

## **Communication cables - Specifications for test methods - Part 1-10: Electrical test methods - Crosstalk**

Communication cables - Specifications for test  
methods - Part 1-10: Electrical test methods -  
Crosstalk

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 50289-1-10:2002 sisaldab Euroopa standardi EN 50289-1-10:2001 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 15.10.2002 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 50289-1-10:2002 consists of the English text of the European standard EN 50289-1-10:2001.</p> <p>This document is endorsed on 15.10.2002 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>
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<p><b>Käsitlusala:</b></p> <p>This Part 1-10 of EN 50289 details the test methods to determine the crosstalk cables used in analogue and digital communication systems. Crosstalk is defined as being near end crosstalk (NEXT), far end crosstalk (FEXT), attenuation to crosstalk ratio (ATR) and power sum of near end crosstalk (PS). It is to be read in conjunction with Part 1-1 of EN 50289, which contains essential provisions for its application.</p>	<p><b>Scope:</b></p> <p>This Part 1-10 of EN 50289 details the test methods to determine the crosstalk cables used in analogue and digital communication systems. Crosstalk is defined as being near end crosstalk (NEXT), far end crosstalk (FEXT), attenuation to crosstalk ratio (ATR) and power sum of near end crosstalk (PS). It is to be read in conjunction with Part 1-1 of EN 50289, which contains essential provisions for its application.</p>
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**Võtmesõnad:** analog signals, crosstalk attenuation, crosstalk attenuation measure, damping, definition, definitions, digital, digital signals, electric cables, electrical engineering, electrical testing, marking, measuring techniques, specification, telecommunication, testing

EUROPEAN STANDARD

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**Communication cables -  
Specifications for test methods  
Part 1-10: Electrical test methods -  
Crosstalk**

Câbles de communication -  
Spécifications des méthodes d'essai  
Partie 1-10: Méthodes d'essais électriques -  
Affaiblissement diaphonique

Kommunikationskabel -  
Spezifikationen für Prüfverfahren  
Teil 1-10: Elektrische Prüfverfahren -  
Nebensprechen

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**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 was prepared by the Technical Committee CENELEC TC 46X, Communication cables.

The text of the draft was submitted to the formal vote and was approved by CENELEC as EN 50289-1-10 on 2001-03-01.

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) 2002-05-01
- latest date by which the national standards conflicting  
with the EN have to be withdrawn (dow) 2004-04-01

This European Standard has been prepared under the European Mandate M/212 given to CENELEC by the European Commission and the European Free Trade Association.

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## 1 Scope

Part 1-10 of EN 50289 details the test methods to determine the crosstalk of cables used in analogue and digital communication systems. Crosstalk effects are near end crosstalk (NEXT), far end crosstalk (FEXT), equal level far end crosstalk (ELFEXT), attenuation to crosstalk ratio (ACR) and power sum of crosstalk (PS).

It is to be read in conjunction with Part 1-1 of EN 50289, which contains essential provisions for its application.

## 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 (including amendments).

EN 50289-1-1	2001	Communication cables – Specifications for test methods - Part 1-1: Electrical test methods - General requirements
EN 50289-1-8	2001	Communication cables - Specifications for test methods - Part 1-8: Electrical test methods - Attenuation
EN 50290-1-2 <sup>1)</sup>		Communication cables - Part 1-2: Definitions

## 3 Definitions

For the purposes of this European Standard, the definitions of EN 50290-1-2 apply in addition to the following ones.

### 3.1 near end crosstalk (NEXT)

$$\text{NEXT} = 10 \times \text{LOG}_{10}(\text{P}_{1\text{N}}/\text{P}_{2\text{N}}) \text{ (dB)} \quad (1)$$

where

$\text{P}_{1\text{N}}$	=	input power into the disturbing pair
$\text{P}_{2\text{N}}$	=	output power of the disturbed pair at near end
NEXT	=	near end crosstalk

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<sup>1)</sup> At draft stage.