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NSAI Standards

Irish Standard
I.S. EN 50193-2-1:2016&A1:2020

Electric instantaneous water heaters - Part 2-1: Methods for measuring the performance - Multifunctional electric instantaneous water heaters

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EN 50193-2-1:2016/A1:2020

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National Foreword

I.S. EN 50193-2-1:2016&A1:2020 is the adopted Irish version of the European Document EN 50193-2-1:2016, Electric instantaneous water heaters - Part 2-1: Methods for measuring the performance - Multifunctional electric instantaneous water heaters

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EUROPEAN STANDARD

NORME EUROPÉENNE

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EN 50193-2-1:2016/A1

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English Version

Electric instantaneous water heaters - Part 2-1: Methods for measuring the performance - Multifunctional electric instantaneous water heaters

Chauffe-eau électriques instantanés - Partie 2-1: Méthodes de mesure de l'aptitude à la fonction - Chauffe-eau électriques instantanés multifonctions

Elektro-Durchfluss-Wassererwärmer - Teil 2-1: Verfahren zur Messung der Gebrauchseigenschaften - Multifunktionelle Elektro-Durchfluss-Wassererwärmer

This amendment A1 modifies the European Standard EN 50193-2-1:2016; it was approved by CENELEC on 2020-06-17. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment the status of a national standard without any alteration.

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Comité Européen de Normalisation Electrotechnique
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European foreword

This document (EN 50193-2-1:2016/A1:2020) 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)	2021–06–17
• latest date by which the national standards conflicting with this document have to be withdrawn	(dow)	2023–06–17

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

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1 Modification to Annex ZZA, "Relationship between this European Standard and the energy labelling requirements of Commission Delegated Regulation (EU) No 812/2013 aimed to be covered" and Annex ZZB, "Relationship between this European Standard and the ecodesign requirements of Commission Regulation (EU) No 814/2013 aimed to be covered"

Replace the Annexes ZZA and ZZB with the following:

"Annex ZZA
(informative)

Relationship between this European Standard and the energy labelling requirements of Commission Delegated Regulation (EU) No 812/2013 aimed to be covered

This European standard has been prepared under a Commission's standardisation request, M/534 C(2015) 2625 final to provide one voluntary means of conforming to the energy labelling requirements of Commission Delegated Regulation (EU) No 812/2013 of 18 February 2013 supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to energy labelling of water heaters, hot water storage tanks and packages of water heater and solar device, OJ L239, 6.9.2013.

Once this standard is cited in the Official Journal of the European Union under that Regulation, compliance with the normative clauses of this standard given in Table ZZA.1 confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding energy labelling requirements of that Regulation and associated EFTA Regulations.

Table ZZA.1 — Correspondence between this European Standard and Commission Delegated Regulation (EU) No 812/2013 of 18 February 2013 supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to energy labelling of water heaters, hot water storage tanks and packages of water heater and solar device, OJ L239, 6.9.2013 and Commission's standardisation request, M/534 C(2015) 2625 final

Energy labelling requirements of Regulation (EU) No 812/2013, OJ L239, 6.9.2013	Clause(s) / sub-clause(s) of this EN	Remarks / Notes
Weekly electricity consumption with enabled smart control settings: Annex V, point 1(f) - Annex VII, point 7(f)	5.1.4 Determination of the smart control factor SCF 5.1.5 Determination of smart control compliance	
Weekly electricity consumption without enabled smart control settings: Annex V, point 1(f) - Annex VII, point 7(h)	5.1.4 Determination of the smart control factor SCF 5.1.5 Determination of smart control compliance	
Daily electricity consumption: Annex V, point 1(f) - Annex VII, point 7(a)	5.2.2 Daily energy demand	
Annual electricity consumption: Annex III, point 1.1.1.(a).V and point 1.2.1(a), Annex IV, point 1.1(f), Annex V, point 1(f) - Annex VII, point 7(b).	5.2.5 Annual electricity consumption	

