

INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Connectors for electronic equipment – Product requirements –
Part 1: Generic specification**

**Connecteurs pour équipements électroniques – Exigences de produit –
Partie 1: Spécification générique**

IEC 61076-1:2006

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**CONNECTORS FOR ELECTRONIC EQUIPMENT –
PRODUCT REQUIREMENTS –****Part 1: Generic specification**

FOREWORD

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IEC 61076-1 edition 2.1 contains the second edition (2006-04) [documents 48B/1621/FDIS and 48B/1671/RVD] and its amendment 1 (2019-01) [documents 48B/2678/FDIS and 48B/2691/RVD].

In this Redline version, a vertical line in the margin shows where the technical content is modified by amendment 1. Additions are in green text, deletions are in strikethrough red text. A separate Final version with all changes accepted is available in this publication.

International Standard IEC 61076-1 has been prepared by subcommittee 48B: Connectors, of IEC technical committee 48: Electromechanical components and mechanical structures for electronic equipment.

This second edition constitutes a technical revision. Modifications with respect to the previous edition are described in the introduction.

This standard is to be used in conjunction with IEC 62197-1:2006.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of the base publication and its amendment will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

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INTRODUCTION

The objective of this work is to update the quality assessment procedures of the connector specifications to the current state of the art industrial procedures.

At the time of publication, all the connector detail specifications dealt with by subcommittee 48B of the International Electrotechnical Commission were built as described in Figure 1 with 5 major chapters.

The most significant out of date procedures relate to the lot-by-lot tests with different inspection levels and acceptance quality level and to the periodic tests with permitted number of defectives.

It was felt necessary to introduce the capability and the technology approval together with the basic design parameters of statistical process control as a feed back system to have a continuous control of the quality during the various steps of manufacture.

It was also felt appropriate to split the current documentation structure into two separate structures of documents which, in the day to day use of specifications, satisfy most users, see Figure 2.

The documentation system will be split into two parts:

- Product requirements
- Quality assessment requirements

The structure for the Product Specification contains characteristics, dimensions, performance requirements and test schedules.

The structure for the quality assessment specification contains the requirements to obtain Qualification Approval (QA) for a given performance level (per environment category), Capability Approval (CA) per family of connectors or Technology Approval (TA) comprising all relevant technologies for connector production.

Capability Approval or Technology Approval combined with statistical process control parameters are intended to replace lot-by-lot and periodic tests.

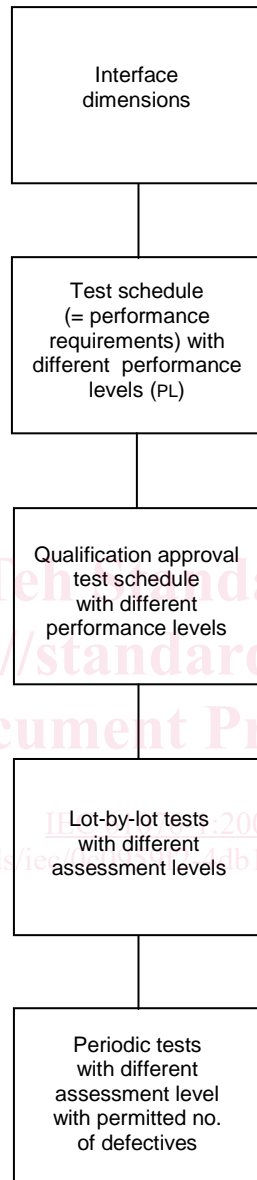
To fully certify a product, a combination of the two structures will have to be selected by the user, keeping in mind that in the statistical process control, key characteristics shall be agreed between manufacturer and user.

A generic product specification with a 4 level structure consists of a generic, a sectional, a blank detail and a detail specification.

From this, it can be concluded that two generic specifications are being circulated, one document for the product aspects and a second one for the quality aspects.

