SLOVENSKI STANDARD
SIST EN 50098-1:2003/A1:2003

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Customer premises cabling for Information Technology - Part 1: ISDN basic access

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Informationstechnische Verkabelung von Gebäudekomplexen -- Teil 1: ISDN-Basisanschluss

Câblages dans les locaux des usagers pour les technologies de l'information -- Partie 1: Accès de base RNIS

Ta slovenski standard je istoveten z: **EN 50098-1:1998/A1:2002**

ICS:

33.060.40	Kabelski razdelilni sistemi	Cabled distribution systems
33.080	Digitalno omrežje z integriranimi storitvami (ISDN)	Integrated Services Digital Network (ISDN)

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EUROPEAN STANDARD

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English version

Customer premises cabling for Information Technology Part 1: ISDN basic access

Câblages dans les locaux des usagers pour les technologies de l'information Partie 1: Accès de base RNIS

Informationstechnische Verkabelung von Gebäudekomplexen Teil 1: ISDN-Basisanschluss

This amendment A1 modifies the European Standard EN 50098-1:1998; it was approved by CENELEC on 2002-07-02. 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, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, 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

Ref. No. EN 50098-1:1998/A1:2002 E

Foreword

This amendment to the European Standard EN 50098-1:1998 was prepared by CENELEC TC 215, *Electrotechnical aspects of telecommunication equipment*, based upon a proposal of the ETSI Project Team Digital Terminals and Access, and with the co-operation of ETSI TM6, Access transmission systems on metallic cables.

The text of the draft was submitted to the Unique Acceptance Procedure and was approved by CENELEC as amendment A1 to EN 50098-1:1998 on 2002-07-02.

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)	2003-07-01
- latest date by which the national standards conflicting with the amendment have to be withdrawn	(dow)	2003-07-01

This amendment replaces 6.6 of EN 50098-1:1998 by a generalized specification of the star configuration as another configuration option for dedicated ISDN wiring.

Foreword

Delete in the last sentence of the last paragraph "and ETS 300 047-1 to ETS 300 047-5", **replace** "EN 60950" by "EN 60950-1" and "ETS 300012" **by** "EN 300 012-1".

Subclause 5.5

Replace in the 2nd paragraph "(7.2.1.3 of ETS 300 012:1992)" **by** "(10.7.1.3. of EN 300 012-1:2000)".

6 Configurations

6.6 **Replace** the existing 6.6 by the following text and **renumber** the figures from 6.7 onwards accordingly:

6.6 The star configuration

The star configuration which is shown in Figure 6a is primarily intended for the domestic and small office/home office (SOHO) environment.

Requirements

The NT shall be configured in short passive bus mode. The maximum number of branches shall be 4 (four). The maximum length of cabling from the NT to the farthest telecommunications outlet in any branch (i.e. d_8 + d_9) shall not exceed

a) 50 m, if either installed balanced cables match Category 3 or if d_8 and d_9 are implemented mixing Category 3 and Category 5 cables. Extension cords shall not be used to extend the cabling distance from NT to the socket beyond 50 m;

b) 100 m, if installed balanced cables match Category 5. Extension cords shall not be used to extend the cabling distance from NT to the socket beyond 100 m.

NOTE For minimum requirements of Category 3 cables and Category 5 cables see Annex A.

It is recommended not to use spurs to connect telecommunications outlets. However, if spurs are present they shall not exceed 1 m.

The polarity of each wire of the twisted pairs shall be maintained throughout the cabling.

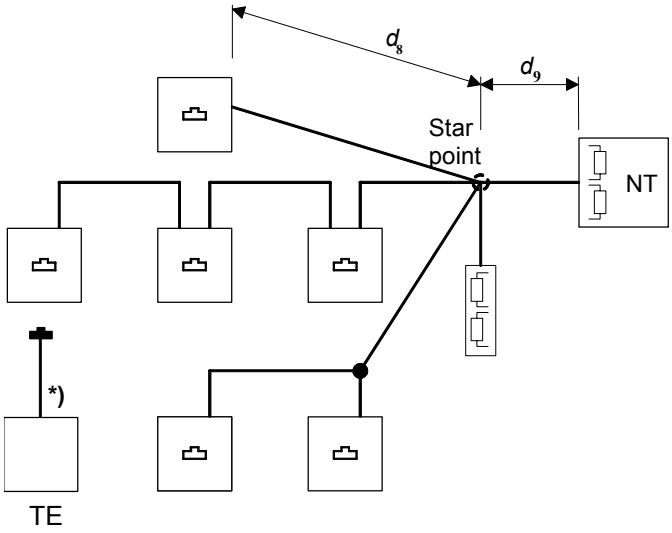
The 100 Ω termination resistors shall be permanently connected to the star point for proper administration of this configuration.

