

Aerospace series - Requirements and test procedures
for switching devices

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 2349-001:2022 sisaldab Euroopa standardi EN 2349-001:2022 ingliskeelset teksti.	This Estonian standard EVS-EN 2349-001:2022 consists of the English text of the European standard EN 2349-001:2022.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 06.07.2022.	Date of Availability of the European standard is 06.07.2022.
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EUROPEAN STANDARD

EN 2349-001

NORME EUROPÉENNE

EUROPÄISCHE NORM

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English Version

Aerospace series - Requirements and test procedures for switching devices

Série aérospatiale - Exigences et procédures d'essais des appareils de commutation

Luft- und Raumfahrt - Anforderungen und Prüfverfahren für Schaltelemente

This European Standard was approved by CEN on 14 October 2018.

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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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European Foreword

This document (EN 2349-001:2022) has been prepared by the Aerospace and Defence Industries Association of Europe — Standardization (ASD-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 ASD, 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 January 2023, and conflicting national standards shall be withdrawn at the latest by January 2023.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

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1 Scope

This document specifies the requirements and test procedures of switching devices for use in aircraft electrical systems to EN 2282.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 2242, *Aerospace series — Crimping of electric cables with conductors defined by EN 2083, EN 4434 and EN 2346*

EN 2282, *Aerospace series — Characteristics of aircraft electrical supplies*

EN 2591-303, *Aerospace series — Elements of electrical and optical connection — Test methods — Part 303: Cold/low pressure and damp heat*

EN 2591-315, *Aerospace series — Elements of electrical and optical connection — Test methods — Part 315: Fluid resistance*

EN 2591-409, *Aerospace series — Elements of electrical and optical connection — Test methods — Part 409: Contact retention in insert*

EN 2591-412, *Aerospace series — Elements of electrical and optical connection — Test methods — Part 412: Contact insertion and extraction forces*

EN 2591-415, *Aerospace series — Elements of electrical and optical connection — Test methods — Part 415: Test probe damage (female contacts)*

EN 2591-417, *Aerospace series — Elements of electrical and optical connection — Test methods — Part 417: Tensile strength (crimped connection)*

EN 2591-418, *Aerospace series — Elements of electrical and optical connection — Test methods — Part 418: Gauge insertion/extraction forces (female contacts)*

EN 3155-001, *Aerospace series — Electrical contacts used in elements of connection — Part 001: Technical specification*

EN 4232, *Aerospace series — Contactors — Terminal strength* ¹⁾

EN 9133, *Aerospace series — Quality Management Systems — Qualification Procedure for Aerospace Standard Products*

EN 60068-2-17, *Environmental testing — Part 2: Tests — Test Q: Sealing*

1) In preparation at the date of publication of this document.

ISO 2669, *Environmental tests for aircraft equipment — Steady-state acceleration* ²⁾

ISO 2678, *Environmental tests for aircraft equipment — Insulation resistance and high voltage tests for electrical equipment* ²⁾

ISO 7137:1987, *Aircraft — Environmental conditions and test procedures for airborne equipment* ²⁾

ISO 2859-1, *Sampling procedures for inspection by attributes — Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection* ²⁾

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <http://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

3.1

switching devices

relays with plug-socket holders and/or contactors

The switching devices are designed for the rated voltage specified. All test voltages are related to the rated voltage specified.

The switching devices are designed for the rated current specified, related to a resistive load.

3.2

data relating to currents and voltages

unless otherwise stated, all data on a.c. values are effective values

A no load circuit is any combination of loads up to 10 mA, 50 mV.

4 Characteristics

4.1 Construction

4.1.1 Metal parts

All metal parts used in the construction of switching components shall be resistant to or protected against corrosion. Dissimilar metals which are in direct contact shall be protected against electrochemical corrosion.

²⁾ Published by: ISO International Organization for Standardization <http://www.iso.ch/>