

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**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**

STANDARD PREVIEW
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IEC 61754-18:2001
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FIBRE OPTIC CONNECTOR INTERFACES –

Part 18: Type MT-RJ connector family

FOREWORD

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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.

This bilingual version (2014-03) corresponds to the monolingual English version, published in 2001-12.

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.

The French version of this standard has not been voted upon.

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- withdrawn;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.

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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	Receptable 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

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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

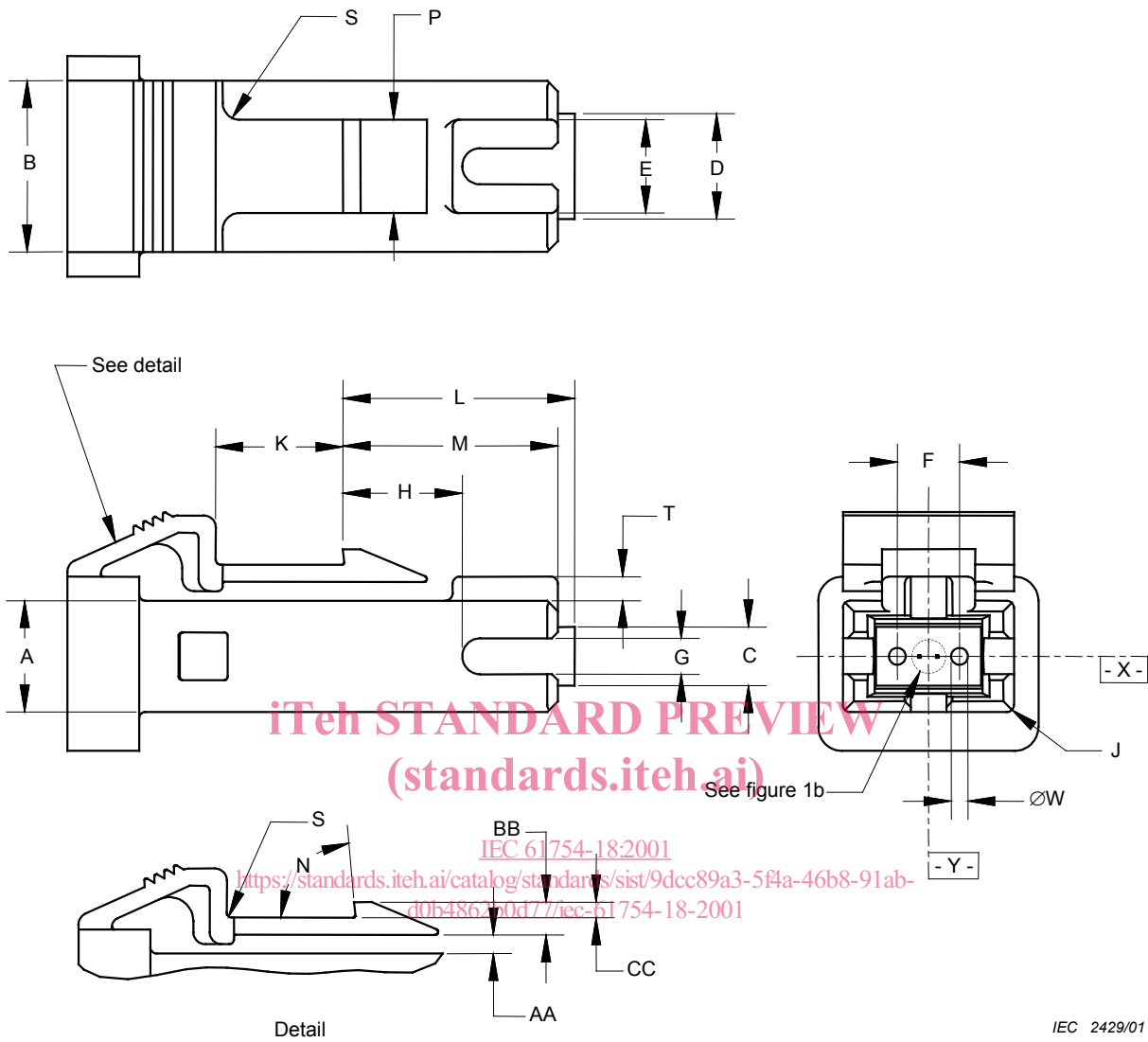


Figure 1a – Plug connector interface – without guide pins

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.

