

INTERNATIONAL STANDARD

IEC
61754-18

First edition
2001-12

Fibre optic connector interfaces –

Part 18: Type MT-RJ connector family

Interfaces de connecteurs pour fibres optiques –

*Partie 18:
Famille de connecteurs de type MT-RJ*

[IEC 61754-18:2001](https://standards.iteh.ai/catalog/standards/iec/9dcc89a3-5f4a-46b8-91ab-d0b4862b0d77/iec-61754-18-2001)

<https://standards.iteh.ai/catalog/standards/iec/9dcc89a3-5f4a-46b8-91ab-d0b4862b0d77/iec-61754-18-2001>



Reference number
IEC 61754-18:2001(E)

Publication numbering

As from 1 January 1997 all IEC publications are issued with a designation in the 60000 series. For example, IEC 34-1 is now referred to as IEC 60034-1.

Consolidated editions

The IEC is now publishing consolidated versions of its publications. For example, edition numbers 1.0, 1.1 and 1.2 refer, respectively, to the base publication, the base publication incorporating amendment 1 and the base publication incorporating amendments 1 and 2.

Further information on IEC publications

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 this publication, including its validity, is available in the IEC Catalogue of publications (see below) in addition to new editions, amendments and corrigenda. Information on the subjects under consideration and work in progress undertaken by the technical committee which has prepared this publication, as well as the list of publications issued, is also available from the following:

- **IEC Web Site** (www.iec.ch)

- **Catalogue of IEC publications**

The on-line catalogue on the IEC web site (www.iec.ch/catlg-e.htm) enables you to search by a variety of criteria including text searches, technical committees and date of publication. On-line information is also available on recently issued publications, withdrawn and replaced publications, as well as corrigenda.

- **IEC Just Published**

This summary of recently issued publications (www.iec.ch/JP.htm) is also available by email. Please contact the Customer Service Centre (see below) for further information.

- **Customer Service Centre**

If you have any questions regarding this publication or need further assistance, please contact the Customer Service Centre:

Email: custserv@iec.ch
Tel: +41 22 919 02 11
Fax: +41 22 919 03 00

INTERNATIONAL STANDARD

IEC 61754-18

First edition
2001-12

Fibre optic connector interfaces –

Part 18: Type MT-RJ connector family

Interfaces de connecteurs pour fibres optiques –

*Partie 18:
Famille de connecteurs de type MT-RJ*

[IEC 61754-18:2001](https://standards.iteh.ai/catalog/standards/iec/9dcc89a3-5f4a-46b8-91ab-d0b4862b0d77/iec-61754-18-2001)

<https://standards.iteh.ai/catalog/standards/iec/9dcc89a3-5f4a-46b8-91ab-d0b4862b0d77/iec-61754-18-2001>

© IEC 2001 — Copyright - all rights reserved

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

International Electrotechnical Commission 3, rue de Varembé Geneva, Switzerland
Telefax: +41 22 919 0300 e-mail: inmail@iec.ch IEC web site <http://www.iec.ch>



Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

PRICE CODE **R**

For price, see current catalogue

CONTENTS

1	Scope	4
2	Description	4
3	Interfaces	4
	Figure 1a – Plug connector interface – without guide pins.....	6
	Figure 1b – Plug connector interface, without guide pins – Optical datum target location diagram	8
	Figure 1c – Plug connector interface without guide pins – Gauge pin.....	9
	Figure 1d – Plug connector interface without guide pins – Plug gauge.....	10
	Figure 2 – Plug connector interface – with guide pins	11
	Figure 3 – Adaptor connector interface	13
	Figure 4 – Receptacle connector interface – without ribs	15
	Figure 5 – Receptacle connector interface – with ribs	17
	Table 1a – Plug connector interface dimensions – without guide pins	7
	Table 1b – Tolerance grade table.....	7
	Table 1c – Dimensions of gauge pin	9
	Table 1d – Dimensions of plug gauge	10
	Table 2a – Plug connector interface dimensions – with guide pins	12
	Table 2b – Tolerance grade table.....	12
	Table 3 – Adaptor connector interface dimensions	14
	Table 4a – Receptacle connector interface dimensions – without ribs	16
	Table 4b – Tolerance grade table.....	16
	Table 5a – Receptacle connector interface dimensions – with ribs	18
	Table 5b – Tolerance grade table.....	18

