उत्पाद मैनुअल
घरेलू और समान विद्युत उपकरणों की सुरक्षा
भाग 1 सामान्य अपेक्षाएँ
आईएस 302 (Part 1): 2024/ IEC 60335-1: 2020 के अनुसर

PRODUCT MANUAL
HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES - SAFETY
PART 1 GENERAL REQUIREMENTS
according to IS 302 (Part 1): 2024/ IEC 60335-1: 2020

यह उत्पाद नियमावली सभी क्षेत्रीय/शाखा कार्यालयों और लाइसेंसधारियों द्वारा विभिन्न उत्पादों के लिए भारतीय मानक ब्यूरो (अनुरूपता मूल्यांकन) विनियम, 2018 की योजना-I के अंतर्गत प्रमाणन के संचालन में एकरूपता और पारदर्शिता सुनिश्चित करने के लिए संदर्भ सामग्री के रूप में उपयोग की जाएगी। बीआईएस प्रमाणन प्राप्त करने के इच्छुक भावी आवेदक भी इस दस्तावेज़ का उपयोग कर सकते हैं।

This Product Manual shall be used as reference material by all Regional/Branch Offices & licensees to ensure uniformity of practice and transparency in operation of certification under Scheme-I of Bureau of Indian Standards (Conformity Assessment) Regulations,2018 for various products. The document may also be used by prospective applicants desirous of obtaining BIS certification.

1.	**मानक संख्या / IS No.**	:	IS 302 (Part 1) : 2024/ IEC 60335-1 : 2020
	शीर्षक / Title	:	Household and Similar Electrical Appliances – Safety Part 1 General Requirements
	संशोधनों की संख्या **No. of amendments**	:	Nil
2.	**नमूनाकरण दिशानिर्देश / Sampling Guidelines**		
a)	**कच्चा माल** **Raw material**	:	Components as per Cl. 24 of IS 302 (Part 1) : 2024/ IEC 60335-1 : 2020 *Note: This section indicates the requirements for raw material (if specified in the IS) for which compliance is to be established during Grant of Licence/Change in Scope of Licence/Factory Surveillance.*
b)	**समूहीकरण दिशानिर्देश** **Grouping Guidelines**	:	Please refer **ANNEX – A**
c)	**अतिरिक्त दिशानिर्देश** **Additional Guidelines**	:	Please refer **ANNEX – B**
d)	**नमूने का परिमाण** **Sample Quantity**	:	2 numbers Note: Where the samples are bulky and testing can be carried out as per the Indian Standard on a single sample, only one sample may be drawn.

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MANAK BHAVAN, 9, BAHADUR SHAH ZAFAR MARG, NEW DELHI-110002
www.bis.gov.in

e)	**परीक्षण अनुरोध में घोषित किए जाने वाले पैरामीटर | Parameters to be Declared in Test Request**		Parameters given in scope of the licence. *Note: Apart from the above, any other requirements/ parameters may also be declared as per the standard, as applicable.*
3.	**परीक्षण उपकरण की सूची** **List of Test Equipment**	:	Please refer **ANNEX – C**
4.	**निरीक्षण एवं परीक्षण योजना** **Scheme of Inspection and Testing**	:	Please refer **ANNEX – D**
5.	**एक दिन में संभावित परीक्षण** **Possible tests in a day**	:	• Marking (Cl.7) • Earth Continuity Test (A-2 of IS 302(Part 1)) • Electric Strength Test (A-3 of IS 302(Part 1)) • Functional test (A-4 of IS 302(Part 1)) • Protection against access to live parts (Cl. 8) • Power Input and Current (Cl. 10) • Leakage Current and Electric Strength at operating temperature (Cl. 13) • Mechanical Strength (Cl.21) • Provision for Earthing (Cl. 27) • Screws and connections (Cl. 28); • Resistance to heat and fire (Cl. 30); • Stability and Mechanical Hazards (Cl. 20). *Note: This section is for the guidance of BIS Certification Officers/ Technical Auditors of BIS Authorized Outside Surveillance Agencies(OSAs) during factory inspection to provide ready reference regarding the tests which can be witnessed during the inspection in the factory by the officer/ auditor.*
6.	**लाइसेंस का दायरा / Scope of the Licence:**		

Licence is granted to use Standard Mark as per **IS 302 (Part 1): 2024 / IEC 60335-1 : 2020** with the following scope:

