# SLOVENSKI STANDARD
# SIST ETS 300 012/A1 E1:2003

## 01-december-2003

8 ][ ]Hᵁ bc˙ca fYÿˆYˇn˙]bhⱲ[ f]fᵁb]a ]˙ghcf]hj ᵁa ]˙f⊄G8 BŁ Ë˙Cgbc j b]˙j a Ygb]_˙i dcfᵁVb]_!
ca fYÿˆYˑË˙GdYWⱤ_Uⱳ⦁ᵁ˙df j Yˇd`Ugh˙]b˙bᵁ Yᵁ˙dfYg_i ý Ub⦁ᵁ

Integrated Services Digital Network (ISDN); Basic user-network interface Layer 1
specification and test principles

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**Ta slovenski standard je istoveten z:** ETS 300 012/A1 Edition 1

## ICS:

| | | |
|---|---|---|
| 33.080 | Digitalno omrežje z integriranimi storitvami (ISDN) | Integrated Services Digital Network (ISDN) |

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**ETS 300 012**

**A**MENDMENT

**A1**

**December 1994**

Source: ETSI TC-TM

Reference: RE/TM-03039

ICS: 33.080, 33.040.50

**Key words:** ISDN, user network interface, testing

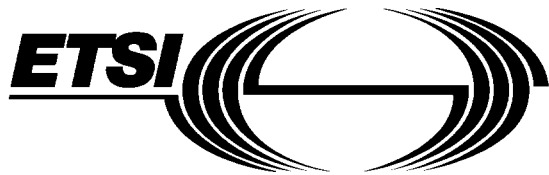**This amendment A1 modifies
the European Telecommunication Standard ETS 300 012 (1992)**

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2016bd41eb1b/sist-ets-300-012-a1-e1-2003

**Integrated Services Digital Network (ISDN);
Basic user-network interface
Layer 1 specification and test principles**

**ETSI**

European Telecommunications Standards Institute

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New presentation - see History box

**Page 2**
**ETS 300 012: April 1992/A1: December 1994**

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## Foreword

This Amendment to ETS 300 012 (1992) has been produced by the Transmission and Multiplexing (TM) Technical Committee of the European Telecommunications Standards Institute (ETSI).

## Amendments

### Page 18, figure 3

Replace figure 3 with the following figure:
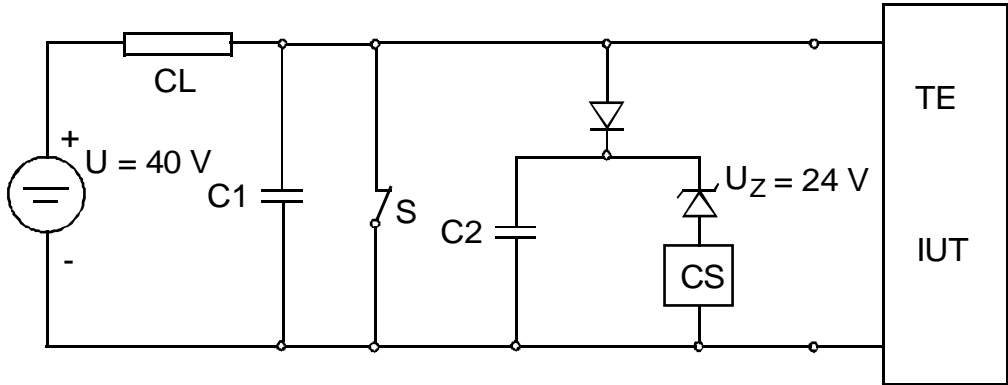


