BS EN 50193-1:2016+A1:2020

BSI Standards Publication

Electric instantaneous water heaters — Methods for measuring the Performance

Part 1: General requirements

bsi.

National foreword

This British Standard is the UK implementation of EN 50193-1:2016+A1:2020. It supersedes BS EN 50193-1:2016, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee CPL/59, Performance of household electrical appliances.

A list of organizations represented on this committee can be obtained on request to its committee manager.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Compliance with a British Standard cannot confer immunity from legal obligations.

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Amendments/corrigenda issued since publication

Date	Text affected
30 September 2020	Implementation of CENELEC amendment A1:2020: Annexes ZZA and ZZB amended.

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English Version

Electric instantaneous water heaters - Methods for measuring the Performance - Part 1: General requirements

Chauffe-eau électriques instantanés - Partie 1: Exigences générales

Elektro-Durchfluss-Wassererwärmer - Prüfverfahren zur Messung der Gebrauchseigenschaften - Teil 1: Allgemeine Anforderungen

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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Contents

European foreword

This document (EN 50193-1:2016) has been prepared by CLC/TC 59X "Performance of household and similar electrical appliances".

The following dates are fixed:

- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2017-05-23
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2019-05-23

This document supersedes EN 50193-1:2013.

EN 50193-1:2016 includes the following significant technical changes with respect to EN 50193-1:2013:

— Alignment of the terms and formulas with those detailed in Commission communication in the framework of the implementation of Commission Regulation (EU) No 814/2013 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for water heaters and hot water storage tanks and of Commission Delegated Regulation (EU) No 812/2013 supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to the energy labelling of water heaters, hot water storage tanks and packages of water heater and solar device (2014/C 207/03).

— Clarification of the Smart Control Factor and the issues surrounding its application for Electric Instantaneous Water Heaters.

— Updates to the references and bibliography.

— Addition of an informative annex for alternative test methods under development.

— Addition of Annexes ZZA and ZZB.

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For the relationship with EU Directive(s) see informative Annex ZZA and ZZB, which are integral parts of this document.

European foreword to amendment A1

This document (EN 50193-1:2016/A1:2020) has been prepared by CLC/TC 59X “Performance of household and similar electrical appliances”.

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For the relationship with EU Directive(s) see informative Annex ZZ, which is an integral part of this document.

1 Scope

This European Standard applies to **electric instantaneous water heaters** for domestic hot water heating for household and similar applications, which show both of the following characteristics:

– fulfilling at least one load pattern from Annex A;

– heating up to temperatures below the boiling temperature.

This European Standard specifies terms, definitions and measurement methods for the assessment of energy efficiency.

This European Standard does not take into account requirements regarding the safety of the appliances.

2 Normative references

The following documents, in whole or in part, are normatively reference 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.

EN 22768-1, *General tolerances - Part 1: Tolerances for linear and angular dimensions without individual tolerance indications (ISO 2768-1)*

EN ISO 228-1, *Pipe threads where pressure-tight joints are not made on the threads - Part 1: Dimensions, tolerances and designation (ISO 228-1)*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
instantaneous water heater
appliance intended to heat water while it flows through the appliance

3.1.1
electric instantaneous water heater
electric powered **instantaneous water heater**

3.1.2
closed instantaneous water heater
instantaneous water heater intended to operate at the pressure of the water system, the flow of water being controlled by one or more valves in the outlet system

3.1.3
open-outlet instantaneous water heater
instantaneous water heater in which the flow of water is controlled by a valve in the inlet pipe, there being no valve in the outlet pipe

3.1.4
hydraulic instantaneous water heater
instantaneous water heater each of whose heating elements are switched on or off, depending on the water flow rate or water pressure

3.2
temperature selector
actuator which presets the temperature set point value of the water outlet and which can be adjusted by the user