Product Type	Safety of **<Product Type>**
Product Name	**<name of the Electrical Appliance>**
Model No./s	
Class of Appliance	I/ II/ III
Rating	_____W,____V or __A,____V
Type of supply	_____Hz,___Phase a.c. / d.c.
Grade	Pollution degree:__, Material group:__
Insulation Class	
Other requirements	Product specific requirements, wherever applicable, i.e. capacity in litres, kg, etc
Applicable Secondary standards	*(Please see S.No.5, ANNEX-B of PM/ IS 302 (Part 1)/IEC 60335-1/ 8 October 2026)*

ANNEX -A
Grouping Guidelines

1. Manufacturers shall declare each model(s) (including model numbers and photographs) of the Electrical Appliances along with parameters indicated in the scope of licence and applicable IS 302 (Part 2) standards, if any, for the product.

2. Each type of Electrical Appliances and each model is required to be tested for verifying compliance to the Indian Standard by the manufacturer.

3. However, wherever, a manufacturer feels that the models can be clubbed together in a series/ group, and the representative model(s) can be tested to ensure compliance of the complete series/ group, the manufacturer may submit the series/ group to the Head of the Branch Office (BO) along with technical justification.

4. Following shall be ensured while making series/ group of models:

Sl. No.	**Criteria**	**Example**
a.	**Product Type**: Electrical Appliances of different product types shall not be grouped together.	For example, Models of kettles, garment steamers, and trimmers shall not be placed in the same series/group.
b.	**Nature of supply**: Electrical Appliances of different nature of supply shall not be grouped together.	For example, Model(s) operating on Single Phase a.c. supply shall not be placed in the same series/ group with model(s) operating on Three Phase a.c. supply/ model(s) operating on d.c. supply/ battery-operated model(s) or vice versa.
c.	**Additional features of the product**	In case the model(s) tested do not have all the features of the product, additional model(s) having all the features shall be tested.
d.	**Aesthetics**	Change in aesthetics, i.e colour, visual design etc. may not be treated as different model.
e.	**Insulation class**	If higher insulation class is tested on a model, then model(s) with lower insulation class in the series/ group may be considered.
f.	**Degree of protection**	If higher degree of protection is tested on a model, then model(s) with lower degree of protection in the series/ group may be considered.

5. Head of the BO shall examine the case and take decision on acceptance of the series/ group. In case the BO faces any issues/ challenge in approval/ finalization of the grouping, the case may be forwarded along with BO's recommendation to CMD-III through DDGR for examination.

6. For considering Grant of Licence/ Change in Scope of the Licence, in the series/ group formed as per above criteria, Models of the highest and the lowest input rating shall be tested.

7. While sampling for Independent Testing as per above criteria, it shall be ensured that atleast one model of each product type selected as per Sl. 4.) c. and/or Sl. 6.) above are also tested for the requirements of EMI/EMC requirements.

8. During the operation of the Licence, BO shall ensure that all the models covered in the scope of the Licence shall be tested in rotation to the extent possible.

ANNEX -B
Additional Guidelines

General

1. IS 302 (Part 1): 2024 deals with the safety of electrical appliances for household and similar purposes, their rated voltage being not more than 250 V for single-phase appliances and 480 V for other appliances including direct current (DC) supplied appliances and battery operated appliances. Appliances not intended for normal household use but which nevertheless may be a source of danger to the public, such as appliances intended to be used by laymen in shops, in light industry and on farms, are within the scope of this standard.

   The standard does not apply to:

   a) appliances intended exclusively for industrial purposes;
   b) appliances intended to be used in locations where special conditions prevail, such as the presence of a corrosive or explosive atmosphere (dust, vapour or gas);
   c) audio, video and similar electronic apparatus (IS 616/ IEC 60065);
   d) medical electrical equipment (IS 13450/ IEC 60601 series);
   e) hand-held motor-operated electric tools (IS 4665/ IEC 60745 series);
   f) information technology equipment (IS 13252/ IEC 60950-1);
   g) transportable motor-operated electric tools (IEC 61029 series);
   h) audio/video, information and communication technology equipment (IS/IEC 62368-1) *for example Electrical and electronic office machines covered under Annex-A of IS/IEC 62368-1:2023*.
   i) electric motor-operated hand-held tools, transportable tools and lawn and garden machinery (IEC 62841 series).

