



SLOVENSKI STANDARD
SIST EN 186230:1999

01-julij-1999

Sectional Specification: Connector sets for optical fibres and cables - Type LSF

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Rahmenspezifikation: Steckverbindersätze für Lichtwellenleiter und Lichtwellenleiterkabel - Bauart LSF

Spécification intermédiaire: Jeux de connecteurs pour fibres et câbles optiques - Type LSF

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Ta slovenski standard je istoveten z: EN 186230:1999

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ICS:

33.180.20	Povezovalne naprave za optična vlakna	Fibre optic interconnecting devices
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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 186 230

December 1993

UDC

Descriptors: Quality, electronic components, connector sets, optical fibres and cables

English Version

Sectional Specification:
Connector Sets for Optical Fibres and Cables
Type LSF

Spécification intermédiaire:

Rahmenspezifikation:

Jeux de connecteurs pour fibres et
câbles optiques
Type LSF

Steckverbindersätze für Lichtwellen-
leiter und Lichtwellenleiterkabel
Bauart LSF

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This European Standard was approved by the CENELEC Electronic Components Committee (CECC) on 13 February 1993. CENELEC members are bound to comply with CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the General Secretariat of the CECC 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 CECC General Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and United Kingdom. The membership of the CECC is identical, with the exception of the national electrotechnical committees of Greece, Iceland and Luxembourg.

CECC

CENELEC Electronic Components Committee
Comité des Composants Electroniques du CENELEC
CENELEC- Komitee für Bauelemente der Elektronik
General Secretariat: Gartenstr. 179, D- 60596 Frankfurt/Main

FOREWORD

The CENELEC Electronic Components Committee (CECC) is composed of those member countries of the European Committee for Electrotechnical Standardization (CENELEC) who wish to take part in a harmonized System for electronic components of assessed quality.

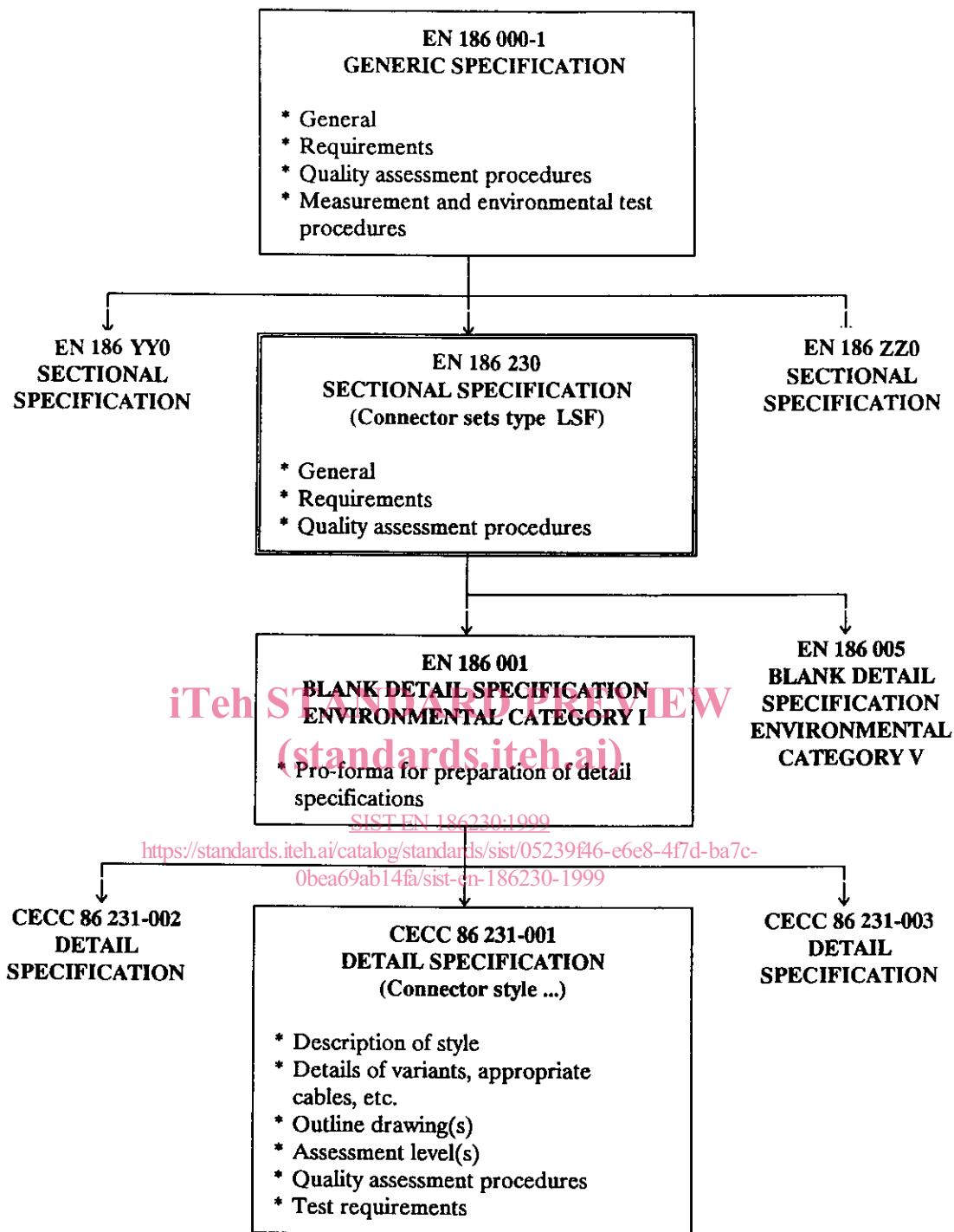
The object of the System is to facilitate international trade by the harmonization of the specifications and quality assessment procedures for electronic components, and by the grant of an internationally recognized Mark, or Certificate, of Conformity. The components produced under the System are thereby acceptable in all member countries without further testing.

