

Förderverein für Elektrotechnische Normung (FEN) e. V.
Cenelec Electronic Components Committee

CECC

Système Harmonisé d'Assurance de la Qualité
des Composants Electroniques

SPECIFICATION INTERMEDIAIRE:

JEUX DE CONNECTEURS POUR FIBRES ET CABLES OPTIQUES

Type OCCA-PC

Harmonized System of Quality Assessment for
Electronic Components

SECTIONAL SPECIFICATION:

CONNECTOR SETS FOR OPTICAL FIBRES AND CABLES

Type OCCA-PC

Harmonisiertes Gütebestätigungssystem für
Bauelemente der Elektronik

RAHMENSPEZIFIKATION:

STECKVERBINDERSÄTZE FÜR LICHTWELLENLEITER UND LICHTWELLENLEITERKABEL

Bauart OCCA-PC



1

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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 specification has been formally approved by the CECC, and has been prepared for those countries taking part in the System who wish to issue national harmonized specifications for fibre optic connectors and accessories Type OCCA-PC. It should be read in conjunction with the current regulations for the CECC System.

At the date of printing of this specification, the member countries of the CECC are Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom, and copies of it can be obtained from the addresses shown in the blue fly sheet.

PREFACE

This specification was prepared by CECC WG26 "Fibre Optic Connectors".

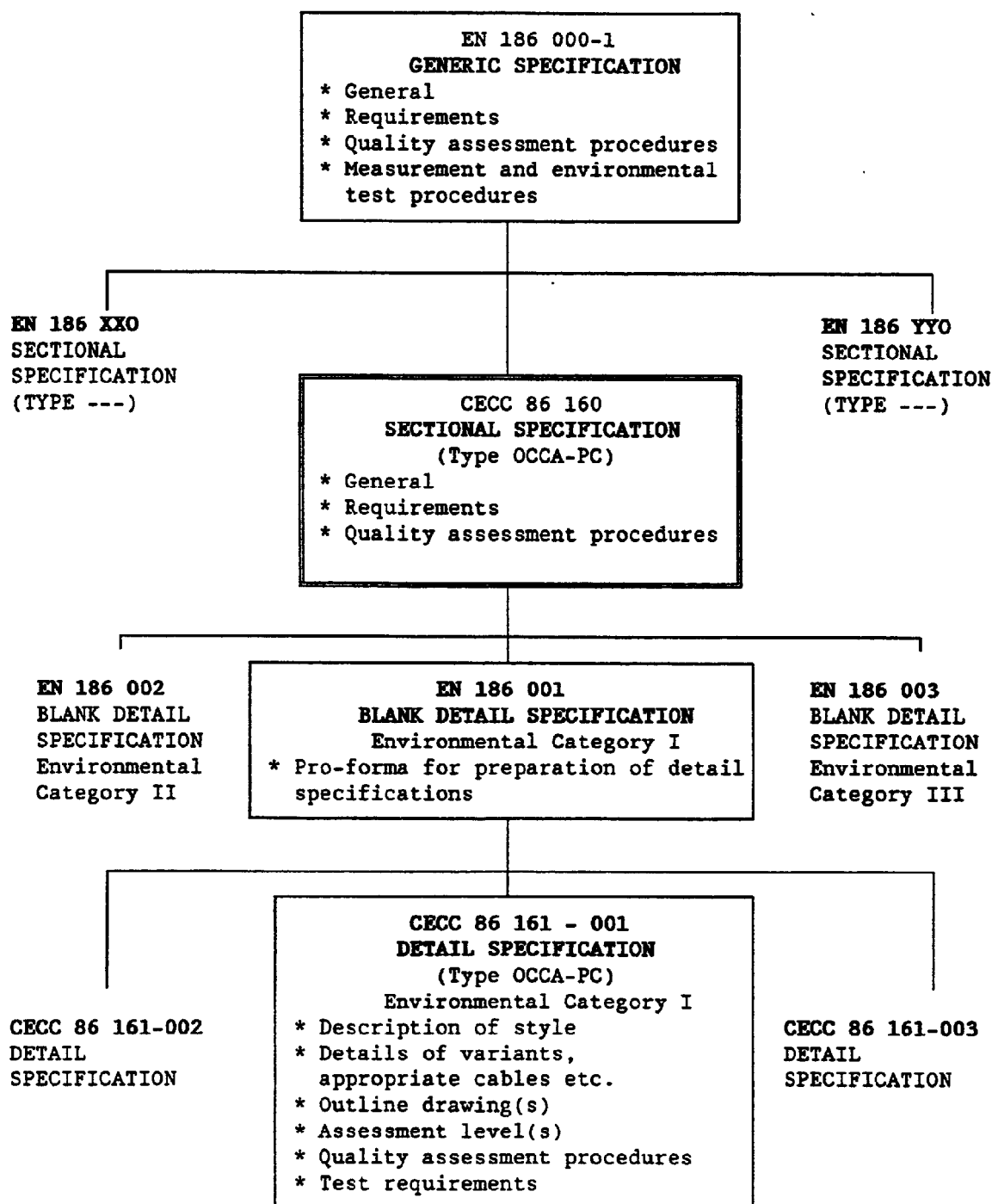
It is based, wherever possible, on the Publications of the International Electrotechnical Commission (IEC).