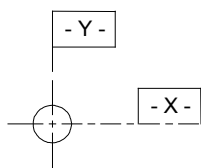
Table 1b – Tolerance grade table

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

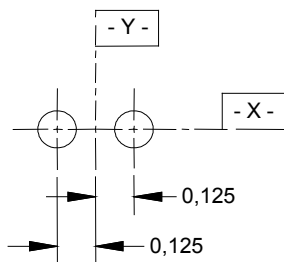
NOTE 1 Append tolerance grade number to the interface number.

NOTE 2 Dimensions apply after termination.

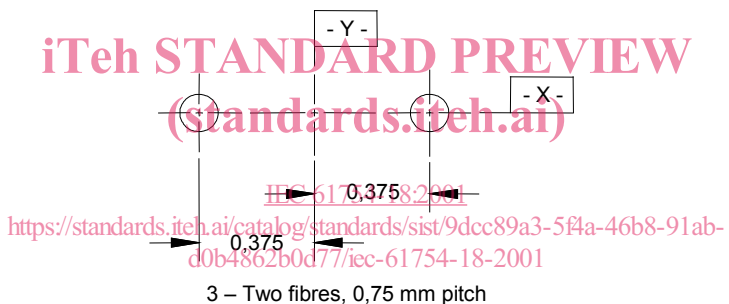
NOTE 3 Each pin-hole shall accept a gauge as shown in figure 1c to a depth of 5,5 mm with a maximum force of 1,7 N. In addition, both pin-holes of a plug shall accept a gauge as shown in figure 1d to a depth of 5,5 mm with a maximum force of 3,4 N.



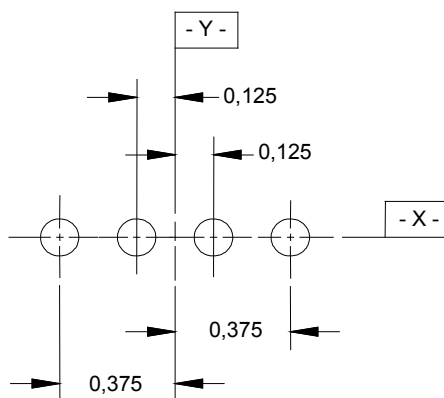
1 – One fibre



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

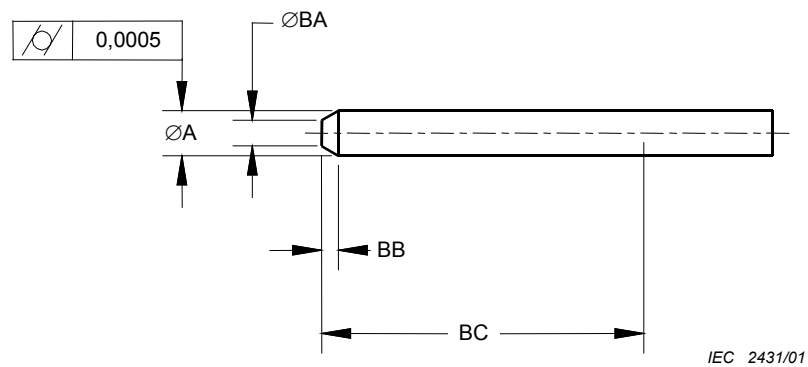


Figure 1c – Plug connector interface without guide pins –
Gauge pin

Table 1c – Dimensions of gauge pin

Reference	Dimensions (mm)		Notes
	Minimum	Maximum	
A	0,6985	0,699	Surface roughness 0,1 μm Ra for the length of dimension BC
BA	0,2	0,4	
BB	0,2	0,5	
BC	5,5		

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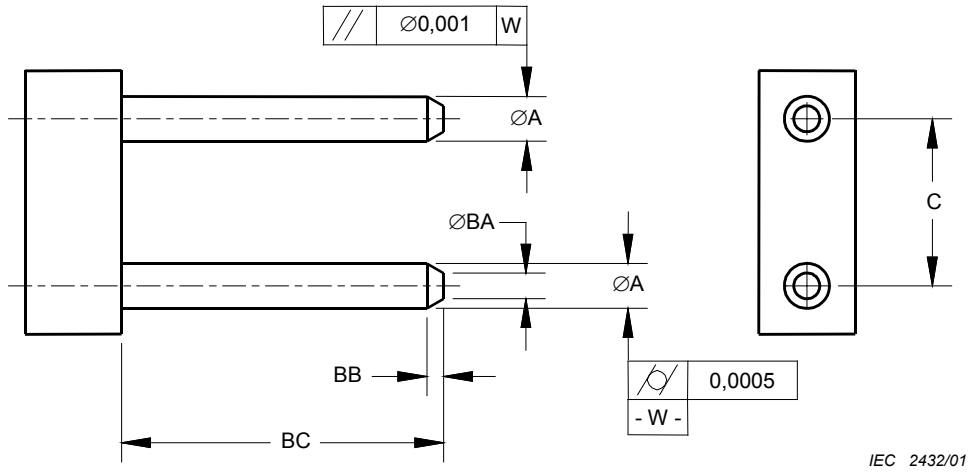


