IEC/PAS 61754-18

Edition 1.0
2001-05

PRE-STANDARD

Fibre optic connector interfaces –

Part 18:
Type MT-RJ connector family

PUBLICLY AVAILABLE SPECIFICATION

INTERNATIONAL
ELECTROTECHNICAL
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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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FIBRE OPTIC CONNECTOR INTERFACES –

Part 18: Type MT-RJ connector family

FOREWORD

A PAS is a technical specification not fulfilling the requirements for a standard, but made available to the public and established in an organization operating under given procedures.

IEC-PAS 61754-18 has been processed by subcommittee86B: Fibre optic interconnecting devices and passive components, of IEC technical committee 86: Fibre optics.

The text of this PAS is based on the following document:	This PAS was approved for publication by the P-members of the committee concerned as indicated in the following document:
Draft PAS	**Report on voting**
86B/1451/PAS	86B/1501/RVD

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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 × 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

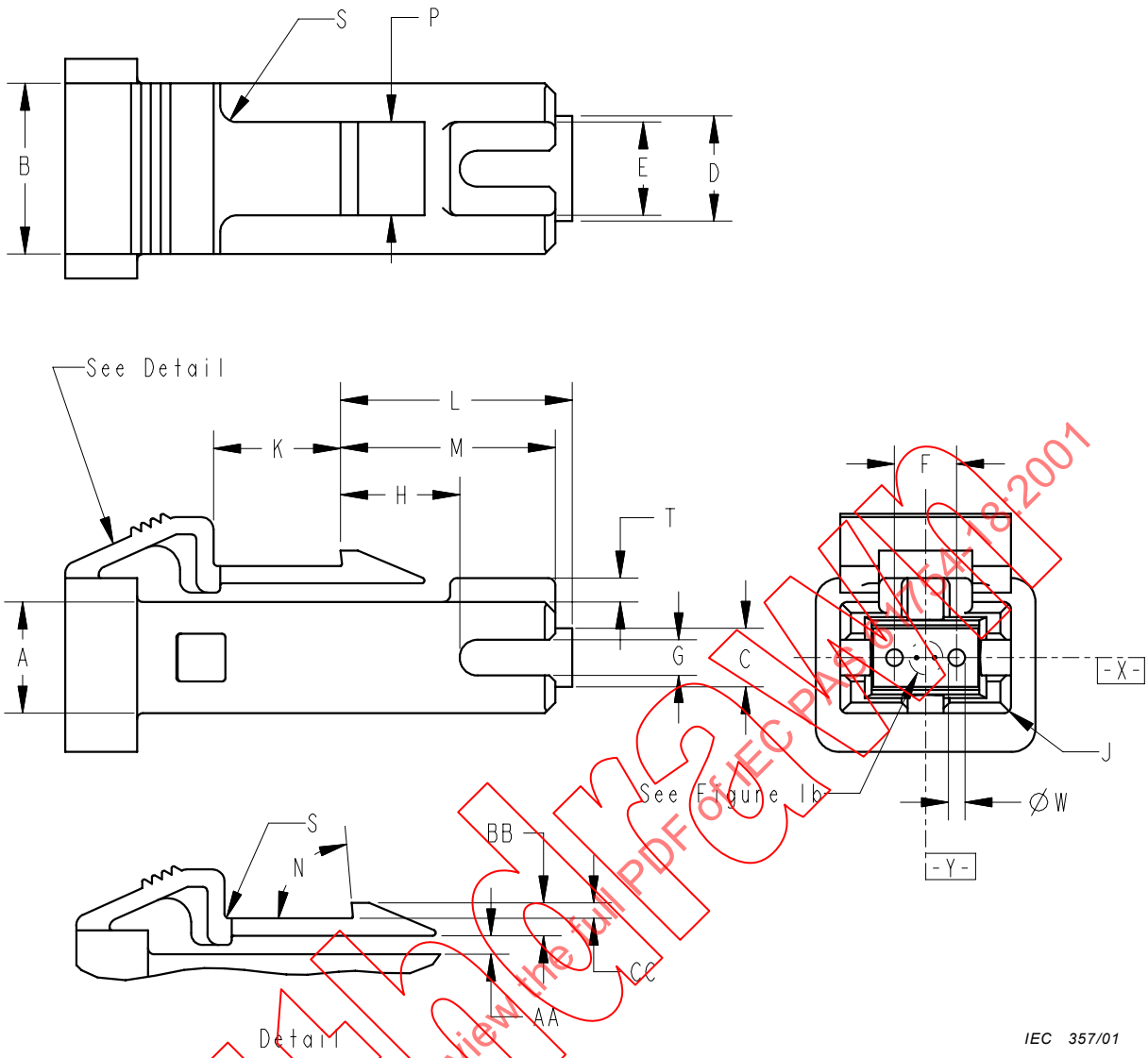


Figure 1 – Plug connector interface, without guide pins

Table 1 – 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			Diameter, see tolerance grade table
AA	0,63	1,2	
BB	1,27	1,42	
CC	0,6	0,77	

Table 1a – Tolerance grade table

Reference	Dimensions (mm)		Notes
	Minimum	Maximum	
1	0,699	0,700	2,4
2	0,699	0,701	2,4

Notes

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.
2. Append tolerance grade number to the interface number.
3. Dimensions apply after termination.
4. 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.

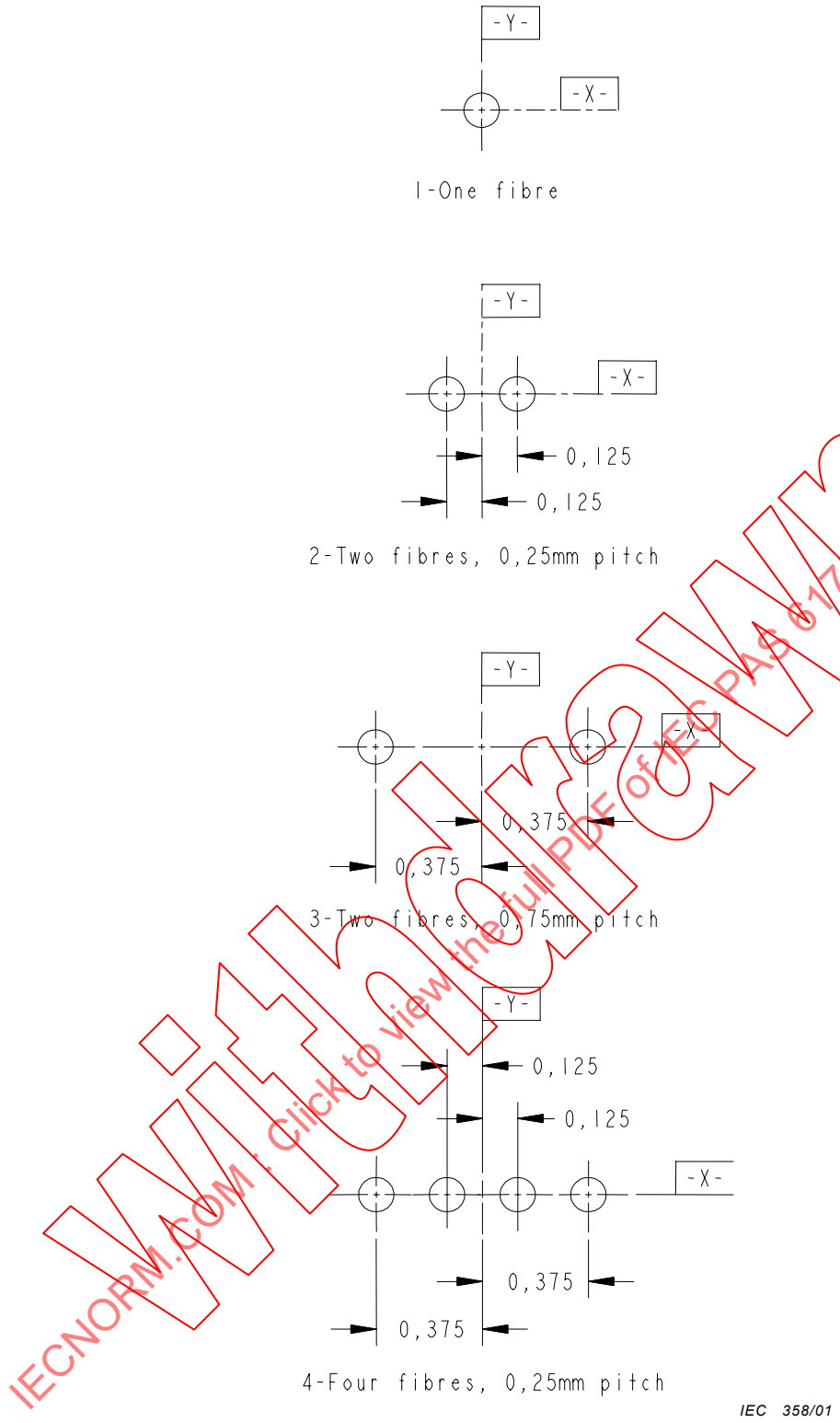
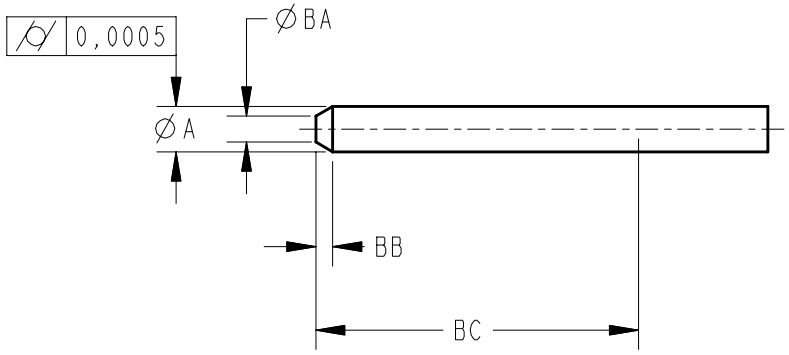


