

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Connectors for electronic equipment – Tests and measurements –
Part 8-3: Static load tests (fixed connectors) – Test 8c: Robustness of actuating
lever**

**Connecteurs pour équipements électroniques – Essais et mesures –
Partie 8-3: Essais de charge statique (embases) – Essai 8c: Robustesse de
l'ergot d'activation**



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**CONNECTORS FOR ELECTRONIC EQUIPMENT –
TESTS AND MEASUREMENTS –****Part 8-3: Static load tests (fixed connectors) –
Test 8c: Robustness of actuating lever**

FOREWORD

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International Standard IEC 60512-8-3 has been prepared by subcommittee 48B: Connectors, of IEC technical committee 48: Electromechanical components and mechanical structures for electronic equipment.

This standard cancels and replaces Test 8c of IEC 60512-5, issued in 1992, and constitutes a technical revision.

This standard is to be read in conjunction with IEC 60512-1 and IEC 60512-1-100, which explains the structure of the IEC 60512 series.

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

CDV	Report on voting
48B/2121/CDV	48B2214/RVC

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

A list of all parts in the IEC 60512 series, under the general title *Connectors for electronic equipment – Tests and measurements*, can be found on the IEC website.

The committee has decided that the contents of this publication 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

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
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CONNECTORS FOR ELECTRONIC EQUIPMENT – TESTS AND MEASUREMENTS –

Part 8-3: Static load tests (fixed connectors) – Test 8c: Robustness of actuating lever

1 Scope and object

This part of IEC 60512, when required by the detail specification, is used for testing connectors within the scope of IEC technical committee 48. It may also be used for similar devices when specified in a detail specification.

The object of this standard is to detail a standard test method to assess the robustness of the actuating lever of a connector mating or release mechanism.

2 Normative references

The following referenced documents are indispensable for the application 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 60512-1, *Connectors for electronic equipment – Tests and measurements – Part 1: General*

IEC 60512-1-1, *Connectors for electronic equipment – Tests and measurements – Part 1-1: General examination – Test 1a: Visual examination*

IEC 60512-1-100, *Connectors for electronic equipment – Tests and measurements – Part 1-100: General – Applicable publications*

3 Preparation

3.1 Preparation of the specimen

The specimen shall not be wired but shall be fitted with such accessories as may be required by the detail specification.

Unless otherwise specified, the specimen shall be mounted in the normal manner, using the normal panel or chassis cut-out as laid down in the detail specification.

NOTE The plate should be strong enough to sustain the applied forces. The length and width of the plate should be such that the contour of the specimen is exceeded.

3.2 Equipment

A suitable test tool (e.g. a universal materials testing machine) and appropriate adapters shall be used.

3.3 Mounting

Unless otherwise specified, the specimen shall be mounted in the normal manner, using the normal panel or chassis cut-out as laid down in the detail specification.

NOTE The plate should be strong enough to sustain the applied forces. The length and width of the plate should be such that the contour of the specimen is exceeded.

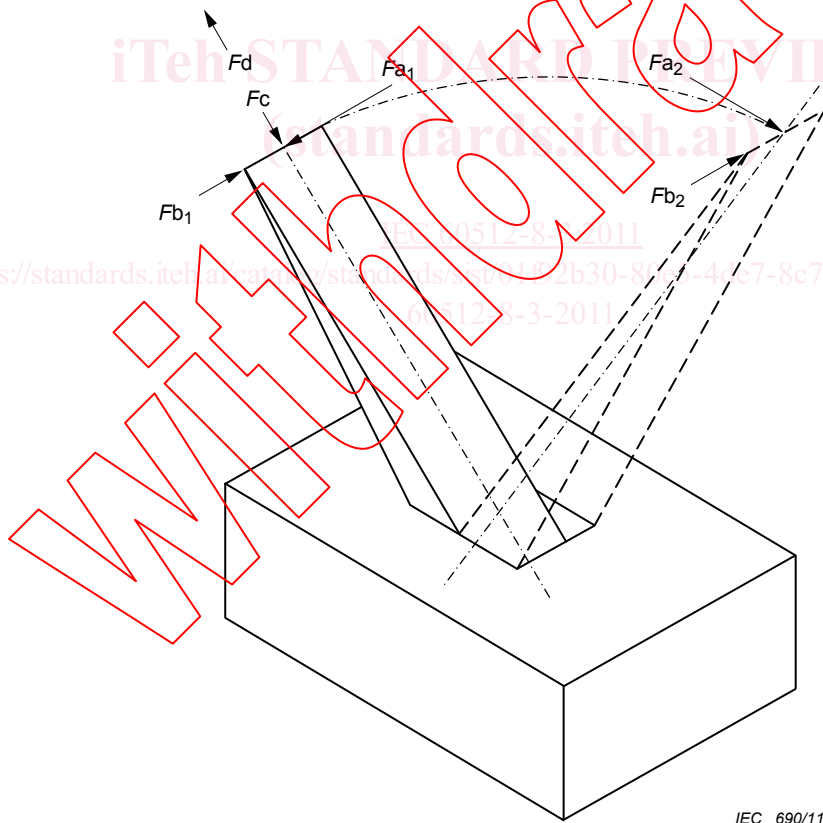
4 Test method

4.1 Force

A specified force shall be applied at the tip of the actuating lever. This force shall be applied in each of the following directions (see Figure 1):

- perpendicular to the lever axis and in the plane of lever travel and at each end position of the lever (F_{a1} and F_{a2});
- perpendicular to the lever axis and perpendicular to the plane of lever travel at each position of the lever (F_{b1} and F_{b2});
- axially with the lever axis towards the lever pivot (F_c);
- axially with the lever axis away from the lever pivot (F_d).

The force shall be steadily increased at a rate of approximately 20 N/s up to the specified value and maintained for 1 min.



IEC 690/11

Figure 1 – Details of force application

4.2 Torque

A specified torque shall be applied around the axis of the lever in either direction for 1 min.

5 Final measurements

- a) Visual examination (IEC 60512-1-1, Test 1a).
- b) Applicable operational characteristics.

NOTE if applicable, the detail specification may require a sealing test from the IEC 60512-14 series or an ingress protection test according IEC 60529.

6 Requirements

There shall be no damage which would impair normal operation.

7 Details to be specified

When this test is required by the detail specification, the following details shall be specified:

- a) mounting details, including dimensions of the panel cut-out;
- b) shape of the fixture or tool used for applying the force/torque;
- c) force/torque to be applied, direction and rate of application;
- d) requirements for final measurements;
- e) any deviation from the standard test method.

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Bibliography

IEC 60512-14 (all parts), *Connectors for electronic equipment – Tests and measurements – Part 14: Sealing tests*

IEC 60529, *Degrees of protection provided by enclosures (IP Code)*

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