

This is a preview - click here to buy the full publication



IEC 61754-6

Edition 2.0 2013-07

INTERNATIONAL STANDARD

**Fibre optic interconnecting devices and passive components – Fibre optic
connector interfaces –
Part 6: Type MU connector family**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

PRICE CODE **XC**

ICS 33.180.20

ISBN 978-2-8322-1010-9

Warning! Make sure that you obtained this publication from an authorized distributor.

CONTENTS

FOREWORD.....	5
1 Scope.....	7
2 Normative references	7
3 Description	7
4 Interfaces	7
Annex A (informative) Configuration of type MU-A connector set	74
Annex B (informative) Configuration of type MU-B connector set	75
Annex C (informative) Floating 2-port connector plug.....	76
Bibliography.....	77
Figure 1 – Simplex plug connector interface – Push/pull	11
Figure 2 – 4,5 mm duplex plug connector interface – Push/pull.....	14
Figure 3 – Simplex adaptor connector interface – Push/pull.....	17
Figure 4 – Gauge pin for resilient alignment sleeve.....	19
Figure 5 – 4,5 mm duplex adaptor connector interface – Push/pull.....	20
Figure 6 – 8-port adaptor connector interface – Push/pull	23
Figure 7 – Plug connector interface – For printed board housings.....	25
Figure 8 – Sleeve holder interface	27
Figure 9 – 2-port backplane housing interface.....	30
Figure 10 – 2-port printed board housing interface.....	34
Figure 11 – 8-port backplane housing interface.....	37
Figure 12 – 8-port printed board housing interface.....	41
Figure 13 – Simplex active device receptacle interface.....	43
Figure 14 – Detail of the mechanical stop for rigid bore alignment feature.....	45
Figure 15 – 4,5 mm duplex active device receptacle interface.....	46
Figure 16 – Detail of the mechanical stop for rigid bore alignment feature.....	48
Figure 17 – 6,25 mm duplex active device receptacle interface.....	49
Figure 18 – Detail of the mechanical stop for rigid bore alignment feature.....	51
Figure 19 – Plug connector interface for printed board housings, APC.....	53
Figure 20 – Simplex plug connector interface – Push/pull, APC	56
Figure 21 – 4,5 mm duplex plug connector interface – Push/pull, APC.....	59
Figure 22 – 6,25 mm duplex plug connector interface – Push/pull, APC.....	62
Figure 23 – 6,25 mm duplex plug connector interface – Push/pull.....	64
Figure 24 – 6,25 mm duplex adaptor connector interface	67
Figure 25 – Horizontal duplex plug connector interface – Push/pull.....	69
Figure 26 – Horizontal duplex adaptor connector interface.....	72
Figure A.1 – Configuration of type MU-A connector set.....	74
Figure B.1 – Configuration of type MU-B connector set.....	75
Figure C.1 – Floating 2-port connector plug	76
Table 1 – MU-A connector set.....	9

Table 2 – MU-B connector set.....	9
Table 3 – MU receptacles	10
Table 4 – Dimensions of the simplex plug connector interface	12
Table 5 – Grade.....	13
Table 6 – Dimensions of the 4,5 mm duplex plug connector interface	15
Table 7 – Grade.....	16
Table 8 – Dimensions of the simplex adaptor connector interface	18
Table 9 – Grade.....	18
Table 10 – Gauge pin dimensions	19
Table 11 – Dimensions of the 4,5 mm duplex adaptor connector interface	21
Table 12 – Grade.....	22
Table 13 – Dimensions of the 8-port adaptor connector interface.....	24
Table 14 – Grade.....	24
Table 15 – Dimensions of the plug connector interface	26
Table 16 – Grade.....	26
Table 17 – Dimensions of the sleeve holder interface	28
Table 18 – Grade.....	28
Table 19 – Dimensions of the 2-port backplane housing interface).....	31
Table 20 – Grade.....	32
Table 21 – Dimensions of the 2-port printed board housing interface	35
Table 22 – Dimensions of the 8-port backplane housing interface	38
Table 23 – Grade.....	39
Table 24 – Dimensions of the 8-port printed board housing interface	42
Table 25 – Dimensions of the simplex active device receptacle interface.....	44
Table 26 – Alignment feature grade	45
Table 27 – Dimensions of the mechanical stop for rigid bore alignment feature.....	45
Table 28 – Mechanical stop feature grade.....	46
Table 29 – Dimensions of the 4,5 mm duplex active device receptacle interface	47
Table 30 – Alignment feature grade	48
Table 31 – Dimensions of the mechanical stop for rigid bore alignment feature.....	48
Table 32 – Mechanical stop feature grade.....	49
Table 33 – Dimensions of the 6,25 mm duplex active device receptacle interface	50
Table 34 – Alignment feature grade	51
Table 35 – Dimensions of the mechanical stop for rigid bore alignment feature.....	51
Table 36 – Mechanical stop feature grade.....	52
Table 37 – Dimensions of the plug connector interface for printed board housings, APC.....	54
Table 38 – Dimensions of the simplex plug connector interfaces, APC.....	57
Table 39 – Dimensions of the 4,5 mm duplex plug connector interfaces, APC.....	60
Table 40 – Dimensions of the 6,25 mm duplex plug connector interface, APC.....	63
Table 41 – Dimensions of the 6,25 mm duplex plug connector interface.....	65
Table 42 – Grade.....	66
Table 43 – Dimensions of the 6,25 mm duplex adaptor connector interface	68
Table 44 – Grade.....	68

Table 45 – Dimensions of the horizontal duplex plug connector interface.....	70
Table 46 – Grade.....	71
Table 47 – Dimensions of the horizontal duplex adaptor connector interface.....	73
Table 48 – Grade.....	73
Table C.1 – Dimensions table for 2-port connector plug	76

INTERNATIONAL ELECTROTECHNICAL COMMISSION

FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS – FIBRE OPTIC CONNECTOR INTERFACES –

Part 6: Type MU connector family

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.
- 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 itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 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 61754-6 has been prepared by subcommittee 86B: Fibre optic interconnecting devices and passive components, of IEC technical committee 86: Fibre optics.

This second edition cancels and replaces the first edition published in 1997 and constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) addition of standard references;
- b) revision of intermateability.

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

FDIS	Report on voting
86B/3627/FDIS	86B/3662/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.

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

A list of all parts of the IEC 61754 series, under the general title *Fibre optic interconnecting devices and passive components – Fibre optic connector interfaces*, can be found on the IEC website.

Future standards in this series will carry the new general title as cited above. Titles of existing standards in this series will be updated at the time of the next edition.

The committee has decided that the contents of this publication will remain unchanged until the stability 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.

A bilingual version of this publication may be issued at a later date.

FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS – FIBRE OPTIC CONNECTOR INTERFACES –

Part 6: Type MU connector family

1 Scope

This part of IEC 61754 defines the standard interface dimensions for type MU family of connectors.

2 Normative references

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

IEC 61755-3-1, *Fibre optic connector optical interfaces – Part 3-1: Optical interface, 2,5 mm and 1,25 mm diameter cylindrical full zirconia PC ferrule, single mode fibre*

IEC 61755-3-2, *Fibre optic connector optical interfaces – Part 3-2: Optical interface, 2,5 mm and 1,25 mm diameter cylindrical full zirconia ferrules for 8 degrees angled-PC single mode fibres*