Figure 1b – Optical datum target location diagram

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.



IEC 359/01

Figure 1c – Gauge pin

Table 1c – Dimensions of gauge pin

Reference	Dimensions (mm)		Notes
	Minimum	Maximum	
A	0,6985	0,699	1
BA	0,2	0,4	
BB	0,2	0,5	
BC	5,5	–	

Note

1. Surface roughness 0,1 µm Ra for the length of dimension BC

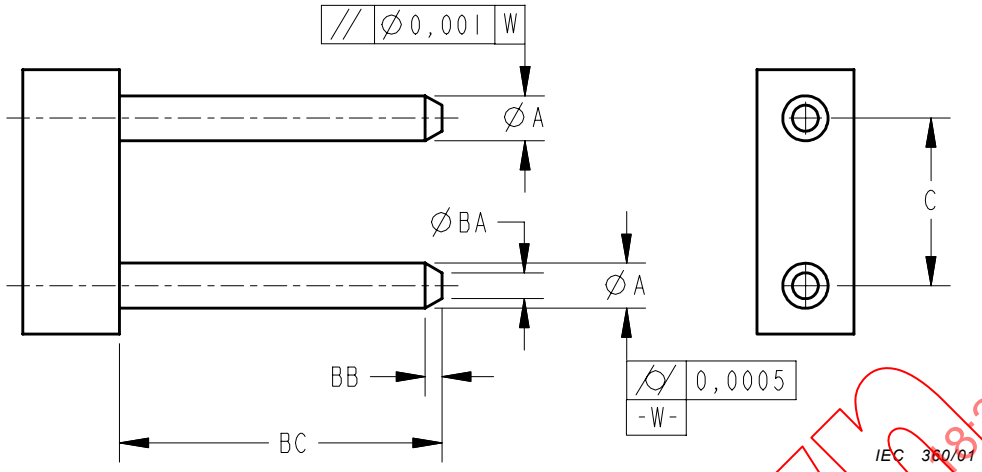


Figure 1d – Plug gauge

Table 1d – Dimensions of plug gauge

Reference	Dimensions (mm)		Notes
	Minimum	Maximum	
A	0,6985	0,699	1
C	2,5995	2,6005	
BA	0,2	0,4	
BB	0,2	0,5	
BC	6	6,5	

