GB

NATIONAL STANDARD OF THE

PEOPLE'S REPUBLIC OF CHINA

ICS 27.160

CCS K 83

GB/T 18912-2024

Replacing GB/T 18912-2002

Salt mist corrosion testing of photovoltaic (PV) modules

光伏组件盐雾腐蚀试验

[IEC 61701:2020, Photovoltaic (PV) modules - Salt mist corrosion testing, MOD]

Issued on: November 28, 2024 **Implemented on: March 01, 2025**

Issued by: State Administration for Market Regulation;
Standardization Administration of the People's Republic of China.

Table of Contents

Foreword

This document was drafted in accordance with the provisions of GB/T 1.1-2020 "*Directives for standardization - Part 1: Rules for the structure and drafting of standardizing documents*".

This document replaces GB/T 18912-2002 "Salt mist corrosion testing of photovoltaic (PV) modules". Compared with GB/T 18912-2002, in addition to structural adjustments and editorial changes, the main technical changes are as follows:

a) ADD the requirements for test samples (see Clause 4 of this document);

b) ADD general test rules (see Clause 5 of this document);

c) MODIFY test methods and requirements (see Clause 6 of this document, Clause 3, Clause 4, Clause 5, Clause 6 of the 2002 edition);

d) ADD a diagram of salt mist test sequence for photovoltaic modules (see Figure 1 of this document);

e) ADD determination requirements (see Clause 7 of this document);

f) ADD test reports (see Clause 8 of this document).

This document has modified and adopted IEC 61701:2020 "*Photovoltaic (PV) modules - Salt mist corrosion testing*".

Compared with IEC 61701:2020, this document has made the following structural adjustments:

- DELETE 6.4 in IEC 61701:2020;

- 6.4 ~ 6.7 correspond to 6.5 ~ 6.8 in IEC 61701:2020 respectively;

- Clause 7 corresponds to 7.1 and 7.2 in IEC 61701:2020;

- DELETE 7.3 in IEC 61701:2020.

The technical differences between this document and IEC 61701:2020 and their reasons are as follows:

- DELET the content and requirements of concentrated photovoltaic modules, to adapt to the technical conditions of China;

- MODIFY NOTE 2 in Figure 1 to a figure footnote, to meet the requirements for the compilation of national standards of China;

Salt mist corrosion testing of photovoltaic (PV) modules

1 Scope

This document establishes test sequences for evaluating the resistance of photovoltaic modules to salt mist corrosion.

This document applies to photovoltaic modules, including crystalline silicon photovoltaic modules and thin-film photovoltaic modules, and does not apply to concentrated photovoltaic modules. The purpose is to evaluate the possible effect of salt mist environments on photovoltaic modules.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 9223 Corrosion of metals and alloys - Corrosivity of atmospheres - Classification, determination and estimation

NOTE: GB/T 19292.1-2018 Corrosion of metals and alloys - Corrosivity of atmospheres - Part 1: Classification, determination and estimation (ISO 9223:2012, IDT)

ISO 9227 Corrosion tests in artificial atmospheres - Salt spray tests

NOTE: GB/T 10125-2021 Corrosion tests in artificial atmospheres - Salt spray tests (ISO 9227:2017, MOD)

IEC 60068-2-52 Environmental testing - Part 2-52: Tests - Test Kb: Salt mist, cyclic (sodium chloride solution)

NOTE: GB/T 2423.18-2021 Environmental testing - Part 2: Test methods - Test Kb: Salt mist, cyclic (sodium chloride solution) (IEC 60068-2-52:2017, IDT）

IEC 61215-1 Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 1: Test requirements

IEC 61215-2 Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 2: Test procedures

IEC 61730-2 Photovoltaic (PV) module safety qualification - Part 2: Requirements for testing

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