**BUREAU OF INDIAN STANDARDS**
**DRAFT FOR COMMENTS ONLY**



***Draft Indian Standard***

# Photovoltaic (PV) Modules -Type Approval, Design and Safety Qualification Retesting

*(First revision)*

(ICS 27.160)

Solar Photovoltaic Energy Systems Sectional Committee, ETD 28

Last date for comments- 02 07 2024

NATIONAL FOREWORD

This draft Indian Standard (First Revision) which is Identical with IEC TS 62915: 2023 'Photovoltaic (PV) Modules -Type Approval, Design and Safety Qualification Retesting' issued by the International Electrotechnical Commission (IEC) will be adopted by the Bureau of Indian Standards on the recommendation of the Solar Photovoltaic Energy Systems Sectional Committee and approval of the Electrotechnical Division Council.

This standard was originally published in 2020 identical to IEC TS 62915: 2018. The First Revision of this standard has been undertaken to align with the latest version of IEC TS 62915: 2023.

The text of the IEC Standard has been approved as suitable for publication as an Indian Standard without deviations. Certain conventions are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

a) Wherever the words 'International Standard' appears referring to this standard, they should be read as 'Indian Standard'.

b) Comma (,) has been used as a decimal marker, while in Indian Standards the current practice is to use a point (.) as the decimal marker.

In this adopted standard, reference appears to International Standards for which Indian Standards also exists. The corresponding Indian Standards, which are to be substituted, are listed below along with their degree of equivalence for the editions indicated:

| *International Standard* | *Corresponding Indian Standard* | *Degree of Equivalence* |
|---|---|---|

| | | |
|---|---|---|
| IEC 61215-1:2021, Terrestrial Photovoltaic (PV) Modules – Design Qualification And Type Approval – Part 1: Test Requirements | IS 14286 (Part 1) : 2019 / IEC 61215-1 : 2016 Terrestrial Photovoltaic (PV) Modules — Design Qualification and Type Approval Part 1 Test Requirements (*Second Revision* ) | Identical |
| IEC 61215-2:2021, Terrestrial Photovoltaic (PV) Modules – Design Qualification And Type Approval – Part 2: Test Procedures | IS 14286 (Part 2) : 2019 / IEC 61215-2 : 2016 Terrestrial Photovoltaic (PV) Modules — Design Qualification and Type Approval Part 2 Test Procedures ( *Second Revision* ) | Identical |
| IEC 61730-1:2023, Photovoltaic (PV) Module Safety Qualification – Part 1: Requirements For Construction | IS/IEC 61730-1 : 2016 Photovoltaic (PV) Module Safety Qualification Part 1 Requirements for Construction ( *First Revision* ) | Identical |
| IEC 61730-2: 2023, Photovoltaic (PV) Module Safety Qualification – Part 2: Requirements For Testing | IS/IEC 61730-2 : 2016 Photovoltaic (PV) Module Safety Qualification Part 2 Requirements for Testing (*First Revision*) | Identical |
| IEC TS 61836, Solar Photovoltaic Energy Systems – Terms, Definitions And Symbols | IS 12834 : 2023 / IEC TS 61836 : 2016 Solar Photovoltaic Energy Systems — Terms, Definitions and Symbols ( *Second Revision* ) | Identical |
| IEC 62790, Junction Boxes For Photovoltaic Modules – Safety Requirements And Tests | IS 16911 : 2023 / IEC 62790 : 2020 Junction Boxes for Photovoltaic Modules — Safety Requirements and Tests ( *First Revision* ) | Identical |
| IEC 62852, Connectors for DC-Application In Photovoltaic Systems – Safety Requirements And Tests | IS 16781 : 2018 / IEC 62852 : 2014 Connectors for d.c. Application in Photovoltaic Systems — Safety Requirements and Tests | Identical |
| IEC 62930, Electric cables for photovoltaic systems with a voltage rating of 1,5 kV DC | IS 17293 : 2020 Electric Cables for Photovoltaic Systems for Rated Voltage 1 500 V d.c. | Modified/ Technically Equivalent |
| IEC 62941: 2019, Terrestrial Photovoltaic (PV) Modules - Quality System For PV Module Manufacturing | IS 18114 : 2023/ IEC 62941 : 2019 Terrestrial Photovoltaic PV Modules - Quality System for PV Module Manufacturing (*First Revision*) | Identical |
| IEC TS 63126 : 2020, Guidelines for Qualifying PV Modules, Components, And Materials For Operation At High Temperatures | IS 17959 : 2023 / IEC TS 63126 : 2020 Guidelines for Qualifying PV Modules, Components and Materials for Operation at High Temperatures | Identical |

| | | |
|---|---|---|
| ISO 9001, Quality management systems – Requirements | IS/ISO 9001 : 2015 Quality Management Systems — Requirements (*Fourth Revision* ) | Identical |

The technical committee has reviewed the provision of the following International Standard referred in this adopted standard and has decided that it is acceptable for usein conjunction with this standard:

| *International Standard* | *Title* |
|---|---|
| IEC 62788- 2-1 | Measurement procedures for materials used in photovoltaic modules – Part 2-1: Polymeric materials – Frontsheet and backsheet – Safety requirements |

Only English language text has been retained while adopting it in this Indian Standard, and as such the page numbers given here are not the same as in the International Standard.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated expressing the result of a test, shall be rounded off in accordance with IS 2: 2022 ‘Rules for rounding off numerical values (*second revision*)’. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

NOTE — The technical content of their document has not been enclosed as there are identical with the corresponding IEC standards for details, please refer the corresponding IEC TS 62915: 2023 or kindly contact:

Head
Electrotechnical Department
Bureau of Indian Standards
9, Bahadur Shah Zafar Marg,
New Delhi-110002
Email: eetd@bis.gov.in
Telephone: 011-23231192 / 8284