

केन्द्रीय मुहर विभाग-3

संदर्भ : के मू वी- 3/16: 15884

13 जनवरी 2025

विषय : IS 15884: 2024 के अनुपालन हेतु दिशानिर्देश

यह उपरोक्त विषय के संदर्भ में है।

सक्षम अधिकारी द्वारा अनुमोदित दिशानिर्देश अनुपालन हेतु संलग्न है।

सभी क्षेत्रीय / शाखा कार्यालयों से अनुरोध है की दिशानिर्देशों का तत्काल प्रभाव से अनुपालन सुनिश्चित करें।

राहुल विश्वकर्मा
वैज्ञानिक - डी

**प्रमुख (के मू वी-3)
सभी क्षेत्रीय / शाखा कार्यालयों**

CENTRAL MARKS DEPARTMENT – III

Our Ref: CMD III/16: IS 15884

13 Jan 2025

Subject: Guidelines for implementation of revised standard IS 15884: 2024

This has reference to the subject mentioned above.

The Competent Authority has approved the enclosed Guidelines for implementation.

All ROs/BOs are requested to ensure the implementation of the above Guidelines with immediate effect.

Rahul Vishwakarma
Scientist D

CENTRAL MARKS DEPARTMENT – III

Our Ref: CMD III/16: IS 15884

13 January 2025

Subject: Guidelines for implementation of Revision of IS 15884: 2024 - Alternating Current Direct Connected Static Prepayment Meters for Active Energy (Class 1 and Class 2)

1. IS 15884: 2010 - Alternating Current Direct Connected Static Prepayment Meters for Active Energy (Class 1 and Class 2) has been revised to IS 15884: 2024 and the last date of concurrent running of the Standard with and without Revision 04 July 2025.
2. The significant changes brought through this Revision is given below:
 - a) Exclusion of outdoor meters from the scope of the standard (Cl. 1);
 - b) Exclusion of prepayment functionality processed outside the meter from the scope of the standard (Cl. 1);
 - c) Definition of 'Load Control Switch' has been added (Cl. 3.2.16);
 - d) Definition of 'Operation Reserve' has been added (Cl. 3.13.10);
 - e) Standard reference voltages have been aligned with IS 12360: 1988 and accordingly voltage marking requirements have been modified (Cl. 4.2.11.1 (e));
 - f) Standard basic current values for 1-phase modified (Cl. 4.1.2 (a));
 - g) Requirements w.r.t meter case have been modified (Cl. 4.2.2);
 - h) Reference standard for IP protection modified (Cl. 4.2.9);
 - j) Requirements for testing for insulation of insulating encased meter of protection Class II has been added (Cl. 4.2.7);
 - k) Requirements w.r.t 'Retention time of the non-volatile memory' have been modified (Cl. 4.2.10.2);
 - m) Display requirements w.r.t time and date, for prepayment meter operating in monetary units have been modified (Cl.4.2.10.5);
 - n) Requirement for additional high-resolution register for testing purposes added (Cl. 4.2.10.7);
 - p) The pulse transition time (rise time) has been modified (Cl. 4.2.10.8);
 - q) General requirements for token carrier interface modified (Cl.4.2.12);
 - r) Number of minimum operations of token carrier acceptor modified (Cl. 4.2.12.2);
 - s) Number of minimum operations of each individual key of the keypad interface modified (Cl. 4.2.12.3);
 - t) Separate requirement for limit range of operation deleted (Cl. 4.3.2 (a));
 - u) Electrical requirements w.r.t permitting temporary degradation of performance or loss of function during the tests deleted (Cl.4.4);
 - v) Following power consumption requirement in current circuit added - In case of single-phase prepaid meters where both phase and neutral is switched, phase and neutral circuit to be considered as a separate circuit (Cl.4.4.1.1);
 - w) Terminology for Withstand voltage range changed to abnormal voltage range- separate clause of withstand range and abnormal voltage conditions deleted (Cl.4.4.2.1 and Table 7);
 - y) Verification of correct operation of payment meter to be carried out at both extreme values of extended operating range (Cl.4.4.2.3);
 - z) Test for Immunity to Earth/Phase Fault added (Cl.4.4.2.5);