The text of this specification was circulated to the CECC for voting in the document(s) indicated (listed) below and was approved for publication:

Document	Date of Voting	Report on the Voting
CECC (Secretariat)2662	January 1991	CECC (Secretariat)3178

Document numbering for fibre optic connector specifications follows 2.2(1) of CECC 00 700: Part IV, in order to permit the issue of more than nine sectional specifications. The approved numbering system applicable to fibre optic connector specifications is illustrated in the following diagram:

CECC SPECIFICATION SYSTEM FOR FIBRE OPTIC CONNECTORS



SECTION ONE - GENERAL

1. General

1.1 Scope

This specification covers a family of single way fibre optic connector sets which are classified as Type OCCA-PC. Type OCCA-PC is a connector set of the male and female configuration. It features a screw thread coupling mechanism and cylindrical, springloaded butting ferrules. The optical alignment mechanism is of the flexible sleeve style and is self contained within the female connector.

The specification contains the requirements for Type OCCA-PC connector sets.

Detail specifications (DSs) shall be prepared using the following proforma general blank detail specifications (BDSs):

Environmental
Category II
EN 186 002

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

CECC 86 162-XXX
Type OCCA-PC
Environmental
Category II

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.

References made to a specific clause or sub-clause of a standard include all sub-clauses to the reference unless otherwise specified.

EN 186 000-1 Generic Specification for Connector Sets for Optical
Fibres and Cables.

1.3 Definitions

All necessary definitions are given in EN 186 000-1.

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 safe 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 output level".

1.5 Marking

See 2.6 of EN 186 000-1.

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 OCCA-PC
- Screw thread coupling
- Configurations: Male connector/Female connector

Arrangements:

- Kit
- Pigtail
- Patch Cord

Environmental categories:

- The DS writer shall select the appropriate BDS for the chosen environmental categorie.

Assessment levels:

- 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 and 3.