$U_Z$:    Zener voltage

**Figure 3: Power start up test for TE**

### Page 22, figure 7

Replace figure 7 with the following figure:
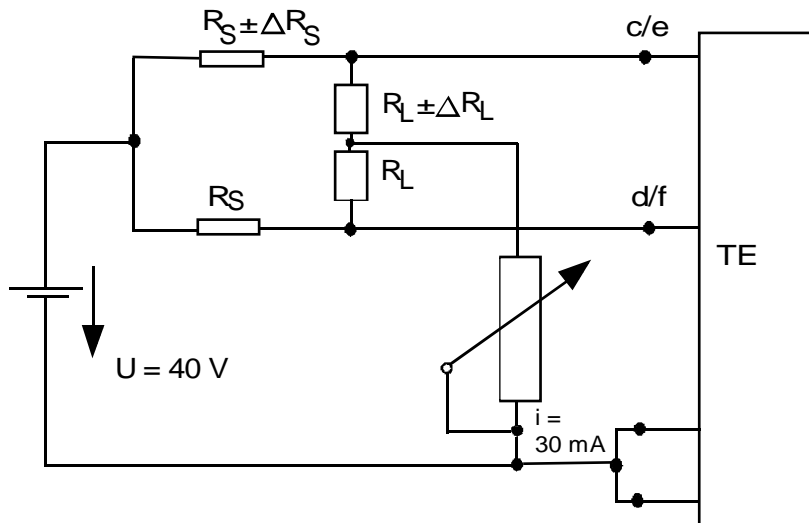


| $R_S = 6\ \Omega$ | $\triangle R_S = 360\ m\Omega$ |
|---|---|
| $R_L = 5\ \Omega$ | $\triangle R_L = 300\ m\Omega$ |

$$X = \frac{\triangle R_S}{2 R_S} = \frac{\triangle R_L}{2 R_L}$$

**Figure 7: Test circuit for applied current unbalance**

**Page 4**
**ETS 300 012: April 1992/A1: December 1994**

**Page 26, table A.1, table entry A.5.3.2**

Replace the table entry A.5.3.2 with the following:

```
     |             |                                            |     |
     |  A.5.3.2    |  TEs not powered across the interface      |     |
     |             |                                            |     |
     |             | _<The following text is added:             |     |
     |             |  A TE using the automatic assignment       |     |
     |             | procedure shall implement the              |     |
     |             | disconnect detector for detection of       |     |
     |             | power source 1 or 2 to establish the       |     |
     |             | connection status.                         |     |
     |             |                                            |     |
     |             |                                            |     |
```

**Page 29, table A.1, table entry A.6.2.6.1**

Replace the final paragraph for table entry A.6.2.6.1 with the following:

```
     |             |                                            |     |
     |             | _<In both paragraphs the term "INFO2"      |     |
     |             | shall be replaced (four times) by:         |     |
     |             |  "INFO2 or INFO4">                         |     |
     |             |                                            |     |
     |             |                                            |     |
```

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**Page 31, table A.1, table entry A.8.5.4**

The statement ("St.-ment") for table entry A.8.5.4 shall be changed to "I" (Informative), as follows:

```
| Clause/    | Title                               | St.- |
| subclause  | <Comment>                           | ment |
| A.8.5.4    | Pulse unbalance                     |  I   |
|            |  <The text under this subclause is  |      |
|            | replaced by:                        |      |
|            |                                     |      |
```

**Page 46, subclause D.1.4.4**

Replace the fourth instance of "N/R" with "D.3.2.2.1.1", producing a table as follows:

```
| Modes                          | Clause/    | Test defined in   |
|                                | subclause  | Clause/subclause  |
| Types of wiring configuration  |   A.4      |   N/R             |
| Point-to-point configuration   |   A.4.1    |   N/R             |
|  Point-to-multipoint           |   A.4.2    |   N/R             |
| configuration                  |            |                   |
| Polarity Integrity             |   A.4.3    |   D.3.2.2.1.1     |
| (figure 2/I.430 [2])           |            |                   |
| Interface Ia                   |   A.4.4    |   N/R             |
| TE associated wiring           |   A.4.5    |   N/R             |
```

