

Svenska Elektriska Kommissionen, SEK

Fastställd	Utgåva	Sida	Ingår i
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Fastighetsnät för informationsöverföring – Provning av metalliska kablar i generella kabelnät enligt EN 50173 – Del 1: Installerade kablar

*Testing of balanced communication cabling in
accordance with standards series EN 50173 –
Part 1: Installed cabling*

Som svensk standard gäller europastandarden EN 61935-1:2005. Den svenska standarden innehåller den officiella engelska språkversionen av EN 61935-1:2005.

Nationellt förord

Europastandarden EN 61935-1:2005

består av:

- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **IEC 61935-1, Second edition, 2005 - Testing of balanced communication cabling in accordance with standards series EN 50173 - Part 1: Installed cabling**

utarbetad inom International Electrotechnical Commission, IEC.

Tidigare fastställd svensk standard SS-EN 61935-1, utgåva 1, 2001 och SS-EN 61935-1/A1, utgåva 1, 2003, gäller ej fr o m 2008-10-01.

ICS 33.120.10

Denna standard är fastställd av Svenska Elektriska Kommissionen, SEK, som också kan lämna upplysningar om **sakinnehållet** i standarden.
Postadress: SEK, Box 1284, 164 29 KISTA
Telefon: 08 - 444 14 00. Telefax: 08 - 444 14 30
E-post: sek@sekom.se. Internet: www.sekom.se

Standarder underlättar utvecklingen och höjer elsäkerheten

Det finns många fördelar med att ha gemensamma tekniska regler för bl a säkerhet, prestanda, dokumentation, utförande och skötsel av elprodukter, elanläggningar och metoder. Genom att utforma sådana standarder blir säkerhetskraven tydliga och utvecklingskostnaderna rimliga samtidigt som marknadens acceptans för produkten eller tjänsten ökar.

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Stora delar av arbetet sker internationellt

Utformningen av standarder sker i allt väsentligt i internationellt och europeiskt samarbete. SEK är svensk nationalkommitté av International Electrotechnical Commission (IEC) och Comité Européen de Normalisation Electrotechnique (CENELEC).

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Du som vill dra nytta av dessa möjligheter är välkommen att kontakta SEKs kansli för mer information.

SEK

Box 1284
164 29 Kista
Tel 08-444 14 00
www.sekom.se

EUROPEAN STANDARD

EN 61935-1

NORME EUROPÉENNE

EUROPÄISCHE NORM

December 2005

ICS 33.120.10

Supersedes EN 61935-1:2000 + A1:2002

English version

**Testing of balanced communication cabling
in accordance with standards series EN 50173
Part 1: Installed cabling
(IEC 61935-1:2005, modified)**

Essais de câblages de
télécommunications symétriques
selon la série de normes EN 50173
Partie 1: Câblages installés
(CEI 61935-1:2005, modifiée)

Prüfung der symmetrischen
Kommunikationsverkabelung
nach der Normenreihe EN 50173
Teil 1: Installierte Verkabelung
(IEC 61935-1:2005, modifiziert)

This European Standard was approved by CENELEC on 2005-10-01. 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.

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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, 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

The text of document 46A/717/FDIS, future edition 2 of IEC 61935-1, prepared by SC 46A, Coaxial cables, of IEC TC 46, Cables, wires, waveguides, R.F. connectors, R.F. and microwave passive components and accessories, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61935-1 on 2005-10-01.

This European Standard supersedes EN 61935-1:2000 + corrigendum February 2001 + A1:2002.

This new edition was written to describe Level IV testers in support of ISO/IEC 11801:2002 and the series EN 50173.

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) 2006-07-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2008-10-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61935-1:2005 was approved by CENELEC as a European Standard with agreed common modifications as given below.

COMMON MODIFICATIONS

[Redacted content]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE Where an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
	–	Information technology - Generic cabling systems	EN 50173	Series
IEC 60169-16	– ¹⁾	Radio-frequency connectors Part 16: R.F. coaxial connectors with inner diameter of outer conductor 7 mm (0,276 in) with screw coupling - Characteristic impedance 50 ohms (75 ohms) (Type N)	–	–
IEC 60169-22	– ¹⁾	Part 22: R.F. two-pole bayonet coupled connectors for use with shielded balanced cables having twin inner conductors (Type BNO)	–	–
IEC 60603-7	1996	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, with assessed quality	EN 60603-7	1997
IEC 61076-3-104	– ¹⁾	Connectors for electronic equipment Part 3-104: Rectangular connectors - Detail specification for 8-way, shielded free and fixed connectors for data transmissions with frequencies up to 600 MHz minimum	EN 61076-3-104	2003 ²⁾
ISO/IEC 14763-1 ³⁾	– ¹⁾	Information technology – Implementation and operation of customer premises cabling Part 1: Administration	–	–
ITU-T Rec. G.117	1996	Transmission aspects of unbalance about earth	–	–
ITU-T Rec. O.9	1988	Measuring arrangements to assess the degree of unbalance about earth	–	–

1) Undated reference.

2) Valid edition at date of issue.

3) EN 50174-1, *Information technology - Cabling installation -- Part 1: Specification and quality assurance*, which is related to, but not directly equivalent with ISO/IEC 14763-1, applies instead.

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TESTING OF BALANCED COMMUNICATION CABLING IN ACCORDANCE WITH ISO/IEC 11801 –

Part 1: Installed cabling

1 Scope

This part of IEC 61935 specifies reference measurement procedures for cabling parameters and the requirements for field tester accuracy to measure cabling parameters identified in ISO/IEC 11801. References in this standard to ISO/IEC 11801 mean ISO/IEC 11801 or equivalent cabling standards.

This standard applies when the cable assemblies are constructed of cables complying with IEC 61156 -1, IEC 61156-2, IEC 61156-3 IEC 61156-4, IEC 61156-5 or IEC 61156-6, and connecting hardware as specified in IEC 60603-7 or IEC 61076-3-104. In the case where cables and/or connectors do not comply with these standards then additional tests may be required.

This standard is organized as follows:

- reference laboratory measurement procedures are specified in Clause 4. In some cases, these procedures may be used in the field;
- descriptions and requirements for measurements in the field are specified in Clause 5;
- performance requirements for field testers and procedures to verify performance are specified in Clause 6.

NOTE 1 This standard does not include tests that are normally performed on the cables and connectors separately. These tests are described in IEC 61156-1 and IEC 60603-7 or IEC 61076-3-104 respectively.

NOTE 2 Wherever possible, cables and connectors used in cable assemblies, even if they are not described in IEC 61156 or IEC 60603-7/IEC 61076-3-104 shall be tested separately according to the tests given in the relevant generic specification. In this case, most of the environmental and mechanical tests described in this standard may be omitted.

NOTE 3 Users of this standard are advised to consult with applications standards, equipment manufacturers and system integrators to determine the suitability of these requirements for specific networking applications

This standard relates to performance with respect to 100 Ω cabling. For 120 Ω or 150 Ω cabling, the same principles apply but the measurement system should correspond to the nominal impedance level.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60169-16, *Radio-frequency connectors – Part 16: R.F. coaxial connectors with inner diameter of outer conductor 7 mm (0.276 in) with screw coupling – Characteristic impedance 50 ohms (75 ohms) (Type N)*