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Interested committees:

Title: Draft BS EN 63580 Ed.1.0 Measuring equipment for electrical and electromagnetic quantities - Environmental aspects

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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.

For national standards, comments will be reviewed by the relevant UK national committee and the resulting standards published as a British Standard.

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Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

Submission of Comments

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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	Commend (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.	



85/952/CD

COMMITTEE DRAFT (CD)

PROJECT NUMBER:

IEC 63580 ED1

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2025-02-14

CLOSING DATE FOR COMMENTS:

2025-05-09

SUPERSEDES DOCUMENTS:

85/906/NP, 85/923A/RVN

IEC TC 85 : MEASURING EQUIPMENT FOR ELECTRICAL AND ELECTROMAGNETIC QUANTITIES

SECRETARIAT:

China

SECRETARY:

Ms Guiju HAN

OF INTEREST TO THE FOLLOWING COMMITTEES:

TC 111, TC 121

HORIZONTAL FUNCTION(S):

ASPECTS CONCERNED:

Environment

This document is still under study and subject to change. It should not be used for reference purposes.

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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:

Measuring equipment for electrical and electromagnetic quantities - Environmental aspects

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**MEASURING EQUIPMENT FOR ELECTRICAL AND ELECTROMAGNETIC
QUANTITIES – ENVIRONMENTAL ASPECTS
FOREWORD**

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IEC 63850 has been prepared by IEC technical committee 85: Measuring equipment for electrical and electromagnetic quantities. It is an International Standard.

This edition constitutes a new edition.

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

Draft	Report on voting
85/XX/FDIS	85/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.

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.

177 available at www.iec.ch/members_experts/refdocs. The main document types developed by
178 IEC are described in greater detail at www.iec.ch/standardsdev/publications.

179 In this document, the following print types are used:

- 180 – requirements and definitions: in roman type;
- 181 – NOTES: in smaller roman type;
- 182 – *compliance*: in italic type.

183 The committee has decided that the contents of this document will remain unchanged until the
184 stability date indicated on the IEC website under webstore.iec.ch in the data related to the
185 specific document. At this date, the document will be

- 186 • reconfirmed,
- 187 • withdrawn,
- 188 • replaced by a revised edition, or
- 189 • amended.

190

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191

192

INTRODUCTION

Increasingly, there is a focus on preserving the natural environment for the good of future generations. This results in the publication of various regulations that require environmental data, whether at the local or national level. Product manufacturers are also faced by requests from their stakeholders' customers (wholesalers, installers, specifiers, authorities...) for environmental data. In addition to reduce product environmental impact, manufacturers need a standardized methodology to quantify and to consequently reduce the environmental impact of the product.

It is necessary to establish product specific rules (PSR) to have standardized science-based methodologies for the data to be evaluated and transmitted.

Specific rules for assessing the environmental impacts and providing appropriate data for ME3Q are among the purposes of this document. These rules establish a common evaluation scheme of their environmental impacts in terms of characterized impact indicators (e.g. CO₂-equivalents, ozone depletion) over their whole life cycle.