The maximum number of telecommunications outlets in a branch may exceed 1 (one) provided that the maximum number of TEs attached does not exceed 4 (four).

The individual branches of the star configuration may be connected at the star point in the following ways:

- hardwired (as indicated in Figure 6a);
- using connecting hardware in accordance with EN 50173-1 (see Figure 6b).

a) star configuration



d_8 length from the star point to the farthest telecommunications outlet in any branch
d_9 length from the star point to NT
*) TE connecting cord or integral cord
Maximum number of telecommunications outlets: 12 (twelve)
Maximum number of terminals: 4 (four)

b) implementation example of connections at the star point

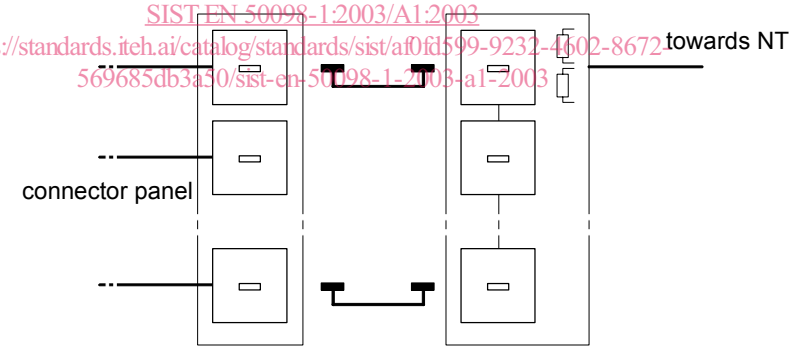


Figure 6 – ISDN star configuration

Annex A

Add the following annex and **rename** the existing annex A into Bibliography.

Annex A
(normative)

Characteristics of Category 3 and Category 5 cables

The general electrical characteristics of installed balanced 100 Ω Category 3 and 100 Ω and 120 Ω Category 5 cables are given in Table A.1, the required attenuation of these cables is given in Table A.2.

Table A.1 - General electrical characteristics of installed balanced 100 Ω and 120 Ω cables

Electrical characteristic		Frequency MHz	Cable type		
			100 Ω Category 3	100 Ω Category 5	120 Ω Category 5
a)	Characteristic impedance Z_0 Ω	0,064	125 ± 25	125 ± 25	125 ± 45
		≥ 1	100 ± 15	100 ± 15	120 ± 15
b)	Maximum d.c. loop resistance Ω/100 m	d.c.	30		
c)	Minimum velocity of propagation	1	0,4 × *c*	0,60 × *c*	
		10	0,6 × *c*	0,65 × *c*	
		100	N/A	0,65 × *c*	
d)	Maximum resistance unbalance %	d.c.	3		
e)	Maximum capacitance unbalance pair to ground pF/km	0,000 8 or 0,001	1 600		
f)	Maximum transfer impedance [a] mΩ/m	10	100		
g)	Minimum d.c. insulation resistance MΩ × km	d.c.	150		
h)	Dielectric strength conductor/conductor and conductor/screen	d.c. or a.c.	750 V, 1 min 500 V, 1 min		
i)	Minimum structural return loss dB at 100 m cable length	1 to 100	ffs		

[a] Only applicable when screens are present. Other measurement methods and values covering the coupling parameters of screened and unscreened cables are under consideration.

Table A.2 - Attenuation of installed balanced 100 Ω and 120 Ω cables

Electrical characteristic	Frequency MHz	Cable type		
		100 Ω Category 3	100 Ω Category 5	120 Ω Category 5
Maximum attenuation dB/100 m	0,064	0,9	0,8	0,8
	0,256	1,3	1,1	1,1
	0,512	1,8	1,5	1,5
	0,772	2,2	1,8	1,8
	1	2,6	2,1	2,0
	4	5,6	4,3	3,8
	10	9,8	6,6	5,7
	16	13,1	8,2	7,1
	20	N/A	9,2	8,0
	31,25	N/A	11,8	10,0
	62,5	N/A	17,1	15,0
	100	N/A	22,0	19,0

Bibliography

Replace the entry for EN 60950 by:

EN 60950-1, *Information technology equipment – Safety – Part 1: General requirements (IEC 60950-1:2001, modified).*

Replace the entry for ETS 300 012 by:

EN 300 012-1, *Integrated Services Digital Network (ISDN) – Basic User-Network Interface (UNI) – Part 1: Layer 1 specification*

Delete entries “ETS 300 047-1” to “ETS 300 047-5”.