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[SIST EN 3841-510:2005](https://standards.iteh.ai/catalog/standards/sist/35198f19-5e8a-4f20-a073-7d12212c9875/sist-en-3841-510-2005)

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 3841-510

December 2004

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English version

Aerospace series - Circuit breakers - Test methods - Part 510: Strength of signal contact terminals

Série aérospatiale - Disjoncteurs - Méthodes d'essais -
Partie 510 : Résistance des éléments de raccordement
auxiliaires

Luft- und Raumfahrt - Schutzschalter - Prüfverfahren - Teil
510: Festigkeit der Signalkontakt-Anschlüsse

This European Standard was approved by CEN on 10 September 2004.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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Foreword

This document (EN 3841-510:2004) has been prepared by the European Association of Aerospace Manufacturers - Standardization (AECMA-STAN).

After enquiries and votes carried out in accordance with the rules of this Association, this Standard has received the approval of the National Associations and the Official Services of the member countries of AECMA, prior to its presentation to CEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 2005, and conflicting national standards shall be withdrawn at the latest by June 2005.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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1 Scope

This standard specifies a method of verifying the strength of signal contact terminals of circuit breakers.

It shall be used together with EN 3841-100.

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.

EN 3841-100, *Aerospace series – Circuit breakers – Test methods – Part 100: General*

EN 3841-509, *Aerospace series – Circuit breakers – Test methods – Part 509: Insertion and extraction forces of signal contact terminals*

3 Method

3.1 Mounting

The circuit breakers shall be mounted according to 4.2 in EN 3841-100.

The contact pins specified by the technical specification shall be wired according to EN 3841-100, Table 1 and installed in an insert.

The signal contact shall be loaded with the lowest current and voltage indicated in the technical specification.

Cables shall be arranged in such a way that a bending load may be applied by means of a weight or a suitable spring scale.

3.2 Procedure

3.2.1 Method

Each contact pin shall be submitted to 20 inserting and extracting operations each with the tool specified in the technical specification and in accordance with EN 3841-509.

3.2.2 Contact retention force

Afterwards each contact pin shall be submitted to an axial preload as specified in the technical specification in order to take up contact slack in its cavity. The force specified by the technical specification shall then be applied for 10 s. The rate of increase of the force shall not exceed 5 N/s. The contact maximum axial displacement shall be measured in accordance with the technical specification while the force is applied and/or after the force is removed.

3.2.3 Radial load

The bending load shall be applied (when possible) in the four main directions related to the housing of the circuit breaker radially to the operating direction. The force specified in the technical specification shall be maintained for 1 min in each direction.

One terminal shall be tested on each sample.

3.3 Requirement

Requirements in accordance with technical specification and product standard.

During the test, no breaking shall occur in the electrical circuit. The applied forces shall not lead to breakage or deterioration of the contact system.

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