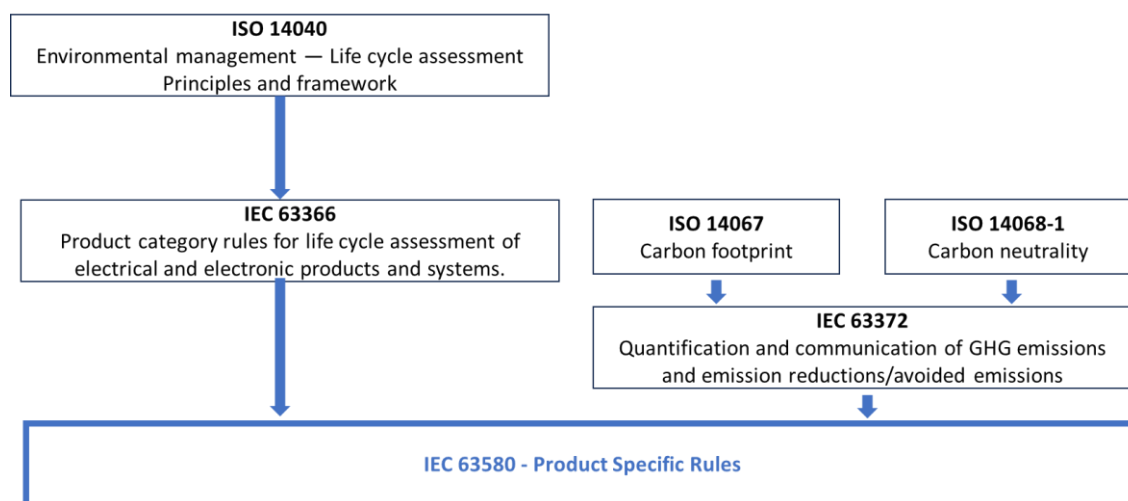


Figure 1 – Standard family for life cycle assessment (LCA)

This document is to be used by manufacturers, customers, authorities, program operators, LCA practitioners and verifiers, whatever the type of environmental data related to life cycle assessment, including extract for one specific impact (carbon footprint).

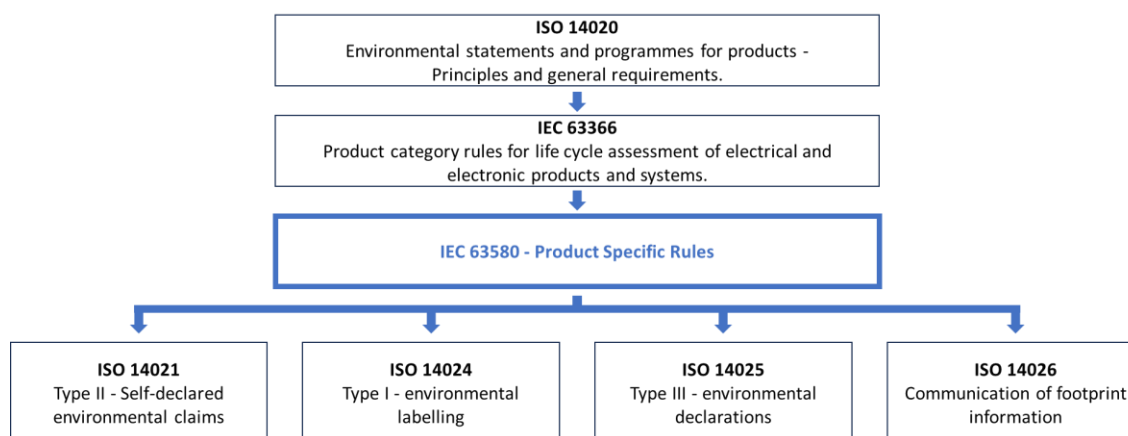
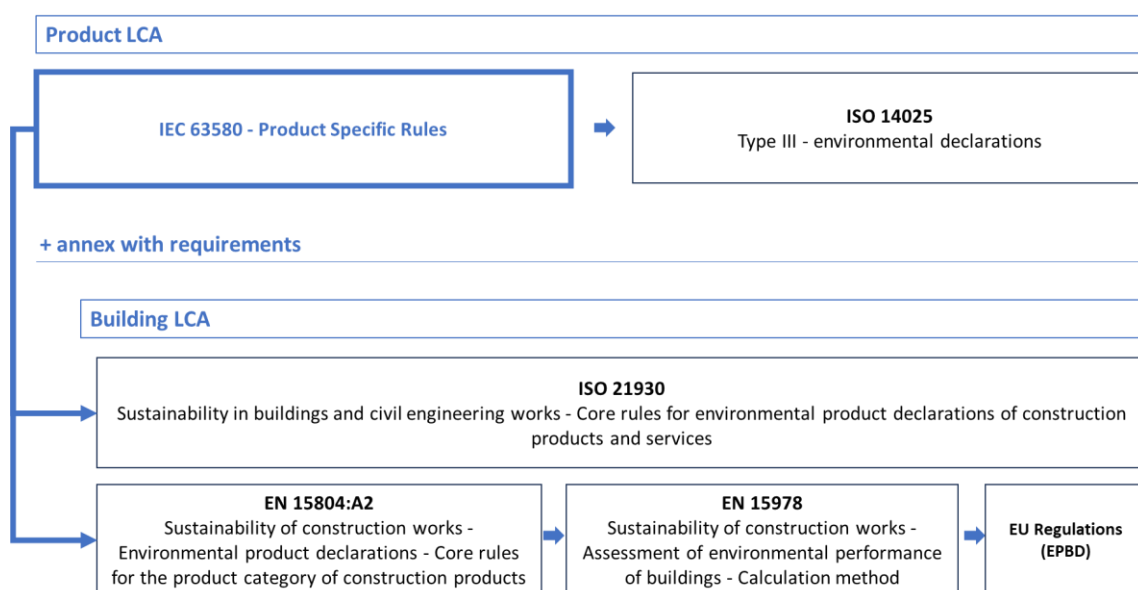


