

IS 11037 : 2019 Electronic Type Fan Regulators - Specification (First Revision)

IS 11037:2019 standard specifies the requirements for **electronic fan regulators**, which are **capacitor-based, step-type devices** designed to control the speed of **single-phase AC fans** up to 250V. These **fan speed regulators** are commonly sought by consumers for their ability to offer **precise speed control, energy efficiency, and safe operation** in household and commercial environments.

Consumers expect **high-quality electronic fan regulators** that ensure **consistent speed control, safety, and long-lasting performance**. The IS 11037 standard addresses these needs by setting strict requirements for **design, construction, and performance** to enhance product reliability and user safety.

The standard includes the following quality and safety measures:

1. **Design and Construction:** Specifies requirements for ventilated and enclosed fan regulators, ensuring **electrical safety** and efficient performance.
2. **Performance Requirements:** Ensures that regulators can reduce fan speed by at least 50% and start the fan from rest at minimum speed, addressing consumer expectations for **energy efficiency** and smooth operation.
3. **Marking:** Requires clear markings (manufacturer details, voltage, frequency) for easy identification and consumer information.

Key tests in IS 11037 include:

- **Temperature Rise Test:** Prevents overheating, ensuring safe operation over extended use.
- **Leakage Current Test:** Limits leakage current to below 300 μ A, protecting users from electric shock.
- **High Voltage and Insulation Resistance Tests:** Verifies durability under high-voltage stress and ensures strong insulation to prevent faults.
- **Electrical Endurance Test:** Simulates 5,000 operations to test for **durability and long-term reliability**.
- **Creepage Distances and Clearances:** Maintains safe distances between live parts, reducing risks of arcing or short circuits.
- **Glow-Wire Test:** Assesses the fire resistance of materials to enhance safety under high thermal stress.
- **Environmental Tests:** Confirms the regulator's functionality under extreme conditions (cold, heat, vibration), ensuring versatility.

By enforcing these standards, **IS 11037** guarantees that **electronic fan regulators** meet consumer demands for **safety, efficiency, and reliability** in real-world applications.