IEC 61754-6

Edition 3.0 2022-02
REDLINE VERSION

INTERNATIONAL STANDARD

colour inside

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

IEC 61754-6:2022-02 RLV(en)

IEC Secretariat
3, rue de Varembé
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
info@iec.ch
www.iec.ch

About the IEC
The International Electrotechnical Commission (IEC) is the leading global organization that prepares and publishes International Standards for all electrical, electronic and related technologies.

About IEC publications
The technical content of IEC publications is kept under constant review by the IEC. Please make sure that you have the latest edition, a corrigendum or an amendment might have been published.

IEC publications search - webstore.iec.ch/advsearchform
The advanced search enables to find IEC publications by a variety of criteria (reference number, text, technical committee, …). It also gives information on projects, replaced and withdrawn publications.

IEC Just Published - webstore.iec.ch/justpublished
Stay up to date on all new IEC publications. Just Published details all new publications released. Available online and once a month by email.

IEC Customer Service Centre - webstore.iec.ch/csc
If you wish to give us your feedback on this publication or need further assistance, please contact the Customer Service Centre: sales@iec.ch.

IEC Products & Services Portal - products.iec.ch
Discover our powerful search engine and read freely all the publications previews. With a subscription you will always have access to up to date content tailored to your needs.

Electropedia - www.electropedia.org
The world's leading online dictionary on electrotechnology, containing more than 22 300 terminological entries in English and French, with equivalent terms in 19 additional languages. Also known as the International Electrotechnical Vocabulary (IEV) online.

IEC 61754-6

Edition 3.0 2022-02
REDLINE VERSION

INTERNATIONAL STANDARD

colour inside

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

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

ICS 33.180.20

ISBN 978-2-8322-1085-5

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

CONTENTS

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.

This redline version of the official IEC Standard allows the user to identify the changes made to the previous edition IEC 61754-6:2013. A vertical bar appears in the margin wherever a change has been made. Additions are in green text, deletions are in strikethrough red text.

IEC 61754-6 has been prepared by subcommittee 86B: Fibre optic interconnecting devices and passive components, of IEC technical committee 86: Fibre optics. It is an International Standard.

This third edition cancels and replaces the second edition published in 2013 and constitutes a technical revision.

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

a) the test method IEC 61300-3-22 for the compression force of the ferrule was added;
b) Annex D (informative) with cut out dimension requirements for testing the strength of mounted adaptors was added.

The text of this International Standard is based on the following documents:

Draft	Report on voting
86B/4562/FDIS	86B/4585/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications.

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 document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

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

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

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~~ specifies the standard interface dimensions for type MU family of connectors.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. 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*~~

IEC 61300-3-22, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-22: Examinations and measurements – Ferrule compression force*

IEC 61754-1, *Fibre optic interconnecting devices and passive components – Fibre optic connector interfaces – Part 1: General and guidance*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 61754-1 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at http://www.electropedia.org/
- ISO Online browsing platform: available at http://www.iso.org/obp

4 Description

The parent connector for type MU connector family is a miniature single-position plug which is characterized by a cylindrical, spring-loaded butting ferrule(s) of a 1,25 mm typical diameter, and a push-pull coupling mechanism. The optical alignment mechanism of the connectors is of a rigid hole or a resilient sleeve style.

This document type MU connector family defines the standard interface dimensions of active device receptacles for the type MU connectors. The receptacles are used to retain the connector

plugs and mechanically maintain the optical datum target of the plugs at a defined position within the receptacle housings.

5 Interfaces

This document contains the standard interfaces showed in Table 1.

Table 1 – Interfaces

Interface IEC 61754-6-1	Simplex plug connector interface – Push/pull (see Figure 1)
Interface IEC 61754-6-2	4,5 mm duplex plug connector interface – Push/pull (see Figure 2)
Interface IEC 61754-6-3	Simplex adaptor connector interface – Push/pull (see Figure 3)
Interface IEC 61754-6-4	4,5 mm duplex adaptor connector interface – Push/pull (see Figure 5)
Interface IEC 61754-6-5	8-port adaptor connector interface – Push/pull (see Figure 6)
Interface IEC 61754-6-6	Plug connector interface – for printed board housings (see Figure 7)
Interface IEC 61754-6-7	Sleeve holder interface – for printed board housings (see Figure 8)
Interface IEC 61754-6-8	2-port backplane housing interface – Self-retentive (see Figure 9)
Interface IEC 61754-6-9	2-port printed board housing interface – Self-retentive (see Figure 10)
Interface IEC 61754-6-10	8-port backplane housing interface – Self-retentive (see Figure 11)
Interface IEC 61754-6-11	8-port printed board housing interface – Self-retentive (see Figure 12)
Interface IEC 61754-6-12	Simplex active device receptacle interface – for physical contact (PC) connector plug (see Figure 13)
Interface IEC 61754-6-13	4,5 mm duplex active device receptacle interface – for PC connector plug (see Figure 15)
Interface IEC 61754-6-14	6,25 mm duplex active device receptacle interface – for PC connector plug (see Figure 17)
Interface IEC 61754-6-15	Plug connector interface – for printed board housings, angled PC (APC) 8 degrees (see Figure 19)
Interface IEC 61754-6-16	Simplex plug connector interface – Push/pull, APC 8 degrees (see Figure 20)
Interface IEC 61754-6-17	4,5 mm duplex plug connector interface – Push/pull, APC 8 degrees (see Figure 21)
Interface IEC 61754-6-18	6,25 mm duplex plug connector interface – Push/pull, APC 8 degrees (see Figure 22)
Interface IEC 61754-6-19	6,25 mm duplex plug connector interface – Push/pull (see Figure 23)
Interface IEC 61754-6-20	6,25 mm duplex adaptor connector interface – Push/pull (see Figure 24)
Interface IEC 61754-6-21	Horizontal duplex plug connector interface – Push/pull (see Figure 25)
Interface IEC 61754-6-22	Horizontal duplex adaptor connector interface – Push/pull (see Figure 26)

The plugs of interfaces IEC 61754-6-1, IEC 61754-6-2, IEC 61754-6-6, IEC 61754-6-19 and IEC 61754-6-21 have a ferrule(s) with a spherically polished endface, and realize physical contact (PC). The plugs of interfaces IEC 61754-6-15, IEC 61754-6-16, IEC 61754-6-17 and IEC 61754-6-18 have a ferrule(s) with a spherically polished angled endface and realize angled PC (APC).

The type MU connector family comprises two types of connector set: MU-A connector set (see Annex A) and MU-B connector set (see Annex B). The MU-A connector set is a plug/adaptor configuration with a push-pull coupling mechanism. The MU-B connector set is a plug-in type back-plane connector configuration which is plug/backplane and printed board housings/plug for printed board housing/sleeve holder configuration and is equipped with a self-retentive mechanism.

The type MU-A connector set consists of simplex and duplex plugs, and simplex, duplex and 8-port adaptors. The plugs are common to the backplane connector housings of the type MU-B connector set.

The type MU-B connector set consists of 2-port and 8-port backplane and printed board connector housings, simplex and duplex plugs, plug for printed board connector housings, and sleeve holder. The plug for printed board connector housing is used as a jack together with the sleeve holder. The jack is attached into the printed board connector housing.

Table 2, Table 3 and Table 4 show the intermateablitiy of the standard interfaces. It shall be noted however that in order to obtain the designated optical performance, any plug shall be connected to a counterpart plug whose ferrule end is polished to the same condition.

Table 2 – Intermateability of MU-A connectors ~~set~~

Plugs	Adaptors				
	61754-6-3	61754-6-4	61754-6-5	61754-6-20	61754- 6-22
61754-6-1	Mate	Mate	Mate	Mate	Mate
61754-6-2	Not mate	Mate	Mate	Not mate	Not mate
61754-6-16	Mate	Mate	Mate	Mate	Mate
61754- 6-17	Not mate	Mate	Mate	Not mate	Not mate
61754-6-18	Not mate	Not mate	Not mate	Mate	Not mate
61754-6-19	Not mate	Not mate	Not mate	Mate	Not mate
61754-6-21	Not mate	Not mate	Not mate	Not mate	Mate

Table 3 – Intermateability of MU-B connectors ~~set~~

Plugs	Connector housings			
	Backplane connector housing		Printed board connector housing	
	61754-6-8	61754-6-10	61754-6-9	61754-6-11
61754-6-1	Mate	Mate	Not mate	Not mate
61754-6-2	Mate	Mate	Not mate	Not mate
61754-6-6 with 61754-6-7	Not mate	Not mate	Mate	Mate
61754-6-15 with 61754- 6-7	Not mate	Not mate	Mate	Mate
61754-6-16	Mate	Mate	Not mate	Not mate
61754-6-17	Mate	Mate	Not mate	Not mate
61754-6-18	Not mate	Not mate	Not mate	Not mate
61754-6-19	Not mate	Not mate	Not mate	Not mate
61754-6-21	Not mate	Not mate	Not mate	Not mate

Table 4 – Intermateability of MU receptacles

Plugs	Receptacles		
	61754-6-12	**61754-6-13**	**61754-6-14**
61754-6-1	Mate	Mate	Mate
61754-6-2	Not mate	Mate	Not mate
61754-6-16	Not mate	Not mate	Not mate
61754-6-17	Not mate	Not mate	Not mate
61754-6-18	Not mate	Not mate	Not mate
61754-6-19	Not mate	Not mate	Mate
61754-6-21	Not mate	Not mate	Not mate

Figure 1 is an example of a simplex plug connector interface. Table 5 gives dimensions of the simplex plug connector interface and Table 6 gives the grade of the simplex plug connector interface.

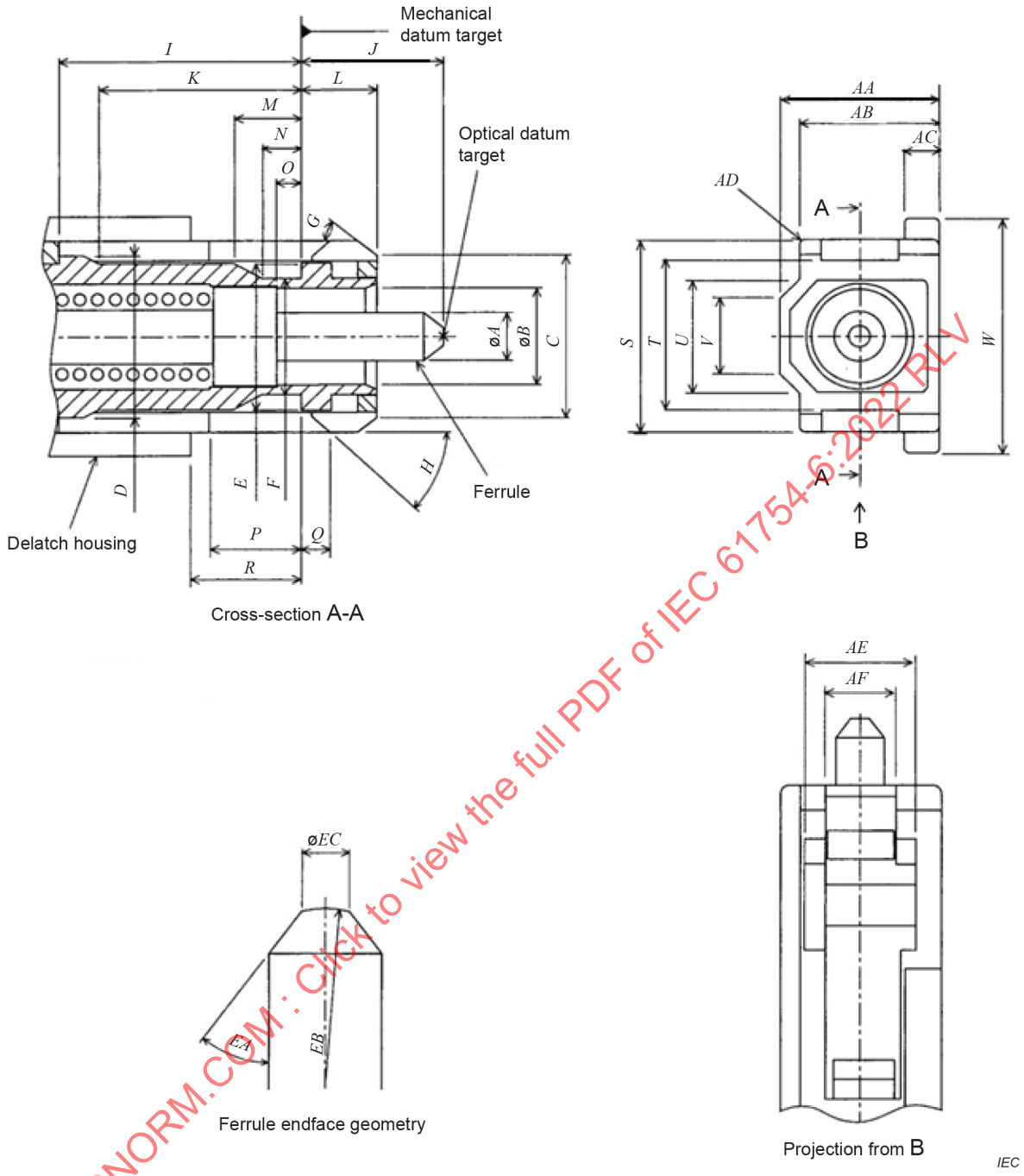


Figure 1 – Simplex plug connector interface – Push/pull

Table 5 – Dimensions of the simplex plug connector interface

Reference	Dimensions		Remarks
	Minimum	Maximum	
A	See Table 6	~~1,249 5 mm~~	a
B	2,6 mm	2,7 mm	
C	4,6 mm	4,8 mm	
D	4,65 mm	4,75 mm	
E	4,3 mm	4,4 mm	
F	3,3 mm	3,4 mm	
G	25°	35°	Angle, unit in degrees
H	25°	35°	Angle, unit in degrees
I	6,55 mm	–	b
J	4,2 mm	4,5 mm	c
K	5,5 mm	–	
L	2,4 mm	2,5 mm	
M	1,5 mm	–	
N	0,6 mm	–	
O	0,5 mm	–	
P	2,6 mm	–	b
Q	1 mm	1,1 mm	b d
R	2,65 mm	2,9 mm	b
S	5,5 mm	5,6 mm	
T	4,3 mm	4,5 mm	
U	–	3,7 mm	
V	–	2,4 mm	
W	6,5 mm	6,6 mm	
AA	4,3 mm	4,4 mm	
AB	3,85 mm	3,95 mm	
AC	0,7 mm	0,9 mm	
AD	0,2 mm	–	Radius
AE	3 mm	–	
AF	2,2 mm	2,3 mm	
EA	32,5°	45°	Angle, unit in degrees e
EB	5 mm	30 mm	Radius f
EC	0,45 mm	0,73 mm	Diameter

a A chamfer or radius is allowed to a maximum depth of 0,5 mm from the ferrule endface.

b The delatch housing shall be movable to the right ~~and~~ or left ~~directions~~. Dimensions *L*, *M* and *V* are given when the ~~coupling sleeve is moved in its most right-direction position~~ delatch housing is at the furthest right.

c Dimension *J* is given for the plug endface when not mated. ~~It is noticed that~~ The ferrule is movable by a certain axial compression force with direct contacting endfaces, and therefore dimension *J* is variable. Ferrule compression force shall be 5,5 N to 6,5 N when the position of the optical datum target from the mechanical datum target is moved in the range of 3,9 mm to 4,1 mm. In addition, dimension *J* shall become less than 3,25 mm with a relatively large axial compression force. The compression force shall be measured according to IEC 61300-3-22.

d ~~The right-side position of *Q* shall become the left-side position to the mechanical datum target when the coupling sleeve is moved to its most left-direction position.~~ *Q* is to the right of the mechanical datum target when the delatch housing is to the right (connected state) and to the left of the mechanical datum target when the delatch housing is to the left (disconnected state).

e 40° to 45° are desirable to minimize debris for backplane connectors.

f Dome eccentricity of the spherically polished ferrule endface shall be less than ~~70~~ 50 µm.

Table 6 – Grade of the simplex plug connector

Grade	Dimensions mm		Remarks
	A		
	Minimum	Maximum	
A	See IEC 61755-3-1		a
B	See IEC 61755-3-1		a
C	See IEC 61755-3-1		a
D	See IEC 61755-3-1		a
~~Am~~	~~1,248 3~~	~~1,249 5~~	~~b~~
~~Bm~~	~~1.246 7~~	~~1,249 5~~	~~b~~
A_m	Grade not specified at this time		a b
B_m	1,246 7	1,249 5	a b
C_m	Grade not specified at this time		a b

a ~~See IEC 61755-3-1.~~ Add grade number to the interface reference number.

b See IEC 61755-6-1[1] for guidance.

Figure 2 is an example of a 4,5 mm duplex plug connector interface. Table 7 gives dimensions of the 4,5 mm duplex plug connector interface and Table 8 gives the grade of the 4,5 mm duplex plug connector interface.

1 Under preparation. Stage at the time of publication: IEC/CDM 61755-6-1:2021.

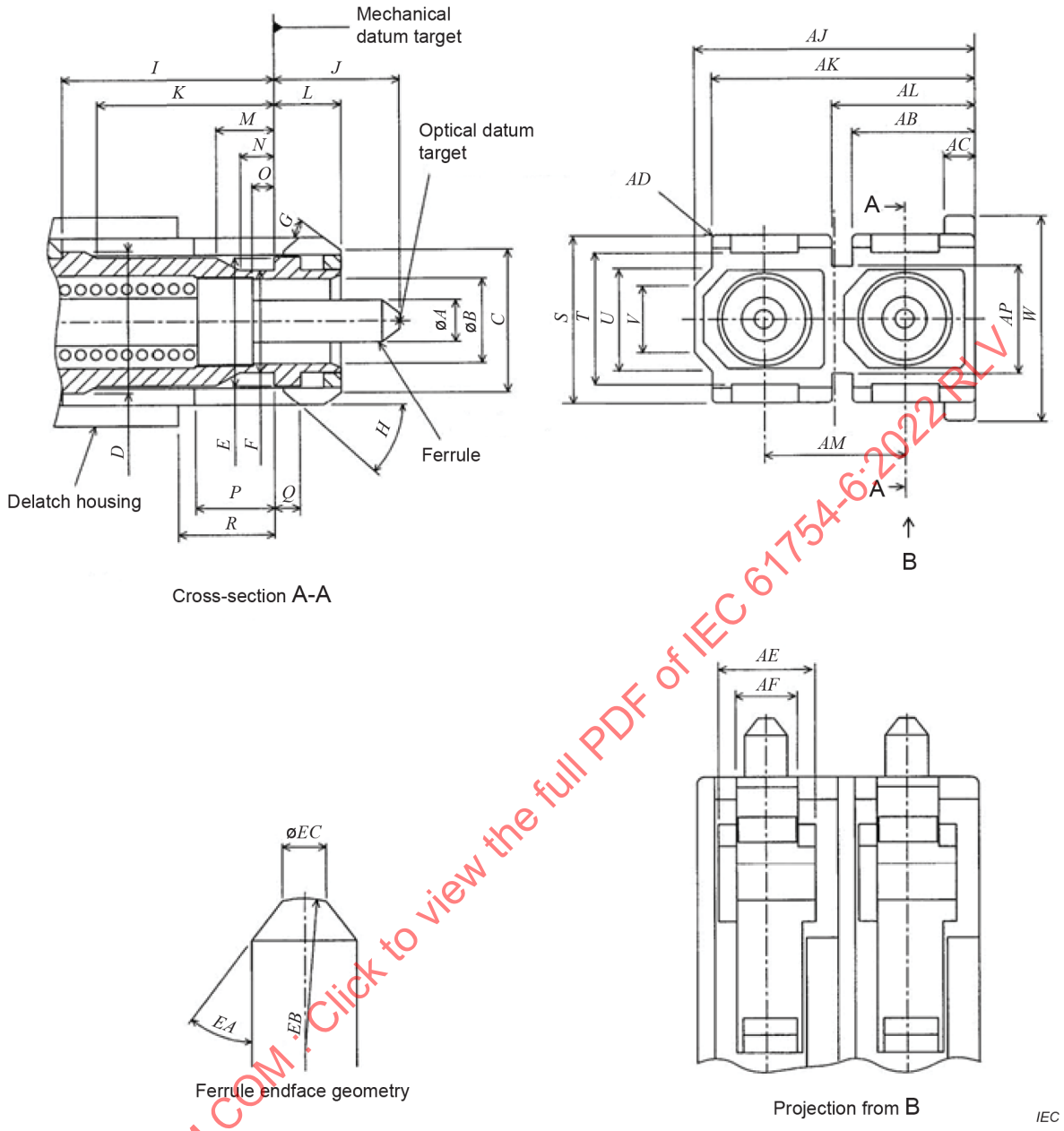


Figure 2 – 4,5 mm duplex plug connector interface – Push/pull

Table 7 – Dimensions of the 4,5 mm duplex plug connector interface

Reference	Dimensions		Remarks
	Minimum	Maximum	
A	See Table 8	~~1,249 5 mm~~	a
B	2,6 mm	2,7 mm	
C	4,6 mm	4,8 mm	
D	4,65 mm	4,75 mm	
E	4,3 mm	4,4 mm	
F	3,3 mm	3,4 mm	
G	25°	35°	Angle, unit in degrees
H	25°	35°	Angle, unit in degrees
I	6,55 mm	–	b

J	4,2 mm	4,5 mm	c
K	5,5 mm	–	
L	2,4 mm	2,5 mm	
M	1,5 mm	–	
N	0,6 mm	–	
O	0,5 mm	–	
P	2,6 mm	–	b
Q	1,0 mm	1,1 mm	b d
R	2,65 mm	2,9 mm	b
S	5,5 mm	5,6 mm	
T	4,3 mm	4,5 mm	
U	–	3,7 mm	
V	–	2,4 mm	
W	6,5 mm	6,6 mm	
AB	3,7 mm	3,85 mm	
AC	0,7 mm	0,9 mm	
AD	0,2 mm	–	Radius
AE	3,0 mm	–	
AF	2,2 mm	2,3 mm	
AJ	8,8 mm	8,9 mm	
AK	8,35 mm	8,45 mm	
AL	4,55 mm	4,7 mm	
AM	4,45 mm	4,55 mm	
AP	–	3,7 mm	
EA	32,5°	45°	Angle, unit in degrees [e]
EB	5 mm	30 mm	Radius [f]
EC	0,45 mm	0,73 mm	Diameter

[a] A chamfer or radius is allowed to a maximum depth of 0,5 mm from the ferrule endface.

[b] The delatch housing shall be movable to the right ~~and~~ or left ~~directions~~. Dimensions *L*, *M* and *V* are given when the ~~coupling sleeve is moved in its most right-direction position~~ delatch housing is at the furthest right.

[c] Dimension *J* is given for the plug endface when not mated. ~~It is noticed that~~ The ferrule is movable by a certain axial compression force with direct contacting endfaces, and therefore dimension *J* is variable. Ferrule compression force shall be 5,5 N to 6,5 N when the position of the optical datum target from the mechanical datum target is moved in the range of 3,9 mm to 4,1 mm. In addition, dimension *J* shall become less than 3,25 mm with a relatively large axial compression force. The compression force shall be measured according to IEC 61300-3-22.

[d] ~~The right-side position of *Q* shall become left-side position to the mechanical datum target when the coupling sleeve is moved to its most left-direction position.~~ *Q* is to the right of the mechanical datum target when the delatch housing is to the right (connected state) and to the left of the mechanical datum target when the delatch housing is to the left (disconnected state).

[e] 40° to 45° are desirable to minimize debris for backplane connectors.

[f] Dome eccentricity of the spherically polished ferrule endface shall be less than ~~70~~ 50 µm.

Table 8 – Grade of the 4,5 mm duplex plug connector

Grade	Dimensions		Remarks
	A		
	Minimum	Maximum	
A	See IEC 61755-3-1		a
B	See IEC 61755-3-1		a
C	See IEC 61755-3-1		a
D	See IEC 61755-3-1		a
~~Am~~	~~1,248 3~~	~~1,249 5~~	~~b~~
~~Bm~~	~~1,246 7~~	~~1,249 5~~	~~b~~
A_m	Grade not specified at this time		a b
B_m	1,246 7	1,249 5	a b
C_m	Grade not specified at this time		a b

a ~~See IEC 61755-3-1.~~ Add grade number to the interface reference number.

b See IEC 61755-6-1 for guidance.

Figure 3 is an example of a simplex adaptor connector interface. Table 9 gives dimensions of the simplex adaptor connector interface and Table 10 gives the grade of the simplex adaptor connector interface.

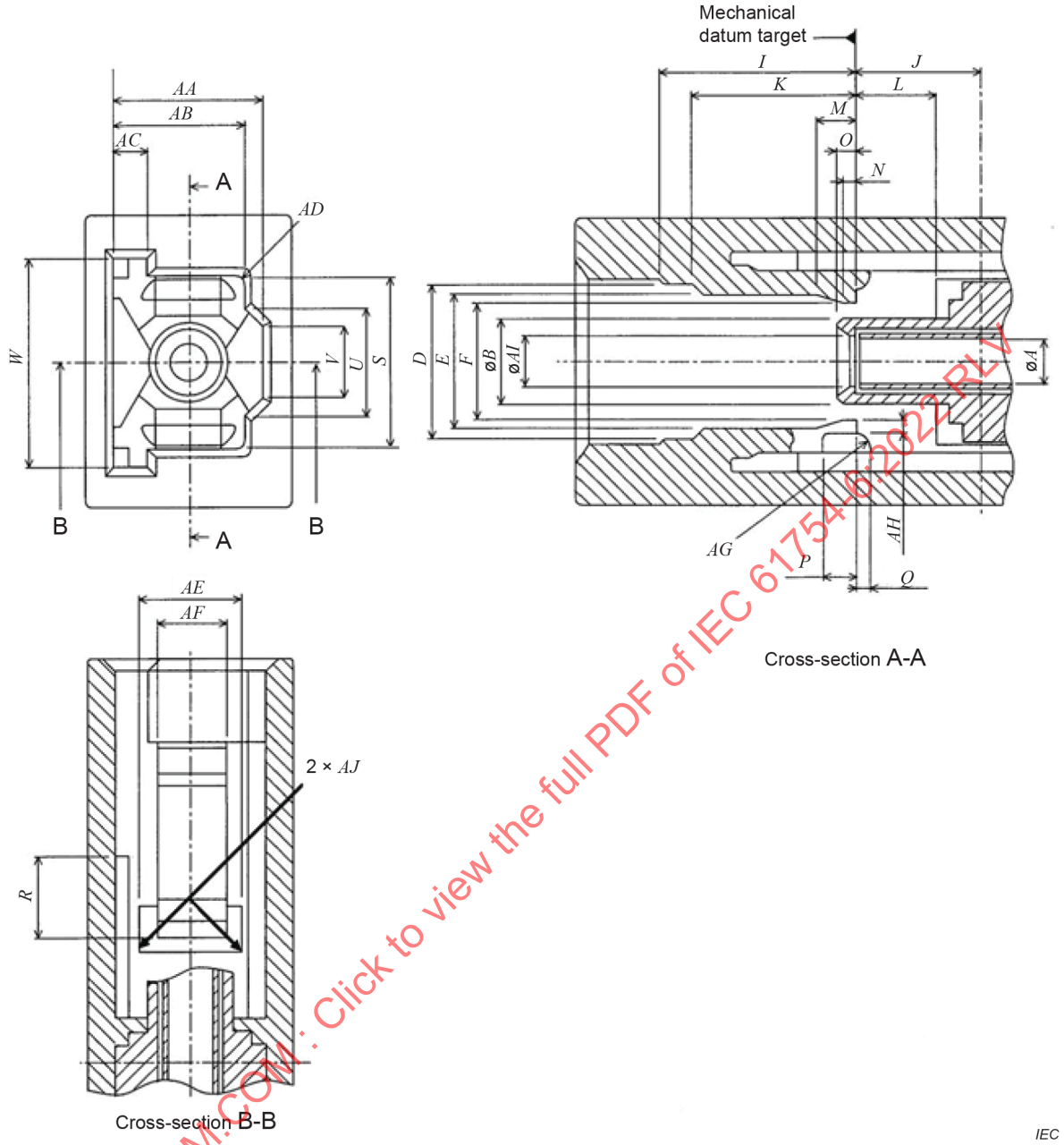


Figure 3 – Simplex adaptor connector interface – Push/pull

Table 9 – Dimensions of the simplex adaptor connector interface

Reference	Dimensions mm		Remarks
	Minimum	Maximum	
A	See Table 10		Diameter
B	2,39	2,59	Diameter
D	4,8	5	
E	4,55	–	
F	2,9	3,5	[a]
I	–	6,5	
J	3,9	4,1	
K	–	5,4	
L	2,55	2,7	
M	–	1,4	
N	–	0,55	
O	–	0,6	
P	–	1,2	
Q	–	0,4	
R	–	2,55	
S	5,65	5,75	
U	3,8	4	
V	3,3	–	
W	6,7	–	
AA	4,45	4,55	
AB	4,01	4,11	
AC	0,95	1,15	
AD	–	0,2	Radius
AE	2,8	2,95	
AF	1,9	2,1	
AG	0,3	–	Radius
AH	0,4	0,55	
AI	1,34	1,44	Diameter
AJ	–	0,3	Radius

[a] Dimension *F* shall become greater than 4,5 mm when a plug is coupled to or removed from the adaptor.

Table 10 – Grade of the simplex adaptor connector

Grade	Dimensions mm		Remarks
	Minimum	Maximum	
1	–	–	Resilient sleeve [a]

[a] The connector alignment feature is a resilient alignment sleeve. The feature shall accept a pin gauge to the centre of the adaptor with a force of 1,0 N to 2,5 N under the condition that another pin gauge is inserted into the feature from the other side. The centre of the adaptor is defined by the right-side position of dimension *J*. The pin gauge is shown in Figure 4 and Table 11.

Figure 4 is an example of a pin gauge for resilient alignment sleeve. Table 11 gives pin gauge dimensions.

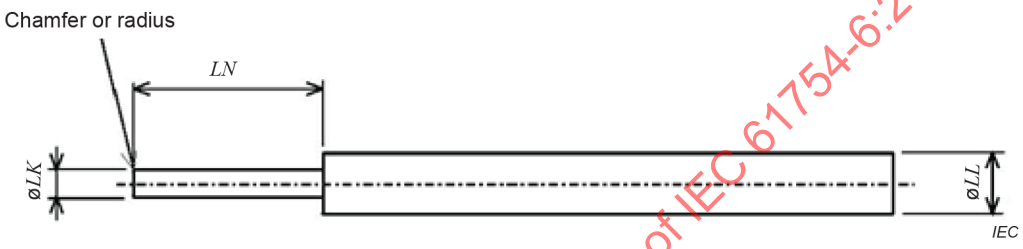


Figure 4 – Pin gauge for resilient alignment sleeve

Table 11 – Pin gauge dimensions

Reference	Dimensions mm		Remarks
	Minimum	Maximum	
LK	1,248 5	1,249 5	Surface roughness grade N4 (0,2 µm radius)
LL	2,6	2,8	
LN	4,7	~~9,5~~ –	

Figure 5 is an example of a 4,5 mm duplex adaptor connector interface. Table 12 gives dimensions of the 4,5 mm duplex adaptor connector interface and Table 13 gives the grade of the 4,5 mm duplex adaptor connector interface.

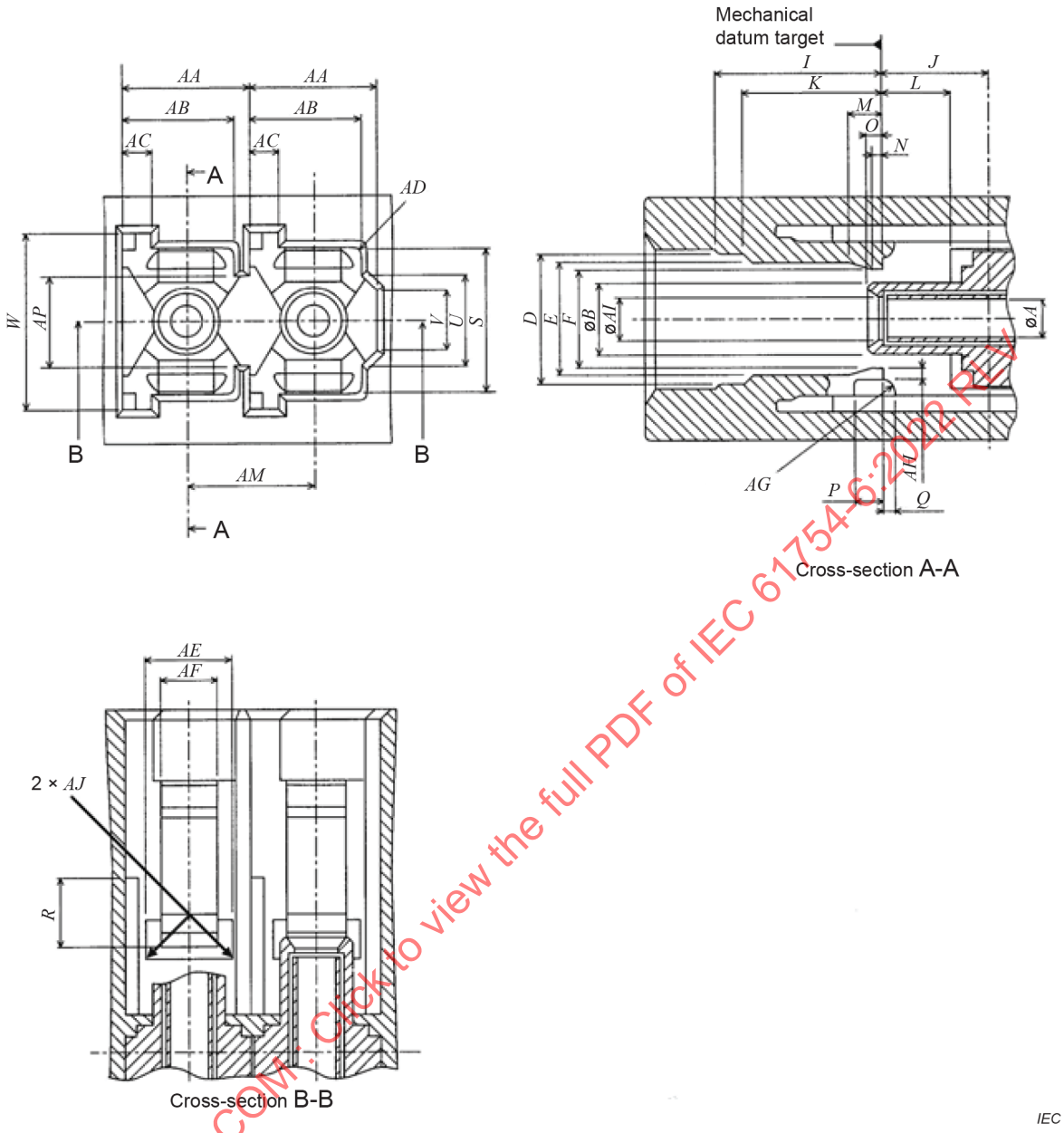


Figure 5 – 4,5 mm duplex adaptor connector interface – Push/pull

Table 12 – Dimensions of the 4,5 mm duplex adaptor connector interface

Reference	Dimensions mm		Remarks
	Minimum	Maximum	
A	See Table 13		
B	2,39	2,59	
D	4,8	5	
E	4,55	–	
F	2,9	3,5	[a]
I	–	6,5	
J	3,9	4,1	
K	–	5,4	
L	2,55	2,7	
M	–	1,4	
N	–	0,55	
O	–	0,6	
P	–	1,2	
Q	–	0,4	
R	–	2,55	
S	5,65	5,75	
U	3,8	4	
V	3,3	–	
W	6,7	–	
AA	4,45	4,55	
AB	4,01	4,11	
AC	0,95	1,15	
AD	–	0,2	Radius
AE	2,8	2,95	
AF	1,9	2,1	
AG	0,3	–	Radius
AH	0,4	0,55	
AI	1,34	1,44	Diameter
AJ	–	0,3	Radius
AM	4,45	4,55	
AP	3,8	4	

[a] Dimension *F* shall become greater than 4,5 mm when a plug is coupled to or removed from the adaptor.

Table 13 – Grade of the 4,5 mm duplex adaptor connector

Grade	Dimensions mm		Notes
	Minimum	Maximum	
1	–	–	Resilient sleeve [a]

[a] The connector alignment feature is a resilient alignment sleeve. The feature shall accept a pin gauge to the centre of the adaptor with a force of 1,0 N to 2,5 N under the condition that another pin gauge is inserted into the feature from the other side. The centre of the adaptor is defined by the right-side position of dimension J. The pin gauge is shown in Figure 4 and Table 11.

Figure 6 is an example of an 8-port adaptor connector interface. Table 14 gives dimensions of the 8-port adaptor connector interface and Table 15 gives the grade of the 8-port adaptor connector interface.

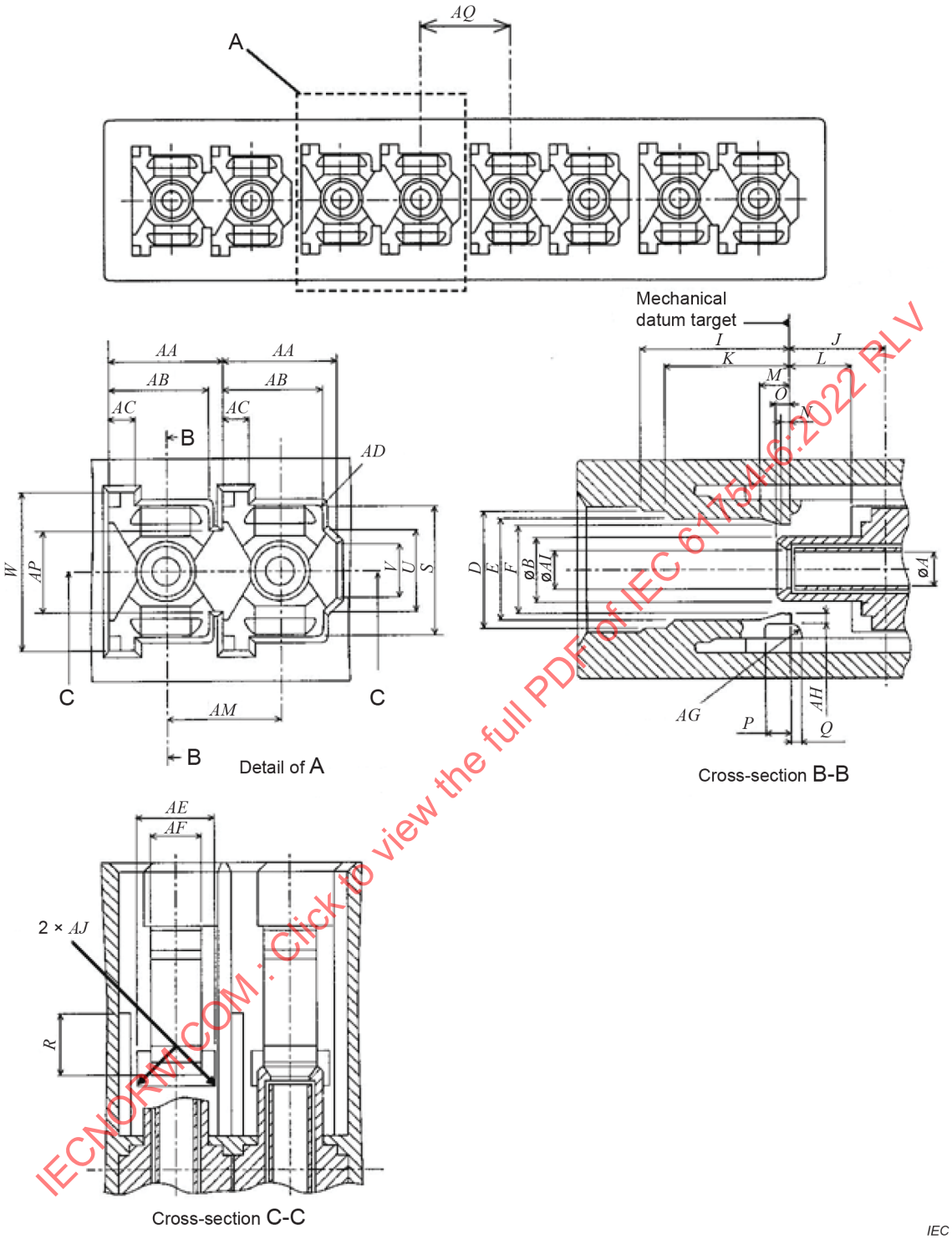


Figure 6 – 8-port adaptor connector interface – Push/pull

Table 14 – Dimensions of the 8-port adaptor connector interface

Reference	Dimensions mm		Remarks
	Minimum	Maximum	
A	See Table 15		
B	2,39	2,59	
D	4,8	5	
E	4,55	–	
F	2,9	3,5	[a]
I	–	6,5	
J	3,9	4,1	
K	–	5,4	
L	2,55	2,7	
M	–	1,4	
N	–	0,55	
O	–	0,6	
P	–	1,2	
Q	–	0,4	
R	–	2,55	
S	5,65	5,75	
U	3,8	4	
V	3,3	–	
W	6,7	–	
AA	4,45	4,55	
AB	4,01	4,11	
AC	0,95	1,15	
AD	–	0,2	Radius
AE	2,8	2,95	
AF	1,9	2,1	
AG	0,3	–	Radius
AH	0,4	0,55	
AI	1,34	1,44	Diameter
AJ	–	0,3	Radius
AM	4,45	4,55	
AP	3,8	4	
AQ	4,8	5,2	

[a] Dimension *F* shall become greater than 4,5 mm when a plug is coupled to or removed from the adaptor.

Table 15 – Grade of the 8-port adaptor connector

Grade	Dimensions mm		Notes
	Minimum	Maximum	
1	–	–	Resilient sleeve [a]

[a] The connector alignment feature is a resilient alignment sleeve. The feature shall accept a pin gauge to the centre of the adaptor with a force of 1,0 N to 2,5 N under the condition that another pin gauge is inserted into the feature from the other side. The centre of the adaptor is defined by the right-side position of dimension *J*. The pin gauge is shown in Figure 4 and Table 11.

Figure 7 is an example of a plug connector interface. Table 16 gives dimensions of the plug connector interface and Table 17 gives the grade of the plug connector interface.

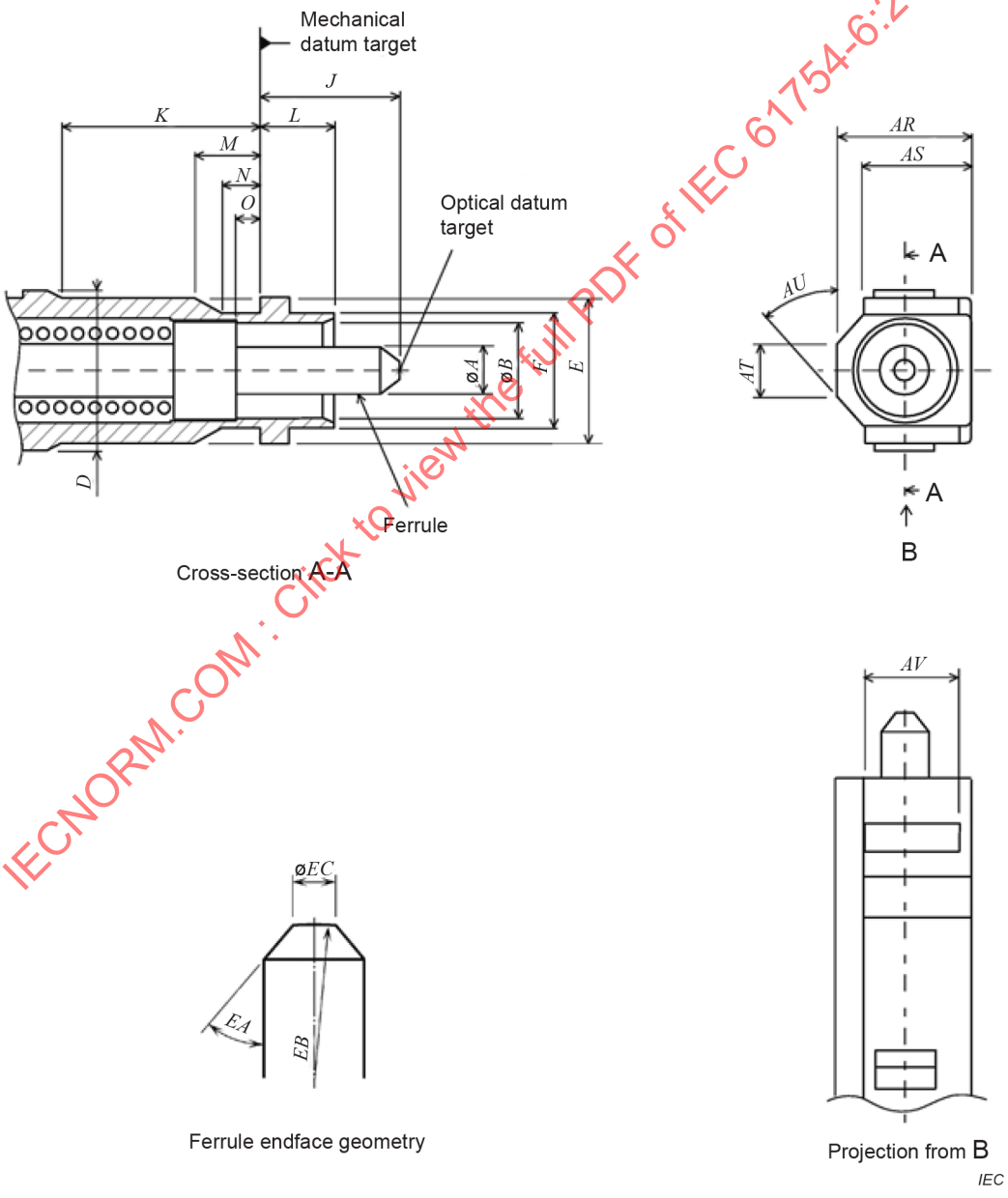


Figure 7 – Plug connector interface – For printed board housings

Table 16 – Dimensions of the plug connector interface

Reference	Dimensions		Notes
	Minimum	Maximum	
A	See Table 17	~~1,249 5 mm~~	[a]
B	2,6 mm	2,7 mm	Diameter
D	4,65 mm	4,75 mm	
E	4,3 mm	4,4 mm	
F	3,3 mm	3,4 mm	
J	4,2 mm	4,5 mm	[b]
K	5,5 mm	–	
L	2,4 mm	2,5 mm	
M	1,5 mm	–	
N	0,6 mm	–	
O	0,5 mm	–	
AR	3,65 mm	3,75 mm	
AS	2,9 mm	3,0 mm	
AT	1,7 mm	2,1 mm	
AU	43°	47°	Angle, unit in degrees
AV	–	3,0 mm	
EA	32,5°	45°	Angle, unit in degrees [c]
EB	5 mm	30 mm	Radius [d]
EC	0,45 mm	0,73 mm	

NOTE 1 A chamfer or radius is allowed to a maximum depth of 0,5 mm from the ferrule endface.

NOTE 2 40° to 45° are desirable to minimize debris for backplane connectors.

[a] A chamfer or radius is allowed to a maximum depth of 0,5 mm from the ferrule endface.

[b] Dimension *J* is given for the plug endface when not mated. ~~It is noticed that~~ The ferrule is movable by a certain axial compression force with direct contacting endfaces, and therefore dimension *J* is variable. Ferrule compression force shall be 5,5 N to 6,5 N when the position of the optical datum target from the mechanical datum target is moved in the range of 3,9 mm to 4,1 mm. In addition, dimension *J* shall become less than 3,25 mm with a relatively large axial compression force. The compression force shall be measured according to IEC 61300-3-22.

[c] 40° to 45° are desirable to minimize debris for backplane connectors.

[d] Dome eccentricity of the spherically polished ferrule endface shall be less than ~~70~~ 50 µm.

Table 17 – Grade of the plug connector

Grade	Dimensions mm		Notes
	A		
	Minimum	Maximum	
A	See IEC 61755-3-1		a
B	See IEC 61755-3-1		a
C	See IEC 61755-3-1		a
D	See IEC 61755-3-1		a
~~Am~~	~~1,248 3~~	~~1,249 5~~	~~b~~
~~Bm~~	~~1,246 7~~	~~1,249 5~~	~~b~~
A_m	Grade not specified at this time		a b
B_m	1,246 7	1,249 5	a b
C_m	Grade not specified at this time		a b

a ~~See IEC 61755-3-1.~~ Add grade number to the interface reference number.

b See IEC 61755-6-1 for guidance .

Figure 8 is an example of the sleeve holder interface. Table 18 gives dimensions of the sleeve holder interface and Table 19 gives the grade of the sleeve holder interface.

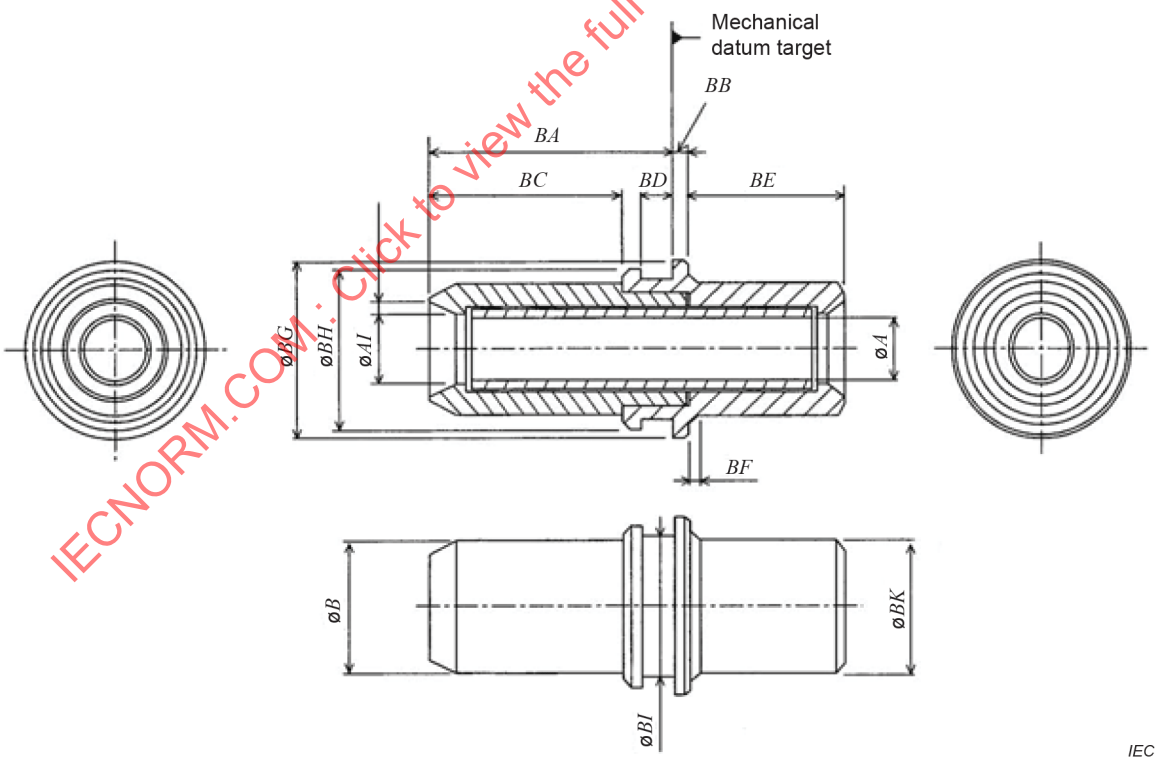


Figure 8 – Sleeve holder interface

Table 18 – Dimensions of the sleeve holder interface

Reference	Dimensions mm		Remarks
	Minimum	Maximum	
A	See Table 19		
B	2,54	2,59	Diameter
AI	1,34	1,39	Diameter
BA	4,65	4,85	
BB	0,20	0,30	
BC	3,65	3,85	
BD	0,65	0,85	
BE	2,9	3,1	
BF	–	0,25	45° chamfer
BG	3,5	3,54	Diameter
BH	3,1	3,2	Diameter
BI	2,5	2,7	Diameter
BJ	0,29	0,37	
BK	2,49	2,59	Diameter

Table 19 – Grade of the sleeve holder

Grade	Dimensions mm		Remarks
	Minimum	Maximum	
1	–	–	Resilient sleeve [a]

[a] The connector alignment feature is a resilient alignment sleeve. The feature shall accept a pin gauge to a depth of 4,3 mm from the left side with a force of 1,0 N to 2,5 N under the condition that another pin gauge is inserted into the feature from the other side. The pin gauge is shown in Figure 4 and Table 11.

Figure 9 is an example of the 2-port backplane housing interface. Table 20 gives dimensions of the 2-port backplane housing interface and Table 21 gives the grade of the 2-port backplane housing interface.

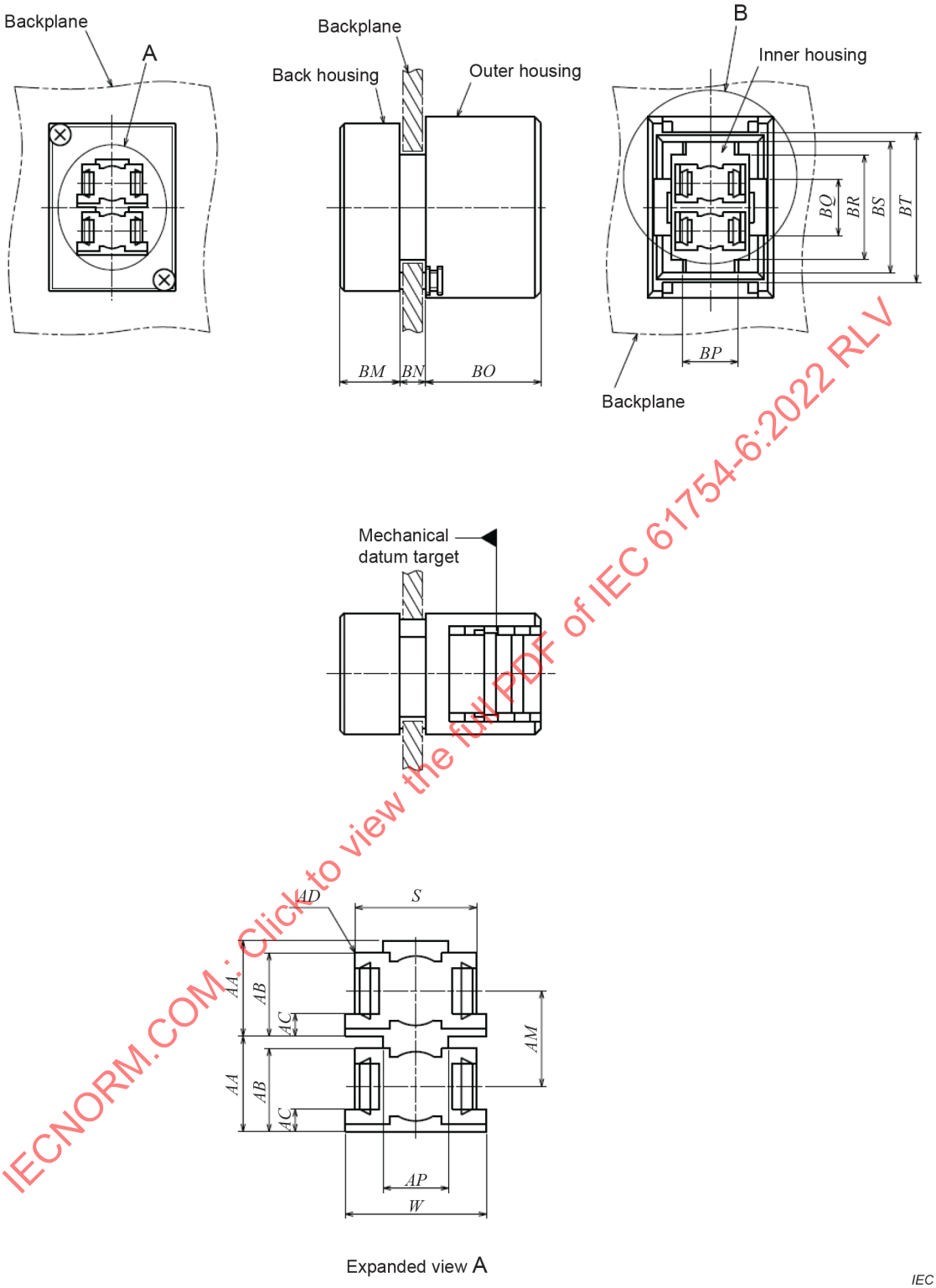
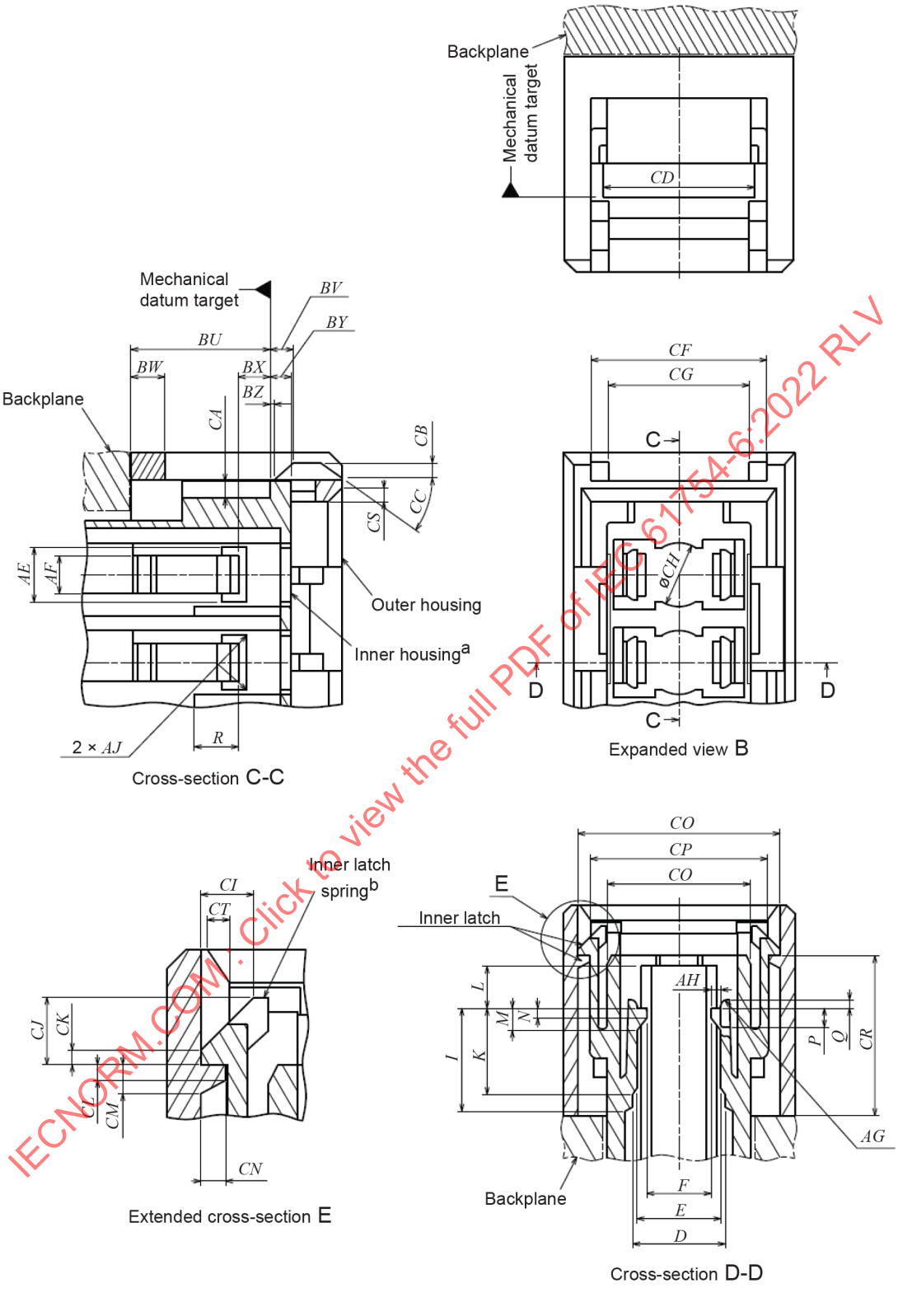


Figure 9 – 2-port backplane housing interface *(1 of 2)*



[a] In the cross-section C-C figure, the inner housing should be movable to the right by at least 0,9 mm, and to the left by at least 2 mm when the inner latch is released.