INTERNATIONAL ELECTROTECHNICAL COMMISSION

FIBRE OPTIC CONNECTOR INTERFACES –

Part 18: Type MT-RJ 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 specifications, 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 61754-18 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/1594/FDIS	86B/1627/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 3.

The committee has decided that the contents of this publication will remain unchanged until 2004. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

FIBRE OPTIC CONNECTOR INTERFACES –

Part 18: Type MT-RJ connector family

1 Scope

This part of IEC 61754 defines the standard interface dimensions for the type MT-RJ family of connectors.

2 Description

The parent connector for the type MT-RJ connector family is a plug connector having single or multiple fibres in a rectangular ferrule nominally 4,4 mm × 2,5 mm aligned by two 0,7 mm diameter pins and corresponding holes. The connector includes a single coupling latch and a ferrule spring loaded in the direction of the optical axis. The plug connector has a single male key which may be used to orientate the connector and the component to which it is mated.

Connector interfaces are configured as a plug without pins, an adaptor and a plug with pins or alternatively as a plug without pins and a receptacle with pins. Adaptors use ribs to pre-align ferrules. Receptacles with and without ribs are defined.

3 Interfaces

Subsequent pages define the standard interfaces for the type MT-RJ connector family.

This standard contains the following standard interfaces:

Interface **61754-18-1** MT-RJ plug connector interface, without pins, consisting of

Interface 61754-18-1-1 for single fibre

Interface 61754-18-1-2 for two fibres with a pitch of 0,25 mm

Interface 61754-18-1-3 for two fibres with a pitch of 0,75 mm

Interface 61754-18-1-4 for four fibres with a pitch of 0,25 mm

Interface **61754-18-2** MT-RJ plug connector interface, with pins, consisting of

Interface 61754-18-2-1 for single fibre

Interface 61754-18-2-2 for two fibres with a pitch of 0,25 mm

Interface 61754-18-2-3 for two fibres with a pitch of 0,75 mm

Interface 61754-18-2-4 for four fibres with a pitch of 0,25 mm

Interface **61754-18-3** MT-RJ adaptor interface

Interface **61754-18-4** MT-RJ receptacle interface, with pins, without ribs, consisting of

Interface 61754-18-4-1 for single fibre

Interface 61754-18-4-2 for two fibres with a pitch of 0,25 mm

Interface 61754-18-4-3 for two fibres with a pitch of 0,75 mm

Interface 61754-18-4-4 for four fibres with a pitch of 0,25 mm

Interface **61754-18-5** MT-RJ receptacle interface, with pins, with ribs, consisting of

Interface 61754-18-5-1 for single fibre

Interface 61754-18-5-2 for two fibres with a pitch of 0,25 mm

Interface 61754-18-5-3 for two fibres with a pitch of 0,75 mm

Interface 61754-18-5-4 for four fibres with a pitch of 0,25 mm

The following standards are intermateable.

