



NSAI
Standards

Irish Standard
I.S. EN 50346:2003

Information technology - Cabling installation - Testing of installed cabling

I.S. EN 50346:2003

Incorporating amendments/corrigenda issued since publication:

EN 50346:2002/A1:2007

EN 50346:2002/A2:2009

This document replaces:

This document is based on:
EN 50346:2002

Published:
20 December, 2002

This document was published
under the authority of the NSAI and
comes into effect on:

28 February, 2003

ICS number:
35.110

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NSAI
Standards

Amendment
I.S. EN 50346/A2:2009

Information technology - Cabling installation - Testing of installed cabling

I.S. EN 50346/A2:2009

Incorporating amendments/corrigenda issued since publication:

<i>This document replaces:</i>	<i>This document is based on:</i> EN 50346:2002/A2:2009	<i>Published:</i> 9 October, 2009
This document was published under the authority of the NSAI and comes into effect on: 12 November, 2009		ICS number: 35.110
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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 50346/A2

October 2009

ICS 35.110

English version

**Information technology -
Cabling installation -
Testing of installed cabling**

Technologies de l'information -
Installation de câblage -
Essai des câblages installés

Informationstechnik -
Installation
von Kommunikationsverkabelung -
Prüfen installierter Verkabelung

This amendment A2 modifies the European Standard EN 50346:2002; it was approved by CENELEC on 2009-05-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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 amendment 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, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

CENELEC

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

Central Secretariat: Avenue Marnix 17, B - 1000 Brussels

Foreword

This amendment to the European Standard EN 50346:2002 was prepared by the Technical Committee CENELEC TC 215, Electrotechnical aspects of telecommunication equipment.

The text of the draft was submitted to the Unique Acceptance Procedure and was approved by CENELEC as amendment A2 to EN 50346:2002 on 2009-05-01.

The following dates were fixed:

- latest date by which the amendment has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2010-05-01
- latest date by which the national standards conflicting with the amendment have to be withdrawn (dow) 2012-05-01

This amendment has been prepared to align Clause 5 with the latest edition of EN 61935-1. In addition, requirements for measuring balanced cabling parameters ACR-F, PSANEXT, PSAACR-F and unbalanced parameters (LCL, TCL and ELTCTL) as well as coaxial cabling have been added. For the convenience of the reader, Clause 5 has been reproduced completely in this amendment.

EUROPEAN STANDARD

EN 50346

NORME EUROPÉENNE

EUROPÄISCHE NORM

December 2002

ICS 35.110

English version

**Information technology -
Cabling installation -
Testing of installed cabling**

Technologies de l'information -
Installation de câblage -
Essai des câblages installés

Informationstechnik -
Installation von
Kommunikationsverkabelung -
Prüfen installierter Verkabelung

This European Standard was approved by CENELEC on 2002-11-01. 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.

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CENELEC

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Comité Européen de Normalisation Electrotechnique
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Foreword

This European Standard has been prepared by Technical Committee CENELEC TC 215, *Electrotechnical aspects of telecommunication equipment*.

The text of the draft was submitted to the formal vote and was approved by CENELEC as EN 50346 on 2002-11-01.

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) 2003-11-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2005-11-01

Annexes designated “normative” are part of the body of the standard.
In this standard, Annex A is normative.

This standard covers the testing of installed balanced and optical fibre cabling conforming to either series EN 50173 (generic cabling) or installed cabling conforming to dedicated, application-specific specifications such as series EN 50098. Thus EN 50346 covers a broader scope than EN 61935-1, which is restricted to the testing of installed balanced cabling according to EN 50173-1.

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Introduction

Within premises, the importance of the information technology cabling infrastructure is similar to that of other fundamental building utilities such as heating, lighting and mains power supplies. As with other utilities, interruptions to service can have serious impact. Poor quality of service due to lack of planning, use of inappropriate components, incorrect installation, poor administration or inadequate support can threaten an organisation's effectiveness.

A series of European Standards have been prepared to support the successful installation of information technology cabling. These are

- for design – EN 50173-1 and relevant application standards (for example, EN 50098-1 and EN 50098-2),
- for specification, implementation and operation – EN 50174-1, EN 50174-2 and EN 50174-3.

This European Standard specifies the requirements for the testing of installed balanced copper and optical fibre cabling. Such testing is commonly undertaken at contract interfaces and the requirements of this standard take the form of defined test procedures ensuring that results obtained are relevant, repeatable and credible.

These test procedures may be

- a) referenced within the installation specification,
- b) used during the implementation phase of the installation,
- c) used during the operational phase to diagnose application failures at the cabling level.

This standard does not define which tests should be applied or the quantity or percentage of installed cabling to be tested. The test parameters to be measured and the sampling levels to be applied for a particular installation should be defined in the installation specification and quality plans for that installation prepared in accordance with EN 50174-1.

1 Scope

This standard specifies procedures for testing the transmission performance of installed information technology cabling in premises. These procedures apply to both balanced copper and optical fibre cabling.

These test procedures may be used for

- acceptance testing against agreed cabling performance limits,
- verification of specific application support,
- the investigation of faults.

These test procedures are not suitable for components or cable assemblies such as patch cords and equipment cords.

For each test procedure this standard specifies

- a) test parameter,
- b) the test method(s),
- c) test system,
- d) test equipment,
- e) cabling interface adaptor,
- f) measurement procedure,
- g) calibration,
- h) interpretation of test results,
- i) documentation.

Limits for the parameters under test are specified in relevant cabling and application standards.

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 50289-1-6, *Communication cables - Specifications for test methods – Part 1-6: Electrical test methods – Electromagnetic performance*

EN 60825-1, *Safety of laser products - Part 1: Equipment classification, requirements and user's guide (IEC 60825-1:1993)*

EN 61280-4-2:1999, *Fibre optic communication subsystem basic test procedures – Part 4-2: Fibre optic cable plant - Single-mode fibre optic cable plant attenuation (IEC 61280-4-2:1999)*

EN 61300-3-4, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-4: Examinations and measurements – Attenuation (IEC 61300-3-4:2001)*

EN 61300-3-6:1997, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures – Part 3-6: Examinations and measurements – Return loss (IEC 61300-3-6:1997)*

EN 61935-1:2000, *Generic cabling systems – Specification for the testing of balanced communication cabling in accordance with EN 50173 - Part 1: Installed cabling (IEC 61935-1:2000)*

EN 61935-1:2000/A1:2002, *Generic cabling systems – Specification for the testing of balanced communication cabling in accordance with EN 50173 – Part 1: Installed cabling (IEC 61935-1:2000/A1:2002)*

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