

Indian Standard
ac STATIC WATTHOUR METERS,
CLASS 1 AND 2 — SPECIFICATION

1 SCOPE

1.1 This standard specifies static watthour meters of accuracy class 1 and 2, for the measurement of alternating-current electrical active energy of frequency in the range 45 Hz to 55 Hz for single-phase and three-phase balanced and unbalanced loads. It applies to their type tests, routine tests and acceptance tests.

1.2 It applies only to static watthour meters consisting of measuring element(s) and register(s) enclosed together in the meter case. It also applies to operation indicator(s) and test output(s). It also applies to multirate tariff meters and meters which measure energy in both directions.

1.3 It does not apply to :

- a) Watthour meters, where the voltage across the connection terminal exceeds 600 V (line to line voltage for meters for polyphase systems);
- b) Portable meters and outdoor meters;
- c) Elements enclosed in the meter case such as impulse device, time-switches, remote control
- d) Data interfaces to the register of the meters.

1.4 For rack-mounted meters, the mechanical properties are not covered in this standard.

2 REFERENCES

The Indian Standards listed in Annex A are necessary adjuncts to this standard.

ANNEXA

(Clause 2)

LIST OF REFERRED INDIAN STANDARDS

| IS No | Title |
|----------------------|-----------------------------------------------------------------------------|
| 1401 : 1970 | Accessibility test probes (<i>first revision</i>) |
| 2071 (Part 1) : 1993 | High voltage testing: Part I General definitions and test requirements |
| 4905 : 1968 | Methods for random sampling |
| 6842 : 1997 | Limits of electromagnetic interference |
| 9000 | Basic environmental testing procedure for electronic and electrical items : |

| | |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (Part 2/Sec1 to 4) | Cold test |
| (Part 3/Sec 1 to 5) | Dry heat test |
| (Part 5/Sec 1&2)1981 | Damp heat (cyclic) test |
| (Part 7/Sec1): 1979 | Impact test (Section 1 to 5 in one volume) |
| (Part 8) : 1981 | Vibration (sinusoidal) test |
| 11000 (Part 2/ Sec 1) : 1984 | Fire hazard testing: Part 2 Test methods, Section 1 Glow-wire test and guidance |
| 11731 (Part 1):1986 | Methods for tests for determination of flammability of solid electrical insulating material when exposed to an igniting source: Part 1 Horizontal specimen method |
| 12032 series | Graphical symbols for diagrams in the field of eletrotechnology |
| 12063 : 1987 | Classification of degrees of protection provided by enclosures of electrical equipment. |
| 12346 : 1988 | Testing equipment for ac electrical energy meters |
| 12360 : 1988 | Voltage bands for electrical installations including preferred voltages and frequency |
| 13010 : 1990 | ac Watt-hour meters, class 0.5, 1 and 2 |