INTERNATIONAL STANDARD

IEC 1754-5

First edition
1996-12

Fibre optic connector interfaces –

Part 5:
Type MT connector family

Interfaces de connecteurs
pour fibres optiques –

Partie 5:
Famille de connecteurs de type MT

Reference number
IEC 1754-5: 1996 (E)

Validité de la présente publication

Le contenu technique des publications de la CEI est constamment revu par la CEI afin qu'il reflète l'état actuel de la technique.

Des renseignements relatifs à la date de reconfirmation de la publication sont disponibles auprès du Bureau Central de la CEI.

Les renseignements relatifs à ces révisions, à l'établissement des éditions révisées et aux amendements peuvent être obtenus auprès des Comités nationaux de la CEI et dans les documents ci-dessous:

- **Bulletin de la CEI**
- **Annuaire de la CEI**
  Publié annuellement
- **Catalogue des publications de la CEI**
  Publié annuellement et mis à jour régulièrement

Terminologie

En ce qui concerne la terminologie générale, le lecteur se reportera à la CEI 50: *Vocabulaire Electrotechnique International* (VEI), qui se présente sous forme de chapitres séparés traitant chacun d'un sujet défini. Des détails complets sur le VEI peuvent être obtenus sur demande. Voir également le dictionnaire multilingue de la CEI.

Les termes et définitions figurant dans la présente publication ont été soit tirés du VEI, soit spécifiquement approuvés aux fins de cette publication.

Symboles graphiques et littéraux

Pour les symboles graphiques, les symboles littéraux et les signes d'usage général approuvés par la CEI, le lecteur consultera:

– la CEI 27: *Symboles littéraux à utiliser en électro-technique;*

– la CEI 417: *Symboles graphiques utilisables sur le matériel. Index, relevé et compilation des feuilles individuelles;*

– la CEI 617: *Symboles graphiques pour schémas;*

et pour les appareils électromédicaux,

– la CEI 878: *Symboles graphiques pour équipements électriques en pratique médicale.*

Les symboles et signes contenus dans la présente publication ont été soit tirés de la CEI 27, de la CEI 417, de la CEI 617 et/ou de la CEI 878, soit spécifiquement approuvés aux fins de cette publication.

Publications de la CEI établies par le même comité d'études

L'attention du lecteur est attirée sur les listes figurant à la fin de cette publication, qui énumèrent les publications de la CEI préparées par le comité d'études qui a établi la présente publication.

Validity of this publication

The technical content of IEC publications is kept under constant review by the IEC, thus ensuring that the content reflects current technology.

Information relating to the date of the reconfirmation of the publication is available from the IEC Central Office.

Information on the revision work, the issue of revised editions and amendments may be obtained from IEC National Committees and from the following IEC sources:

- **IEC Bulletin**
- **IEC Yearbook**
  Published yearly
- **Catalogue of IEC publications**
  Published yearly with regular updates

Terminology

For general terminology, readers are referred to IEC 50: *International Electrotechnical Vocabulary* (IEV), which is issued in the form of separate chapters each dealing with a specific field. Full details of the IEV will be supplied on request. See also the IEC Multilingual Dictionary.

The terms and definitions contained in the present publication have either been taken from the IEV or have been specifically approved for the purpose of this publication.

Graphical and letter symbols

For graphical symbols, and letter symbols and signs approved by the IEC for general use, readers are referred to publications:

– IEC 27: *Letter symbols to be used in electrical technology;*

– IEC 417: *Graphical symbols for use on equipment. Index, survey and compilation of the single sheets;*

– IEC 617: *Graphical symbols for diagrams;*

and for medical electrical equipment,

– IEC 878: *Graphical symbols for electromedical equipment in medical practice.*

The symbols and signs contained in the present publication have either been taken from IEC 27, IEC 417, IEC 617 and/or IEC 878, or have been specifically approved for the purpose of this publication.

IEC publications prepared by the same technical committee

The attention of readers is drawn to the end pages of this publication which list the IEC publications issued by the technical committee which has prepared the present publication.