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Energy labelling requirements of Regulation (EU) No 812/2013, OJ L239, 6.9.2013	Clause(s) / sub-clause(s) of this EN	Remarks / Notes
Water heater energy efficiency: Annex III, point 1.1.1.(a).IV and point 1.2.1(a) Annex IV, point 1.1.(d), (e), (g), point 4.I, Annex V, point 1.1.(g) – Annex VIII, point 2(a)	5.2.4 Energy-efficiency	
Load profiles: Annex III, point 1.1.1.(a).III and point 1.2.1.(a) Annex IV, point 1.1(c) and (g) and point 4.II and III Annex V, point 1.1(f) – Annex VIII, point 7(b)	Annex A Tables A.1, A.2 and A.3 specify the tapping patterns for the chosen load pattern	
Test-rig for the measurement of the daily electricity consumption and standby power consumption to indicate water demand: Annex V, point 1.1(f) – Annex VIII, point 7(a)	Annex B Test setup	

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Annex ZZB
(informative)

Relationship between this European Standard and the ecodesign requirements of Commission Regulation (EU) No 814/2013 aimed to be covered

This European Standard has been prepared under a Commission's standardization request, M/534 C(2015) 2625 final to provide one voluntary means of conforming to the ecodesign requirements of Commission Regulation (EU) No 814/2013 of 2 August 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, OJ L293, 6.9.2013.

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Table ZZB.1 — Correspondence between this European Standard and Commission Regulation (EU) No 814/2013 of 2 August 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, OJ L293, 6.9.2013 and Commission's standardization request, M/534 C(2015) 2625 final

Ecodesign requirements of Regulation (EU) No 814/2013, OJ L293, 6.9.2013	Clause(s) / sub-clause(s) of this EN	Remarks / Notes
Weekly electricity consumption with enabled smart control settings: Annex II, point 1.6(b) - Annex III, point 6(g)	5.1.4 Determination of the smart control factor SCF 5.1.5 Determination of smart control compliance	
Weekly electricity consumption without enabled smart control settings: Annex II, point 1.6(b) – Annex III, point 6(i)	5.1.4 Determination of the smart control factor SCF 5.1.5 Determination of smart control compliance	
Daily electricity consumption: Annex II, point 1.6(b) – Annex III, point 6(a)	5.2.2 Daily energy demand	
Water heater efficiency: Annex II, point 1.1 Annex II, point 1.6(c) - Annex IV, point 2(a)	5.2.4 Energy-efficiency	
Load profiles: Annex II, point 1.6(b) – Annex III, point 6(b)	Annex A Tables A.1, A.2 and A.3 specify the tapping patterns for the chosen load pattern	
Test-rig for the measurement of the daily electricity consumption and standby power consumption to indicate water demand: Annex II, point 1.6(b) – Annex III, point 6(a)	Annex B Test setup	

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EN 50193-2-1

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Elektro-Durchfluss-Wassererwärmer - Teil 2 1: Verfahren zur Messung der Gebrauchseigenschaften - Multifunktionelle Elektro-Durchfluss-Wassererwärmer

This European Standard was approved by CENELEC on 2016-03-28. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

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

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1 Scope

This clause of Part 1 is applicable with the following exception:

This European Standard applies to electrical instantaneous water heaters designed to operate as multifunctional appliances with electric rated power >2 kW.

This European Standard specifies tests for the assessment of the performance.

2 Normative references

This clause of Part 1 is applicable with the following exception:

Addition:

EN 50193-1:2013, *Electric instantaneous water heaters - Part 1: General requirements*

3 Terms and definitions

This clause of Part 1 is applicable with the following exceptions:

Addition:

3.101
setpoint value
changeable value which is allocated to the appliance or the individual components thereof

3.102
flow pressure on activation of the heating capacity
pressure drop in the instantaneous water heater, at which the heating capacity is, and remains, activated

3.103
90% method
usually a physical value is reaching a final (average) value in an asymptotic manner. To reach a valid measurement result, a stop point of the measurement has to be defined. The measurement is stopped, if the value finally has reached 90% of the difference between (average) starting value and (average) final value

3.104
10%/90% method
usually a physical value is changing with a time delay in an asymptotic manner between starting value and final value. To reach a valid measurement result, a starting point and a stop point have to be defined for the measurement. The measurement is started, if the physical value has first reached 10% of the difference between (average) starting value and (average) final value. The measurement is stopped, if the value finally has reached 90% of the difference

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