

**Customer premises cabling for  
Information Technology - Part 2: 2048  
kbit/s ISDN primary access and leased  
line network interface**

Customer premises cabling for Information  
Technology - Part 2: 2048 kbit/s ISDN primary  
access and leased line network interface

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 50098-2:2002 sisaldab Euroopa standardi EN 50098-2:1996 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 18.12.2002 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 50098-2:2002 consists of the English text of the European standard EN 50098-2:1996.</p> <p>This document is endorsed on 18.12.2002 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
--	---

<p><b>Käsitlusala:</b> This European standard specifies the design and configuration of customer premises cabling for the connection of primary access ISDN equipment. It includes</p> <ul style="list-style-type: none"><li>- design requirements for ISDN primary access point-to-point configuration;</li><li>- cabling requirements for the installation of new cabling;</li><li>- criteria for the use of existing cabling;</li><li>- implementation of ISDN primary access on structured cabling systems.</li></ul>	<p><b>Scope:</b> This European standard specifies the design and configuration of customer premises cabling for the connection of primary access ISDN equipment. It includes</p> <ul style="list-style-type: none"><li>- design requirements for ISDN primary access point-to-point configuration;</li><li>- cabling requirements for the installation of new cabling;</li><li>- criteria for the use of existing cabling;</li><li>- implementation of ISDN primary access on structured cabling systems.</li></ul>
---	---

ICS 33.080

**Võtmesõnad:** cabling topology, design requirements, isdn primary access, requirements for cabling and components

ICS 33.080

Descriptors: Cabling topology, design requirements, ISDN primary access, requirements for cabling and components

English version

**Customer premises cabling for Information Technology  
Part 2: 2048 kbit/s ISDN primary access and leased line network interface**

Câblages dans les locaux des usagers  
pour les technologies de l'information  
Partie 2: Câblage d'interface de réseaux  
pour lignes spécialisées et accès au  
débit primaire RNIS à 2048 kbit/s

Informationstechnische Verkabelung  
von Gebäudekomplexen  
Teil 2: 2048 kbit/s  
ISDN-Primärmultiplexanschluß und  
Netzschnittstelle für Mietleitungen

This European Standard was approved by CENELEC on 1995-11-28. 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.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

**CENELEC**

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

## Foreword

This European Standard has been prepared by CENELEC TC 215 *Electrotechnical aspects of telecommunications equipment*. It has been developed with the co-operation of ETSI TM 3 *Architecture, Functional Requirements and Interfaces of Transmission Networks*.

The text of the draft was submitted to the formal vote and was approved by CENELEC as EN 50098-2 on 1995-11-28.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 1996-12-01
- latest date by which national standards conflicting with the EN have to be withdrawn (dow) 1996-12-01

EN 50098-2 covers customer premises cabling for connection of Integrated Services Digital Network (ISDN) primary access equipment.

This standard is the second of a series of European standards for customer premises cabling. It specifies customer premises cabling for the connection of customers premises equipment with 2048 kbit/s interfaces to ISDN primary access and leased lines.

The requirements in this standard are derived from ETS 300 011 [which is based upon ITU-T<sup>1)</sup> I.431 (Blue Book, Volume III) and contains additional requirements as well as modifications of ITU-T I.431], and EN 60603-7. The reader is referred to EN 60950 and ETS 300 046-1 to ETS 300 046-5 for general safety requirements (see Annex A).

EN 50098-2 contains two informative Annexes A and B.

Other standards in the series are:

EN 50098-1 Customer premises cabling for information technology - Part 1: ISDN basic access.

---

1) International Telecommunication Union - Telecommunications Standardisation Sector (formerly CCITT)

## Contents

	<b>Introduction .....</b>	<b>4</b>
<b>1</b>	<b>Scope.....</b>	<b>4</b>
<b>2</b>	<b>Normative references.....</b>	<b>4</b>
<b>3</b>	<b>Definitions .....</b>	<b>4</b>
<b>4</b>	<b>Abbreviations and symbols .....</b>	<b>5</b>
4.1	Abbreviations .....	5
4.2	Symbols .....	5
<b>5</b>	<b>Design requirements.....</b>	<b>6</b>
5.1	General.....	6
5.2	Insertion loss.....	6
5.3	Power feeding.....	6
5.4	Electromagnetic environment.....	6
5.5	Spurs .....	6
5.6	Near-end crosstalk loss .....	6
<b>6</b>	<b>Point-to-point configuration.....</b>	<b>7</b>
<b>7</b>	<b>Component requirements within dedicated ISDN cabling .....</b>	<b>7</b>
7.1	General.....	7
7.2	Cables .....	8
7.3	Connectors.....	8
7.4	Cords .....	8
<b>8</b>	<b>Implementation over generic cabling systems .....</b>	<b>8</b>
8.1	General.....	8
8.2	Connection of ISDN primary access to generic cabling .....	9
8.3	Requirements for ISDN primary access generic cabling adapters.....	10
<b>9</b>	<b>Cabling qualification .....</b>	<b>10</b>
9.1	General .....	10
9.2	Spurs .....	11
9.3	Cabling integrity.....	11
9.4	DC loop resistance .....	11
9.5	Insulation resistance .....	11
9.6	Insertion loss .....	11
9.7	Characteristic impedance .....	11
	<b>Annex A (informative): Bibliography .....</b>	<b>12</b>
	<b>Annex B (informative): Examples of maximum distances for specific common cables .....</b>	<b>12</b>

## Introduction

This standard is intended for use by those designing, planning, procuring, installing or testing cabling for ISDN primary access within a customer's premises. The design requirements are specified in clause 5, the minimum requirements for the associated components are specified in clause 7.

## 1 Scope

This European standard specifies the design and configuration of customer premises cabling for the connection of primary access ISDN equipment.

It includes

- design requirements for ISDN primary access point-to-point configuration;
- cabling requirements for the installation of new cabling;
- criteria for the use of existing cabling;
- implementation of ISDN primary access on generic cabling systems according to EN 50173.

This standard applies to the customer premises cabling for the transmission of ISDN primary access signals as defined by ETS 300 011. The requirements in this standard also apply to the cabling between Open Network Provision 2048 kbit/s network interfaces and terminal equipment conforming to ETS 300 248.

## 2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 50098-1	Customer premises cabling for information technology - Part 1: ISDN basic access
EN 50173	Information technology - Generic cabling systems
EN 55022	Limits and methods of measurement of radio interference characteristics of information technology equipment (IEC/CISPR 22:1993)
EN 60603-7	Connectors for frequencies below 3 MHz for use with printed boards - Part 7: Detail specification for connectors, 8 way, including fixed and free connectors with common mating features (IEC 603-7:1990)
ETS 300 011	Integrated Services Digital Network (ISDN) - Primary rate user-network interface - Layer 1 specification and test principles
IEC 807-8	Rectangular connectors for frequencies below 3 MHz - Part 8: Detail specification for connectors, four-signal contacts and earthing contacts for cable screen

## 3 Definitions

For the purposes of this standard the definitions of EN 50098-1 and EN 50173 apply, of which the following are repeated below.

**3.1 cable unit:** A single assembly of one or more cable elements usually of the same type or category. The cable unit may have a screen.

NOTE: A binder group is an example of a cable unit. [3.1.8 of EN 50173:1995]

**3.2 channel:** The end to end transmission path connecting any two pieces of application-specific equipment. Equipment cables and work area cables are included in the channel. [3.1.13 of EN 50173:1995]