Aspects		-	Identical under single numbering
47	IS/IEC 60479-2 : 2019 IEC 60479:2019 IEC 60479:2019	Effects of current on human beings and livestock - Part 2: Special Aspects		-	Identical under single numbering
48	IS/IEC 60479-3 : 1998 IEC 60479-3 : 1998 Reviewed In : 2019 IEC 60479-3 : 1998	Effects of current on human beings and livestock: Part 3 effects of currents passing through the body of livestock	March, 2019	-	Identical under single numbering
49	IS/IEC 60479-4 : 2004 IEC/TR 60479-4:2004 Reviewed In : 2019 IEC 60479-4 : 2011	Effects of current on human beings and livestock: Part 4 effects of lightning strokes on human beings and livestock	March, 2019	-	Identical under single numbering
50	IS/IEC 60479-5 : 2007 IEC/TR 60479-5 : 2007 Reviewed In : 2019 IEC 60479 : Part 5 : 2007	Effects of current on human beings and livestock: Part 5 touch voltage threshold values for physiological effects	March, 2019	-	Identical under single numbering
51	IS 62305 (Part 1) : 2010 Reviewed In : 2020 IEC 62305(Part 1):2010	Protection against lightning: Part 1 general principles	March, 2020	-	Identical under single numbering
52	IS/IEC 62305-2 : 2010 Reviewed In : 2019 IEC 62305-2:2010	Protection against lightning: Part 2 risk management	March, 2019	-	Identical under single numbering
53	IS/IEC 62305-3 : 2010 IEC 62305-3 Reviewed In : 2020 IEC 62305-3	Protection against lightning: Part 3 physical damage to structures and life hazard	March, 2020	-	Identical under dual numbering

54	IS/IEC 62305-4 : 2010 Reviewed In : 2020 IEC 62305-4:2010	Protection against lightning: Part 4 electrical and electronic systems within structures	August, 2020	-	Identical under single numbering
55	IS/IEC/TR 62713 : 2013 IEC 62713:2013 IEC 62713:2013	Safety procedures for reduction of risk outside a structure		-	Identical under single numbering
56	IS/IEC 62793 : 2020 IEC 62793:2020 IEC 62793:2020	Thunderstorm warning systems Protection against lightning		-	Identical under single numbering
57	IS/IEC 62858 : 2019 IEC 62858:2019 IEC 62858:2019	Lightning density based on lightning location systems General principles		-	Identical under single numbering
58	IS 732 : 2019 IEC 60335	Code of practice for electrical wiring installations (Fourth Revision)	-	-	Modified/Technically Equivalent
59	IS 7689 : 1989 Reviewed In : 2020 BS 5958 P1 & P2	Guide for control of undesirable static electricity (First Revision)	March, 2020	-	Modified/Technically Equivalent
60	IS 7752 (Part 1) : 1975 Reviewed In : 2021	Guide for improvement of power factor in consumer installations: Part 1 low and medium supply voltages	December, 2021	-	Indigenous
61	IS 8061 : 1976 Reviewed In : 2016 Indian Electricity Act, 1910 and the Indian Electricity Rules, 1956.	Code of practice for design, installation and maintenance of service lines up to and including 650 V	March, 2016	-	Modified/Technically Equivalent
62	IS 8884 : 1978 Reviewed In : 2017	Code of practice for the installation of electric bells and call system		-	Indigenous
63	IS 8923 : 1978 Reviewed In : 2020 IEC Pub : 41 7B (I)731	Warning symbol for dangerous voltages	March, 2020	-	Modified/Technically Equivalent
64	IS 8969 : 1978 Reviewed In : 2021	Code of practice for installation and maintenance of impulse and electronic master and slave electric clock systems	March, 2021	-	Indigenous

Standards under Development

Projects Approved

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

Preliminary Draft Standards

SI. No.	Doc No.	Title
1	ETD 20 (25694) Revision of: IS 5216:1982	RECOMMENDATIONS ON SAFETY PROCEDURES AND PRACTICES IN ELECTRICAL WORK PART 1 GENERAL Second Revision
2	ETD 20 (25696) Revision of: IS 5216:1982	RECOMMENDATIONS ON SAFETY PROCEDURES AND PRACTICES IN ELECTRICAL WORK PART 2 LIFE SAVING TECHNIQUES Second Revision
3	ETD 20 (26516) Revision of: IS 4648:1968	GUIDE FOR ELECTRICAL LAYOUT IN RESIDENTIAL BUILDINGS First Revision
4	ETD 20 (26576) Revision	WARNING SYMBOL FOR DANGEROUS VOLTAGES

	of: IS 8923:1978	
5	ETD 20 (26877) Revision of: IS 3043:2018	Code of Practice for Earthing