3.1 Plug-adaptor-plug

Plug without pins	Adaptor	Plug with pins
61754-18-1-1	61754-18-3	61754-18-2-1
61754-18-1-2	61754-18-3	61754-18-2-2
61754-18-1-3	61754-18-3	61754-18-2-3
61754-18-1-4	61754-18-3	61754-18-2-4

3.2 Plug-receptacle – without ribs

Plug without pins	Receptacle with pins
61754-18-1-1	61754-18-4-1
61754-18-1-2	61754-18-4-2
61754-18-1-3	61754-18-4-3
61754-18-1-4	61754-18-4-4

3.3 Plug-receptacle – with ribs

Plug without pins	Receptacle with pins
61754-18-1-1	61754-18-5-1
61754-18-1-2	61754-18-5-2
61754-18-1-3	61754-18-5-3
61754-18-1-4	61754-18-5-4

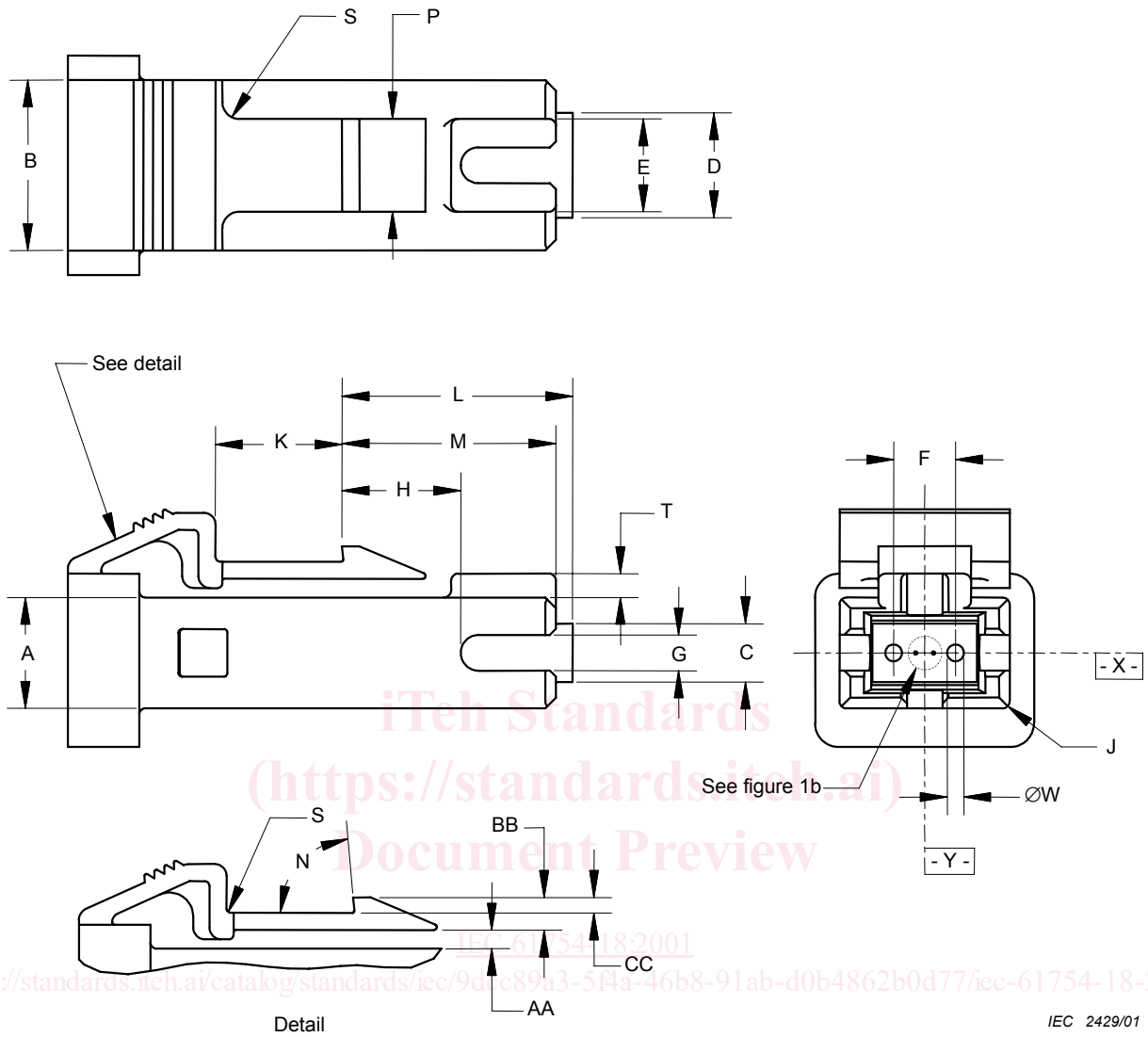


Figure 1a – Plug connector interface – without guide pins

Table 1a – Plug connector interface dimensions – without guide pins

Reference	Dimensions (mm)		Notes
	Minimum	Maximum	
A	4,61	4,69	
B	7,11	7,19	
C	2,4	2,5	
D	4,35	4,45	
E	3,8	4	
F	2,597	2,603	
G	1,45	1,55	
H	–	5,3	
J	0,25	0,5	Radius
K	5,1	–	
L	9,35	9,75	1
M	7,9	9	
N	82	88	Degrees
P	3,8	4	
S	–	0,8	Radius
T	0,9	1,1	
W			See tolerance grade table
AA	0,63	1,2	
BB	1,27	1,42	
CC	0,6	0,77	

NOTE 1 When reference L = 9,1 mm, the force exerted by the ferrule must be less than or equal to 11,8 N, and when reference L = 9,3 mm, the force exerted by the ferrule must be greater than or equal to 7,8 N.