Note

1. Surface roughness 0,1 µm Ra for the length of dimension BC

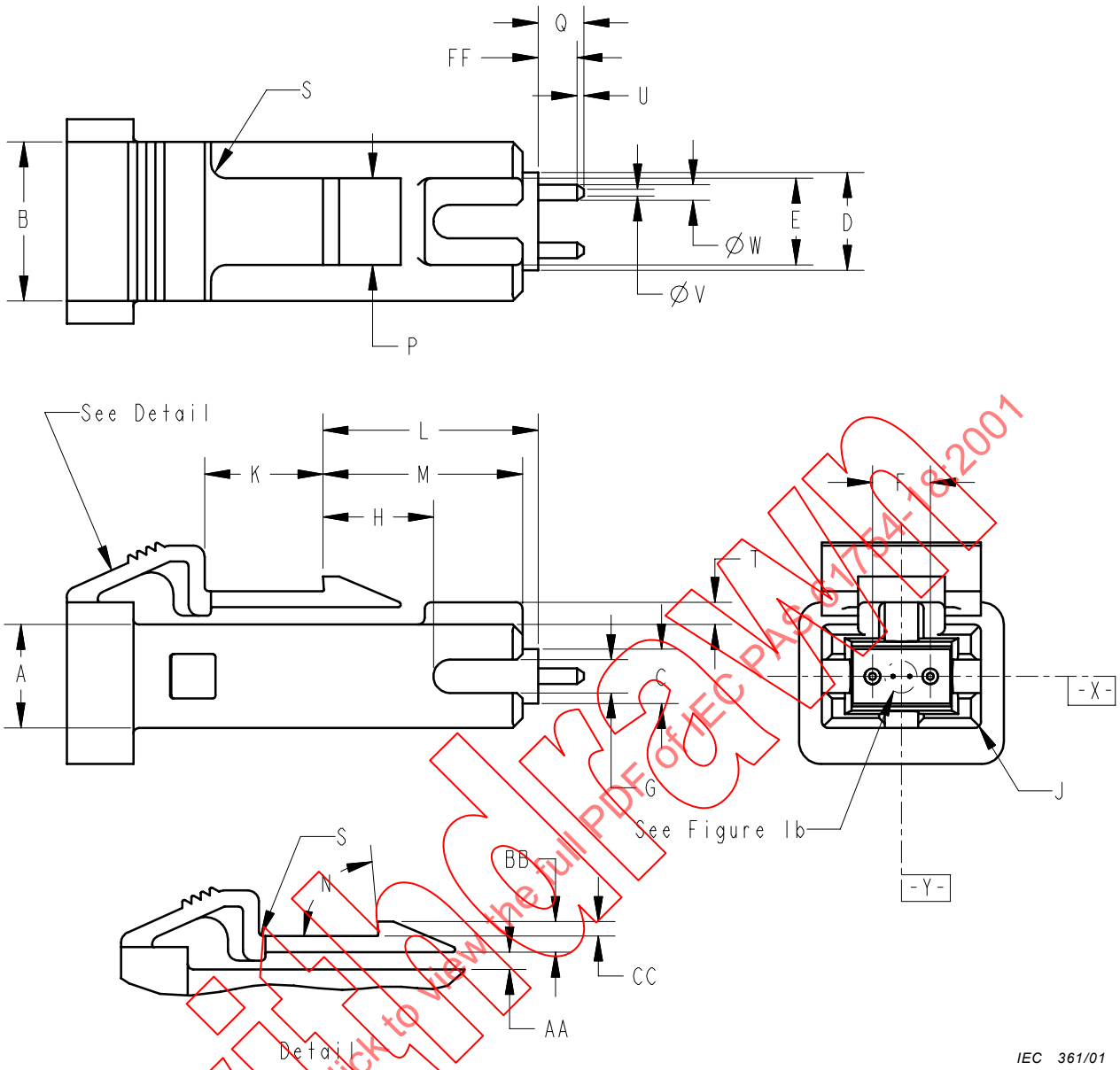


Figure 2 – Plug connector interface, with guide pins

Table 2 – Plug connector interface dimensions, with 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	
Q	–	2,25	
S	–	0,8	Radius
T	0,9	1,1	
U	0,15	–	
V	–	0,4	
W			See tolerance grade table
AA	0,63	1,2	
BB	1,27	1,42	
CC	0,6	0,77	
FF	1,5	–	

Table 2A – Tolerance grade table

Reference	Dimensions (mm)		Notes
	Minimum	Maximum	
1	0,698	0,699	2
2	0,697	0,699	2

Notes

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.
2. Append tolerance grade number to the interface number.
3. Dimensions apply after termination.

