SLOVENSKI STANDARD
SIST EN 186290:1999

01-maj-1999

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

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

Rahmenspezifikation: Steckverbindersätze für Lichtwellenleiter und LWL-Kabel - Bauart MPO

Spécification particulière: Jeux de connecteurs pour fibres et câbles optiques - Type MPO

Ta slovenski standard je istoveten z: **EN 186290:1997**

ICS:

33.180.20	Povezovalne naprave za optiļ na vlakna	Fibre optic interconnecting devices

SIST EN 186290:1999 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 186290

November 1997

ICS 33.180.20

Descriptors: Connector, optical fibres and cables, type MPO

English version

Sectional Specification: Connector sets for optical fibres and cables Type MPO

Spécification particulière: Jeux de connecteurs pour fibres et câbles optiques - Type MPO

Bauartspezifikation: Steckverbindersätze für Lichtwellenleiter und Lichtwellenleiterkabel - Typ MPO

This European Standard was approved by CENELEC on 1997-07-01. 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.

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, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and 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

Foreword

This European Standard was prepared by the Technical Committee CENELEC TC 86BXA (former WG 26 of CLC/TC CECC), Fibre optic connectors.

The text of the draft was submitted to the Unique Acceptance Procedure and was approved by CENELEC as EN 186290 on 1997-07-01.

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) 1998-06-01

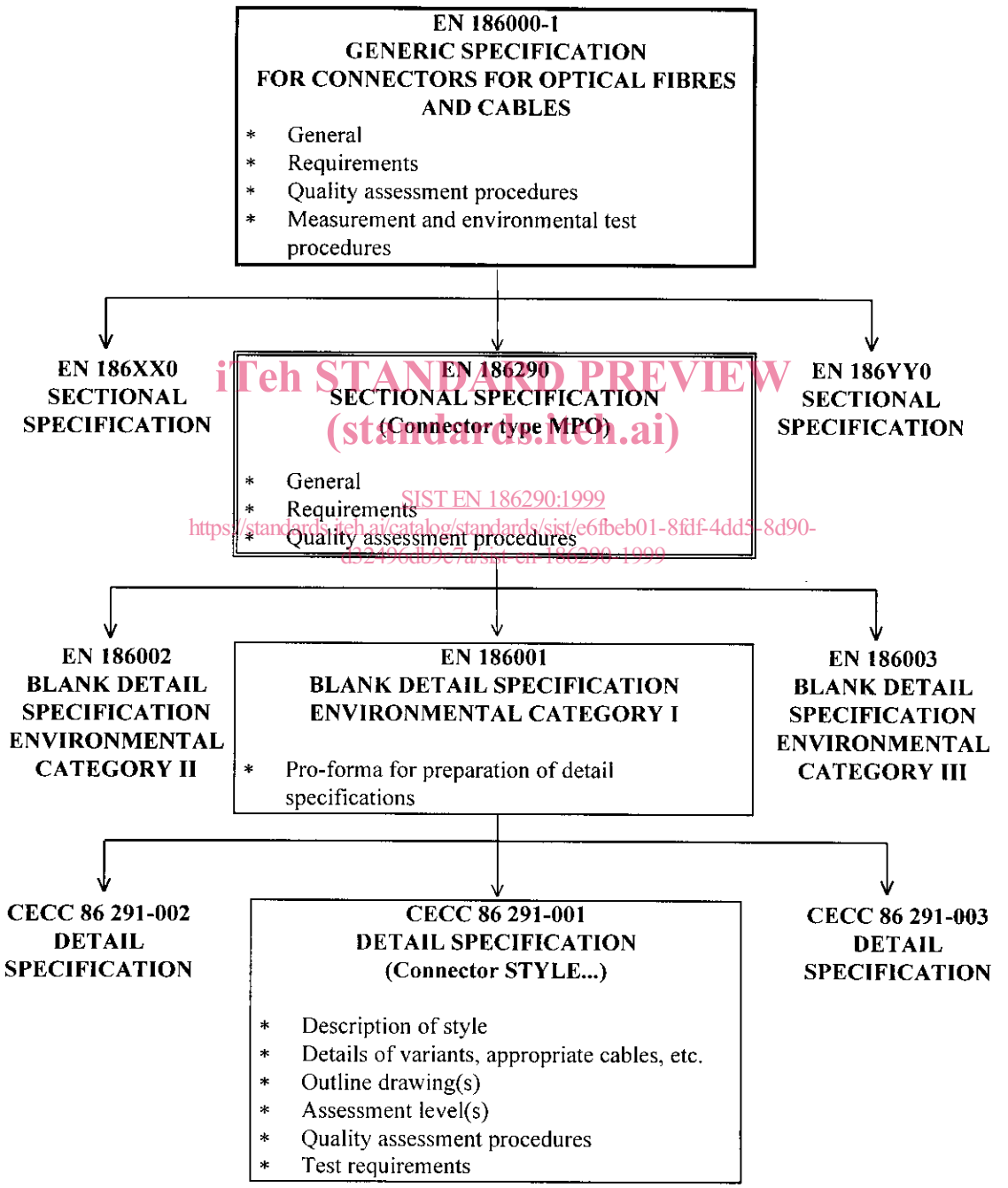
- latest date by which the national standards* conflicting with the EN have to be withdrawn (dow) 1998-06-01

* national standard (excluding national implementation of IECQ Specifications)

CONTENTS

Document numbering for fibre optic connector specifications follows 2.2(1) of CECC 00 700, Sect. 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



SECTION ONE - GENERAL

1. General

1.1 Scope

This specification covers Type MPO fibre optic connector sets. Type MPO defines a multiway connector characterised by a rectangular ferrule nominally 6,4 mm x 2,5 mm which utilises two pins of 0,7 mm diameter as its alignment technology . It is applicable to a joint of multiple fibres by arranging them between two pin-positioning holes in the plug. The connector includes a push-pull coupling mechanism and a ferrule spring loaded in the direction of the optical axis. The connector has a single male key which may be used to orientate and limit the relative position between the connector and the component to which it is mated.