Figure 2 – Standard family for environmental communication

Even though ME3Q have a relatively minor impact on the environment, there is a market need for appropriate methods for managing these environmental matters. A simplified means of estimating the environmental impacts is required together with readily available data to make the stakeholders, for example contractor's, installer's and end user's, task of assessing environmental impacts at system level easier.

Generally, the environmental impact of ME3Q is very low compared with that of the overall system into which they are incorporated and the processes to which they contribute. The lifetime impact of processes such as the air-conditioning of a building, the manufacture of steel or shipping far exceed that of the manufacture and use of any associated ME3Q.

Figure 3 – Standard family for interoperability with Building LCA



In addition, release of substances and materials that might be harmful for the environment or induce climatic changes are to be avoided or minimized. From conception to end of life of a product, the environmental impact of all the relevant processes should be considered, including how materials are disposed of or recovered for future use.

In order to contribute to conserving natural resources, manufacturers of measuring equipment for electrical and electromagnetic quantities (ME3Q) should ensure an environmentally conscious design (ECD) involving:

- phasing-out or minimizing use of hazardous substances or materials;
- efficient use of energy and materials in the manufacture of products;
- ensuring the lowest practical energy consumption by the products while they are in use;
- at the end of product life, the possibility, as far as practical, of recycling materials for future use, and sorting hazardous components requiring a specific treatment.

Declarations and ECD are increasingly required and in some instances mandated. These can take several forms, for example, Type II or Type III environmental declaration, material declaration (MD). In some business, Green Public Procurement (GPP) is applicable and/or ECD is part of the ISO 14001 certification. Some countries and regions are also actively pushing for environmental conservation, for example, the European Union through its Ecodesign Directive and China through Ecodesign Initiative. Systematic demands for ECD will be required by most, if not all customers, in the medium term.

Assessing the environmental impact of ME3Q is part of an ECD process. ECD requires the identification, measurement and reporting of particular impacts. ISO/IEC 62430 describes the

246 basic principles of ECD, with the goal of reducing the potential environmental impacts of
247 products.
248

MEASURING EQUIPMENT FOR ELECTRICAL AND ELECTROMAGNETIC QUANTITIES – ENVIRONMENTAL ASPECTS

1 Scope

This document provides guidance to manufacturers of measuring equipment for electrical and electromagnetic quantities (ME3Q) in evaluating and improving the environmental impact of their products, and in enabling effective communication using common references for environmental information throughout the supply chain.

NOTE - ME3Q devices are described in Annex A.

This standard covers only the below fixed installed measuring equipment:

- IEC 61557-12 (PMD)
- IEC 62586-1 (PQI)
- IEC 60688 (TRD)
- IEC 62974-1 (DDM)

This document provides:

- guidance on the process and general aspects to implement environmentally-conscious product design principles, as given in ISO/IEC 62430;
- the Product Specific Rules (PSR) for Life Cycle Assessment (LCA);

NOTE 1 The general methods and the process to execute the LCA are in accordance with ISO 14040 and ISO 14044 but not addressed in this document.

NOTE 2 PSR and LCA can be used for quantitative ECD and also apply for some environmental declarations, for example Type III.

- standard environmental impact data derived from case studies and a means of using them;

NOTE 3 This is to encourage manufacturers to apply more effective quantitative methods in the ECD process to improve the environmental efficiency of their products.