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

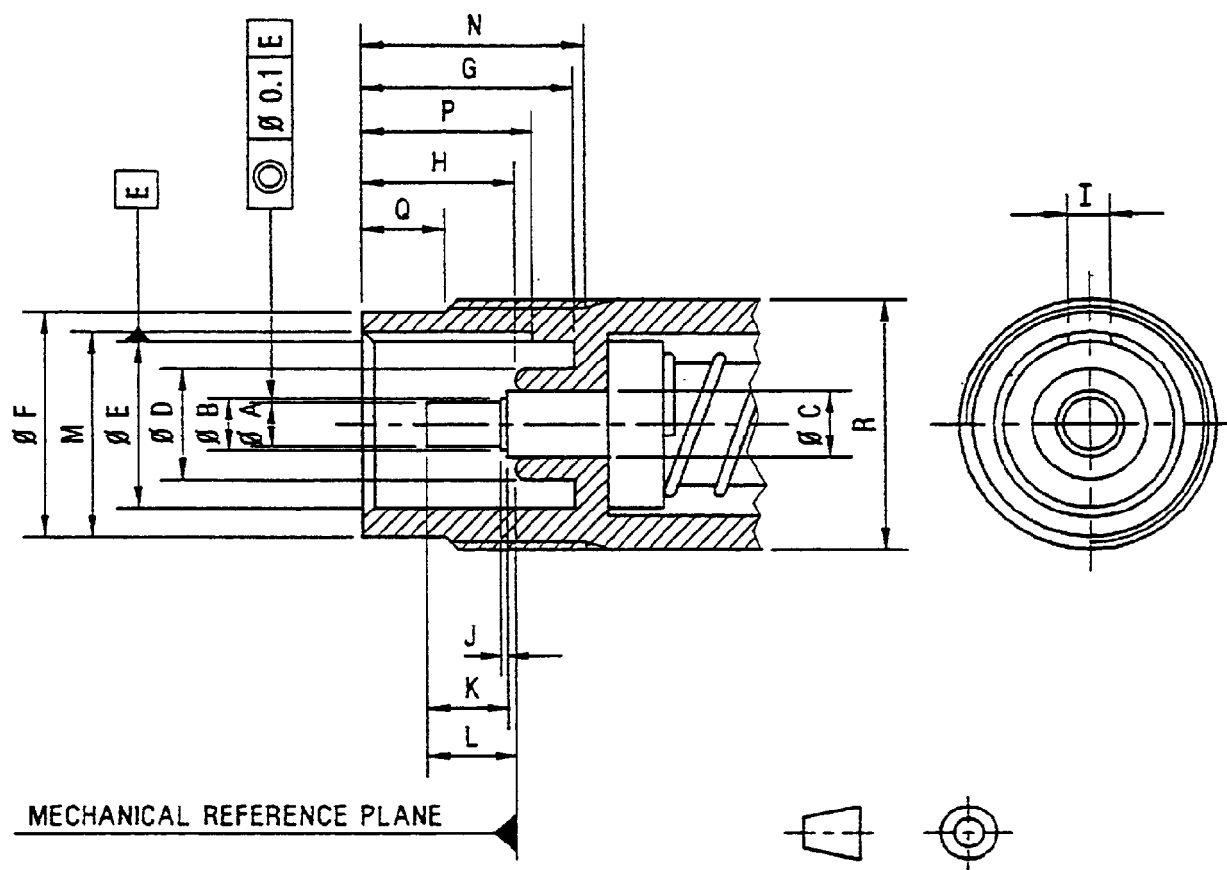


Figure 1. Male connector mating face limit dimensions

REF.	DIMENSIONS mm		NOTES
	MIN.	MAX.	
A	-	1,780	DIA
B	-	1,87	DIA
C	-	2,38	DIA 4)
D	-	4,00	DIA
E	6,03	-	DIA
F	-	8,1	DIA
G	7,6	-	
H	5,3	-	
I	1,50	-	
J	-	0,25	
K	2,9	-	
L	-	4,30	1) 2)
M	6,35	-	
N	7,5	-	
P	5,7	-	
Q	2,9	-	
R	M9 x 0,5		3)

- Note: 1. In unmated condition
 2. Spring-loaded termination, minimum travel of the ferrule 2,5 mm
 3. M9x0,5 indicates metric screw thread with nominal diameter 9 mm and pitch 0,5 mm
 4. Clearance min. 0,1 mm

Figure 1. Male connector mating face limit dimensions (Continued)

