

<b>STN</b>	<b>Komunikačné káble</b> <b>Špecifikácie skúšobných metód</b> <b>Časť 1-1: Elektrické skúšobné metódy</b> <b>Všeobecné požiadavky</b>	<b>STN</b> <b>EN 50289-1-1</b>  34 7011
------------	--	--

Communication cables - Specifications for test methods - Part 1-1: Electrical test methods - General requirements

Táto norma obsahuje anglickú verziu európskej normy.  
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 06/17

Obsahuje: EN 50289-1-1:2017

Oznámením tejto normy sa od 16.12.2019 ruší  
STN EN 50289-1-1 (34 7011) z novembra 2001

**125032**

Úrad pre normalizáciu, metrológiu a skúšobníctvo Slovenskej republiky, 2017  
Podľa zákona č. 264/1999 Z. z. o technických požiadavkách na výrobky a o posudzovaní zhody a o zmene a doplnení niektorých zákonov v znení neskorších predpisov sa slovenská technická norma a časti slovenskej technickej normy môžu rozmnožovať alebo rozširovať len so súhlasom slovenského národného normalizačného orgánu.

English Version

**Communication cables - Specifications for test methods - Part 1-  
1: Electrical test methods - General requirements**

Câbles de communication - Spécifications des méthodes  
d'essai Partie 1-1: Méthodes d'essais électriques -  
Prescriptions générales

Kommunikationskabel - Spezifikationen für Prüfverfahren  
Teil 1-1: Elektrische Prüfverfahren - Allgemeines

This European Standard was approved by CENELEC on 2016-12-16. 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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



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

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

<b>Contents</b>	<b>Page</b>
<b>European foreword</b> .....	<b>3</b>
<b>1 Scope</b> .....	<b>4</b>
<b>2 Normative references</b> .....	<b>4</b>
<b>3 Terms and definitions</b> .....	<b>5</b>
<b>4 Sampling</b> .....	<b>5</b>
<b>4.1 Cable under test (CUT)</b> .....	<b>5</b>
<b>4.2 Pre-conditioning</b> .....	<b>5</b>
<b>5 Tests</b> .....	<b>5</b>
<b>6 Test conditions</b> .....	<b>5</b>
<b>6.1 Ambient temperature</b> .....	<b>5</b>
<b>6.2 Tolerance on temperature values</b> .....	<b>5</b>
<b>6.3 Frequency and waveform of test voltages for dielectric strength test</b> .....	<b>5</b>
<b>6.4 Frequency range and stability for frequency related measurements</b> .....	<b>6</b>
<b>6.5 Measurement on drums</b> .....	<b>6</b>
<b>7 Measurement methods and equipment</b> .....	<b>6</b>
<b>7.1 Calibration</b> .....	<b>6</b>
<b>7.2 Requirements for balanced to unbalanced converters (Baluns)</b> .....	<b>6</b>
<b>7.3 Balun-less test method</b> .....	<b>8</b>
<b>8 Test report</b> .....	<b>14</b>
<b>Annex A (informative) Example derivation of mixed mode parameters using the modal decomposition technique</b> .....	<b>15</b>
<b>Annex B (informative) Verification artefacts</b> .....	<b>18</b>
<b>Bibliography</b> .....	<b>21</b>

## European foreword

This document [EN 50289-1-1:2017] has been prepared by CLC/TC 46X "Communication cables".

The following dates are fixed:

- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2017-09-16
- latest date by which the national standards with this document have to be withdrawn conflicting (dow) 2019-12-16

This document supersedes EN 50289-1-1:2001.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

EN 50289-1, Communication cables — Specifications for test methods, is currently composed with the following parts:

- *Part 1-1: Electrical test methods — General requirements;*
- *Part 1-2: Electrical test methods — DC resistance;*
- *Part 1-3: Electrical test methods — Dielectric strength;*
- *Part 1-4: Electrical test methods — Insulation resistance;*
- *Part 1-5: Electrical test methods — Capacitance;*
- *Part 1-6: Electrical test methods — Electromagnetic performance;*
- *Part 1-7: Electrical test methods — Velocity of propagation;*
- *Part 1-8: Electrical test methods — Attenuation;*
- *Part 1-9: Electrical test methods — Unbalance attenuation (longitudinal conversion loss, longitudinal conversion transfer loss);*
- *Part 1-10: Electrical test methods — Crosstalk;*
- *Part 1-11: Electrical test methods — Characteristic impedance, input impedance, return loss;*
- *Part 1-12: Electrical test methods — Inductance;*
- *Part 1-13: Electrical test methods — Coupling attenuation or screening attenuation of patch cords / coaxial cable assemblies / pre-connectorised cables;*
- *Part 1-14: Electrical test methods — Coupling attenuation or screening attenuation of connecting hardware;*
- *Part 1-15: Electromagnetic performance — Coupling attenuation of links and channels (Laboratory conditions);*
- *Part 1-16: Electromagnetic performance — Coupling attenuation of cable assemblies (Field conditions);*
- *Part 1-17: Electrical test methods — Exogenous Crosstalk ExNEXT and ExFEXT.*

## 1 Scope

This European Standard specifies the electrical test methods for cables used in analogue and digital communication systems.

Part 1 of EN 50289 consists of the following documents:

- Part 1-1 General requirements
- Part 1-2 DC resistance
- Part 1-3 Dielectric strength
- Part 1-4 Insulation resistance
- Part 1-5 Capacitance
- Part 1-6 Electromagnetic performance
- Part 1-7 Velocity of propagation
- Part 1-8 Attenuation
- Part 1-9 Unbalance attenuation (longitudinal conversion loss, longitudinal conversion transfer loss)
- Part 1-10 Crosstalk
- Part 1-11 Characteristic impedance, input impedance, return loss
- Part 1-12 Inductance
- Part 1-13 Coupling attenuation or screening attenuation of patch cords / coaxial cable assemblies / pre-connectorised cables
- Part 1-14 Coupling attenuation or screening attenuation of connecting hardware
- Part 1-15 Coupling attenuation of links and channels (Laboratory conditions)
- Part 1-16 Coupling attenuation of cable assemblies (Field conditions)
- Part 1-17 Exogenous Crosstalk ExNEXT and ExFEXT

Further test details (e.g. temperature, duration) and/or test requirements are given in the relevant cable standard.

## 2 Normative references

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

EN 50289-1-9, *Communication cables - Specifications for test methods - Part 1-9: Electrical test methods - Unbalance attenuation (longitudinal conversion loss, longitudinal conversion transfer loss)*

EN 50290-1-2, *Communication cables - Part 1-2: Definitions*

EN 61169-16, *Radio-frequency connectors - Part 16: Sectional specification - RF coaxial connectors with inner diameter of outer conductor 7 mm (0,276 in) with screw coupling - Characteristic impedance 50 ohms (75 ohms) (type N)(IEC61169-16)*

IEC 60169-15, *Radio-frequency connectors — Part 15: R.F. coaxial connectors with inner diameter of outer conductor 4.13 mm (0.163 in) with screw coupling — Characteristic impedance 50 ohms (Type SMA)*

**koniec náhľadu – text ďalej pokračuje v platenej verzii STN**