- common rules for communicating information about the presence of regulated substances and the materials contained in the product;
- guidance on communicating information about the end-of-life treatment of the product.

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.

2.1 Normative references for terminology

IEC 60050-904, *International Electrotechnical Vocabulary (IEV) – Part 904: Environmental standardization for electrical and electronic products and systems* (available at www.electropedia.org)

2.2 Normative references for LCA and environmental footprint

IEC 63366 (111/691/CDV) *Product category rules for life cycle assessments of electrical and electronic products and systems*

ISO 14040:2006, *Environmental management – Life cycle assessment – Principles and framework*

ISO 14044:2006, *Environmental management – Life cycle assessment – Requirements and guidelines*

ISO 14044:2006/AMD1:2017

ISO 14044:2006/AMD2:2020

ISO 14067:2018: Greenhouse gases — Carbon footprint of products — Requirements and guidelines for quantification

ISO 14068-1:2023: Climate change management — Transition to net zero – Carbon neutrality

IEC 63372 (111/757/CDV) Quantification and communication of GHG emissions and emission reductions/avoided emissions from electric and electronic products, services and systems - Principles, methodologies and guidance

2.3 Normative references for environmental communication formats

ISO 14020:2022, *Environmental statements and programmes for products - Principles and general requirements*

ISO 14021:2016, *Environmental labels and declarations – Self-declared environmental claims (Type II environmental labelling)*

ISO 14024:2018, *Environmental labels and declarations: Type I environmental labelling. Principles and procedures.*

ISO 14025:2006, *Environmental labels and declarations – Type III environmental declarations – Principles and procedures*

ISO 14026:2017, *Environmental labels and declarations: Principles, requirements and guidelines for communication of footprint information*

ISO 21930:2017, Sustainability in buildings and civil engineering works - Core rules for environmental product declarations of construction products and services

EN 15978:2012, Sustainability of construction works - Assessment of environmental performance of buildings - Calculation method

EN15804:2019+A2, Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products

IEC 63058 CD (121/168/CD), Switchgear and controlgear and their assemblies for low voltage – Environmental aspects

2.4 Normative references for other environmental aspects

ISO/IEC 62430:2019, *Environmentally conscious design (ECD) – Principles, requirements and guidance*

IEC 62474:2018, *Material declaration for products of and for the electrotechnical industry*

324 IEC 62474 DB, *Material declaration for products of and for the electrotechnical industry*
325 (available at <http://std.iec.ch/iec62474>)

326 IEC TR 62635:2012, *Guidelines for end-of-life information provided by manufacturers and*
327 *recyclers and for recyclability rate calculation of electrical and electronic equipment*

328 **3 Terms, definitions and abbreviated terms**

329 **3.1 Terms and definitions**

330 For the purposes of this document, the terms and definitions given in IEC 60050-904 and the
331 following apply.

332 ISO and IEC maintain terminological databases for use in standardization at the following
333 addresses:

- 334 • ISO Online browsing platform: available at <http://www.iso.org/obp>
- 335 • IEC Electropedia: available at <http://www.electropedia.org/>

336 **3.2 General**

337 **3.2.1**

338 **Greenhouse gas**

339 **GHG**

340 gaseous constituent of the atmosphere, both natural and anthropogenic, that absorbs and
341 emits radiation at specific wavelengths within the spectrum of infrared radiation emitted by the
342 earth's surface, the atmosphere, and clouds

343 Note 1 to entry: For a list of GHGs, see the latest IPCC Assessment Report.

344 Note 2 to entry: Water vapour and ozone, which are anthropogenic as well as natural GHGs, are not included in the
345 CFP and partial CFP.

346 Note 3 to entry: The focus of this document is limited to long-lived GHGs, it therefore excludes climate effects due
347 to changes in surface reflectivity (albedo) and short-lived radiative forcing agents (e.g., black carbon and
348 aerosols).

349 [SOURCE: ISO 14067:2018, 3.1.2.1]

350 **3.2.2**

351 **co-product**

352 any of two or more products coming from the same unit process or product system

353 Note 1 to entry: Co-product, by-product and product have the same status and are used for identification of several
354 distinguished flows of products from the same unit process. From co-product, by-product and product, waste is the
355 only output to be distinguished as a non-product.