- aa) Requirements added for Time keeping of the meter during voltage dips and short interruptions (Cl.4.4.2.6);
- bb) Tolerance added for short-time overcurrent (Cl. 4.4.3);
- cc) Maximum test duration for influence of self-heating added and break time added for repeating test at 0.5 (lagging) power factor (Cl.4.4.4);
- dd) Values for Ambient temperature and cable length and its acceptable current density modified for testing for Influence of heating modified (Cl.4.4.5);
- ee) Limits of error due to variation of the current modified for $0.2 I_b \leq I \leq I_{Max}$ with power factor changes to 0.5 capacitive (from 0.8 capacitive), percentage error limits added for 0.8 capacitive for value of current $0.2 I_b \leq I \leq I_{max}$ (Cl. 4.6.1);
- ff) Limits of variation due to abnormal a.c. magnetic induction of external origin (10 mT) modified (Cl.4.6.2 and Table 13);
- gg) Value of current modified for testing Limits of variation due to dc and even harmonics in the ac current circuit (4.6.1);
- hh) Temperature range values modified for calculation of mean temperature coefficient (Cl.4.6.3);
- jj) Requirement of time keeping added (Cl.4.7);
- kk) Requirements for load switching capability added (Cl. 4.8);
- mm) Performance requirements for Utilization category UC1, UC2 and UC3 added (Cl. 4.8.2);
- nn) Number of Samples for type tests now dependent upon the interfaces and functionality of the specific payment meter and requirement of equal no. of samples for re-testing in case of failure added (Cl. 5.1.3);
- pp) Acceptance criteria explicitly specified for tests of climatic influences (Cl. 5.3);
- qq) Damp heat cyclic test modified (Cl. 5.3.3);
- rr) Acceptance criteria modified for test of influence of voltage dips and interruptions (Cl. 5.4.2);
- ss) Acceptance criteria for test of influence of heating modified (Cl. 5.4.5);
- tt) Test conditions and acceptance criteria for test of insulation properties modified (Cl. 5.4.6);
- uu) Reference standard for impulse voltage test modified (Cl. 5.4.6.2);
- vv) Reference standard for vibration test and cold test modified (Cl. 5.2.3 and Cl. 5.3.1);
- ww) Test duration of a.c. voltage test modified (Cl. 5.4.6.3);
- yy) Test duration of Insulation resistance test modified (Cl. 5.4.6.4);
- zz) General test conditions for Electromagnetic Compatibility (EMC) added (Cl. 5.5.1);
- aaa) Test condition for test of immunity to electrostatic discharges modified (Cl. 5.5.2);
- bbb) Test severity level deleted for Contact discharge test (Cl. 5.5.2.1);
- ccc) Acceptance criteria for test of immunity to electrostatic discharges modified (Cl. 5.5.2.2);
- ddd) Test severity level deleted, test conditions modified for Test of Immunity to Electromagnetic HF Fields (Cl. 5.5.3);
- eee) Test method and acceptance criteria for radio interference measurement modified (Cl. 5.5.5);
- fff) Reference standard for Surge Immunity Test modified; different test condition for surge immunity test for UCI, UC2, UC3 defined (Cl. 5.5.6);
- ggg) General test conditions for test of accuracy requirements added; additional test conditions added (Cl. 5.6.1);

