

### SLOVENSKI STANDARD SIST EN 61756-1:2006

01-oktober-2006

### Povezovalne naprave in pasivne komponente optičnih vlaken – Vmesniški standard za sisteme upravljanja z optičnimi kabli – 1. del: Splošno in napotki (IEC 61756-1:2006)

Fibre optic interconnecting devices and passive components - Interface standard for fibre management systems -- Part 1: General and guidance

Lichtwellenleiter Verbindungselemente und passive Bauteile - Schnittstellennorm für Einzelfasermanagementsysteme -- Teil 1: Allgemeines und Leitfaden (standards.iteh.ai)

Dispositifs d'interconnexion et composants passifs à fibres optiques - Norme d'interface pour les systèmes de gestion de fibres - Partie 1: Généralités et lignes directrices 27702d22dfa7/sist-en-61756-1-2006

Ta slovenski standard je istoveten z: EN 61756-1:2006

### <u>ICS:</u>

33.180.20 Povezovalne naprave za optična vlakna

Fibre optic interconnecting devices

SIST EN 61756-1:2006

en



## iTeh STANDARD PREVIEW (standards.iteh.ai)

<u>SIST EN 61756-12006</u> https://standards.iteh.ai/catalog/standards/sist/97c2380d-352c-441d-9322-27702d22dfa7/sist-en-61756-1-2006

#### SIST EN 61756-1:2006

## EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

## EN 61756-1

July 2006

ICS 33.180.01

English version

### Fibre optic interconnecting devices and passive components -Interface standard for fibre management systems Part 1: General and guidance

(IEC 61756-1:2006)

Dispositifs d'interconnexion et composants passifs à fibres optiques -Norme d'interface pour les systèmes de gestion de fibres Partie 1: Généralités et lignes directrices (CEI 61756-1:2006) Lichtwellenleiter Verbindungselemente und passive Bauteile -Schnittstellennorm für Einzelfasermanagementsysteme Teil 1: Allgemeines und Leitfaden (IEC 61756-1:2006)

### iTeh STANDARD PREVIEW (standards.iteh.ai)

This European Standard was approved by CENELEC on 2006-06-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration sist/97c2380d-352c-441d-9322-

27702d22dfa7/sist-en-61756-1-2006

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 European Standard 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, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the 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

© 2006 CENELEC - All rights of exploitation in any form and by any means reserved worldwide for CENELEC members.

#### Foreword

The text of document 86B/2283/FDIS, future edition 1 of IEC 61756-1, prepared by SC 86B, Fibre optic interconnecting devices and passive components, of IEC TC 86, Fibre optics, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61756-1 on 2006-06-01.

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)	2007-03-01
-	latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2009-06-01

Annex ZA has been added by CENELEC.

#### **Endorsement notice**

The text of the International Standard IEC 61756-1:2006 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

	II EN SIANDARD PREVIEW
IEC 60794-2	NOTE Harmonized as EN 60794-2:2003 (not modified).
	(standards.iteh.ai)
IEC 60794-3	NOTE Harmonized as EN 60794-3:2002 (not modified).
	SIST EN 61756-1:2006
IEC 62134-1	https://siNQTEdsHarmonized.as EN 62134-1:2002 (not modified) 441d-9322-
	27702d22dfa7/sist-en-61756-1-2006

### Annex ZA

- 3 -

#### (normative)

# Normative references to international publications with their corresponding European publications

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Publication	Year	Title	<u>EN/HD</u>	Year
IEC 60793-2	_ <sup>1)</sup>	Optical fibres Part 2: Product specifications - General	EN 60793-2	2004 <sup>2)</sup>

## iTeh STANDARD PREVIEW (standards.iteh.ai)

<u>SIST EN 61756-1:2006</u> https://standards.iteh.ai/catalog/standards/sist/97c2380d-352c-441d-9322-27702d22dfa7/sist-en-61756-1-2006

<sup>&</sup>lt;sup>1)</sup> Undated reference.

<sup>&</sup>lt;sup>2)</sup> Valid edition at date of issue.



## iTeh STANDARD PREVIEW (standards.iteh.ai)

<u>SIST EN 61756-12006</u> https://standards.iteh.ai/catalog/standards/sist/97c2380d-352c-441d-9322-27702d22dfa7/sist-en-61756-1-2006 SIST EN 61756-1:2006

# NORME INTERNATIONALE INTERNATIONAL STANDARD

CEI **IEC** 61756-1

Première édition First edition 2006-05

Dispositifs d'interconnexion et composants passifs à fibres optiques – Norme d'interface pour les systèmes de gestion de fibres –

### i Partie 1: ANDARD PREVIEW Généralités et lignes directrices (standards.iteh.al)

Fibre optic interconnecting devices and passive components – Interface standard for fibre management systems –