INTERNATIONAL STANDARD

IEC 1754-5

First edition
1996-12

Fibre optic connector interfaces –

Part 5:
Type MT connector family

Interfaces de connecteurs pour fibres optiques –

Partie 5:
Famille de connecteurs de type MT

Bureau central de la Commission Electrotechnique Internationale 3, rue de Varembé Genève Suisse

Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

CODE PRIX
PRICE CODE
L

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

CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

_____

FIBRE OPTIC CONNECTOR INTERFACES –
Part 5: Type MT connector family

FOREWORD

1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the 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, the IEC publishes International Standards. 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. The 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 the 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 National Committees.

3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical reports or guides and they are accepted by the National Committees in that sense.

4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.

5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.

6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 1754-5 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/835/FDIS	86B/925/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.

FIBRE OPTIC CONNECTOR INTERFACES –
Part 5: Type MT connector family

1 Scope

This part of IEC 1754 defines the standard interface dimensions for the type MT family of connectors.

2 Description

The parent connector for type MT connector family is a multiway plug connector characterized by a rectangular ferrule, typically 2,5 mm by 6,4 mm. The connector is aligned using two alignment pins and is normally secured by the use of a latching spring.

Each connector interface may be configured in a number of ways as shown in figure 1. In the parent version, the two alignment pins are free to move within the plug bodies, and hence when unplugged may be located in either plug. The connector may also be configured with one pin fixed in each half (a hermaphroditic variant), or with both pins fixed in one plug (a plug and socket variant). Figure 1 shows which variants are intermateable as follows:

a) parent plug to parent plug using two free pins;

b) single pin plug to parent plug using one extra free pin;

c) two pin plug to parent plug;

d) single pin plug to single pin plug.

NOTE – The two pin plug will not intermate with the single pin plug.

Different connector interfaces will intermate and will correctly align the lower defined number of optical datum targets.

3 Interfaces

This standard contains the following standard interface:

Interface 5-1 MT interface dimensions

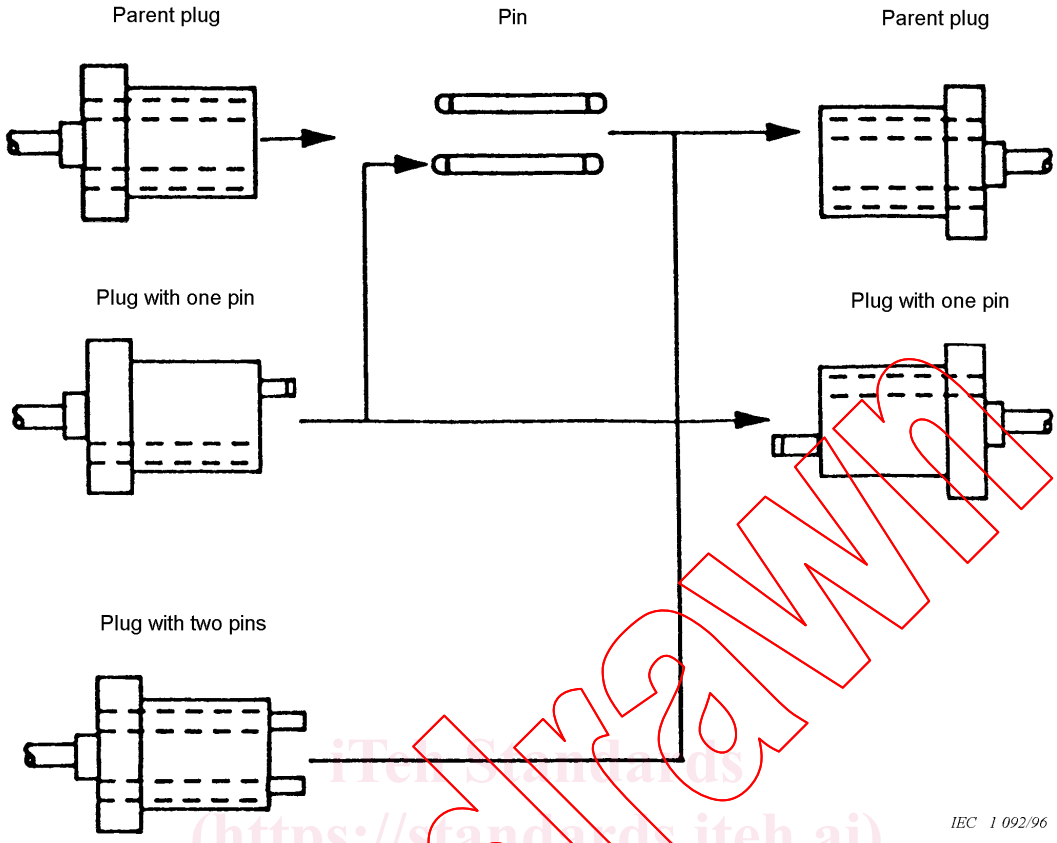


Figure 1 – MT plug configuration and intermateability options

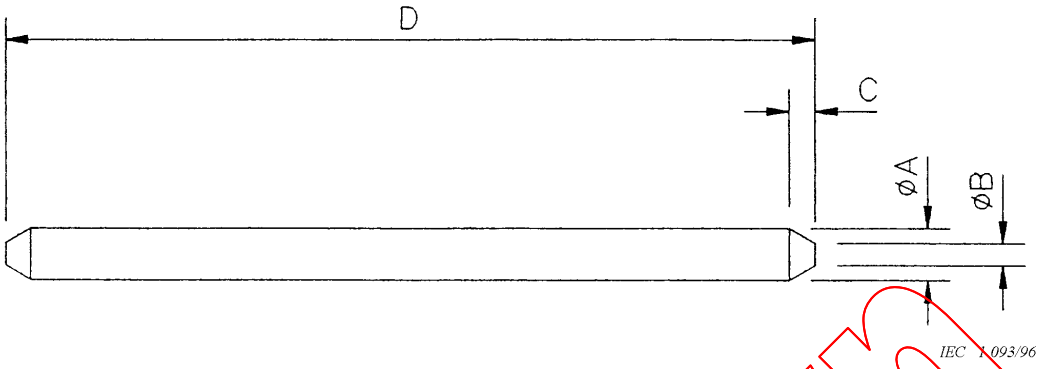


Figure 2a – MT alignment pin

Table 1a – Dimensions for MT alignment pin

Reference	Dimensions mm		Notes
	Minimum	Maximum	
A	0,697	0,699	
B	0,2	0,4	
C	0,2	0,5	
D	10,8	11,2	Typical

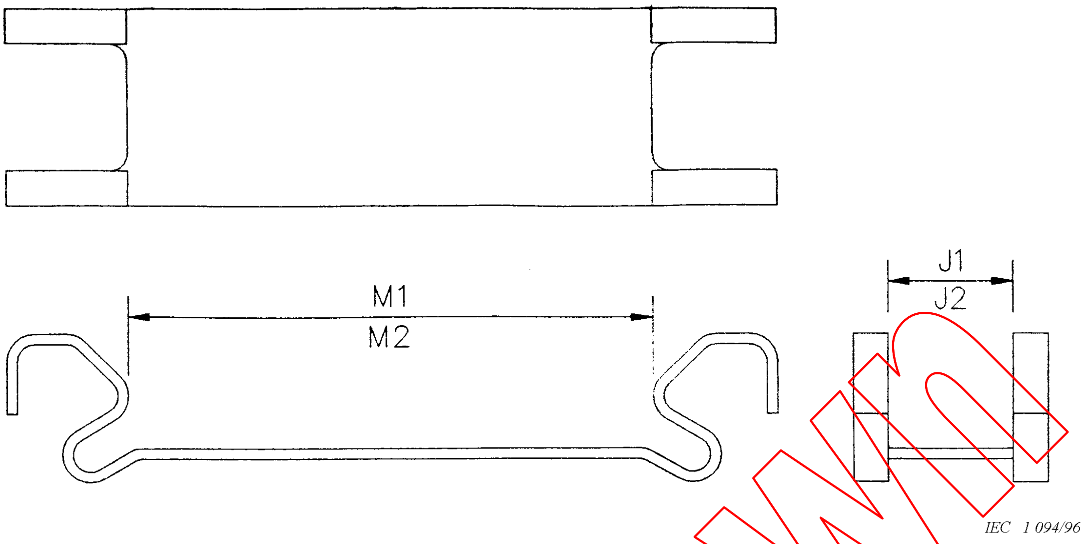


Figure 2b – MT clamp spring

Table 1b – Dimensions for MT clamp spring

Reference	Dimensions mm		Notes
	Minimum	Maximum	
M1	14,7	15,7	1
M2	15,8	16,2	2
J1	3,1	3,3	3
J2	3,6	3,8	4

