

INTERNATIONAL STANDARD



AMENDMENT 1

**Information technology – Implementation and operation of customer premises cabling –
Part 3: Testing of optical fibre cabling**



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**Information technology – Implementation and operation of customer premises cabling –
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FOREWORD

This amendment has been prepared by subcommittee SC 25: Interconnection of information technology equipment, of ISO/IEC joint technical committee 1: Information technology.

This document has been approved by vote of the member bodies, and the voting results may be obtained from the address given on the second title page.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

INTRODUCTION to the amendment

This document contains information for inspecting end faces of the different kinds of installed fibre optic cabling interfaces and connectors of test cords and recommendations for cleaning these interfaces, and replaces the normative Annex B and deletes the informative Annex H of ISO/IEC 14763-3:2014.

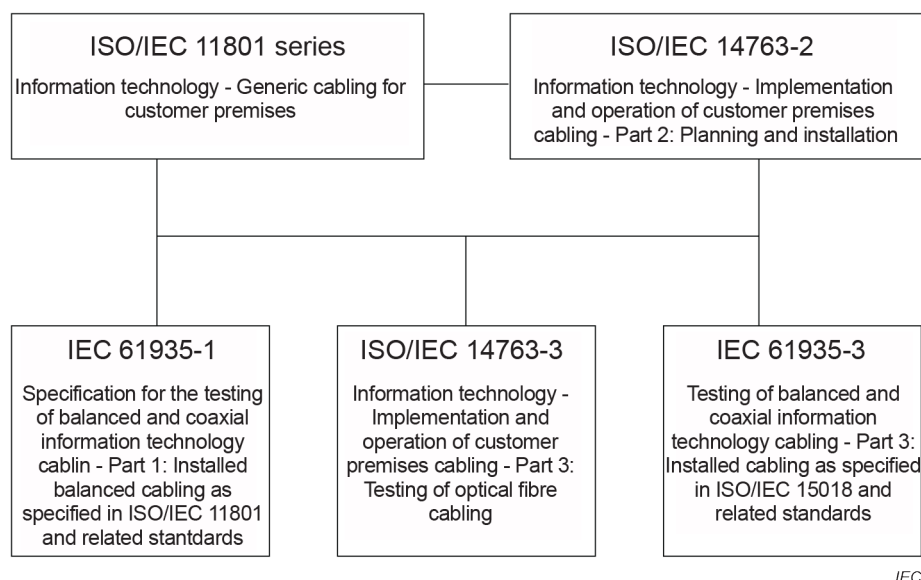
Additional information regarding channel and link testing is provided to Annex E.

Introduction

Replace paragraphs 1 to 3, including Figure 1, with the following:

This International Standard has been prepared in support of International Standard series ISO/IEC 11801.

Figure 1 below shows the inter-relationship between the ISO/IEC 11801 series and other International Standards and for cabling systems with related standards.



NOTE ISO/IEC 15018 has been replaced by ISO/IEC 11801-4.

Figure 1 – Relationship of related International Standards

ISO/IEC 14763-3 details the inspection and test procedures for optical fibre cabling,

- a) designed in accordance with premises cabling standards including the ISO/IEC 11801 series, and
- b) installed according to the requirements and recommendations of ISO/IEC 14763-2.

In the NOTE, replace "ISO/IEC 11801" with "ISO/IEC 11801-1".

1 Scope

Replace "ISO/IEC 11801, ISO/IEC 24764, ISO/IEC 24702 and ISO/IEC 15018" with "the ISO/IEC 11801 series".

2 Normative references

Replace the reference to ISO/IEC 11801 with the following new reference:

ISO/IEC 11801-1, *Information technology – Generic cabling for customer premises – Part 1: General requirements*

Replace the reference to IEC 61300-3-35:2009 with the following new reference:

IEC 61300-3-35, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-35: Examinations and measurements – Visual inspection of fibre optic connectors and fibre-stub transceivers*

Clauses 3, 6, 8, 9, 10, E.1, F.1, G.1 and G.2

Replace all instances of "ISO/IEC 11801" in these clauses with "ISO/IEC 11801-1".

3.1 Terms and definitions

Add the following new terms and definitions:

3.1.25

defect

surface feature such as pits, chips and loose debris

3.1.26

loose debris

particles and debris on the surface that can be removed by cleaning

3.1.27

pit

permanent non-linear surface damage

3.1.28

scratch

permanent linear surface damage

3.2 Abbreviations

Add the following new abbreviation:

LC LC connector

Replace the existing MPO abbreviation with the following:

MPO Multi-fibre Push On connector (based on rectangular ferrule)

9.1.1.1 General

Add the following new paragraphs after the first paragraph:

According to ISO/IEC 11801-1, a channel does not include the connector on the equipment cords that interfaces with the network equipment. The optical attenuation limits specified for network equipment take into account the attenuation associated with the connections of the equipment to the installed cabling.