Part 1: General and guidance

© IEC 2006 Droits de reproduction réservés — Copyright - all rights reserved

Aucune partie de cette publication ne peut être reproduite ni utilisée sous quelque forme que ce soit et par aucun procédé, électronique ou mécanique, y compris la photocopie et les microfilms, sans l'accord écrit de l'éditeur. No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

International Electrotechnical Commission, 3, rue de Varembé, PO Box 131, CH-1211 Geneva 20, Switzerland Telephone: +41 22 919 02 11 Telefax: +41 22 919 03 00 E-mail: inmail@iec.ch Web: www.iec.ch



Commission Electrotechnique Internationale International Electrotechnical Commission Международная Электротехническая Комиссия





Pour prix, voir catalogue en vigueur For price, see current catalogue

### CONTENTS

FOI	REWC	)RD	.5
1	Scop	e	.9
2	Norm	ative references	11
3	Defin	itions and abbreviations	11
	3.1	Definitions	11
	3.2	Abbreviations	21
4	Funct	tions of the fibre management system2	21
	4.1	Single Circuit (SC) Management System	23
	4.2	Single Element (SE) Management System	23
	4.3	Multiple Element (ME) Management System	23
5	Parts	and content of a fibre management system2	23
	5.1	Splice tray	25
	5.2	Splice holder	27
	5.3	Splice Protection	27
	5.4	Guiding elements	29
	5.5	Bending radius	
	5.6	Fibre storageT.ehST.AND.A.R.DP.R.E.V.IE.W	
	5.7	Patchcords and pigtails	31
	5.8	Identification of fibres, fibre tubes or single elements	31
Fia	ure 1 -	- Single circuit management	13
Fig	ure 2 -	- Single circuit management System 61756-1:2006 https://standards.iteh.ai/catalog/standards/sist/97c2380d-352c-441d-9322- - Single element management system en-61756-1-2006	15
		- Multiple element management system	
-			
-		- Patchcord	
Fig	ure 5 -	- Pigtail2	21
Tab	ole 1 –	Typical Splice Protector Types and Dimensions	29

61756-1 © IEC:2006

#### INTERNATIONAL ELECTROTECHNICAL COMMISSION

### FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS – INTERFACE STANDARD FOR FIBRE MANAGEMENT SYSTEMS –

### Part 1: General and guidance

#### FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees. TANDARD PREVIEW
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with an IEC Publication.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 61756-1 has been prepared by subcommittee 86B: Fibre optic interconnecting devices and passive components, of IEC technical committee 86: Fibre optics.

The text of this standard is based on the following documents:

FDIS	Report on voting
86B/2283/FDIS	86B/2316/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

61756-1 © IEC:2006

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

IEC 61756 consists of the following parts, under the general title *Fibre optic interconnecting devices and passive components – Interface standard for fibre management systems*:

- Part 1: General and guidance
- Part 2-1: Single circuit management system (under consideration)
- Part 2-2: Single element management system (under consideration)
- Part 2-3: Multiple element management system (under consideration)

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

### iTeh STANDARD PREVIEW (standards.iteh.ai)

<u>SIST EN 61756-1:2006</u> https://standards.iteh.ai/catalog/standards/sist/97c2380d-352c-441d-9322-27702d22dfa7/sist-en-61756-1-2006

### FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS -INTERFACE STANDARD FOR FIBRE **MANAGEMENT SYSTEMS –**

#### Part 1: General and guidance

#### Scope 1

This part of IEC 61756 covers general information on the subject of fibre management system (FMS) interfaces. It includes references, document structure details, definitions and the rules under which a FMS interface is created.

This interface standard defines a fibre management system which is part of an optical network. It provides facilities for the direct exchange of optical signals between the incoming and outgoing fibre optic cables. In order to comply with the standard, the optical functionality, physical, geometrical and mechanical requirements shall be met.

These facilities comprise functional and installation aspects for fibres or ribbons like storage, fibre routing, identification, interconnection, reconfiguration, application of passive and active components, protection and traceability.

The fibre management system allows different degrees of physical separation of optical circuits. This is in order to reduce the risk of disturbing other circuits that do not belong to the same group as the ones that are to be manipulated. st/97c2380d-352c-441d-9322-

Depending on the grouping, guiding and splicing of the fibres from incoming and outgoing cables, the fibre management system can be a single circuit, a single element or a multiple element management system. Single circuit management describes a management system where one or more fibres of a cable element are spliced and/or stored in individual trays. Single element management describes a management system where all fibres of a cable element are spliced and/or stored in individual trays. Multiple element management describes a management system where fibres from more than one cable element are spliced and/or stored in individual trays.

The fibre management system shall be independent from one specific application or housing. It is designed in a way to allow the use for several applications in different housings, e.g. a single circuit management system can be used in a closure, enclosure and open rack.

This specification is related to both singlemode and multimode fibres.

To fulfil the mentioned functions, a fibre management system is normally integrated in an enclosure, e.g. a closure, case or cabinet or it is part of an open access system like an optical distribution frame or rack.