**Page 50, subclause D.1.4.11**

Replace the final instance of "N/R" with "D.5.1.4.1" and add test for Annex B, Clause B.6, producing a table as follows:

| Requirements | Clause/ subclause | Test defined in Clause/subclause |
|---|---|---|
| Test loopbacks defined for the basic user-network interface | Annex A App. I | N/R |
| Additional requirements applicable to the explicit S reference point | B.1 to B.5 B.6 | N/R D.5.1.4.2 |
| TE design to minimise power disturbance | Annex C | D.5.1.4.1 |

**Page 57, subclause D.3.2.1**

Replace the table in subclause D.3.2.1 with the following table (modifying states 9, 16, 22, 40 and 46 and adding NOTE 9):

**Table to subclause D.3.2.1**

| STATE NO | CURRENT STATE | STIMULUS | NOTE | NEXT STATE | INFO SENT | COMMENT |
|---|---|---|---|---|---|---|
| 1 | F1 | Power | 1 | F2 | I0 | Detection of power |
| 2 | F1 | T3 expires | 2/6 | F1 | I0 | No action |
| 3 | F2 | Loss of Power | | F1 | I0 | Return to inactive state |
| 4 | F2 | Rx INFO 0 | 4 | F3 | I0 | Assume deactivated state |
| 5 | F2 | Rx INFO 2 | | F6 | I3 | Synchronised state |
| 6 | F2 | Rx INFO 4 | | F7 | I3 | Activated |
| 7 | F2 | Rx any signal | 3 | F2 | I0 | No action |
| 8 | F2 | T3 expires | 6 | F2 | I0 | No action |
| 9 | F3 | Loss of Power | 9 | F1 | I0 | Return to inactive |
| 10 | F3 | PH-AR | | F4 | I1 | Initiate activation & T3 |
| 11 | F3 | Rx INFO 0 | 4 | F3 | I0 | No action |
| 12 | F3 | Rx INFO 2 | | F6 | I3 | Synchronised state |
| 13 | F3 | Rx INFO 4 | | F7 | I3 | Activated |
| 14 | F3 | Rx any signal | 3 | F3 | I0 | No action |
| 15 | F3 | T3 expires | 2 | F3 | I0 | No action |
| 16 | F4 | Loss of Power | 9 | F1 | I0 | Return to inactive state |
| 17 | F4 | Rx INFO 0 | 4 | F4 | I1 | No action |
| 18 | F4 | Rx INFO 2 | 7 | F6 | I3 | Synchronised |
| 19 | F4 | Rx INFO 4 | 7 | F7 | I3 | Active |
| 20 | F4 | Rx any signal | 3 | F5 | I0 | Detection of signal |
| 21 | F4 | T3 Expires | 2 | F3 | I0 | Deactivated |
| 22 | F5 | Loss of Power | 9 | F1 | I0 | Return to inactive |
| 23 | F5 | Rx INFO 0 | 4 | F5 | I0 | No action |
| 24 | F5 | Rx INFO 2 | | F6 | I3 | Synchronised |
| 25 | F5 | Rx INFO 4 | | F7 | I3 | Activated |
| 26 | F5 | Rx any signal | 3 | F5 | I0 | No action |
| 27 | F5 | T3 Expires | 2 | F3 | I0 | Deactivated |
| 28 | F6 | Loss of Power | 8 | F1 | I0 | Return to inactive |
| 29 | F6 | Lost Framing | | F8 | I0 | Loss of framing signals |
| 30 | F6 | PH-AR | | F6 | I3 | No action |

(continued)

