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Priključitve na javno komutirano telefonsko omrežje (PSTN) - Splošne tehnične zahteve za opremo, priključitev eno na analogni naročniški vmesnik v omrežju PSTN (kandidat NET 4)

Attachments to the Public Switched Telephone Network (PSTN); General technical requirements for equipment connected to an analogue subscriber interface in the PSTN (Candidate NET 4)

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ETSI

EUROPEAN TELECOMMUNICATION STANDARD

ETS 300 001

August 1992

Source: ETSI TC-TE

Reference: T/TE 04-16

UDC: 621.395.3

Key words: PSTN, Access, TE

Attachments to Public Switched Telephone Network (PSTN); General technical requirements for equipment connected to an analogue subscriber interface in the PSTN

(Candidate NET 4)

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ETS 300 001

(Candidate NET 4)

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Chapter 1: General

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Foreword

Chapter 1 of this European Telecommunication Standard (ETS) has been produced by the Terminal Equipment (TE) Technical Committee of the European Telecommunications Standards Institute (ETSI). The text of this ETS may be utilized, wholly or in part, for the establishment of NET 4.

For historical purposes, this ETS was drafted in the form of a NET. However, until a final decision to adopt this ETS as NET 4 has been agreed by the Technical Recommendations Application Committee (TRAC), the terms NET or NET 4 in this document should be read as ETS or ETS 300 001 respectively.

This ETS comprises ten chapters:

"Attachments to Public Switched Telephone Network (PSTN); General technical requirements for equipment connected to an analogue subscriber interface in the PSTN".

Chapter	**1**	**-**	**General**
Chapter	2	-	DC characteristics
Chapter	3	-	Ringing signal characteristics
Chapter	4	-	Transmission characteristics
Chapter	5	-	Calling functions
Chapter	6	-	Answering function
Chapter	7	-	Power failure
Chapter	8	-	Connection methods
Chapter	9	-	Special functions
Chapter	10	-	Additional unclassified requirements

This is the first chapter providing, among other information, the scope of this ETS, definitions, symbols and abbreviations, an explanation of the structure of the ETS and its method of use.

This ETS contains requirements and associated compliance tests. Each compliance test has been assigned a section number which is identical to that of the related requirement and has been given the prefix "A". The requirements and their associated compliance tests are grouped together in the main body of this ETS.

National variations to each requirement and test, which may be particular to an Administration, are given as additional text within the body of each requirement or test. The national designations used are given in section 1.9 of this chapter (page 60). Section 1.3 provides further details on the structure and how to use this ETS.

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1 General

1.1 Introduction

1.1.1 Foreword

It is recognised, in the field of telecommunications within Europe, that there is a need to create common European standards for telecommunication equipment.

Such harmonisation would, among other things, facilitate co-operation between telecommunication equipment manufacturers and public telecommunication network operators, create a marketplace which naturally transcends that of national frontiers, enhance the efficiency of business and other communications across Europe to bring economic benefits, and help translate the vision of a united Europe into a working reality.

In 1985, an initiative by the Conference of European Posts and Telecommunications Administrations (CEPT) resulted in the drafting of a Memorandum of Understanding (MoU) agreeing to the mutual recognition of results of tests of conformity to a technical specification which would be known as a Norme Européenne de Telecommunication (or NET). The signatories of the MOU represent the telecommunications administrations of most countries in Western Europe, including EEC and EFTA administrations.

In 1986, European Community Council Directive 86/361/EEC laid down the principles of the initial stage of the mutual recognition of type approval for telecommunications Terminal Equipment (TE). The Directive imposes the obligation on EC Member States to implement the recognition of tests to common conformity specifications.

1.1.2 NETs

The guiding principals under which a NET is written are the need to ensure that essential requirements are met.

These include:

- user safety, insofar as this requirement is not covered by other legal instruments (e.g. Directive 73/23/EEC);
- safety of employees of the public telecommunication network operators, insofar as this requirement is not covered by other legal instruments (e.g. Directive 73/23/EEC);
- protection of public telecommunication networks from harm;
- interworking of TE, in justified cases.

Each NET constitutes part of a series of NETs prepared in response to the MOU and the EC Directive 86/361.

A NET details the requirements, and a specification of interface tests for conformance to those requirements, which a defined type of telecommunication TE is required to satisfy in order to obtain authorisation for connection of the equipment to a defined European Telecommunications Network. The NET also includes, where appropriate, requirements made necessary in a given State by historical network peculiarities.

