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Environmental Engineering (EE); Measurement method for energy consumption of Customer Premises Equipment (CPE)

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This standard includes the English version of the European Standard.

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Foreword

This European Standard (EN) has been produced by ETSI Technical Committee Environmental Engineering (EE).

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Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the [ETSI Drafting Rules](#) (Verbal forms for the expression of provisions).

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Introduction

The present document defines the energy consumption measurement methods for Customer Premises Equipment (CPE).

1 Scope

The present document defines the methodology and the tests conditions to measure the power consumption of CPE power source within the scope of Commission Regulation 2023/826 [i.1]:

Moreover, these different modes of operation are defined.

- Disconnect mode.
- Off mode (as defined in Commission Regulation 2023/826 [i.1]).
- Idle states.
- Low Power states.
- On mode.
- Ready mode.

The methods of measurement are applicable to customer premises equipment which can be directly connected to the mains.

Equipment drawing electricity via the network connection (indirectly connected to the mains) or via local Personal Computer (i.e. via USB) is out of scope:

- Networked standby mode and stand by mode defined in Commission Regulation (EU) 2023/826 [i.1] is out of the scope of the present document and it is covered by ETSI EN 303 423 [i.4].

2 References

2.1 Normative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the referenced document (including any amendments) applies.

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The following referenced documents are necessary for the application of the present document.

- [1] [EN 50160](#): "Voltage characteristics of electricity supplied by public electricity networks", (produced by CENELEC).

2.2 Informative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the referenced document (including any amendments) applies.

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The following referenced documents are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

- [i.1] [Commission Regulation \(EU\) 2023/826 of 17 April 2023](#) laying down ecodesign requirements for off mode, standby mode, and networked standby energy consumption of electrical and electronic household and office equipment pursuant to Directive 2009/125/EC of the European Parliament and of the Council and repealing Commission Regulations (EC) No 1275/2008 and (EC) No 107/2009.
- [i.2] European Commission Directorate-General, Joint Research Centre: "[EU Code Of Conduct on Energy Consumption of Broadband Communication Equipment](#)".
- [i.3] [Directive 2014/30/EU of the European Parliament and of the Council of 26 February 2014](#) on the harmonisation of the laws of the Member States relating to electromagnetic compatibility (recast).
- [i.4] ETSI EN 303 423: "Environmental Engineering (EE); Electrical and electronic household and office equipment; Measurement of networked standby power consumption of Interconnecting equipment".
- [i.5] Cablelabs®: "Data-Over-Cable Service Interface Specifications- DOCSIS® 3.0 Interface".
- [i.6] Cablelabs®: "Data-Over-Cable Service Interface Specifications- DOCSIS® 3.1 Interface".
- [i.7] [IEEE 802.3-2005™](#): "IEEE Standard for Information Technology - Telecommunications and Information Exchange Between Systems - Local and Metropolitan Area Networks - Specific Requirements Part 3: Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications".
- [i.8] [Commission accompanying \(EU\) No 801/2013](#) amending Regulation (EC) N° 1275/2008 with regard to ecodesign requirements for standby, off mode electric power consumption of electrical and electronic household and office equipment, and amending Regulation (EC) N° 642/2009 with regard to ecodesign requirements for televisions.
- [i.9] [Guidelines accompanying Commission Regulation \(EC\) No 1275/2008 of 17 December 2008](#) implementing Directive 2005/32/EC of the European Parliament and of the Council with regard to ecodesign requirements for standby and off-mode electric power consumption of electrical and electronic household equipment.
- [i.10] IEEE 802.11-2021™: "IEEE Standard for Information Technology--Telecommunications and Information Exchange between Systems - Local and Metropolitan Area Networks--Specific Requirements - Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications".
- [i.11] [Recommendation ITU-T G.993.2 \(02/2019\)](#): "Very high speed digital subscriber line transceivers 2 (VDSL2)".

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