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Date: 02 April 2025

Origin: International

Latest date for receipt of comments: 23 April 2025

Project No. 2025/00928

Responsible committee: PEL/85 Measuring equipment for electrical and electromagnetic quantities

Interested committees:

Title: Draft BS EN 62586-1 Ed.3.0 BS EN 62586-1 Power quality measurement in power supply systems. Part 1: Power quality instruments (PQI).

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Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

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UK Vote

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Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/ Figure/Table/Note	Type of comment	Comment (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	



85/955/CD

COMMITTEE DRAFT (CD)

PROJECT NUMBER:

IEC 62586-1 ED3

DATE OF CIRCULATION:

2025-03-28

CLOSING DATE FOR COMMENTS:

2025-05-23

SUPERSEDES DOCUMENTS:

85/950/RR

IEC TC 85 : MEASURING EQUIPMENT FOR ELECTRICAL AND ELECTROMAGNETIC QUANTITIES

SECRETARIAT:

China

SECRETARY:

Ms Guiju HAN

OF INTEREST TO THE FOLLOWING COMMITTEES:

SC 77A

HORIZONTAL FUNCTION(S):

ASPECTS CONCERNED:

Electromagnetic Compatibility, Safety

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Recipients of this document are invited to submit, with their comments, notification of any local regulations or technical reasons that may exist and should be considered should this proposal proceed, recognizing that failure to address such requirements could result in the need for new or existing "In Some Countries" clauses. (SEE [AC/22/2007](#) OR [NEW GUIDANCE DOC](#)).

TITLE:

Power quality measurement in power supply systems - Part 1: Power quality instruments (PQI)

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Link to Committee Draft (CD) online document:

<https://osd.iec.ch/#/editor/archive/2f1cf093-ef1a-a87e-e063-6d13000a19b5/en/CD/1>

How to access

This link leads you to the Online Standards Development (OSD) platform for National Mirror Committee's (NMC) comments. The project draft may be found further down this document.

Resource materials

We recommend NCs to review the available materials to better understand the member commenting on the OSD platform. This includes the:

- OSD NC roles overview: [here](#)
- How to add and submit comments to the IEC: [here](#)

Contact

Should you require any assistance, please contact the IEC IT Helpdesk at helpdesk@iec.ch.

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

FOREWORD

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IEC 62586-1 has been prepared by IEC technical committee 85: Measuring equipment for electrical and electromagnetic quantities. It is an International Standard.

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

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

- a) integration of the new measurement functions of upcoming IEC 61000-4-30:2026 (e.g. RVC and current functions);
- b) integration of the new requirements of IEC 61000-6-5:2015I, update of definitions of environment G and H, update of applicable EMC performance criteria;
- c) correction of minor mistakes, improvement in specification.

The text of this International Standard is based on the following documents:

Draft	Report on voting
XX/XX/FDIS	XX/XX/RVD

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

The language used for the development of this International Standard is English [change language if necessary].

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

It has the status of a basic EMC publication in accordance with [IEC Guide 107 \[1\]](#).

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 document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

192

INTRODUCTION

193 Electricity as delivered to the customers has several characteristics that are variable and that
194 affect its usefulness to the customers.

195 Power quality instruments on the market have different characteristics. This document provides
196 a common system of references in order to facilitate their selection, comparison and evaluation.
197 This document specifies a classification based on product performances, environment and
198 safety.

199 It is acknowledged that IEC 61000-4-30 standard is a basic EMC publication. Detailed guidance
200 on instrument performance, performance verification methods, additional influence quantities
201 and other similar information should, in general, be found in a product standard.

202 IEC 62586-1 is a product standard that refers to IEC 61000-4-30, IEC 61000-4-7 and IEC
203 61000-4-15 for measuring methods.

204 IEC 62586-2 specifies functional tests and uncertainty requirements for instruments in the
205 scope of IEC 62586-1.

206 IEC 62586-1 is therefore complementing basic EMC standards with environmental, safety and
207 performance requirements.

208

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

1 Scope

This part of IEC 62586 specifies product and performance 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.

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

These instruments can be used:

- in the generation, transmission and distribution of electricity, e.g. inside a power station, substation or a distributed generator connection;
- at the interface point between the installation and the network, e.g. in order to check the compliance of the connection agreement between a network operator and the customer.

NOTE 1 These instruments can also be used for other applications, e.g. inside commercial / industrial installations especially where comparable measurements are needed, (i.e. data centres or petrochemical plants).

These instruments are fixed-installed or portable. They are intended to be used indoors and/or outdoors.

Devices such as digital fault recorders, energy/power meters, protection relays or circuit breakers can include Power Quality functions defined in IEC 61000-4-30 class A or class S. If such devices are specified according to this document, then this document fully applies and applies in addition to the relevant product standard. This document does not replace the relevant product standard.

This document does not address the user interface or topics unrelated to measurement performance of device.

NOTE 2 It is not the intent of this standard to address user interface or topics unrelated to device measurement performance.

NOTE 3 The standard does not cover postprocessing & interpretation of the data, for example with a 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 60068-1, *Environmental testing - Part 1: General and guidance*

IEC 60068-2-6, *Environmental testing - Part 2-6: Tests - Test Fc: Vibration (sinusoidal)*

IEC 60068-2-14, *Environmental testing - Part 2-14: Tests - Test N: Change of temperature*

IEC 60068-2-27, *Environmental testing - Part 2-27: Tests - Test Ea and guidance: Shock*

IEC 60068-2-31, *Environmental testing - Part 2-31: Tests - Test Ec: Rough handling shocks, primarily for equipment-type specimens*

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