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
1	ETD 20 (24754)	CODE OF PRACTICE FOR DESIGN INSTALLATION AND MAINTENANCE OF SERVICE LINES UP TO AND INCLUDING 650 V a c First Revision

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 20 (24498)	Lightning protection system components LPSC - Part 1 Requirements for connection components
2	ETD 20 (24499)	Lightning protection system components LPSC Part 2 Requirements for conductors and earth electrodes
3	ETD 20 (24500)	Lightning protection system components LPSC Part 3 Requirements for isolating spark gaps ISGs
4	ETD 20 (24501)	Lightning protection system components LPSC Part 4 Requirements for conductor fasteners
5	ETD 20 (24502)	Lightning protection system components LPSC Part 5 Requirements for earth electrode inspection housings and earth electrode seals
6	ETD 20 (24503)	Lightning protection system components LPSC Part 6 Requirements for lightning strike counters LSCs
7	ETD 20 (24504)	Lightning Protection System Components LPSC Part 7 Requirements for earthing enhancing compounds
8	ETD 20 (24505)	Lightning protection system components LPSC Part 8 Requirements for components for isolated LPS

Total Published Standards:61 Total Standards Under development:14

Aspect Wise Report

Product : 1
 Code of Practices : 56
 Methods of Test : 2
 Terminology : 0
 Dimensions : 0
 System Standard : 1
 Safety Standard : 2
 Others : 2
 Service Specification : 0
 Process Specification : 0
 Unclassified : 0

Annexure-I :List of Indian Standards Withdrawn/Superseded

SI. No.	IS No. & Year	Title
1	IS 10242 (Part 2/Sec 4) : 1993	Electrical installations in ships - Specification Part 2 system design Sec 4 electric and electrohydraulic steering gear

	IEC 60092-204 Reviewed In : 2019 IEC Publication 92 -	
2	IS 10242 (Part 3/Sec 11) : 1986 IEC 60092-351 Reviewed In : 2017 IEC Publication 92 -	Specification for electrical installations in ships Part 3 equipment Sec 11 insulating materials for shipboard power cables
3	IS 10242 (Part 3/Sec 19) : 1990 EC 60092-359I Reviewed In : 2017 IEC Publication 92 -	Electrical installation in ships Part 3 equipment Sec 19 sheathing materials for telecommunication and power shipboard cables - Specification
4	IS 10242 (Part 3/Sec 23) : 1987 EC 60092-373 Reviewed In : 2017 IEC Publication 92 -	Specification for electrical installation in ships Part 3 equipment Sec 23 shipboard telecommunication cables and radio - Frequency cables shipboard flexible coaxial cables
5	IS 10242 (Part 3/Sec 24) : 1987 IEC 60092-374 Reviewed In : 2017 IEC Publication 92 -	Specification for electrical installation in ships Part 3 equipment Sec 24 shipboard telecommunication cables and radio frequency cables Telephone cables for non - Essential communication services
6	IS 10242 (Part 3/Sec 25) : 1987 EC 60092-375 Reviewed In : 2017 IEC Publication 92 -	Specification for electrical installation in ships Part 3 equipment Sec 25 shipboard telecommunication cables and radio - Frequency cables General instrumentation control and communication cables
7	IS 2274 : 1963	Code of practice for electrical wiring installations system voltage exceeding 650 volts
8	IS 2309 : 1989 Reviewed In : 2010	Code of practice for the protection of buildings and allied structures against lightning
9	IS 5728 : 1970	Guide for short-circuit calculations
10	IS 5908 : 1970	Method of measurement of electrical installations in buildings
11	IS 7733 : 1975	Code of practice for electrical wiring installations in hospitals
12	IS 8437 : 1977	Guide on effects of currents passing through human body
13	IS 8437 (Part 1) : 1992 IEC 479-1 Reviewed In : 2012	Guide on effects of current passing through human body Part 1 General aspects
14	IS 8437 (Part 2) : 1993 IEC 479-2 Reviewed In : 2012	Guide on effects of current passing through human body Part 2 Special aspects

Annexure-II :List of Indian Product Standards

Sl. No.	IS No. & Year	Title
1	IS 2551 : 1982 Reviewed In : 2020	Danger notice plates First Revision