This European Standard was prepared by CECC WG 26, Fibre Optic Connectors.

The text of the draft based on document CECC(Sec)2738 was submitted to the formal vote; together with the voting report, circulated as document CECC(Sec)3013 it was approved by CECC as EN 186 230 on 13 February 1992.

The following dates were fixed:

- latest date of announcement of the (doa) 1992-12-15
EN at national level
- latest date of publication of an (dop) 1993-06-15
identical national standard
- latest date of declaration of (standards.iteh.ai) 1993-06-15
national standards obsolescence
- latest date of withdrawal of [SIST \(dow\) 230:1999](#) 2002-12-15
conflicting national standards [iteh.ai/catalog/standards/sist/05239f46-e6e8-4f7d-ba7c-0bea69ab14fa/sist-en-186230-1999](#)



SECTION ONE - GENERAL

1. General

1.1 Scope

This SS covers type LSF fibre optic connector sets. Type LSF defines single way connectors with a push-pull coupling mechanism and a v-groove alignment device.

This specification contains the requirements for type LSF connector sets.

Detail specifications (DSs) shall be prepared using the following pro-forma general blank detail specifications (BDS) associated with the generic specification. For example:

- EN 186 005, environmental category V.

When completed, the DSs applicable to this SS shall be re-numbered in accordance with CECC 00 700 (Section IV) Issue 1, clause 4.2, as follows:

CECC 86 235-XXX
Type LSF
Environmental Category V

1.2 Related Documents

The following standards contain provisions which, through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards listed below. Members of CECC, IEC and ISO maintain registers of currently valid International Standards.

References made to a specific clause or subclause of a standard includes all subclauses to the reference unless otherwise specified.

EN 186 000-1:	Generic specification (GS) for connector sets for optical fibres and cables.
IEC 825 :	Radiation safety of laser products, equipment classification, requirements and user's guide.
ISO 128:	Technical drawings - General principles of presentation.

1.3 Definitions

None

1.4 Safety

1.4.1 Optical fibre connectors, when used as part of an optical fibre system, may emit/produce potentially hazardous radiation. The manufacturers of connectors are not obliged to mark them as such, but sufficient information should be made available in the manufacturer's literature to enable the system designer to assess the degree of hazard. This information shall be given prominence in the DS.

