

# INTERNATIONAL STANDARD

# ISO/IEC 11801

1995

AMENDMENT 1  
1999-02

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## Amendment 1

### **Information technology – Generic cabling for customer premises**

#### *Amendement 1*

#### *Technologies de l'information – Câblage générique des locaux d'utilisateurs*

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PRICE CODE

**C**

*For price, see current catalogue*

## FOREWORD

This amendment has been prepared by subcommittee 25: Interconnection of information technology equipment, of ISO/IEC Joint Technical Committee 1: Information Technology.

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

Text for vote	Report on voting
ISO/IEC 11801:1995 DAM1 and DAM2	ISO/IEC JTC1/SC25 N484

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

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### 5.5.3 Telecommunications outlet

*Replace the third paragraph with:*

A minimum of one TO served by 100  $\Omega$  or 120  $\Omega$  cable shall be provided at each work area<sup>1)</sup> (100  $\Omega$  preferred). Other TOs shall be supported by either balanced cable or by optical fibre cable<sup>2)</sup>. In the horizontal cabling, at least one TO shall be configured as specified in item b of 6.1.3 (balanced or optical fibre cable) or at least one TO shall be served by either class D or optical class, as identified in 7.1.1. When a TO is supported by balanced cable, 2 pairs<sup>3)</sup> or 4 pairs shall be provided at each TO; all pairs shall be terminated. If less than four pairs are provided, the outlet shall be clearly marked<sup>4)</sup>. Emerging balanced cable applications may be limited by differential delay of pairs that serve a single telecommunications outlet. See clause 9 for TO specifications that correspond to each of the cables listed above.

### Footnotes

*Replace footnotes with:*

- 1) When the greatest flexibility is desired, four pair or two quad cable should be used (see Annex G).
- 2) When the largest bandwidth is desired the use of optical fibre is recommended.
- 3) Installation of 2 pairs not capable of forming class D links may limit the applications supported.
- 4) See annex G for number and performance of pairs needed for different applications and their pin assignment.

### 7.1.2 Link classification

Replace table 2 with:

**Table 2 – Channel lengths achievable with different categories and types of cabling**

Medium	Channel length				
	Class A	Class B	Class C	Class D	Optical class
Category 3 balanced cable (8.1)	2 km	200 m	100 m <sup>1)</sup>	–	–
Category 4 balanced cable (8.1)	3 km	260 m	150 m <sup>2)</sup>	–	–
Category 5 balanced cable (8.1)	3 km	260 m	160 m <sup>2)</sup>	100 m <sup>1)</sup>	–
150 Ω balanced cable (8.2)	3 km	400 m	250 m <sup>2)</sup>	150 m <sup>2)</sup>	–
Multimode optical fibre (8.4)	N/A	N/A	N/A	N/A	2 km <sup>3)</sup>
Singlemode optical fibre (8.5)	N/A	N/A	N/A	N/A	3 km <sup>4)</sup>

<sup>1)</sup> The 100 m distance includes a total allowance of 10 m of flexible cable for patch cords / jumpers, work area and equipment connections. Link specifications are consistent with 90 m horizontal cable, 7,5 m electrical length of patch cable and three connectors of the same category. Support for applications is assumed, provided that no more than an additional 7,5 m electrical length of combined work and equipment area cable is used (see figure 7).

<sup>2)</sup> For distances greater than 100 m of balanced cable in the horizontal cabling subsystem, the applicable application standards should be consulted.

<sup>3)</sup> When using fibre with a modal bandwidth of 160 MHz·km, the maximum distance is only 1,6 km.

<sup>4)</sup> 3 km is a limit defined by the scope of the International Standard and not a medium limitation.

### 7.2.1 Characteristic impedance

Replace the existing first paragraph by the following:

The nominal characteristic impedance of a link shall be 100 Ω, 120 Ω, or 150 Ω at frequencies between 1 MHz and the highest specified frequency for the cabling class.

### 7.2.1 Characteristic impedance

Replace the existing second paragraph by the following:

The characteristic impedance of cabling links should be achieved by suitable design, and the appropriate choice of cables and connecting hardware.

### 7.2.2 Return loss

Replace first paragraph with:

The return loss of the cabling, measured at any interface, shall meet or exceed the values shown in table 3. Terminations that are matched to the nominal impedance of the cabling (in particular 100 Ω, 120 Ω or 150 Ω), shall be connected to cabling elements under test at the remote end of the link. The return loss shall be measured according to IEC 61935-1.

Replace table 3 with:

**Table 3 – Minimum return loss at each cabling interface**

Frequency MHz	Minimum return loss dB	
	Class C	Class D
$1 \leq f < 16$	15	15
$16 \leq f < 20$	N/A	15
$20 \leq f \leq 100$	N/A	$15 - 7 \log(f/20)$

NOTE – Links or channels using connectors with return loss of less than 18 dB at 100 MHz may fail to meet the requirements of table 3.

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**8.1 General requirements for 100 Ω and 120 Ω balanced cabling**

Replace line 1.14 in table 15 with the following:

	Cable characteristics	Units	Subsystem	Test method
1.14	Fire Rating		According to IEC 61156 unless otherwise requested by local regulation .	As applicable

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**8.2 General requirements for 150 Ω balanced cabling**

Replace line 1.15 in table 20 with:

	Cable characteristics	Units	Requirement	Test method
1.15	Fire Rating		According to IEC 61156 unless otherwise requested by local regulation	As applicable