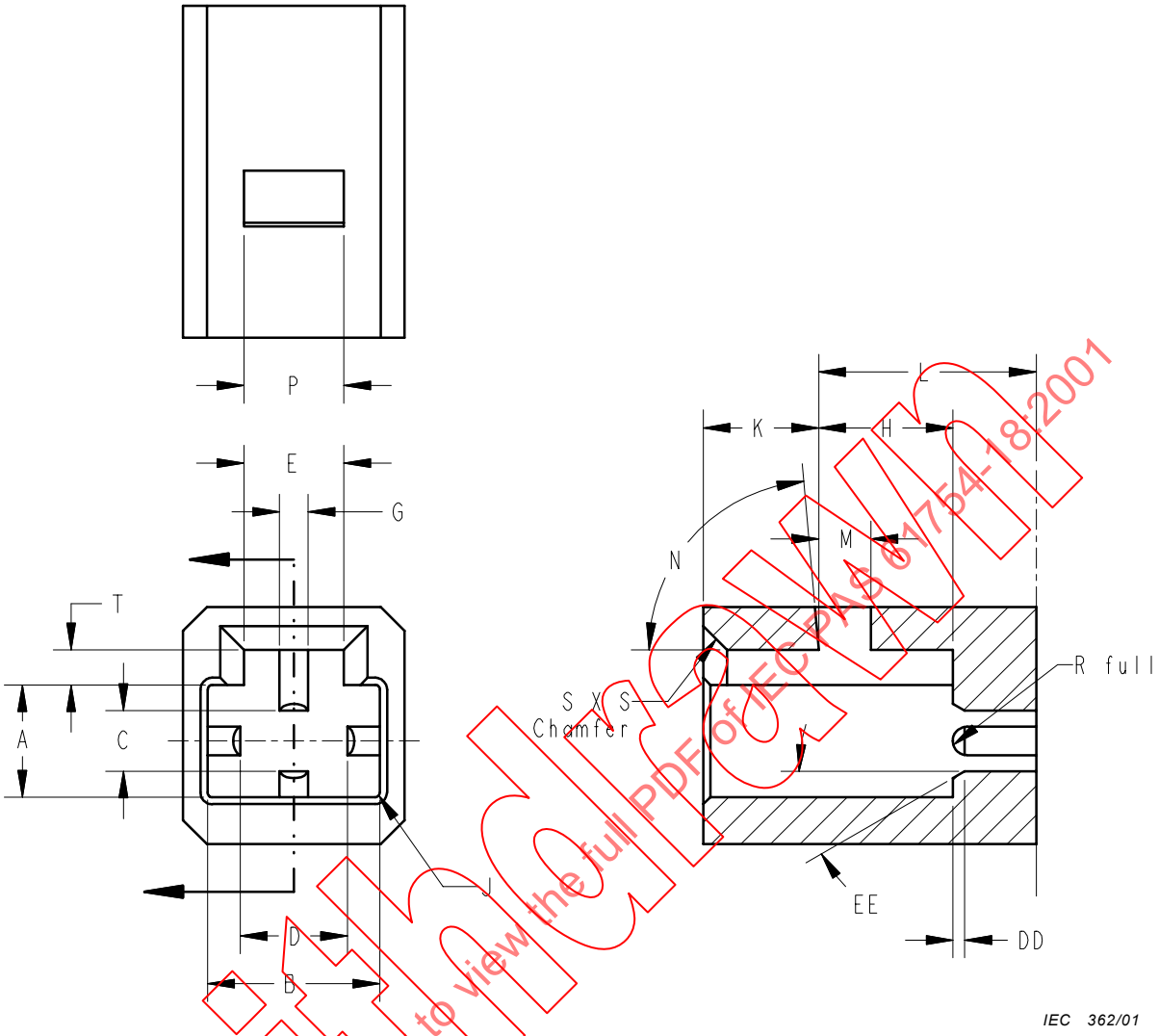
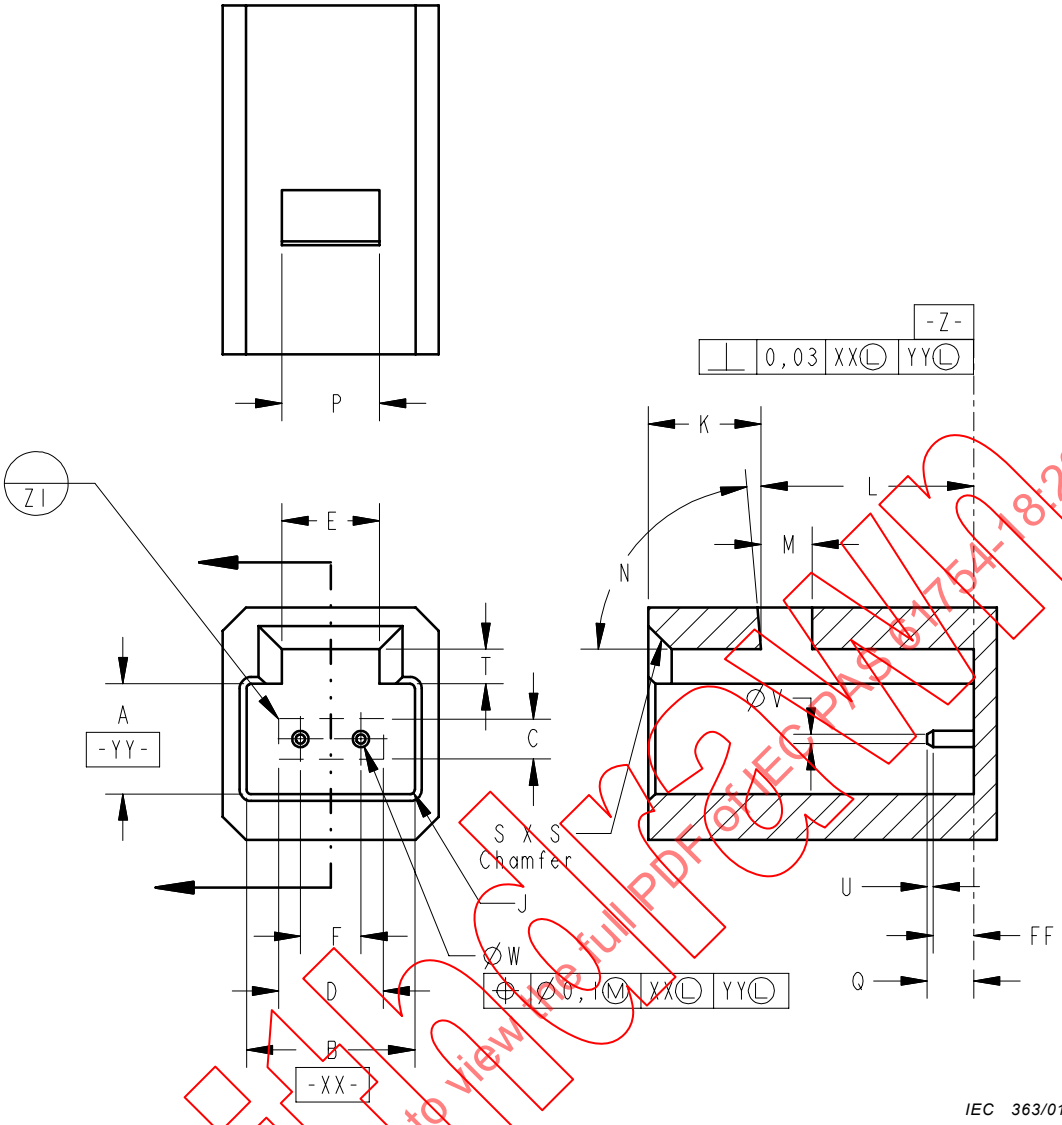


Figure 3 – Adaptor connector interface

Table 3 – Adaptor connector interface dimensions

Reference	Dimensions (mm)		Notes
	Minimum	Maximum	
A	4,7	4,78	
B	7,2	7,28	
C	2,51	2,61	
D	4,46	4,56	
E	4,1	5	
G	1,15	1,25	
H	5,45	5,85	
J	–	0,25	Radius
K	–	5	
L	9,1	9,3	
M	2,1	–	
N	82	88	Degrees
P	4,1	–	
S	0,8	–	
T	1,43	1,53	
DD	0,45	0,55	
EE	25	35	Degrees



Dimensions in mm

Figure 4 – Receptacle connector interface, without ribs