**Table to subclause D.3.2.1 (concluded)**

| STATE NO | CURRENT STATE | STIMULUS | NOTE | NEXT STATE | INFO SENT | COMMENT |
|---|---|---|---|---|---|---|
| 31 | F6 | Rx INFO 0 | 4 | F3 | I0 | Deactivated |
| 32 | F6 | Rx INFO 2 | | F6 | I3 | No action |
| 33 | F6 | Rx INFO 4 | | F7 | I3 | Activated |
| 34 | F6 | T3 Expires | 2 | F6 | I3 | Synchronised |
| 35 | F7 | Loss of Power | 8 | F1 | I0 | Return to inactive |
| 36 | F7 | Lost Framing | | F8 | I0 | Loss of framing |
| 37 | F7 | Rx INFO 0 | 4/5 | F3 | I0 | Deactivated |
| 38 | F7 | Rx INFO 2 | | F6 | I3 | Synchronised |
| 39 | F7 | Rx INFO 4 | | F7 | I3 | No action |
| 40 | F8 | Loss of Power | 9 | F1 | I0 | Return to inactive |
| 41 | F8 | PH-AR | | F8 | I0 | No action |
| 42 | F8 | Rx INFO 0 | 4/5 | F3 | I0 | Deactivation |
| 43 | F8 | Rx INFO 2 | | F6 | I3 | Synchronised |
| 44 | F8 | Rx INFO 4 | | F7 | I3 | Activated |
| 45 | F8 | Rx any signal | 3 | F8 | I0 | No action |
| 46 | F8 | T3 expires | 2 | F3 | I0 | Assume deactivated state |

NOTE 1:     Because the IUT can be powered in different ways, it is useful to test this IUT with the possible power it is able to detect (PS1, PS2, local power).

NOTE 2:     T3 = Implementation dependent, not to exceed 30 sec.

NOTE 3:     "Any signal" is simulated by any bit pattern on which the IUT conforming to subclause A.6.3.1.2, ETS 300 012 is not able to synchronise.

NOTE 4:     For testing purposes INFO 0 is simulated by a sinusoidal signal having a voltage of 100 mV peak to peak (with a frequency in the range of 2 kHz to 1000 kHz). The TE shall react by transmitting INFO 0 within a period time 250 µs to 25 ms.

NOTE 5:     The PH-DI corresponding to the reception of INFO 0 shall be delivered to Layer 2 only if Layer 1 does not re-enter an active state before the expiration of a timer of which the value is in the range of 500 ms to 1 s.

NOTE 6:     Applicable only for TEs which are locally powered and able to detect PS1 or PS2.

NOTE 7:     If INFO 2 of INFO 4 is not recognised within 5 ms after the appearance of a signal, TE shall go to F5. The result is to be tested 5 ms after generation of the stimulus.

NOTE 8:     For TEs which are locally powered and able to detect PS1 or PS2, at the event "disappearance of power" in states F6 or F7, no state change shall be observed.

NOTE 9:     Locally powered TEs with disconnected detector shall not assume disconnection and shall not take any action until the voltage of the interface has remained below 24 V for at least 500 ms (refer to subclause 7.1.1).

**Page 58, subclause D.3.2.2.1.1**

Replace the title of subclause D.3.2.2.1.1 with the following title:

**D.3.2.2.1.1      Test A, in state F3 (subclauses A.4.3 and A.6.2.6.1, ETS 300 012)**

**Page 58, subclause D.3.2.2.1.1**

Replace the paragraph "Stimulus:" with the following text:

Stimulus:                    INFO 2 type frames from the network. This test shall be performed with both normal and reversed polarity of the interchange circuit (NT to TE direction).

**Page 68, subclause D.3.3**

Replace the results and notes 3 and 4 with the following:

Results:

| | STIMULUS | RESULTS | COMMENTS |
|---|---|---|---|
| a) | 1 bad frame | INFO 3 | No loss of framing |
| b) | 5 bad frames | INFO 0 | Framing lost |
| c) | 2 good frames | INFO 0 | Framing not regained |
| d) | 6 good frames (note 3) | INFO 3 | Framing regained within 5 frames |

NOTE 3:      Before the test, the TE shall be in state F8. The input shall be applied with "Any signal". Multiframing is not covered by this test.

**Page 73, subclause D.4.2**

Replace the first paragraph of subclause D.4.2, with a subclause heading as follows:

**D.4.2.1      TE jitter measurement characteristics (test A) (subclause A.8.2.2, ETS 300 012)**