[b] In the expanded cross-section E figure, the inner latch spring should be moved by more than 0,65 mm to the right when the inner latch is released or latched.

Figure 9 *(2 of 2)*

Table 20 – Dimensions of the 2-port backplane housing interface

Reference	Dimensions		Remarks
	Minimum	Maximum	
D	4,8 mm	5 mm	
E	4,55 mm	–	
F	2,9 mm	3,5 mm	a
I	–	6,5 mm	
K	–	5,4 mm	
L	2,6 mm	2,7 mm	
M	–	1,4 mm	
N	–	0,6 mm	
P	–	1,2 mm	
Q	–	0,4 mm	
R	–	2,55 mm	
S	5,65 mm	5,75 mm	
W	6,7 mm	–	
AA	4,45 mm	4,55 mm	
AB	4,01 mm	4,11 mm	
AC	0,95 mm	1,15 mm	
AD	–	0,2 mm	Radius
AE	2,8 mm	2,95 mm	
AF	1,9 mm	2,1 mm	
AG	0,3 mm	–	Radius
AH	0,4 mm	0,55 mm	
AJ	–	0.3 mm	Radius
AM	4,45 mm	4,55 mm	
AP	3,8 mm	4,0 mm	
BM	–	–	See Table 21
BN	–	–	See Table 21
BO	12,25 mm	12,35 mm	
BP	5,5 mm	5,7 mm	
BQ	4,6 mm	4,7 mm	
BR	11,2 mm	11,4 mm	
BS	13,95 mm	14,05 mm	
BT	16,2 mm	16,3 mm	
BU	7,72 mm	7,78 mm	b
BV	1,1 mm	1,4 mm	b
BW	2,2 mm	2,6 mm	
BX	1,95 mm	2,05 mm	
BY	1,15 mm	1,25 mm	
BZ	0,3 mm	0,4 mm	b
CA	0,725 mm	0,925 mm	
CB	0,9 mm	1,1 mm	
CC	35°	50°	Angle, unit in degrees
CD	8,1 mm	9,1 mm	

Reference	Dimensions		Remarks
	Minimum	Maximum	
CF	10,05 mm	10,35 mm	
CG	8,1 mm	8,3 mm	
CH	3,4 mm	3,6 mm	Diameter
CI	1,17 mm	1,27 mm	
CJ	1,7 mm	2,3 mm	
CK	0,2 mm	0,3 mm	
CL	0,3 mm	0,4 mm	
CM	0,8 mm	1 mm	
CN	0,55 mm	0,65 mm	
CO	11,55 mm	11,65 mm	
CP	9,95 mm	10,03 mm	
CQ	7,92 mm	8 mm	
CR	9,37 mm	9,43 mm	
CS	0,55 mm	0,65 mm	45° chamfer
CT	0,55 mm	0,65 mm	45° chamfer

[a] Dimension *F* shall become greater than 4,5 mm when a plug is coupled to or removed from the backplane housing.

[b] These dimensions are given when the inner housing is moved ~~in its most left-side position under the condition that the inner latch is completed~~ to the furthest left position and when the inner latch is fully latched.

Table 21 – Grade of the 2-port backplane housing

Grade	Reference	Dimensions mm		Remarks
		Minimum	Maximum	
1	*BM*	6	6,2	Backplane thickness 2,4 mm
	BN	2,65	2,75	
2	*BM*	6	6,2	Backplane thickness 3,2 mm
	BN	3,45	3,55	

Figure 10 is an example of the 2-port printed board housing interface. Table 22 gives dimensions of the 2-port printed board housing interface.

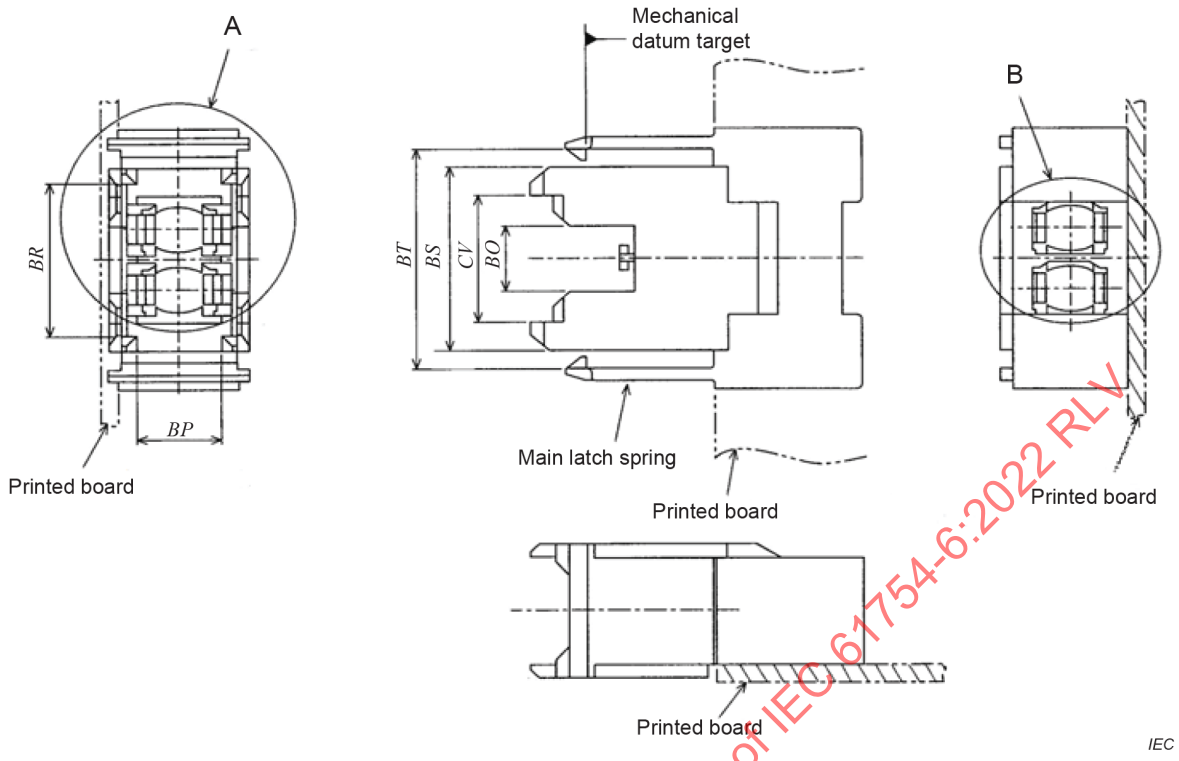


Figure 10 – 2-port printed board housing interface *(1 of 2)*

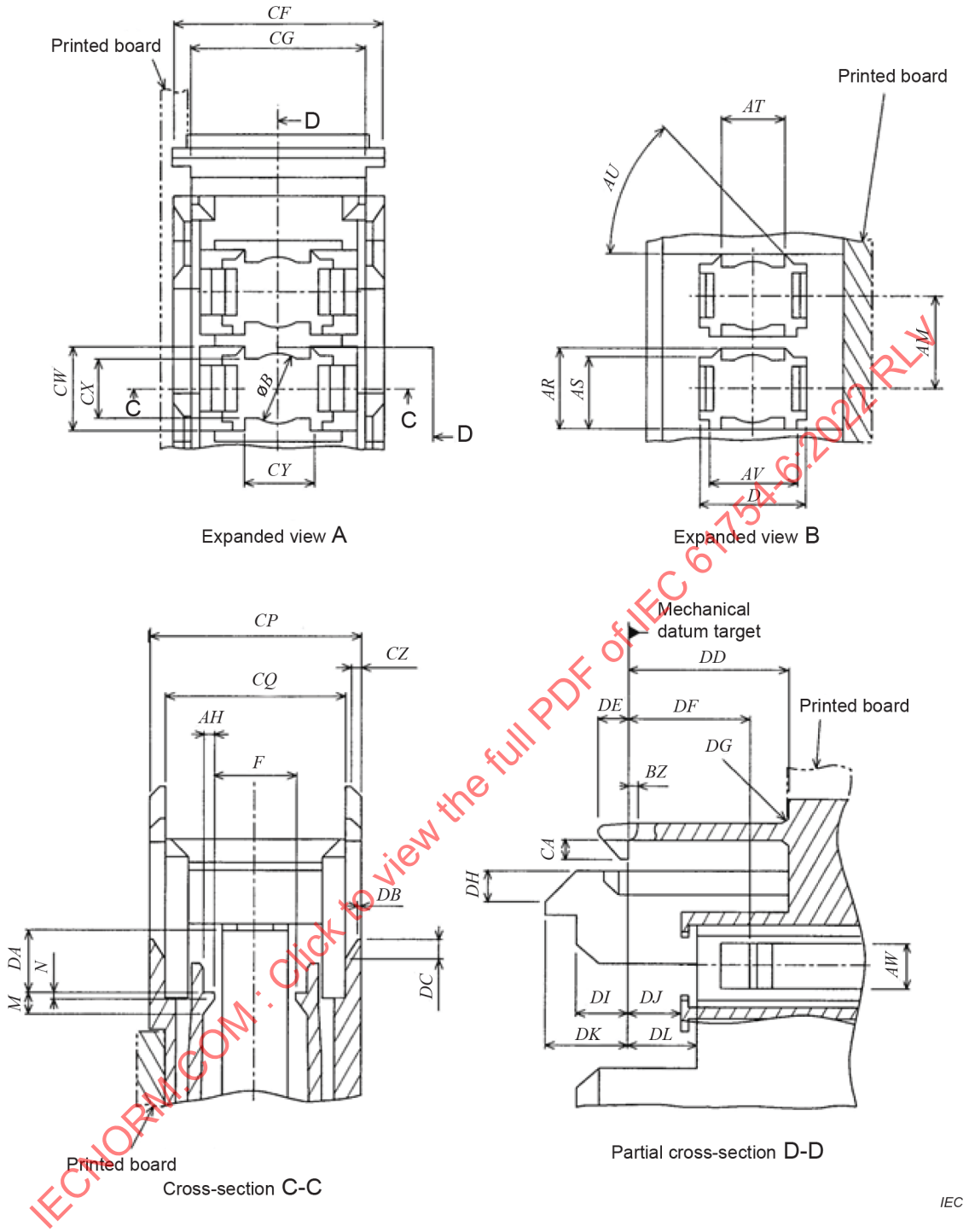


Figure 10 *(2 of 2)*

Table 22 – Dimensions of the 2-port printed board housing interface

Reference	Dimensions		Remarks
	Minimum	Maximum	
B	3,07 mm	3,15 mm	Diameter [a]
D	5 mm	5,15 mm	
F	2,9 mm	3,5 mm	[b]
M	–	1,4 mm	
N	–	0,6 mm	
AH	0,4 mm	0,55 mm	
AM	4,45 mm	4,55 mm	
AR	4 mm	4,1 mm	
AS	3,25 mm	3,35 mm	
AT	2,3 mm	2,6 mm	
AU	42°	48°	Angle, unit in degrees
AV	4,7 mm	4,75 mm	
AW	1,7 mm	2,3 mm	
BP	5,9 mm	6,1 mm	
BQ	4,75 mm	4,95 mm	
BR	11,5 mm	11,7 mm	
BS	13,8 mm	13,9 mm	
BT	16 mm	16,4 mm	[c]
BZ	0,3 mm	0,4 mm	
CA	0,73 mm	0,83 mm	
CF	9,8 mm	9,9 mm	
CG	7,8 mm	8 mm	
CP	9,82 mm	9,9 mm	
CQ	8,01 mm	8,09 mm	
CV	9,2 mm	9,4 mm	
CW	3,95 mm	4,15 mm	
CX	2,75 mm	2,95 mm	
CY	2,9 mm	3,1 mm	
CZ	0,6 mm	0,7 mm	45° chamfer
DA	2,89 mm	2,99 mm	
DB	0,2 mm	0,3 mm	
DC	1 mm	1,1 mm	
DD	9,2 mm	9,6 mm	
DE	1,35 mm	1,45 mm	
DF	5,75 mm	5,85 mm	
DG	–	1 mm	Radius
DH	1,45 mm	1,55 mm	45° chamfer
DI	1,8 mm	2,1 mm	
DJ	2,35 mm	2,45 mm	
DK	3,84 mm	3,94 mm	
DL	3,37 mm	3,43 mm	

[a] Dimension B shall become greater than 3,55 mm when a sleeve holder is inserted into or removed from the printed board housing.

[b] Dimension F shall become greater than 4,5 mm when a plug is coupled to or removed from the printed board housing.

[c] Dimension BT is defined at the top of the main latch springs. Dimension shall be greater than 16,3 mm at the base of the springs. Dimension BT at the top of the springs shall become greater than 18,5 mm when the printed board housing is coupled to or removed from a backplane housing.

Figure 11 is an example of the 8-port backplane housing interface. Table 23 gives dimensions of the 8-port backplane housing interface and Table 24 gives the grade of the 8-port backplane housing interface.

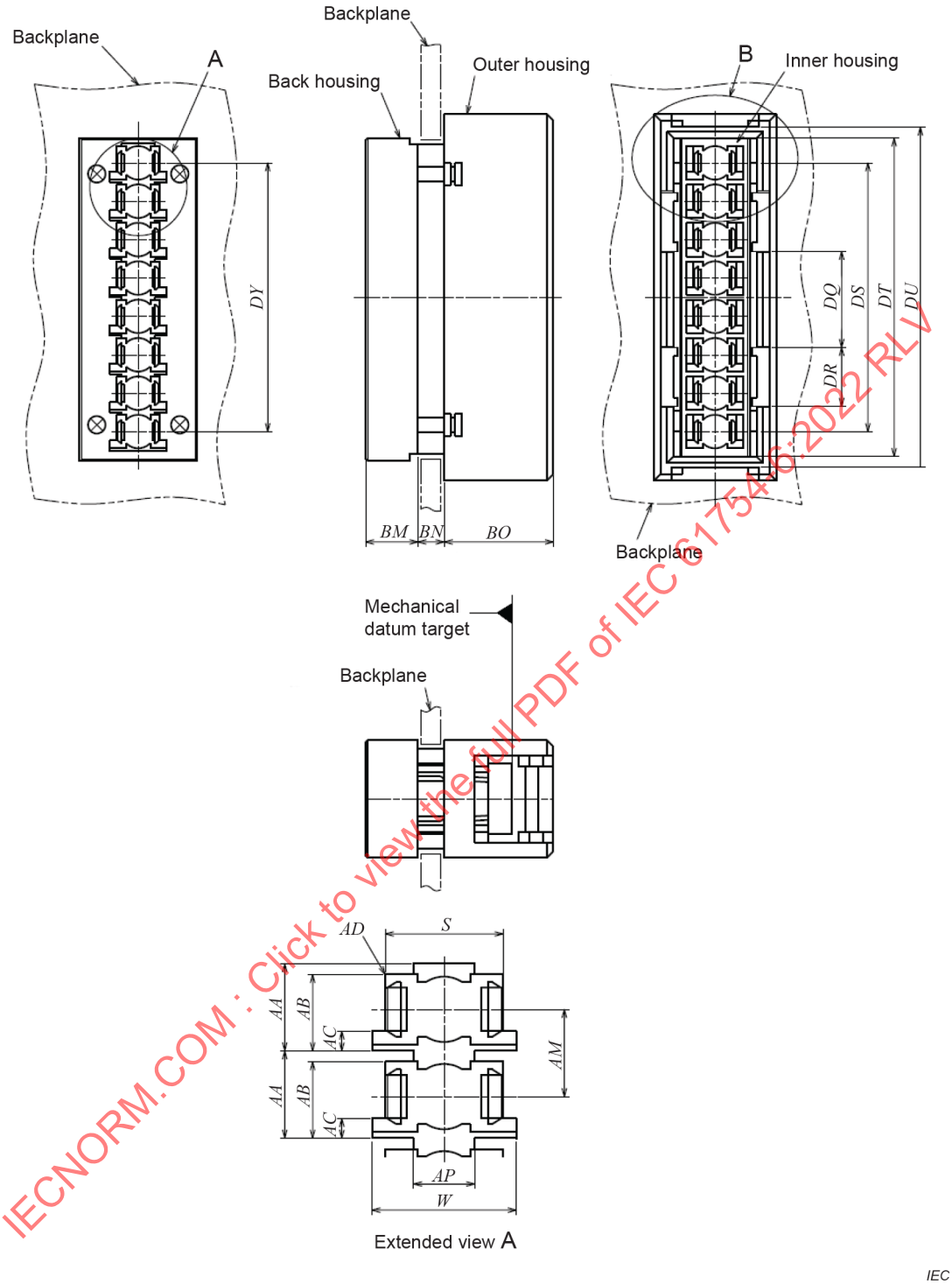
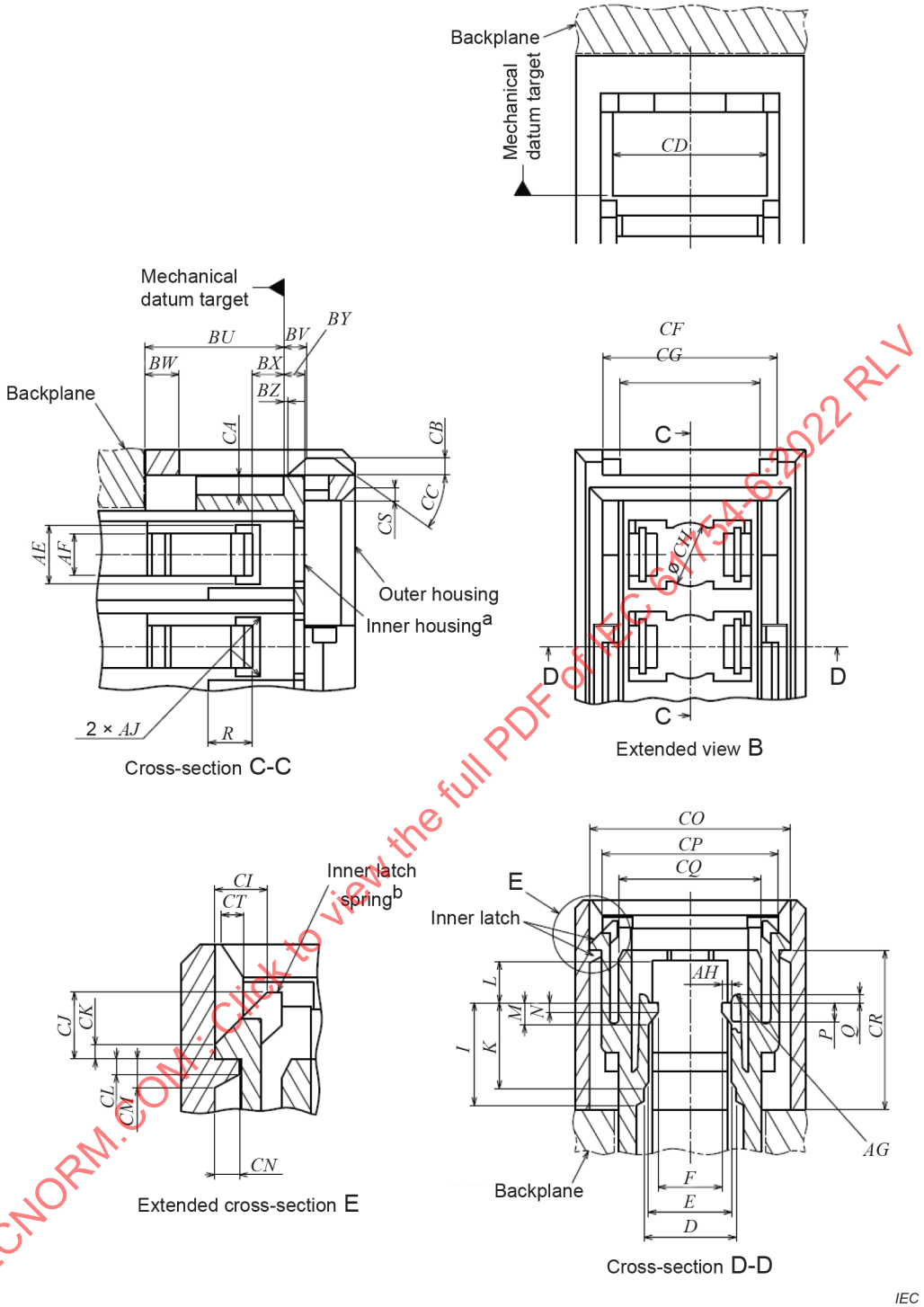


Figure 11 – 8-port backplane housing interface *(1 of 2)*



[a] In the cross-section C-C figure, the inner housing should be movable to the right by at least 0,9 mm, and to the left by at least 2 mm when the inner latch is released.

[b] In the expanded cross-section E figure, the inner latch spring ~~should~~ shall move by more than 0,65 mm to the right when the inner latch is released or latched.

Figure 11 *(2 of 2)*

Table 23 – Dimensions of the 8-port backplane housing interface

Reference	Dimensions		Remarks
	Minimum	Maximum	
D	4,8 mm	5 mm	
E	4,55 mm	–	
F	2,9 mm	3,5 mm	[a]
I	–	6,5 mm	
K	–	5,4 mm	
L	2,6 mm	2,7 mm	
M	–	1,4 mm	
N	–	0,6 mm	
P	–	1,2 mm	
Q	–	0,4 mm	
R	–	2,55 mm	
S	5,65 mm	5,75 mm	
W	6,7 mm	–	
AA	4,45 mm	4,55 mm	
AB	4,01 mm	4,11 mm	
AC	0,95 mm	1,15 mm	
AD	–	0,2 mm	Radius
AE	2,8 mm	2,95 mm	
AF	1,9 mm	2,1 mm	
AG	0,3 mm	–	Radius
AH	0,4 mm	0,55 mm	
AJ	–	0,3 mm	Radius
AM	4,45 mm	4,55 mm	
AP	3,8 mm	4 mm	
BM	See Table 24	See Table 24	
BN	See Table 24	See Table 24	
BO	12,25 mm	12,35 mm	
BU	7,72 mm	7,78 mm	[b]
BV	1,1 mm	1,4 mm	[b]
BW	2,2 mm	2,6 mm	
BX	1,95 mm	2,05 mm	
BY	1,15 mm	1,25 mm	
BZ	0,3 mm	0,4 mm	[b]
CA	0,725 mm	0,925 mm	
CB	0,9 mm	1,1 mm	
CC	35°	50°	Angle, unit in degrees
CD	8,1 mm	9,1 mm	
CF	10,05 mm	10,35 mm	
CG	8,1 mm	8,3 mm	
CH	3,4 mm	3,6 mm	
CI	1,17 mm	1,27 mm	
CJ	1,7 mm	2,3 mm	

Reference	Dimensions		Remarks
	Minimum	Maximum	
CK	0,2 mm	0,3 mm	
CL	0,3 mm	0,4 mm	
CM	0,8 mm	1 mm	
CN	0,55 mm	0,65 mm	
CO	11,55 mm	11,65 mm	
CP	9,95 mm	10,03 mm	
CQ	7,92 mm	8 mm	
CR	9,37 mm	9,43 mm	
CS	0,55 mm	0,65 mm	45° chamfer
CT	0,55 mm	0,65 mm	45° chamfer
DQ	10,3 mm	10,7 mm	
DR	6,9 mm	7 mm	
DS	–	31,9 mm	
DT	36,55 mm	36,65 mm	
DU	38,8 mm	38,9 mm	
DY	31,4 mm	31,6 mm	

[a] Dimension *F* shall become greater than 4,5 mm when a plug is coupled to or removed from the backplane housing.

[b] These dimensions are given when the inner housing is moved ~~in its most left-side position under the condition that the inner latch is completed~~ to the furthest left position and when the inner latch is fully latched.

Table 24 – Grade of the 8-port backplane housing

Grade	Reference	Dimensions mm		Remarks
		Minimum	Maximum	
1	*BM*	6	6,2	Backplane thickness 2,4 mm
	BN	2,65	2,75	
2	*BM*	6	6,2	Backplane thickness 3,2 mm
	BN	3,45	3,55	

Figure 12 is an example of the 8-port printed board housing interface. Table 25 gives dimensions of the 8-port printed board housing interface.

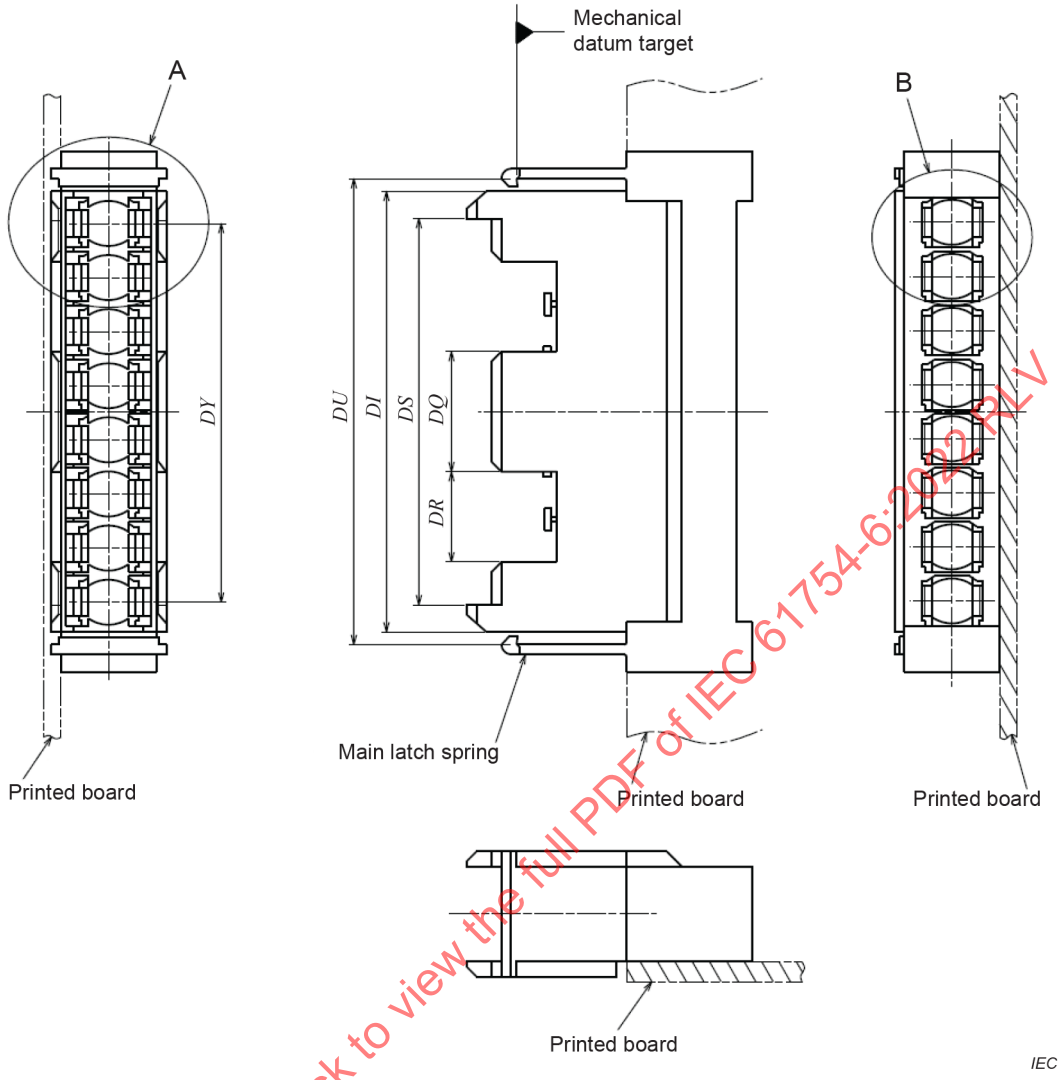


Figure 12 – 8-port printed board housing interface *(1 of 2)*

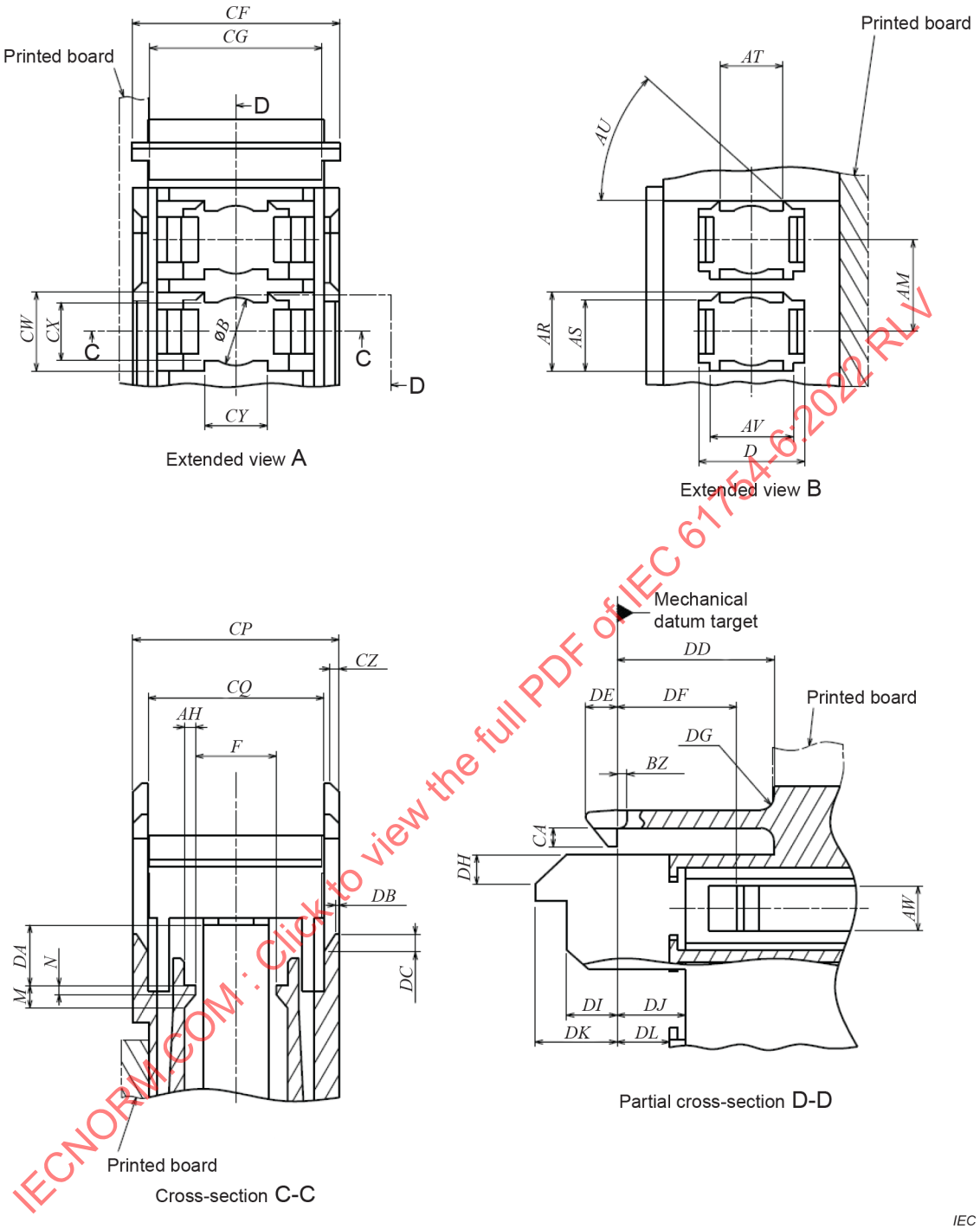


Figure 12 *(2 of 2)*

Table 25 – Dimensions of the 8-port printed board housing interface

Reference	Dimensions		Remarks
	Minimum	Maximum	
B	3,07 mm	3,15 mm	a
D	5 mm	5,15 mm	
F	2,9 mm	3,5 mm	b
M	–	1,4 mm	
N	–	0,6 mm	
AH	0,4 mm	0,55 mm	
~~AJ~~	~~–~~	~~0,3 mm~~	~~Radius~~
AM	4,45 mm	4,55 mm	
AR	4 mm	4,1 mm	
AS	3,25 mm	3,35 mm	
AT	2,3 mm	2,6 mm	
AU	42°	48°	Angle, unit in degrees
AV	4,7 mm	4,75 mm	
AW	1,7 mm	2,3 mm	
BZ	0,3 mm	0,4 mm	
CA	0,73 mm	0,83 mm	
CF	9,8 mm	9,9 mm	
CG	7,8 mm	8 mm	
CP	9,82 mm	9,9 mm	
CQ	8,01 mm	8,09 mm	
CW	3,95 mm	4,15 mm	
CX	2,75 mm	2,95 mm	
CY	2,9 mm	3,1 mm	
CZ	0,6 mm	0,7 mm	45° chamfer
DA	2,89 mm	2,99 mm	
DB	0,2 mm	0,3 mm	
DC	1 mm	1,1 mm	
DD	9,2 mm	9,6 mm	
DE	1,35 mm	1,45 mm	
DF	5,75 mm	5,85 mm	
DG	–	1 mm	Radius
DH	1,45 mm	1,55 mm	45° chamfer
DI	1,8 mm	2,1 mm	
DJ	2,35 mm	2,45 mm	
DK	3,84 mm	3,94 mm	
DL	3,37 mm	3,43 mm	
DQ	9,9 mm	10 mm	
DR	7,5 mm	7,6 mm	
DS	31,9 mm	32,1 mm	
DT	36,4 mm	36,5 mm	
DU	38,6 mm	39 mm	c
DY	31,4 mm	31,6 mm	

[a] Dimension B shall become greater than 3,55 mm when a sleeve holder is inserted into or removed from the printed board housing.

[b] Dimension F shall become greater than 4,5 mm when a plug is coupled to or removed from the printed board housing.

[c] Dimension DU is defined at the top of the main latch springs. This dimension shall be greater than 38,9 mm at the base of the springs. Dimension DU at the top of the springs shall become greater than 41,1 mm when the printed board housing is coupled to or removed from a backplane housing.

Figure 13 is an example of the simplex active device receptacle interface. Table 26 gives dimensions of the simplex active device receptacle interface and Table 27 gives alignment feature of the simplex active device receptacle interface.

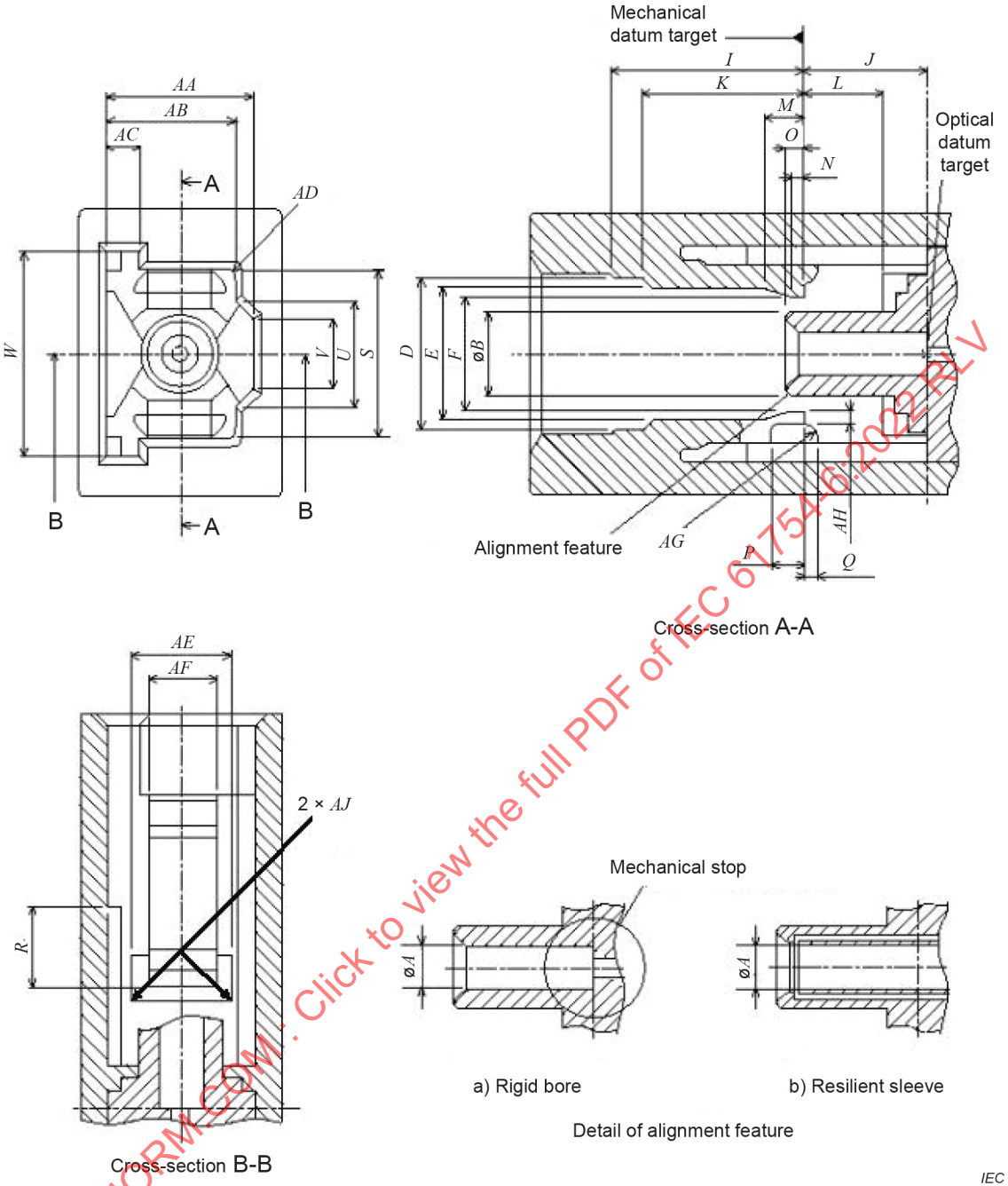


Figure 13 – Simplex active device receptacle interface

Table 26 – Dimensions of the simplex active device receptacle interface

Reference	Dimensions mm		Remarks
	Minimum	Maximum	
A	See Table 27		
B	2,29	2,59	
D	4,8	5	
E	4,55	–	
F	2,9	3,5	[a]
I	–	6,5	
J	3,9	4,1	[b]
K	–	5,4	
L	2,55	2,7	
M	–	1,4	
N	–	0,55	
O	–	0,6	
P	–	1,2	
Q	–	0,4	
R	–	2,55	
S	5,65	5,75	
U	3,8	4	
V	3,3	–	
W	6,7	–	
AA	4,45	4,55	
AB	4,01	4,11	
AC	0,95	1,15	
AD	–	0,2	Radius
AE	2,8	2,95	
AF	1,9	2,1	
AG	0,3	–	Radius
AH	0,4	0,55	
AJ	–	0,3	Radius

[a] Dimension *F* ~~should~~ shall become greater than 4,5 mm when a plug is coupled to or removed from the receptacles.

[b] A mechanical stop feature may be required in order to bring the fibre tip to the optical datum target. An example of a mechanical stop feature is shown in Figure 13, Detail of alignment feature, a) Rigid bore.

Table 27 – Alignment feature grade

Grade	Dimensions mm		Remarks
	Minimum	Maximum	
1	1,251	1,252	a b
2	1,251	1,254	a b
3	1,251	1,275	a b
4			b c

[a] Where the connector alignment feature is a rigid bore, as shown in Figure 13, Detail of alignment feature, a) Rigid bore, the alignment feature is equipped with a mechanical stop. The detail of the mechanical stop feature is shown in Figure 14.

[b] Add the grade number to the interface reference number.

[c] Where the connector alignment feature is a resilient sleeve, as shown in Figure 13, Detail of alignment feature, b) Resilient sleeve, the alignment feature is not equipped with a mechanical stop. The optical datum target of the plug connector is not limited by the alignment feature. The alignment feature should accept a pin gauge to the centre of the receptacle with a force of 1 N to 2,5 N. The centre of the receptacle is defined by the right side position of dimension *J*. The pin gauge is shown in Figure 4 and Table 11.

Figure 14 is an example of the detail of the mechanical stop for rigid bore alignment feature. Table 28 gives dimensions of the mechanical stop for rigid bore alignment feature and Table 29 gives dimensions of the mechanical stop feature grade.

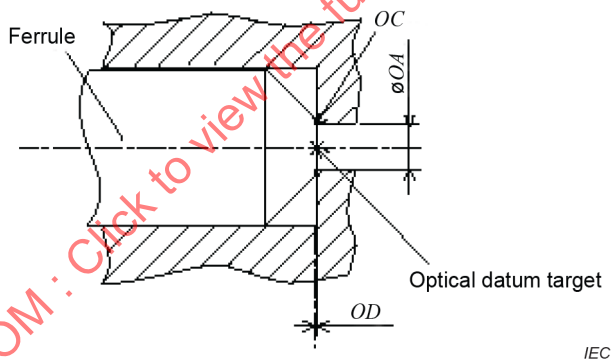


Figure 14 – Detail of the mechanical stop for rigid bore alignment feature

Table 28 – Dimensions of the mechanical stop for rigid bore alignment feature

Reference	Dimensions mm		Remarks
	Minimum	Maximum	
OA			[a] and see Table 29
OC	0	0,05	Radius
OD			[a] and see Table 29

[a] Whatever form of mechanical stop feature is incorporated into the receptacle, it shall be capable of maintaining the optical datum target of both the fibre and the receptacle within the clearances specified in Table 29 depending upon the application.

Table 29 – Mechanical stop feature grade

Grade	Dimensions mm		Dimensions µm	Notes
	OA **minimum**	***OA*** **maximum**	***OD*** **clearance**	
A	0,3	0,4	±5	
N	0,3	1,251	–	

Figure 15 is an example of the 4,5 mm duplex active device receptacle interface. Table 30 gives dimensions of the 4,5 mm duplex active device receptacle interface and Table 31 gives alignment feature of the 4,5 mm duplex active device receptacle interface.

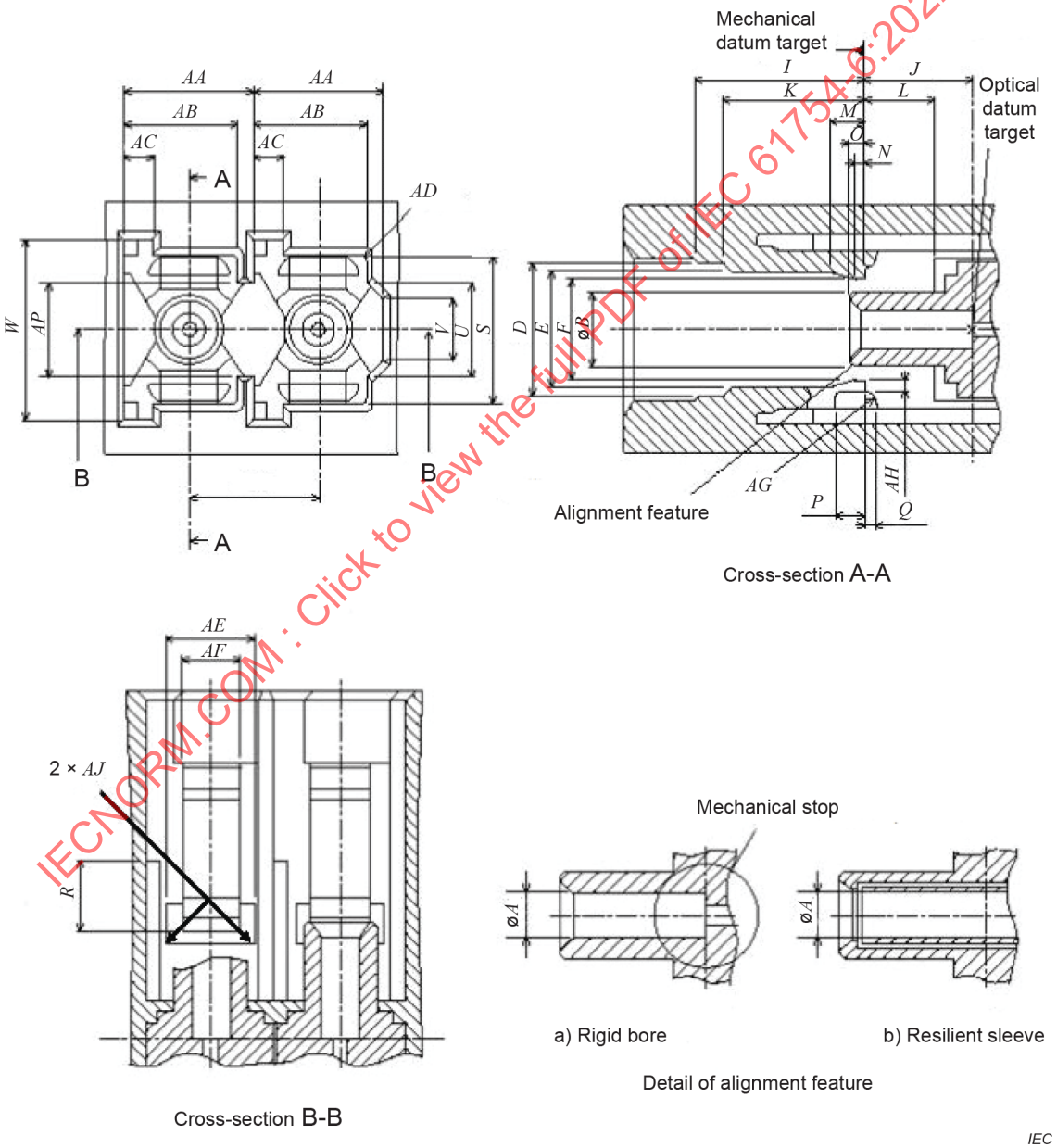


Figure 15 – 4,5 mm duplex active device receptacle interface

Table 30 – Dimensions of the 4,5 mm duplex active device receptacle interface

Reference	Dimensions mm		Notes
	Minimum	Maximum	
A	See Table 31		
B	2,29	2,59	
D	4,8	5	
E	4,55	–	
F	2,9	3,5	a
I	–	6,5	
J	3,9	4,1	b
K	–	5,4	
L	2,55	2,7	
M	–	1,4	
N	–	0,55	
O	–	0,6	
P	–	1,2	
Q	–	0,4	
R	–	2,55	
S	5,65	5,75	
U	3,8	4	
V	3,3	–	
W	6,7	–	
AA	4,45	4,55	
AB	4,01	4,11	
AC	0,95	1,15	
AD	–	0,2	Radius
AE	2,8	2,95	
AF	1,9	2,1	
AG	0,3	–	Radius
AH	0,4	0,55	
AJ	–	0,3	Radius
AM	4,45	4,55	
AP	3,8	4,0	

a Dimension *F* should become greater than 4,5 mm when a plug is coupled to or removed from the receptacle.

b A mechanical stop feature may be required in order to bring the fibre tip to the optical datum target. An example of a mechanical stop feature is shown in Figure 15, Detail of alignment feature, a) Rigid bore.

Table 31 – Alignment feature grade

Grade	Dimensions mm		Remarks
	Minimum	Maximum	
1	1,251	1,252	a b
2	1,251	1,254	a b
3	1,251	1,275	a b
4			b c

[a] Where the connector alignment feature is a rigid bore, as shown in Figure 15, Detail of alignment feature, a) Rigid bore, the alignment feature is equipped with a mechanical stop. The detail of the mechanical stop feature is shown in Figure 16.

[b] Add the grade number to the interface reference number.

[c] Where the connector alignment feature is a resilient sleeve, as shown in Figure 15, Detail of alignment feature, b) Resilient sleeve, the alignment feature is not equipped with a mechanical stop. The optical datum target of the plug connector is not limited by the alignment feature. The alignment feature should accept a pin gauge to the centre of the receptacle with a force of 1 N to 2,5 N. The centre of the receptacle is defined by the right side position of dimension *A*. The pin gauge is shown in Figure 4 and Table 11.

Figure 16 is an example of the mechanical stop for rigid bore alignment feature. Table 32 gives dimensions of the mechanical stop for rigid bore alignment feature and Table 33 gives dimensions of the mechanical stop feature grade.

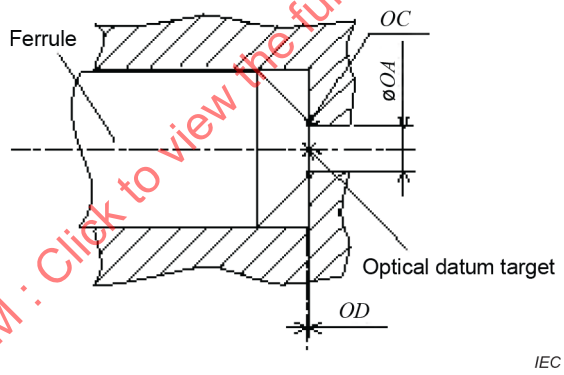


Figure 16 – Detail of the mechanical stop for rigid bore alignment feature

Table 32 – Dimensions of the mechanical stop for rigid bore alignment feature

Reference	Dimensions mm		Remarks
	Minimum	Maximum	
OA			[a] and see Table 33
OC	0	0,05	Radius
OD			[a] and see Table 33

[a] Whatever form of mechanical stop feature is incorporated into the receptacle, it shall be capable of maintaining the optical datum target of both the fibre and the receptacle within the clearances specified in Table 33 depending on the application.

Table 33 – Mechanical stop feature grade

Grade	Dimensions mm		Dimensions µm	Remarks
	OA **minimum**	***OA*** **maximum**	***OD*** **clearance**	
A	0,3	0,4	±5	[a]
N	0,3	1,251	–	[a]
[a] Add the grade number to the alignment feature grade number.				

Figure 17 is an example of the 6,25 mm duplex active device receptacle interface. Table 34 gives dimensions of the 6,25 mm duplex active device receptacle interface and Table 35 gives alignment feature of the 6,25 mm duplex active device receptacle interface.

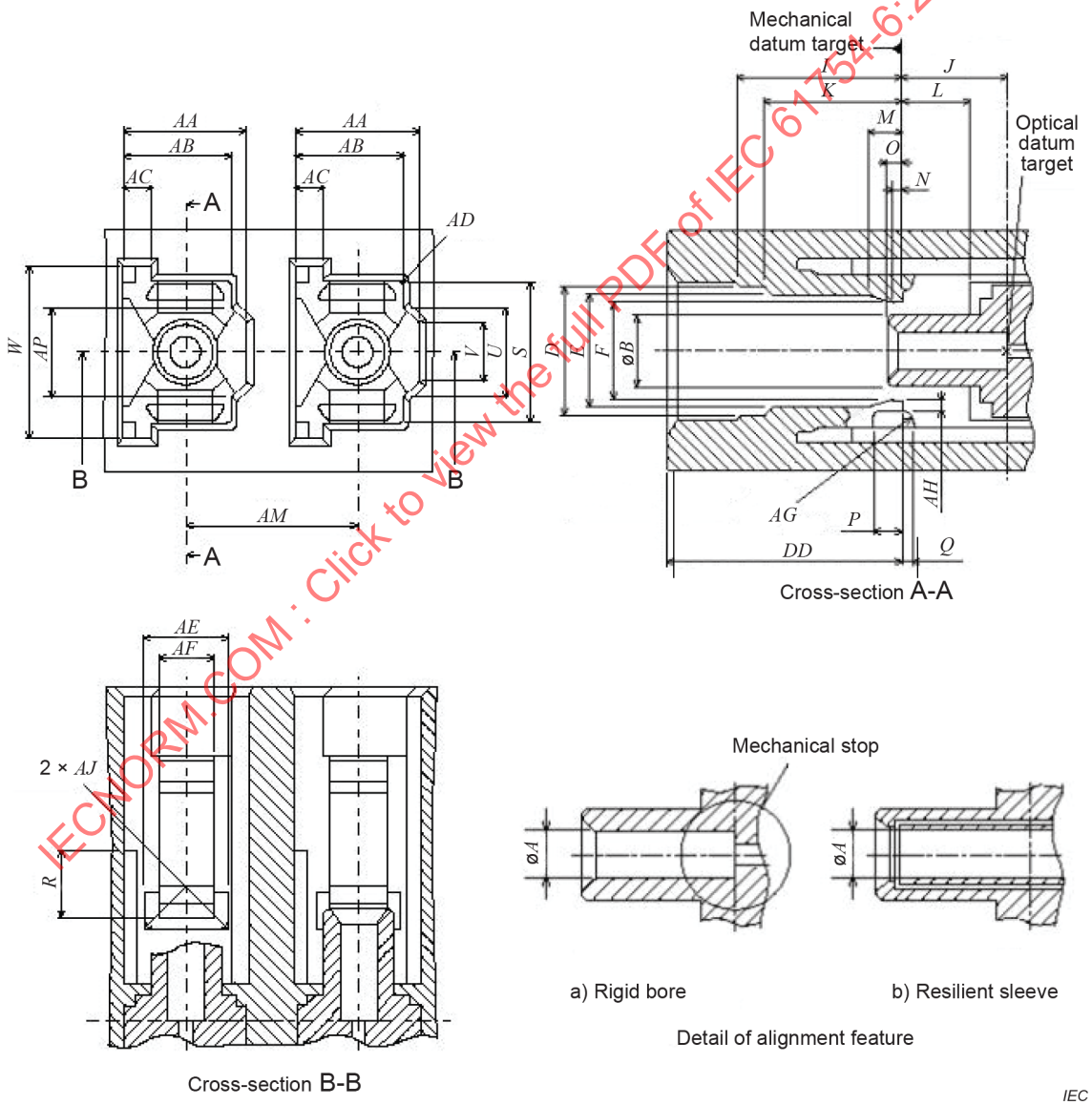


Figure 17 – 6,25 mm duplex active device receptacle interface

Table 34 – Dimensions of the 6,25 mm duplex active device receptacle interface

Reference	Dimensions mm		Remarks
	Minimum	Maximum	
A	See Table 35		
B	2,29	2,59	
D	4,8	5	
E	4,55	–	
F	2,9	3,5	a
I	–	6,5	
J	3,9	4,1	b
K	–	5,4	
L	2,55	2,7	
M	–	1,4	
N	–	0,55	
O	–	0,6	
P	–	1,2	
Q	–	0,4	
R	–	2,55	
S	5,65	5,75	
U	3,8	4	
V	3,3	–	
W	6,7	–	
AA	4,45	4,55	
AB	4,01	4,11	
AC	0,95	1,15	
AD	–	0,2	Radius
AE	2,8	2,95	
AF	1,9	2,1	
AG	0,3	–	Radius
AH	0,4	0,55	
AJ	–	0,3	Radius
AM	6,20	6,30	
AP	3,8	4,0	
DD	8,77	9,23	

[a] Dimension *F* should become greater than 4,5 mm when a plug is coupled to or removed from the receptacle.

