



PRODUCT MANUAL FOR ELECTRONIC TYPE FAN REGULATORS ACCORDING TO IS 11037:2019

This Product Manual shall be used as reference material by all Regional/Branch Offices & licensees to ensure coherence 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 license/certificate.

1.	Product	:	IS 11037:2019
	Title	:	Electronic Type Fan Regulators
	No. of Amendments	:	—
2.	Sampling Guidelines:		
a)	Raw material	:	N.A
b)	Grouping guidelines	:	Please refer ANNEX – A
c)	Sample Size	:	10 nos.
3.	List of Test Equipment	:	Please refer ANNEX – B
4.	Scheme of Inspection and Testing	:	Please refer ANNEX – C
5.	Possible tests in a day :	:	Please refer ANNEX-D
6.	Scope of the Licence : Licence is granted to use Standard Mark as per IS 11037:2019 with the following scope:		
	Electronic Step Type Fan Regulators for use with single phase ac fans,V, upto and includingW, Hz.		

ANNEX A

Grouping Guidelines

1. IS 11037:2019 deals with safety and performance requirements of Electronic Step type fan regulators for use with single phase ac fans up to 250V.
2. For considering GoL/CSoL, Regulators preferably of the highest wattage may be drawn for testing.
3. In case Regulator for any rated voltage is tested, Regulators of other lower rated voltages may also be covered.
4. The Firm shall declare the varieties of Electronic type fan regulators intended to be covered in the Licence. The Scope of Licence may be restricted based on the Manufacturing and Testing capabilities of the Manufacturer.
5. During the operation of the Licence, BO shall ensure that all the Varieties covered in the Licence are tested in rotation to the extent possible.

ANNEX B**List Of Test Equipment***Major test equipment required to test as per the Indian Standard*

Sl. No.	Test Equipment	Tests used in with Clause Reference
1.	Leakage Current Tester	Cl. 9.5.2
2.	High Voltage Tester with kV meter and mA meter	Cl. 9.5.3
3.	Insulation Resistance Tester with Voltmeter and Ohm meter	Cl. 9.5.4
4.	Voltmeter, Ammeter, Ohm meter	Cl. 9.5.5
5.	Finger Test Apparatus, Voltmeter, Standard Test Finger	Cl. 9.5.6
6.	Digital Multimeter	Cl. 7.7
7.	Voltmeter, Tachometer	Cl. 8
8.	Humidity Chamber with temperature indicator and humidity indicator	Cl. 9.5.7
9.	Current Source, Voltmeter, Ammeter, Wattmeter, Fan	Cl. 9.5.1
10.	Impact Test Apparatus	Cl. 9.5.8
11.	Vernier Calipers	Cl. 9.5.9
12.	Endurance Test Panel, Fan/Equivalent impedance load	Cl. 9.5.10
13.	Cold Test Chamber, Dry Heat Test Chamber along with humidity controls, Vibration generator & apparatus to measure sweep frequency range, displacement amplitude and no. of sweep cycles	Cl. 9.5.11
14.	Glow Wire Test Apparatus	Cl. 9.5.12

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

ANNEX C

Scheme Of Inspection And Testing

1. LABORATORY - A laboratory shall be maintained which shall be suitably equipped (as per the requirement given in column 2 of Table 1) and staffed, where different tests given in the specification shall be carried out in accordance with the methods given in the specification.

1.1 The manufacturer shall prepare a calibration plan for the test equipment.

2. TEST RECORDS – The manufacturer shall maintain test records for the tests carried out to establish conformity.

3. LABELLING AND MARKING – As per the requirements of IS 11037:2019.

4. CONTROL UNIT – All Electronic type fan regulators of same type and rating manufactured in a day shall constitute a control unit.

5. LEVELS OF CONTROL - The tests as indicated in column 1 of [Table 1](#) and the levels of control in column 3 of [Table 1](#), shall be carried out on the whole production of the factory which is covered by this plan and appropriate records maintained in accordance with paragraph 2 above.

6. REJECTIONS – 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

(1)				(2)	(3)		
Test Details				Test equipment requirement R: required (or) S: Sub-contracting permitted	Levels of Control		
Cl.	Requirement	Test Methods			No. of Sample	Frequency	Remarks
		Clause	Reference				
6.1 to 6.3, 6.5 to 6.6	Design and General Construction	6.1 to 6.3, 6.5 to 6.6	IS 11037	R	Every Regulator	-	
9.3.3	Flash Test	9.5.3.4	IS 11037	R			
9.3.3	Insulation Resistance (Routine test)	9.5.4.2	IS 11037	R			
9.3.3	Earthing Connection	9.5.5	IS 11037	R			
9.3.1, 7.2	Leakage Current	9.5.2	IS 11037	R	Three	Each Control Unit	*
9.3.1	High Voltage Test	9.5.3	IS 11037	R			
9.3.1	Protection against Electric Shock	9.5.6	IS 11037	R			
8	Performance	8	IS 11037	R			
9.3.1	Checking of dimensions	9.5.14	IS 11037	S	Three	Once in three months for each type and rating	**
9.3.1	Electrical Endurance Test	9.5.10	IS 11037	S			
9.3.1, 6.4	Moisture Resistance	9.5.7	IS 11037	S			
9.3.1,7.1	Insulation Resistance (Type test)	9.5.4.1	IS 11037	S			
7.6	Radio and Television Interference Suppression	7.6	IS 11037	S			
7.7	Voltage Drop	7.7	IS 11037	S			
9.3.1, 7.3	Temperature Rise	9.5.1	IS 11037	S			
9.3.1, 7.4	Mechanical Strength	9.5.8, 7.4	IS 11037	S			
9.3.1, 7.5	Creepage Distances & Clearances	9.5.9	IS 11037	S			
9.3.1	Resistance to Rusting	9.5.13	IS 11037	S			
9.3.1	Environmental Tests	9.5.11	IS 11037	S			
9.3.1	Resistance to abnormal heat and to fire	9.5.12	IS 11037	S	Three	Once in a year for each type and rating	**

* In case a regulator fails in any of the tests, all the regulators in the control unit shall be tested and those failing shall be rejected.

** In case a sample fails in any of the requirements, marking of that type and rating shall be stopped. The marking and frequency of the testing shall be resumed after taking corrective actions and ensuring conformity.

Note-1: Sub-contracting is permitted to a laboratory recognized by the Bureau or Government laboratories empaneled by the Bureau.

Note-2: Levels of control given in column 3 are only recommendatory in nature. The manufacturer may define the control unit/batch/lot and submit his own levels of control in column 3 with proper justification for approval by BO Head.

ANNEX D

Possible Tests in a day

1. Flash Test
2. Insulation Resistance (Routine Test)
3. Flash Test
4. Earthing Connection
5. Checking of Dimensions
6. Voltage Drop
7. Leakage Current
8. Protection against electric shock
9. Creepage distances and clearances
10. Mechanical Strength