

INTERNATIONAL STANDARD

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

**Mesure de la qualité de l'alimentation dans les réseaux d'alimentation –
Partie 2: Essais fonctionnels et exigences d'incertitude**



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

FOREWORD

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International Standard IEC 62586-2 has been prepared by IEC technical committee 85: Measuring equipment for electrical and electromagnetic quantities.

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

FDIS	Report on voting
85/461/FDIS	85/467/RVD

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

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 web site 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- withdrawn,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.

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INTRODUCTION

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

IEC 62586-2 is a standard specifying 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.

IEC 62586-2 therefore complements IEC 61000-4-30.

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

This standard may 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 a.c. power supply systems at 50 Hz or 60 Hz.

NOTE 1 It is not the intent of this standard to address user interface or topics unrelated to device measurement performance.

NOTE 2 The standard does not cover postprocessing and interpretation of the data, for example with a dedicated software.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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 61000-4-30:2008, *Electromagnetic compatibility (EMC) – Part 4-30: Testing and measurement techniques – Power quality measurement methods*

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

3 Terms, definitions, abbreviations, notations and symbols

For the purposes of this document, the terms and definitions given in IEC 61000-4-30 as well as the following terms and definitions apply.