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IEC 61701: 2020

DRAFT TANZANIA STANDARD

(Draft for comments only)

Photovoltaic (PV) modules - Salt mist corrosion testing

Draft for Stakeholders comments only

TANZANIA BUREAU OF STANDARDS

1 National Foreword

This draft Tanzania Standard is being prepared by the Renewable Energy Technical Committee, under the supervision of the Electrotechnical Divisional Standards Committee (EDC)

This draft Tanzania Standard is an adoption of the International Standard IEC 61701:2020, *Photovoltaic (PV) modules - Salt mist corrosion testing*, which has been prepared by the International Electrotechnical Commission (IEC).

2 Terminology and conventions

Some terminologies and certain conventions are not identical with those used in Tanzania Standards; Attention is drawn especially to the following:

- 1) The comma has been used as a decimal marker for metric dimensions. In Tanzania Standards, it is current practice to use “full point” on the baseline as the decimal marker; and
- 2) Where the words “International Standard(s)” appear, referring to this standard they should read “Tanzania Standard(s)”.

3 Scope

Photovoltaic (PV) modules are electrical devices normally intended for continuous outdoor exposure during their lifetime. Highly corrosive wet atmospheres, such as marine environments or locations near the ocean or other large bodies of salt water, could eventually degrade some of the PV module components (corrosion of metallic parts, deterioration of the properties of some non-metallic materials – such as protective coatings and plastics – by assimilation of salts, etc.) causing permanent degradation that could impair their functioning. Temporary corrosive atmospheres are also present in places where salt is used in winter periods to melt ice formations on streets and roads.

This document describes test sequences useful to determine the resistance of different PV modules to corrosion from salt mist containing Cl (NaCl, MgCl₂, etc.). The bypass diode functionality test in this document is modified. They are combined in this document to provide means to evaluate possible faults caused in PV modules when operating under wet atmospheres having high concentration of dissolved salt (NaCl). Depending on the specific nature of the surrounding atmosphere to which the module is exposed in real operation several testing methods can be applied, as defined in relevant international standards. Guidance for determining the applicability of this document and selecting an appropriate method is provided in Annex A.

This document can be applied to both flat plate PV modules and concentrator PV modules and assemblies.

