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INTERNATIONAL STANDARD

NORME INTERNATIONALE

colour inside

AMENDMENT 1
AMENDEMENT 1

Connectors for electronic equipment – Product requirements – Part 4-116: Printed board connectors – Detail specification for a high-speed two-part connector with integrated shielding function

Connecteurs pour équipements électroniques – Exigences de produit – Partie 4-116: Connecteurs pour cartes imprimées – Spécification particulière pour un connecteur haute vitesse en deux parties avec une fonction de protection intégrée

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FOREWORD

This amendment has been prepared by subcommittee 48B: Connectors, of IEC technical committee 48: Electromechanical components and mechanical structures for electronic equipment.

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

FDIS	Report on voting
48B/2452/FDIS	48B/2465/RVD

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

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

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- withdrawn,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

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Add the following new Annex A.

Annex A
(informative)

Vibration and shock testing of connectors mounted to a mechanical structure for electronic equipment according to IEC 60917 and IEC 60297 – Test setup of assemblies with mass loading of printed boards

A.1 General

Dynamic stress tests on connector as defined in 8.5 are carried out according to IEC 60512, tests 6c and 6d. The device under test consists of the connector assembled to a printed board. The printed board under test usually contains the connector but no additional components.

Practice has demonstrated for a long time that this test setup is sufficient for connector qualification and for comparing the results of different arrangements and of different test laboratories. Nevertheless there are concerns that boards with heavy mechanical load, due to heavy components, may cause extra movements between the plug-in unit and the subrack assembly, respectively between the free printed board connector and the fixed connector mounted on the backplane, this would cause micro movements and increase the wear of the precisions metal plating in the contact area of male and female contacts.

IEC 60917 series and IEC 60297 series define the connector interfaces for subracks and associated plug-in units. A plug-in unit in general is a printed board assembly.

IEC 61587-1 and IEC 61587-5 call out the mechanical only shock, vibration and seismic testing of subracks and plug-in units with simulated mass loading. However, the electrical performance of the connector interface is not defined. The connector may pass mechanically but if the connector will pass its electrical capability is not specified.

It is the object of this amendment to provide an evaluation of the combination of connector and heavy printed board assembly (plug-in unit).

This standard contains only the necessary information and test setups to test the electrical performance of printed board connectors that are mounted to mass loaded plug-in units according to IEC 60917 series, IEC 60297 series standards and shock and vibration conditions as defined in IEC 61587-1 and IEC 61587-5.

A.2 General information and objectives

This Annex A establishes only the test setup requirements for mass loaded printed boards (plug-in units) assembled with free connectors and subracks assembled with the corresponding fixed connectors as used in IEC 60917 series and IEC 60297 series equipment practices.

The vibration and shock test severity levels are defined in IEC 61587-1. The seismic severity levels are defined in IEC 61587-5.

The object of this annex is to provide a test method for connector under conditions closer to the intended service condition to provide information of contact resistance under lifetime and expected severity of the intended use.