

INTERNATIONAL STANDARD

IEC
60874-19-2

QC 910005XX0002

First edition
1999-09

Connectors for optical fibres and cables –

Part 19-2:

Fibre optic adaptor (duplex) type SC for single-mode fibre connectors –

Detail specification

ITC STANDARD PREVIEW
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Connecteurs pour fibres et câbles optiques –

[IEC 60874-19-2:1999](#)

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Partie 19-2:

Adaptateur pour fibres optiques (duplex) de type SC, pour connecteurs pour fibres optiques monomodales – Spécification particulière



Reference number
IEC 60874-19-2:1999(E)

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For graphical symbols, and letter symbols and signs approved by the IEC for general use, readers are referred to publications IEC 60027: *Letter symbols to be used in electrical technology*, IEC 60417: *Graphical symbols for use on equipment. Index, survey and compilation of the single sheets* and IEC 60617: *Graphical symbols for diagrams*.

* See web site address on title page.

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Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

PRICE CODE

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For price, see current catalogue

INTERNATIONAL ELECTROTECHNICAL COMMISSION

CONNECTORS FOR OPTICAL FIBRES AND CABLES –

Part 19-2: Fibre optic adaptor (duplex) type SC for single-mode fibre connectors – Detail specification

FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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- 3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical specifications, technical reports or guides and they are accepted by the National Committees in that sense.
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- 6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 60874-19-2 has been prepared by subcommittee 86B: Fibre optic interconnecting devices and passive components, of IEC technical committee 86: Fibre optics.

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

FDIS	Report on voting
86B/1221/FDIS	86B/1257/RVD

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

This publication has not been drafted in complete accordance with the ISO/IEC Directives, Part 3.

The QC number that appears on the front cover of this publication is the specification number in the IEC Quality Assessment System for Electronic Components (IECQ).

The references to clauses or subclauses of IEC 60874-1 indicated in this part apply to the third edition of IEC 60874-1.

The committee has decided that the contents of this publication will remain unchanged until 2012. At this date, the publication will be

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

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

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CONNECTORS FOR OPTICAL FIBRES AND CABLES

Part 19-2: Fibre optic adaptor (duplex) type SC for single-mode fibre connectors – Detail specification

NATIONAL STANDARDS

ORGANIZATION:

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Date

DETAIL SPECIFICATION IEC QC 910005XX0002

FIBRE OPTIC COMPONENT OF ASSESSED QUALITY IN ACCORDANCE WITH

- GENERIC SPECIFICATION: QC 910000 (IEC 60874-1)
- BLANK DETAIL SPECIFICATION: QC 910004 (IEC 60874-1-1)

FIBRE OPTIC ADAPTOR

CLASSIFICATION:

Type: Name: SC-duplex for single-mode connectors

For use in datacom applications as specified in ISO/IEC International Standard 11801:

Generic cabling for customer premises

Configuration: plug-adaptor-plug

Coupling: push-pull

Control dimensions:

- Adaptor: see figures 1, 2 and 3
- Gauge: figures 4 and 5

Variants: see page 10

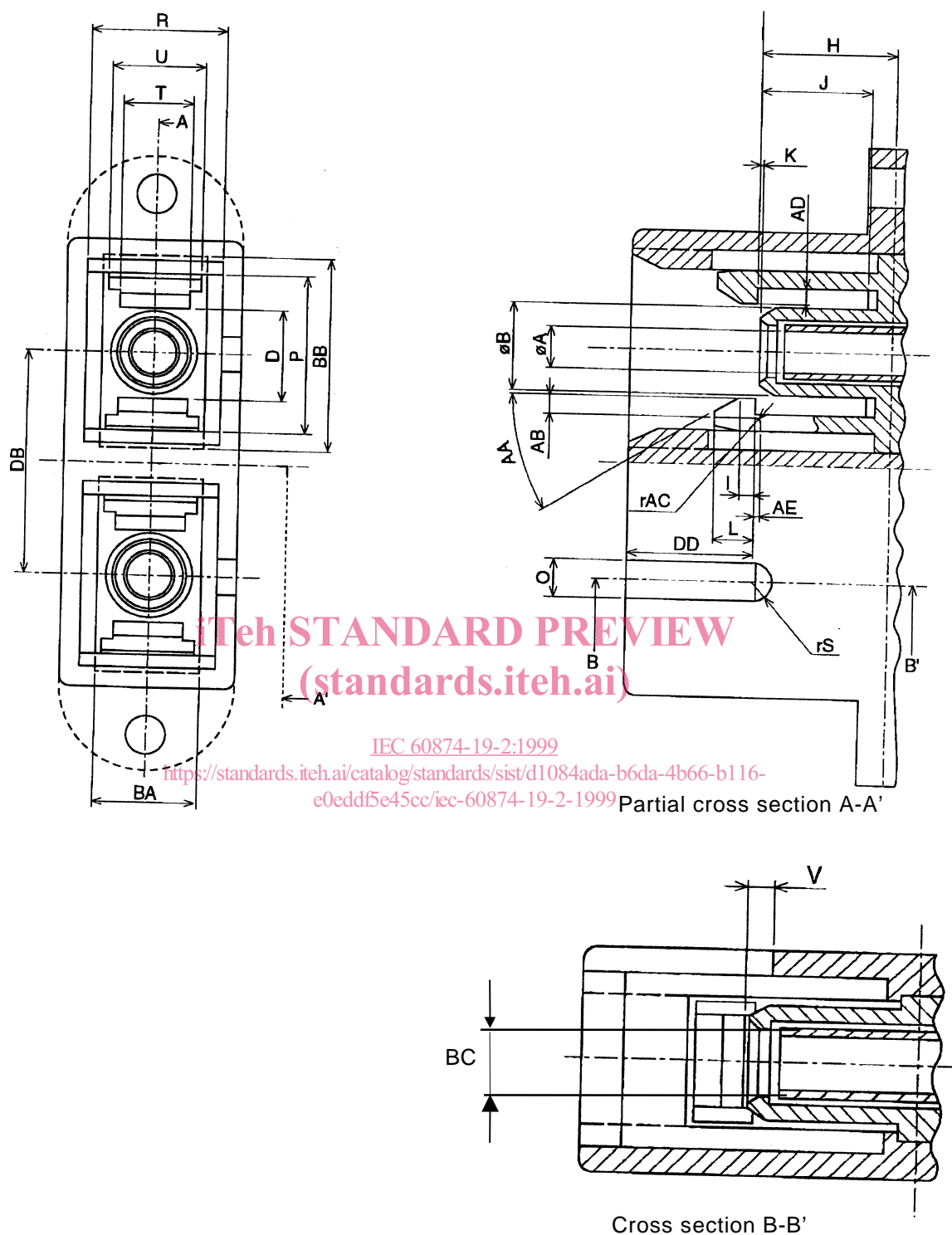
Climatic category: 10/60/4

Environmental category: 4

Assessment level: A

QUALIFICATION PROCEDURE: Fixed sample procedure

SAFETY WARNING: Take care when handling small diameter optical fibre to prevent puncturing the skin, especially in the eye area. Direct viewing of the end of an optical fibre when it is propagating energy is not recommended unless prior assurance is obtained as to the safe energy output level.



IEC 1025/99

NOTE – The dotted lines are for information only and represent the outer shape of the fixture of the adaptor.

