

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

AMENDMENT 1  
AMENDEMENT 1

**Multicore and symmetrical pair/quad cables for digital communications –  
Part 1: Generic specification**

**Câbles multiconducteurs à paires symétriques et quartes pour transmissions  
numériques –  
Partie 1: Spécification générique**



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## FOREWORD

This amendment has been prepared by subcommittee 46C: Wires and symmetric cables, of IEC technical committee 46: Cables, wires, waveguides, R.F. connectors, R.F. and microwave passive components and accessories.

The text of this amendment is based on the following documents:

FDIS	Report on voting
46C/897/FDIS	46C/899/RVD

Full information on the voting for the approval of this amendment can be found in the report on voting indicated in the above table.

The committee has decided that the contents of this amendment and the base publication will remain unchanged until the maintenance result date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

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### 3 Terms and definitions

Replace definitions 3.17, 3.18, 3.19, 3.20 and 3.24 by the following:

#### 3.17 characteristic impedance

$Z_c$

impedance at the input of a homogeneous line of infinite length

The impedance value is expressed in  $\Omega$ , calculated, at relevant frequencies, as the square root of the product of the impedances measured at the near end (input) of a cable pair when the far end is terminated by a short-circuit load and then an open-circuit load.

NOTE 1 The asymptotic value at high frequencies is denoted as  $Z_\infty$ .

NOTE 2 The characteristic impedance of a homogeneous cable pair is given by the quotient of a voltage wave and current wave which are propagating in the same direction, either forwards or backwards.

NOTE 3 For homogeneous ideal cables, this method yields a flat smooth curve over the whole frequency range. Real cables with distortions give curves with some roughness.