[b] A mechanical stop feature may be required in order to bring the fibre tip to the optical datum target. An example of a mechanical stop feature is shown in Figure 17, Detail of alignment feature, a) Rigid bore.

Table 35 – Alignment feature grade

Grade	Dimensions mm		Remarks
	Minimum	Maximum	
1	1,251	1,252	a b
2	1,251	1,254	a b
3	1,251	1,275	a b
4			b c

[a] Where the connector alignment feature is a rigid bore, as shown in Figure 17, Detail of alignment feature, a) Rigid bore, the alignment feature is equipped with a mechanical stop. The detail of the mechanical stop feature is shown in Figure 18.

[b] Add the grade number to the interface reference number.

[c] Where the connector alignment feature is a resilient sleeve, as shown in Figure 17, Detail of alignment feature, b) Resilient sleeve, the alignment feature is not equipped with a mechanical stop. The optical datum target of the plug connector is not limited by the alignment feature. The alignment feature should accept a pin gauge to the centre of the receptacle with a force of 1 N to 2,5 N. The centre of the receptacle is defined by the right side position of dimension *A*. The pin gauge is shown in Figure 4 and Table 11.

Figure 18 is an example of the mechanical stop for rigid bore alignment feature. Table 36 gives dimensions of the mechanical stop for rigid bore alignment feature and Table 37 gives dimensions of the mechanical stop feature grade.

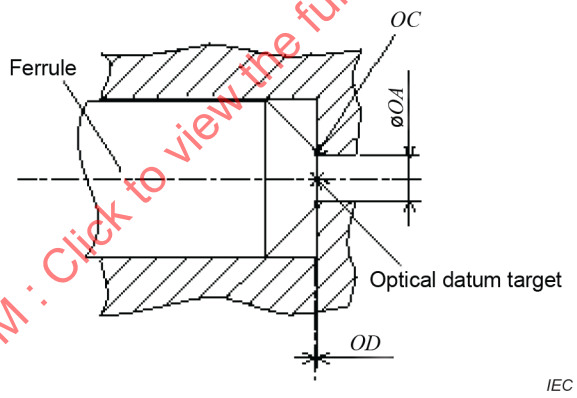


Figure 18 – Detail of the mechanical stop for rigid bore alignment feature

Table 36 – Dimensions of the mechanical stop for rigid bore alignment feature

Reference	Dimensions mm		Remarks
	Minimum	Maximum	
OA			[a] and see Table 37
OC	0	0,05	Radius
OD			[a] and see Table 37

[a] Whatever form of mechanical stop feature is incorporated into the receptacle, it shall be capable of maintaining the optical datum target of both the fibre and the receptacle within the clearances specified in Table 37 depending on the application.

Table 37 – Mechanical stop feature grade

Grade	Dimensions mm		Dimensions µm	Remarks
	OA **minimum**	***OA*** **maximum**	***OD*** **clearance**	
A	0,3	0,4	±5	[a]
N	0,3	1,251	–	[a]
[a] Add the grade number to the alignment feature grade number.				

Figure 19 is an example of the plug connector interface – for printed board housings, APC. Table 38 gives dimensions of the plug connector interface – for printed board housings, APC. The detail dimensions of optical interfaces for APC are defined in IEC 61755-3-2.

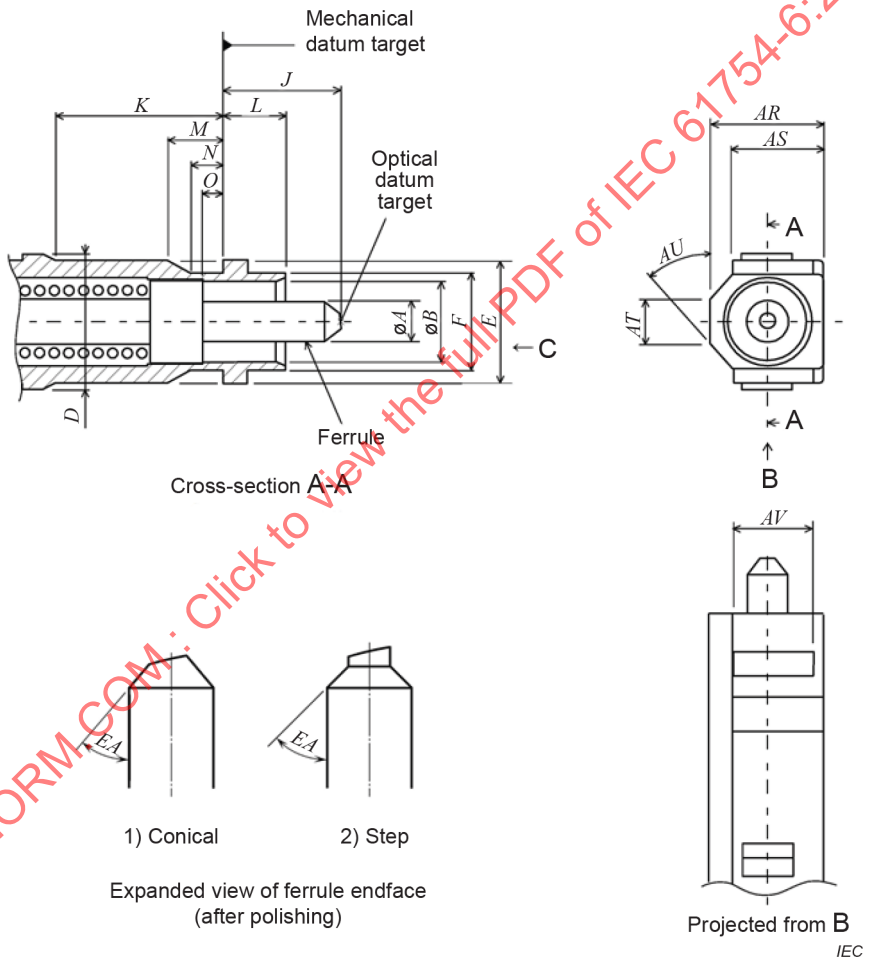
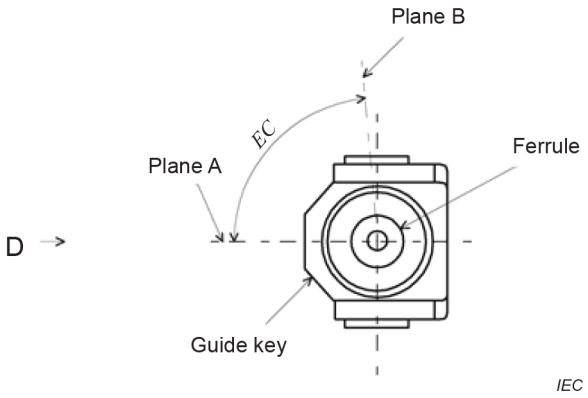
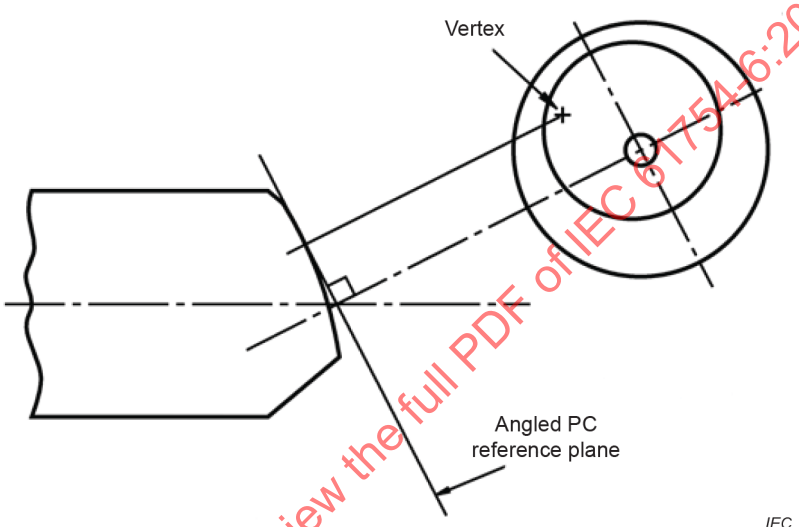


Figure 19 – Plug connector interface – For printed board housings, APC *(1 of 2)*



Expanded view from C direction (after polishing)



Ferrule endface geometry (expanded view from D direction, after polishing)

Figure 19 – Plug connector interface – For printed board housings, APC *(2 of 2)*

Table 38 – Dimensions of the plug connector interface – For printed board housings, APC

Reference	Dimensions			Remarks
	Minimum	Basic	Maximum	
A			~~1,2495 mm~~ See IEC 61755-3-2	[a]
B	2,6 mm		2,7 mm	
D	4,65 mm		4,75 mm	
E	4,3 mm		4,4 mm	
F	3,3 mm		3,4 mm	
J	4,2 mm		4,5 mm	[b]
K	5,5 mm		–	
L	2,4 mm		2,5 mm	
M	1,5 mm		–	
N	0,6 mm		–	
O	0,5 mm		–	
AR	3,65 mm		3,75 mm	
AS	2,9 mm		3,0 mm	
AT	1,7 mm		2,1 mm	
AU	43°		47°	Angle, unit in degrees
AV	–		3,0 mm	
EA	32,5°		45°	Angle, unit in degrees [c]
EC	–	90°	–	Angle, unit in degrees [d]

[a] A chamfer or radius is allowed to maximum depth of 0,5 mm from the ferrule endface. ~~Detail dimensions and the grade number of the ferrule is required in IEC 61755-3-2.~~ Add grade number to the interface reference number.

[b] Dimension *J* is given for the plug endface when not mated. ~~It is noticed that~~ The ferrule is movable by a certain axial compression force with direct contacting endfaces, and therefore dimension *J* is given variable. Ferrule compression force shall be 5,5 N to 6,5 N when the position of the optical datum target from the mechanical datum target is moved in the range of 3,9 mm to 4,1 mm. In addition, dimension *J* shall become less than 3,25 mm with a relatively large axial compression force. The compression force shall be measured according to IEC 61300-3-22.

[c] 40° to 45° are desirable to minimize debris for backplane connectors.

[d] Dimension *EC* is defined as an angle between two planes: one plane, plane A, passes through the axis of the ferrule and axis of symmetry of the key of the angled endface connector plug. The other plane, plane B, passes through the axis of the ferrule and the normal to the APC reference plane.

Figure 20 is an example of the simplex plug connector interface – Push/pull, APC. Table 39 gives dimensions of the simplex plug connector interface – Push/pull, APC. The detail dimensions of optical interfaces for APC are defined in IEC 61755-3-2.

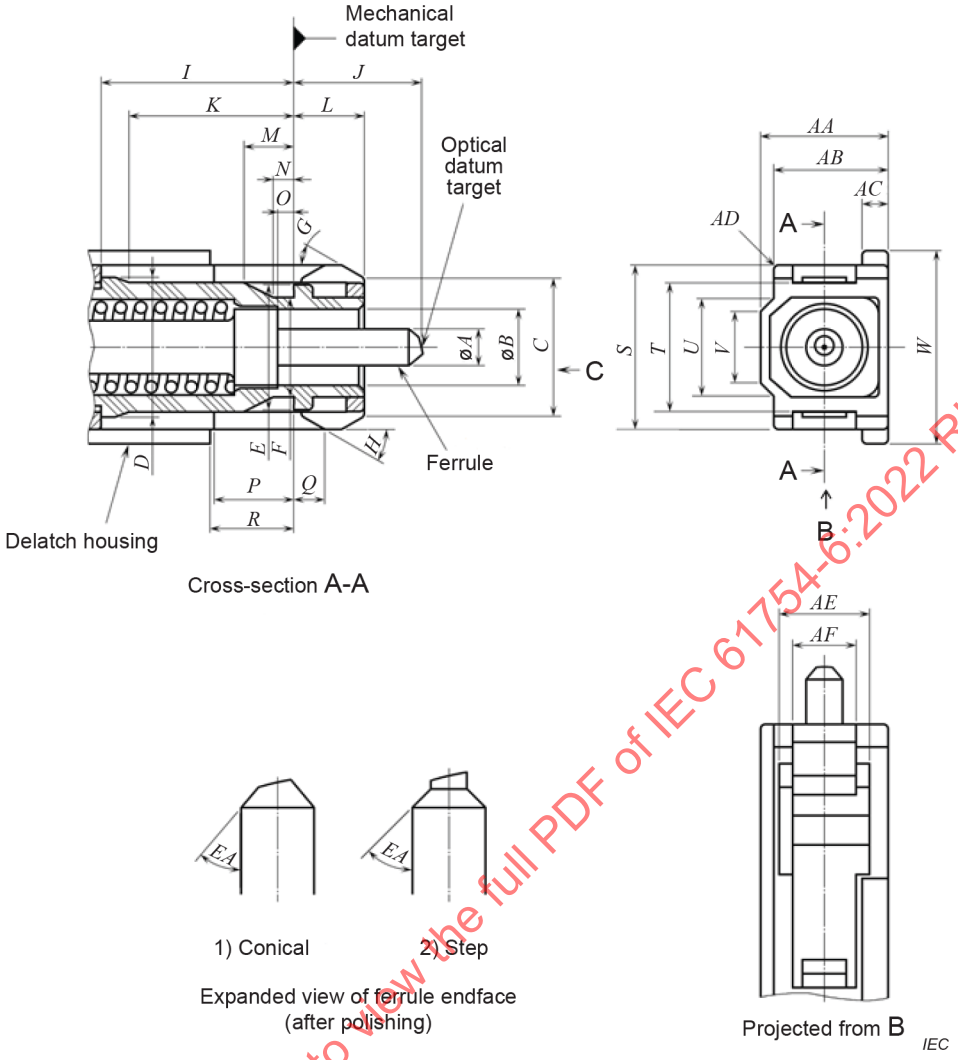
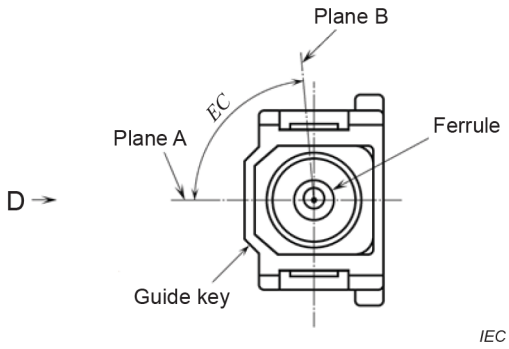
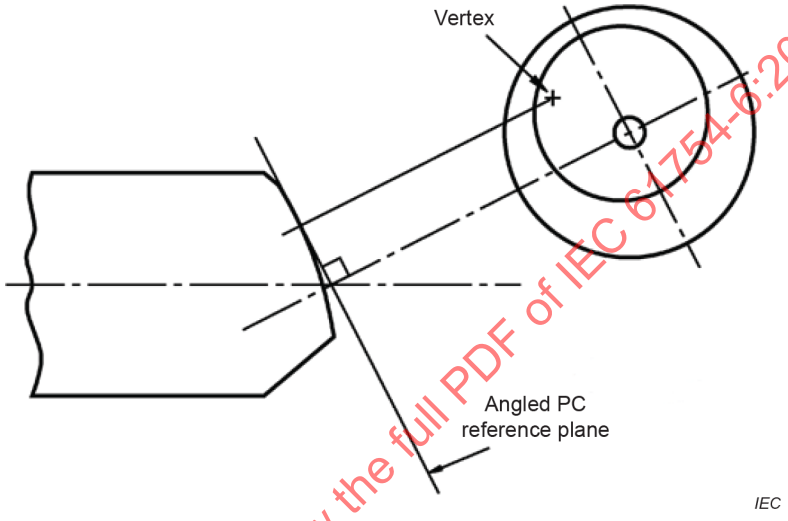


Figure 20 – Simplex plug connector interface – Push/pull, APC *(1 of 2)*



Expanded view from C direction (after polishing)



Ferrule endface geometry (expanded view from D direction, after polishing)

Figure 20 – Simplex plug connector interface – Push/pull, APC *(2 of 2)*

Table 39 – Dimensions of the simplex plug connector interfaces, APC

Reference	Dimensions			Remarks
	Minimum	Basic	Maximum	
A			~~1,249 5 mm~~ See IEC 61755-3-2	a
B	2,6 mm		2,7 mm	
C	4,6 mm		4,8 mm	
D	4,65 mm		4,75 mm	
E	4,3 mm		4,4 mm	
F	3,3 mm		3,4 mm	
G	25°		35°	Angle, unit in degrees
H	25°		35°	Angle, unit in degrees
I	6,55 mm		–	b
J	4,2 mm		4,5 mm	c
K	5,5 mm		–	
L	2,4 mm		2,5 mm	

Reference	Dimensions			Remarks
	Minimum	Basic	Maximum	
M	1,5 mm		–	
N	0,6 mm		–	
O	0,5 mm		–	
P	2,6 mm		–	b
Q	1 mm		1,1 mm	b ~~e~~ d
R	2,65 mm		2,9 mm	b
S	5,5 mm		5,6 mm	
T	4,3 mm		4,5 mm	
U	–		3,7 mm	
V	–		2,4 mm	
W	6,5 mm		6,6 mm	
AA	4,3 mm		4,4 mm	
AB	3,85 mm		3,95 mm	
AC	0,7 mm		0,9 mm	
AD	0,2 mm		–	Radius
AE	3 mm		–	
AF	2,2 mm		2,3 mm	
EA	32,5°		45°	Angle, unit in degrees [e]
EC	–	90°	–	Angle, unit in degrees [f]

[a] A chamfer or radius is allowed to maximum depth of 0,5 mm from the ferrule endface. ~~Detail dimensions and the grade number of the ferrule is required in IEC 61755-3-2.~~ Add grade number to the interface reference number.

[b] ~~The coupling sleeve shall be movable toward the right and the left directions. These dimensions are given when the coupling sleeve is moved in its most right-direction position.~~ The delatch housing shall be movable to the right or left. Dimensions *L*, *M* and *V* are given when the delatch housing is at the furthest right.

[c] Dimension *J* is given for the plug endface when not mated. ~~It is noticed that~~ The ferrule is movable by a certain axial compression force with direct contacting endfaces, and therefore dimension *J* is given variable. Ferrule compression force shall be 5,5 N to 6,5 N when the position of the optical datum target from the mechanical datum target is moved in the range of 3,9 mm to 4,1 mm. In addition, dimension *J* shall become less than 3,25 mm with a relatively large axial compression force. The compression force shall be measured according to IEC 61300-3-22.

[d] ~~The right-side position of *Q* shall become the left-side position to the plane defined by the mechanical datum target when the coupling sleeve is moved to its most left-direction position.~~ *Q* is to the right of the mechanical datum target when the delatch housing is to the right (connected state) and to the left of the mechanical datum target when the delatch housing is to the left (disconnected state).

[e] 40° to 45° are desirable to minimize debris for backplane connectors.

[f] Dimension *EA* is defined as an angle between two planes: one plane, plane A, passes through the axis of the ferrule and axis of symmetry of the key of the angled endface connector plug. The other plane, plane B, passes through the axis of the ferrule and the normal to the APC reference plane.

Figure 21 is an example of the 4,5 mm duplex plug connector interface – Push/pull, APC. Table 40 gives dimensions of the 4,5 mm duplex plug connector interface – Push/pull, APC. The detail dimensions of optical interfaces for APC are defined in IEC 61755-3-2.

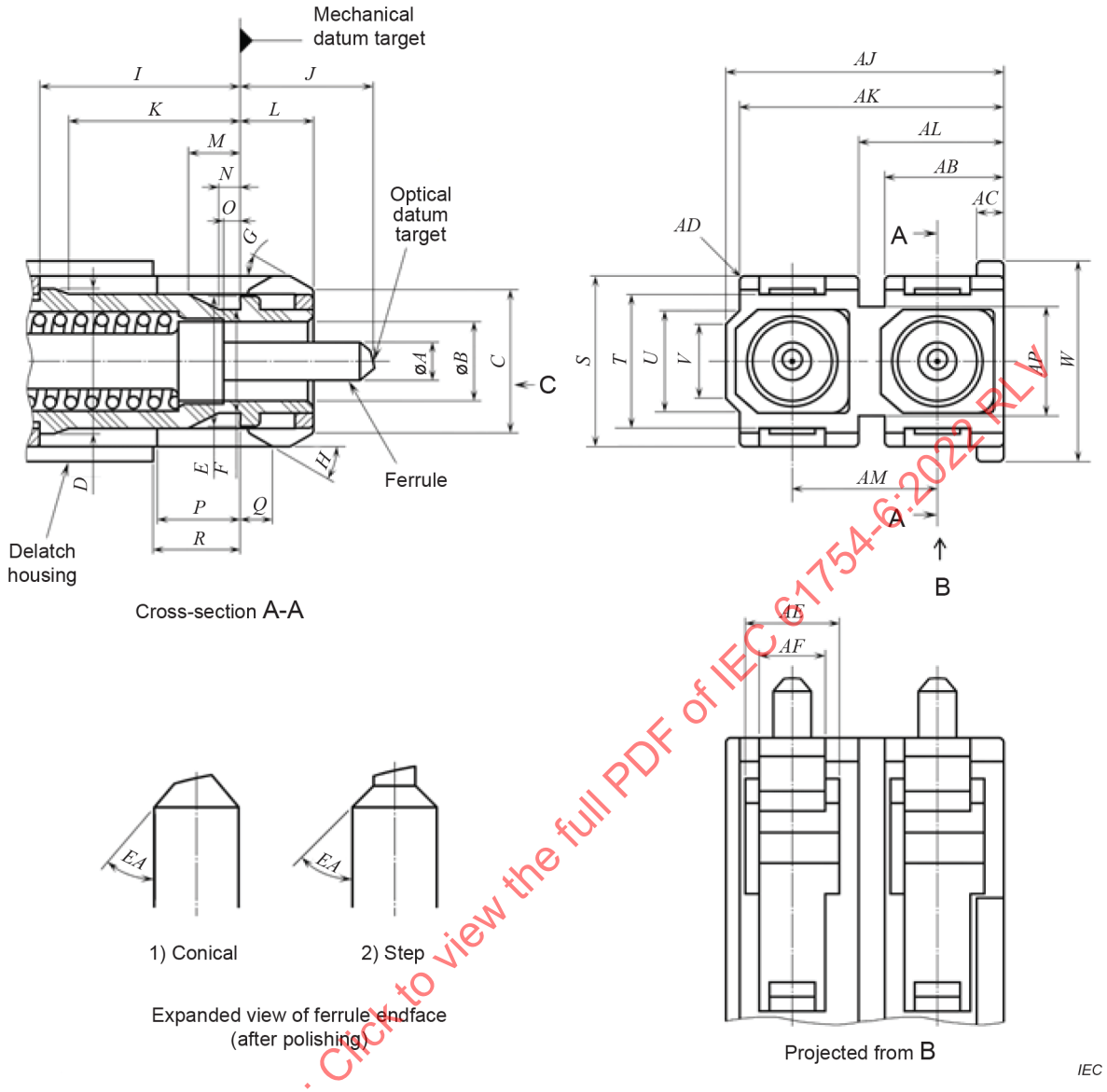
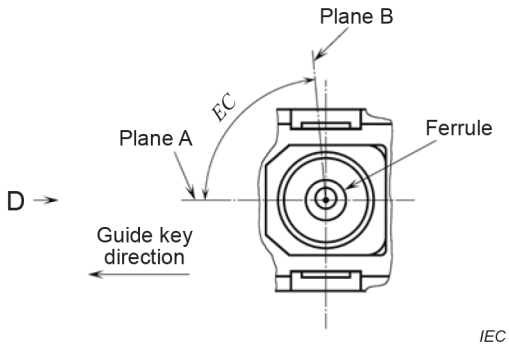
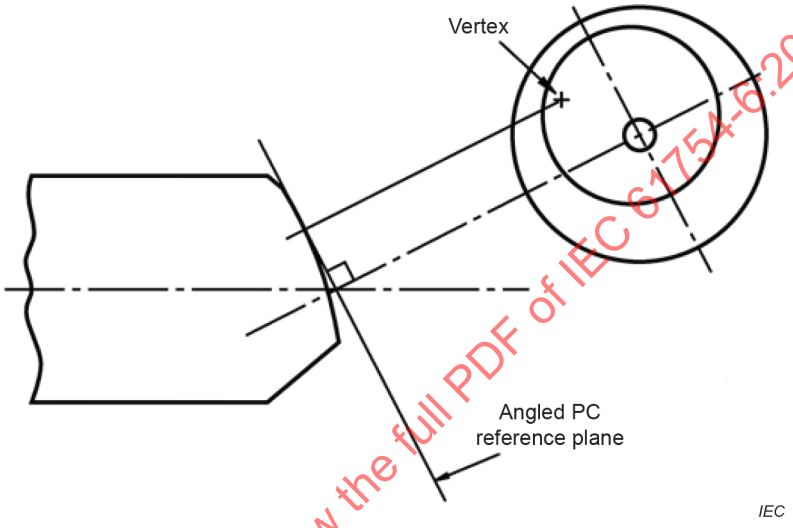


Figure 21 – 4,5 mm duplex plug connector interface – Push/pull, APC *(1 of 2)*



Expanded view from C direction (after polishing)



Ferrule endface geometry (expanded view from D direction, after polishing)

Figure 21 – 4,5 mm duplex plug connector interface – Push/pull, APC *(2 of 2)*

Table 40 – Dimensions of the 4,5 mm duplex plug connector interfaces, APC

Reference	Dimensions			Remarks
	Minimum	Basic	Maximum	
A			~~1,249 5 mm~~ See IEC 61755-3-2	Diameter [a]
B	2,6		2,7	
C	4,6		4,8	
D	4,65		4,75	
E	4,3		4,4	
F	3,3		3,4	
G	25°		35°	Angle, unit in degrees
H	25°		35°	Angle, unit in degrees
I	6,55		–	[b]
J	4,2		4,5	[c]
K	5,5		–	

Reference	Dimensions			Remarks
	Minimum	Basic	Maximum	
L	2,4		2,5	
M	1,5		–	
N	0,6		–	
O	0,5		–	
P	2,6		–	b
Q	1		1,1	b d
R	2,65		2,9	b
S	5,5		5,6	
T	4,3		4,5	
U	–		3,7	
V	–		2,4	
W	6,5		6,6	
AB	3,7		3,85	
AC	0,7		0,9	
AD	0,2		–	Radius
AE	3		–	
AF	2,2		2,3	
AJ	8,8		8,9	
AK	8,35		8,45	
AL	4,55		4,7	
AM	4,45		4,55	
AP	–		3,7	
EA	32,5°		45°	Angle, unit in degrees [e]
EC	–	90°	–	Angle, unit in degrees [f]

[a] A chamfer or radius is allowed to a maximum depth of 0,5 mm from the ferrule endface. ~~Detail dimensions and the grade number of the ferrule is required in IEC 61755-3-2.~~ Add grade number to the interface reference number.

[b] ~~The coupling sleeve must be movable toward the right and the left directions. These dimensions are given when the coupling sleeve is moved in its most right-direction position.~~ The delatch housing shall be movable to the right or left. Dimensions *L*, *M* and *V* are given when the delatch housing is at the furthest right.

[c] Dimension *J* is given for the plug endface when not mated. ~~It is noticed that~~ The ferrule is movable by a certain axial compression force with direct contacting endfaces, and therefore dimension *J* is given variable. Ferrule compression force shall be 5,5 N to 6,5 N when the position of the optical datum target from the mechanical datum target is moved in the range of 3,9 mm to 4,1 mm. In addition, dimension *J* shall become less than 3,25 mm with a relatively large axial compression force. The compression force shall be measured according to IEC 61300-3-22.

[d] ~~The right-side position of *Q* shall become the left-side position to the plane defined by the mechanical datum target when the coupling sleeve is moved to its most left-direction position.~~ *Q* is to the right of the mechanical datum target when the delatch housing is to the right (connected state) and to the left of the mechanical datum target when the delatch housing is to the left (disconnected state).

[e] 40° to 45° are desirable to minimize debris for backplane connectors.

[f] Dimension ~~EC~~ *EA* is defined as an angle between two planes: one plane, plane A, passes through the axis of the ferrule and axis of symmetry of the key of the angled endface connector plug. The other plane, plane B, passes through the axis of the ferrule and the normal to the APC reference plane.

Figure 22 is an example of the 6,25 mm duplex plug connector interface – Push/pull, APC. Table 41 gives dimensions of the 6,25 mm duplex plug connector interface – Push/pull, APC. The detail dimensions of optical interfaces for APC are defined in IEC 61755-3-2.

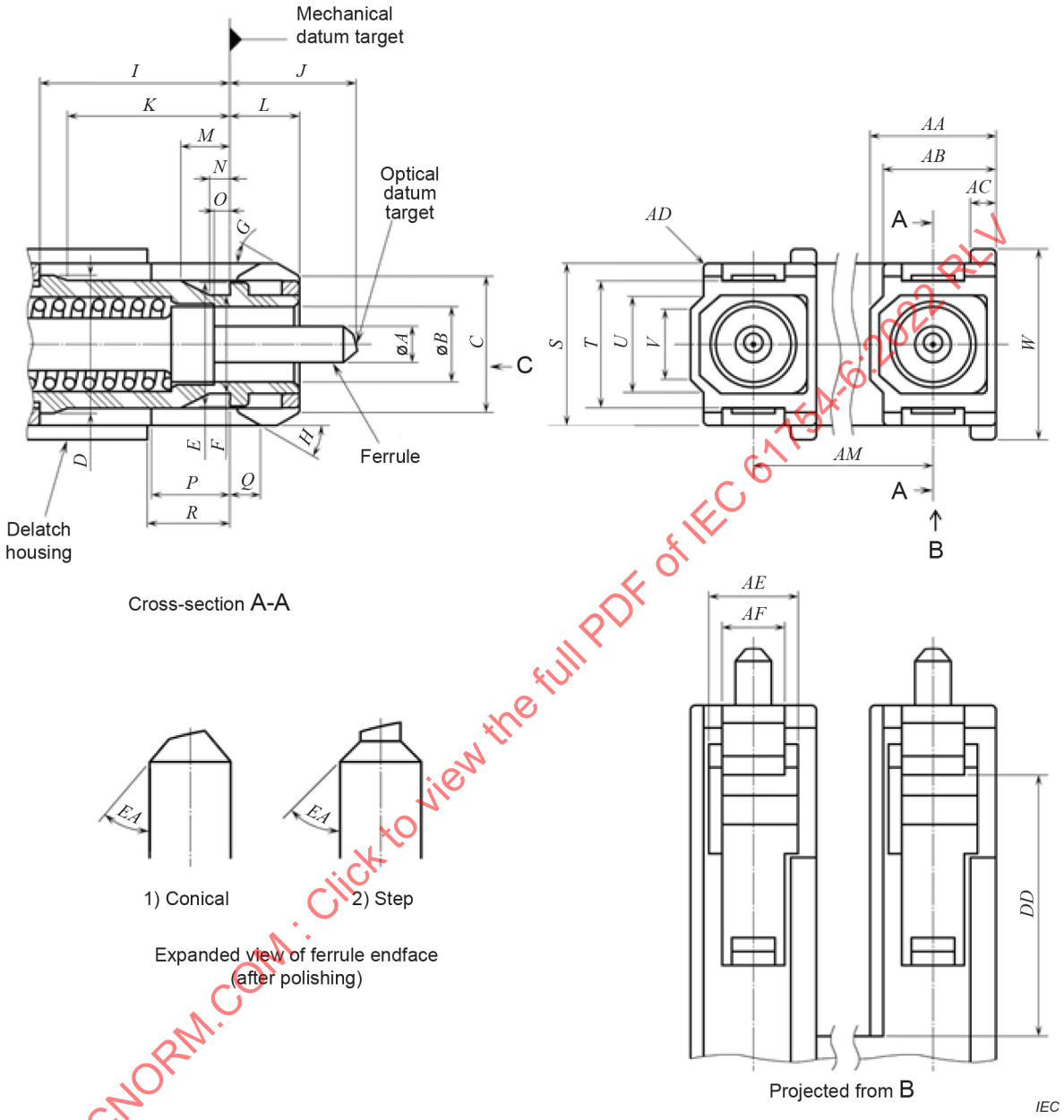
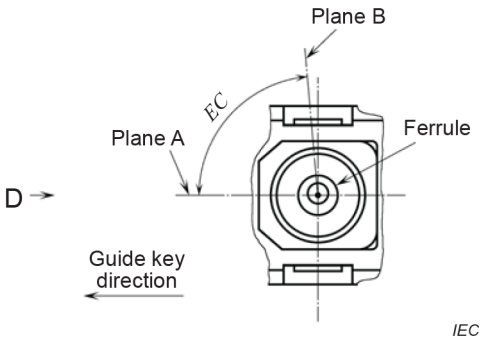
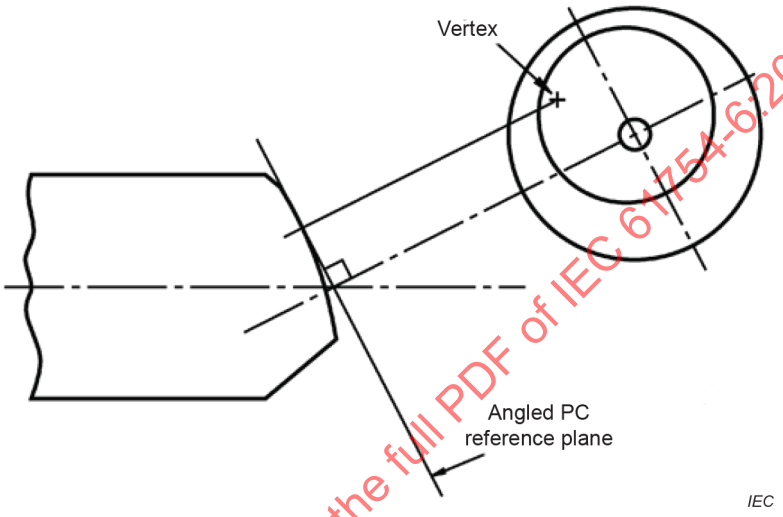


Figure 22 – 6,25 mm duplex plug connector interface – Push/pull, APC *(1 of 2)*



Expanded view from C direction (after polishing)



Ferrule endface geometry (expanded view from D direction, after polishing)

Figure 22 – 6,25 mm duplex plug connector interface – Push/pull, APC *(2 of 2)*

Table 41 – Dimensions of the 6,25 mm duplex plug connector interface, APC

Reference	Dimensions			Remarks
	Minimum	Basic	Maximum	
A			~~1,249 5 mm~~ See IEC 61755-3-2	[a] ~~and Table 42~~
B	2,6 mm		2,7 mm	
C	4,6 mm		4,8 mm	
D	4,65 mm		4,75 mm	
E	4,3 mm		4,4 mm	
F	3,3 mm		3,4 mm	
G	25°		35°	Angle, unit in degrees
H	25°		35°	Angle, unit in degrees
I	6,55 mm		–	[b]
J	4,2 mm		4,5 mm	[c]
K	5,5 mm		–	
L	2,4 mm		2,5 mm	

Reference	Dimensions			Remarks
	Minimum	Basic	Maximum	
M	1,5 mm		–	
N	0,6 mm		–	
O	0,5 mm		–	
P	2,6 mm		–	b
Q	1 mm		1,1 mm	b ~~c~~ d
R	2,65 mm		2,9 mm	b
S	5,5 mm		5,6 mm	
T	4,3 mm		4,5 mm	
U	–		3,7 mm	
V	–		2,4 mm	
W	6,5 mm		6,6 mm	
AB	3,85 mm		3,95 mm	
AC	0,7 mm		0,9 mm	
AD	0,2 mm		–	Radius
AE	3 mm		–	
AF	2,2 mm		2,3 mm	
AJ	8,8 mm		8,9 mm	
AK	8,35 mm		8,45 mm	
AL	4,55 mm		4,7 mm	
AM	6,2 mm		6,3 mm	
AP	–		3,7 mm	
EA	32,5°		45°	Angle, unit in degrees
EC	–	90°	–	Angle, unit in degrees[e]

[a] A chamfer or radius is allowed to maximum depth of 0,5 mm from the ferrule endface. Add grade number to the interface reference number.

[b] The coupling sleeve shall be movable toward the right and the left directions. These dimensions are given when the coupling sleeve is moved in its most right-direction position.

[c] Dimension *J* is given for the plug endface when not mated. ~~It is noticed that~~ The ferrule is movable by a certain axial compression force with direct contacting endfaces, and therefore dimension *J* is given variable. Ferrule compression force shall be 5,5 N to 6,5 N when the position of the optical datum target from the mechanical datum target is moved in the range of 3,9 mm to 4,1 mm. In addition, dimension *J* shall become less than 3,25 mm with a relatively large axial compression force. The compression force shall be measured according to IEC 61300-3-22.

[d] ~~The right-side position of *Q* shall become the left-side position to the plane defined by the mechanical datum target when the coupling sleeve is moved to its most left-direction position.~~ *Q* is to the right of the mechanical datum target when the delatch housing is to the right (connected state) and to the left of the mechanical datum target when the delatch housing is to the left (disconnected state).

[e] Dimension *EC* is defined as an angle between two planes: one plane, plane A, passes through the axis of the ferrule and axis of symmetry of the key of the angled endface connector plug. The other plane, plane B, passes through the axis of the ferrule and the normal to the APC reference plane.

Figure 23 is an example of the 6,25 mm duplex plug connector interface – Push/pull. Table 42 gives dimensions of the 6,25 mm duplex plug connector interface – Push/pull and Table 43 gives grade of the 6,25 mm duplex plug connector interface – Push/pull.

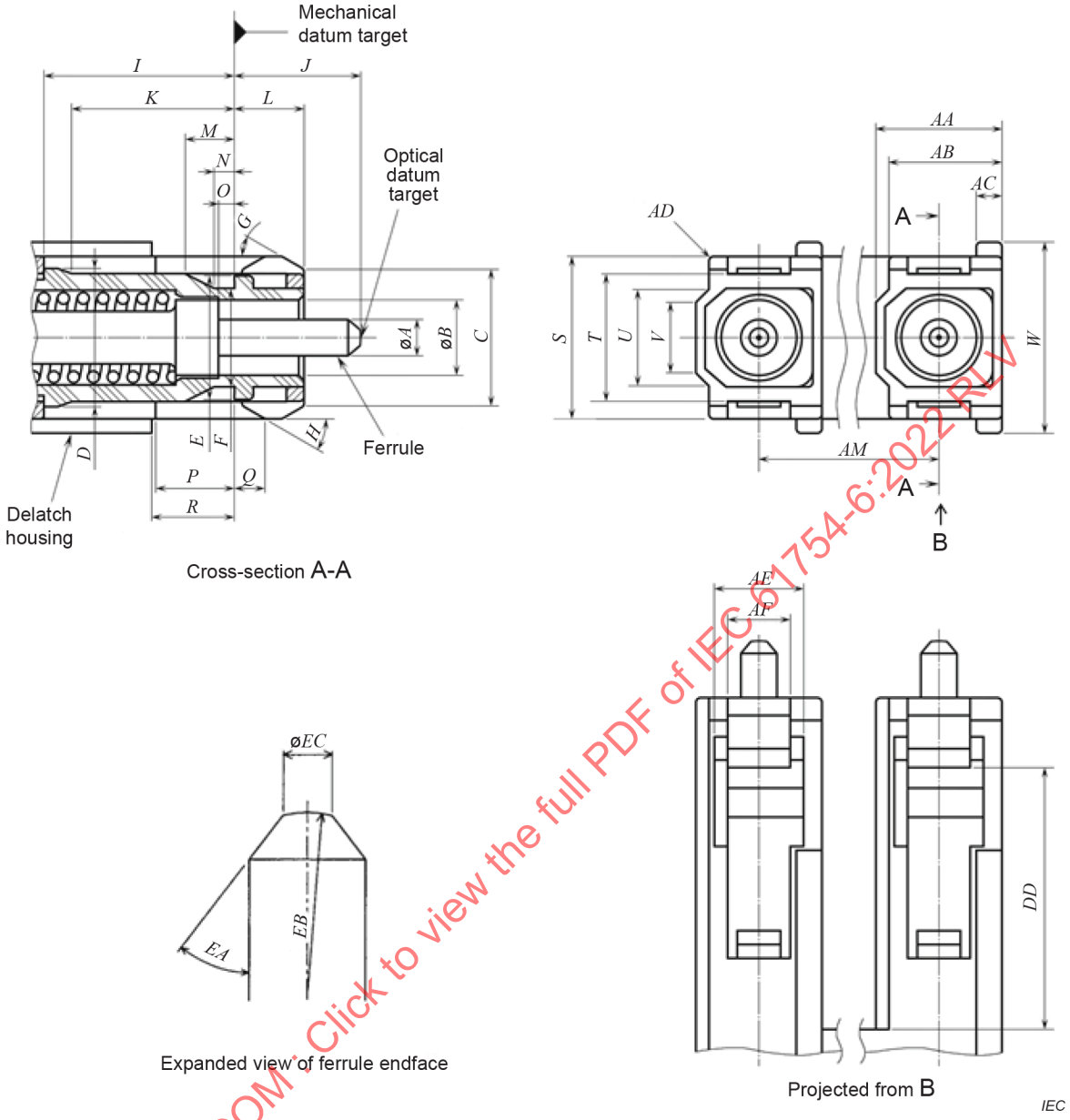


Figure 23 – 6,25 mm duplex plug connector interface – Push/pull

Table 42 – Dimensions of the 6,25 mm duplex plug connector interface

Reference	Dimensions		Remarks
	Minimum	Maximum	
A	See Table 43	~~1,249 5 mm~~	a
B	2,6	2,7	
C	4,6	4,8	
D	4,65	4,75	
E	4,3	4,4	
F	3,3	3,4	
G	25°	35°	Angle, unit in degrees
H	25°	35°	Angle, unit in degrees
I	6,55	–	b

Reference	Dimensions		Remarks
	Minimum	Maximum	
J	4,2	4,5	c
K	5,5	–	
L	2,4	2,5	
M	1,5	–	
N	0,6	–	
O	0,5	–	
P	2,6	–	b
Q	1,0	1,1	b d
R	2,65	2,9	b
S	5,5	5,6	
T	4,3	4,5	
U	–	3,7	
V	–	2,4	
W	6,5	6,6	
AB	3,85	3,95	
AC	0,7	0,9	
AD	0,2	–	Radius
AE	3,0	–	
AF	2,2	2,3	
AJ	8,8	8,9	
AK	8,35	8,45	
AL	4,55	4,7	
AM	~~6.2~~ 4,45	~~6.3~~ 4,55	
DD	9,25	–	
EA	32,5°	45°	Angle, unit in degrees
EB	5	30	Radius [e]
EC	0,6	NA	Diameter

[a] A chamfer or radius is allowed to a maximum depth of 0,5 mm from the ferrule endface.

[b] The delatch housing shall be movable to the right ~~and~~ or left. Dimensions *L*, *M* and *V* are given when the ~~coupling sleeve is moved in its most right-direction position~~ delatch housing is at the furthest right (connected state).

[c] Dimension *J* is given for the plug endface when not mated. ~~It is noticed that~~ The ferrule is movable by a certain axial compression force with direct contacting endfaces, and therefore dimension *J* is variable. Ferrule compression force shall be 5,5 N to 6,5 N when the position of the optical datum target from the mechanical datum target is moved in the range of 3,9 mm to 4,1 mm. In addition, dimension *J* shall become less than 3,25 mm with a relatively large axial compression force. The compression force shall be measured according to IEC 61300-3-22.

[d] ~~The right-side position of *Q* shall become left-side position to the plane defined by the mechanical datum target when the coupling sleeve is moved to its most left-direction position.~~ *Q* is to the right of the mechanical datum target when the delatch housing is to the right (connected state) and to the left of the mechanical datum target when the delatch housing is to the left (disconnected state).

[e] Dome eccentricity of the spherically polished ferrule endface shall be less than ~~70~~ 50 µm.

Table 43 – Grade of the 6,25 mm duplex plug connector

Grade	Dimensions		Remarks
	A		
	Minimum	Maximum	
A	See IEC 61755-3-1		a
B	See IEC 61755-3-1		a
C	See IEC 61755-3-1		a
D	See IEC 61755-3-1		a
~~Am~~	~~1,248 3~~	~~1,249 5~~	~~b~~
~~Bm~~	~~1,246 7~~	~~1,249 5~~	~~b~~
A_m	Grade not specified at this time		a b
B_m	1,246 7	1,249 5	a b
C_m	Grade not specified at this time		

a ~~See IEC 61755-3-1.~~ Add grade number to the interface reference number.

b See IEC 61755-6-1 for guidance.

Figure 24 is an example of the 6,25 mm duplex adaptor connector interface. Table 44 gives dimensions of the 6,25 mm duplex adaptor connector interface ~~1~~ and Table 45 gives grade of the 6,25 mm duplex adaptor connector interface.

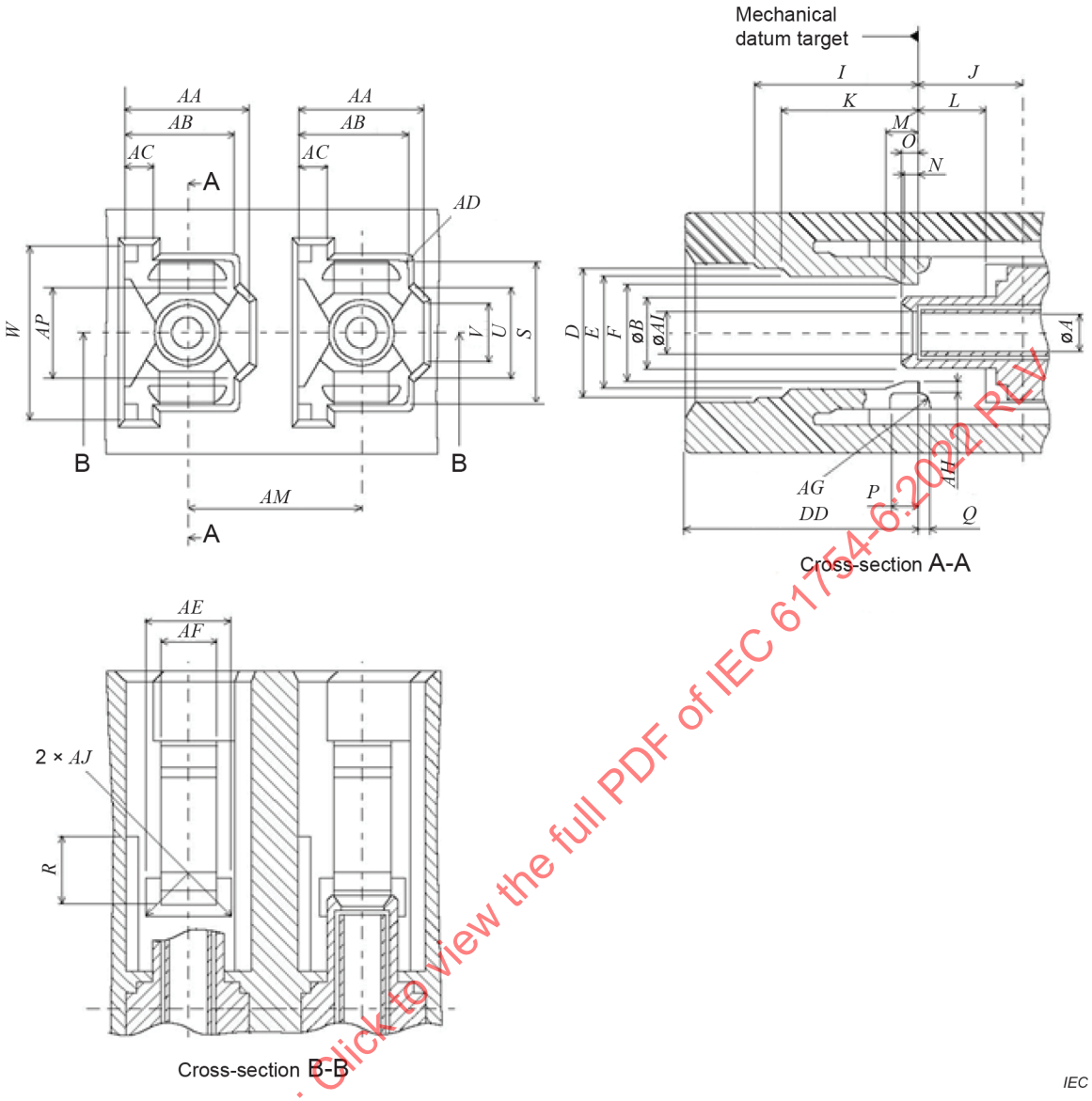


Figure 24 – 6,25 mm duplex adaptor connector interface

Table 44 – Dimensions of the 6,25 mm duplex adaptor connector interface

Reference	Dimensions mm		Remarks
	Minimum	Maximum	
A	See Table 45		
B	2,39	2,59	Diameter
D	4,8	5	
E	4,55	–	
F	2,9	3,5	[a]
I	–	6,5	
J	3,9	4,1	
K	–	5,4	
L	2,55	2,7	
M	–	1,4	

Reference	Dimensions mm		Remarks
	Minimum	Maximum	
N	–	0,55	
O	–	0,6	
P	–	1,2	
Q	–	0,4	
R	–	2,55	
S	5,65	5,75	
U	3,8	4	
V	3,3	–	
W	6,7	–	
AA	4,45	4,55	
AB	4,01	4,11	
AC	0,95	1,15	
AD	–	0,2	Radius
AE	2,8	2,95	
AF	1,9	2,1	
AG	0,3	–	Radius
AH	0,4	0,55	
AI	1,34	1,44	Diameter
AJ	–	0,3	Radius
AM	6,20	6,30	
AP	3,8	4	
DD	8.77	9.23	

[a] Dimension *F* shall become greater than 4,5 mm when a plug is coupled to or removed from the adaptor.

Table 45 – Grade of the 6,25 mm duplex adaptor connector

Grade	Dimensions mm		Remarks
	Minimum	Maximum	
1			Resilient sleeve [a] [b]

[a] The connector alignment feature is a resilient alignment sleeve. The feature shall accept a pin gauge to the centre of the adaptor with a force of 1 N to 2,5 N on condition that another pin gauge is inserted into the feature from the other side. The centre of the adaptor is defined by the right-side position of dimension *J*. The pin gauge is shown in Figure 4 and Table 11.

[b] Add grade number to the interface reference number.

Figure 25 is an example of the horizontal duplex plug connector interface. Table 46 gives dimensions of the horizontal duplex plug connector interface and Table 47 gives grade of the horizontal duplex plug connector interface.

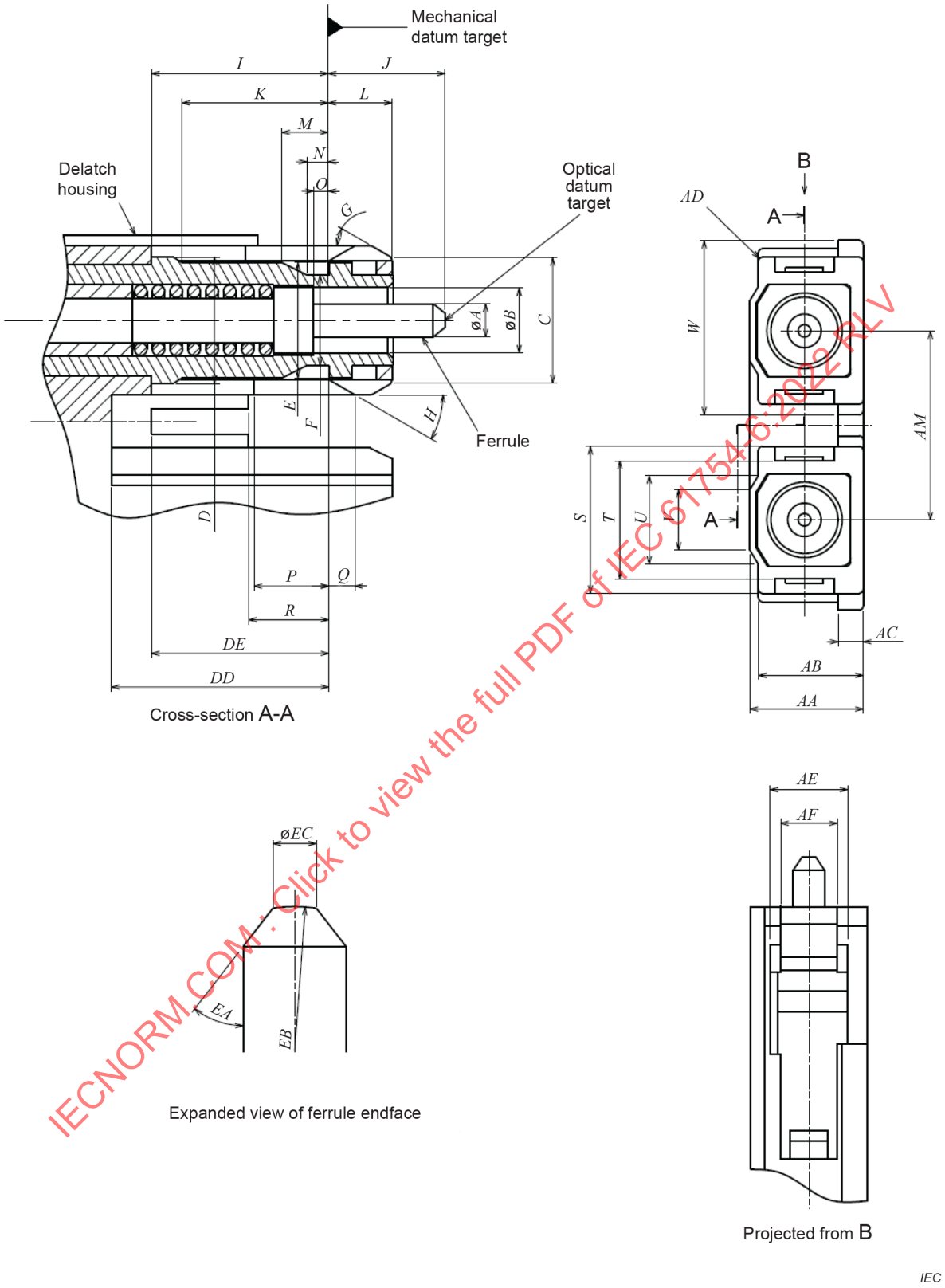


Figure 25 – Horizontal duplex plug connector interface – Push/pull

Table 46 – Dimensions of the horizontal duplex plug connector interface

Reference	Dimensions		Remarks
	Minimum	Maximum	
A	see Table 47	~~1.249 5 mm~~	a
B	2,6 mm	2,7 mm	
C	4,6 mm	4,8 mm	
D	4,65 mm	4,75 mm	
E	4,3 mm	4,4 mm	
F	3,3 mm	3,4 mm	
G	25°	35°	Angle, unit in degrees
H	25°	35°	Angle, unit in degrees
I	6,55 mm	–	b
J	4,2 mm	4,5 mm	c
K	5,5 mm	–	
L	2,4 mm	2,5 mm	
M	1,5 mm	–	
N	0,6 mm	–	
O	0,5 mm	–	
P	2,6 mm	–	b
Q	1,0 mm	1,1 mm	b d
R	2,65 mm	2,9 mm	b
S	5,5 mm	5,6 mm	
T	4,3 mm	4,5 mm	
U	–	3,7 mm	
V	–	2,4 mm	
W	14,1 mm	14,2 mm	
AA	4,3 mm	4,4 mm	
AB	3,7 mm	3,85 mm	
AC	0,7 mm	0,9 mm	
AD	0,2 mm	–	Radius
AE	3,0 mm	–	
AF	2,2 mm	2,3 mm	
AM	7,45 mm	7,55 mm	
DD	9,25 mm	–	
DE	6,55 mm	–	
EA	32,5°	45°	Angle, unit in degrees
EB	5 mm	30 mm	Radius e
EC	0,6 mm	NA	Diameter

[a] A chamfer or radius is allowed to a maximum depth of 0,5 mm from the ferrule endface.

[b] The delatch housing shall be movable to the right ~~and~~ or left ~~directions~~. Dimensions L, M and V are given when the ~~coupling sleeve is moved in its most right-direction position~~ delatch housing is at the furthest right (connected state).

[c] Dimension J is given for the plug endface when not mated. ~~It is noticed that~~ The ferrule is movable by a certain axial compression force with direct contacting endfaces, and therefore dimension J is variable. Ferrule compression force shall be 5,5 N to 6,5 N when the position of the optical datum target from the mechanical datum target is moved in the range of 3,9 mm to 4,1 mm. In addition, dimension J shall become less than 3,25 mm with a relatively large axial compression force. The compression force shall be measured according to IEC 61300-3-22.

[d] ~~The right-side position of Q shall become left-side position to the plane defined by the mechanical datum target when the coupling sleeve is moved to its most left-direction position.~~ Q is to the right of the mechanical datum target when the delatch housing is to the right (connected state) and to the left of the mechanical datum target when the delatch housing is to the left (disconnected state).

[e] Dome eccentricity of the spherically polished ferrule endface shall be less than ~~70~~ 50 µm.

Table 47 – Grade of the horizontal duplex plug connector

Grade	Dimensions mm		Remarks
	A		
	Minimum	Maximum	
A	See IEC 61755-3-1		a
B	See IEC 61755-3-1		a
C	See IEC 61755-3-1		a
D	See IEC 61755-3-1		a
~~Am~~	~~1,248 3~~	~~1,249 5~~	~~b~~
~~Bm~~	~~1,246 7~~	~~1,249 5~~	~~b~~
A_m	Grade not specified at this time		a,b
B_m	1,246 7	1,249 5	a,b
C_m	Grade not specified at this time		a,b

[a] ~~See IEC 61755-3-1.~~ Add grade number to the interface reference number.