The specification contains the requirements for Type MPO connector sets.

Detail specifications shall be prepared using the following proforma general blank detail specifications associated with the generic specification. For example:-

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 86 292-XXX
Type MPO
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.
IEC 825:	Radiation safety of laser products, equipment

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 detail specification (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 of the output level."

1.5 Marking

See 2.6 of EN 186 000-1.

SECTION TWO - REQUIREMENTS

2. Requirements

The requirements specified in Section 2 and Section 3 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 MPO
- Alignment mechanism: pin
- Coupling mechanism: push-pull
- Configurations: plug- adaptor-plug

Arrangements

- Kit
- Pigtail
- Patch cord

Environmental categories

The DS written shall select the appropriate BDS for the chosen environmental category.

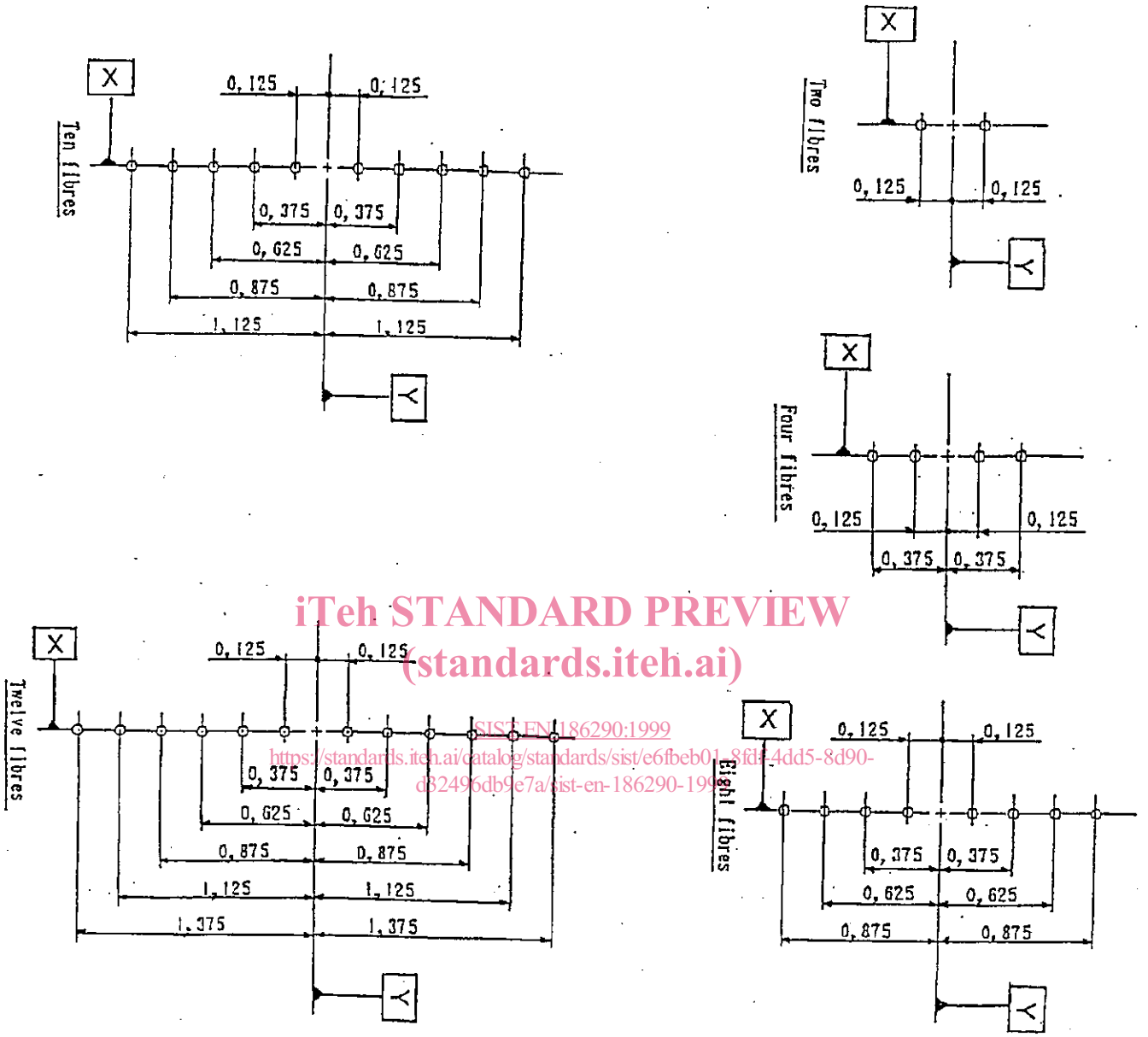
Assessment levels

- Level A
- Level B
- Level C

The mating face limit dimensions for each connector set configuration are given in Figures 1, 2, 3 and 4.

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

Figure 1 - MPO Connector Configuration



Notes:

1) Datum X is the centre line that runs through the true position centres of the guide pin holes.

2) Datum Y is the centre line between the guide pin holes.

Figure 2 - Fibre Location on Plug Endface