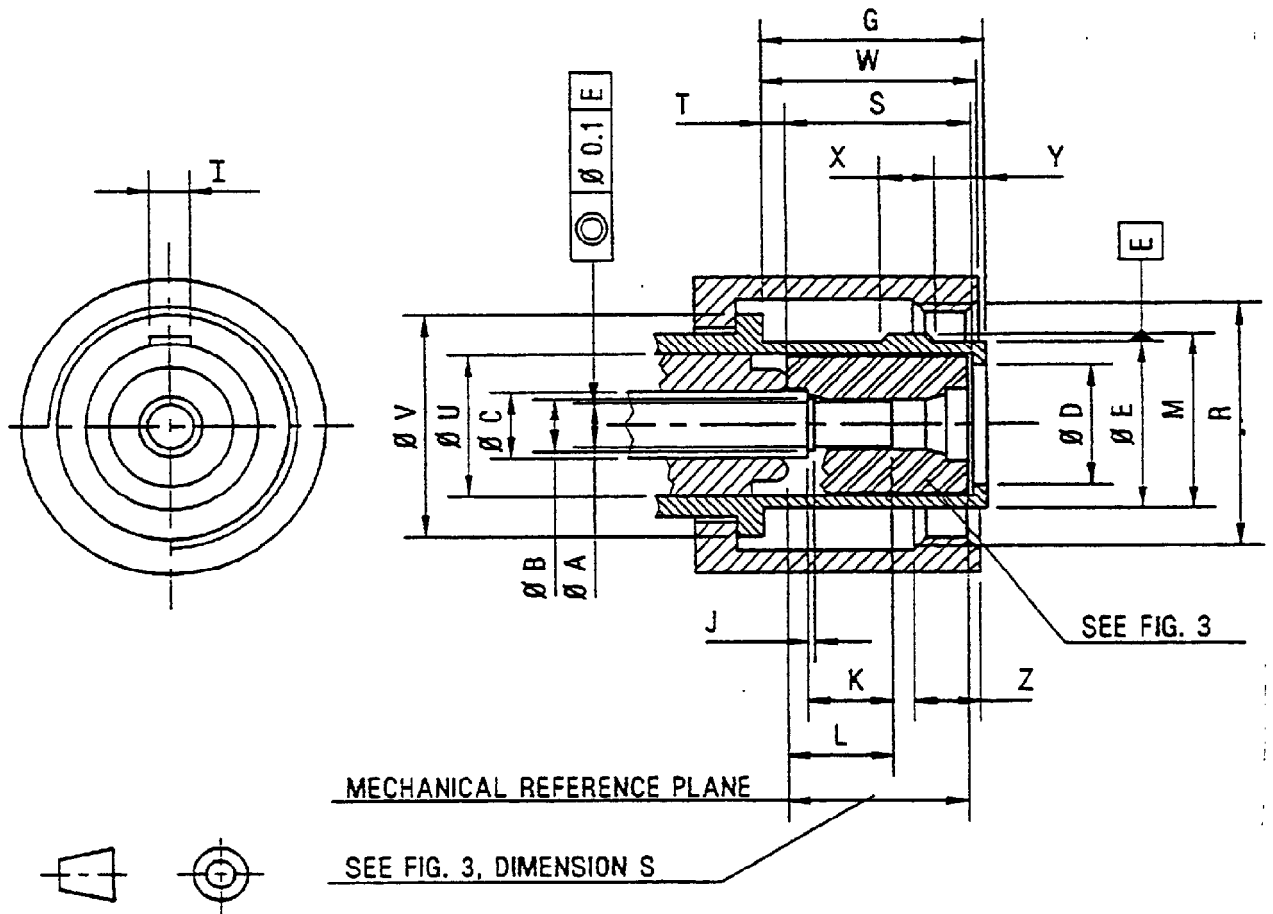


Figure 2. Female connector mating face limit dimensions