ICS 33.050.01 SLOVENSKÁ TECHNICKÁ NORMA Apríl 2023

STN	**Environmentálne inžinierstvo (EE) Rozhranie napájania na vstupe zariadení informačných a komunikačných technológií (ICT) Časť 1: Striedavý prúd (AC)**	**STN EN 300 132-1 V2.2.1** 87 0132

Environmental Engineering (EE); Power supply interface at the input to Information and Communication Technology (ICT) equipment; Part 1: Alternating Current (AC)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 03/23

Obsahuje: EN 300 132-1 V2.2.1:2022

obsahuje farebné strany

136420

ETSI EN 300 132-1 V2.2.1 (2022-11)

Environmental Engineering (EE); Power supply interface at the input to Information and Communication Technology (ICT) equipment; Part 1: Alternating Current (AC)

Reference
REN/EE-02102

Keywords
environment, interface, power supply

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Sous-Préfecture de Grasse (06) N° w061004871

Contents

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Foreword

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

The present document is part 1 of a multi-part deliverable covering Environmental Engineering (EE); Power supply interface at the input to Information and Communication Technology (ICT) equipment, as identified below:

Part 1: "Alternating Current (AC)";

Part 2: "-48 V Direct Current (DC)";

Part 3: "Up to 400 V Direct Current (DC)";

National transposition dates	
Date of adoption of this EN:	31 October 2022
Date of latest announcement of this EN (doa):	31 January 2023
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	31 July 2023
Date of withdrawal of any conflicting National Standard (dow):	31 July 2023

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).

"**must**" and "**must not**" are **NOT** allowed in ETSI deliverables except when used in direct citation.

1 Scope

The present document contains requirements for the input of the ICT equipment connected to interface "A1".

The voltage at interface "A1" defined in the present document is single phase and three phase AC.

The following voltage range categories are covered:

- Narrow single phase "A1"$_{n\text{-}1p}$ and narrow three phase "A1"$_{n\text{-}3p}$ AC voltage range defined to comply with nominal European AC voltages defined in IEC 60038 [i.2].
- Wide single phase "A1"$_{w\text{-}1p}$ and wide three phase "A1"$_{w\text{-}3p}$ AC voltage range for worldwide nominal AC voltages. This wide voltage range is based on the nominal voltages defined in IEC 60038 [i.2].

The present document aims at providing compatibility between the power supply equipment and both the ICT equipment, and the different load units connected to the same interface "A1" (e.g. control/monitoring, cooling system, etc.).

The purpose of the present document is:

- to identify a power supply system with the same characteristics for all ICT equipment defined in the area of application; the area of application may be any location where the interface "A1" is used i.e. telecommunication centres, Radio Base Stations, datacentres and customer premises;
- to facilitate interworking of different (types of) loads;
- to facilitate the standardization of power supply systems for ICT equipment;
- to facilitate the installation, operation and maintenance in the same network of ICT equipment and systems from different origins. General requirements for safety and EMC are out of the scope of the present document series unless specific requirement not defined in existing safety or EMC standards.

The present document concerns the requirements for the interface between Information and Communication Technology (ICT) equipment and its power supply. It includes requirements relating to its stability and measurement. Various other references and detailed measurement and test arrangements are contained in informative annexes.

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.

Referenced documents which are not found to be publicly available in the expected location might be found at https://docbox.etsi.org/Reference/.

NOTE: While any hyperlinks included in this clause were valid at the time of publication, ETSI cannot guarantee their long term validity.

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

[1] IEC 60947-2: "Low-voltage switchgear and controlgear - Part 2: Circuit-breakers".

[2] IEC 60269-1: "Low-voltage fuses - Part 1: General requirements".

[3] IEC 61000-4-5:2014+AMD1:2017: "Electromagnetic compatibility (EMC) - Part 4-5: Testing and measurement techniques - Surge immunity test".

[4] IEC 61000-4-11:2020: "Electromagnetic compatibility (EMC) - Part 4-11: Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests for equipment with input current up to 16 A per phase".

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] ETSI ETS 300 132-1 (Edition 1): "Equipment Engineering (EE); Power supply interface at the input to telecommunications equipment; Part 1: Operated by alternating current (ac) derived from direct current (dc) sources".

[i.2] IEC 60038:2009+AMD1:2021: "IEC standard voltages".

[i.3] IEC 60050-601: "International Electrotechnical Vocabulary (IEV) Part 601: Generation, transmission and distribution of electricity - General".

[i.4] Void.

[i.5] Void.

[i.6] Void.

[i.7] Void.

[i.8] IEC 60445: "Basic and safety principle for man-machine interface, marking and identification - Identification of equipment terminals, conductor terminations and conductors".

[i.9] IEC 60898-1:2015: "Electrical accessories - Circuit-breakers for overcurrent protection for household and similar installations - Part 1: Circuit-breakers for a.c. operation".

[i.10] IEC 60898-2: "Electrical accessories - Circuit-breakers for overcurrent protection for household and similar installations - Part 2: Circuit-breakers for AC and DC operation".

[i.11] IEC 60364 series: "Low-voltage electrical installations".

[i.12] IEC 62040 series: "Uninterruptible power systems (UPS)".

[i.13] IEC 60050-351:2006: "International Electrotechnical Vocabulary (IEV) - Part 351: Control technology".