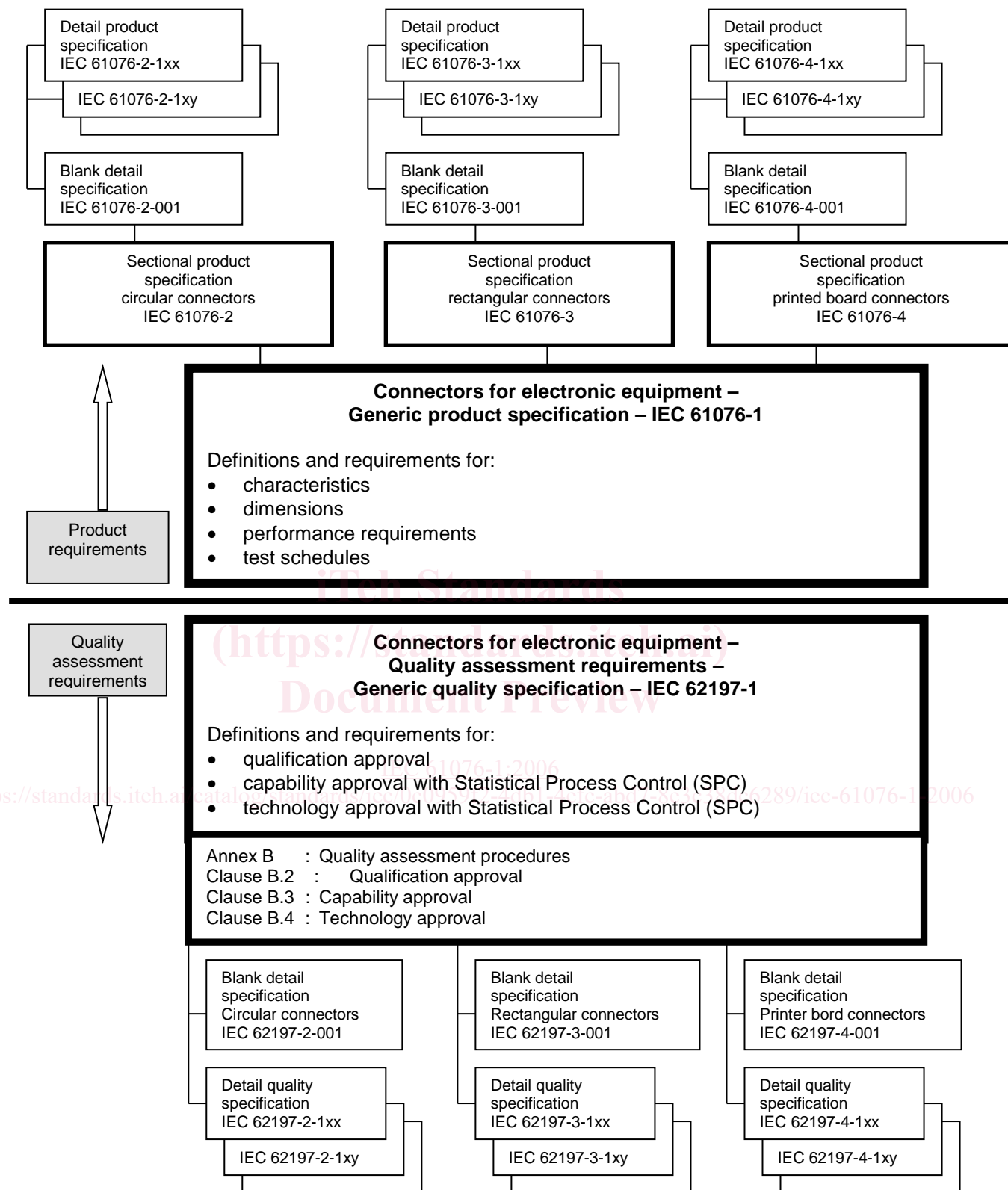
The sectional specifications will be presented at the product level per family of connectors, for example printed board connectors, circular connectors, rectangular connectors, etc.

At the quality assessment level, Annex B of IEC 62197-1 deals with qualification approval in B.2, capability approval in B.3 and technology approval in B.4.



IEC 481/06

Figure 1 – Actual detail specification structure



IEC 482/06

NOTE Detail and blank detail specifications for the same connector will have publication numbers with identical terminations in the 61076 and 62197 series; for instance IEC 61076-4-100 and IEC 62197-4-100 are associated with the same connector.

Figure 2 – New documentation structure for specifications drafted in SC 48B – Separation of product and quality assessment requirements

The objective of this 2nd Edition is to review and update the actual connector specifications containing product and quality assessment requirements.

Today, all the connector detail specifications dealt with by Subcommittee 48B of the International Electrotechnical Commission are prepared as described in figure 1 with 5 major chapters.

The most significant out of date procedures relate to the lot-by-lot tests with different inspection levels and acceptance quality level and to the periodic tests with permitted number of defectives.

To update the document to reflect modern practices it was necessary to introduce the capability and the technology approval together with the basic design parameters of statistical process control as a feed back system to have a continuous quality control during various steps of manufacture.

It was also felt appropriate to split the current documentation into two separate structures of documents which, in the day-to-day use of specifications, satisfy most users, see illustration in Figure 2.

This offers the user the option to acquire products with and without certification. It is obvious that the industry needs to get separate information on dimensions, performance requirements and basic design parameters.

The two separate documents are:

- Product requirements
- Quality assessment requirements

The Product Specification contains characteristics, dimensions, performance requirements and test schedules. The relevant document is:

IEC 61076-1 (Ed. 2)

Connectors for electronic equipment – Product requirements –

Part 1: Generic Specification.

The Quality Assessment Specification contains the requirements to obtain Qualification Approval (QA) for a given performance level (per environment category), Capability Approval (CA) per family of connectors or Technology Approval (TA) comprising all relevant technologies for connector production.

Capability Approval or Technology Approval combined with statistical process control parameters are intending to replace lot-by-lot and periodic tests. The relevant document is:

IEC 62197-1

Connectors for electronic equipment – Quality assessment requirements –

Part 1: Generic Specification

To specify a fully certified product, a combination of specifications from both structures shall be required.

The 4 level document structure adopted by SC48B consists of a Generic, a Sectional, a Blank Detail and Detail Specifications.

To maintain this 4 level structure, two Generic Specifications are being circulated, one document for the product aspects and a second one for the quality aspects.

The Sectional Specifications will be presented at the product level per family of connectors e.g. printed board connectors, circular connectors, rectangular connectors, etc.

At the quality assessment level Annex B of IEC 62197-1 is dealing with Qualification Approval B.2, Capability Approval B.3 and Technology Approval B.4.

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