The existence of a NET will make it possible for an accredited laboratory in a country whose administration has signed the MOU, to carry out tests, specified in the NET, on TE submitted to it, and to issue a test report. On the basis of the report, a competent body may then issue a certificate of conformity to the NET. There may of course be cases where the laboratory itself is the competent authority. This certificate is then recognised as valid in all other signatory countries, avoiding the need for equipment to have to undergo the same tests, over and over again, each time approval is applied for in any of those countries.

The common reference point which a NET represents thus offers the opportunity of substantially reducing the complexity, length and cost of approval formalities. The operators of public networks are required to make reference to relevant NETs in public supply contracts. Manufacturers are thereby enabled to compete on a more equal technical basis in the supply of terminal equipment covered by NETs.

1.1.3 Types of NET

The majority of NETs fall into one of three categories; general NETs, access NETs, and terminal NETs as described below;

a) General NET

The objective of a general NET is to ensure the general requirements concerning the safety of people and the protection of both the network and the TE.

b) Access NET

The objective of an access NET is to ensure no disturbance occurs to the network and to ensure interworking between network and TE so that calls can be routed successfully through the network (but without any guarantee of terminal to terminal operation). Indeed, since an access NET may have to serve a number of terminal NETs and applications which have not even been envisaged at present, it is important for the content not to include anything which is particular to a specific terminal or otherwise inhibiting to new developments.

Details of the technical characteristics (electrical, mechanical and access control protocols), to be offered by TE at the interface to a specific public telecommunications network are covered in an access NET.

c) Terminal NET

The objective of a terminal NET is to ensure the end-to-end compatibility of a defined telecommunication service. The terminal NET should indicate any requirement which must be added to the corresponding access NET(s) to ensure end-to-end communication.

1.1.3 (N) 1 For requirements concerning safety and protection see Chapter 10.

1.1.4 NET 4

ETSI has adopted this approach in the generation of NETs, but labelled as follows:

a) Aspect 1 - General requirements;
b) Aspect 2 - Access requirements;
c) Aspect 3 - TE requirements.

This document is a candidate for adoption as an access NET and is to be used for type approval according to the scope stated in section 1.2.

TE submitted for type approval is subject to Aspect 1 requirements in every case and, in addition to other relevant requirements e.g. NETs, international or national specifications. Such additional requirements are not contained in this document.

Aspect 3 NETs or other national standards which are relevant to a given type of TE meeting the requirements of this NET shall be in addition to, and refer to the requirements in this NET and shall not modify the requirements in this access NET.

1.1.4 (D) 1 In accordance with the three level approach of EG and ETSI, all TEs have to fulfil in addition to the requirements stated in this document the following Aspect 1 requirements:

- electrical safety;
- climatic environment;
- EMC.

As long as there are no European recommendations for electrical safety, climate and EMC, the relevant enclosures of the national specifications 1 TR 2, Part 1 are applicable.

1.2 Scope

This Access NET specifies the technical requirements (electrical, mechanical and method of signalling) and their associated compliance tests to be met by all TE at each of its ports provided for connection to the Public Switched Telephone Network (PSTN). This connection is effected at a standard analogue interface. This interface is characterised by a two-wire derived presentation using dc loop seizure and clear and low-frequency ac ringing signals below the speech passband.

These requirements and associated compliance tests form the definition of the standard analogue PSTN access (Aspect 2) in each of the participating Administrations.

It is recognised that for historical reasons requirements and their associated compliance tests may include values particular to each Administration's network. These requirements reflect existing standards.

This access NET does not necessarily contain all the requirements which a specific type of TE shall meet in order to gain type approval for attachment to the relevant PSTN attachment point.

1.2 (DK) 1

This document does not form the type approval requirements for those equipments that are part of PABX or other complex installations connected to the PSTN.

For these types of installations, including their associated (series- or parallel connected) equipment to the PSTN, DK national requirements apply.

In every case, reference shall be made to the DK Approval Authority in order to determine the totality of applicable requirements and associated tests.

1.2 (F) 1

The national values contained in the current issue of this NET are not applicable to the standard analogue interface used for the connection to the PSTN when connecting a complex installation. For these types of installation, connection to the PSTN is covered by:

- I-ETSs 300 003 and 300 004 for transmission characteristics of digital PABXs;
- national standards for other characteristics of digital PABXs and for other complex installations, until a new enhancement of this NET will be available.

Complex installations are hereby understood as equipment:

- including switching capability to interconnect at least one PSTN access with at least two other ports (e.g. PBXs);

or

- able to interconnect PSTN accesses (e.g. call diverting devices);

or

- able to broadcast the same information to several PSTN accesses at the same time.

1.2 (D) 1

This document basically applies to all TE intended for linking to customer accesses with analogue interconnection points. For PBXs, besides the interface requirements set out in this document, relevant provisions are contained in the: