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DRAFT TANZANIA STANDARD

(Draft for comments only)

**Power quality measurement in power supply systems-Part 2: Functional tests
and uncertainty requirements**

TANZANIA BUREAU OF STANDARDS

0 National Foreword

This draft Tanzania Standard has been prepared by the Electrical Installation Technical Committee, under the supervision of the Electrotechnical Divisional Standards Committee (EDC)

This draft Tanzania Standard is identical to International Standard **IEC 62586-2:2017 Power quality measurement in power supply systems-Part 2: Functional tests and uncertainty requirements**, which has been prepared by the Electrotechnical commission.

1 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.
- 2) Where the words "International Standard(s)" appear, referring to this standard they should read "Tanzania Standard(s)".



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®

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– Part 2: Functional tests and uncertainty requirements**

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Draft for stakeholders comments

INTERNATIONAL ELECTROTECHNICAL COMMISSION

POWER QUALITY MEASUREMENT IN POWER SUPPLY**SYSTEMS – Part 2: Functional tests and uncertainty****requirements FOREWORD**

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 62586-2 has been prepared by IEC technical committee 85:
Measuring equipment for electrical and electromagnetic quantities.

This second edition cancels and replaces the first edition published in 2013. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) test procedures for RVC and current have been added;
- b) mistakes have been fixed.

This bilingual version (2017-11) corresponds to the monolingual English version, published in 2017-03.

The text of this standard is based on the following documents:

CDV	Report on voting
85/525/CDV	85/571/RVC

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

The French version of this standard has not been voted upon.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts of the IEC 62586 series, published under the general title *Power quality measurement in power supply systems*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

The contents of the corrigendum of June 2018 have been included in this copy.

INTRODUCTION

Power quality is more and more important worldwide in power supply systems and is generally assessed by power quality instruments.

This part of IEC 62586 specifies functional and uncertainty tests intended to verify the compliance of a product to class A and class S measurement methods defined in IEC 61000-4-30.

This document therefore complements IEC 61000-4-30.

Draft for stakeholders comments

POWER QUALITY MEASUREMENT IN POWER SUPPLY SYSTEMS – Part 2:

Functional tests and uncertainty requirements

1 Scope

This part of IEC 62586 specifies functional tests and uncertainty requirements for instruments whose functions include measuring, recording, and possibly monitoring power quality parameters in power supply systems, and whose measuring methods (class A or class S) are defined in IEC 61000-4-30.

This document applies to power quality instruments complying with IEC 62586-1.

This document can also be referred to by other product standards (e.g. digital fault recorders, revenue meters, MV or HV protection relays) specifying devices embedding class A or class S power quality functions according to IEC 61000-4-30.

These requirements are applicable in single-, dual- (split phase) and 3-phase AC power supply systems at 50 Hz or 60 Hz.

It is not the intent of this document to address user interface or topics unrelated to device measurement performance.

The document does not cover post-processing and interpretation of the data, for example with dedicated software.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

IEC 61000-2-4, *Electromagnetic compatibility (EMC) – Part 2-4: Environment – Compatibility levels in industrial plants for low-frequency conducted disturbances*

IEC 61000-4-7, *Electromagnetic compatibility (EMC) – Part 4-7: Testing and measurement techniques – General guide on harmonics and interharmonics measurements and instrumentation, for power supply systems and equipment connected thereto*

IEC 61000-4-15, *Electromagnetic compatibility (EMC) – Part 4-15: Testing and measurement techniques – Flickermeter – Functional and design specifications*

IEC 61000-4-30:2015, *Electromagnetic compatibility (EMC) – Part 4-30: Testing and measurement techniques – Power quality measurement methods*

IEC 62586-1:2013, *Power quality measurement in power supply systems – Part 1: Power quality instruments (PQI)*

ISO/IEC Guide 98-3:2008, *Uncertainty of measurement – Part 3: Guide to the expression of uncertainty in measurement (GUM:1995)*

Draft for stakeholders comments