[b] See IEC 61755-6-1 for guidance.

Constructions of floating 2-port connector plug and panel dimensions are described in Annex C and Annex D respectively.

Figure 26 is an example of the horizontal duplex adaptor connector interface. Table 48 gives dimensions of the horizontal duplex adaptor connector interface and Table 49 gives grade of the horizontal duplex adaptor connector interface.

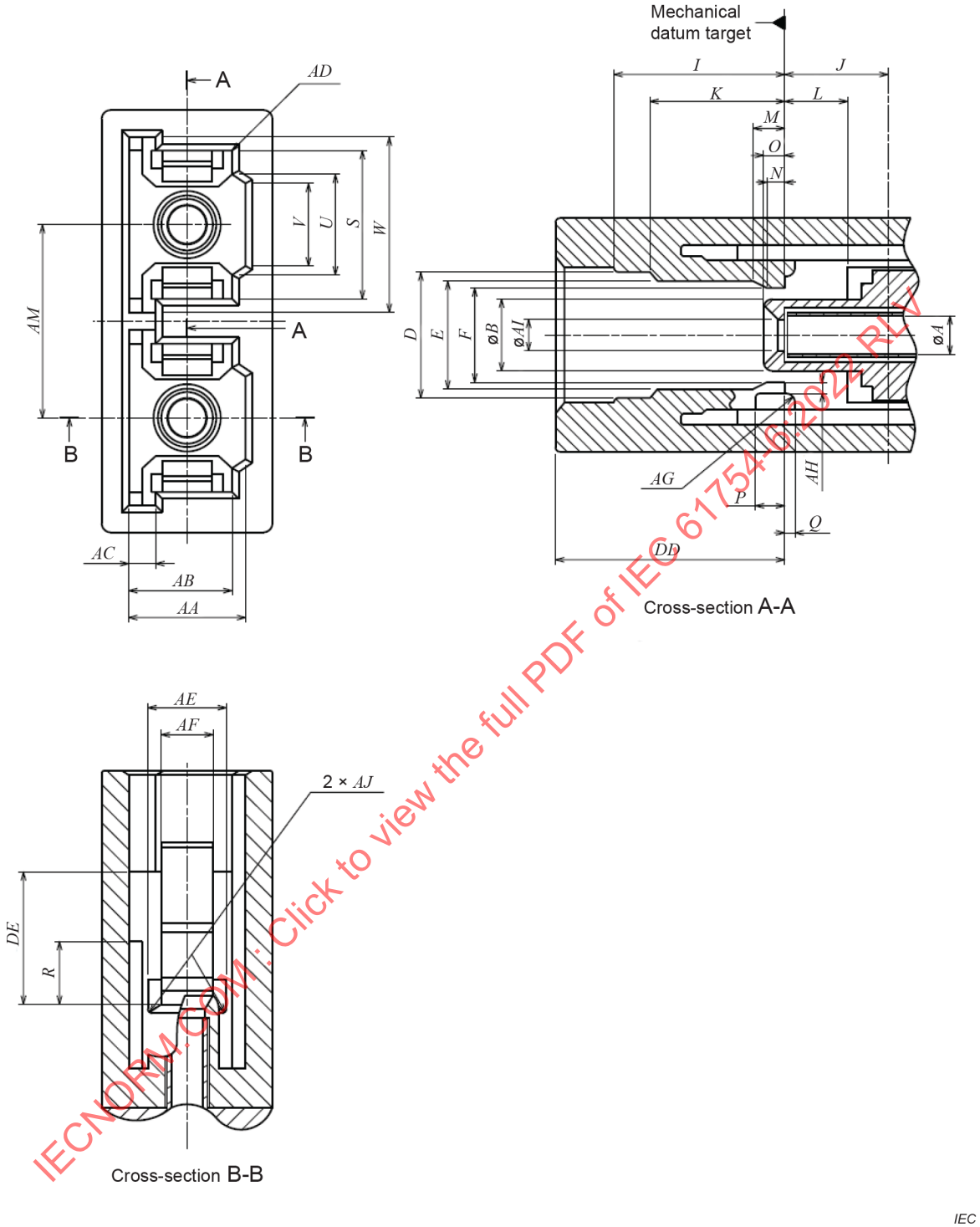


Figure 26 – Horizontal duplex adaptor connector interface

Table 48 – Dimensions of the horizontal duplex adaptor connector interface

Reference	Dimensions mm		Remarks
	Minimum	Maximum	
A	See Table 49		
B	2,39	2,59	Diameter
D	4,8	5,0	
E	4,55	–	
F	2,9	3,5	[a]
I	–	6,5	
J	3,9	4,1	
K	–	5,4	
L	2,55	2,7	
M	–	1,4	
N	–	0,55	
O	–	0,6	
P	–	1,2	
Q	–	0,4	
R	–	2,55	
S	5,65	5,75	
U	3,8	4	
V	2,8	–	
W	14,4	–	
AA	4,45	4,55	
AB	4,01	4,11	
AC	0,95	1,15	
AD	–	0,2	Radius
AE	2,8	2,95	
AF	1,9	2,1	
AG	0,3	–	Radius
AH	0,4	0,55	
AI	1,34	1,44	Diameter
AJ	–	0,3	Radius
AM	7,45	7,55	
DD	8,77	9,23	
DE	–	6.5	

[a] Dimension *F* shall become greater than 4,5 mm when a plug is coupled to or removed from the adaptor.

Table 49 – Grade of the horizontal duplex adaptor connector

Grade	Dimensions mm		Remarks
	Minimum	Maximum	
1	–	–	Resilient sleeve [a] [b]

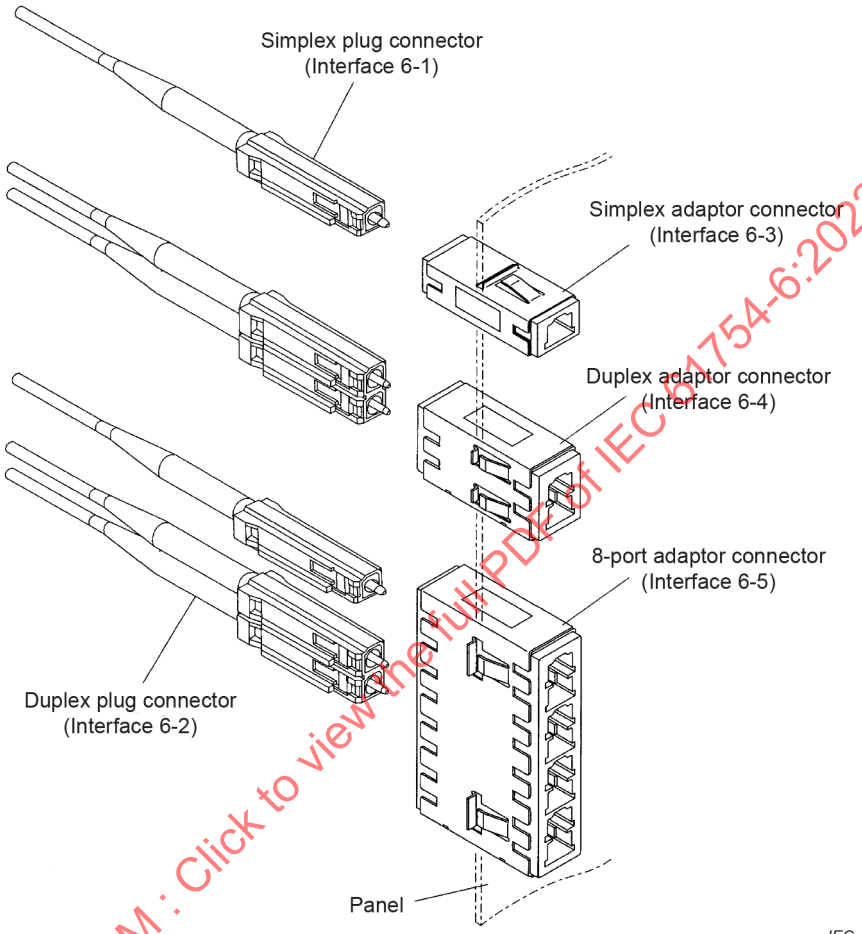
[a] The connector alignment feature is a resilient alignment sleeve. The feature shall accept a pin gauge to the centre of the adaptor with a force of 1 N to 2,5 N under the condition that another pin gauge is inserted into the feature from the other side. The centre of the adaptor is defined by the right-side position of dimension *J*. The pin gauge is shown in Figure 4 and Table 11.

[b] Add grade number to the interface reference number.

Annex A
(informative)

Configuration of type MU-A connector set

Figure A.1 shows the configuration of a type MU-A connector set.



NOTE 1 Adaptors for panel use are illustrated as an example.

NOTE 2 Adaptors for printed board use are also available.

Figure A.1 – Configuration of type MU-A connector set

Annex B
(informative)

Configuration of type MU-B connector set

Figure B.1 shows the configuration of a type MU-B connector set.

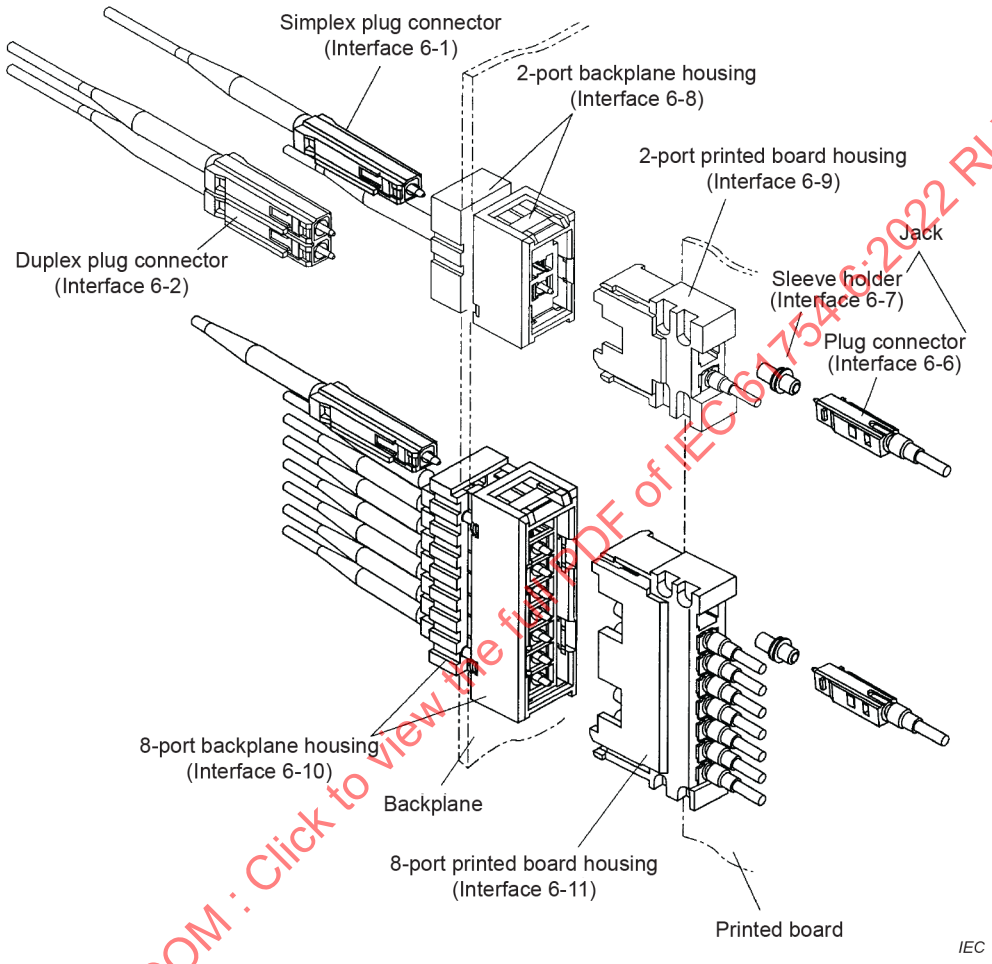


Figure B.1 – Configuration of type MU-B connector set

Annex C
(informative)

Floating 2-port connector plug

Only floating style 2-port connector plugs shall be used as the MU optical connector interface of fibre channel physical interface standard (FC-PI2). The floating 2-port connectors essentially take two simplex plug connectors (interface 6-1) and mechanically couple them together so each of the two MU simplex plug connectors are retained with the nominal distance of 6,25 mm between the centre of connectors, but free to "float" within the constraints of the coupling assembly. Figure C.1 and the Table C.1 describe the floating duplex connector plug envelope dimensions.

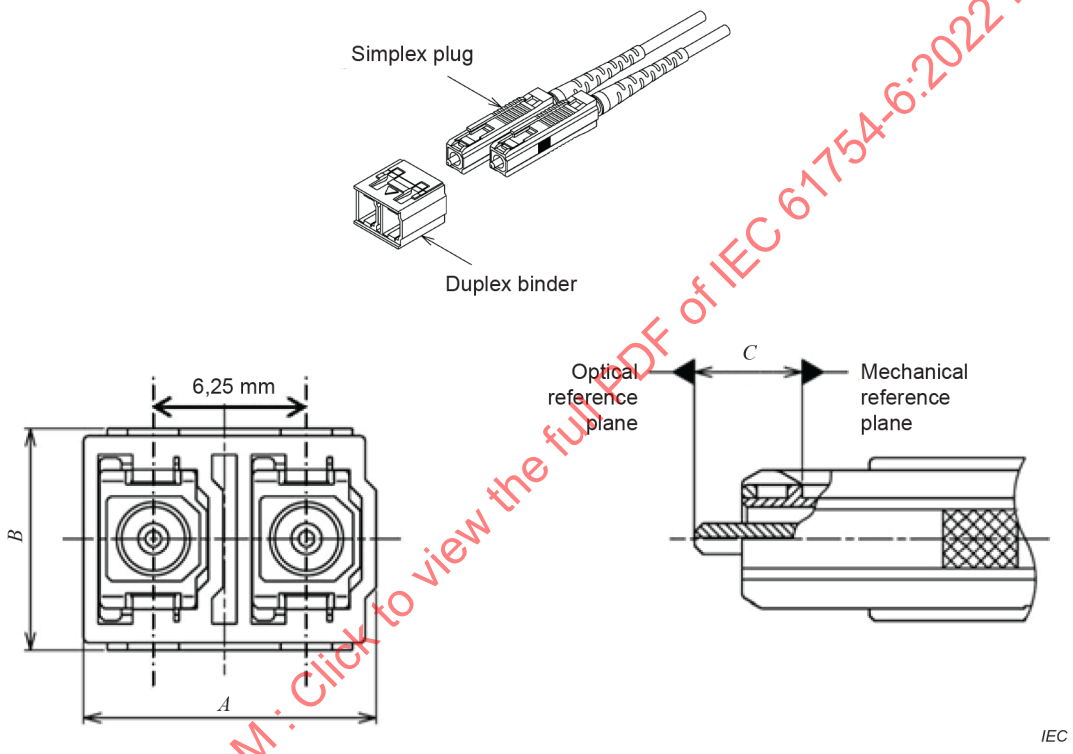


Figure C.1 – Floating 2-port connector plug

Table C.1 – Dimensions table for 2-port connector plug

Reference	Nominal mm
A	11,95
B	9
C	4 mated 4,4 free

Annex D
(informative)

Panel dimensions

D.1 General

When the IEC 61300-2-55 strength of mounted adaptor test is required in the relevant specifications, the test should be performed with a panel having the relevant cut out as shown in Figure D.1 to Figure D.5.

D.2 Simplex adaptor

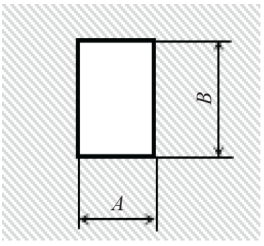


Figure D.1 – Panel cut out

Table D.1 – Dimensions for simplex adaptor

Reference	Dimensions mm		Remarks
	Minimum	Maximum	
A	7,8	7,9	
B	10,9	11,0	
The maximum thickness of the panel should be 1,6 mm. IEC 60874-14-3:1997, Figure 2, Note 2, should be referred to.			

D.3 4,5 mm duplex adaptor

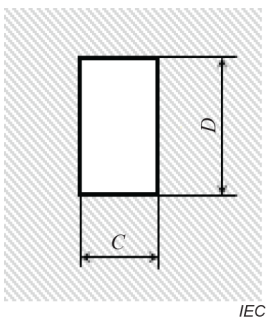


Figure D.2 – Panel cut out

Table D.2 – Dimensions for 4,5 mm duplex adaptor

Reference	Dimensions mm		Remarks
	Minimum	Maximum	
C	10,3	10,4	
D	14,5	14,6	
The maximum thickness of the panel should be 1,6 mm. See IEC 60874-19-2.			

D.4 6,25 mm duplex adaptor

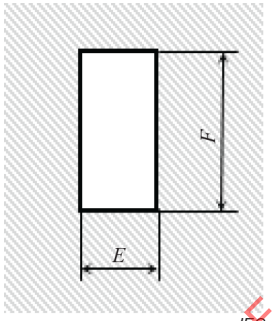


Figure D.3 – Panel cut out

Table D.3 – Dimensions for 6,25 mm duplex adaptor

Reference	Dimensions mm		Remarks
	Minimum	Maximum	
E	10,3	10,4	
F	16,2	16,3	
The maximum thickness of the panel should be 1,6 mm. See IEC 60874-19-2.			

D.5 Horizontal duplex adaptor

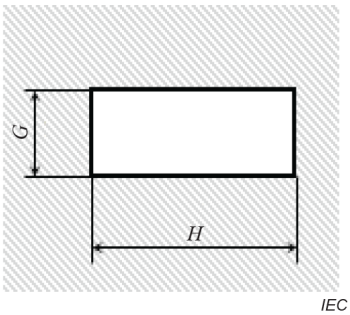


Figure D.4 – Panel cut out

Table D.4 – Dimensions for horizontal duplex adaptor

Reference	Dimensions mm		Remarks
	Minimum	Maximum	
G	7,8	7,9	
H	18,2	18,3	
The maximum thickness of the panel should be 1,6 mm. See IEC 60874-19-2.			

D.6 4,5 mm 8-port adaptor

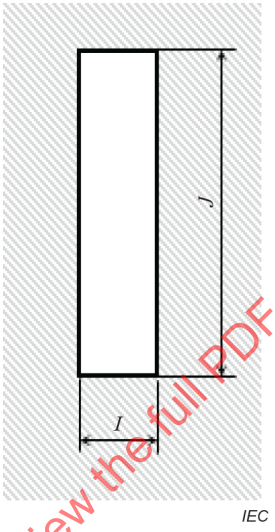


Figure D.5 – Panel cut out

Table D.5 – Dimensions for 4,5 mm 8-port adaptor

Reference	Dimensions mm		Remarks
	Minimum	Maximum	
I	10,3	10,4	
J	42,5	42,6	
The maximum thickness of the panel should be 1,6 mm. See IEC 60874-19-2.			

Bibliography

IEC 60874-14-3:1997, *Connectors for optical fibres and cables – Part 14-3: Detail specification for fibre optic adaptor (simplex) type SC for single-mode fibre*

IEC 60874-19-2, *Connectors for optical fibres and cables – Part 19-2: Fibre optic adaptor (duplex) type SC for single-mode fibre connectors – Detail specification*

IEC 61300-2-55, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-55: Tests – Strength of mounted adaptor*

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 PC ferrule, single mode fibres*

IEC 61755-6-1, *Fibre optic interconnecting devices and passive components – Fibre optic connector optical interfaces – Part 6-1: ~~Optical interfaces for 50,0 µm multimode fibres – General and guidance~~ Connection of 50 µm multimode, non-angled physically contacting fibres*[2]

[2] Under preparation. Stage at the time of publication: IEC/CDM 61755-6-1:2021.

IEC 61754-6

Edition 3.0 2022-02

INTERNATIONAL STANDARD

NORME INTERNATIONALE

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

Dispositifs d'interconnexion et composants passifs fibroniques – Interfaces de connecteurs fibroniques –
Partie 6: Famille de connecteurs de type MU

IEC 61754-6:2022-02(en-fr)

CONTENTS

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.

IEC 61754-6 has been prepared by subcommittee 86B: Fibre optic interconnecting devices and passive components, of IEC technical committee 86: Fibre optics. It is an International Standard.

This third edition cancels and replaces the second edition published in 2013 and constitutes a technical revision.

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

a) the test method IEC 61300-3-22 for the compression force of the ferrule was added;
b) Annex D (informative) with cut out dimension requirements for testing the strength of mounted adaptors was added.

The text of this International Standard is based on the following documents:

Draft	Report on voting
86B/4562/FDIS	86B/4585/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications.

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 document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

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

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

Part 6: Type MU connector family

1 Scope

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

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 61300-3-22, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-22: Examinations and measurements – Ferrule compression force*

IEC 61754-1, *Fibre optic interconnecting devices and passive components – Fibre optic connector interfaces – Part 1: General and guidance*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 61754-1 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at http://www.electropedia.org/
- ISO Online browsing platform: available at http://www.iso.org/obp

4 Description

The parent connector for type MU connector family is a miniature single-position plug which is characterized by a cylindrical, spring-loaded butting ferrule(s) of a 1,25 mm typical diameter, and a push-pull coupling mechanism. The optical alignment mechanism of the connectors is of a rigid hole or a resilient sleeve style.

This document type MU connector family defines the standard interface dimensions of active device receptacles for the type MU connectors. The receptacles are used to retain the connector plugs and mechanically maintain the optical datum target of the plugs at a defined position within the receptacle housings.

5 Interfaces

This document contains the standard interfaces showed in Table 1.

Table 1 – Interfaces

Interface IEC 61754-6-1	Simplex plug connector interface – Push/pull (see Figure 1)
Interface IEC 61754-6-2	4,5 mm duplex plug connector interface – Push/pull (see Figure 2)
Interface IEC 61754-6-3	Simplex adaptor connector interface – Push/pull (see Figure 3)
Interface IEC 61754-6-4	4,5 mm duplex adaptor connector interface – Push/pull (see Figure 5)
Interface IEC 61754-6-5	8-port adaptor connector interface – Push/pull (see Figure 6)
Interface IEC 61754-6-6	Plug connector interface – for printed board housings (see Figure 7)
Interface IEC 61754-6-7	Sleeve holder interface – for printed board housings (see Figure 8)
Interface IEC 61754-6-8	2-port backplane housing interface – Self-retentive (see Figure 9)
Interface IEC 61754-6-9	2-port printed board housing interface – Self-retentive (see Figure 10)
Interface IEC 61754-6-10	8-port backplane housing interface – Self-retentive (see Figure 11)
Interface IEC 61754-6-1	8-port printed board housing interface – Self-retentive (see Figure 12)
Interface IEC 61754-6-12	Simplex active device receptacle interface – for physical contact (PC) connector plug (see Figure 13)
Interface IEC 61754-6-13	4,5 mm duplex active device receptacle interface – for PC connector plug (see Figure 15)
Interface IEC 61754-6-14	6,25 mm duplex active device receptacle interface – for PC connector plug (see Figure 17)
Interface IEC 61754-6-15	Plug connector interface – for printed board housings, angled PC (APC) 8 degrees (see Figure 19)
Interface IEC 61754-6-16	Simplex plug connector interface – Push/pull, APC 8 degrees (see Figure 20)
Interface IEC 61754-6-17	4,5 mm duplex plug connector interface – Push/pull, APC 8 degrees (see Figure 21)
Interface IEC 61754-6-18	6,25 mm duplex plug connector interface – Push/pull, APC 8 degrees (see Figure 22)
Interface IEC 61754-6-19	6,25 mm duplex plug connector interface – Push/pull (see Figure 23)
Interface IEC 61754-6-20	6,25 mm duplex adaptor connector interface – Push/pull (see Figure 24)
Interface IEC 61754-6-21	Horizontal duplex plug connector interface – Push/pull (see Figure 25)
Interface IEC 61754-6-22	Horizontal duplex adaptor connector interface – Push/pull (see Figure 26)

The plugs of interfaces IEC 61754-6-1, IEC 61754-6-2, IEC 61754-6-6, IEC 61754-6-19 and IEC 61754-6-21 have a ferrule(s) with a spherically polished endface, and realize physical contact (PC). The plugs of interfaces IEC 61754-6-15, IEC 61754-6-16, IEC 61754-6-17 and IEC 61754-6-18 have a ferrule(s) with a spherically polished angled endface and realize angled PC (APC).

The type MU connector family comprises two types of connector set: MU-A connector set (see Annex A) and MU-B connector set (see Annex B). The MU-A connector set is a plug/adaptor configuration with a push-pull coupling mechanism. The MU-B connector set is a plug-in type back-plane connector configuration which is plug/backplane and printed board housings/plug for printed board housing/sleeve holder configuration and is equipped with a self-retentive mechanism.

The type MU-A connector set consists of simplex and duplex plugs, and simplex, duplex and 8-port adaptors. The plugs are common to the backplane connector housings of the type MU-B connector set.

The type MU-B connector set consists of 2-port and 8-port backplane and printed board connector housings, simplex and duplex plugs, plug for printed board connector housings, and sleeve holder. The plug for printed board connector housing is used as a jack together with the sleeve holder. The jack is attached into the printed board connector housing.

Table 2, Table 3 and Table 4 show the intermateablitiy of the standard interfaces. It shall be noted however that in order to obtain the designated optical performance, any plug shall be connected to a counterpart plug whose ferrule end is polished to the same condition.

Table 2 – Intermateability of MU-A connectors

Plugs	Adaptors				
	61754-6-3	61754-6-4	61754-6-5	61754-6-20	61754- 6-22
61754-6-1	Mate	Mate	Mate	Mate	Mate
61754-6-2	Not mate	Mate	Mate	Not mate	Not mate
61754-6-16	Mate	Mate	Mate	Mate	Mate
61754- 6-17	Not mate	Mate	Mate	Not mate	Not mate
61754-6-18	Not mate	Not mate	Not mate	Mate	Not mate
61754-6-19	Not mate	Not mate	Not mate	Mate	Not mate
61754-6-21	Not mate	Not mate	Not mate	Not mate	Mate

Table 3 – Intermateability of MU-B connectors

Plugs	Connector housings			
	Backplane connector housing		Printed board connector housing	
	61754-6-8	61754-6-10	61754-6-9	61754-6-11
61754-6-1	Mate	Mate	Not mate	Not mate
61754-6-2	Mate	Mate	Not mate	Not mate
61754-6-6 with 61754-6-7	Not mate	Not mate	Mate	Mate
61754-6-15 with 61754- 6-7	Not mate	Not mate	Mate	Mate
61754-6-16	Mate	Mate	Not mate	Not mate
61754-6-17	Mate	Mate	Not mate	Not mate
61754-6-18	Not mate	Not mate	Not mate	Not mate
61754-6-19	Not mate	Not mate	Not mate	Not mate
61754-6-21	Not mate	Not mate	Not mate	Not mate

Table 4 – Intermateability of MU receptacles

Plugs	Receptacles		
	61754-6-12	**61754-6-13**	**61754-6-14**
61754-6-1	Mate	Mate	Mate
61754-6-2	Not mate	Mate	Not mate
61754-6-16	Not mate	Not mate	Not mate
61754-6-17	Not mate	Not mate	Not mate
61754-6-18	Not mate	Not mate	Not mate
61754-6-19	Not mate	Not mate	Mate
61754-6-21	Not mate	Not mate	Not mate

Figure 1 is an example of a simplex plug connector interface. Table 5 gives dimensions of the simplex plug connector interface and Table 6 gives the grade of the simplex plug connector interface.

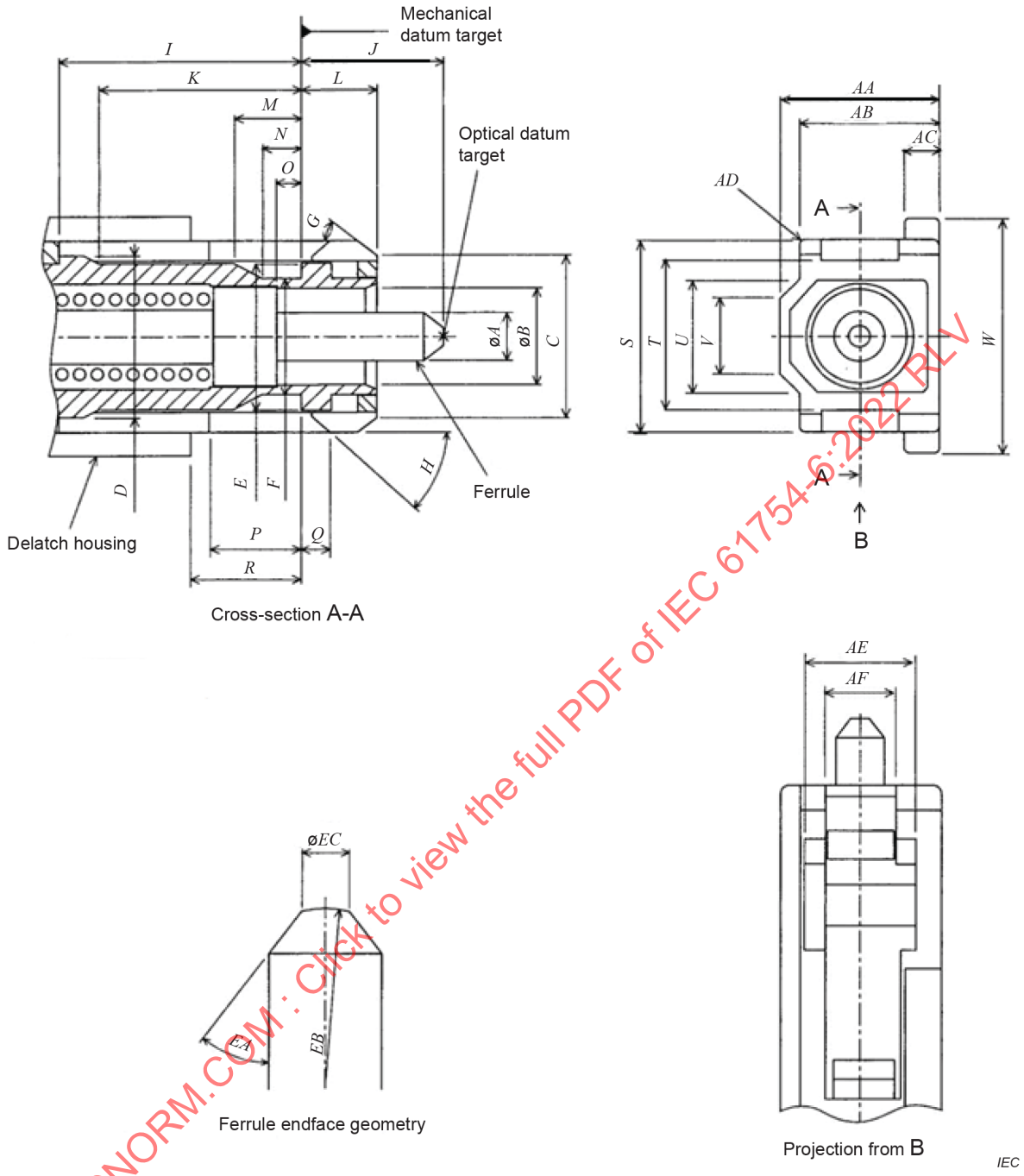


Figure 1 – Simplex plug connector interface – Push/pull

Table 5 – Dimensions of the simplex plug connector interface

Reference	Dimensions		Remarks
	Minimum	Maximum	
A	See Table 6		a
B	2,6 mm	2,7 mm	
C	4,6 mm	4,8 mm	
D	4,65 mm	4,75 mm	
E	4,3 mm	4,4 mm	
F	3,3 mm	3,4 mm	
G	25°	35°	Angle, unit in degrees
H	25°	35°	Angle, unit in degrees
I	6,55 mm	–	b
J	4,2 mm	4,5 mm	c
K	5,5 mm	–	
L	2,4 mm	2,5 mm	
M	1,5 mm	–	
N	0,6 mm	–	
O	0,5 mm	–	
P	2,6 mm	–	b
Q	1 mm	1,1 mm	b d
R	2,65 mm	2,9 mm	b
S	5,5 mm	5,6 mm	
T	4,3 mm	4,5 mm	
U	–	3,7 mm	
V	–	2,4 mm	
W	6,5 mm	6,6 mm	
AA	4,3 mm	4,4 mm	
AB	3,85 mm	3,95 mm	
AC	0,7 mm	0,9 mm	
AD	0,2 mm	–	Radius
AE	3 mm	–	
AF	2,2 mm	2,3 mm	
EA	32,5°	45°	Angle, unit in degrees e
EB	5 mm	30 mm	Radius f
EC	0,45 mm	0,73 mm	Diameter

a A chamfer or radius is allowed to a maximum depth of 0,5 mm from the ferrule endface.

b The delatch housing shall be movable to the right or left. Dimensions L, M and V are given when the delatch housing is at the furthest right.

c Dimension J is given for the plug endface when not mated. The ferrule is movable by a certain axial compression force with direct contacting endfaces, and therefore dimension J is variable. Ferrule compression force shall be 5,5 N to 6,5 N when the position of the optical datum target from the mechanical datum target is moved in the range of 3,9 mm to 4,1 mm. In addition, dimension J shall become less than 3,25 mm with a relatively large axial compression force. The compression force shall be measured according to IEC 61300-3-22.

d Q is to the right of the mechanical datum target when the delatch housing is to the right (connected state) and to the left of the mechanical datum target when the delatch housing is to the left (disconnected state).

e 40° to 45° are desirable to minimize debris for backplane connectors.

f Dome eccentricity of the spherically polished ferrule endface shall be less than 50 µm.

Table 6 – Grade of the simplex plug connector

Grade	Dimensions mm		Remarks
	A		
	Minimum	Maximum	
A	See IEC 61755-3-1		a
B	See IEC 61755-3-1		a
C	See IEC 61755-3-1		a
D	See IEC 61755-3-1		a
A_m	Grade not specified at this time		a b
B_m	1,246 7	1,249 5	a b
C_m	Grade not specified at this time		a b

[a] Add grade number to the interface reference number.

[b] See IEC 61755-6-1[1] for guidance.

Figure 2 is an example of a 4,5 mm duplex plug connector interface. Table 7 gives dimensions of the 4,5 mm duplex plug connector interface and Table 8 gives the grade of the 4,5 mm duplex plug connector interface.

[1] Under preparation. Stage at the time of publication: IEC/CDM 61755-6-1:2021.

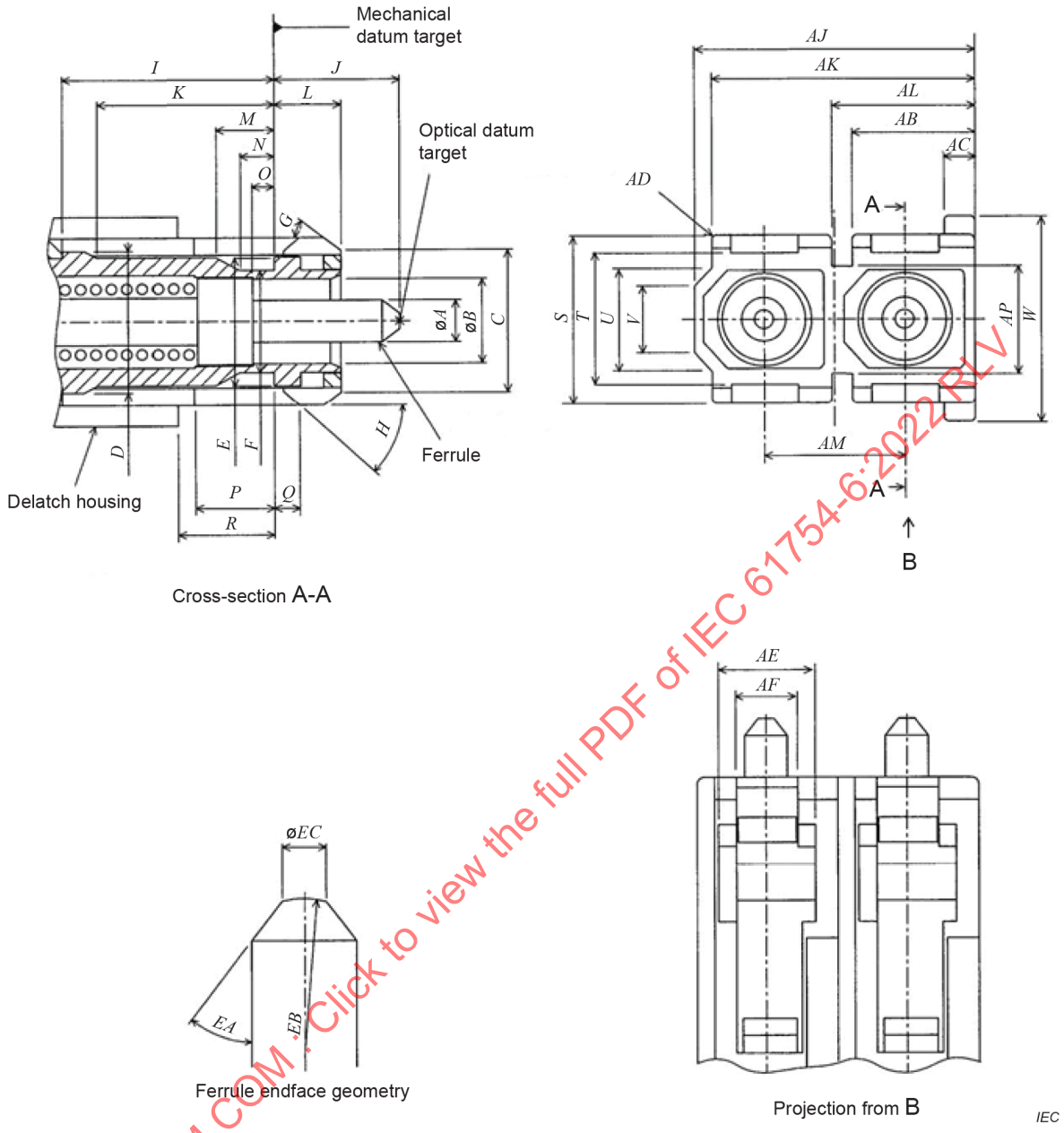


Figure 2 – 4,5 mm duplex plug connector interface – Push/pull

Table 7 – Dimensions of the 4,5 mm duplex plug connector interface

Reference	Dimensions		Remarks
	Minimum	Maximum	
A	See Table 8		[a]
B	2,6 mm	2,7 mm	
C	4,6 mm	4,8 mm	
D	4,65 mm	4,75 mm	
E	4,3 mm	4,4 mm	
F	3,3 mm	3,4 mm	
G	25°	35°	Angle, unit in degrees
H	25°	35°	Angle, unit in degrees
I	6,55 mm	–	[b]
J	4,2 mm	4,5 mm	[c]
K	5,5 mm	–	
L	2,4 mm	2,5 mm	
M	1,5 mm	–	
N	0,6 mm	–	
O	0,5 mm	–	
P	2,6 mm	–	[b]
Q	1,0 mm	1,1 mm	[b] [d]
R	2,65 mm	2,9 mm	[b]
S	5,5 mm	5,6 mm	
T	4,3 mm	4,5 mm	
U	–	3,7 mm	
V	–	2,4 mm	
W	6,5 mm	6,6 mm	
AB	3,7 mm	3,85 mm	
AC	0,7 mm	0,9 mm	
AD	0,2 mm	–	Radius
AE	3,0 mm	–	
AF	2,2 mm	2,3 mm	
AJ	8,8 mm	8,9 mm	
AK	8,35 mm	8,45 mm	
AL	4,55 mm	4,7 mm	
AM	4,45 mm	4,55 mm	
AP	–	3,7 mm	
EA	32,5°	45°	Angle, unit in degrees [e]
EB	5 mm	30 mm	Radius [f]
EC	0,45 mm	0,73 mm	Diameter

[a] A chamfer or radius is allowed to a maximum depth of 0,5 mm from the ferrule endface.

[b] The delatch housing shall be movable to the right or left. Dimensions *L*, *M* and *V* are given when the delatch housing is at the furthest right.

[c] Dimension *J* is given for the plug endface when not mated. The ferrule is movable by a certain axial compression force with direct contacting endfaces, and therefore dimension *J* is variable. Ferrule compression force shall be 5,5 N to 6,5 N when the position of the optical datum target from the mechanical datum target is moved in the range of 3,9 mm to 4,1 mm. In addition, dimension *J* shall become less than 3,25 mm with a relatively large axial compression force. The compression force shall be measured according to IEC 61300-3-22.

[d] *Q* is to the right of the mechanical datum target when the delatch housing is to the right (connected state) and to the left of the mechanical datum target when the delatch housing is to the left (disconnected state).

[e] 40° to 45° are desirable to minimize debris for backplane connectors.

[f] Dome eccentricity of the spherically polished ferrule endface shall be less than 50 µm.

Table 8 – Grade of the 4,5 mm duplex plug connector

Grade	Dimensions		Remarks
	A		
	Minimum	Maximum	
A	See IEC 61755-3-1		[a]
B	See IEC 61755-3-1		[a]
C	See IEC 61755-3-1		[a]
D	See IEC 61755-3-1		[a]
A_m	Grade not specified at this time		[a] [b]
B_m	1,246 7	1,249 5	[a] [b]
C_m	Grade not specified at this time		[a] [b]

[a] Add grade number to the interface reference number.

[b] See IEC 61755-6-1 for guidance.

Figure 3 is an example of a simplex adaptor connector interface. Table 9 gives dimensions of the simplex adaptor connector interface and Table 10 gives the grade of the simplex adaptor connector interface.

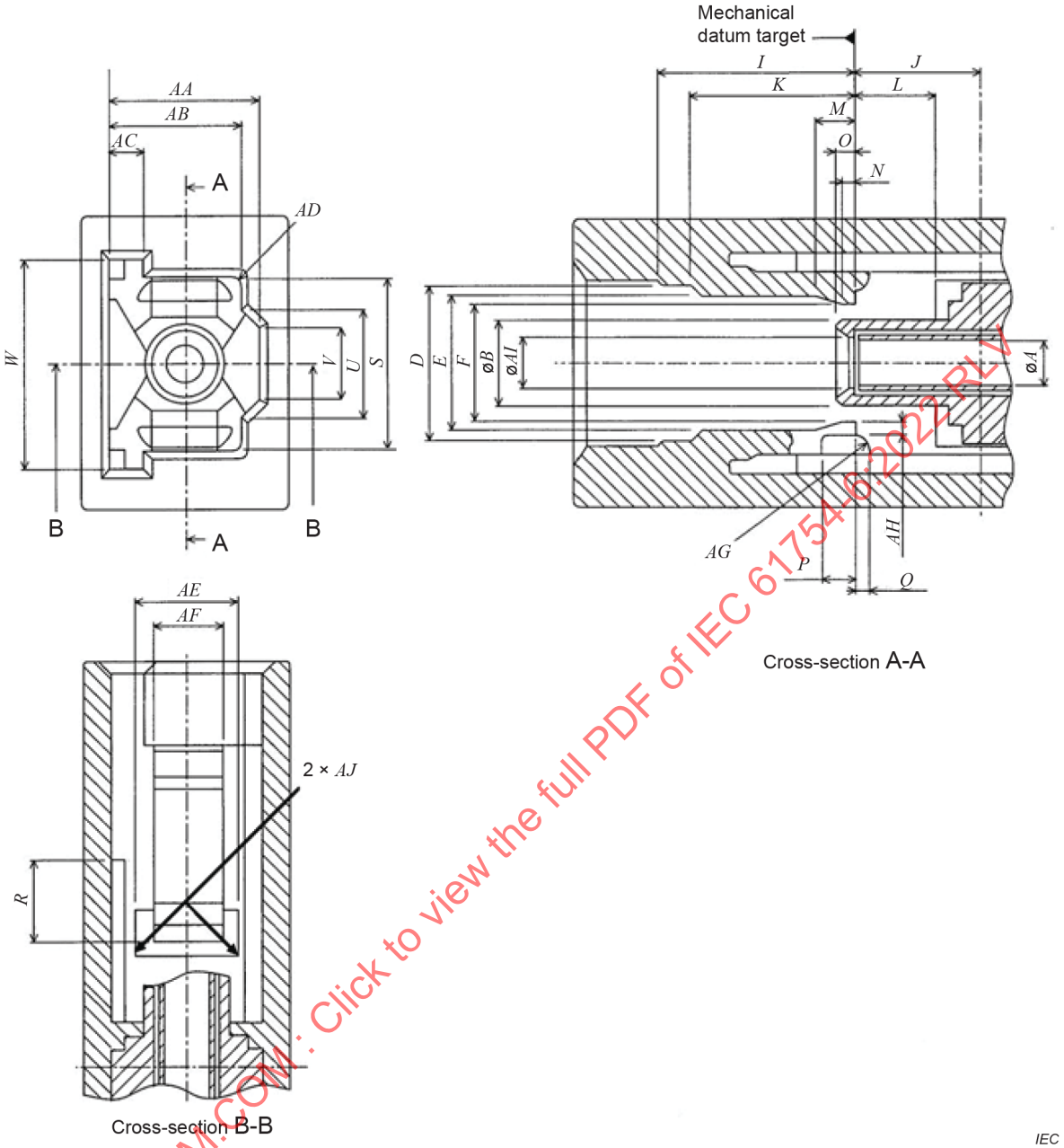


Figure 3 – Simplex adaptor connector interface – Push/pull

Table 9 – Dimensions of the simplex adaptor connector interface

Reference	Dimensions mm		Remarks
	Minimum	Maximum	
A	See Table 10		Diameter
B	2,39	2,59	Diameter
D	4,8	5	
E	4,55	–	
F	2,9	3,5	[a]
I	–	6,5	
J	3,9	4,1	
K	–	5,4	
L	2,55	2,7	
M	–	1,4	
N	–	0,55	
O	–	0,6	
P	–	1,2	
Q	–	0,4	
R	–	2,55	
S	5,65	5,75	
U	3,8	4	
V	3,3	–	
W	6,7	–	
AA	4,45	4,55	
AB	4,01	4,11	
AC	0,95	1,15	
AD	–	0,2	Radius
AE	2,8	2,95	
AF	1,9	2,1	
AG	0,3	–	Radius
AH	0,4	0,55	
AI	1,34	1,44	Diameter
AJ	–	0,3	Radius

[a] Dimension *F* shall become greater than 4,5 mm when a plug is coupled to or removed from the adaptor.

Table 10 – Grade of the simplex adaptor connector

Grade	Dimensions mm		Remarks
	Minimum	Maximum	
1	–	–	Resilient sleeve [a]

[a] The connector alignment feature is a resilient alignment sleeve. The feature shall accept a pin gauge to the centre of the adaptor with a force of 1,0 N to 2,5 N under the condition that another pin gauge is inserted into the feature from the other side. The centre of the adaptor is defined by the right-side position of dimension *J*. The pin gauge is shown in Figure 4 and Table 11.

Figure 4 is an example of a pin gauge for resilient alignment sleeve. Table 11 gives pin gauge dimensions.

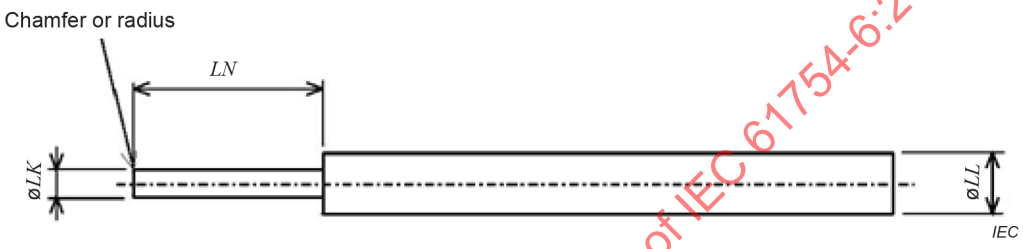


Figure 4 – Pin gauge for resilient alignment sleeve

Table 11 – Pin gauge dimensions

Reference	Dimensions mm		Remarks
	Minimum	Maximum	
LK	1,248 5	1,249 5	Surface roughness grade N4 (0,2 µm radius)
LL	2,6	2,8	
LN	4,7	–	

Figure 5 is an example of a 4,5 mm duplex adaptor connector interface. Table 12 gives dimensions of the 4,5 mm duplex adaptor connector interface and Table 13 gives the grade of the 4,5 mm duplex adaptor connector interface.

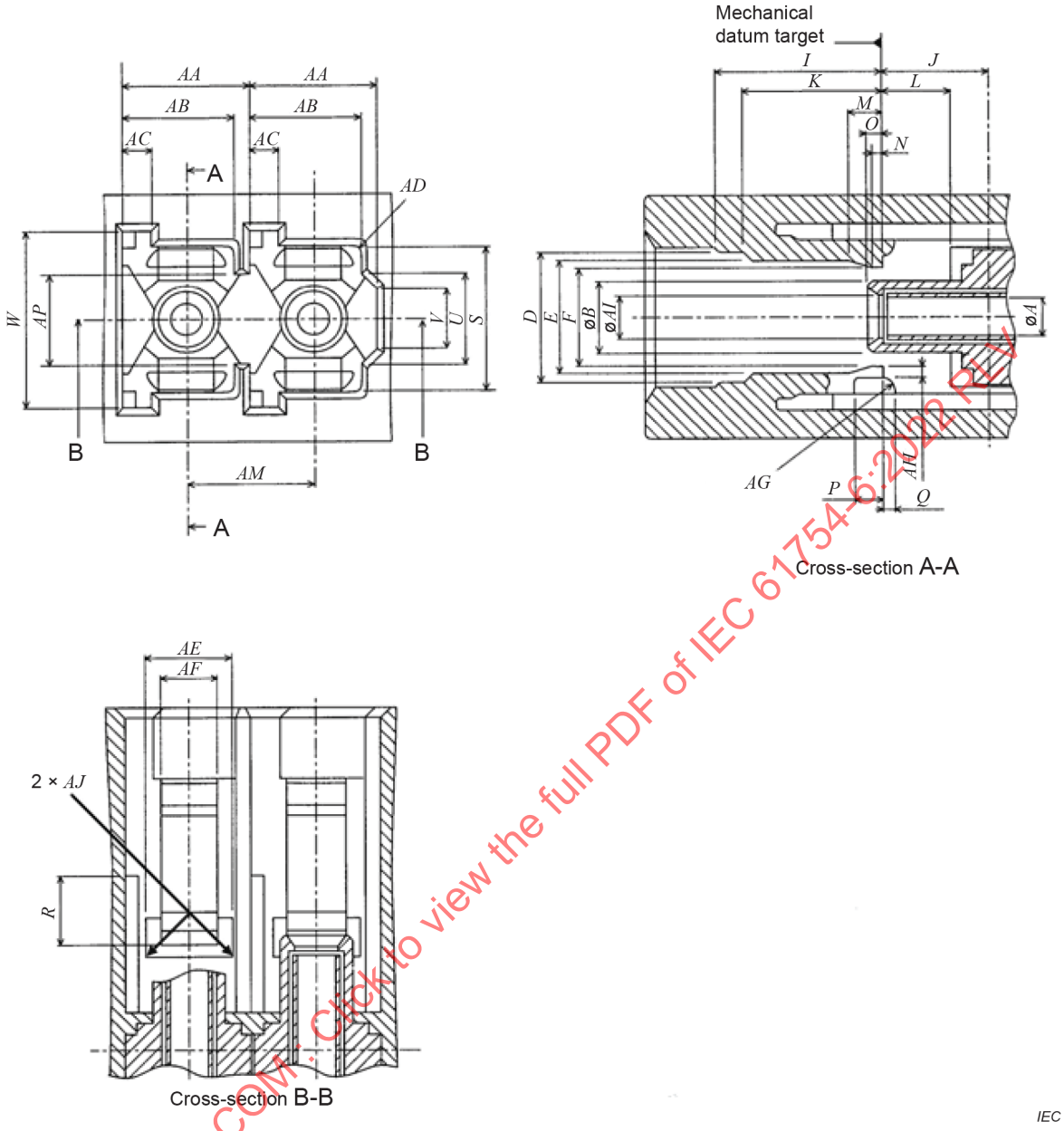


Figure 5 – 4,5 mm duplex adaptor connector interface – Push/pull

Table 12 – Dimensions of the 4,5 mm duplex adaptor connector interface

Reference	Dimensions mm		Remarks
	Minimum	Maximum	
A	See Table 13		
B	2,39	2,59	
D	4,8	5	
E	4,55	–	
F	2,9	3,5	[a]
I	–	6,5	
J	3,9	4,1	
K	–	5,4	
L	2,55	2,7	
M	–	1,4	
N	–	0,55	
O	–	0,6	
P	–	1,2	
Q	–	0,4	
R	–	2,55	
S	5,65	5,75	
U	3,8	4	
V	3,3	–	
W	6,7	–	
AA	4,45	4,55	
AB	4,01	4,11	
AC	0,95	1,15	
AD	–	0,2	Radius
AE	2,8	2,95	
AF	1,9	2,1	
AG	0,3	–	Radius
AH	0,4	0,55	
AI	1,34	1,44	Diameter
AJ	–	0,3	Radius
AM	4,45	4,55	
AP	3,8	4	

[a] Dimension *F* shall become greater than 4,5 mm when a plug is coupled to or removed from the adaptor.

Table 13 – Grade of the 4,5 mm duplex adaptor connector

Grade	Dimensions mm		Notes
	Minimum	Maximum	
1	–	–	Resilient sleeve [a]

[a] The connector alignment feature is a resilient alignment sleeve. The feature shall accept a pin gauge to the centre of the adaptor with a force of 1,0 N to 2,5 N under the condition that another pin gauge is inserted into the feature from the other side. The centre of the adaptor is defined by the right-side position of dimension J. The pin gauge is shown in Figure 4 and Table 11.

Figure 6 is an example of an 8-port adaptor connector interface. Table 14 gives dimensions of the 8-port adaptor connector interface and Table 15 gives the grade of the 8-port adaptor connector interface.

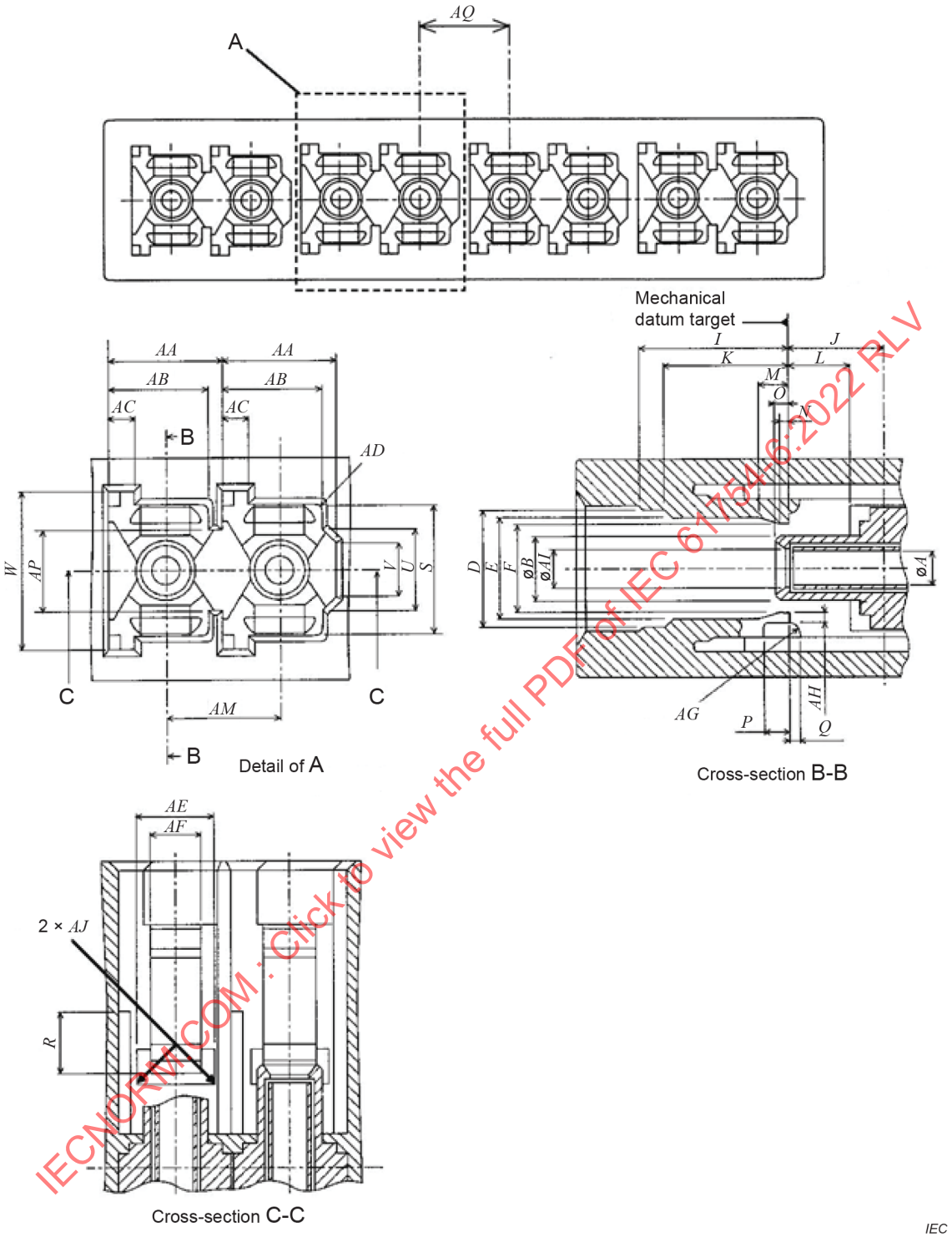


Figure 6 – 8-port adaptor connector interface – Push/pull

Table 14 – Dimensions of the 8-port adaptor connector interface

Reference	Dimensions mm		Remarks
	Minimum	Maximum	
A	See Table 15		
B	2,39	2,59	
D	4,8	5	
E	4,55	–	
F	2,9	3,5	[a]
I	–	6,5	
J	3,9	4,1	
K	–	5,4	
L	2,55	2,7	
M	–	1,4	
N	–	0,55	
O	–	0,6	
P	–	1,2	
Q	–	0,4	
R	–	2,55	
S	5,65	5,75	
U	3,8	4	
V	3,3	–	
W	6,7	–	
AA	4,45	4,55	
AB	4,01	4,11	
AC	0,95	1,15	
AD	–	0,2	Radius
AE	2,8	2,95	
AF	1,9	2,1	
AG	0,3	–	Radius
AH	0,4	0,55	
AI	1,34	1,44	Diameter
AJ	–	0,3	Radius
AM	4,45	4,55	
AP	3,8	4	
AQ	4,8	5,2	

[a] Dimension *F* shall become greater than 4,5 mm when a plug is coupled to or removed from the adaptor.