- 1.4.2 The assembly instructions, included in the connector package, shall give a prominent warning to the assembler, of the necessary work practices.
- 1.4.3 The responsibility for the safe application of the connector lies with the system design engineer, who should refer to IEC 825. As there is no safety guide for light emitting diodes (LEDs), IEC 825 shall apply to systems using these also.
- 1.4.4 DSs should give the following information in a prominent position :

WARNING

"Care should be taken when handling small diameter optical fibre, to prevent it puncturing the skin, especially in the eye area.

Direct viewing of the end of an optical fibre or a terminated optical fibre, while it is propagating energy, is not recommended unless prior assurance has been obtained as to the safe energy of the output level".

1.5 Marking

See 2.6 of EN 186 000-1.

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SECTION TWO - REQUIREMENTS

2. Requirements

The requirements specified in Section two and Section three of EN 186 000-1 apply.

The requirements for connector set components covered by this specification are as specified herein and in the relevant DS.

2.1 Classification

The connector sets covered by this specification are classified as :

Type :

- type LSF
- push-pull coupling mechanism
- alignment by V-grove
- configurations:
 - plug / alignment device / plug
 - plug / socket.

Arrangements:

- kit
- pigtail
- patch cord.

Environmental categories:

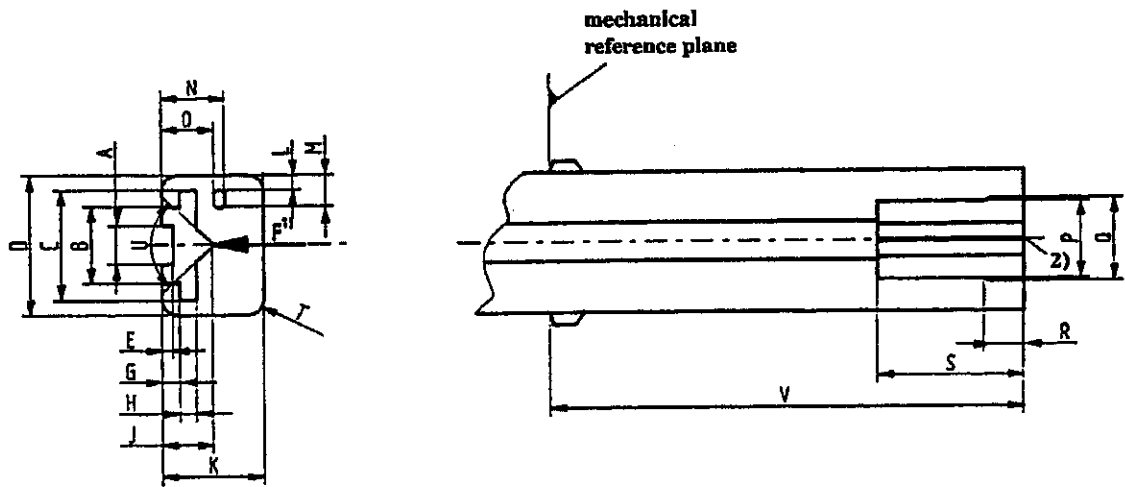
- category: V.

Assessment levels:

- [SIST EN 186230:1999](https://standards.iteh.ai/catalog/standards/sist/05239f46-e6e8-4f7d-ba7c-0bea69ab7414/sist-en-186230-1999)
- level A
- level B
- level C.

The single limit (maximum or minimum) mating face dimensions for connector set configurations are given in Figures 1, 2, 3 and 4, which use first angle projection according to ISO 128.

The applicable configuration, arrangement, style, variants, climatic category and assessment levels shall be specified in the DS.



Ref.	Dimensions mm		Notes
	min.	max.	
A	1,75	-	radius angle
B	3,5	-	
C	5,15	-	
D	-	6,7	
E	0,5	-	
G	0,76	-	
H	0,82	-	
J	2,27	-	
K	-	4,64	
L	-	0,78	
M	1,6	-	
N	3	-	
O	-	2,47	
P	3,5	-	
Q	4	-	
R	2	-	
S	6,45	-	
T	0,65	-	
U	90	-	
V	-	21,5	

Note:

- 1) F is a force vector. The value of F is given in the relevant DS.
- 2) The fibre length has to be designed in such a way that the fibre endfaces contact first when coupling.

Figure 1 - Plug mating face single limit dimensions