NOTE 2 Dimensions apply after termination

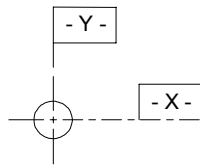
Table 1b – Tolerance grade table

Reference	Dimensions (mm)		Notes
	Minimum	Maximum	
1	0,699	0,700	1,3
2	0,699	0,701	1,3

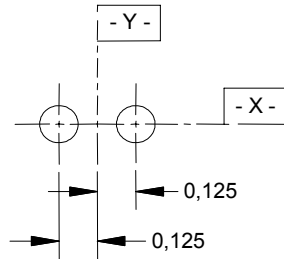
NOTE 1 Append tolerance grade number to the interface number.

NOTE 2 Dimensions apply after termination.

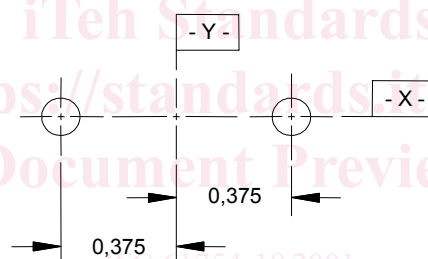
NOTE 3 Each pin-hole shall accept a gauge as shown in figure 1c to a depth of 5,5 mm with a maximum force of 1,7 N. In addition, both pin-holes of a plug shall accept a gauge as shown in figure 1d to a depth of 5,5 mm with a maximum force of 3,4 N.



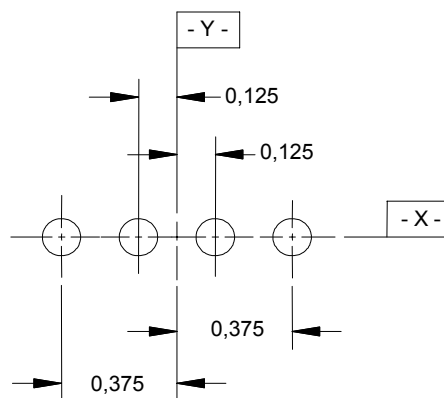
1 – One fibre



2 – Two fibres, 0,25 mm pitch



3 – Two fibres, 0,75 mm pitch



4 – Four fibres, 0,25 mm pitch

IEC 2430/01

NOTE The optical datum target diagram is shown in the figure. The optical datum targets are located on a line X passing through the two pin-hole centres and located on or symmetrically about a line Y perpendicular to line X located midway between the two pin-hole centres.

**Figure 1b – Plug connector interface, without guide pins –
Optical datum target location diagram**