Figure 1d – Plug connector interface without guide pins – Plug gauge

Table 1d – Dimensions of plug gauge

Reference	Dimensions (mm)		Notes
	Minimum	Maximum	
A	0,6985	0,699	Surface roughness 0,1 µm Ra for the length of dimension BC
C	2,5995	2,6005	
BA	0,2	0,4	
BB	0,2	0,5	
BC	6	0,6	

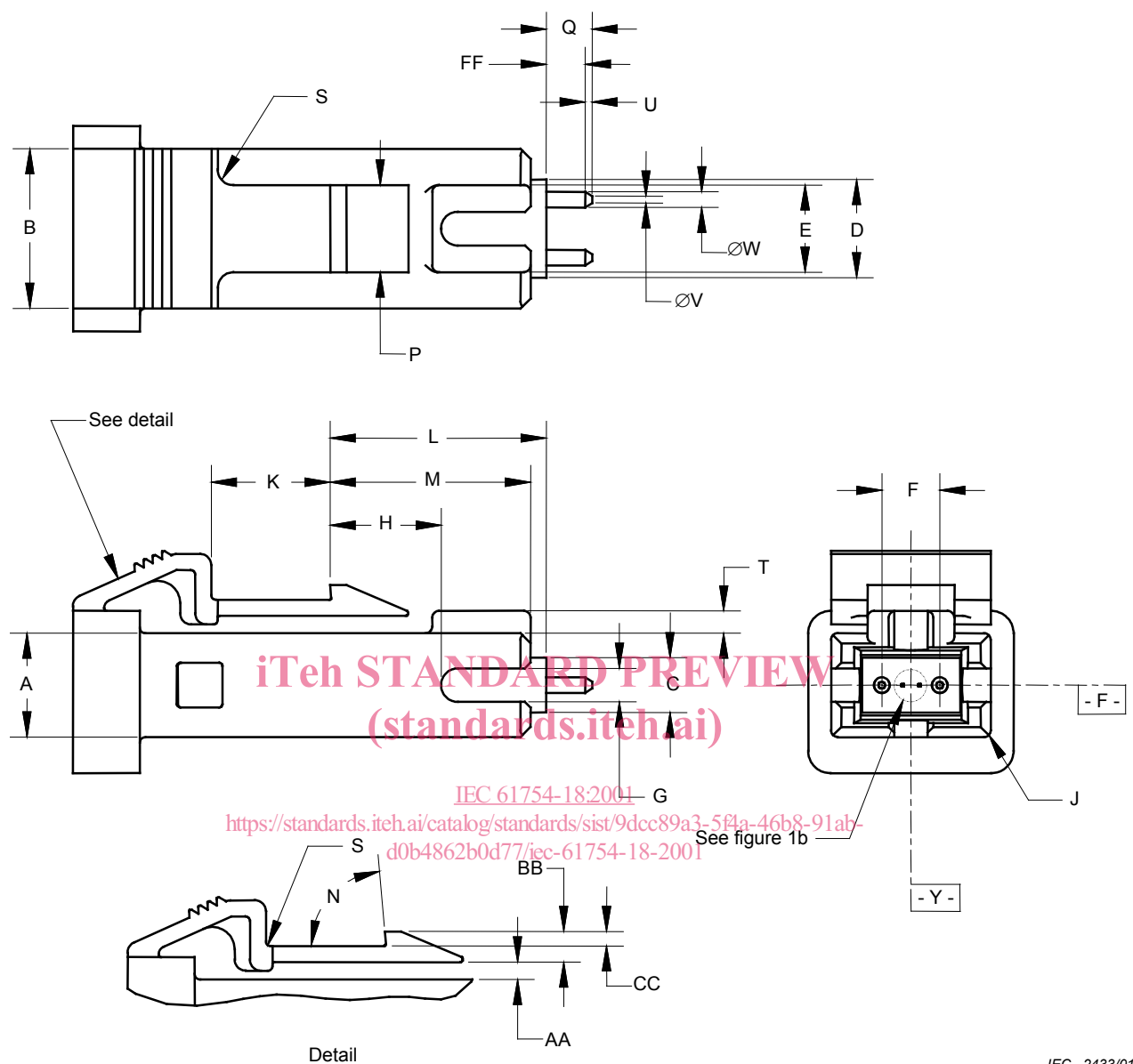


Figure 2 – Plug connector interface – with guide pins