



# AMENDMENT

**TBR 12**

**A1**

January 1996

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ICS: 33.120

**Key words:** ONP, leased lines, D2048U

**This amendment A1 modifies  
the Technical Basis for Regulation TBR 12 (1993)**

**Business TeleCommunications (BTC);  
Open Network Provision (ONP) technical requirements;  
2 048 kbit/s digital unstructured leased line (D2048U);  
Attachment requirements for terminal equipment interface**

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## Foreword

This amendment to TBR 12 (1993) has been produced by the Business TeleCommunications (BTC) Technical Committee of the European Telecommunications Standards Institute (ETSI).

This amendment changes TBR 12 (1993) as described below:

The connector type specified, conforming to ISO/IEC 10173 (1991), cannot be manufactured. Since a standardized connector is not available, the terminal equipment is required to provide either a point for connection of solid conductors, or solid conductors themselves. In order to allow connection to be made using other methods, the TE is permitted to be supplied with other connection schemes (e.g. connectors).

## Amendments

### Page 7, amendment to clause 2

Delete reference [3].

### Page 8, amendment to subclause 5.1

Replace subclause 5.1 with subclauses 5.1, 5.1.1 and 5.1.2 as given below:

#### "5.1 Physical characteristics

**Justification:** Without a connection method defined, it is impossible for the terminal equipment to connect to the network, therefore this is required for the terminal equipment to interwork with the network (article 4f).

Currently no standardized connector is readily available. Consequently, the only method of connection that can be specified in this TBR is the use of solid conductors of 0,4 to 0,6 mm. This TBR requires the TE to be capable of presenting either a point for the attachment of unterminated solid conductors, or solid conductors themselves (see subclause 5.1.1). It is a requirement that such a connection method be available to be provided for use with the TE if necessary.

In order to allow connection to be made using other methods (e.g. connectors), the TE is permitted to be supplied with a connection method suitable for use with those methods (see subclause 5.1.2).

NOTE 1: The following are examples of arrangements that comply with the requirements. The list below should not be regarded as an exhaustive list of all permitted arrangements:

- a) a cord, permanently connected to the terminal equipment at one end and unterminated at the other end, with wires that are solid conductors with diameters in the range 0,4 to 0,6 mm;
- b) a cord, connected via a plug and socket to the terminal equipment at one end and unterminated at the other end, with wires that are solid conductors with diameters in the range 0,4 to 0,6 mm;
- c) an insulation displacement connector, designed to accept wires with solid conductors with diameters in the range 0,4 to 0,6 mm, but with no cord;
- d) a screw connector, designed to accept wires with solid conductors with diameters in the range 0,4 to 0,6 mm, but with no cord;
- e) the arrangement in b) plus one or more additional alternative cords with the same plug or socket arrangement at the terminal end and any plug or socket at the other end;
- f) the arrangement in c) or d) plus one or more cords suitable for connection to the terminal equipment at one end and any plug or socket at the other end.

The transmit pair is the output from the terminal equipment interface. The receive pair is the input to the terminal equipment interface, as shown in figure 1. Where the terms "output" and "input" are used without qualification in this TBR, they refer to the terminal equipment interface.

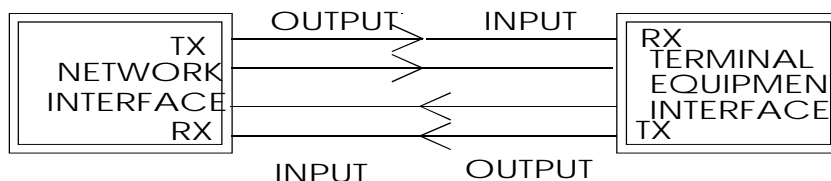


Figure 1

NOTE 2: The use of a shielded cord or cable may be necessary to meet radiation and immunity requirements defined in Electro-Magnetic Compatibility (EMC) standards.

#### 5.1.1 Hardwired connection

**Requirement:** The terminal equipment shall provide:

- a) a set of connection contacts (e.g. an insulation displacement connector or a screw terminal block) to which solid wire conductors with diameters in the range 0,4 to 0,6 mm may be connected; or
- b) a wiring arrangement connected by any means to the terminal equipment, with unterminated solid wire conductors with diameters in the range 0,4 to 0,6 mm at the end distant from the terminal equipment.

**Test:** There is no test. All subsequent tests are carried out via the specified connection method.

#### 5.1.2 Alternative means of connection

Any alternative means of connection may be provided in addition to the connection arrangements under subclause 5.1.1.

#### Page 14, amendment to subclause A.1.1, first paragraph

Delete the first sentence:

"The tests shall normally be applied at the plug for connection to the NTP."

and replace with:

"The tests in this TBR shall be carried out using the connection method suitable for use with unterminated solid conductors as defined in subclause 5.1.1."

#### Page 14, amendment to subclause A.1.1, note

Delete "the normal plug and cord" and replace with "additional wiring".

Delete "5.1" and replace with "5.1.2".

**History**

<b>Document history</b>	
December 1993	First Edition
June 1995	Unified Approval Procedure UAP 30: 1995-06-05 to 1995-09-29
January 1996	Amendment 1 to 1st Edition