   (Clause 1 of IS 302 (Part 1): 2024)

Usage of Part 2 standard in conjunction with Part 1

2. IS 302 (Part 1): 2024 is to be used in conjunction with the appropriate section of Part 2 of IS 302, wherever available. However, where such appropriate section of Part 2 of IS 302 is not available for an appliance, the relevant provisions of this standard, as applicable to that particular appliance, shall apply. IS 302 (Part 1): 2024 is only to be used in conjunction with those sections of Part 2 of IS 302 that have been established on the basis of this standard.

   (National Annex-A of IS 302 (Part 1): 2024)

Processing of new applications as per IS 302 (Part 1): 2024

3. In case application is submitted as per IS 302 (Part 1): 2024 and relevant product standard is available in IS 302 (Part 2) series; licence will be granted after compliance to IS 302 (Part 1): 2024 and the relevant clause of IS 302 (Part 2) of electrical appliance is established; More than one IS 302 (Part 2) standard may also be applicable for an appliance with multiple functions.
4. In case application is submitted as per IS 302 (Part 1): 2024 and relevant product standard is not available in IS 302 (Part 2) series; licence will be granted based on the requirements specified in IS 302 (Part 1): 2024 and the requirements in relevant IEC Standards referred in IS 302 (Part 1): 2024.

Applicable Secondary Standards

5. In case of Sl.No.3 above, all the IS 302 (Part 2) standards to which conformity is ensured before granting licence as per IS 302 (Part 1): 2024 will be classified as the applicable secondary standards for the product type and endorsed in scope of licence along with year and applicable amendments.

Implementation of new/ revised versions of IS 302 (Part 2) standard

6. Licences

6.1 Where licence is granted as per IS 302 (Part 1): 2024 in line with S.No.3 or 4 above and the corresponding Part 2 standard is published/revised subsequently, the licensee shall submit the in-house/ independent test report for the models covered in the scope of the licence in line with the grouping guidelines.

6.2 The in-house/ independent test report submitted shall demonstrate compliance to those requirements of IS 302 (Part 1): 2024 which have been supplemented or modified by the relevant Part 2 standard.

6.3 The licence shall submit the same within a period of 6 months from the date of publication of the new standard or before the last date of concurrent running, in case of revised standard.

6.4 If the Licensee fails to demonstrate compliance to the new/revised IS 302 (Part 2) standard within time norms, it shall be dealt with as per the prevailing guidelines.

6.5 Upon implementation of the new/revised IS 302 (Part 2) standard, the same shall be endorsed in the licence against the particular Product Type.

7. Applications

7.1 Existing Applications where sample has been submitted in the Laboratory/Test Report has been issued by the Laboratory may be processed without considering the new/ revised IS 302 (Part 2) standard. However, if the Applicant is desirous of considering the application as per new/ revised IS 302 (Part 2) standard, a declaration may be obtained from the Applicant to that effect and the Application may be processed accordingly.

7.2 Processing of Applications without considering the new/ revised IS 302 (Part 2) standard shall be permitted only up to a period of 6 months from the date of publication of the new standard or up to the last date of concurrent running of the revised standard. A declaration may be obtained from the Applicant that they will implement the new/ revised IS 302 (Part 2) standard within the last date.

Implementation of upcoming Quality Control Order (QCO)

8. As per the Safety of Household, Commercial and Similar Electrical Appliances (Quality Control) Order, 2026, the QCO shall not apply to electrical appliances which fall under the scope of any other Quality Control Order issued by the said Act or notified for mandatory Bureau of Indian Standard certification under any other Act.

9. If a product which falls under the purview of this QCO and for which the manufacturer is holding a valid BIS licence, is brought under mandatory certification for its particular safety or performance requirements through a separate Quality Control Order, the licensee can opt to changeover their existing licence to licence as per the standard given in the QCO or opt to get a separate licence as per the standard given in the QCO:

10. In both the cases, licence as per the relevant standard given in the QCO may be granted for same scope as of existing licence, after ensuring conformity to the additional requirements given in the particular safety or performance standard given in the QCO.

Guidelines for drawl of verification samples

11. In case a manufacturer applies for multiple product types in one application under simplified procedure, then the manufacturer shall be required to offer samples of each product types during the verification visit. However, sample of only one of the product type, selected randomly by the BO, shall be drawn as Verification Sample.