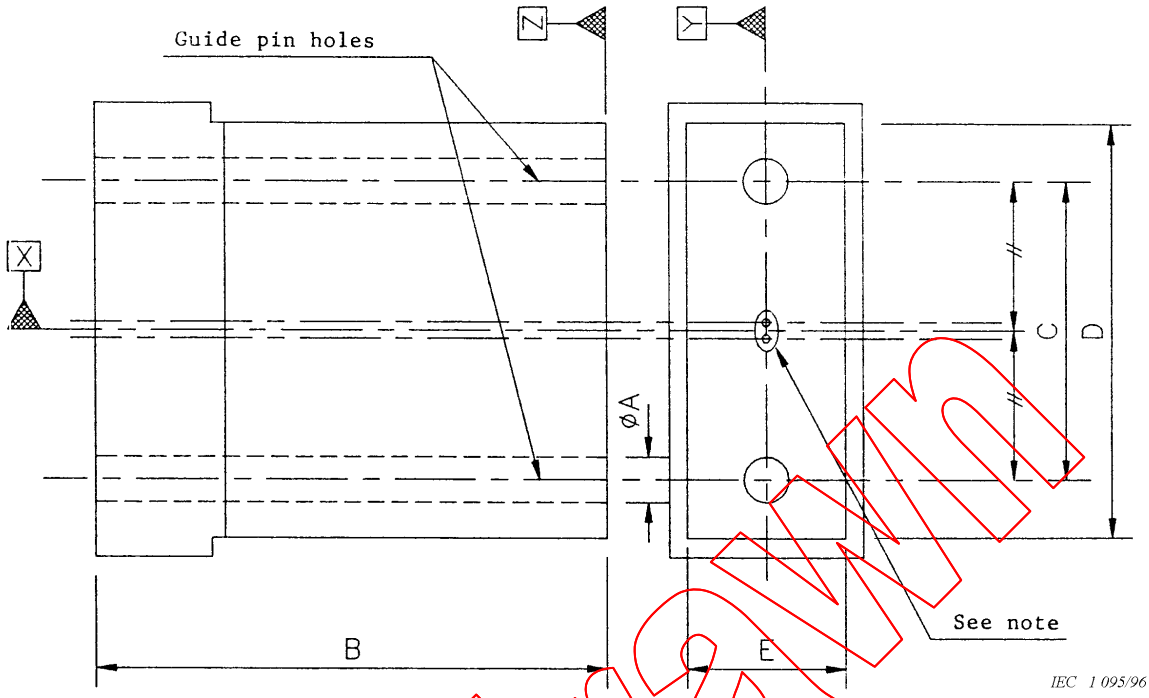
NOTES

1 Length in free condition.

2 Compression force for clamping condition shall be 6,8 N to 12,8 N when dimension M2 is between 15,8 mm and 16,2 mm.

3 Dimensions for MT 2, 4, 8.

4 Dimensions for MT 10, 12.



NOTE – For optical datum target locations see figure 2d. Here, datum X is defined as the line passing through two pin hole centres and datum Y is defined as the line perpendicular to datum X and passing through the midpoint.

Figure 2c – MT interface

Table 1c – Dimensions for MT interface

Reference	Dimensions mm		Notes
	Minimum	Maximum	
A	0,699	0,701	1
B	7,9	8,1	
C	4,597	4,603	2
D	6,3	6,5	
E	2,4	2,5	

NOTES

1 Each guide pin hole must accept a gauge pin as shown in figure 2f to a depth of 5,5 mm with a maximum force of 1,7 N. In addition, two guide pin holes of a plug must accept a gauge as shown in figure 2e to a depth of 5,5 mm with a maximum force of 3,4 N.

2 Dimension C is defined as the distance between two pin hole centres.