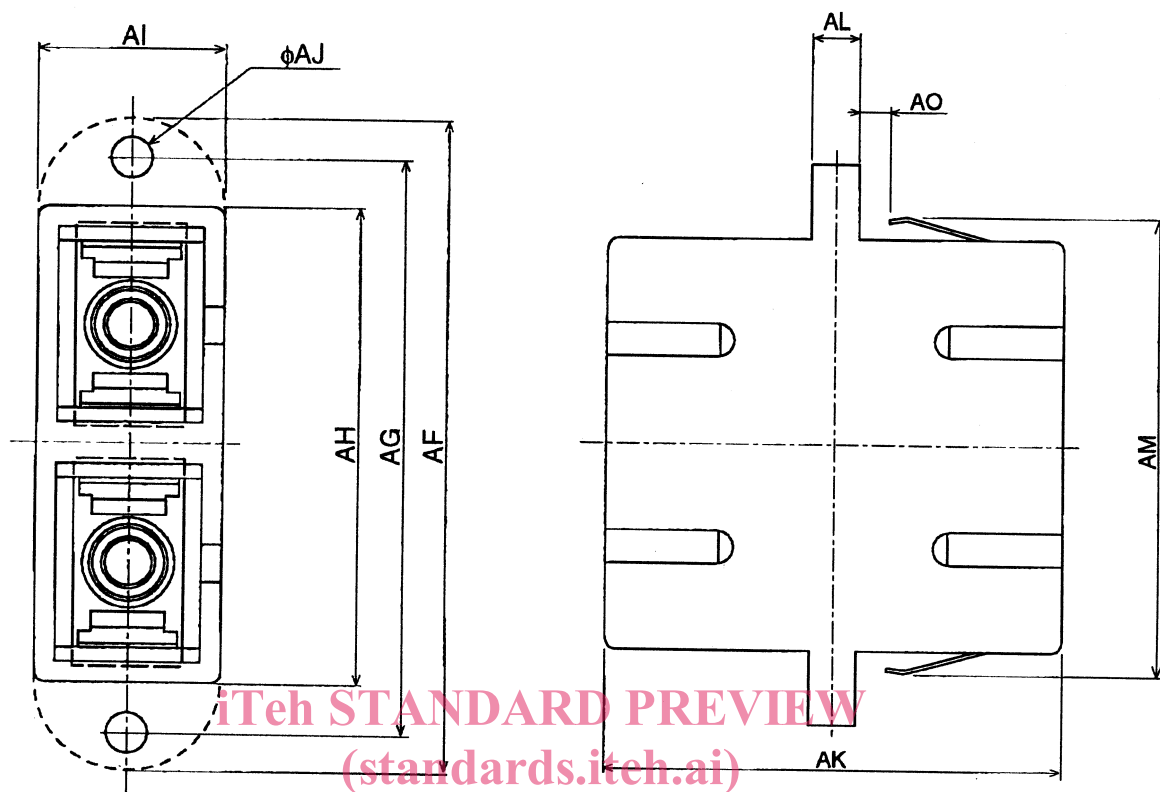
Figure 1 – Adaptor mating face dimensions

Reference	Dimensions		Notes
	Minimum	Maximum	
A	–	–	Diameter, 1 Diameter
B	4,59 mm	4,79 mm	
D	4,90 mm	5,50 mm	2 Radius
H	6,90 mm	7,10 mm	
I	0,40 mm	0,80 mm	
J	5,51 mm	5,90 mm	
K	0,06 mm	1,00 mm	
L	1,90 mm	2,10 mm	
O	2,00 mm	2,20 mm	
P	9,00 mm	9,10 mm	
R	7,40 mm	7,50 mm	
rS	1,00 mm	1,10 mm	
T	3,80 mm	4,04 mm	Diameter
U	5,00 mm	5,30 mm	
V	0,60 mm	1,60 mm	
AA	27°	33°	
AB	0,80 mm	0,90 mm	
AC	0,40 mm	0,60 mm	
AD	0,70 mm	0,80 mm	
AE	0,40 mm	0,60 mm	
BA	5,40 mm	5,60 mm	
BB	10,80 mm	11,20 mm	
BC	2,70 mm	2,80 mm	Diameter
DB	12,65 mm	12,75 mm	
DD	5,60 mm	6,99 mm	

NOTES

- 1 The connector alignment feature is a resilient alignment sleeve. The gauge retention force shall be measured with two gauge pins, each inserted to the middle of the alignment feature. The gauge retention force shall be from 2,0 N to 5,9 N for PC and from 2,9 N to 5,9 N for APC.
- 2 For the angled PC variants No. 1005 and 1006, the two slots "O" shall be symmetric within $\pm 0,03$ mm.
- 3 Where a tolerance of form is not specified, the limits of the dimensions for a feature control the form as well as the size.
- 4 Where interrelated features of size (features shown with a common axis or centre plane) have no geometric tolerance of location or run-out specified, the limits of the dimensions for a feature control the location tolerance as well as the size.
- 5 Where perpendicular features (features shown at right angles) have no geometric tolerance of orientation or run-out specified, the limits of the dimensions for a feature control the orientation tolerance as well as the size.