Table 15 – Grade of the 8-port adaptor connector

Grade	Dimensions mm		Notes
	Minimum	Maximum	
1	–	–	Resilient sleeve [a]

[a] The connector alignment feature is a resilient alignment sleeve. The feature shall accept a pin gauge to the centre of the adaptor with a force of 1,0 N to 2,5 N under the condition that another pin gauge is inserted into the feature from the other side. The centre of the adaptor is defined by the right-side position of dimension *J*. The pin gauge is shown in Figure 4 and Table 11.

Figure 7 is an example of a plug connector interface. Table 16 gives dimensions of the plug connector interface and Table 17 gives the grade of the plug connector interface.

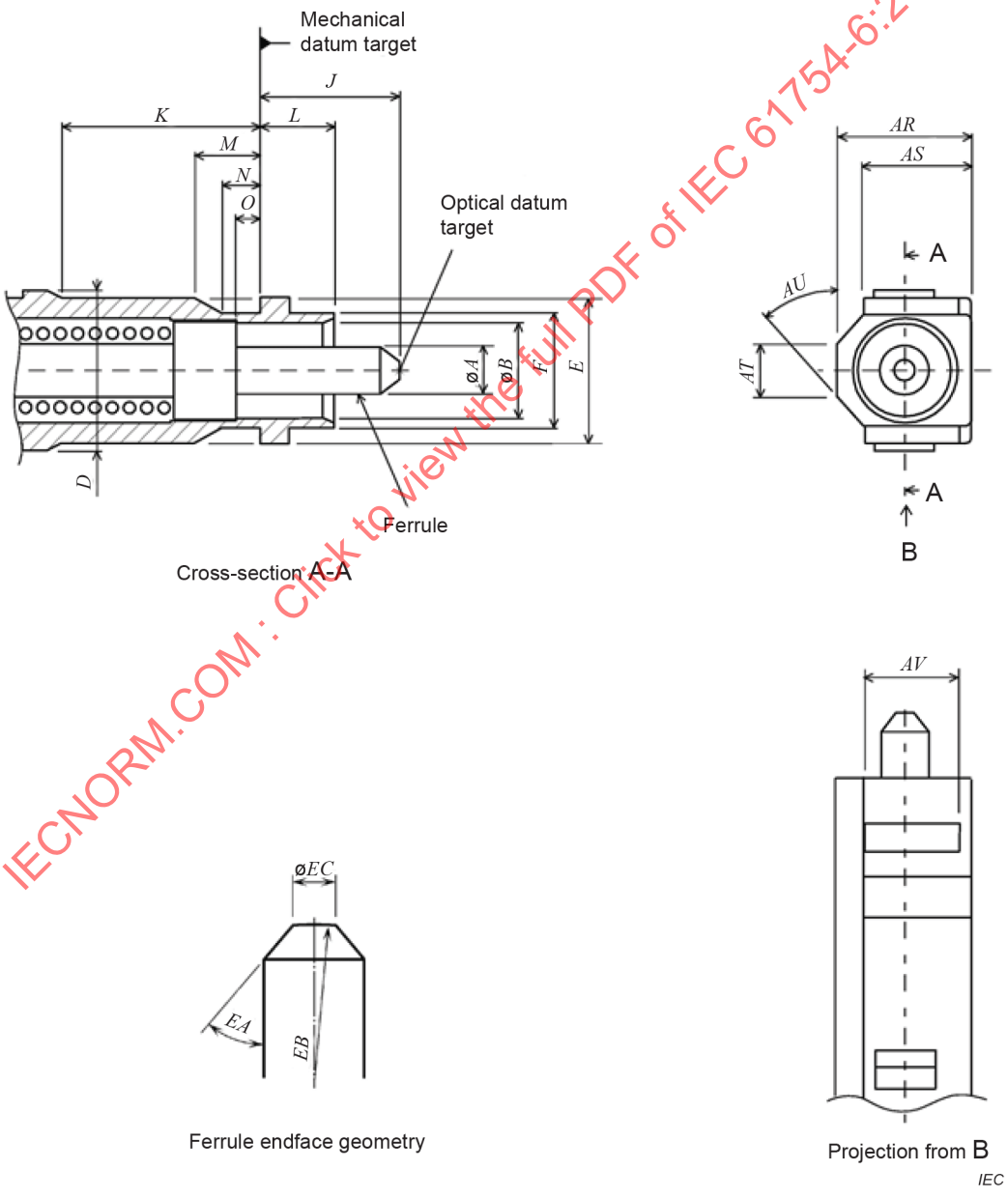


Figure 7 – Plug connector interface – For printed board housings

Table 16 – Dimensions of the plug connector interface

Reference	Dimensions		Notes
	Minimum	Maximum	
A	See Table 17		[a]
B	2,6 mm	2,7 mm	Diameter
D	4,65 mm	4,75 mm	
E	4,3 mm	4,4 mm	
F	3,3 mm	3,4 mm	
J	4,2 mm	4,5 mm	[b]
K	5,5 mm	–	
L	2,4 mm	2,5 mm	
M	1,5 mm	–	
N	0,6 mm	–	
O	0,5 mm	–	
AR	3,65 mm	3,75 mm	
AS	2,9 mm	3,0 mm	
AT	1,7 mm	2,1 mm	
AU	43°	47°	Angle, unit in degrees
AV	–	3,0 mm	
EA	32,5°	45°	Angle, unit in degrees [c]
EB	5 mm	30 mm	Radius [d]
EC	0,45 mm	0,73 mm	

NOTE 1 A chamfer or radius is allowed to a maximum depth of 0,5 mm from the ferrule endface.

NOTE 2 40° to 45° are desirable to minimize debris for backplane connectors.

[a] A chamfer or radius is allowed to a maximum depth of 0,5 mm from the ferrule endface.

[b] Dimension *J* is given for the plug endface when not mated. The ferrule is movable by a certain axial compression force with direct contacting endfaces, and therefore dimension *J* is variable. Ferrule compression force shall be 5,5 N to 6,5 N when the position of the optical datum target from the mechanical datum target is moved in the range of 3,9 mm to 4,1 mm. In addition, dimension *J* shall become less than 3,25 mm with a relatively large axial compression force. The compression force shall be measured according to IEC 61300-3-22.

[c] 40° to 45° are desirable to minimize debris for backplane connectors.

[d] Dome eccentricity of the spherically polished ferrule endface shall be less than 50 µm.

Table 17 – Grade of the plug connector

Grade	Dimensions mm		Notes
	A		
	Minimum	Maximum	
A	See IEC 61755-3-1		a
B	See IEC 61755-3-1		a
C	See IEC 61755-3-1		a
D	See IEC 61755-3-1		a
A_m	Grade not specified at this time		a b
B_m	1,246 7	1,249 5	a b
C_m	Grade not specified at this time		a b

[a] Add grade number to the interface reference number.

[b] See IEC 61755-6-1 for guidance .

Figure 8 is an example of the sleeve holder interface. Table 18 gives dimensions of the sleeve holder interface and Table 19 gives the grade of the sleeve holder interface.

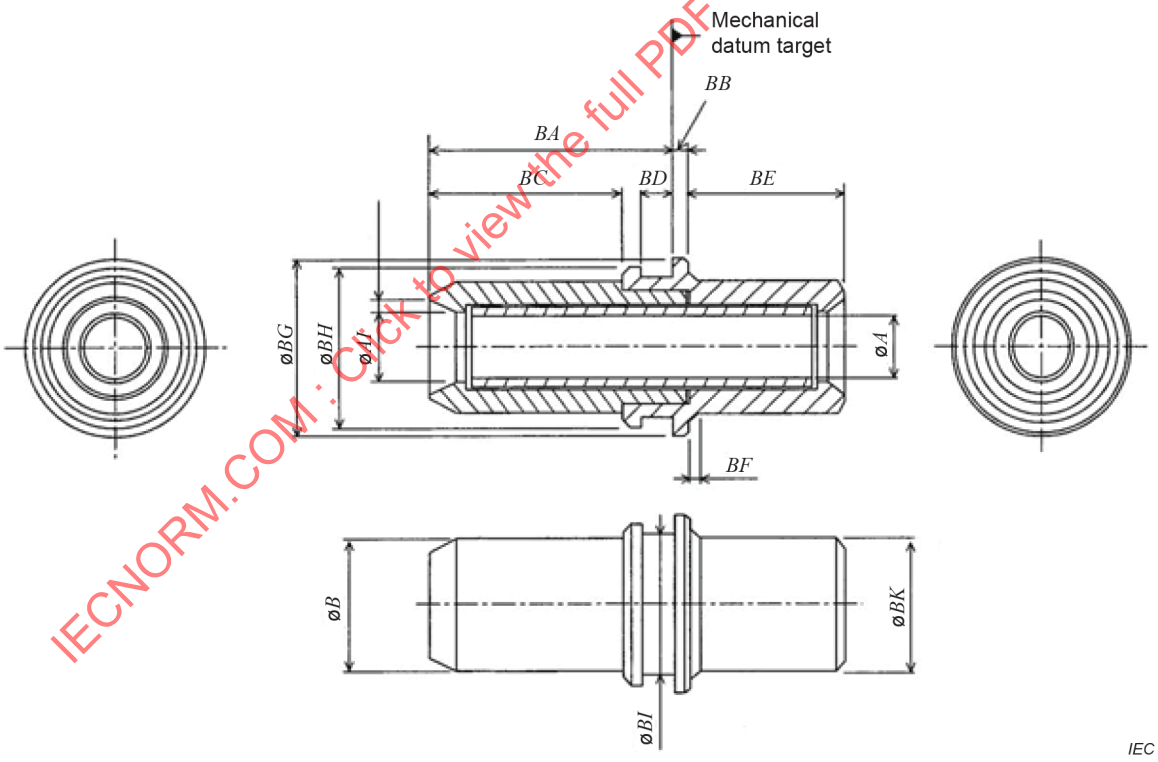


Figure 8 – Sleeve holder interface

Table 18 – Dimensions of the sleeve holder interface

Reference	Dimensions mm		Remarks
	Minimum	Maximum	
A	See Table 19		
B	2,54	2,59	Diameter
AI	1,34	1,39	Diameter
BA	4,65	4,85	
BB	0,20	0,30	
BC	3,65	3,85	
BD	0,65	0,85	
BE	2,9	3,1	
BF	–	0,25	45° chamfer
BG	3,5	3,54	Diameter
BH	3,1	3,2	Diameter
BI	2,5	2,7	Diameter
BJ	0,29	0,37	
BK	2,49	2,59	Diameter

Table 19 – Grade of the sleeve holder

Grade	Dimensions mm		Remarks
	Minimum	Maximum	
1	–	–	Resilient sleeve [a]

[a] The connector alignment feature is a resilient alignment sleeve. The feature shall accept a pin gauge to a depth of 4,3 mm from the left side with a force of 1,0 N to 2,5 N under the condition that another pin gauge is inserted into the feature from the other side. The pin gauge is shown in Figure 4 and Table 11.

Figure 9 is an example of the 2-port backplane housing interface. Table 20 gives dimensions of the 2-port backplane housing interface and Table 21 gives the grade of the 2-port backplane housing interface.

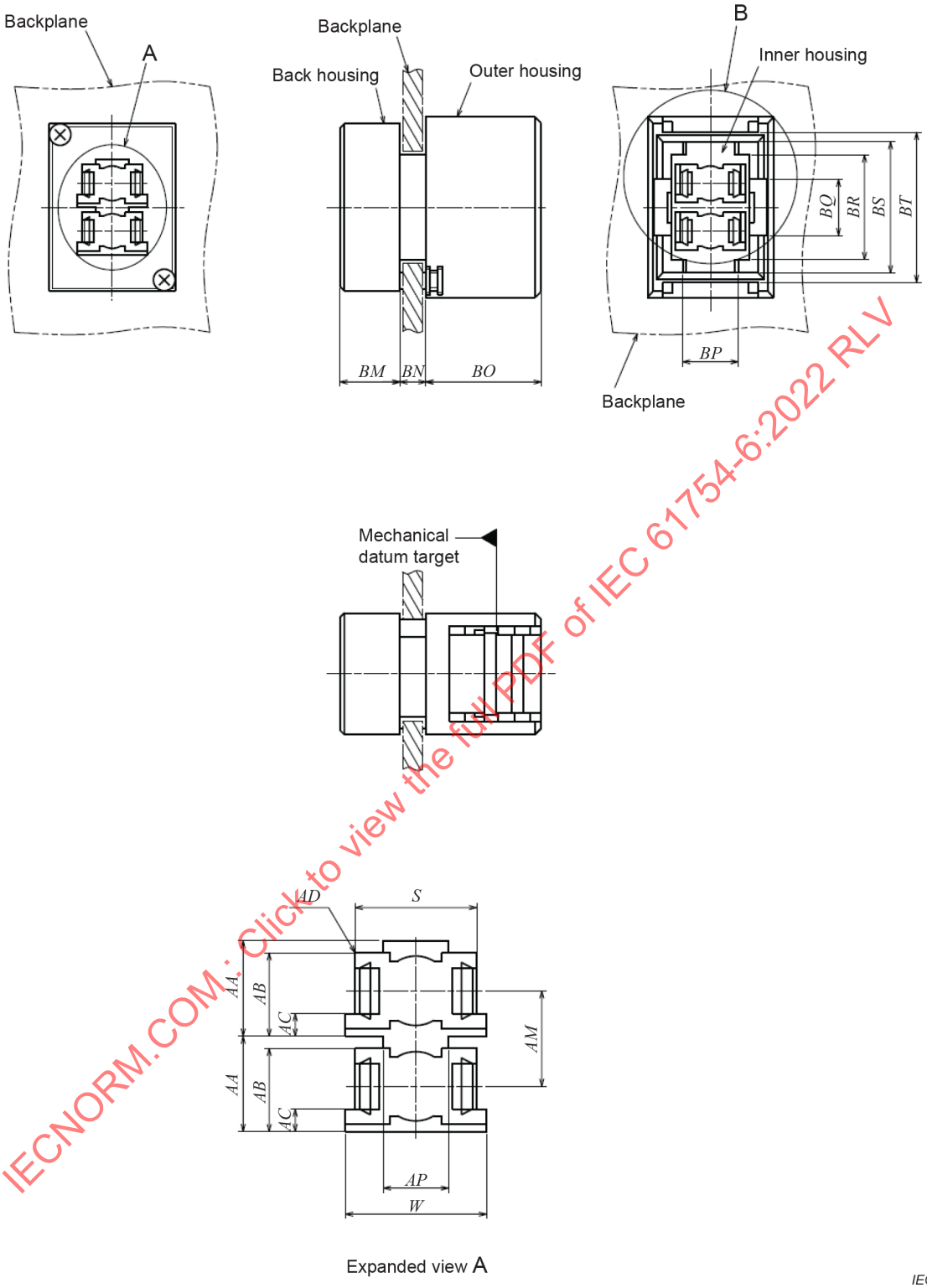
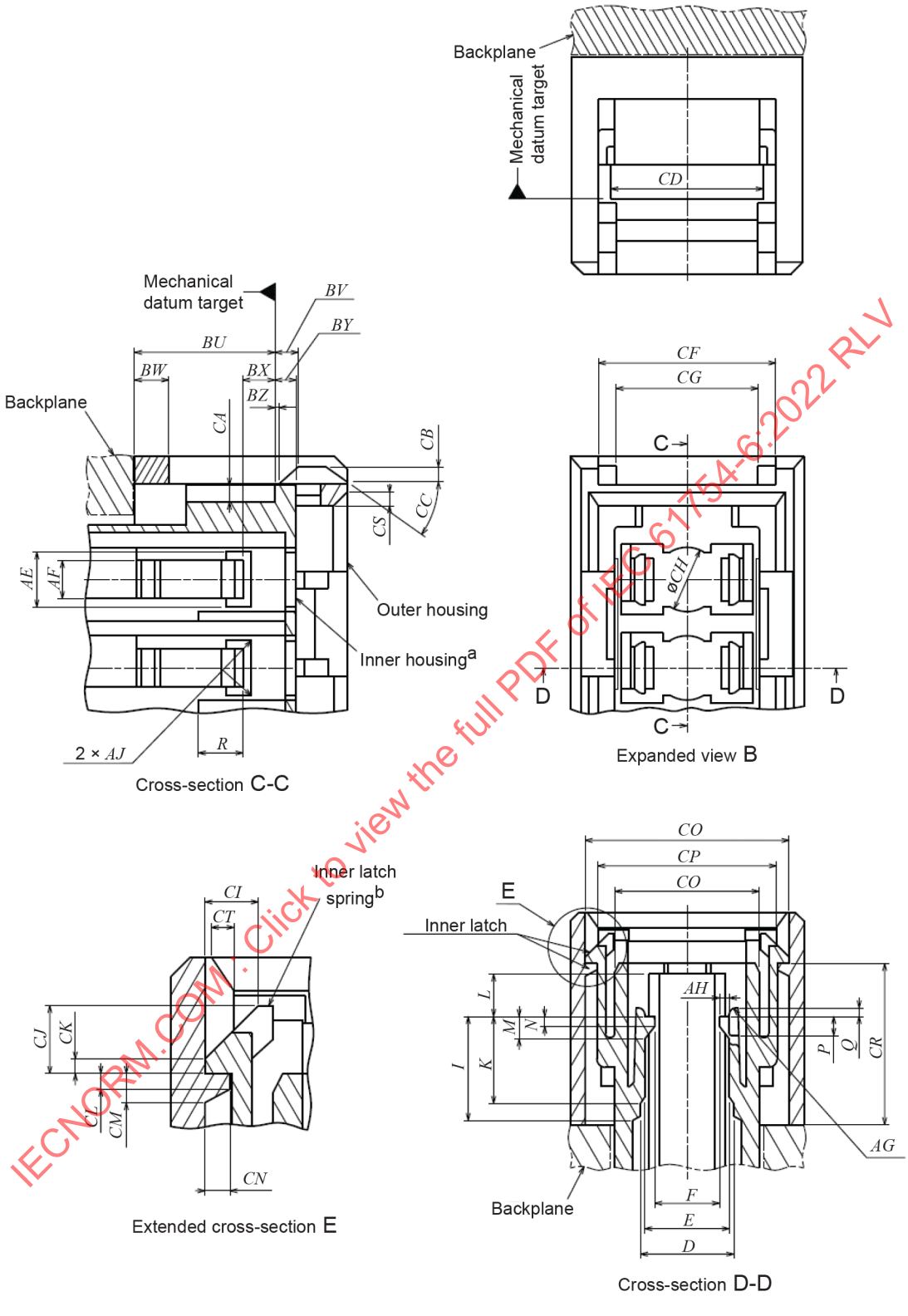


Figure 9 – 2-port backplane housing interface *(1 of 2)*



[a] In the cross-section C-C figure, the inner housing should be movable to the right by at least 0,9 mm, and to the left by at least 2 mm when the inner latch is released.

[b] In the expanded cross-section E figure, the inner latch spring should be moved by more than 0,65 mm to the right when the inner latch is released or latched.

Figure 9 *(2 of 2)*

Table 20 – Dimensions of the 2-port backplane housing interface

Reference	Dimensions		Remarks
	Minimum	Maximum	
D	4,8 mm	5 mm	
E	4,55 mm	–	
F	2,9 mm	3,5 mm	a
I	–	6,5 mm	
K	–	5,4 mm	
L	2,6 mm	2,7 mm	
M	–	1,4 mm	
N	–	0,6 mm	
P	–	1,2 mm	
Q	–	0,4 mm	
R	–	2,55 mm	
S	5,65 mm	5,75 mm	
W	6,7 mm	–	
AA	4,45 mm	4,55 mm	
AB	4,01 mm	4,11 mm	
AC	0,95 mm	1,15 mm	
AD	–	0,2 mm	Radius
AE	2,8 mm	2,95 mm	
AF	1,9 mm	2,1 mm	
AG	0,3 mm	–	Radius
AH	0,4 mm	0,55 mm	
AJ	–	0.3 mm	Radius
AM	4,45 mm	4,55 mm	
AP	3,8 mm	4,0 mm	
BM	–	–	See Table 21
BN	–	–	See Table 21
BO	12,25 mm	12,35 mm	
BP	5,5 mm	5,7 mm	
BQ	4,6 mm	4,7 mm	
BR	11,2 mm	11,4 mm	
BS	13,95 mm	14,05 mm	
BT	16,2 mm	16,3 mm	
BU	7,72 mm	7,78 mm	b
BV	1,1 mm	1,4 mm	b
BW	2,2 mm	2,6 mm	
BX	1,95 mm	2,05 mm	
BY	1,15 mm	1,25 mm	
BZ	0,3 mm	0,4 mm	b
CA	0,725 mm	0,925 mm	
CB	0,9 mm	1,1 mm	
CC	35°	50°	Angle, unit in degrees
CD	8,1 mm	9,1 mm	

Reference	Dimensions		Remarks
	Minimum	Maximum	
CF	10,05 mm	10,35 mm	
CG	8,1 mm	8,3 mm	
CH	3,4 mm	3,6 mm	Diameter
CI	1,17 mm	1,27 mm	
CJ	1,7 mm	2,3 mm	
CK	0,2 mm	0,3 mm	
CL	0,3 mm	0,4 mm	
CM	0,8 mm	1 mm	
CN	0,55 mm	0,65 mm	
CO	11,55 mm	11,65 mm	
CP	9,95 mm	10,03 mm	
CQ	7,92 mm	8 mm	
CR	9,37 mm	9,43 mm	
CS	0,55 mm	0,65 mm	45° chamfer
CT	0,55 mm	0,65 mm	45° chamfer

[a] Dimension *F* shall become greater than 4,5 mm when a plug is coupled to or removed from the backplane housing.

[b] These dimensions are given when the inner housing is moved to the furthest left position and when the inner latch is fully latched.

Table 21 – Grade of the 2-port backplane housing

Grade	Reference	Dimensions mm		Remarks
		Minimum	Maximum	
1	*BM*	6	6,2	Backplane thickness 2,4 mm
	BN	2,65	2,75	
2	*BM*	6	6,2	Backplane thickness 3,2 mm
	BN	3,45	3,55	

Figure 10 is an example of the 2-port printed board housing interface. Table 22 gives dimensions of the 2-port printed board housing interface.

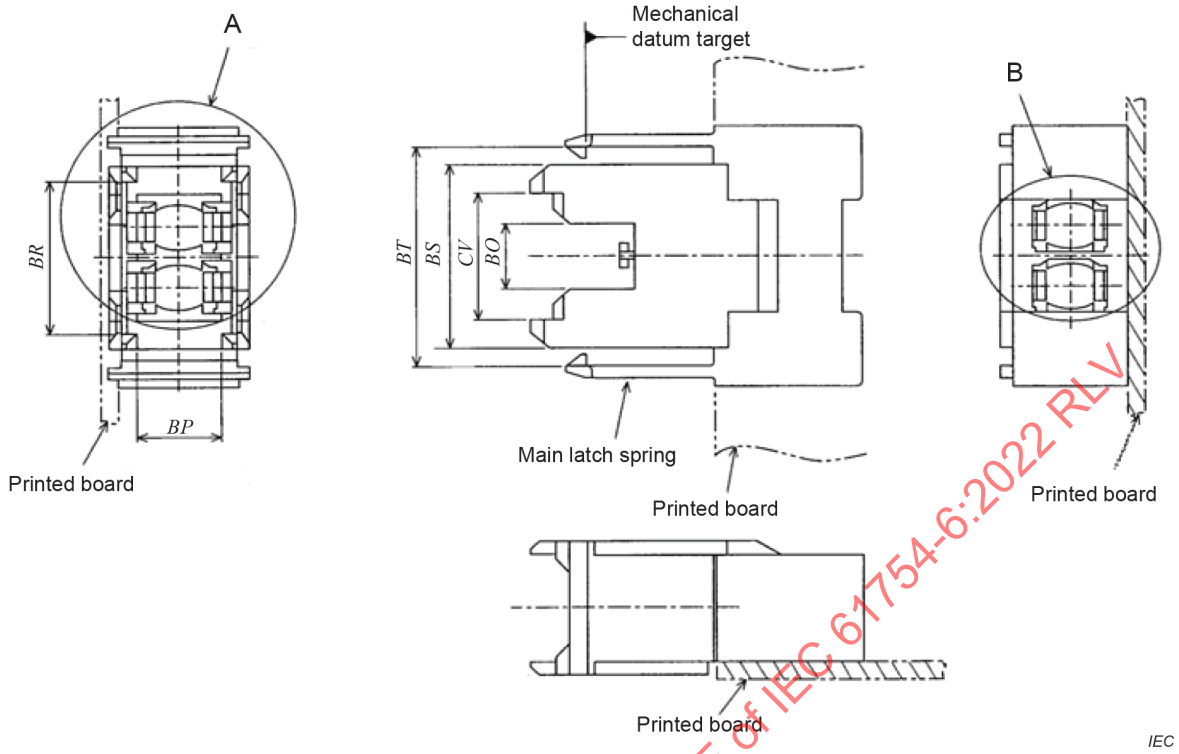


Figure 10 – 2-port printed board housing interface *(1 of 2)*

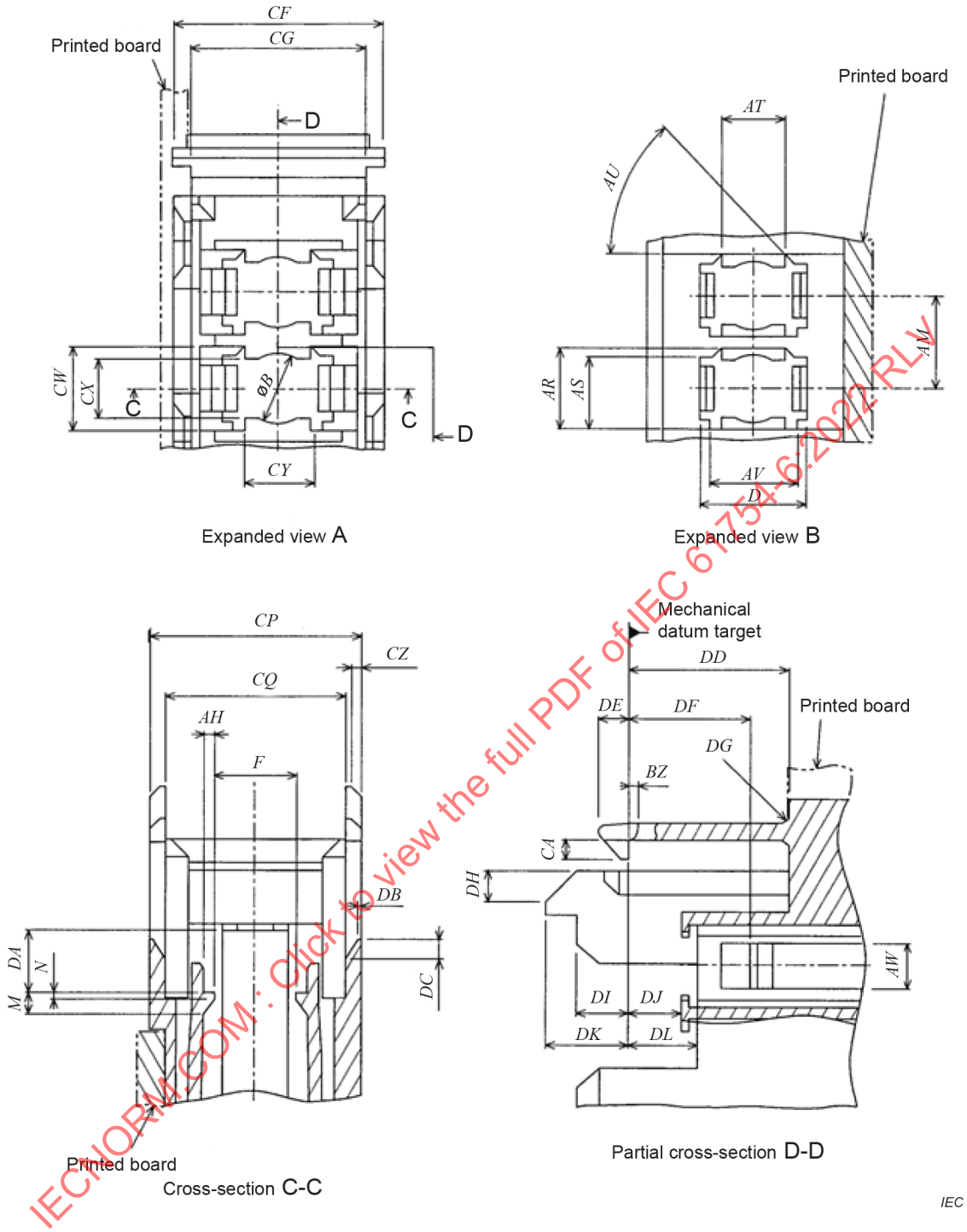


Figure 10 *(2 of 2)*

Table 22 – Dimensions of the 2-port printed board housing interface

Reference	Dimensions		Remarks
	Minimum	Maximum	
B	3,07 mm	3,15 mm	Diameter [a]
D	5 mm	5,15 mm	
F	2,9 mm	3,5 mm	[b]
M	–	1,4 mm	
N	–	0,6 mm	
AH	0,4 mm	0,55 mm	
AM	4,45 mm	4,55 mm	
AR	4 mm	4,1 mm	
AS	3,25 mm	3,35 mm	
AT	2,3 mm	2,6 mm	
AU	42°	48°	Angle, unit in degrees
AV	4,7 mm	4,75 mm	
AW	1,7 mm	2,3 mm	
BP	5,9 mm	6,1 mm	
BQ	4,75 mm	4,95 mm	
BR	11,5 mm	11,7 mm	
BS	13,8 mm	13,9 mm	
BT	16 mm	16,4 mm	[c]
BZ	0,3 mm	0,4 mm	
CA	0,73 mm	0,83 mm	
CF	9,8 mm	9,9 mm	
CG	7,8 mm	8 mm	
CP	9,82 mm	9,9 mm	
CQ	8,01 mm	8,09 mm	
CV	9,2 mm	9,4 mm	
CW	3,95 mm	4,15 mm	
CX	2,75 mm	2,95 mm	
CY	2,9 mm	3,1 mm	
CZ	0,6 mm	0,7 mm	45° chamfer
DA	2,89 mm	2,99 mm	
DB	0,2 mm	0,3 mm	
DC	1 mm	1,1 mm	
DD	9,2 mm	9,6 mm	
DE	1,35 mm	1,45 mm	
DF	5,75 mm	5,85 mm	
DG	–	1 mm	Radius
DH	1,45 mm	1,55 mm	45° chamfer
DI	1,8 mm	2,1 mm	
DJ	2,35 mm	2,45 mm	
DK	3,84 mm	3,94 mm	
DL	3,37 mm	3,43 mm	

[a] Dimension B shall become greater than 3,55 mm when a sleeve holder is inserted into or removed from the printed board housing.

[b] Dimension F shall become greater than 4,5 mm when a plug is coupled to or removed from the printed board housing.

[c] Dimension BT is defined at the top of the main latch springs. Dimension shall be greater than 16,3 mm at the base of the springs. Dimension BT at the top of the springs shall become greater than 18,5 mm when the printed board housing is coupled to or removed from a backplane housing.

Figure 11 is an example of the 8-port backplane housing interface. Table 23 gives dimensions of the 8-port backplane housing interface and Table 24 gives the grade of the 8-port backplane housing interface.

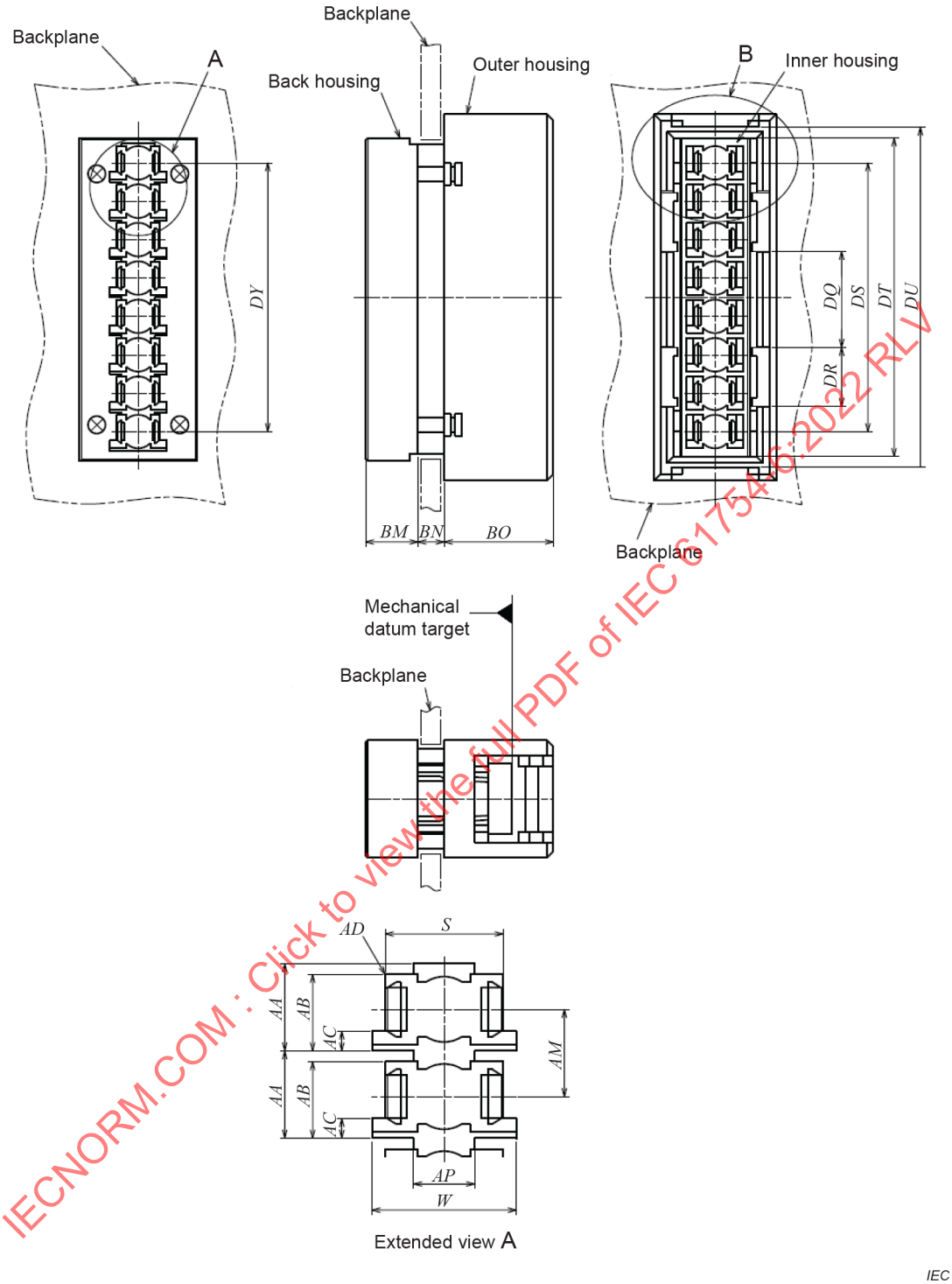
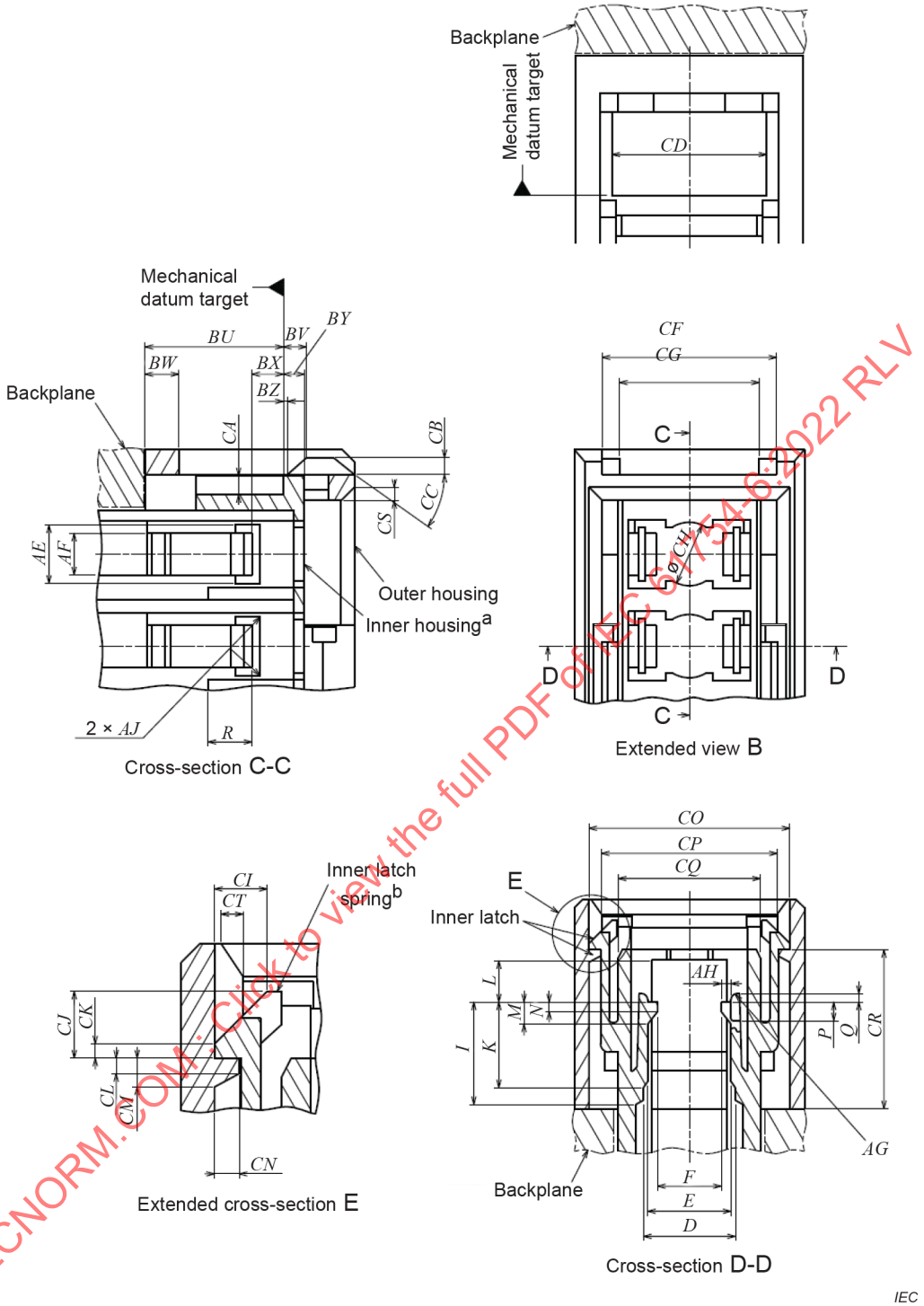


Figure 11 – 8-port backplane housing interface *(1 of 2)*



[a] In the cross-section C-C figure, the inner housing should be movable to the right by at least 0,9 mm, and to the left by at least 2 mm when the inner latch is released.

[b] In the expanded cross-section E figure, the inner latch spring shall move by more than 0,65 mm to the right when the inner latch is released or latched.

Figure 11 *(2 of 2)*

Table 23 – Dimensions of the 8-port backplane housing interface

Reference	Dimensions		Remarks
	Minimum	Maximum	
D	4,8 mm	5 mm	
E	4,55 mm	–	
F	2,9 mm	3,5 mm	[a]
I	–	6,5 mm	
K	–	5,4 mm	
L	2,6 mm	2,7 mm	
M	–	1,4 mm	
N	–	0,6 mm	
P	–	1,2 mm	
Q	–	0,4 mm	
R	–	2,55 mm	
S	5,65 mm	5,75 mm	
W	6,7 mm	–	
AA	4,45 mm	4,55 mm	
AB	4,01 mm	4,11 mm	
AC	0,95 mm	1,15 mm	
AD	–	0,2 mm	Radius
AE	2,8 mm	2,95 mm	
AF	1,9 mm	2,1 mm	
AG	0,3 mm	–	Radius
AH	0,4 mm	0,55 mm	
AJ	–	0,3 mm	Radius
AM	4,45 mm	4,55 mm	
AP	3,8 mm	4 mm	
BM	See Table 24	See Table 24	
BN	See Table 24	See Table 24	
BO	12,25 mm	12,35 mm	
BU	7,72 mm	7,78 mm	[b]
BV	1,1 mm	1,4 mm	[b]
BW	2,2 mm	2,6 mm	
BX	1,95 mm	2,05 mm	
BY	1,15 mm	1,25 mm	
BZ	0,3 mm	0,4 mm	[b]
CA	0,725 mm	0,925 mm	
CB	0,9 mm	1,1 mm	
CC	35°	50°	Angle, unit in degrees
CD	8,1 mm	9,1 mm	
CF	10,05 mm	10,35 mm	
CG	8,1 mm	8,3 mm	
CH	3,4 mm	3,6 mm	
CI	1,17 mm	1,27 mm	
CJ	1,7 mm	2,3 mm	

Reference	Dimensions		Remarks
	Minimum	Maximum	
CK	0,2 mm	0,3 mm	
CL	0,3 mm	0,4 mm	
CM	0,8 mm	1 mm	
CN	0,55 mm	0,65 mm	
CO	11,55 mm	11,65 mm	
CP	9,95 mm	10,03 mm	
CQ	7,92 mm	8 mm	
CR	9,37 mm	9,43 mm	
CS	0,55 mm	0,65 mm	45° chamfer
CT	0,55 mm	0,65 mm	45° chamfer
DQ	10,3 mm	10,7 mm	
DR	6,9 mm	7 mm	
DS	–	31,9 mm	
DT	36,55 mm	36,65 mm	
DU	38,8 mm	38,9 mm	
DY	31,4 mm	31,6 mm	

[a] Dimension *F* shall become greater than 4,5 mm when a plug is coupled to or removed from the backplane housing.

[b] These dimensions are given when the inner housing is moved to the furthest left position and when the inner latch is fully latched.

Table 24 – Grade of the 8-port backplane housing

Grade	Reference	Dimensions mm		Remarks
		Minimum	Maximum	
1	*BM*	6	6,2	Backplane thickness 2,4 mm
	BN	2,65	2,75	
2	*BM*	6	6,2	Backplane thickness 3,2 mm
	BN	3,45	3,55	

Figure 12 is an example of the 8-port printed board housing interface. Table 25 gives dimensions of the 8-port printed board housing interface.

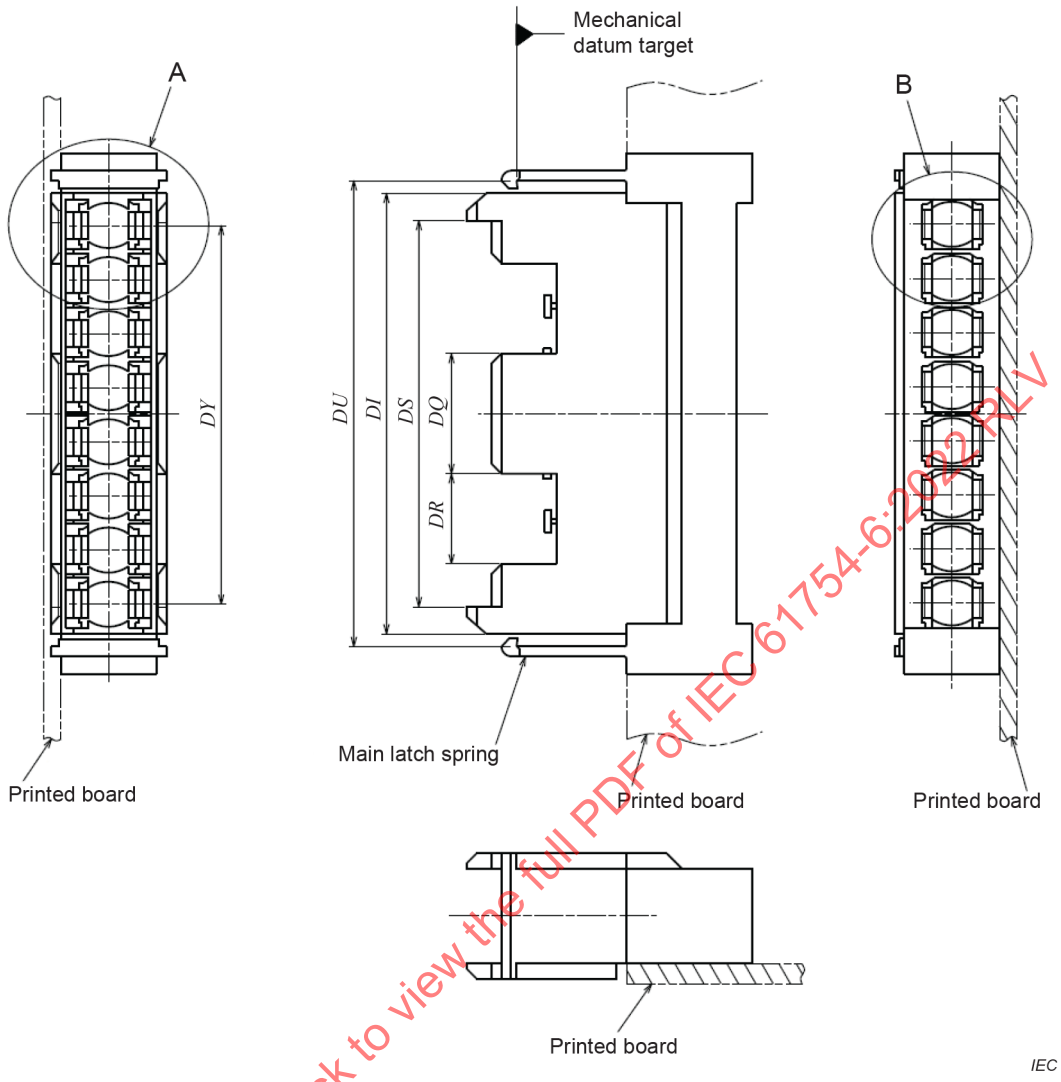


Figure 12 – 8-port printed board housing interface *(1 of 2)*

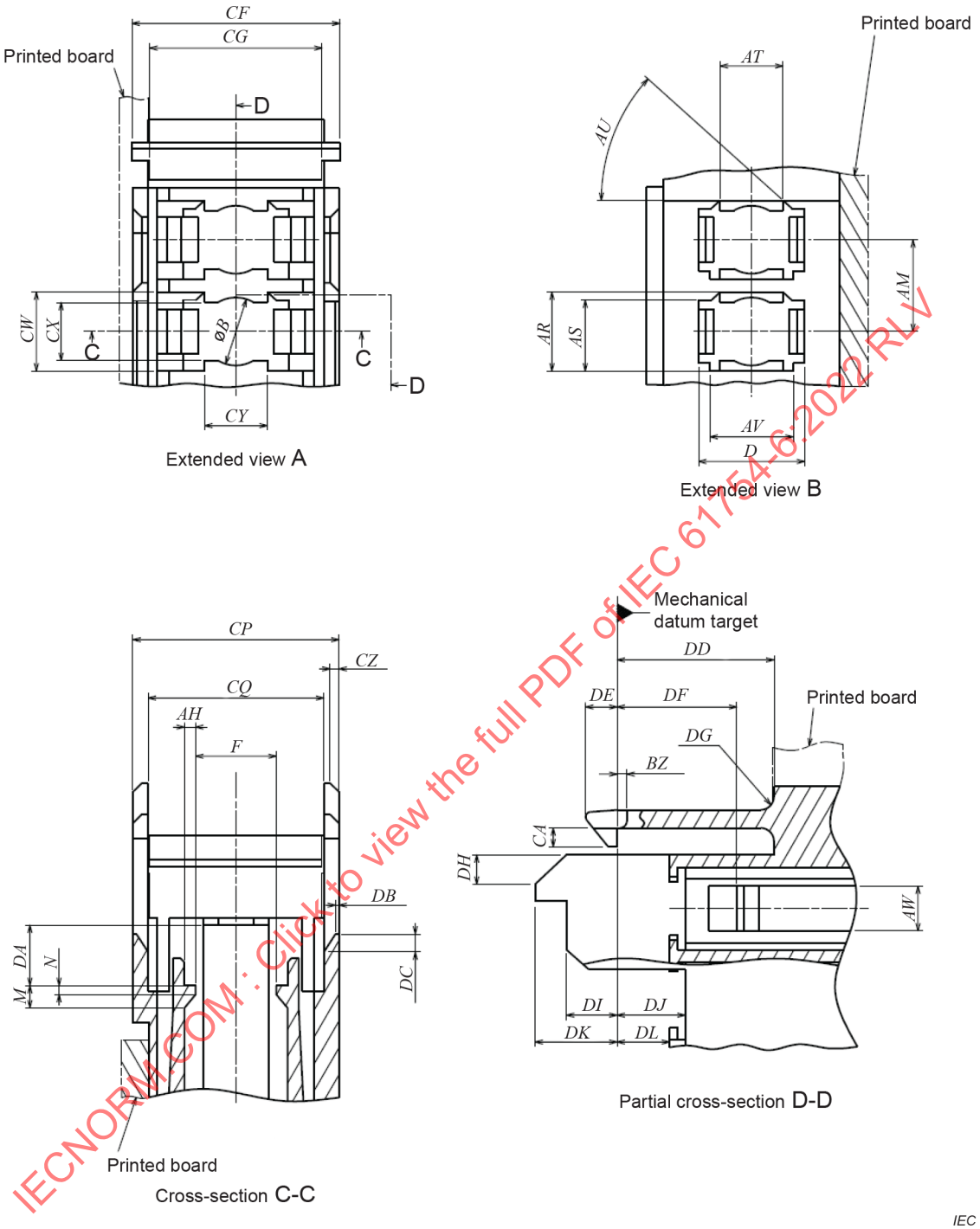


Figure 12 *(2 of 2)*

Table 25 – Dimensions of the 8-port printed board housing interface

Reference	Dimensions		Remarks
	Minimum	Maximum	
B	3,07 mm	3,15 mm	a
D	5 mm	5,15 mm	
F	2,9 mm	3,5 mm	b
M	–	1,4 mm	
N	–	0,6 mm	
AH	0,4 mm	0,55 mm	
AM	4,45 mm	4,55 mm	
AR	4 mm	4,1 mm	
AS	3,25 mm	3,35 mm	
AT	2,3 mm	2,6 mm	
AU	42°	48°	Angle, unit in degrees
AV	4,7 mm	4,75 mm	
AW	1,7 mm	2,3 mm	
BZ	0,3 mm	0,4 mm	
CA	0,73 mm	0,83 mm	
CF	9,8 mm	9,9 mm	
CG	7,8 mm	8 mm	
CP	9,82 mm	9,9 mm	
CQ	8,01 mm	8,09 mm	
CW	3,95 mm	4,15 mm	
CX	2,75 mm	2,95 mm	
CY	2,9 mm	3,1 mm	
CZ	0,6 mm	0,7 mm	45° chamfer
DA	2,89 mm	2,99 mm	
DB	0,2 mm	0,3 mm	
DC	1 mm	1,1 mm	
DD	9,2 mm	9,6 mm	
DE	1,35 mm	1,45 mm	
DF	5,75 mm	5,85 mm	
DG	–	1 mm	Radius
DH	1,45 mm	1,55 mm	45° chamfer
DI	1,8 mm	2,1 mm	
DJ	2,35 mm	2,45 mm	
DK	3,84 mm	3,94 mm	
DL	3,37 mm	3,43 mm	
DQ	9,9 mm	10 mm	
DR	7,5 mm	7,6 mm	
DS	31,9 mm	32,1 mm	
DT	36,4 mm	36,5 mm	
DU	38,6 mm	39 mm	c
DY	31,4 mm	31,6 mm	

[a] Dimension B shall become greater than 3,55 mm when a sleeve holder is inserted into or removed from the printed board housing.

[b] Dimension F shall become greater than 4,5 mm when a plug is coupled to or removed from the printed board housing.

[c] Dimension DU is defined at the top of the main latch springs. This dimension shall be greater than 38,9 mm at the base of the springs. Dimension DU at the top of the springs shall become greater than 41,1 mm when the printed board housing is coupled to or removed from a backplane housing.

Figure 13 is an example of the simplex active device receptacle interface. Table 26 gives dimensions of the simplex active device receptacle interface and Table 27 gives alignment feature of the simplex active device receptacle interface.

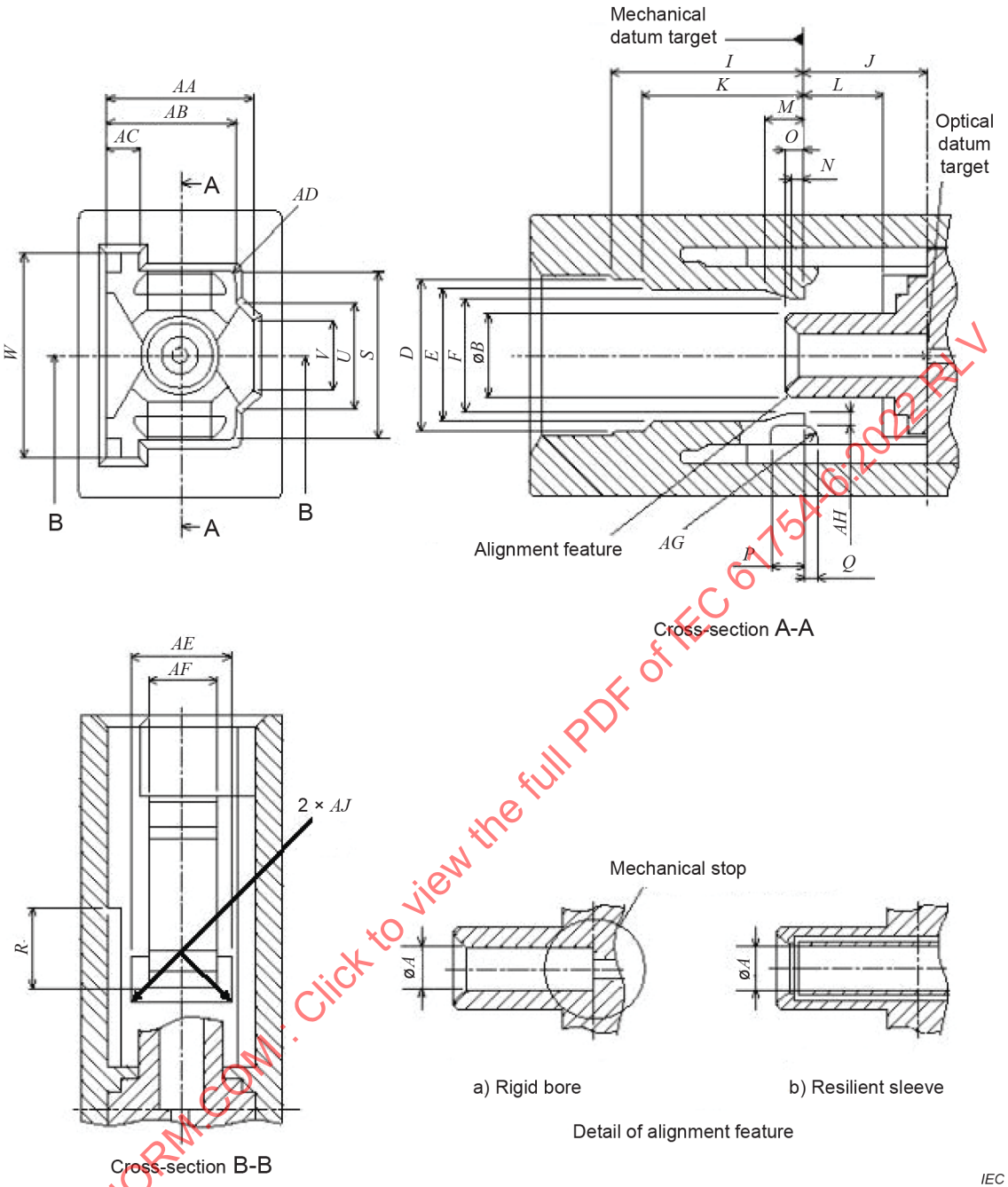


Figure 13 – Simplex active device receptacle interface

Table 26 – Dimensions of the simplex active device receptacle interface

Reference	Dimensions mm		Remarks
	Minimum	Maximum	
A	See Table 27		
B	2,29	2,59	
D	4,8	5	
E	4,55	–	
F	2,9	3,5	[a]
I	–	6,5	
J	3,9	4,1	[b]
K	–	5,4	
L	2,55	2,7	
M	–	1,4	
N	–	0,55	
O	–	0,6	
P	–	1,2	
Q	–	0,4	
R	–	2,55	
S	5,65	5,75	
U	3,8	4	
V	3,3	–	
W	6,7	–	
AA	4,45	4,55	
AB	4,01	4,11	
AC	0,95	1,15	
AD	–	0,2	Radius
AE	2,8	2,95	
AF	1,9	2,1	
AG	0,3	–	Radius
AH	0,4	0,55	
AJ	–	0,3	Radius

[a] Dimension *F* shall become greater than 4,5 mm when a plug is coupled to or removed from the receptacles.

[b] A mechanical stop feature may be required in order to bring the fibre tip to the optical datum target. An example of a mechanical stop feature is shown in Figure 13, Detail of alignment feature, a) Rigid bore.

Table 27 – Alignment feature grade

Grade	Dimensions mm		Remarks
	Minimum	Maximum	
1	1,251	1,252	a b
2	1,251	1,254	a b
3	1,251	1,275	a b
4			b c

[a] Where the connector alignment feature is a rigid bore, as shown in Figure 13, Detail of alignment feature, a) Rigid bore, the alignment feature is equipped with a mechanical stop. The detail of the mechanical stop feature is shown in Figure 14.

[b] Add the grade number to the interface reference number.

[c] Where the connector alignment feature is a resilient sleeve, as shown in Figure 13, Detail of alignment feature, b) Resilient sleeve, the alignment feature is not equipped with a mechanical stop. The optical datum target of the plug connector is not limited by the alignment feature. The alignment feature should accept a pin gauge to the centre of the receptacle with a force of 1 N to 2,5 N. The centre of the receptacle is defined by the right side position of dimension *J*. The pin gauge is shown in Figure 4 and Table 11.

Figure 14 is an example of the detail of the mechanical stop for rigid bore alignment feature. Table 28 gives dimensions of the mechanical stop for rigid bore alignment feature and Table 29 gives dimensions of the mechanical stop feature grade.

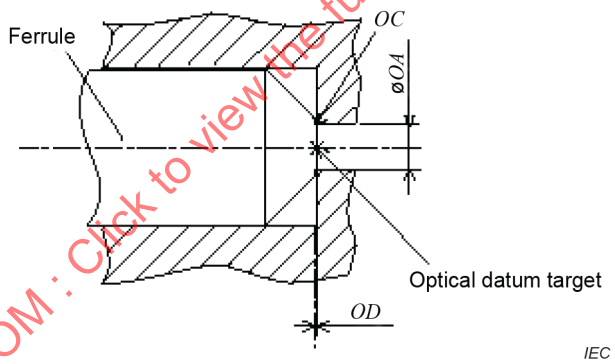


Figure 14 – Detail of the mechanical stop for rigid bore alignment feature

Table 28 – Dimensions of the mechanical stop for rigid bore alignment feature

Reference	Dimensions mm		Remarks
	Minimum	Maximum	
OA			[a] and see Table 29
OC	0	0,05	Radius
OD			[a] and see Table 29

[a] Whatever form of mechanical stop feature is incorporated into the receptacle, it shall be capable of maintaining the optical datum target of both the fibre and the receptacle within the clearances specified in Table 29 depending upon the application.

Table 29 – Mechanical stop feature grade

Grade	Dimensions mm		Dimensions µm	Notes
	OA **minimum**	***OA*** **maximum**	***OD*** **clearance**	
A	0,3	0,4	±5	
N	0,3	1,251	–	

Figure 15 is an example of the 4,5 mm duplex active device receptacle interface. Table 30 gives dimensions of the 4,5 mm duplex active device receptacle interface and Table 31 gives alignment feature of the 4,5 mm duplex active device receptacle interface.

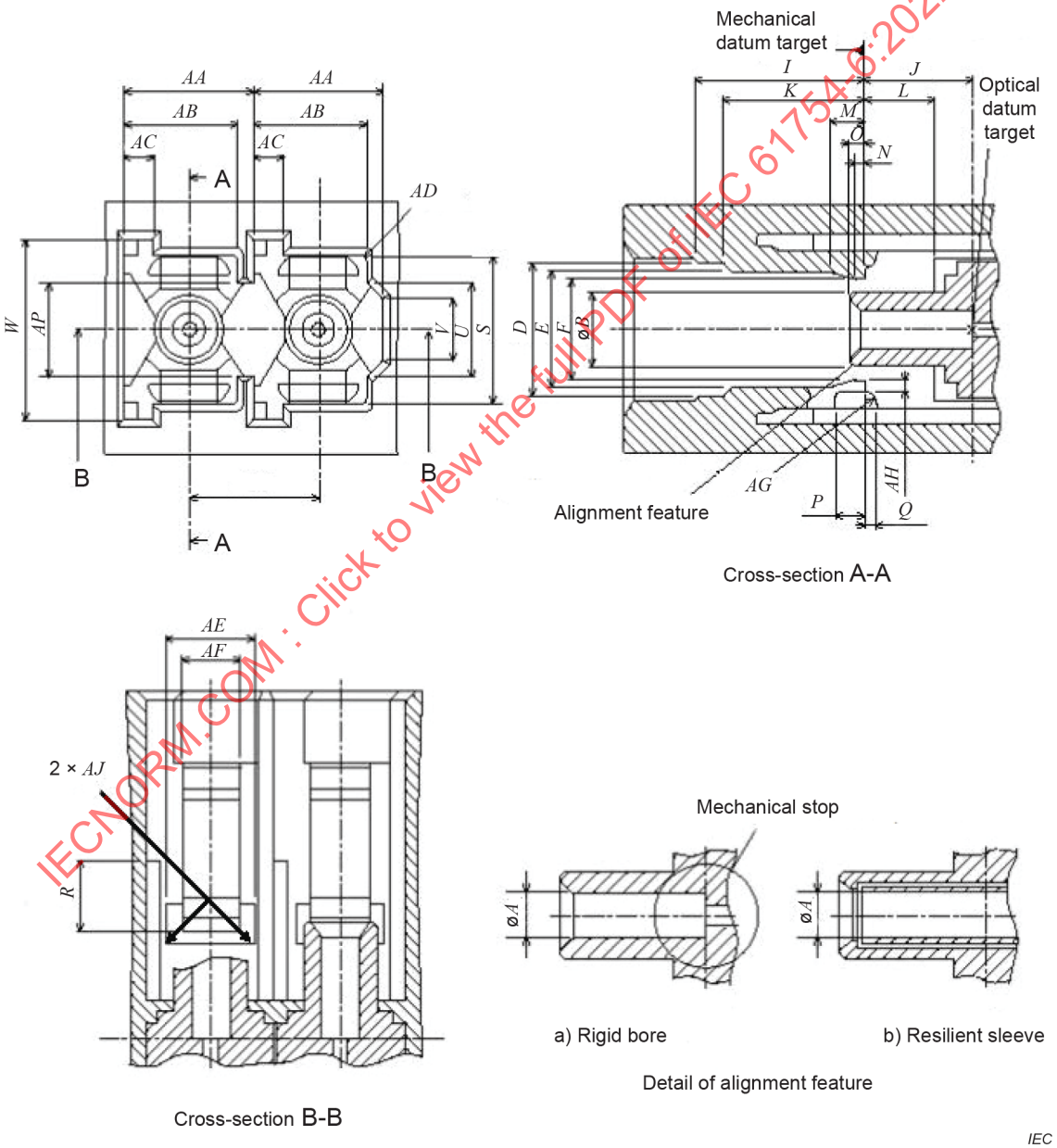


Figure 15 – 4,5 mm duplex active device receptacle interface

Table 30 – Dimensions of the 4,5 mm duplex active device receptacle interface

Reference	Dimensions mm		Notes
	Minimum	Maximum	
A	See Table 31		
B	2,29	2,59	
D	4,8	5	
E	4,55	–	
F	2,9	3,5	a
I	–	6,5	
J	3,9	4,1	b
K	–	5,4	
L	2,55	2,7	
M	–	1,4	
N	–	0,55	
O	–	0,6	
P	–	1,2	
Q	–	0,4	
R	–	2,55	
S	5,65	5,75	
U	3,8	4	
V	3,3	–	
W	6,7	–	
AA	4,45	4,55	
AB	4,01	4,11	
AC	0,95	1,15	
AD	–	0,2	Radius
AE	2,8	2,95	
AF	1,9	2,1	
AG	0,3	–	Radius
AH	0,4	0,55	
AJ	–	0,3	Radius
AM	4,45	4,55	
AP	3,8	4,0	

a Dimension *F* should become greater than 4,5 mm when a plug is coupled to or removed from the receptacle.

b A mechanical stop feature may be required in order to bring the fibre tip to the optical datum target. An example of a mechanical stop feature is shown in Figure 15, Detail of alignment feature, a) Rigid bore.

Table 31 – Alignment feature grade

Grade	Dimensions mm		Remarks
	Minimum	Maximum	
1	1,251	1,252	a b
2	1,251	1,254	a b
3	1,251	1,275	a b
4			b c

a Where the connector alignment feature is a rigid bore, as shown in Figure 15, Detail of alignment feature, a) Rigid bore, the alignment feature is equipped with a mechanical stop. The detail of the mechanical stop feature is shown in Figure 16.

b Add the grade number to the interface reference number.

c Where the connector alignment feature is a resilient sleeve, as shown in Figure 15, Detail of alignment feature, b) Resilient sleeve, the alignment feature is not equipped with a mechanical stop. The optical datum target of the plug connector is not limited by the alignment feature. The alignment feature should accept a pin gauge to the centre of the receptacle with a force of 1 N to 2,5 N. The centre of the receptacle is defined by the right side position of dimension *J*. The pin gauge is shown in Figure 4 and Table 11.

Figure 16 is an example of the mechanical stop for rigid bore alignment feature. Table 32 gives dimensions of the mechanical stop for rigid bore alignment feature and Table 33 gives dimensions of the mechanical stop feature grade.

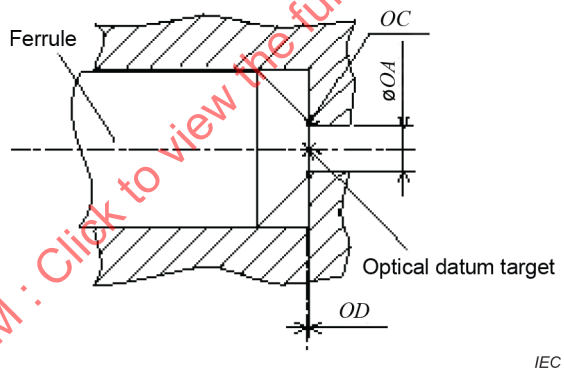


Figure 16 – Detail of the mechanical stop for rigid bore alignment feature

Table 32 – Dimensions of the mechanical stop for rigid bore alignment feature

Reference	Dimensions mm		Remarks
	Minimum	Maximum	
OA			a and see Table 33
OC	0	0,05	Radius
OD			a and see Table 33

a Whatever form of mechanical stop feature is incorporated into the receptacle, it shall be capable of maintaining the optical datum target of both the fibre and the receptacle within the clearances specified in Table 33 depending on the application.

Table 33 – Mechanical stop feature grade

Grade	Dimensions mm		Dimensions µm	Remarks
	OA **minimum**	***OA*** **maximum**	***OD*** **clearance**	
A	0,3	0,4	±5	[a]
N	0,3	1,251	–	[a]
[a] Add the grade number to the alignment feature grade number.				

Figure 17 is an example of the 6,25 mm duplex active device receptacle interface. Table 34 gives dimensions of the 6,25 mm duplex active device receptacle interface and Table 35 gives alignment feature of the 6,25 mm duplex active device receptacle interface.

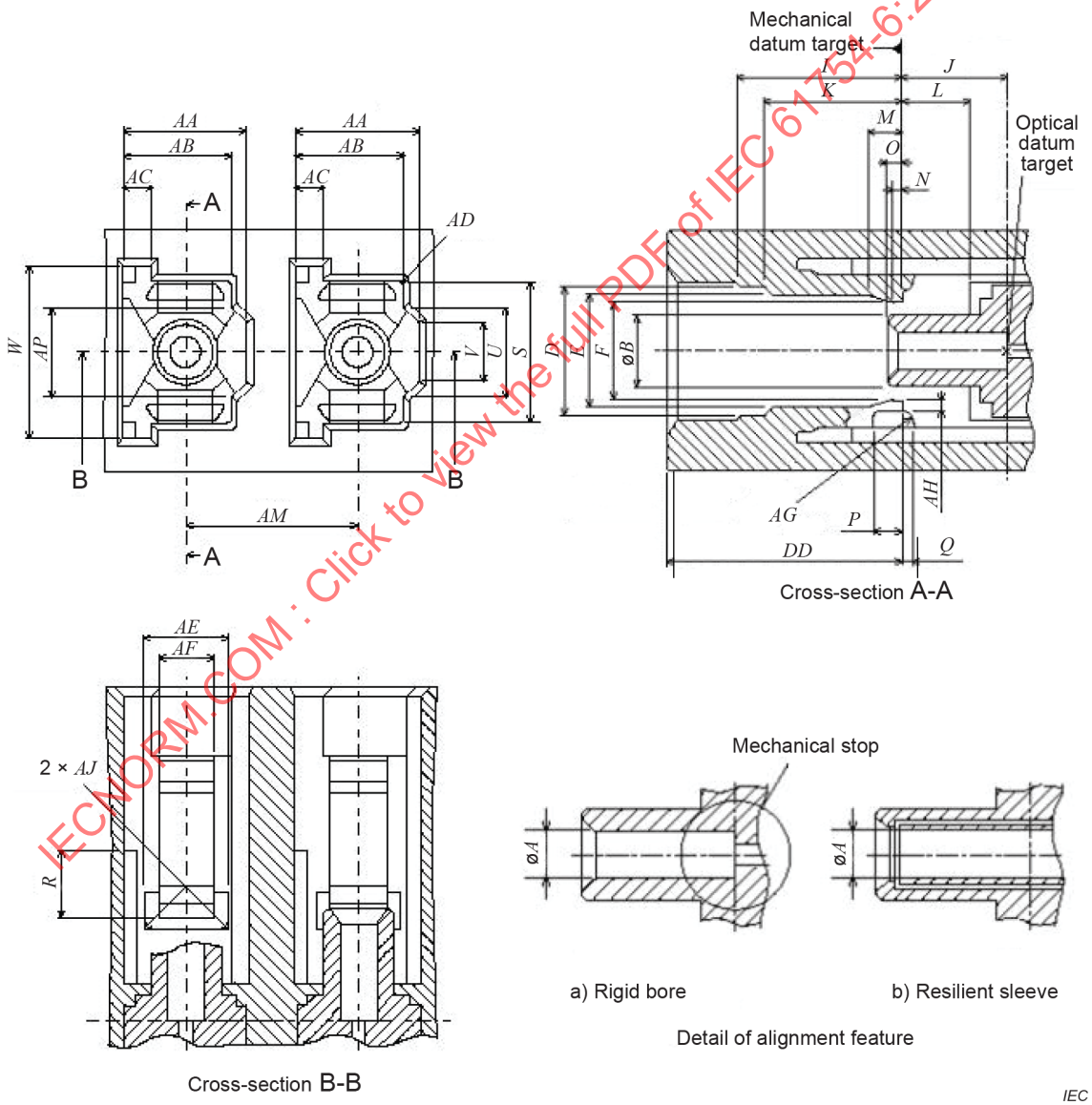


Figure 17 – 6,25 mm duplex active device receptacle interface

Table 34 – Dimensions of the 6,25 mm duplex active device receptacle interface

Reference	Dimensions mm		Remarks
	Minimum	Maximum	
A	See Table 35		
B	2,29	2,59	
D	4,8	5	
E	4,55	–	
F	2,9	3,5	a
I	–	6,5	
J	3,9	4,1	b
K	–	5,4	
L	2,55	2,7	
M	–	1,4	
N	–	0,55	
O	–	0,6	
P	–	1,2	
Q	–	0,4	
R	–	2,55	
S	5,65	5,75	
U	3,8	4	
V	3,3	–	
W	6,7	–	
AA	4,45	4,55	
AB	4,01	4,11	
AC	0,95	1,15	
AD	–	0,2	Radius
AE	2,8	2,95	
AF	1,9	2,1	
AG	0,3	–	Radius
AH	0,4	0,55	
AJ	–	0,3	Radius
AM	6,20	6,30	
AP	3,8	4,0	
DD	8,77	9,23	

a Dimension *F* should become greater than 4,5 mm when a plug is coupled to or removed from the receptacle.

b A mechanical stop feature may be required in order to bring the fibre tip to the optical datum target. An example of a mechanical stop feature is shown in Figure 17, Detail of alignment feature, a) Rigid bore.

Table 35 – Alignment feature grade

Grade	Dimensions mm		Remarks
	Minimum	Maximum	
1	1,251	1,252	a b
2	1,251	1,254	a b
3	1,251	1,275	a b
4			b c

[a] Where the connector alignment feature is a rigid bore, as shown in Figure 17, Detail of alignment feature, a) Rigid bore, the alignment feature is equipped with a mechanical stop. The detail of the mechanical stop feature is shown in Figure 18.

[b] Add the grade number to the interface reference number.

[c] Where the connector alignment feature is a resilient sleeve, as shown in Figure 17, Detail of alignment feature, b) Resilient sleeve, the alignment feature is not equipped with a mechanical stop. The optical datum target of the plug connector is not limited by the alignment feature. The alignment feature should accept a pin gauge to the centre of the receptacle with a force of 1 N to 2,5 N. The centre of the receptacle is defined by the right side position of dimension *A*. The pin gauge is shown in Figure 4 and Table 11.

Figure 18 is an example of the mechanical stop for rigid bore alignment feature. Table 36 gives dimensions of the mechanical stop for rigid bore alignment feature and Table 37 gives dimensions of the mechanical stop feature grade.

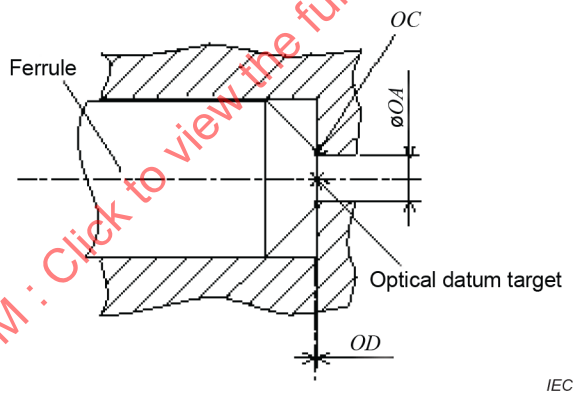


Figure 18 – Detail of the mechanical stop for rigid bore alignment feature

Table 36 – Dimensions of the mechanical stop for rigid bore alignment feature

Reference	Dimensions mm		Remarks
	Minimum	Maximum	
OA			[a] and see Table 37
OC	0	0,05	Radius
OD			[a] and see Table 37

[a] Whatever form of mechanical stop feature is incorporated into the receptacle, it shall be capable of maintaining the optical datum target of both the fibre and the receptacle within the clearances specified in Table 37 depending on the application.

Table 37 – Mechanical stop feature grade

Grade	Dimensions mm		Dimensions µm	Remarks
	OA **minimum**	***OA*** **maximum**	***OD*** **clearance**	
A	0,3	0,4	±5	[a]
N	0,3	1,251	–	[a]
[a] Add the grade number to the alignment feature grade number.				

Figure 19 is an example of the plug connector interface – for printed board housings, APC. Table 38 gives dimensions of the plug connector interface – for printed board housings, APC. The detail dimensions of optical interfaces for APC are defined in IEC 61755-3-2.

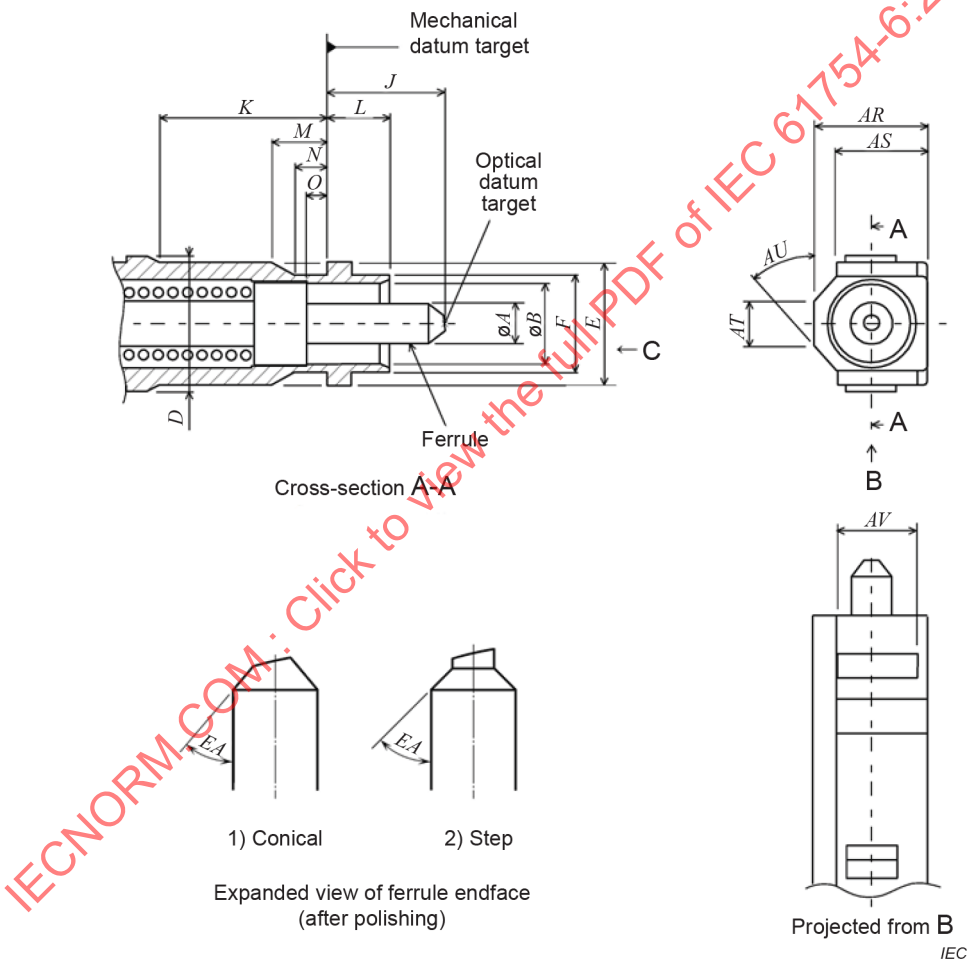
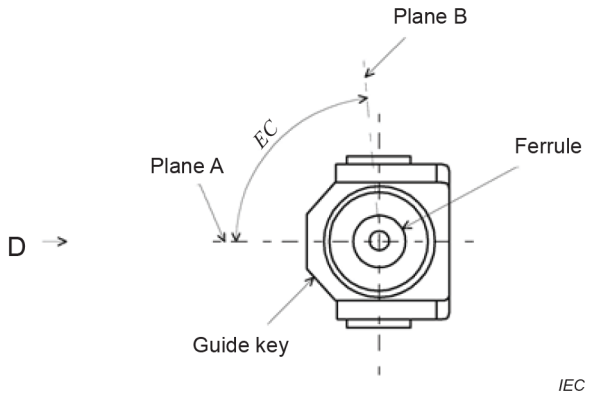
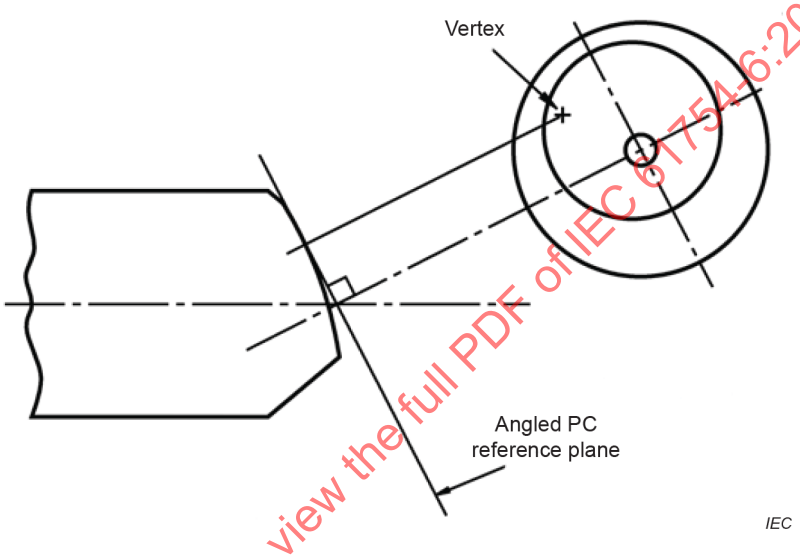


Figure 19 – Plug connector interface – For printed board housings, APC *(1 of 2)*



Expanded view from C direction (after polishing)



Ferrule endface geometry (expanded view from D direction, after polishing)

Figure 19 – Plug connector interface – For printed board housings, APC *(2 of 2)*

Table 38 – Dimensions of the plug connector interface – For printed board housings, APC

Reference	Dimensions			Remarks
	Minimum	Basic	Maximum	
A			See IEC 61755-3-2	a
B	2,6 mm		2,7 mm	
D	4,65 mm		4,75 mm	
E	4,3 mm		4,4 mm	
F	3,3 mm		3,4 mm	
J	4,2 mm		4,5 mm	b
K	5,5 mm		–	
L	2,4 mm		2,5 mm	
M	1,5 mm		–	
N	0,6 mm		–	
O	0,5 mm		–	
AR	3,65 mm		3.75 mm	
AS	2,9 mm		3.0 mm	
AT	1,7 mm		2,1 mm	

Reference	Dimensions			Remarks
	Minimum	Basic	Maximum	
AU	43°		47°	Angle, unit in degrees
AV	–		3,0 mm	
EA	32,5°		45°	Angle, unit in degrees [c]
EC	–	90°	–	Angle, unit in degrees [d]

[a] A chamfer or radius is allowed to maximum depth of 0,5 mm from the ferrule endface. Add grade number to the interface reference number.

[b] Dimension *J* is given for the plug endface when not mated. The ferrule is movable by a certain axial compression force with direct contacting endfaces, and therefore dimension *J* is given variable. Ferrule compression force shall be 5,5 N to 6,5 N when the position of the optical datum target from the mechanical datum target is moved in the range of 3,9 mm to 4,1 mm. In addition, dimension *J* shall become less than 3,25 mm with a relatively large axial compression force. The compression force shall be measured according to IEC 61300-3-22.

[c] 40° to 45° are desirable to minimize debris for backplane connectors.

[d] Dimension *EC* is defined as an angle between two planes: one plane, plane A, passes through the axis of the ferrule and axis of symmetry of the key of the angled endface connector plug. The other plane, plane B, passes through the axis of the ferrule and the normal to the APC reference plane.

Figure 20 is an example of the simplex plug connector interface – Push/pull, APC. Table 39 gives dimensions of the simplex plug connector interface – Push/pull, APC. The detail dimensions of optical interfaces for APC are defined in IEC 61755-3-2.

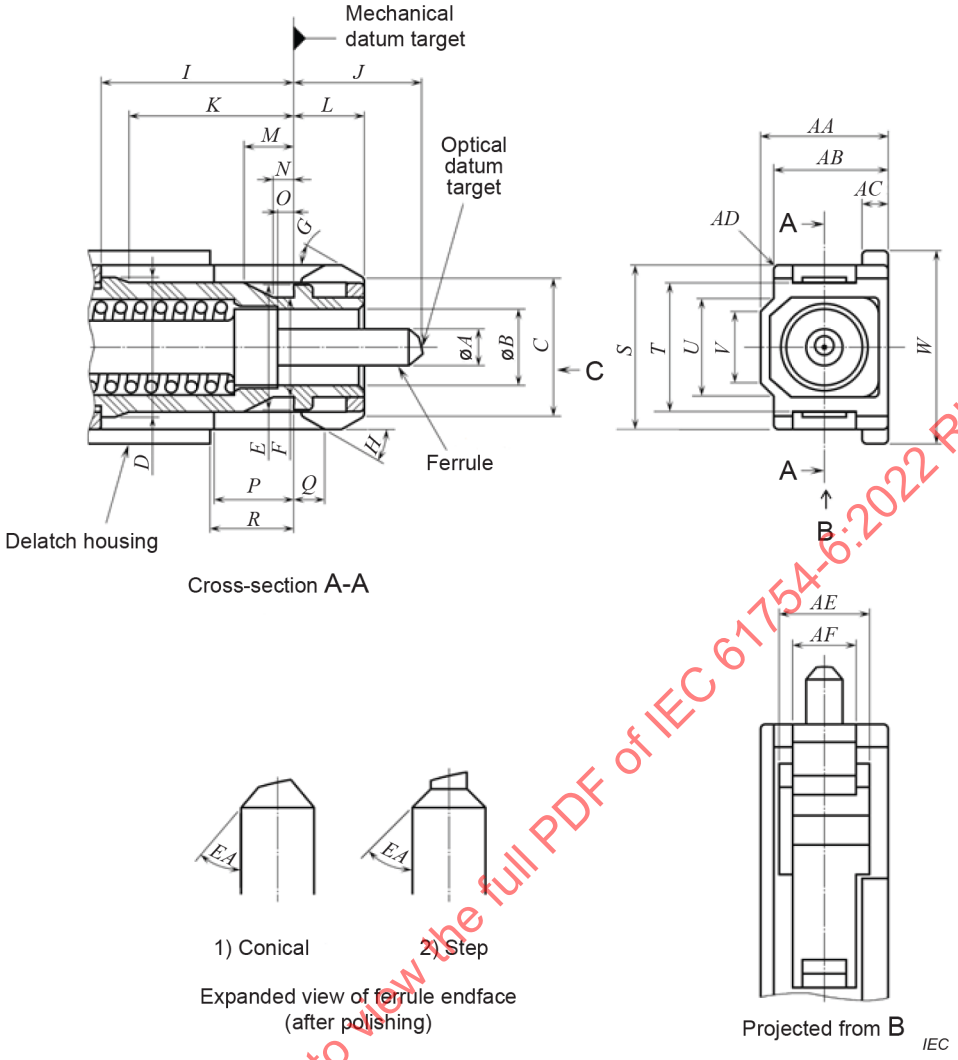
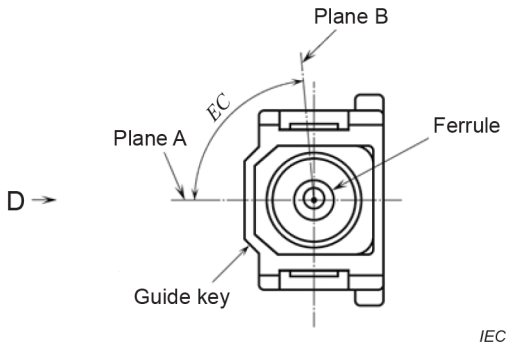
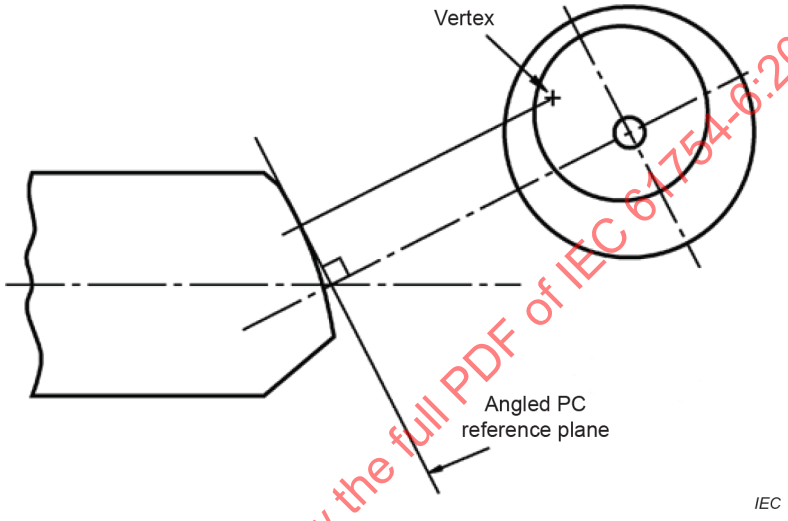


Figure 20 – Simplex plug connector interface – Push/pull, APC *(1 of 2)*



Expanded view from C direction (after polishing)



Ferrule endface geometry (expanded view from D direction, after polishing)

Figure 20 – Simplex plug connector interface – Push/pull, APC *(2 of 2)*

Table 39 – Dimensions of the simplex plug connector interfaces, APC

Reference	Dimensions			Remarks
	Minimum	Basic	Maximum	
A			See IEC 61755-3-2	a
B	2,6 mm		2,7 mm	
C	4,6 mm		4,8 mm	
D	4,65 mm		4,75 mm	
E	4,3 mm		4,4 mm	
F	3,3 mm		3,4 mm	
G	25°		35°	Angle, unit in degrees
H	25°		35°	Angle, unit in degrees
I	6,55 mm		–	b
J	4,2 mm		4,5 mm	c
K	5,5 mm		–	
L	2,4 mm		2,5 mm	
M	1,5 mm		–	

Reference	Dimensions			Remarks
	Minimum	Basic	Maximum	
N	0,6 mm		–	
O	0,5 mm		–	
P	2,6 mm		–	b
Q	1 mm		1,1 mm	b d
R	2,65 mm		2,9 mm	b
S	5,5 mm		5,6 mm	
T	4,3 mm		4,5 mm	
U	–		3,7 mm	
V	–		2,4 mm	
W	6,5 mm		6,6 mm	
AA	4,3 mm		4,4 mm	
AB	3,85 mm		3,95 mm	
AC	0,7 mm		0,9 mm	
AD	0,2 mm		–	Radius
AE	3 mm		–	
AF	2,2 mm		2,3 mm	
EA	32,5°		45°	Angle, unit in degrees [e]
EC	–	90°	–	Angle, unit in degrees [f]

[a] A chamfer or radius is allowed to maximum depth of 0,5 mm from the ferrule endface. Add grade number to the interface reference number.

[b] The delatch housing shall be movable to the right or left. Dimensions *L*, *M* and *V* are given when the delatch housing is at the furthest right.

[c] Dimension *J* is given for the plug endface when not mated. The ferrule is movable by a certain axial compression force with direct contacting endfaces, and therefore dimension *J* is given variable. Ferrule compression force shall be 5,5 N to 6,5 N when the position of the optical datum target from the mechanical datum target is moved in the range of 3,9 mm to 4,1 mm. In addition, dimension *J* shall become less than 3,25 mm with a relatively large axial compression force. The compression force shall be measured according to IEC 61300-3-22.

[d] *Q* is to the right of the mechanical datum target when the delatch housing is to the right (connected state) and to the left of the mechanical datum target when the delatch housing is to the left (disconnected state).

[e] 40° to 45° are desirable to minimize debris for backplane connectors.

[f] Dimension *EA* is defined as an angle between two planes: one plane, plane A, passes through the axis of the ferrule and axis of symmetry of the key of the angled endface connector plug. The other plane, plane B, passes through the axis of the ferrule and the normal to the APC reference plane.

Figure 21 is an example of the 4,5 mm duplex plug connector interface – Push/pull, APC. Table 40 gives dimensions of the 4,5 mm duplex plug connector interface – Push/pull, APC. The detail dimensions of optical interfaces for APC are defined in IEC 61755-3-2.

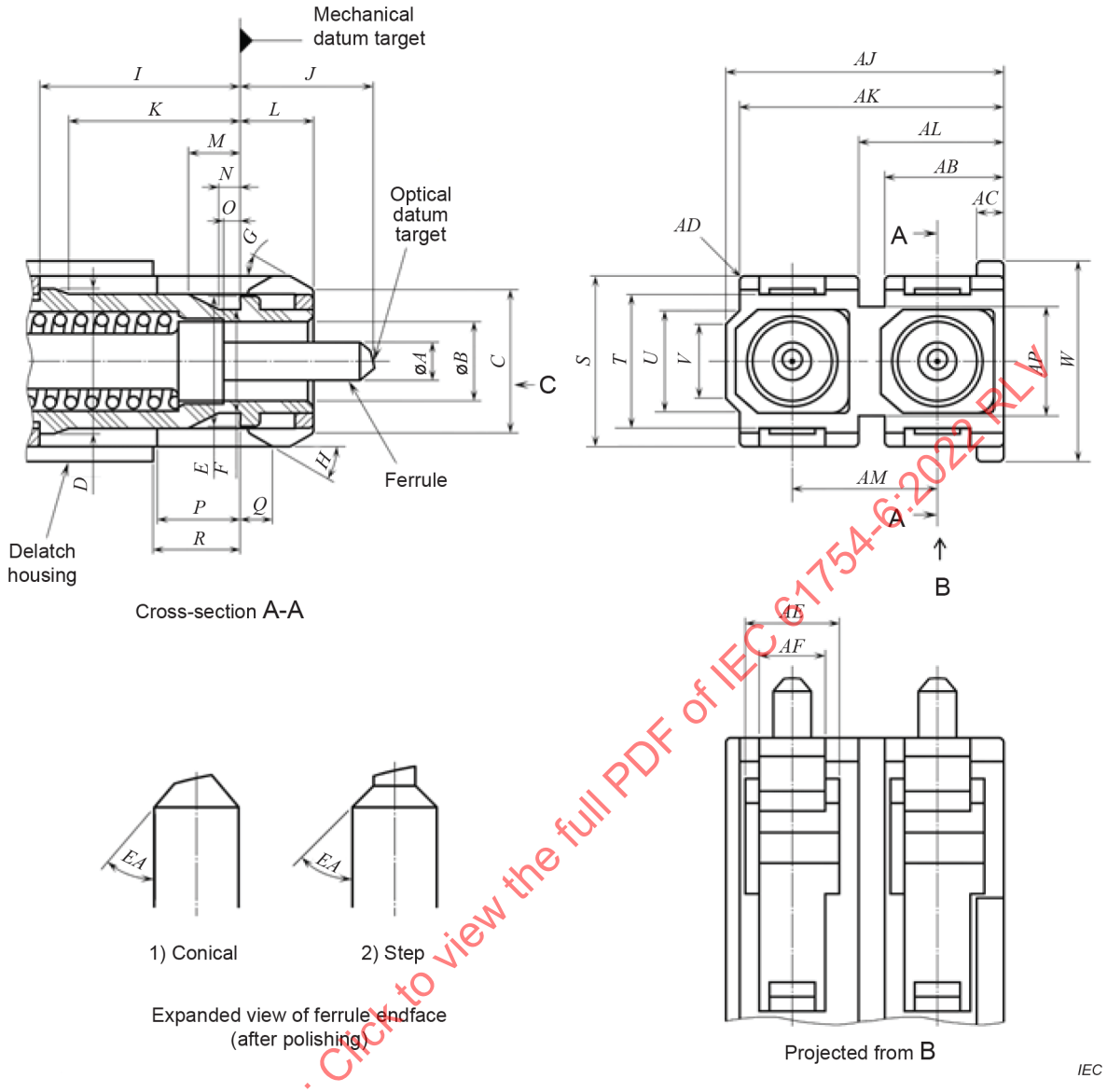
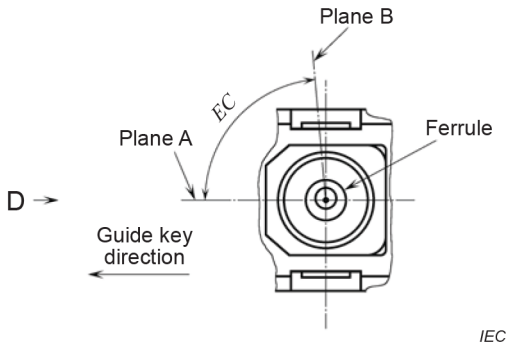
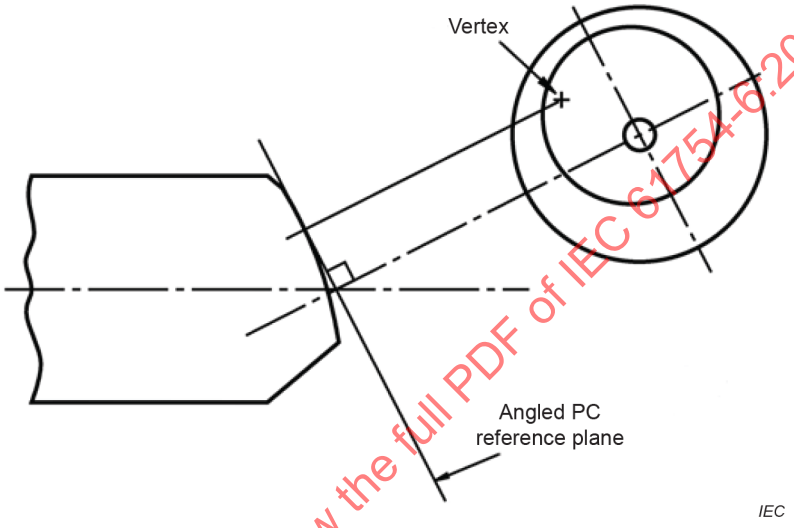


Figure 21 – 4,5 mm duplex plug connector interface – Push/pull, APC *(1 of 2)*



Expanded view from C direction (after polishing)



Ferrule endface geometry (expanded view from D direction, after polishing)

Figure 21 – 4,5 mm duplex plug connector interface – Push/pull, APC *(2 of 2)*

Table 40 – Dimensions of the 4,5 mm duplex plug connector interfaces, APC

Reference	Dimensions			Remarks
	Minimum	Basic	Maximum	
A			See IEC 61755-3-2	Diameter [a]
B	2,6		2,7	
C	4,6		4,8	
D	4,65		4,75	
E	4,3		4,4	
F	3,3		3,4	
G	25°		35°	Angle, unit in degrees
H	25°		35°	Angle, unit in degrees
I	6,55		–	[b]
J	4,2		4,5	[c]
K	5,5		–	
L	2,4		2,5	

Reference	Dimensions			Remarks
	Minimum	Basic	Maximum	
M	1,5		–	
N	0,6		–	
O	0,5		–	
P	2,6		–	[b]
Q	1		1,1	[b] [d]
R	2,65		2,9	[b]
S	5,5		5,6	
T	4,3		4,5	
U	–		3,7	
V	–		2,4	
W	6,5		6,6	
AB	3,7		3,85	
AC	0,7		0,9	
AD	0,2		–	Radius
AE	3		–	
AF	2,2		2,3	
AJ	8,8		8,9	
AK	8,35		8,45	
AL	4,55		4,7	
AM	4,45		4,55	
AP	–		3,7	
EA	32,5°		45°	Angle, unit in degrees [e]
EC	–	90°	–	Angle, unit in degrees [f]

[a] A chamfer or radius is allowed to a maximum depth of 0,5 mm from the ferrule endface. Add grade number to the interface reference number.

[b] The delatch housing shall be movable to the right or left. Dimensions *L*, *M* and *V* are given when the delatch housing is at the furthest right.

[c] Dimension *J* is given for the plug endface when not mated. The ferrule is movable by a certain axial compression force with direct contacting endfaces, and therefore dimension *J* is given variable. Ferrule compression force shall be 5,5 N to 6,5 N when the position of the optical datum target from the mechanical datum target is moved in the range of 3,9 mm to 4,1 mm. In addition, dimension *J* shall become less than 3,25 mm with a relatively large axial compression force. The compression force shall be measured according to IEC 61300-3-22.

[d] *Q* is to the right of the mechanical datum target when the delatch housing is to the right (connected state) and to the left of the mechanical datum target when the delatch housing is to the left (disconnected state).

[e] 40° to 45° are desirable to minimize debris for backplane connectors.

[f] Dimension *EA* is defined as an angle between two planes: one plane, plane A, passes through the axis of the ferrule and axis of symmetry of the key of the angled endface connector plug. The other plane, plane B, passes through the axis of the ferrule and the normal to the APC reference plane.

Figure 22 is an example of the 6,25 mm duplex plug connector interface – Push/pull, APC. Table 41 gives dimensions of the 6,25 mm duplex plug connector interface – Push/pull, APC. The detail dimensions of optical interfaces for APC are defined in IEC 61755-3-2.

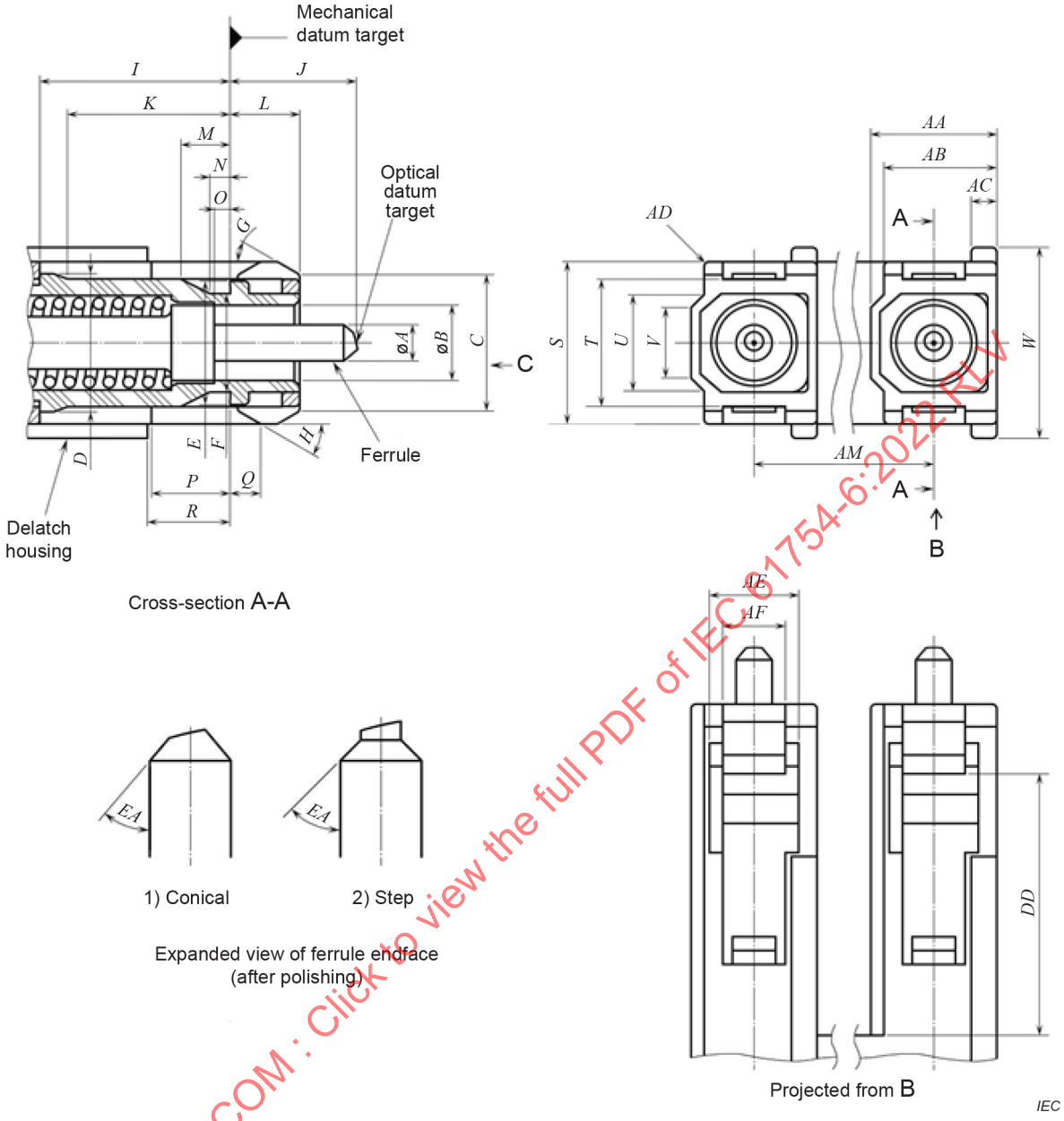
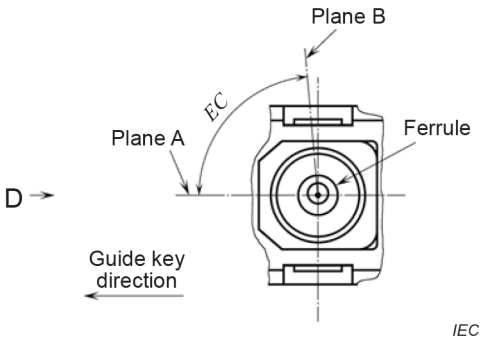
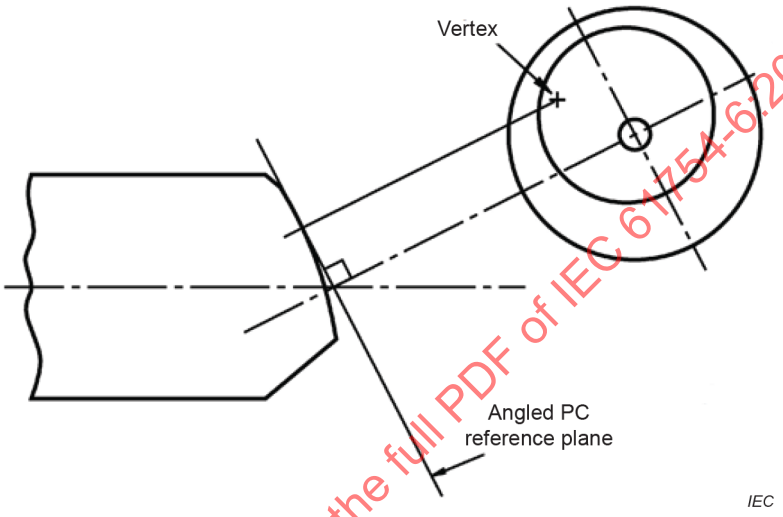


Figure 22 – 6,25 mm duplex plug connector interface – Push/pull, APC *(1 of 2)*



Expanded view from C direction (after polishing)



Ferrule endface geometry (expanded view from D direction, after polishing)

Figure 22 – 6,25 mm duplex plug connector interface – Push/pull, APC *(2 of 2)*

Table 41 – Dimensions of the 6,25 mm duplex plug connector interface, APC

Reference	Dimensions			Remarks
	Minimum	Basic	Maximum	
A			See IEC 61755-3-2	a
B	2,6 mm		2,7 mm	
C	4,6 mm		4,8 mm	
D	4,65 mm		4,75 mm	
E	4,3 mm		4,4 mm	
F	3,3 mm		3,4 mm	
G	25°		35°	Angle, unit in degrees
H	25°		35°	Angle, unit in degrees
I	6,55 mm		–	b
J	4,2 mm		4,5 mm	c
K	5,5 mm		–	
L	2,4 mm		2,5 mm	
M	1,5 mm		–	

Reference	Dimensions			Remarks
	Minimum	Basic	Maximum	
N	0,6 mm		–	
O	0,5 mm		–	
P	2,6 mm		–	b
Q	1 mm		1,1 mm	b d
R	2,65 mm		2,9 mm	b
S	5,5 mm		5,6 mm	
T	4,3 mm		4,5 mm	
U	–		3,7 mm	
V	–		2,4 mm	
W	6,5 mm		6,6 mm	
AB	3,85 mm		3,95 mm	
AC	0,7 mm		0,9 mm	
AD	0,2 mm		–	Radius
AE	3 mm		–	
AF	2,2 mm		2,3 mm	
AJ	8,8 mm		8,9 mm	
AK	8,35 mm		8,45 mm	
AL	4,55 mm		4,7 mm	
AM	6,2 mm		6,3 mm	
AP	–		3,7 mm	
EA	32,5°		45°	Angle, unit in degrees
EC	–	90°	–	Angle, unit in degrees[e]

[a] A chamfer or radius is allowed to maximum depth of 0,5 mm from the ferrule endface. Add grade number to the interface reference number.

[b] The coupling sleeve shall be movable toward the right and the left directions. These dimensions are given when the coupling sleeve is moved in its most right-direction position.

[c] Dimension *J* is given for the plug endface when not mated. The ferrule is movable by a certain axial compression force with direct contacting endfaces, and therefore dimension *J* is given variable. Ferrule compression force shall be 5,5 N to 6,5 N when the position of the optical datum target from the mechanical datum target is moved in the range of 3,9 mm to 4,1 mm. In addition, dimension *J* shall become less than 3,25 mm with a relatively large axial compression force. The compression force shall be measured according to IEC 61300-3-22.

[d] *Q* is to the right of the mechanical datum target when the delatch housing is to the right (connected state) and to the left of the mechanical datum target when the delatch housing is to the left (disconnected state).

[e] Dimension *EC* is defined as an angle between two planes: one plane, plane A, passes through the axis of the ferrule and axis of symmetry of the key of the angled endface connector plug. The other plane, plane B, passes through the axis of the ferrule and the normal to the APC reference plane.

Figure 23 is an example of the 6,25 mm duplex plug connector interface – Push/pull. Table 42 gives dimensions of the 6,25 mm duplex plug connector interface – Push/pull and Table 43 gives grade of the 6,25 mm duplex plug connector interface – Push/pull.

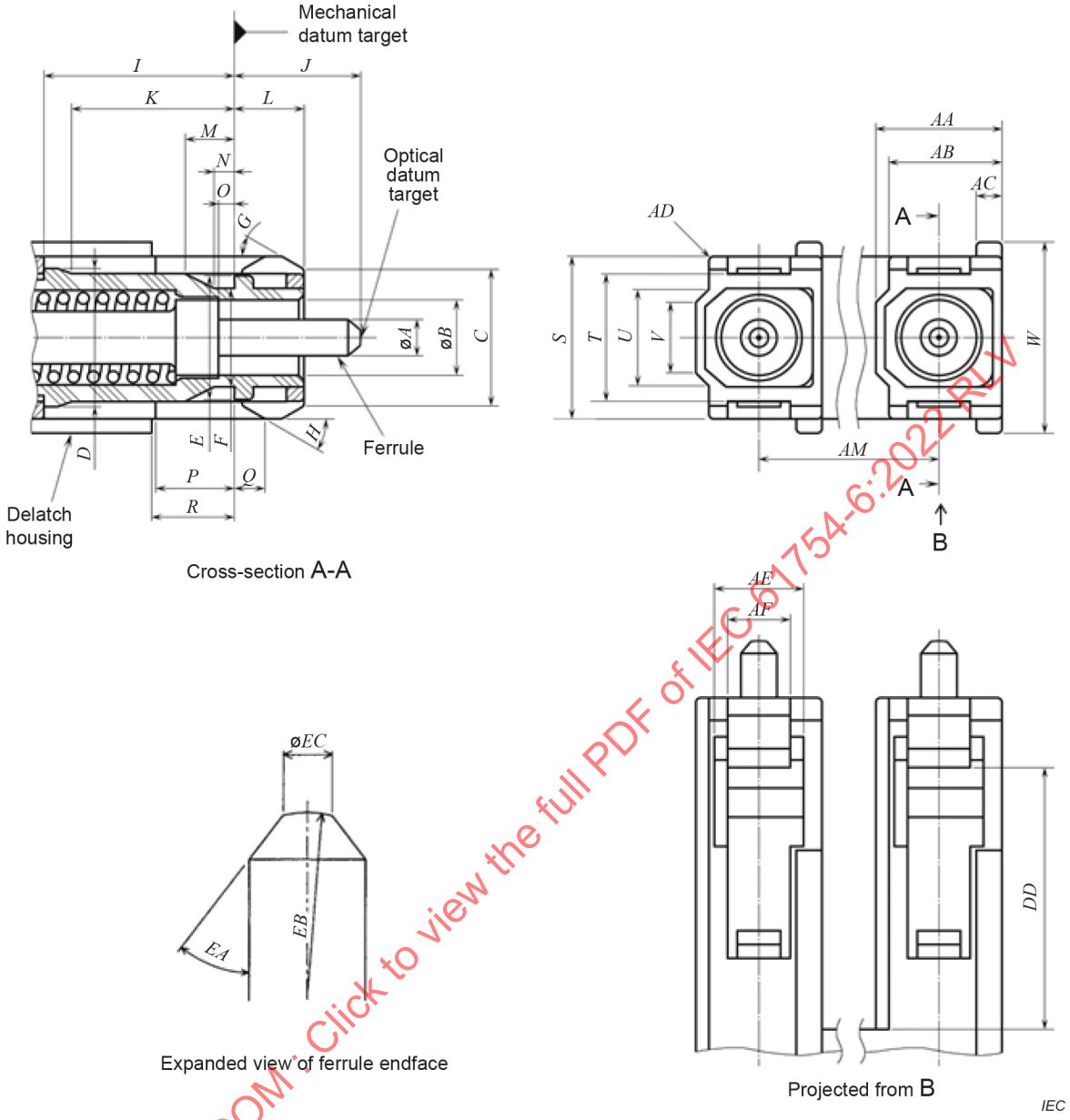


Figure 23 – 6,25 mm duplex plug connector interface – Push/pull

Table 42 – Dimensions of the 6,25 mm duplex plug connector interface

Reference	Dimensions		Remarks
	Minimum	Maximum	
A	See Table 43		[a]
B	2,6	2,7	
C	4,6	4,8	
D	4,65	4,75	
E	4,3	4,4	
F	3,3	3,4	
G	25°	35°	Angle, unit in degrees
H	25°	35°	Angle, unit in degrees
I	6,55	–	[b]
J	4,2	4,5	[c]

Reference	Dimensions		Remarks
	Minimum	Maximum	
K	5,5	–	
L	2,4	2,5	
M	1,5	–	
N	0,6	–	
O	0,5	–	
P	2,6	–	[b]
Q	1,0	1,1	[b] [d]
R	2,65	2,9	[b]
S	5,5	5,6	
T	4,3	4,5	
U	–	3,7	
V	–	2,4	
W	6,5	6,6	
AB	3,85	3,95	
AC	0,7	0,9	
AD	0,2	–	Radius
AE	3,0	–	
AF	2,2	2,3	
AJ	8,8	8,9	
AK	8,35	8,45	
AL	4,55	4,7	
AM	4,45	4,55	
DD	9,25	–	
EA	32,5°	45°	Angle, unit in degrees
EB	5	30	Radius [e]
EC	0,6	NA	Diameter

[a] A chamfer or radius is allowed to a maximum depth of 0,5 mm from the ferrule endface.

[b] The delatch housing shall be movable to the right or left. Dimensions L, M and V are given when the delatch housing is at the furthest right (connected state).

[c] Dimension J is given for the plug endface when not mated. The ferrule is movable by a certain axial compression force with direct contacting endfaces, and therefore dimension J is variable. Ferrule compression force shall be 5,5 N to 6,5 N when the position of the optical datum target from the mechanical datum target is moved in the range of 3,9 mm to 4,1 mm. In addition, dimension J shall become less than 3,25 mm with a relatively large axial compression force. The compression force shall be measured according to IEC 61300-3-22.

[d] Q is to the right of the mechanical datum target when the delatch housing is to the right (connected state) and to the left of the mechanical datum target when the delatch housing is to the left (disconnected state).

[e] Dome eccentricity of the spherically polished ferrule endface shall be less than 50 µm.

Table 43 – Grade of the 6,25 mm duplex plug connector

Grade	Dimensions		Remarks
	A		
	Minimum	Maximum	
A	See IEC 61755-3-1		[a]
B	See IEC 61755-3-1		[a]
C	See IEC 61755-3-1		[a]
D	See IEC 61755-3-1		[a]
A_m	Grade not specified at this time		[a] [b]
B_m	1,246 7	1,249 5	[a] [b]
C_m	Grade not specified at this time		

[a] Add grade number to the interface reference number.

[b] See IEC 61755-6-1 for guidance.

Figure 24 is an example of the 6,25 mm duplex adaptor connector interface. Table 44 gives dimensions of the 6,25 mm duplex adaptor connector interface and Table 45 gives grade of the 6,25 mm duplex adaptor connector interface.

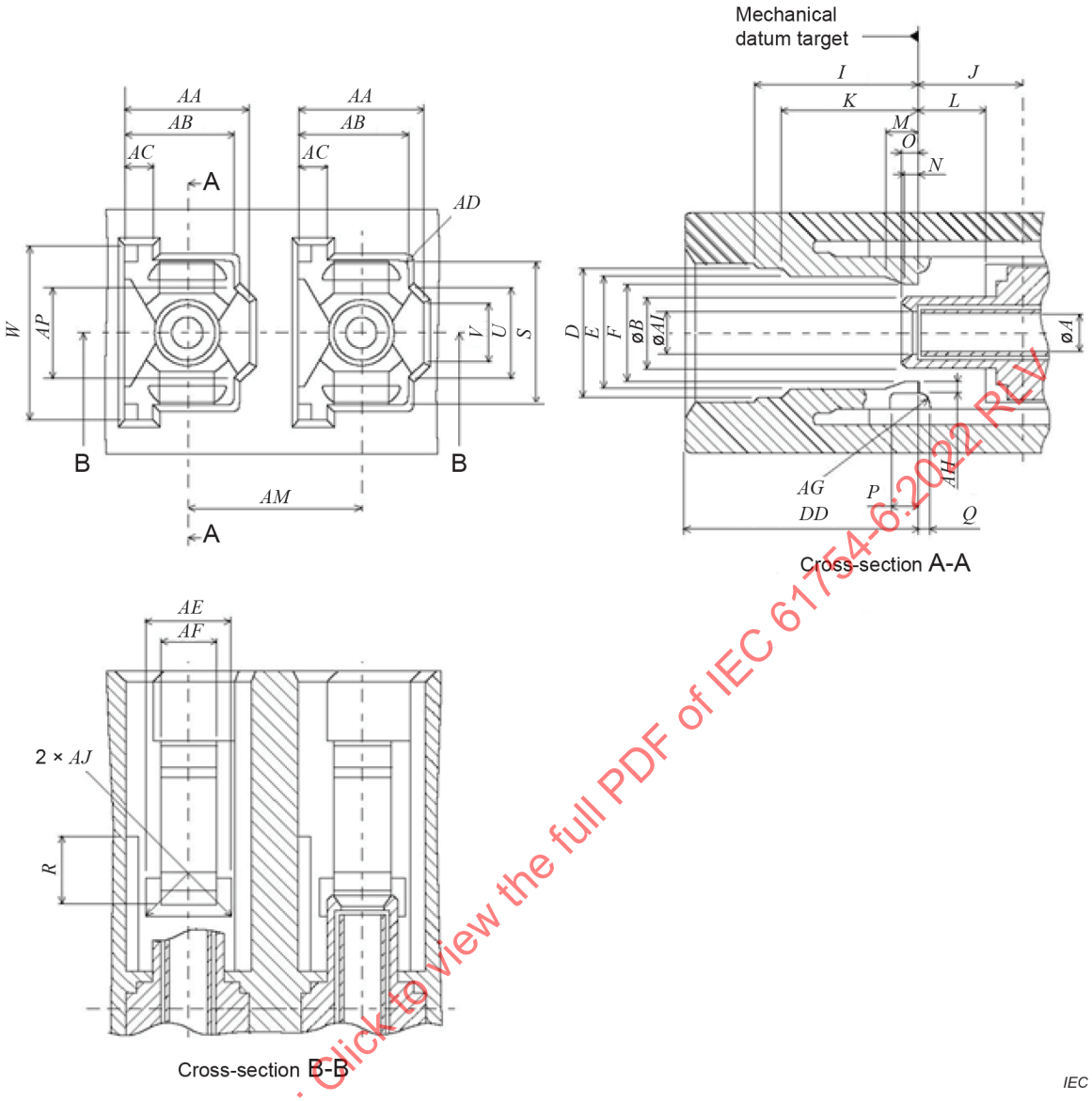


Figure 24 – 6,25 mm duplex adaptor connector interface

Table 44 – Dimensions of the 6,25 mm duplex adaptor connector interface

Reference	Dimensions mm		Remarks
	Minimum	Maximum	
A	See Table 45		
B	2,39	2,59	Diameter
D	4,8	5	
E	4,55	–	
F	2,9	3,5	[a]
I	–	6,5	
J	3,9	4,1	
K	–	5,4	
L	2,55	2,7	
M	–	1,4	

Reference	Dimensions mm		Remarks
	Minimum	Maximum	
N	–	0,55	
O	–	0,6	
P	–	1,2	
Q	–	0,4	
R	–	2,55	
S	5,65	5,75	
U	3,8	4	
V	3,3	–	
W	6,7	–	
AA	4,45	4,55	
AB	4,01	4,11	
AC	0,95	1,15	
AD	–	0,2	Radius
AE	2,8	2,95	
AF	1,9	2,1	
AG	0,3	–	Radius
AH	0,4	0,55	
AI	1,34	1,44	Diameter
AJ	–	0,3	Radius
AM	6,20	6,30	
AP	3,8	4	
DD	8.77	9.23	

[a] Dimension *F* shall become greater than 4,5 mm when a plug is coupled to or removed from the adaptor.

Table 45 – Grade of the 6,25 mm duplex adaptor connector

Grade	Dimensions mm		Remarks
	Minimum	Maximum	
1			Resilient sleeve [a] [b]

[a] The connector alignment feature is a resilient alignment sleeve. The feature shall accept a pin gauge to the centre of the adaptor with a force of 1 N to 2,5 N on condition that another pin gauge is inserted into the feature from the other side. The centre of the adaptor is defined by the right-side position of dimension *J*. The pin gauge is shown in Figure 4 and Table 11.

[b] Add grade number to the interface reference number.

Figure 25 is an example of the horizontal duplex plug connector interface. Table 46 gives dimensions of the horizontal duplex plug connector interface and Table 47 gives grade of the horizontal duplex plug connector interface.

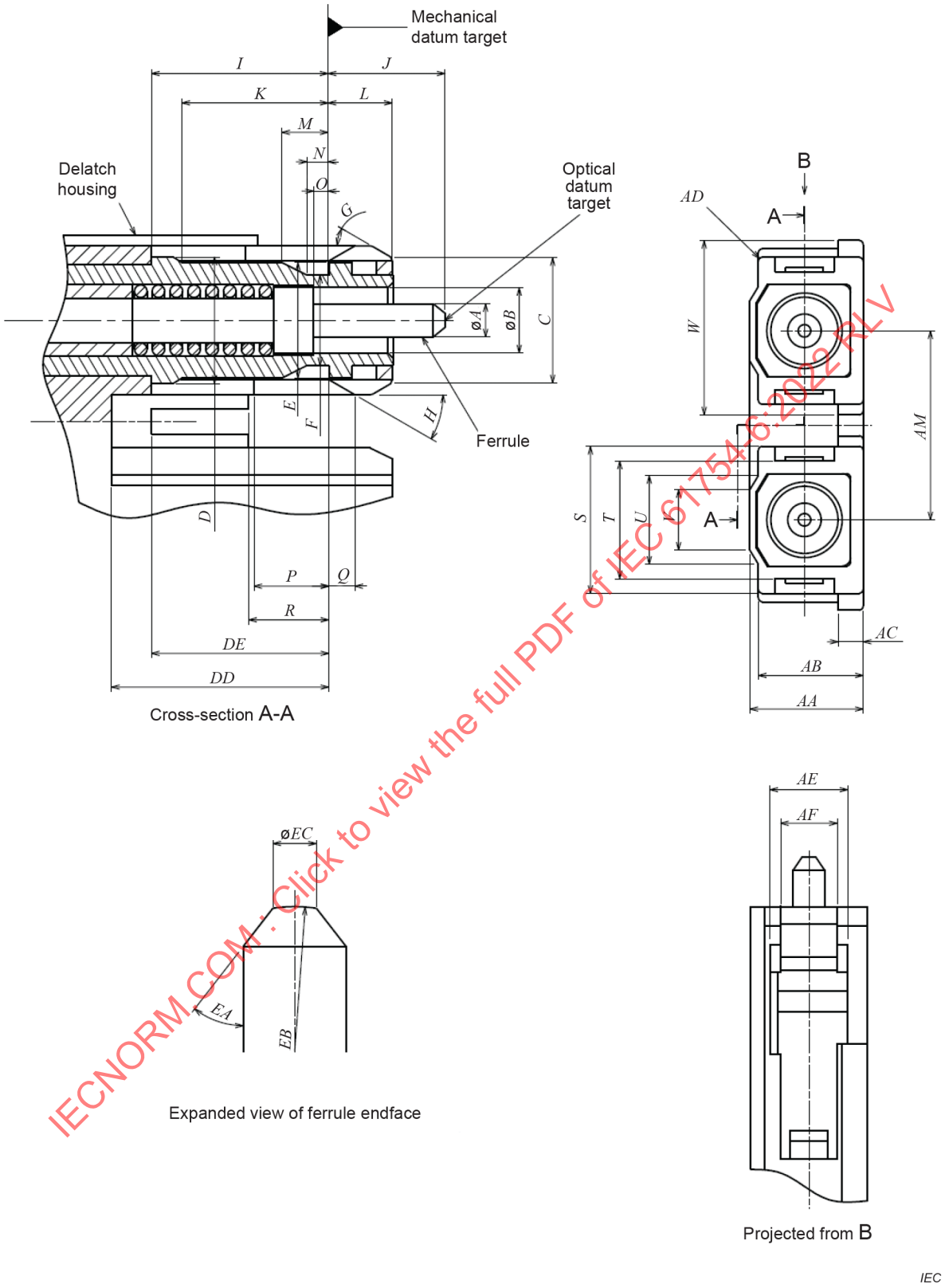


Figure 25 – Horizontal duplex plug connector interface – Push/pull

Table 46 – Dimensions of the horizontal duplex plug connector interface

Reference	Dimensions		Remarks
	Minimum	Maximum	
A	see Table 47		[a]
B	2,6 mm	2,7 mm	
C	4,6 mm	4,8 mm	
D	4,65 mm	4,75 mm	
E	4,3 mm	4,4 mm	
F	3,3 mm	3,4 mm	
G	25°	35°	Angle, unit in degrees
H	25°	35°	Angle, unit in degrees
I	6,55 mm	–	[b]
J	4,2 mm	4,5 mm	[c]
K	5,5 mm	–	
L	2,4 mm	2,5 mm	
M	1,5 mm	–	
N	0,6 mm	–	
O	0,5 mm	–	
P	2,6 mm	–	[b]
Q	1,0 mm	1,1 mm	[b d]
R	2,65 mm	2,9 mm	[b]
S	5,5 mm	5,6 mm	
T	4,3 mm	4,5 mm	
U	–	3,7 mm	
V	–	2,4 mm	
W	14,1 mm	14,2 mm	
AA	4,3 mm	4,4 mm	
AB	3,7 mm	3,85 mm	
AC	0,7 mm	0,9 mm	
AD	0,2 mm	–	Radius
AE	3,0 mm	–	
AF	2,2 mm	2,3 mm	
AM	7,45 mm	7,55 mm	
DD	9,25 mm	–	
DE	6,55 mm	–	
EA	32,5°	45°	Angle, unit in degrees
EB	5 mm	30 mm	Radius [e]
EC	0,6 mm	NA	Diameter

[a] A chamfer or radius is allowed to a maximum depth of 0,5 mm from the ferrule endface.

[b] The delatch housing shall be movable to the right or left. Dimensions L, M and V are given when the delatch housing is at the furthest right (connected state).

[c] Dimension J is given for the plug endface when not mated. The ferrule is movable by a certain axial compression force with direct contacting endfaces, and therefore dimension J is variable. Ferrule compression force shall be 5,5 N to 6,5 N when the position of the optical datum target from the mechanical datum target is moved in the range of 3,9 mm to 4,1 mm. In addition, dimension J shall become less than 3,25 mm with a relatively large axial compression force. The compression force shall be measured according to IEC 61300-3-22.

[d] Q is to the right of the mechanical datum target when the delatch housing is to the right (connected state) and to the left of the mechanical datum target when the delatch housing is to the left (disconnected state).

[e] Dome eccentricity of the spherically polished ferrule endface shall be less than 50 µm.

Table 47 – Grade of the horizontal duplex plug connector

Grade	Dimensions mm		Remarks
	A		
	Minimum	Maximum	
A	See IEC 61755-3-1		[a]
B	See IEC 61755-3-1		[a]
C	See IEC 61755-3-1		[a]
D	See IEC 61755-3-1		[a]
A_m	Grade not specified at this time		[a,b]
B_m	1,246 7	1,249 5	[a,b]
C_m	Grade not specified at this time		[a,b]

[a] Add grade number to the interface reference number.

[b] See IEC 61755-6-1 for guidance.

Constructions of floating 2-port connector plug and panel dimensions are described in Annex C and Annex D respectively.

Figure 26 is an example of the horizontal duplex adaptor connector interface. Table 48 gives dimensions of the horizontal duplex adaptor connector interface and Table 49 gives grade of the horizontal duplex adaptor connector interface.

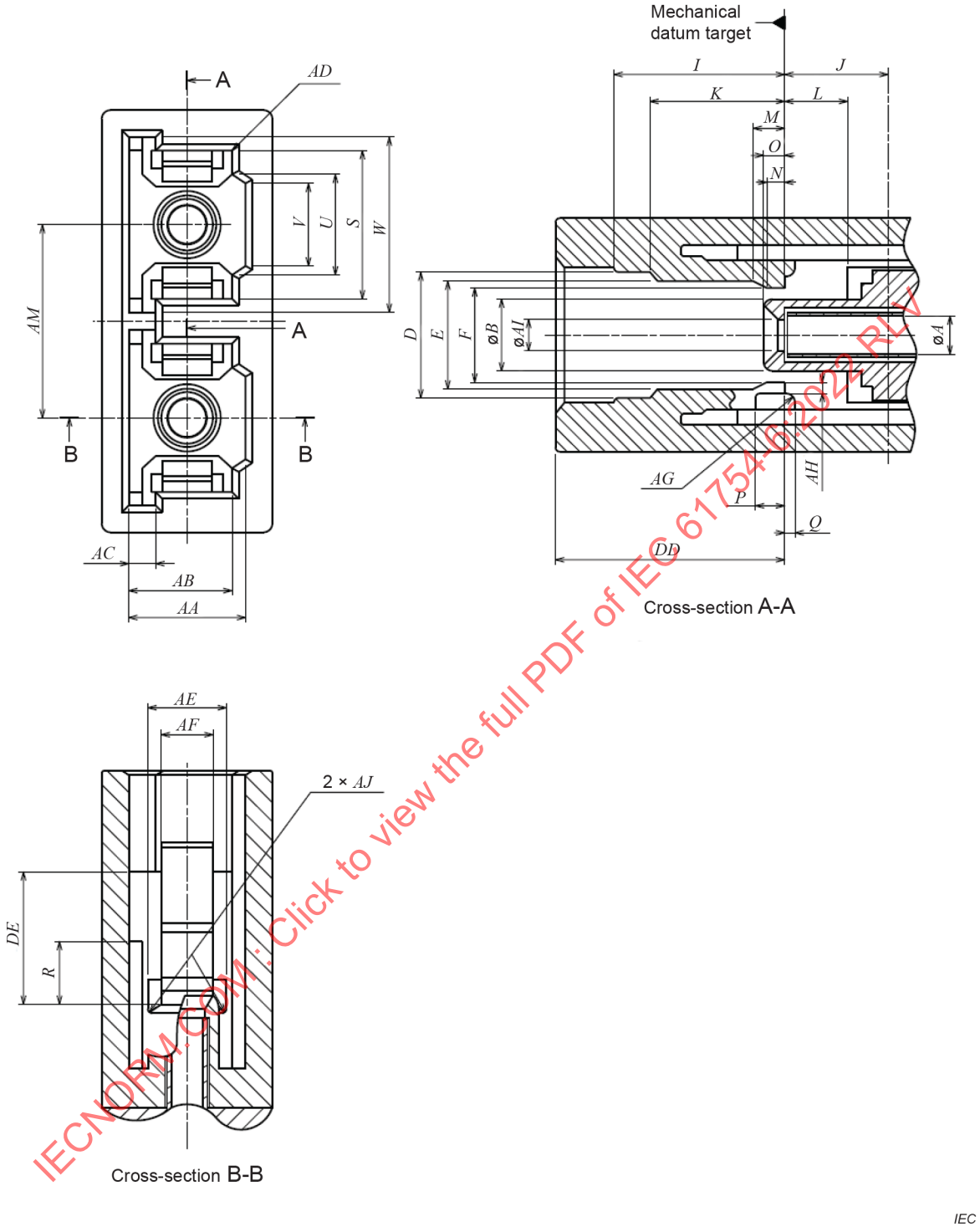


Figure 26 – Horizontal duplex adaptor connector interface

Table 48 – Dimensions of the horizontal duplex adaptor connector interface

Reference	Dimensions mm		Remarks
	Minimum	Maximum	
A	See Table 49		
B	2,39	2,59	Diameter
D	4,8	5,0	
E	4,55	–	
F	2,9	3,5	[a]
I	–	6,5	
J	3,9	4,1	
K	–	5,4	
L	2,55	2,7	
M	–	1,4	
N	–	0,55	
O	–	0,6	
P	–	1,2	
Q	–	0,4	
R	–	2,55	
S	5,65	5,75	
U	3,8	4	
V	2,8	–	
W	14,4	–	
AA	4,45	4,55	
AB	4,01	4,11	
AC	0,95	1,15	
AD	–	0,2	Radius
AE	2,8	2,95	
AF	1,9	2,1	
AG	0,3	–	Radius
AH	0,4	0,55	
AI	1,34	1,44	Diameter
AJ	–	0,3	Radius
AM	7,45	7,55	
DD	8,77	9,23	
DE	–	6.5	

[a] Dimension *F* shall become greater than 4,5 mm when a plug is coupled to or removed from the adaptor.

Table 49 – Grade of the horizontal duplex adaptor connector

Grade	Dimensions mm		Remarks
	Minimum	Maximum	
1	–	–	Resilient sleeve [a] [b]

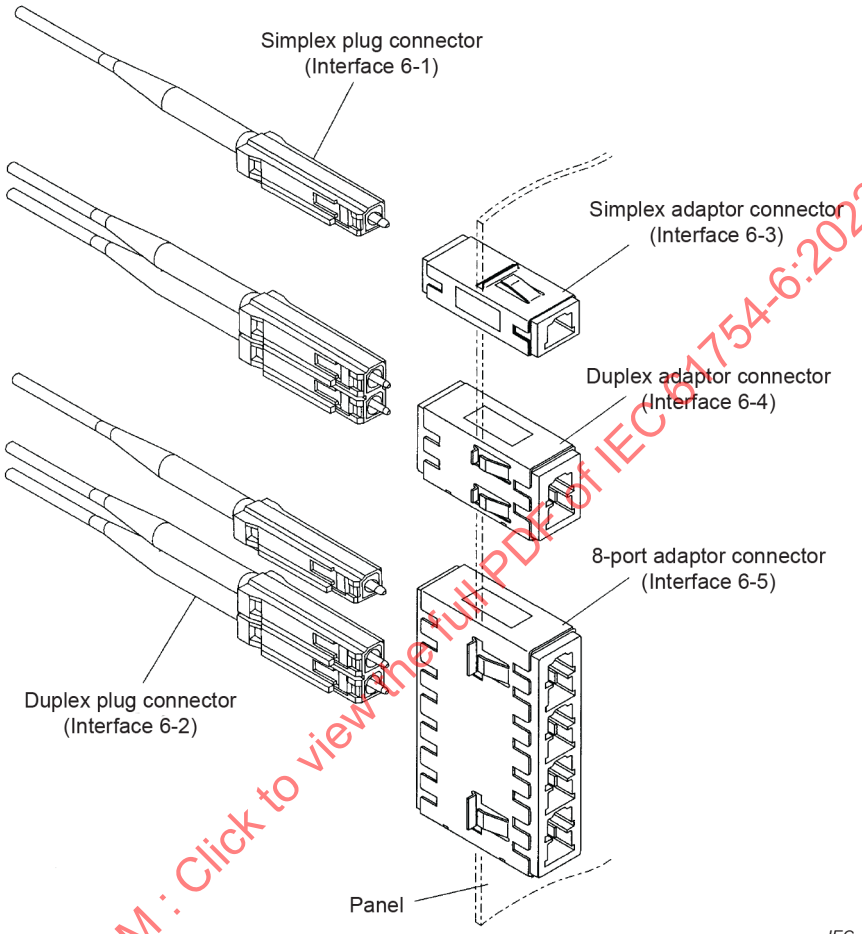
[a] The connector alignment feature is a resilient alignment sleeve. The feature shall accept a pin gauge to the centre of the adaptor with a force of 1 N to 2,5 N under the condition that another pin gauge is inserted into the feature from the other side. The centre of the adaptor is defined by the right-side position of dimension *J*. The pin gauge is shown in Figure 4 and Table 11.

[b] Add grade number to the interface reference number.

Annex A
(informative)

Configuration of type MU-A connector set

Figure A.1 shows the configuration of a type MU-A connector set.



NOTE 1 Adaptors for panel use are illustrated as an example.

NOTE 2 Adaptors for printed board use are also available.

Figure A.1 – Configuration of type MU-A connector set

Annex B
(informative)

Configuration of type MU-B connector set

Figure B.1 shows the configuration of a type MU-B connector set.

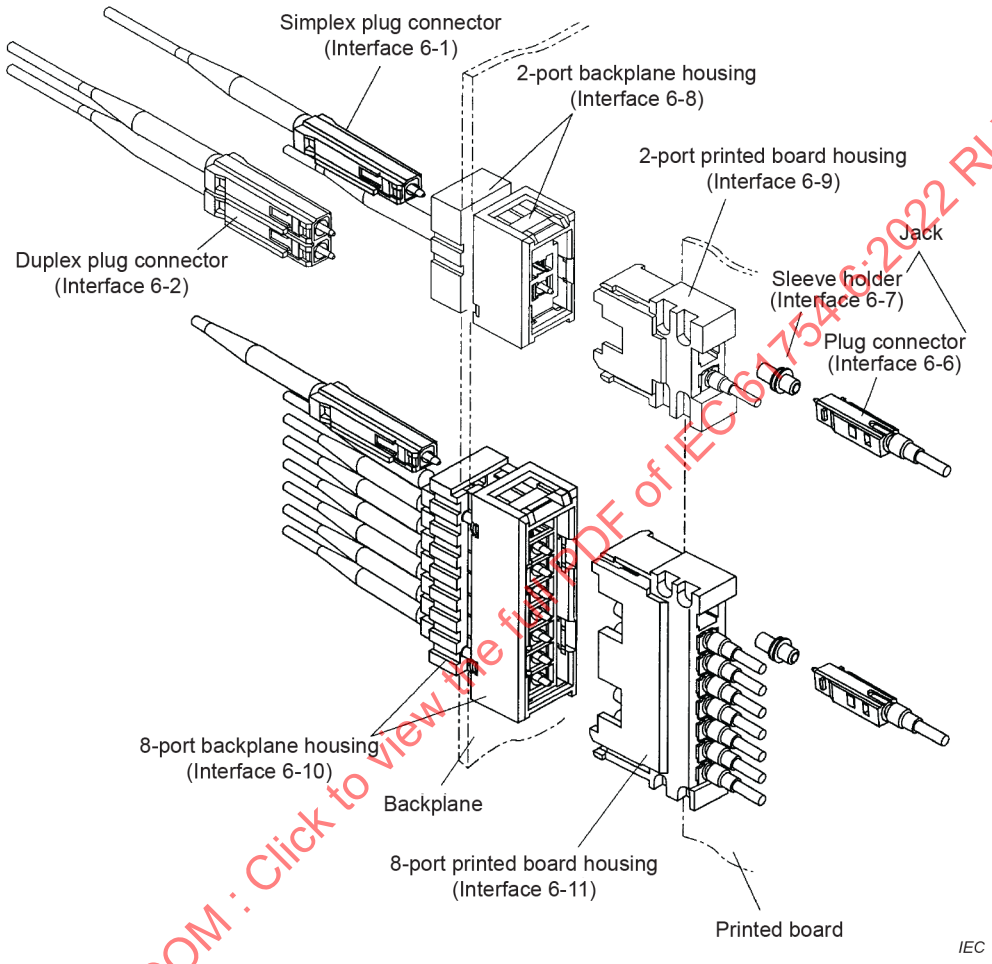


Figure B.1 – Configuration of type MU-B connector set

Annex C
(informative)

Floating 2-port connector plug

Only floating style 2-port connector plugs shall be used as the MU optical connector interface of fibre channel physical interface standard (FC-PI2). The floating 2-port connectors essentially take two simplex plug connectors (interface 6-1) and mechanically couple them together so each of the two MU simplex plug connectors are retained with the nominal distance of 6,25 mm between the centre of connectors, but free to "float" within the constraints of the coupling assembly. Figure C.1 and the Table C.1 describe the floating duplex connector plug envelope dimensions.

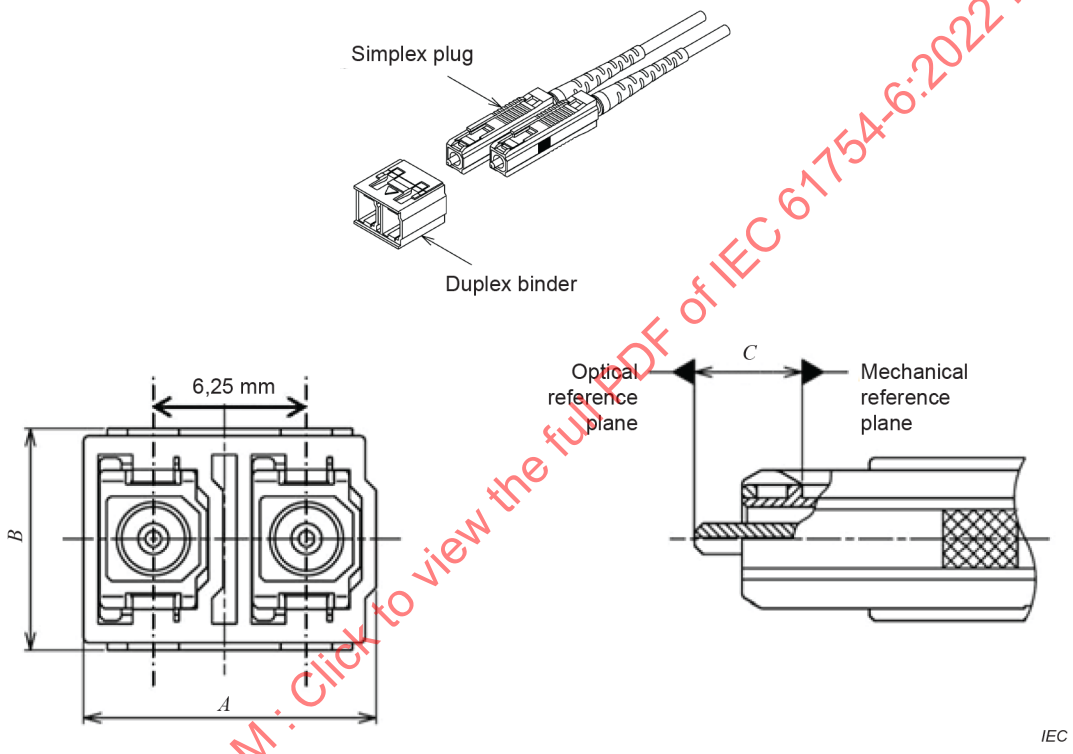


Figure C.1 – Floating 2-port connector plug

Table C.1 – Dimensions table for 2-port connector plug

Reference	Nominal mm
A	11,95
B	9
C	4 mated 4,4 free

Annex D
(informative)

Panel dimensions

D.1 General

When the IEC 61300-2-55 strength of mounted adaptor test is required in the relevant specifications, the test should be performed with a panel having the relevant cut out as shown in Figure D.1 to Figure D.5.

D.2 Simplex adaptor

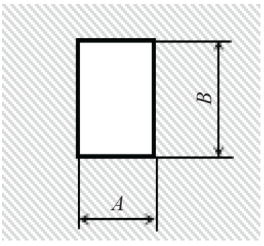


Figure D.1 – Panel cut out

Table D.1 – Dimensions for simplex adaptor

Reference	Dimensions mm		Remarks
	Minimum	Maximum	
A	7,8	7,9	
B	10,9	11,0	
The maximum thickness of the panel should be 1,6 mm. IEC 60874-14-3:1997, Figure 2, Note 2, should be referred to.			

D.3 4,5 mm duplex adaptor

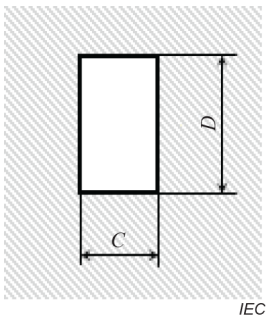


Figure D.2 – Panel cut out

Table D.2 – Dimensions for 4,5 mm duplex adaptor

Reference	Dimensions mm		Remarks
	Minimum	Maximum	
C	10,3	10,4	
D	14,5	14,6	
The maximum thickness of the panel should be 1,6 mm. See IEC 60874-19-2.			

D.4 6,25 mm duplex adaptor

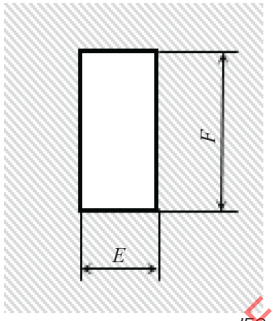


Figure D.3 – Panel cut out

Table D.3 – Dimensions for 6,25 mm duplex adaptor

Reference	Dimensions mm		Remarks
	Minimum	Maximum	
E	10,3	10,4	
F	16,2	16,3	
The maximum thickness of the panel should be 1,6 mm. See IEC 60874-19-2.			

D.5 Horizontal duplex adaptor

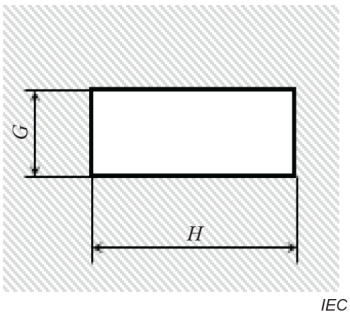


Figure D.4 – Panel cut out

Table D.4 – Dimensions for horizontal duplex adaptor

Reference	Dimensions mm		Remarks
	Minimum	Maximum	
G	7,8	7,9	
H	18,2	18,3	
The maximum thickness of the panel should be 1,6 mm. See IEC 60874-19-2.			

D.6 4,5 mm 8-port adaptor

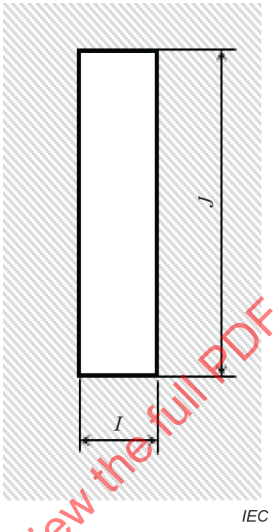


Figure D.5 – Panel cut out

Table D.5 – Dimensions for 4,5 mm 8-port adaptor

Reference	Dimensions mm		Remarks
	Minimum	Maximum	
I	10,3	10,4	
J	42,5	42,6	
The maximum thickness of the panel should be 1,6 mm. See IEC 60874-19-2.			

Bibliography

IEC 60874-14-3:1997, *Connectors for optical fibres and cables – Part 14-3: Detail specification for fibre optic adaptor (simplex) type SC for single-mode fibre*

IEC 60874-19-2, *Connectors for optical fibres and cables – Part 19-2: Fibre optic adaptor (duplex) type SC for single-mode fibre connectors – Detail specification*

IEC 61300-2-55, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-55: Tests – Strength of mounted adaptor*

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 PC ferrule, single mode fibres*

IEC 61755-6-1, *Fibre optic interconnecting devices and passive components – Fibre optic connector optical interfaces – Part 6-1: Connection of 50 µm multimode, non-angled physically contacting fibres*[2]

[2] Under preparation. Stage at the time of publication: IEC/CDM 61755-6-1:2021.

SOMMAIRE

COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

_____

DISPOSITIFS D'INTERCONNEXION ET COMPOSANTS PASSIFS FIBRONIQUES – INTERFACES DE CONNECTEURS FIBRONIQUES –

Partie 6: Famille de connecteurs de type MU

AVANT-PROPOS

1) La Commission Électrotechnique Internationale (IEC) est une organisation mondiale de normalisation composée de l'ensemble des comités électrotechniques nationaux (Comités nationaux de l'IEC). L'IEC a pour objet de favoriser la coopération internationale pour toutes les questions de normalisation dans les domaines de l'électricité et de l'électronique. À cet effet, l'IEC – entre autres activités – publie des Normes internationales, des Spécifications techniques, des Rapports techniques, des Spécifications accessibles au public (PAS) et des Guides (ci-après dénommés "Publication(s) de l'IEC"). Leur élaboration est confiée à des comités d'études, aux travaux desquels tout Comité national intéressé par le sujet traité peut participer. Les organisations internationales, gouvernementales et non gouvernementales, en liaison avec l'IEC, participent également aux travaux. L'IEC collabore étroitement avec l'Organisation Internationale de Normalisation (ISO), selon des conditions fixées par accord entre les deux organisations.
2) Les décisions ou accords officiels de l'IEC concernant les questions techniques représentent, dans la mesure du possible, un accord international sur les sujets étudiés, étant donné que les Comités nationaux de l'IEC intéressés sont représentés dans chaque comité d'études.
3) Les Publications de l'IEC se présentent sous la forme de recommandations internationales et sont agréées comme telles par les Comités nationaux de l'IEC. Tous les efforts raisonnables sont entrepris afin que l'IEC s'assure de l'exactitude du contenu technique de ses publications; l'IEC ne peut pas être tenue responsable de l'éventuelle mauvaise utilisation ou interprétation qui en est faite par un quelconque utilisateur final.
4) Dans le but d'encourager l'uniformité internationale, les Comités nationaux de l'IEC s'engagent, dans toute la mesure possible, à appliquer de façon transparente les Publications de l'IEC dans leurs publications nationales et régionales. Toutes divergences entre toutes Publications de l'IEC et toutes publications nationales ou régionales correspondantes doivent être indiquées en termes clairs dans ces dernières.
5) L'IEC elle-même ne fournit aucune attestation de conformité. Des organismes de certification indépendants fournissent des services d'évaluation de conformité et, dans certains secteurs, accèdent aux marques de conformité de l'IEC. L'IEC n'est responsable d'aucun des services effectués par les organismes de certification indépendants.
6) Tous les utilisateurs doivent s'assurer qu'ils sont en possession de la dernière édition de cette publication.
7) Aucune responsabilité ne doit être imputée à l'IEC, à ses administrateurs, employés, auxiliaires ou mandataires, y compris ses experts particuliers et les membres de ses comités d'études et des Comités nationaux de l'IEC, pour tout préjudice causé en cas de dommages corporels et matériels, ou de tout autre dommage de quelque nature que ce soit, directe ou indirecte, ou pour supporter les coûts (y compris les frais de justice) et les dépenses découlant de la publication ou de l'utilisation de cette Publication de l'IEC ou de toute autre Publication de l'IEC, ou au crédit qui lui est accordé.
8) L'attention est attirée sur les références normatives citées dans cette publication. L'utilisation de publications référencées est obligatoire pour une application correcte de la présente publication.
9) L'attention est attirée sur le fait que certains des éléments de la présente Publication de l'IEC peuvent faire l'objet de droits de brevet. L'IEC ne saurait être tenue pour responsable de ne pas avoir identifié de tels droits de brevets.

L'IEC 61754-6 a été établie par le sous-comité 86B: Dispositifs d'interconnexion et composants passifs à fibres optiques, du comité d'études 86 de l'IEC: Fibres optiques. Il s'agit d'une Norme internationale.

Cette troisième édition annule et remplace la deuxième édition parue en 2013. Cette édition constitue une révision technique.

Cette édition inclut les modifications techniques majeures suivantes par rapport à l'édition précédente:

a) ajout de la méthode d'essai de l'IEC 61300-3-22 sur la force de compression de la férule;

b) ajout de l'Annexe D (informative) avec les exigences relatives aux dimensions des découpes pour réaliser les essais de résistance des raccords montés.

Le texte de cette Norme internationale est issu des documents suivants:

Projet	Rapport de vote
86B/4562/FDIS	86B/4585/RVD

Le rapport de vote indiqué dans le tableau ci-dessus donne toute information sur le vote ayant abouti à son approbation.

La langue employée pour l'élaboration de cette Norme internationale est l'anglais.

Le présent document a été rédigé selon les Directives ISO/IEC, Partie 2, il a été développé selon les Directives ISO/IEC, Partie 1 et les Directives ISO/IEC, Supplément IEC, disponibles sous www.iec.ch/members_experts/refdocs. Les principaux types de documents développés par l'IEC sont décrits plus en détail sous www.iec.ch/standardsdev/publications.

Une liste de toutes les parties de la série IEC 61754, publiées sous le titre général *Dispositifs d'interconnexion et composants passifs fibroniques – Interfaces de connecteurs fibroniques*, peut être consultée sur le site web de l'IEC.

Les futures normes de cette série porteront dorénavant le nouveau titre général cité ci-dessus. Le titre des normes existant déjà dans cette série sera mis à jour lors de la prochaine édition.

Le comité a décidé que le contenu du présent document ne sera pas modifié avant la date de stabilité indiquée sur le site web de l'IEC sous webstore.iec.ch dans les données relatives au document recherché. À cette date, le document sera

- reconduit,
- supprimé,
- remplacé par une édition révisée, ou
- amendé.

DISPOSITIFS D'INTERCONNEXION ET COMPOSANTS PASSIFS FIBRONIQUES – INTERFACES DE CONNECTEURS FIBRONIQUES –

Partie 6: Famille de connecteurs de type MU

1 Domaine d'application

La présente partie de l'IEC 61754 spécifie les dimensions d'interfaces normalisées pour la famille de connecteurs de type MU.

2 Références normatives

Les documents suivants sont cités dans le texte de sorte qu'ils constituent, pour tout ou partie de leur contenu, des exigences du présent document. Pour les références datées, seule l'édition citée s'applique. Pour les références non datées, la dernière édition du document de référence s'applique (y compris les éventuels amendements).

IEC 61300-3-22, *Dispositifs d'interconnexion et composants passifs à fibres optiques – Méthodes fondamentales d'essais et de mesures – Partie 3-22: Examens et mesures – Force de compression des férules*

IEC 61754-1, *Dispositifs d'interconnexion et composants passifs à fibres optiques – Interfaces de connecteurs à fibres optiques – Partie 1: Généralités et lignes directrices*

3 Termes et définitions

Pour les besoins du présent document, les termes et définitions de l'IEC 61754-1 s'appliquent.

L'ISO et l'IEC tiennent à jour des bases de données terminologiques destinées à être utilisées en normalisation, consultables aux adresses suivantes:

- IEC Electropedia: disponible à l'adresse http://www.electropedia.org/
- ISO Online browsing platform: disponible à l'adresse http://www.iso.org/obp

4 Description

Le connecteur générique de la famille de connecteurs de type MU est une fiche miniature à position unique caractérisée par une ou plusieurs férules en butée à ressort cylindriques dont le diamètre type est de 1,25 mm et par un mécanisme de couplage pousser/tirer. Le mécanisme d'alignement optique des connecteurs est de type à alésage rigide ou à manchon élastique.

Le présent document, relatif à la famille des connecteurs de type MU, définit les dimensions d'interfaces normalisées des embases à dispositifs actifs pour les connecteurs de type MU. Les embases sont utilisées pour retenir les fiches des connecteurs et maintenir mécaniquement la cible de référence optique des fiches dans une position définie à l'intérieur des boîtiers d'embases.

5 Interfaces

Le présent document contient les interfaces normalisées (voir Tableau 1).

Tableau 1 – Interfaces

Interface IEC 61754-6-1	Interface de fiches simplex – Pousser/tirer (voir Figure 1)
Interface IEC 61754-6-2	Interface de fiches duplex de 4,5 mm – Pousser/tirer (voir Figure 2)
Interface IEC 61754-6-3	Interface de raccords simplex – Pousser/tirer (voir Figure 3)
Interface IEC 61754-6-4	Interface de raccords duplex de 4,5 mm – Pousser/tirer (voir Figure 5)
Interface IEC 61754-6-5	Interface de raccords à 8 ports – Pousser/tirer (voir Figure 6)
Interface IEC 61754-6-6	Interface de fiches – pour boîtiers de carte imprimée (voir Figure 7)
Interface IEC 61754-6-7	Interface de supports de manchon – pour boîtiers de carte imprimée (voir Figure 8)
Interface IEC 61754-6-8	Interface de boîtiers de fond de panier à 2 ports – A autorétention (voir Figure 9)
Interface IEC 61754-6-9	Interface de boîtiers de carte imprimée à 2 ports – A autorétention (voir Figure 10)
Interface IEC 61754-6-10	Interface de boîtiers de fond de panier à 8 ports – A autorétention (voir Figure 11)
Interface IEC 61754-6-1	Interface de boîtiers de carte imprimée à 8 ports – A autorétention (voir Figure 12)
Interface IEC 61754-6-12	Interface d'embases de dispositif actif simplex – Pour fiches à contact physique (PC - physical contact) (voir Figure 13)
Interface IEC 61754-6-13	Interface d'embase de dispositif actif duplex de 4,5 mm – Pour fiches PC (voir Figure 15)
Interface IEC 61754-6-14	Interface d'embase de dispositif actif duplex de 6,25 mm – Pour fiches PC (voir Figure 17)
Interface IEC 61754-6-15	Interface de fiches – Pour boîtiers de carte imprimée, contact physique avec angle (APC - angled physical contact) 8 degrés (voir Figure 19)
Interface IEC 61754-6-16	Interface de fiches simplex – Pousser/tirer, APC 8 degrés (voir Figure 20)
Interface IEC 61754-6-17	Interface de fiches duplex de 4,5 mm – Pousser/tirer, APC 8 degrés (voir Figure 21)
Interface IEC 61754-6-18	Interface de fiches duplex de 6,25 mm – Pousser/tirer, APC 8 degrés (voir Figure 22)
Interface IEC 61754-6-19	Interface de fiches duplex de 6,25 mm – Pousser/tirer (voir Figure 23)
Interface IEC 61754-6-20	Interface de raccords duplex de 6,25 mm – Pousser/tirer (voir Figure 24)
Interface IEC 61754-6-21	Interface de fiches duplex horizontales – Pousser/tirer (voir Figure 25)
Interface IEC 61754-6-22	Interface de raccords duplex horizontales – Pousser/tirer (voir Figure 26)

Les fiches des interfaces IEC 61754-6-1, IEC 61754-6-2, IEC 61754-6-6, IEC 61754-6-19 et IEC 61754-6-21 possèdent une ou plusieurs férules dont la face d'extrémité est polie sphériquement, et permettent de réaliser un contact physique (PC - physical contact). Les fiches des interfaces IEC 61754-6-15, IEC 61754-6-16, IEC 61754-6-17 et IEC 61754-6-18 possèdent une ou plusieurs férules dont la face d'extrémité est polie sphériquement avec un angle, et permettent de réaliser un contact physique avec angle (APC - angled physical contact).

La famille de connecteurs de type MU comprend deux types de jeux de connecteurs: le jeu de connecteurs MU-A (voir Annexe A) et le jeu de connecteurs MU-B (voir Annexe B). Le jeu de connecteurs MU-A est une configuration fiche-raccord à mécanisme de couplage pousser-tirer. Le jeu de connecteurs MU-B est une configuration de connecteurs de fond de panier enfichables, fiche/fond de panier et boîtiers de carte imprimée/fiche pour configuration boîtier de carte imprimée/support de manchon, et il est équipé d'un mécanisme d'autorétention.

Le jeu de connecteurs de type MU-A comporte des fiches simplex et duplex, des raccords simplex, duplex et à 8 ports. Les fiches sont communes aux boîtiers de connecteurs de fond de panier du jeu de connecteurs MU-B.

Le jeu de connecteurs de type MU-B comprend des boîtiers de connecteurs de fond de panier et de carte imprimée à 2 ports et à 8 ports, des fiches simplex et duplex, une fiche pour boîtiers de connecteurs de cartes imprimées et un support de manchon. La fiche pour boîtier de connecteurs de carte imprimée est utilisée comme un jack avec le support de manchon. Le jack est connecté au boîtier de connecteurs de carte imprimée.

Le Tableau 2, le Tableau 3 et le Tableau 4 présentent la compatibilité d'accouplement des interfaces normalisées. Cependant, il faut noter que pour obtenir la performance optique prévue, toute fiche doit être connectée à une fiche équivalente dont la face d'extrémité de la férule est polie dans les mêmes conditions.

Tableau 2 – Compatibilité d'accouplement des connecteurs MU-A

Fiches	Raccords				
	61754-6-3	61754-6-4	61754-6-5	61754-6-20	61754-6-22
61754-6-1	Accouplable	Accouplable	Accouplable	Accouplable	Accouplable
61754-6-2	Non accouplable	Accouplable	Accouplable	Non accouplable	Non accouplable
61754-6-16	Accouplable	Accouplable	Accouplable	Accouplable	Accouplable
61754-6-17	Non accouplable	Accouplable	Accouplable	Non accouplable	Non accouplable
61754-6-18	Non accouplable	Non accouplable	Non accouplable	Accouplable	Non accouplable
61754-6-19	Non accouplable	Non accouplable	Non accouplable	Accouplable	Non accouplable
61754-6-21	Non accouplable	Non accouplable	Non accouplable	Non accouplable	Accouplable

Tableau 3 – Compatibilité d'accouplement des connecteurs MU-B

Fiches	Boîtiers de connecteurs			
	Boîtier de connecteur de fond de panier		Boîtier de connecteur de carte imprimée	
	61754-6-8	61754-6-10	61754-6-9	61754-6-11
61754-6-1	Accouplable	Accouplable	Non accouplable	Non accouplable
61754-6-2	Accouplable	Accouplable	Non accouplable	Non accouplable
61754-6-6 avec 61754-6-7	Non accouplable	Non accouplable	Accouplable	Accouplable
61754-6-15 avec 61754- 6-7	Non accouplable	Non accouplable	Accouplable	Accouplable
61754-6-16	Accouplable	Accouplable	Non accouplable	Non accouplable
61754-6-17	Accouplable	Accouplable	Non accouplable	Non accouplable
61754-6-18	Non accouplable	Non accouplable	Non accouplable	Non accouplable
61754-6-19	Non accouplable	Non accouplable	Non accouplable	Non accouplable
61754-6-21	Non accouplable	Non accouplable	Non accouplable	Non accouplable

Tableau 4 – Compatibilité d'accouplement des embases MU

Fiches	Embases		
	61754-6-12	**61754-6-13**	**61754-6-14**
61754-6-1	Accouplable	Accouplable	Accouplable
61754-6-2	Non accouplable	Accouplable	Non accouplable
61754-6-16	Non accouplable	Non accouplable	Non accouplable
61754-6-17	Non accouplable	Non accouplable	Non accouplable
61754-6-18	Non accouplable	Non accouplable	Non accouplable
61754-6-19	Non accouplable	Non accouplable	Accouplable
61754-6-21	Non accouplable	Non accouplable	Non accouplable

La Figure 1 représente un exemple d'interface de fiches simplex. Le Tableau 5 donne les dimensions de l'interface de fiches simplex et le Tableau 6 donne la classe de l'interface de fiches simplex.

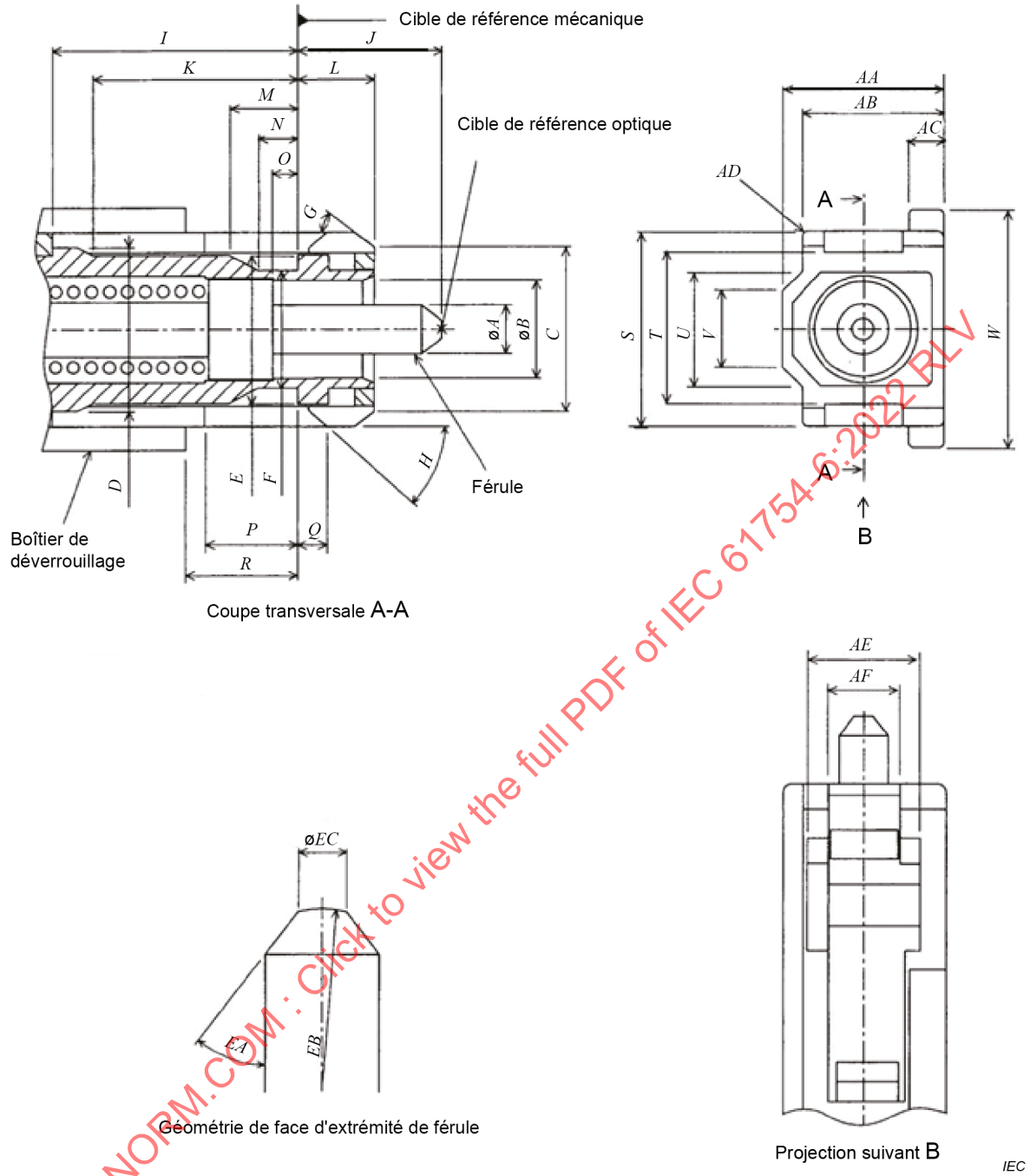


Figure 1 – Interface de fiches simplex – Pousser/tirer

Tableau 5 – Dimensions de l'interface de fiches simplex

Référence	Dimensions		Remarques
	Minimales	Maximales	
A	Voir Tableau 6		[a]
B	2,6 mm	2,7 mm	
C	4,6 mm	4,8 mm	
D	4,65 mm	4,75 mm	
E	4,3 mm	4,4 mm	
F	3,3 mm	3,4 mm	
G	25°	35°	Angle, unité en degrés
H	25°	35°	Angle, unité en degrés
I	6,55 mm	–	[b]
J	4,2 mm	4,5 mm	[c]
K	5,5 mm	–	
L	2,4 mm	2,5 mm	
M	1,5 mm	–	
N	0,6 mm	–	
O	0,5 mm	–	
P	2,6 mm	–	[b]
Q	1 mm	1,1 mm	[bd]
R	2,65 mm	2,9 mm	[b]
S	5,5 mm	5,6 mm	
T	4,3 mm	4,5 mm	
U	–	3,7 mm	
V	–	2,4 mm	
W	6,5 mm	6,6 mm	
AA	4,3 mm	4,4 mm	
AB	3,85 mm	3,95 mm	
AC	0,7 mm	0,9 mm	
AD	0,2 mm	–	Rayon
AE	3 mm	–	
AF	2,2 mm	2,3 mm	
EA	32,5°	45°	Angle, unité en degrés, [e]
EB	5 mm	30 mm	Rayon [f]
EC	0,45 mm	0,73 mm	Diamètre

[a] Un chanfrein ou un arrondi est admis à une profondeur maximale de 0,5 mm par rapport à la face d'extrémité de la férule.

[b] Le boîtier de déverrouillage doit pouvoir être déplacé vers la droite ou vers la gauche. Les dimensions *L*, *M* et *V* sont indiquées lorsque le boîtier de déverrouillage se trouve à l'extrême droite.

[c] La dimension *J* est indiquée pour la face d'extrémité de la fiche quand elle n'est pas accouplée. La férule peut être déplacée par une force de compression axiale avec des faces d'extrémité en contact direct; la dimension *J* est par conséquent variable. La force de compression de la férule doit être comprise entre 5,5 N et 6,5 N lorsque la position de la cible de référence optique à partir de la cible de référence mécanique est déplacée dans la plage comprise entre 3,9 mm et 4,1 mm. De plus, la dimension *J* doit se réduire à moins de 3,25 mm avec une force de compression axiale relativement importante. La force de compression doit être mesurée conformément à l'IEC 61300-3-22.

[d] *Q* est situé à droite de la cible de référence mécanique lorsque le boîtier de déverrouillage est situé à droite (état connecté) et à gauche de la cible de référence mécanique lorsque le boîtier de déverrouillage est situé à gauche (état déconnecté).

[e] 40° à 45° sont souhaitables pour réduire le plus possible les détériorations des connecteurs de fond de panier.

[f] L'excentricité du dôme de la face d'extrémité de la férule polie sphériquement doit être inférieure à 50 µm.

Tableau 6 – Classe de la fiche simplex

Classe	Dimensions mm		Remarques
	A		
	Minimales	**Maximales**	
A	Voir l'IEC 61755-3-1		a
B	Voir l'IEC 61755-3-1		a
C	Voir l'IEC 61755-3-1		a
D	Voir l'IEC 61755-3-1		a
A_m	Classe non spécifiée pour l'instant		ab
B_m	1,2467	1,2495	ab
C_m	Classe non spécifiée pour l'instant		ab

[a] Ajouter le numéro de classe au numéro de référence de l'interface.

[b] Voir l'IEC 61755-6-1[1] pour des recommandations.

La Figure 2 représente un exemple d'interface de fiches duplex de 4,5 mm. Le Tableau 7 donne les dimensions de l'interface de fiches duplex de 4,5 mm et le Tableau 8 donne la classe de l'interface de fiches duplex de 4,5 mm.

[1] En cours d'élaboration. Stade au moment de la publication: IEC/CDM 61755-6-1:2021.

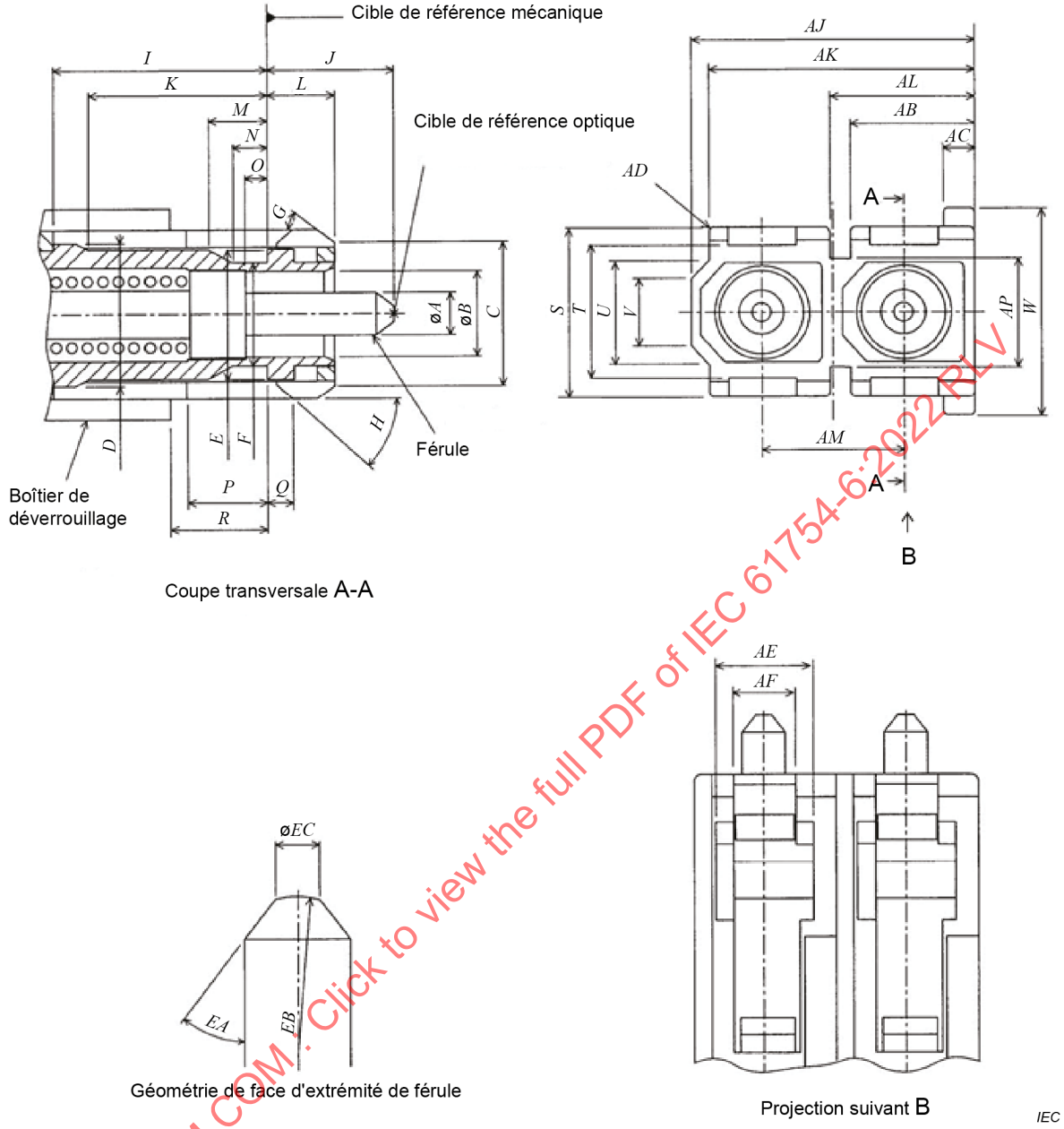


Figure 2 – Interface de fiches duplex de 4,5 mm – Pousser/tirer

Tableau 7 – Dimensions de l'interface de fiches duplex de 4,5 mm

Référence	Dimensions		Remarques
	Minimales	Maximales	
A	Voir Tableau 8		[a]
B	2,6 mm	2,7 mm	
C	4,6 mm	4,8 mm	
D	4,65 mm	4,75 mm	
E	4,3 mm	4,4 mm	
F	3,3 mm	3,4 mm	
G	25°	35°	Angle, unité en degrés
H	25°	35°	Angle, unité en degrés
I	6,55 mm	–	[b]
J	4,2 mm	4,5 mm	[c]
K	5,5 mm	–	
L	2,4 mm	2,5 mm	
M	1,5 mm	–	
N	0,6 mm	–	
O	0,5 mm	–	
P	2,6 mm	–	[b]
Q	1,0 mm	1,1 mm	[b d]
R	2,65 mm	2,9 mm	[b]
S	5,5 mm	5,6 mm	
T	4,3 mm	4,5 mm	
U	–	3,7 mm	
V	–	2,4 mm	
W	6,5 mm	6,6 mm	
AB	3,7 mm	3,85 mm	
AC	0,7 mm	0,9 mm	
AD	0,2 mm	–	Rayon
AE	3,0 mm	–	
AF	2,2 mm	2,3 mm	
AJ	8,8 mm	8,9 mm	
AK	8,35 mm	8,45 mm	
AL	4,55 mm	4,7 mm	
AM	4,45 mm	4,55 mm	
AP	–	3,7 mm	
EA	32,5°	45°	Angle, unité en degrés, [e]
EB	5 mm	30 mm	Rayon [f]
EC	0,45 mm	0,73 mm	Diamètre

[a] Un chanfrein ou un arrondi est admis à une profondeur maximale de 0,5 mm par rapport à la face d'extrémité de la férule.

[b] Le boîtier de déverrouillage doit pouvoir être déplacé vers la droite ou vers la gauche. Les dimensions *L*, *M* et *V* sont indiquées lorsque le boîtier de déverrouillage se trouve à l'extrême droite.

[c] La dimension *J* est indiquée pour la face d'extrémité de la fiche quand elle n'est pas accouplée. La férule peut être déplacée par une force de compression axiale avec des faces d'extrémité en contact direct; la dimension *J* est par conséquent variable. La force de compression de la férule doit être comprise entre 5,5 N et 6,5 N lorsque la position de la cible de référence optique à partir de la cible de référence mécanique est déplacée dans la plage comprise entre 3,9 mm et 4,1 mm. De plus, la dimension *J* doit se réduire à moins de 3,25 mm avec une force de compression axiale relativement importante. La force de compression doit être mesurée conformément à l'IEC 61300-3-22.

[d] *Q* est situé à droite de la cible de référence mécanique lorsque le boîtier de déverrouillage est situé à droite (état connecté) et à gauche de la cible de référence mécanique lorsque le boîtier de déverrouillage est situé à gauche (état déconnecté).

[e] 40° à 45° sont souhaitables pour réduire le plus possible les détériorations des connecteurs de fond de panier.

[f] L'excentricité du dôme de la face d'extrémité de la férule polie sphériquement doit être inférieure à 50 µm.

Tableau 8 – Classe de la fiches duplex de 4,5 mm

Classe	Dimensions		Remarques
	A		
	Minimales	Maximales	
A	Voir l'IEC 61755-3-1		[a]
B	Voir l'IEC 61755-3-1		[a]
C	Voir l'IEC 61755-3-1		[a]
D	Voir l'IEC 61755-3-1		[a]
A_m	Classe non spécifiée pour l'instant		[a] [b]
B_m	1,2467	1,2495	[a] [b]
C_m	Classe non spécifiée pour l'instant		[a] [b]

[a] Ajouter le numéro de classe au numéro de référence de l'interface.

[b] Voir l'IEC 61755-6-1 pour des recommandations.

La Figure 3 représente un exemple d'interface de raccord simplex. Le Tableau 9 donne les dimensions de l'interface de raccord simplex et le Tableau 10 donne la classe de l'interface de raccord simplex.

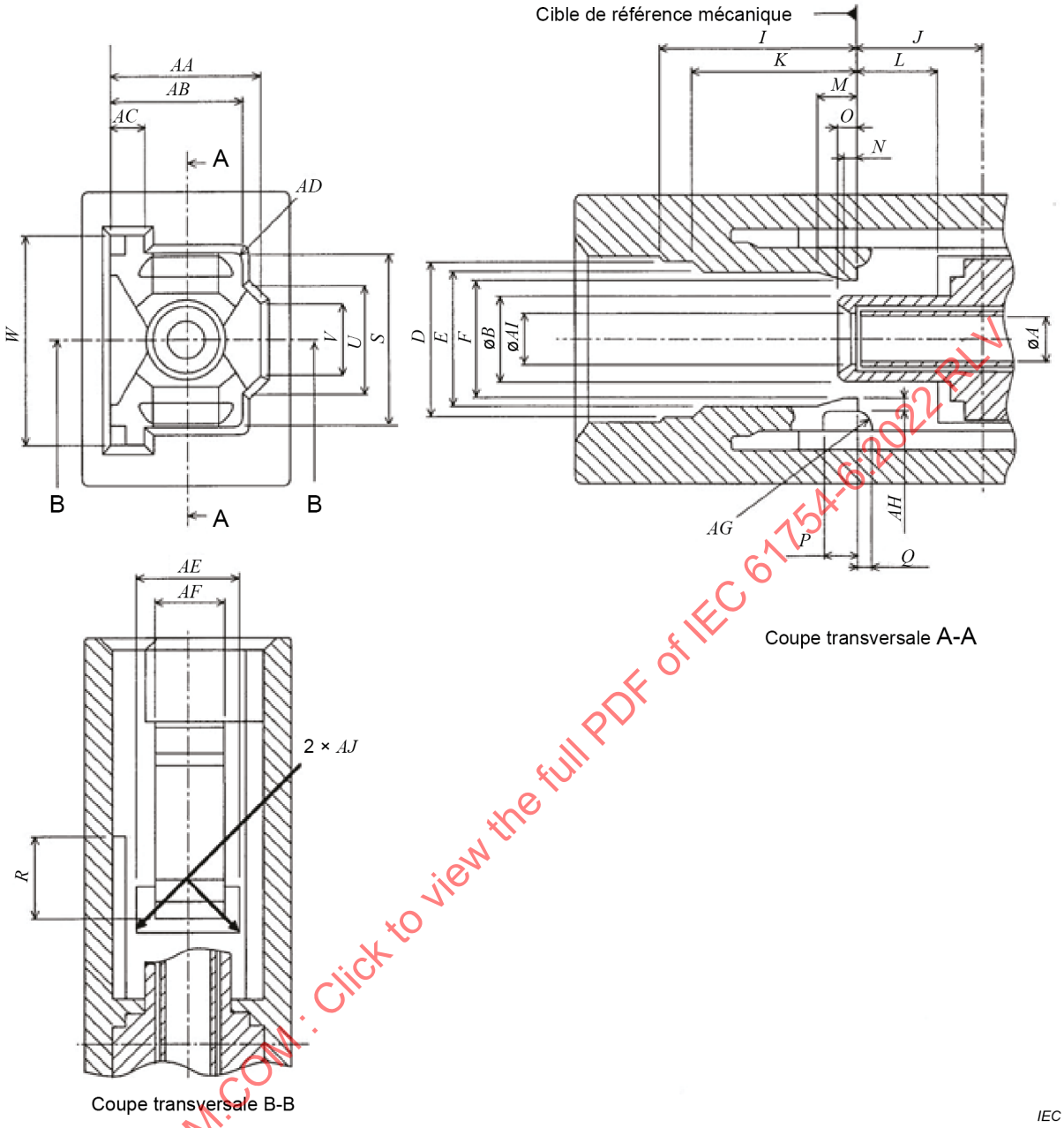


Figure 3 – Interface de raccord simplex – Pousser/tirer

Tableau 9 – Dimensions de l'interface de raccord simplex

Référence	Dimensions mm		Remarques
	Minimales	Maximales	
A	Voir Tableau 10		Diamètre
B	2,39	2,59	Diamètre
D	4,8	5	
E	4,55	–	
F	2,9	3,5	[a]
I	–	6,5	
J	3,9	4,1	
K	–	5,4	
L	2,55	2,7	
M	–	1,4	
N	–	0,55	
O	–	0,6	
P	–	1,2	
Q	–	0,4	
R	–	2,55	
S	5,65	5,75	
U	3,8	4	
V	3,3	–	
W	6,7	–	
AA	4,45	4,55	
AB	4,01	4,11	
AC	0,95	1,15	
AD	–	0,2	Rayon
AE	2,8	2,95	
AF	1,9	2,1	
AG	0,3	–	Rayon
AH	0,4	0,55	
AI	1,34	1,44	Diamètre
AJ	–	0,3	Rayon

[a] La dimension *F* doit dépasser 4,5 mm lorsqu'une fiche est accouplée au raccord ou retirée du raccord.

Tableau 10 – Classe du raccord simplex

Classe	Dimensions mm		Remarques
	Minimales	Maximales	
1	–	–	Manchon élastique[a]

[a] L'élément d'alignement du connecteur est un manchon d'alignement élastique. L'élément doit accepter une broche calibrée au centre du raccord avec une force de 1,0 N à 2,5 N à condition qu'une autre broche calibrée soit insérée dans l'élément par l'autre côté. Le centre du raccord est défini par la position du côté droit de la dimension *J*. La broche calibrée est représentée à la Figure 4 et dans le Tableau 11.

La Figure 4 représente un exemple de broche calibrée pour manchon d'alignement élastique. Le Tableau 11 donne les dimensions de la broche calibrée.

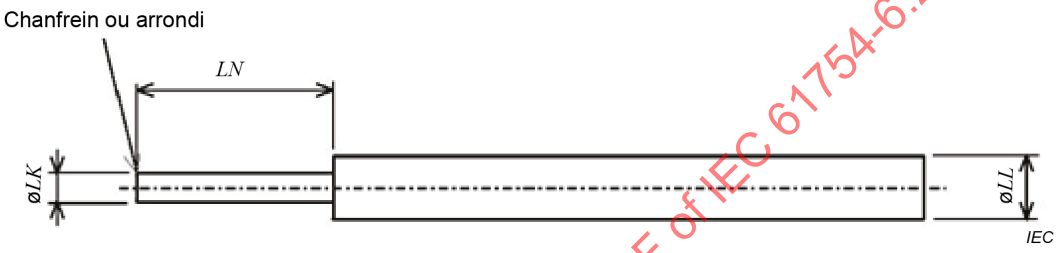


Figure 4 – Broche calibrée pour manchon d'alignement élastique

Tableau 11 – Dimensions de la broche calibrée

Référence	Dimensions mm		Remarques
	Minimales	Maximales	
LK	1,2485	1,2495	Rugosité de surface: Classe N4 (0,2 µm de rayon)
LL	2,6	2,8	
LN	4,7	–	

La Figure 5 représente un exemple d'interface de raccord duplex de 4,5 mm. Le Tableau 12 donne les dimensions de l'interface de raccord duplex de 4,5 mm et le Tableau 13 donne la classe de l'interface de raccord duplex de 4,5 mm.

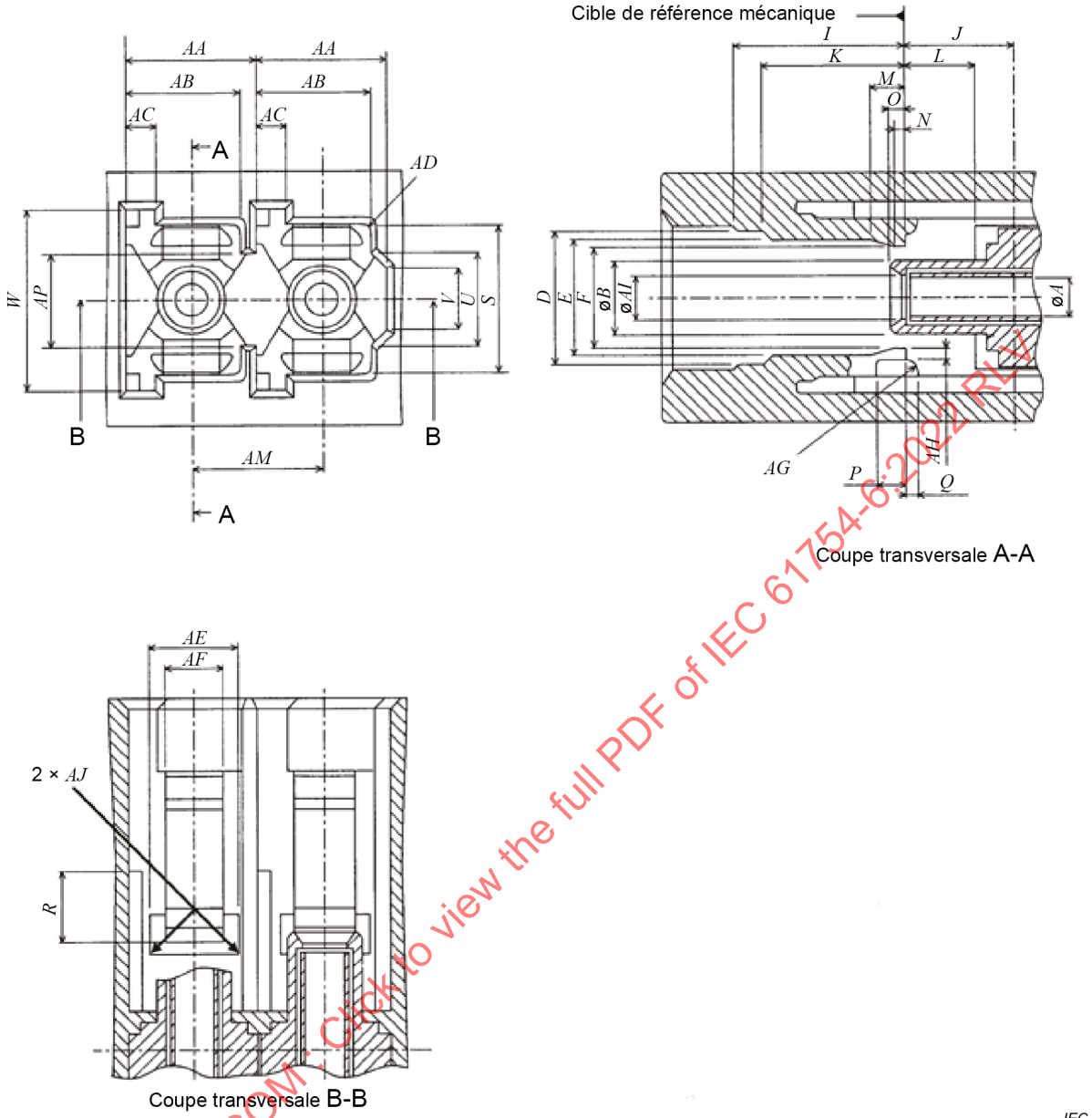


Figure 5 – Interface de raccord duplex de 4,5 mm – Pousser/tirer

Tableau 12 – Dimensions de l'interface de raccord duplex de 4,5 mm

Référence	Dimensions mm		Remarques
	Minimales	Maximales	
A	Voir Tableau 13		
B	2,39	2,59	
D	4,8	5	
E	4,55	–	
F	2,9	3,5	[a]
I	–	6,5	
J	3,9	4,1	
K	–	5,4	
L	2,55	2,7	
M	–	1,4	
N	–	0,55	
O	–	0,6	
P	–	1,2	
Q	–	0,4	
R	–	2,55	
S	5,65	5,75	
U	3,8	4	
V	3,3	–	
W	6,7	–	
AA	4,45	4,55	
AB	4,01	4,11	
AC	0,95	1,15	
AD	–	0,2	Rayon
AE	2,8	2,95	
AF	1,9	2,1	
AG	0,3	–	Rayon
AH	0,4	0,55	
AI	1,34	1,44	Diamètre
AJ	–	0,3	Rayon
AM	4,45	4,55	
AP	3,8	4	

[a] La dimension *F* doit dépasser 4,5 mm lorsqu'une fiche est accouplée au raccord ou retirée du raccord.

Tableau 13 – Classe du raccord duplex de 4,5 mm

Classe	Dimensions mm		Notes
	Minimales	Maximales	
1	–	–	Manchon élastique[a]

[a] L'élément d'alignement du connecteur est un manchon d'alignement élastique. L'élément doit accepter une broche calibrée au centre du raccord avec une force de 1,0 N à 2,5 N à condition qu'une autre broche calibrée soit insérée dans l'élément par l'autre côté. Le centre du raccord est défini par la position du côté droit de la dimension J. La broche calibrée est représentée à la Figure 4 et dans le Tableau 11.

La Figure 6 représente un exemple d'interface de raccord à 8 ports. Le Tableau 14 donne les dimensions de l'interface de raccord à 8 ports et le Tableau 15 donne la classe de l'interface de raccord à 8 ports.

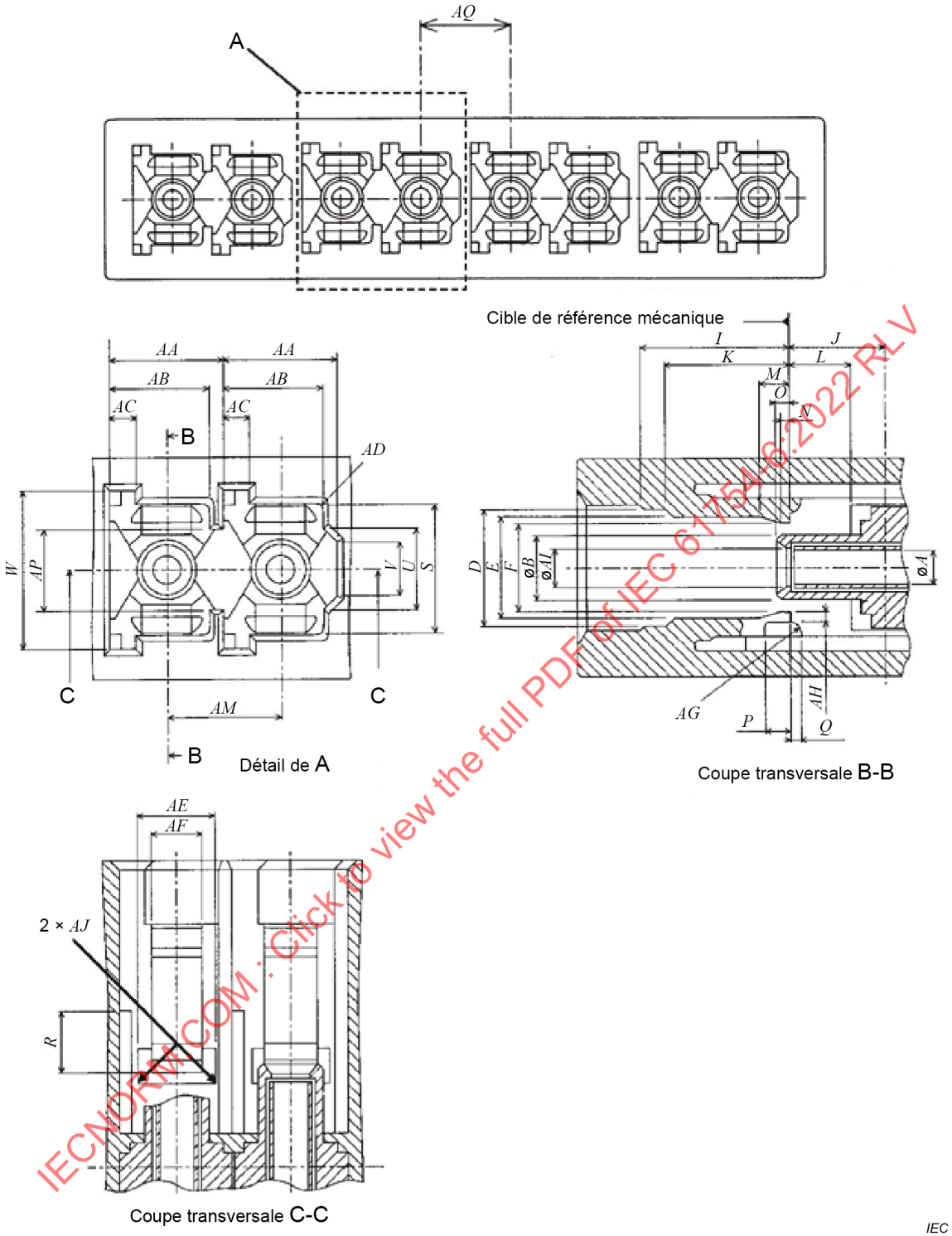


Figure 6 – Interface de raccord à 8 ports – Pousser/tirer

Tableau 14 – Dimensions de l'interface de raccord à 8 ports

Référence	Dimensions mm		Remarques
	Minimales	Maximales	
A	Voir Tableau 15		
B	2,39	2,59	
D	4,8	5	
E	4,55	–	
F	2,9	3,5	[a]
I	–	6,5	
J	3,9	4,1	
K	–	5,4	
L	2,55	2,7	
M	–	1,4	
N	–	0,55	
O	–	0,6	
P	–	1,2	
Q	–	0,4	
R	–	2,55	
S	5,65	5,75	
U	3,8	4	
V	3,3	–	
W	6,7	–	
AA	4,45	4,55	
AB	4,01	4,11	
AC	0,95	1,15	
AD	–	0,2	Rayon
AE	2,8	2,95	
AF	1,9	2,1	
AG	0,3	–	Rayon
AH	0,4	0,55	
AI	1,34	1,44	Diamètre
AJ	–	0,3	Rayon
AM	4,45	4,55	
AP	3,8	4	
AQ	4,8	5,2	

[a] La dimension *F* doit dépasser 4,5 mm lorsqu'une fiche est accouplée au raccord ou retirée du raccord.

Tableau 15 – Classe du raccord à 8 ports

Classe	Dimensions mm		Notes
	Minimales	Maximales	
1	–	–	Manchon élastique[a]

[a] L'élément d'alignement du connecteur est un manchon d'alignement élastique. L'élément doit accepter une broche calibrée au centre du raccord avec une force de 1,0 N à 2,5 N à condition qu'une autre broche calibrée soit insérée dans l'élément par l'autre côté. Le centre du raccord est défini par la position du côté droit de la dimension *J*. La broche calibrée est représentée à la Figure 4 et dans le Tableau 11.

La Figure 7 représente un exemple d'interface de fiche. Le Tableau 16 donne les dimensions de l'interface de fiches et le Tableau 17 donne la classe de l'interface de fiche.

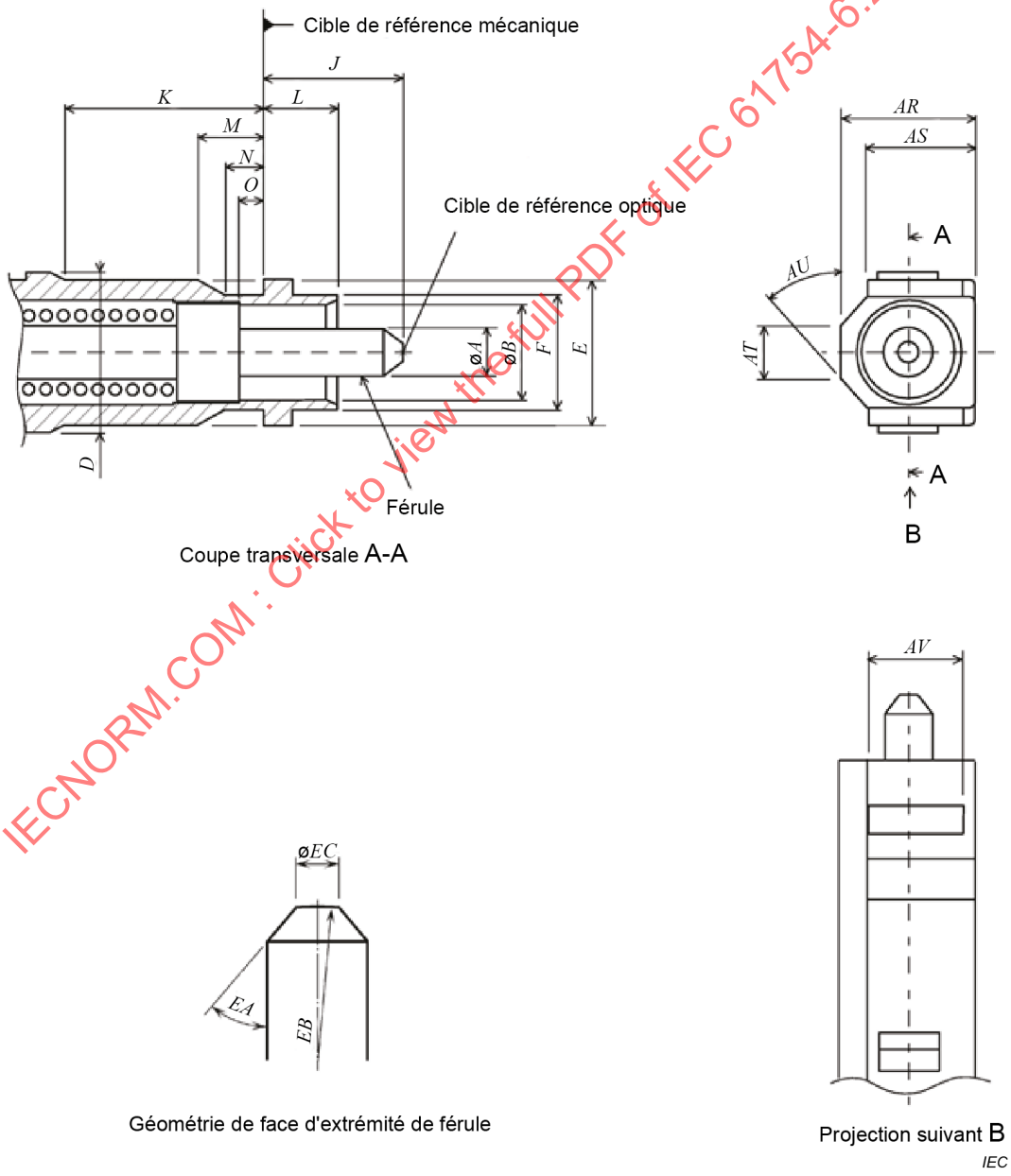


Figure 7 – Interface de fiches – pour boîtiers de carte imprimée

Tableau 16 – Dimensions de l'interface de fiche

Référence	Dimensions		Notes
	Minimales	Maximales	
A	Voir Tableau 17		[a]
B	2,6 mm	2,7 mm	Diamètre
D	4,65 mm	4,75 mm	
E	4,3 mm	4,4 mm	
F	3,3 mm	3,4 mm	
J	4,2 mm	4,5 mm	[b]
K	5,5 mm	–	
L	2,4 mm	2,5 mm	
M	1,5 mm	–	
N	0,6 mm	–	
O	0,5 mm	–	
AR	3,65 mm	3,75 mm	
AS	2,9 mm	3,0 mm	
AT	1,7 mm	2,1 mm	
AU	43°	47°	Angle, unité en degrés
AV	–	3,0 mm	
EA	32,5°	45°	Angle, unité en degrés, [c]
EB	5 mm	30 mm	Rayon[d]
EC	0,45 mm	0,73 mm	

NOTE 1 Un chanfrein ou un arrondi est admis à une profondeur maximale de 0,5 mm par rapport à la face d'extrémité de la férule.

NOTE 2 40° à 45° sont souhaitables pour réduire le plus possible les détériorations des connecteurs de fond de panier.

[a] Un chanfrein ou un arrondi est admis à une profondeur maximale de 0,5 mm par rapport à la face d'extrémité de la férule.

[b] La dimension *J* est indiquée pour la face d'extrémité de la fiche quand elle n'est pas accouplée. La férule peut être déplacée par une force de compression axiale avec des faces d'extrémité en contact direct, la dimension *J* est par conséquent variable. La force de compression de la férule doit être comprise entre 5,5 N et 6,5 N lorsque la position de la cible de référence optique à partir de la cible de référence mécanique est déplacée dans la plage comprise entre 3,9 mm et 4,1 mm. De plus, la dimension *J* doit se réduire à moins de 3,25 mm avec une force de compression axiale relativement importante. La force de compression doit être mesurée conformément à l'IEC 61300-3-22.

[c] 40° à 45° sont souhaitables pour réduire le plus possible les détériorations des connecteurs de fond de panier.

[d] L'excentricité du dôme de la face d'extrémité de la férule polie sphériquement doit être inférieure à 50 µm.

Tableau 17 – Classe de la fiche

Classe	Dimensions mm		Notes
	A		
	Minimales	Maximales	
A	Voir l'IEC 61755-3-1		a
B	Voir l'IEC 61755-3-1		a
C	Voir l'IEC 61755-3-1		a
D	Voir l'IEC 61755-3-1		a
A_m	Classe non spécifiée pour		a b
B_m	1,2467	1,2495	a b
C_m	Classe non spécifiée pour		a b

[a] Ajouter le numéro de classe au numéro de référence de l'interface.

[b] Voir l'IEC 61755-6-1 pour des recommandations.

La Figure 8 représente un exemple d'interface de support de manchon. Le Tableau 18 donne les dimensions de l'interface de support de manchon et le Tableau 19 donne la classe de l'interface de support de manchon.

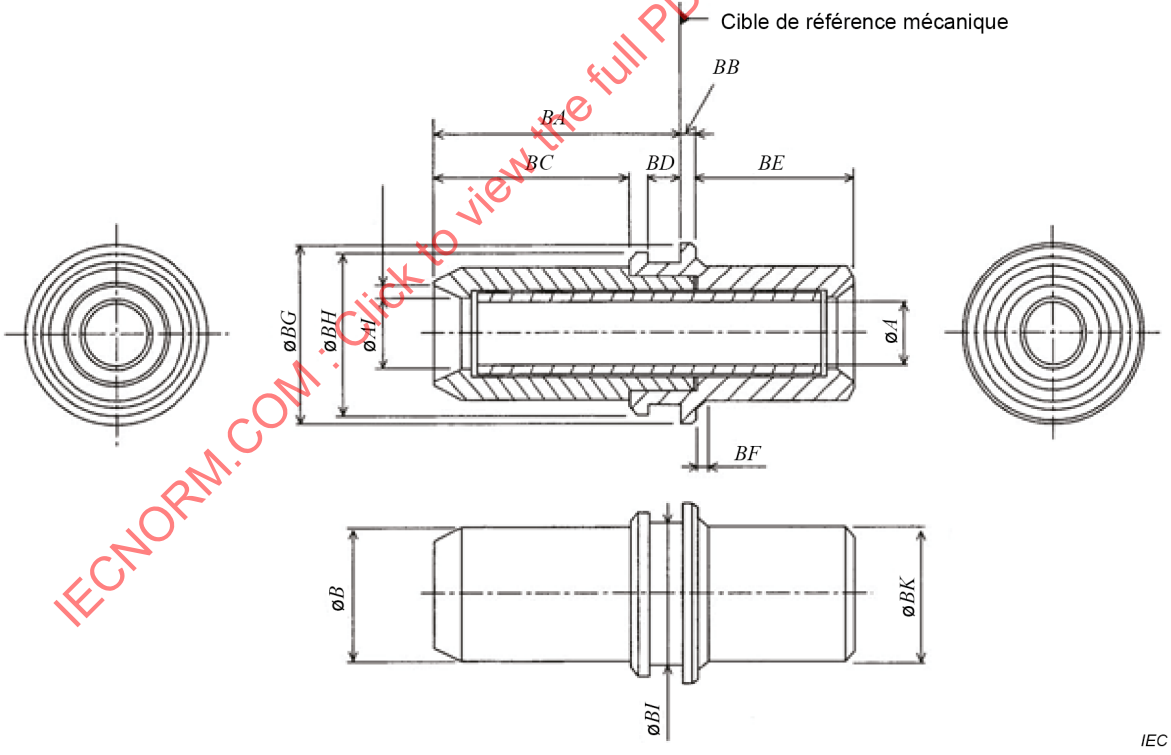


Figure 8 – Interface de support de manchon

Tableau 18 – Dimensions de l'interface de support de manchon

Référence	Dimensions mm		Remarques
	Minimales	Maximales	
A	Voir Tableau 19		
B	2,54	2,59	Diamètre
AI	1,34	1,39	Diamètre
BA	4,65	4,85	
BB	0,20	0,30	
BC	3,65	3,85	
BD	0,65	0,85	
BE	2,9	3,1	
BF	–	0,25	Chanfrein à 45°
BG	3,5	3,54	Diamètre
BH	3,1	3,2	Diamètre
BI	2,5	2,7	Diamètre
BJ	0,29	0,37	
BK	2,49	2,59	Diamètre

Tableau 19 – Classe du support de manchon

Classe	Dimensions mm		Remarques
	Minimales	Maximales	
1	–	–	Manchon élastique[a]

[a] L'élément d'alignement du connecteur est un manchon d'alignement élastique. L'élément doit pouvoir recevoir une broche calibrée jusqu'à une profondeur de 4,3 mm, du côté gauche, avec une force comprise entre 1 N et 2,5 N, à condition qu'une autre broche calibrée soit insérée dans l'élément par l'autre côté. La broche calibrée est représentée à la Figure 4 et dans le Tableau 11.

La Figure 9 représente un exemple d'interface de boîtier de fond de panier à 2 ports. Le Tableau 20 donne les dimensions de l'interface de boîtier de fond de panier à 2 ports et le Tableau 21 donne la classe de l'interface de boîtier de fond de panier à 2 ports.

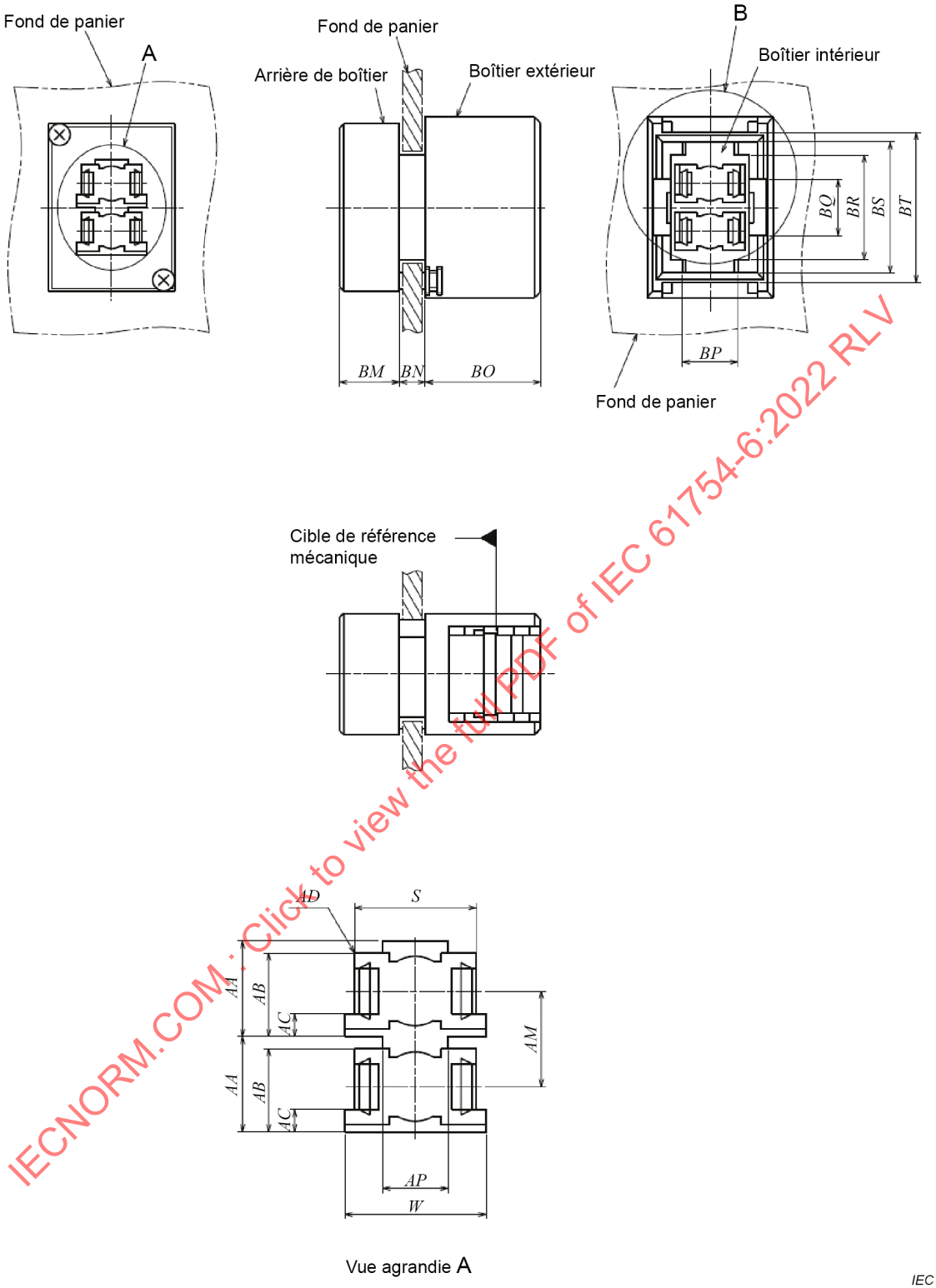
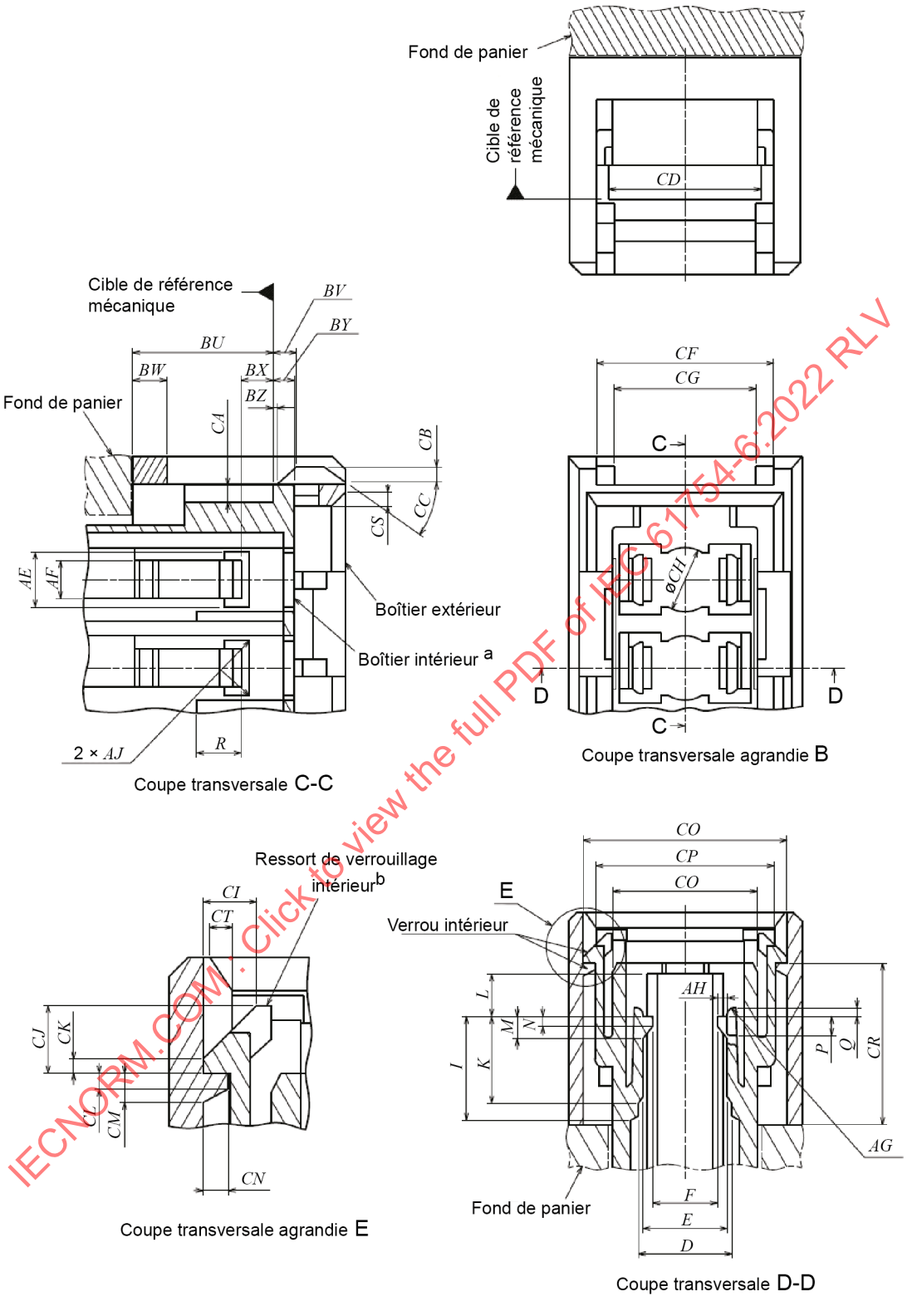


Figure 9 – Interface de boîtier de fond de panier à 2 ports *(1 de 2)*



[a] À la figure représentant la coupe transversale C-C, il convient que le boîtier intérieur puisse être déplacé d'au moins 0,9 mm vers la droite et d'au moins 2 mm vers la gauche lorsque le verrou intérieur est débloqué.

[b] À la figure représentant la coupe transversale agrandie E, il convient que le ressort du verrou intérieur puisse être déplacé de plus de 0,65 mm vers la droite lorsque le verrou intérieur est débloqué ou verrouillé.

Figure 9 *(2 de 2)*

Tableau 20 – Dimensions de l'interface de boîtier de fond de panier à 2 ports

Référence	Dimensions		Remarques
	Minimales	Maximales	
D	4,8 mm	5 mm	
E	4,55 mm	–	
F	2,9 mm	3,5 mm	a
I	–	6,5 mm	
K	–	5,4 mm	
L	2,6 mm	2,7 mm	
M	–	1,4 mm	
N	–	0,6 mm	
P	–	1,2 mm	
Q	–	0,4 mm	
R	–	2,55 mm	
S	5,65 mm	5,75 mm	
W	6,7 mm	–	
AA	4,45 mm	4,55 mm	
AB	4,01 mm	4,11 mm	
AC	0,95 mm	1,15 mm	
AD	–	0,2 mm	Rayon
AE	2,8 mm	2,95 mm	
AF	1,9 mm	2,1 mm	
AG	0,3 mm	–	Rayon
AH	0,4 mm	0,55 mm	
AJ	–	0,3 mm	Rayon
AM	4,45 mm	4,55 mm	
AP	3,8 mm	4,0 mm	
BM	–	–	Voir Tableau 21
BN	–	–	Voir Tableau 21
BO	12,25 mm	12,35 mm	
BP	5,5 mm	5,7 mm	
BQ	4,6 mm	4,7 mm	
BR	11,2 mm	11,4 mm	
BS	13,95 mm	14,05 mm	
BT	16,2 mm	16,3 mm	
BU	7,72 mm	7,78 mm	b
BV	1,1 mm	1,4 mm	b
BW	2,2 mm	2,6 mm	
BX	1,95 mm	2,05 mm	
BY	1,15 mm	1,25 mm	
BZ	0,3 mm	0,4 mm	b
CA	0,725 mm	0,925 mm	
CB	0,9 mm	1,1 mm	
CC	35°	50°	Angle, unité en degrés
CD	8,1 mm	9,1 mm	

Référence	Dimensions		Remarques
	Minimales	Maximales	
CF	10,05 mm	10,35 mm	
CG	8,1 mm	8,3 mm	
CH	3,4 mm	3,6 mm	Diamètre
CI	1,17 mm	1,27 mm	
CJ	1,7 mm	2,3 mm	
CK	0,2 mm	0,3 mm	
CL	0,3 mm	0,4 mm	
CM	0,8 mm	1 mm	
CN	0,55 mm	0,65 mm	
CO	11,55 mm	11,65 mm	
CP	9,95 mm	10,03 mm	
CQ	7,92 mm	8 mm	
CR	9,37 mm	9,43 mm	
CS	0,55 mm	0,65 mm	Chanfrein à 45°
CT	0,55 mm	0,65 mm	Chanfrein à 45°

[a] La dimension *F* doit dépasser 4,5 mm lorsqu'une fiche est accouplée au boîtier de fond de panier ou retirée du boîtier de fond de panier.

[b] Ces dimensions sont indiquées lorsque le boîtier intérieur est déplacé vers la position située la plus à gauche et lorsque le verrou intérieur est complètement verrouillé.

Tableau 21 – Classe du boîtier de fond de panier à 2 ports

Classe	Référence	Dimensions mm		Remarques
		Minimales	Maximales	
1	*BM*	6	6,2	Épaisseur de fond de panier 2,4 mm
	BN	2,65	2,75	
2	*BM*	6	6,2	Épaisseur de fond de panier 3,2 mm
	BN	3,45	3,55	

La Figure 10 représente un exemple d'interface de boîtier de carte imprimée à 2 ports. Le Tableau 22 donne les dimensions de l'interface de boîtier de carte imprimée à 2 ports.

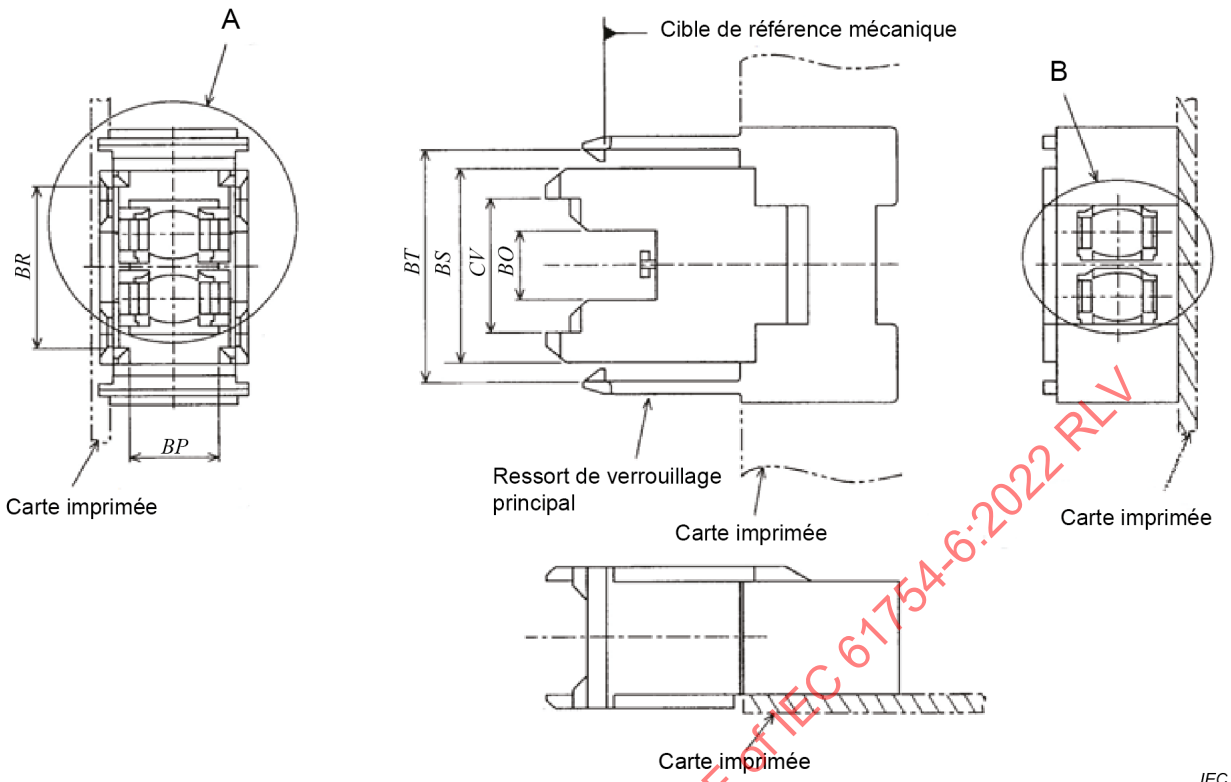


Figure 10 – Interface de boîtier de carte imprimée à 2 ports *(1 de 2)*

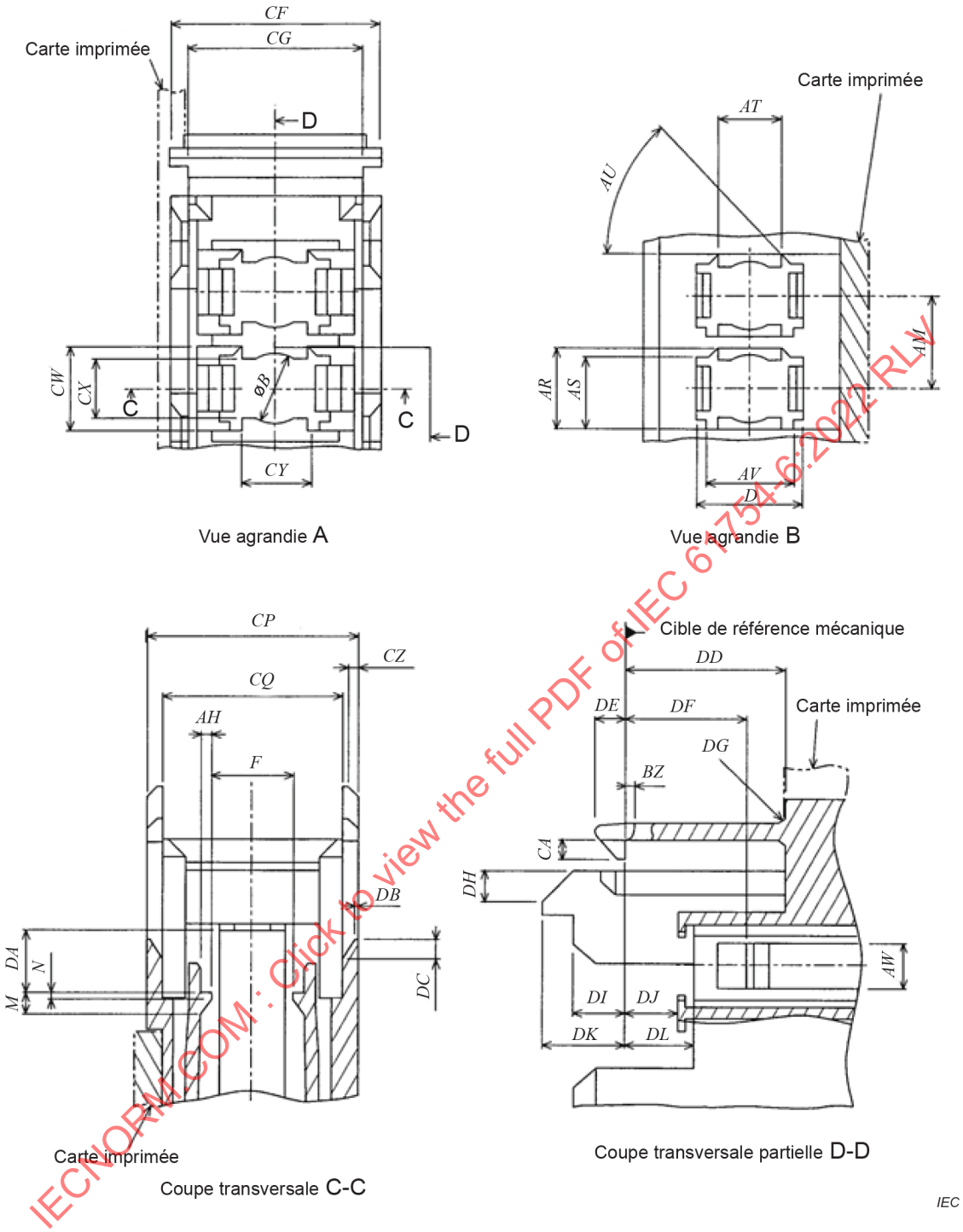


Figure 10 *(2 de 2)*

Tableau 22 – Dimensions de l'interface de boîtier de carte imprimée à 2 ports

Référence	Dimensions		Remarques
	Minimales	Maximales	
B	3,07 mm	3,15 mm	Diamètre, [a]
D	5 mm	5,15 mm	
F	2,9 mm	3,5 mm	[b]
M	–	1,4 mm	
N	–	0,6 mm	
AH	0,4 mm	0,55 mm	
AM	4,45 mm	4,55 mm	
AR	4 mm	4,1 mm	
AS	3,25 mm	3,35 mm	
AT	2,3 mm	2,6 mm	
AU	42°	48°	Angle, unité en degrés
AV	4,7 mm	4,75 mm	
AW	1,7 mm	2,3 mm	
BP	5,9 mm	6,1 mm	
BQ	4,75 mm	4,95 mm	
BR	11,5 mm	11,7 mm	
BS	13,8 mm	13,9 mm	
BT	16 mm	16,4 mm	[c]
BZ	0,3 mm	0,4 mm	
CA	0,73 mm	0,83 mm	
CF	9,8 mm	9,9 mm	
CG	7,8 mm	8 mm	
CP	9,82 mm	9,9 mm	
CQ	8,01 mm	8,09 mm	
CV	9,2 mm	9,4 mm	
CW	3,95 mm	4,15 mm	
CX	2,75 mm	2,95 mm	
CY	2,9 mm	3,1 mm	
CZ	0,6 mm	0,7 mm	Chanfrein à 45°
DA	2,89 mm	2,99 mm	
DB	0,2 mm	0,3 mm	
DC	1 mm	1,1 mm	
DD	9,2 mm	9,6 mm	
DE	1,35 mm	1,45 mm	
DF	5,75 mm	5,85 mm	
DG	–	1 mm	Rayon
DH	1,45 mm	1,55 mm	Chanfrein à 45°
DI	1,8 mm	2,1 mm	
DJ	2,35 mm	2,45 mm	
DK	3,84 mm	3,94 mm	
DL	3,37 mm	3,43 mm	