356 [SOURCE: ISO 14040:2006, 3.10, modified, a note to entry has been added]

357 **3.2.3**

358 **cut-off criteria**

359 Specification of the amount of material or energy flow or the level of environmental
360 significance associated with unit processes or product system to be excluded from a study.

361 [SOURCE: ISO 14040:2006, 3.18]

3.3 Section related to data

3.3.1

primary data

quantified value of a unit process or an activity obtained from a direct measurement or a calculation based on direct measurements at the original source

[SOURCE: ISO 14050:2020, 3.6.34]

3.3.2

secondary data

data that do not fulfil the requirements for primary data

[SOURCE: ISO 14050:2020, 3.6.35]

3.3.3

Data quality

Characteristics of data that relate to their ability to satisfy stated requirements.

[SOURCE: ISO 14044:2006, 3.19]

3.3.4

declared unit

quantity of the product used as a reference unit in a Type III environmental declaration or footprint communication, based on one or more information modules

Note 1 to entry: Information module is a compilation of data covering a unit process or a combination of unit processes that are part of the life cycle of a product.

[SOURCE: ISO 14040:2006, 3.7.11, modified, note 1 to entry had been added]

3.3.5

Disposal

Any operation which is not recovery even where this operation has a reclamation of substances or energy secondary consequences.

[SOURCE: IEC/TR 62635:2012, 3.1]

3.3.6

durability

<of a product>

ability to function as required, under defined conditions of use, maintenance and repair, until a limiting state is reached

Note 1 to entry: The degree to which maintenance and repair are within the scope of durability will vary by product or product-group.

Note 2 to entry: Durability can be expressed in units appropriate to the part or product concerned, e.g. calendar time, operating cycles, distance run, etc. The units should always be clearly stated.

[SOURCE: EN 45550:2020; 4.2.1.1, modified: Note 2 deleted]

3.3.7

end of life

life cycle stage of a product starting when it is removed from its intended use phase

[SOURCE: IEC TR 62635:2012, 3.2, modified – Hyphens deleted in term, alternate term deleted, "use-stage" replaced with "use phase".]

3.3.8**end of life treatment**

operation after a waste has been handed over to a facility for product and product part reuse, material recycling, energy recovery and residue disposal

Note 1 to entry: This includes dismantling, material separation and disposal.

[SOURCE: IEC TR 62635:2012, 3.3, modified – Hyphens in term deleted, insertion of Note 1 to entry.]

3.4 Section related to energy**3.4.1****energy recovery**

production of useful energy through direct and controlled combustion or other processing of waste

Note 1 to entry: Waste incinerators producing hot water, steam and/or electricity are common means for energy recovery.

[SOURCE: IEC 60050-904:2014, 904-04-03]

3.4.2**environment**

surroundings in which a product or system exists, including air, water, land, natural resources, flora, fauna, humans and their interrelation

[SOURCE: IEC Guide 109:2012, 3.3]

3.4.3**environmental aspect**

element of an organization's activities or products that interacts or can interact with the environment

Note 1 to entry: An environmental aspect can cause (an) environmental impact(s). A significant environmental aspect is one that has or can have one or more significant environmental impact(s).

Note 2 to entry: Significant environmental aspects are determined by the organization applying one or more criteria.

[SOURCE: ISO 14001:2015, 3.2.2, modified – "or services" deleted in the definition.]

3.4.4**environmental claim**

statement, symbol or graphic that indicates an environmental aspect of a product, including any associated components and packaging

[SOURCE: ISO 14050:2020, 3.7.3]

3.4.5**environmentally conscious design**

systematic approach which considers environmental aspects in the design and development with the aim to reduce adverse environmental impacts throughout the life cycle of a product

Note 1 to entry: Other terminology used worldwide with the same meaning includes ecodesign, design for environment (DFE), green design and environmentally sustainable design.

[SOURCE: ISO/IEC 62430:2019, 3.1.1, modified – Abbreviated term "ECD" and Note 2 to entry deleted.]