Figure 1 – Adaptor mating face dimensions *(continued)*



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Reference	Dimension mm		Notes
	Minimum	Maximum	
AF	34,50	35,20	1
AG	30,20	31,20	
AH	25,20	25,90	
AJ	2,20	2,40	
AI	9,20	9,40	1
AK	27,00	27,80	
AL	2,70	2,80	2
AM	27,50	29,50	
AO	1,70	2,20	

NOTES

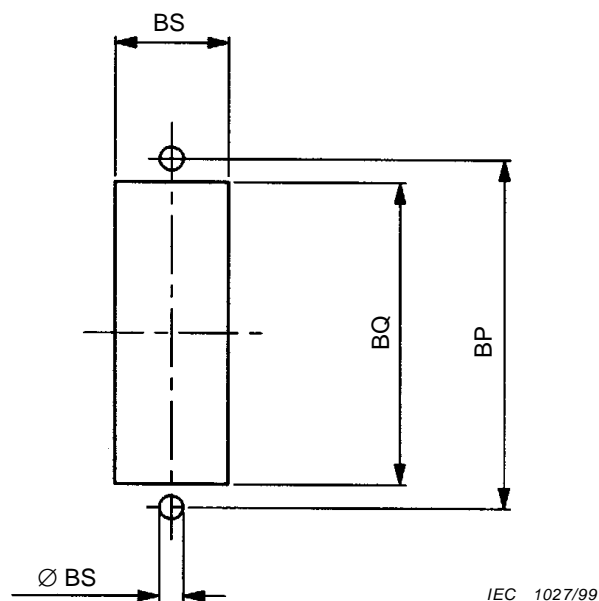
1

The dotted lines are illustrative only; the flange may be radiused or have square corners.

2

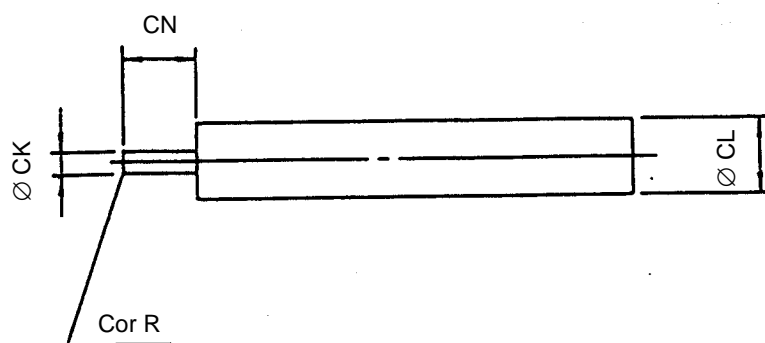
The maximum thickness of the panel shall be 1,6 mm when the adaptor is mounted using the spring hook.

Figure 2 – Adaptor dimensions



Reference	Dimensions mm		Notes
	Minimum	Maximum	
BP	30,60	31,20	1
BQ	26,20	26,40	
BR	2,40	2,60	
BS	9,50	10,00	
NOTE – If the adaptor is mounted using bolts only, this hole shall be threaded M2.			

Figure 3 – Panel piercing and mounting detail



IEC 1028/99

Reference	Dimensions mm		Notes
	Minimum	Maximum	
CK	2,4985	2,4995	1
CL	2,80	4,80	
CN	7,00	–	
NOTE – Surface roughness grade N4 (0,2 μm Ra).			

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Figure 4 – Dimension of a pin gauge for an adaptor

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