The testing of a channel utilizes the customer's equipment cords at both ends of the channel and these cords are left in place after testing. The channel test method is normally used to measure the attenuation of a channel at the time of service implementation or maintenance.

The channel and link test method requires a new reference for any change of connection at the light source and/or the power meter between tests since the connection between source and connected cord should never be disturbed after a reference measurement has been taken.

Inspect and clean when necessary the connector interfaces of the source, the launch test cord, the tail test cord and substitution test cord.

Allow sufficient time for light source stabilization in accordance with light source manufacturer's recommendations.

9.1.1.2 Enhanced three-test-cord attenuation measurement test method of installed channels

Replace 9.1.1.2 with the following:

9.1.1.2 Channel test method

The procedure for channel testing is as follows.

- a) Connect the launch test cord (LTC) to the light source (LS) at one end and to the equipment (EQP) cord at the other end. Connect equipment cord to the power meter (PM). Allow sufficient time for the light source stabilization in accordance with light source manufacturer's recommendations. (See Figure 8). Since this reference measurement is carried out with a near end EQP cord, the defect of near end EQP cord may not be found. When this test method is used, the quality of the near end EQP cord shall comply with the requirement.

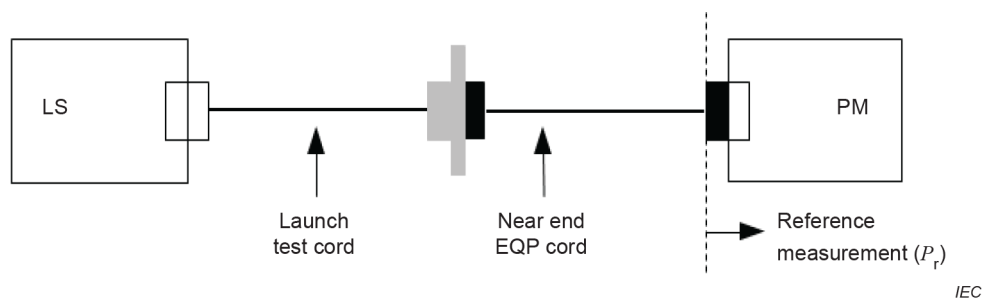


Figure 8 – Connection of LS – LTC – Near end EQP cord – PM for reference setting

- b) The reference measurement, P_r , shall be recorded in watts (W) or decibel-milliwatts (dBm).
- c) The near end EQP cord is disconnected from the power meter and the LTC-EQP cord combination is reconnected to the fixed cable of the channel under test.
- d) At the far end of the channel, connect the far end EQP cord to the power meter, see Figure 20).

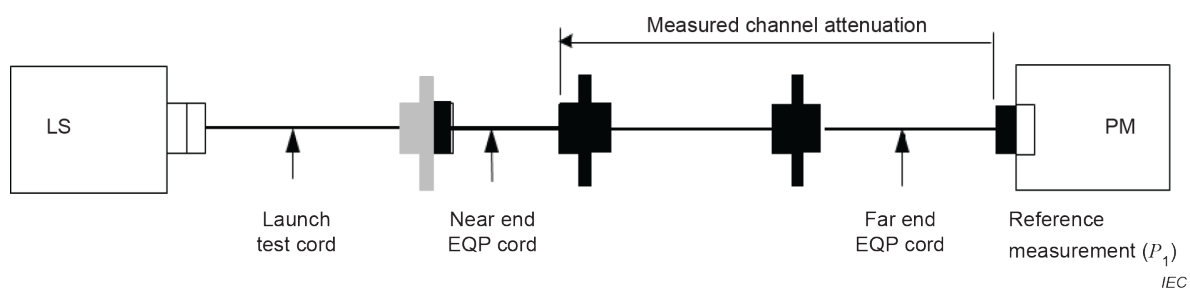


Figure 20 – Connections to channel test for attenuation measurement

- e) The power P_1 is measured directly at the far end EQP cord. The measurement, P_1 , shall be recorded in watts (W) or decibel-milliwatts (dBm).
- f) The attenuation of the channel is:

$$A = P_r - P_1 \quad (\text{dB}) \quad (1)$$

where P_1 and P_r are expressed in dBm.

If P_1 and P_r are expressed in W, then the measured attenuation can be calculated as follows: