Connectors sets and interconnect components to be used in optical fibre communication systems - Product specifications -- Part 10-2: MU-APC singlemode terminated on IEC 60793-2 category B1 fibre

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 50377-10-2:2008 sisaldab Euroopa standardi EN 50377-10-2:2005 ingliskeelset teksti.	This Estonian standard EVS-EN 50377-10-2:2008 consists of the English text of the European standard EN 50377-10-2:2005.
Standard on kinnitatud Eesti Standardikeskuse 24.07.2008 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.	This standard is ratified with the order of Estonian Centre for Standardisation dated 24.07.2008 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.
Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 26.05.2008.	Date of Availability of the European standard text 26.05.2008.
Standard on kättesaadav Eesti standardiorganisatsioonist.	The standard is available from Estonian standardisation organisation.

ICS 33.180.20

Võtmesõnad:

EUROPEAN STANDARD **EN 50377-10-2**

NORME EUROPÉENNE

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ICS 33.180.20

English version

Connectors sets and interconnect components to be used in optical fibre communication systems – Product specifications Part 10-2: MU-APC singlemode terminated on IEC 60793-2 category B1 fibre

Jeux de connecteurs et composants d'interconnexion à utiliser dans les systèmes de communication par fibres optiques – Spécifications de produit Partie 10-2: Type MU-APC cablé sur une fibre unimodale de la catégorie B1 de la CEI 60793-2

Steckverbindersätze und Verbindungsbauelemente für Lichtwellenleiter-Datenübertragungssysteme – Produktnormen Teil 10-2: Bauart MU-APC zum Anschluss an Einmodenfasern der Kategorie B1.1 nach IEC 60793-50

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 50377-10-2:2005 E

Foreword

This European Standard was prepared by the Technical Committee CENELEC TC 86BXA, Fibre optic interconnect, passive and connectorised components.

The text of the project was submitted to the Unique Acceptance Procedure and was approved by CENELEC on 2004-12-01.

The following dates were fixed:

– latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2005-12-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2007-12-01

PRODUCT SPECIFICATION FOR CONNECTOR SET TO BE USED IN SINGLE MODE OPTICAL FIBRE COMMUNICATION SYSTEMS

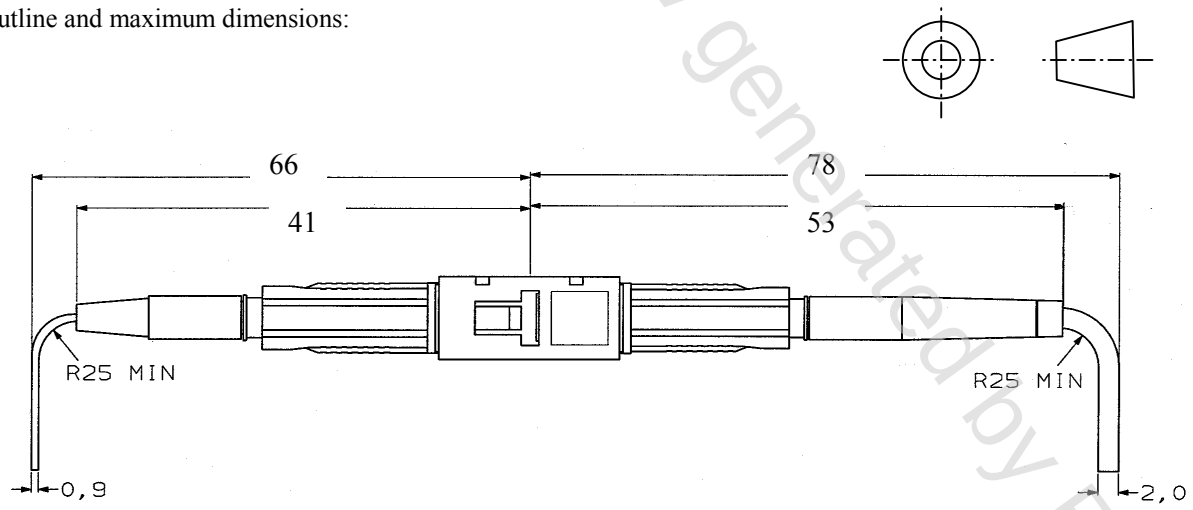
Type: **MU-APC singlemode terminated on IEC 60793-2 category B1 fibre**

Description		Performance	
Coupling mechanism:	push-pull	Application:	For use in EN Category U and ES 200-671 environments (see 1.3)
Configuration:	plug/adaptor/plug		
Fibre category:	IEC 60793-2-50 type B1	Attenuation Grades: (Random Mate)	P: <0,35 dB mean. <1,0 dB for >97% of measurements Q: <0,30 dB mean. <0,60 dB for >99% of measurements
Cable type	see Table 3		
		Return Loss:	V: ≥ 55 dB unmated

Related documents:

IEC 61754-6	Fibre optic connector interfaces - Part 6: Type MU connector family
EN 61300-series	Fibre optic interconnecting devices and passive components – Basic test and measurement procedures
IEC 60794-2	Optical Fibre Cables - Part 2: Indoor cables – Sectional specification
IEC 61753-1-1	Fibre optic interconnecting devices and passive components performance standard – Part 1-1: General and guidance - Interconnecting devices (connectors)
EN 186000	Generic Specification – connector sets for optical fibres and cables
ES 200 671	Transmission and Multiplexing (TM) – Passive optical components – Optical fibre connectors for single-mode optical fibre communication systems – Common requirements and conformance testing
EN 300 019-series	Equipment Engineering (EE) – Environmental conditions and environmental tests for telecommunications equipment
IEC 60793-2 -50	Optical Fibre Cables - Part 2-50: Product Specifications

Outline and maximum dimensions:



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1 Scope

1.1 Product definition

This European Standard contains the initial, start of life dimensional, optical, mechanical and environmental performance requirements which a terminated and assembled singlemode resilient alignment sleeve MU-APC simplex connector set (plug adaptor plug) must meet in order for it to be categorised as an EN standard product.

Since different variants and grades of performance are permitted, product marking details are given in Section 3.5.

1.2 Intermateability

Although all products conforming to the requirements of this specification will intermate, the resulting level of random attenuation performance will only be ensured in accordance with Table 1. The intention is that this will be true irrespective of the manufacturing source(s) of the product.

In all cases, the intermating of plug variants having different attenuation or return loss grades will result in an uncertain level of random attenuation performance. When intermating plug variants having different return loss grades, the resulting level of return loss can not be assured to be any better than the worst return loss grade

Similarly, the intermating of a grade P plug with a grade Q plug will result in an uncertain level of random attenuation performance.

Table 1 - Ensured level of random attenuation

Plug variant/Attenuation grade	P	Q
P	P	P
Q	P	Q

1.3 Operating environment

The tests selected combined with the severities and durations are representative of an IEC Category U environment and the ES 200 671 environment.

1.4 Reliability

Whilst the anticipated service life expectancy of the product in this environment is 20 years, compliance with this specification does not guarantee the reliability of the product. This should be predicted using a recognised reliability assessment programme.

1.5 Quality assurance

Compliance with this specification does not guarantee the manufacturing consistency of the product. This should be maintained using a recognised quality assurance programme.

2 Normative references

IEC 61754-6	Fibre optic connector interfaces dimensions - Part 6: Type MU connector family
EN 61300 series	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures (IEC 61300 series)
EN 61300-2-1	Part 2-1: Tests - Vibration (sinusoidal) (IEC 61300-2-1)
EN 61300-2-2	Part 2-2: Tests - Mating durability (IEC 61300-2-2)
EN 61300-2-4	Part 2-4: Tests - Fibre/cable retention (IEC 61300-2-4)
EN 61300-2-5	Part 2-5: Tests – Torsion/twist (IEC 61300-2-5)
EN 61300-2-6	Part 2-6: Tests - Tensile strength of coupling mechanism (IEC 61300-2-6)
EN 61300-2-7	Part 2-7: Tests – Bending moment (IEC 61300-2-7)
EN 61300-2-12	Part 2-12: Tests – Impact (IEC 61300-2-12)
EN 61300-2-17	Part 2-17: Tests – Cold (IEC 61300-2-17)
EN 61300-2-18	Part 2-18: Tests - Dry heat - High temperature endurance (IEC 61300-2-18)
EN 61300-2-19	Part 2-19: Tests - Damp heat (steady state) (IEC 61300-2-19)
EN 61300-2-21	Part 2-21: Tests – Composite temperature-humidity cyclic test (IEC 61300-2-21)
EN 61300-2-22	Part 2-22: Tests - Change of temperature (IEC 61300-2-22)
EN 61300-2-26	Part 2-26: Tests – salt mist (IEC 61300-2-26)
EN 61300-2-27	Part 2-27: Tests – Dust – Laminar flow (IEC 61300-2-27)
EN 61300-2-42	Part 2-42: Tests - Static side load for connectors (IEC 61300-2-42)
EN 61300-2-46	Part 2-46 Test Dampheat Cyclic
EN 61300-3-3	Part 3-3: Examinations and measurements - Monitoring change in attenuation and in return loss (multiple paths) (IEC 61300-3-3)
EN 61300-3-4	Part 3-4: Examinations and measurements – Attenuation (IEC 61300-3-4)
EN 61300-3-6	Part 3-6: Examinations and measurements - Return loss (IEC 61300-3-6)
EN 61300-3-23	Part 3-23: Examination and measurements - Fibre position relative to ferrule endface (IEC 61300-3-23)
EN 61300-3-28	Part 3-28: Examination and measurements - Transient loss (IEC 61300-3-28)
EN 61300-3-34	Part 3-34: Examinations and measurements - Attenuation of random mated connectors (IEC 61300-3-34)
EN 61753-1-1	Fibre optic interconnecting devices and passive components performance standard - Part 1-1: General and guidance - Interconnecting devices (connectors) (IEC 61753-1-1)
EN 186000-1	Generic Specification: Connector sets for optical fibres and cables – Part 1: Requirements, test methods and qualification approval procedures
EN 300 019-series	Equipment Engineering (EE) – Environmental conditions and environmental tests for telecommunications equipment
ES 200 671	Transmission and Multiplexing (TM) – Passive optical components – Optical fibre connectors for single-mode optical fibre communication systems – Common requirements and conformance testing
IEC 60793-2-50	Optical fibres - Part 2-50: Product specifications – Sectional specification for class B single-mode fibres
IEC 60794-2	Optical fibre cables - Part 2: Indoor cables - Sectional specification