- hhh) Reference conditions for test of influence quantities modified (Cl. 5.6.2);
- jjj) Values modified for minimum test period of no-load condition test (Cl. 5.6.3);
- kkk) Test of meter constant modified (Cl. 5.6.5);
- mmm) Type test repeatability removed; acceptance criteria of repeatability of error added (Cl. 5.6.7);
- nnn) Test of Consumption based charging functions and time-based charging functions added (Cl. 5.8);
- ppp) Requirement of Interruption and restoration of the load for emergency credit facility added (Cl. 5.9);
- qqq) Tests of the Load Switch operation at different voltages and temperature added (Cl. 5.10);
- rrr) Requirements to verify robustness of meter accounting process modified (Cl. 6.2);
- sss) General requirements of time-keeping modified (Cl. 4.7 and Annex – D);
- ttt) Title of ‘Crystal controlled clocks’ changed to ‘Real Time Clock’ and accuracy requirements modified (Cl. D 2);
- uuu) Requirements added for test of accuracy of real time clocks on main supplies for test duration greater than 48 h (Cl. D.3.2.1);
- vvv) Battery requirement for providing reserve power for minimum operation life of the meter added (Cl. D.3.2.2); time period for test duration modified along with acceptable discrepancy in time indication (Annex D);
- www) Test conditions and time keeping accuracy modified for test of accuracy of real time clocks with temperature (Annex D);
- yyy) Effects of electromagnetic disturbances on time keeping deleted (Annex D);
- zzz) Method of test of the effects of short interruptions and voltage dips modified (Cl. D.4.2.2);
- aaaa) Method of test and acceptance criteria for effect of short interruptions on real time clocks modified (Cl. D.4.3.2);
- bbbb) Method of test and acceptance criteria for effect of voltage dips on real time clocks modified (Cl. D.4.2.4);
- cccc) Recommended Test Sequences also list no. of samples now for clarity (Annex – E);
- dddd) In Annex G ‘Performance requirements for payment meters with load switching utilization categories UC2 and UC3’ - Clarity provided for different test currents being prospective r.m.s currents for utilization categories;
- eeee) Following methods of test for load switch (Annex G) modified;
- ffff) Normal operation, electrical endurance, line to load voltage surge withstand, fault current making capacity and short-circuit current carrying capacity (Annex G);
- gggg) Process modified for ensuring minimum level of isolation between the supply input and load output terminals when load switch contacts are open (Annex G);
- hhhh) In line with IS 13779, additional resistor requirement for testing limits of error due to d.c. and even harmonics in the a.c. current circuit added and test method modified (in Annex K); and
- jjjj) Circuit diagram for the test of immunity to earth phase fault added (Annex L).

3. Consequent upon the Revision of Indian Standard, the Product Manual has been revised as Product Manual Doc: **PM/ IS 15884/ 2/ October 2024** and is being circulated separately through BIS website.
4. The guidelines for implementation of the Revised Indian Standard is given below:

A) LICENSEES

- i. Licensee shall implement the requirements of the Revised Standards by 04 July 2025. Any difficulty in implementation shall be brought to the notice of CMD III within 30 days of issuance of these guidelines. BO shall ensure that no Licences are under operation as per old standard after 04 July 2024. The status of implementation of the Revised Indian Standard shall be confirmed by Head (BO) to CMD-III within one month of the last date of concurrent running.
- ii. Licensees shall submit In-house test report / test report from BIS approved labs of product in order to establish conformity to the modified requirements.
- iii. Verification of implementation of the Revised Standard IS 15884: 2024 shall be done during the next surveillance visit, which shall be completed within one months from the last date of implementation.
- iv. If the Licensee fails to complete all actions by 04 July 2025, it shall be dealt with as per the prevailing guidelines.

B) APPLICATIONS FOR GRANT OF LICENCE

- i. Applications which are recorded henceforth may be processed with or without Revision. Processing of Applications without Revision shall be permitted only upto 04 July 2025 and for such cases Applicant shall give a declaration that they will implement the Revised Indian Standard by 04 July 2025.
- ii. After 04 July 2025, no Licence shall be granted without consideration of the Revision.

C) CHANGE IN SCOPE OF LICENCE

- i. For change in scope of licence, the relevant provisions as given above for Applicants shall apply.
- ii. However, processing of such applications for change in scope of licence as per old Standard shall be permitted only upto the date of implementation of the revised Standard by the licensee or up to 04 July 2025 whichever is earlier.

5. The above guidelines come into force with immediate effect.

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Head (CMD III)
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