ANNEX- C

List of Test Equipments

(Indicative List, For Guidance Only)

Sl. No.	Test Equipment	Test used in with clause reference
1	Petroleum spirit (n-Hexane), Cloth, Stopwatch	Cl. 7 (Marking and instruction)
2	Test probe-B, Test Probe-13, Test Probe 18, Test probe-41, Push-Pull Gauge, Voltmeter, Finger Test Apparatus	Cl. 8 (Protection against access to live parts)
3	Voltmeter, Ammeter, Wattmeter, Variable voltage input supply	Cl. 10 (Power Input and current)
4	Digital temp data logger, Steel scale, Voltmeter, Wooden test corner, Fine wire thermocouple (wires with a diameter not exceeding 0.3 mm),Stopwatch, Wattmeter	Cl. 11 (Heating)
5	IR Meter, Micro/Milli ammeter, HV Tester, Metal foil, Stopwatch	Cl. 13 (Leakage Current and Electric Strength)
6	Humidity Chamber (Temperature Indicator, Temperature Controller, Thermo hygrometer, Hour Meter), Test set up for ingress protection	Cl. 15 (Moisture resistance test)
7	Micro/Milli ammeter, HV Tester, Metal foil, Stopwatch	Cl. 16 (Leakage Current and Electric Strength)
8	Variable Power Supply or Transformer Test Setup, Short-Circuit Simulation Setup, Multi-channel temperature data logger, Digital thermometer, Adjustable load bank, Insulation Monitoring Tools, Timer	Cl. 17 (Overload Protection of Transformers and associated circuits)
9	Wattmeter, Variable voltage supply, Digital temp data logger, HV tester, Metal Foil, Fine wire thermocouple, Stopwatch, Surge test generator	Cl. 19 (Abnormal Operation)
10	Inclined plane, Angle Finder, Push-pull gauge, Test probe similar to test probe B(as per Cl. 20.2), Steel scale, Spring Impact Hammer, Vernier caliper, scratch tester, test fingernail(as per Cl.21.2) , Door Endurance test apparatus, Impact tester, Compression resist tester	Cl. 20 (Stability and mechanical Hazards), Cl. 21 (Mechanical Strength)
11	Test probe B, Test probe 13, Test probe 18, Test probe 41, Torque meter, Push-pull Gauge, Hot Air Oven, syringe, colored water, Stopwatch, Voltmeter, Multimeter, Vernier Caliper, Iron bars, electrodes, hydrogenated oil, gravy, salt-free butter, fuchsine, methylated spirit, Door Endurance test apparatus	Cl. 22 (Construction)
12	Flexing Test Apparatus, HV tester, Metal Foil, Stop watch	Cl. 23 (Internal Wiring)
13	LCR meter, Endurance test apparatus	Cl. 24 (Components)
14	Cord Grip Test Apparatus, Measuring Tape, Micro ohmmeter, HV tester, Metal foil, Cord flexing test apparatus, Push pull gauge	Cl. 25 (Supply connections and External Flexible Cables and Cords)
15	Torque Screwdriver	Cl. 26 (Terminal for external Conductors)
16	Earth Contact Resistance Testing Panel (ECR Measurement), Voltmeter, Ammeter	Cl. 27 (Provision for Earthing)
17	Torque Wrench	Cl. 28 (Screw and connections)
18	Feeler Gauge, Vernier Caliper, Micrometer	Cl. 29 (Creepage distances and Clearances)
19	Glow Wire Test Apparatus, Oven, Ball Pressure Apparatus, Heating Oven with temperature controller	Cl. 30 (Resistance to Heat and Fire)
20	Humidity Chamber with temperature and humidity controller, Measuring cylinder, Ammonium chloride, Carbon Tetrachloride, Distilled Water	Cl. 31 (Resistance to Rusting)
21	Impulse voltage test generator and monitor	Cl. 14 (Transient voltages)
22	Air conditioner, Temperature Indicator	To maintain ambient temperature

The above list is indicative only and may not be treated as exhaustive.

ANNEX D
Scheme of Inspection and Testing

1. QUALITY ASSURANCE PLAN

1.1 It is expected that during operation of BIS licence manufacturers will implement a Quality Assurance Plan (QAP) i.e. a plan of regular testing and in-process controls, designed to ensure that the product bearing the Standard Mark conforms to all requirements of the Indian Standard.

1.2 The manufacturers shall define a Quality Assurance Plan (QAP) defining the control unit (i.e. lot/batch etc.), the levels of control (i.e. the frequency and number of samples for conducting the different tests as per the Indian Standard) and declare the arrangement for testing i.e. whether in-house or sub-contracting/ sharing for each applicable test and submit the same to BIS Branch Office for information. The manufacturer shall comply with the QAP and maintain test records in accordance with para 2.1.

1.3 Recommended Levels of Control/ Control Unit:

1.3.1 For the guidance of manufacturers, the recommended definition of control unit is: *All Electrical Appliances of each product type and each model number manufactured in a day,* shall constitute a control unit.

1.3.2 For the guidance of manufacturers in preparing the Quality Assurance Plan, recommended levels of control are given in Table 1. Manufacturer has the discretion of declaring their own levels of control or accept the levels of control given in this document.

1.3.3 The manufacturer shall ensure inspection and testing as per the Quality Assurance Plan submitted by them on the whole production of the factory which is covered by this plan.

1.4 However, all manufacturers shall ensure compliance of their products to all the requirements of the Indian Standard.

2. ENSURING COMPLIANCE THROUGH TESTING

The manufacturers shall ensure compliance of their products to all the requirements of the Indian Standard for which they may have in-house test facilities. However, there is no obligation to maintain in-house laboratory. Licensee may use alternative arrangements for tests of the production as per the declared QAP. Various alternatives are available for operation of BIS certification as given below and the relevant guidelines for availing such relaxations by the manufacturers, as amended from time to time, are to be referred:

i) Shared testing resources like common facility,

ii) Cluster based testing facility,

iii) Sub-contracting to outside laboratories which may either be:

a) BIS recognised/ empanelled laboratories, or

b) Any accredited laboratory as per ISO/IEC 17025

2.1 Test Records- The manufacturers shall maintain test records for the tests carried out (either in-house or at a sub-contracted or at shared test facility) to establish conformity of the product to the Standard for operation of licence. For the tests being subcontracted or conducted at a shared test facility, test results issued by the laboratories or test facilities, shall be made available for inspection by BIS.

3. PACKING AND MARKING

The Standard Mark as given in the Schedule of the licence shall be incorporated legibly and indelibly on **each electrical appliance and also on its packaging,** wherever applicable, provided always that the product so marked conforms to each requirement of the specification.

3.1 Marking on each electrical appliance shall be done as per Cl. 7 of IS 302 (Part 1): 2024/ IEC 60335-1: 2020.

3.2 **Additional Marking requirements**: Additionally, the following shall also be marked on product or package or both:

a) "For BIS certification details please visit www.bis.gov.in";
b) Instruction shall be provided with each **Electrical Appliance** as per requirement prescribed at Cl. 7.12 of the **IS 302 (Part 1): 2024/ IEC 60335-1: 2020;**
c) Product specific marking as prescribed in relevant section of IS 302 (Part 2) series, wherever available, shall also be marked on the product and/ or packaging (wherever applicable).

4. REJECTION

The production which conforms to the Indian Standard and covered under the scope of this licence shall be marked with the Standard Mark. Disposal of non-conforming product shall be done in such a way so as to ensure that there is no violation of provisions of BIS Act, 2016.

TABLE-1

(Recommended Levels of Control by BIS- for Guidance Only)

(1)				(2)		
Test Details				**Levels of Control**		
Cl.	**Requirement**	**Test Methods**		**No. of Sample**	**Frequency**	**Remarks**
		Clause	**Ref**			
24	Components	24	IS 302 (Part 1)/ IEC 60335-1	Each consignment	No further testing required, if supplied with test certificate or BIS Standard Mark.	
7	Marking and Instructions	*7*		Firm should exercise adequate control so that whole production should meet the requirements. Records shall be maintained.		
5.1	Earth continuity test	A-2		Each electrical appliance		
5.1	Electric strength test	A-3				
5.1	Functional test	A-4				
27	Provision for earthing	27		One	Each Control Unit	
8	Protection Against Access to live parts	8		One	Each model of Electrical Appliance manufactured in the period of six months	
10	Power Input and Current	10				
11	Heating	11				
12	Charging of metal-ion batteries	12				
13	Leakage current and Electric strength at operating temperature	13				
14	Transient Overvoltage	14				
15	Moisture Resistance	15				
16	Leakage current and Electric strength	16				
17	Overload protection of transformers and associated circuits	17				
19	Abnormal operation	19				
20	Stability and Mechanical hazards	20				
21	Mechanical strength	21				
22	Construction	22				
23	Internal wiring	23				
25	Supply connection and external flexible cords	25				
26	Terminals for external conductors	26				
28	Screws and connections	28				
29	Clearances, creepage distances and solid insulation	29				
30	Resistance to heat and fire	30				
31	Resistance to rusting	31				
32	Radiation, Toxicity and Similar Hazards	32				