

Aerospace series - Connectors, electrical, circular, scoop-proof, triple start threaded coupling, operating temperature 175 °C or 200 °C continuous - Part 002: Specification of performance and contact arrangements

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 3645-002:2024 sisaldab Euroopa standardi EN 3645-002:2024 ingliskeelset teksti. Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas. Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 21.02.2024. Standard on kättesaadav Eesti Standardimis-ja Akrediteerimiskeskusest.	This Estonian standard EVS-EN 3645-002:2024 consists of the English text of the European standard EN 3645-002:2024. This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation. Date of Availability of the European standard is 21.02.2024. The standard is available from the Estonian Centre for Standardisation and Accreditation.
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ICS 49.060

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English Version

**Aerospace series - Connectors, electrical, circular, scoop-
proof, triple start threaded coupling, operating
temperature 175 °C or 200 °C continuous - Part 002:
Specification of performance and contact arrangements**

Série aérospatiale - Connecteurs électriques
circulaires, à contacts protégés, à accouplement par
filetage, à pas rapide à trois filets, température
d'utilisation 175 °C ou 200 °C continu - Partie 002:
Spécification de performances et d'arrangements des
contacts

Luft- und Raumfahrt - Elektrische Rundsteckverbinder,
kontaktgeschützt, dreigängige Gewinde-
Schnellkupplung, Betriebstemperatur 175 °C oder 200
°C konstant - Teil 002: Leistungsdaten und
Kontaktanordnungen

This European Standard was approved by CEN on 15 October 2023.

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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.

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



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (EN 3645-002:2024) 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 document has received the approval of the National Associations and the Official Services of the member countries of ASD STAN, 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 August 2024, and conflicting national standards shall be withdrawn at the latest by August 2024.

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.

This document supersedes EN 3645-002:2015

EN 3645-002:2023 includes the following significant technical changes with respect to EN 3645-002:2015:

- description of connector models V and Z in Table 1 updated;
- Table 2 — Hexavalent chromium compound list added;
- values for models K and Y in Table 9 (shielding effectiveness) updated;
- Table 12 – Housing size and contact arrangements updated.

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

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

Introduction

This family of connectors is derived from MIL-DTL-38999 series III, with which it is intermateable and interchangeable.

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1 Scope

This document specifies the performances and contact arrangements for threaded ring coupling circular connectors, fire resistant or non-fire resistant, intended for use in a temperature range from $-65\text{ }^{\circ}\text{C}$ to $175\text{ }^{\circ}\text{C}$ or $200\text{ }^{\circ}\text{C}$ continuous.

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 2591-209, *Aerospace series — Elements of electrical and optical connection — Test methods — Part 209: Current temperature derating*

EN 3155-001:2016, *Aerospace series — Electrical contacts used in elements of connection — Part 001: Technical Specification*

EN 3197, *Aerospace series — Design and installation of aircraft electrical and optical interconnection systems*¹

EN 3645-001, *Aerospace series — Connectors, electrical, circular, scoop-proof, triple start threaded coupling, operating temperature $175\text{ }^{\circ}\text{C}$ or $200\text{ }^{\circ}\text{C}$ continuous — Part 001: Technical specification*

EN 3645-003, *Aerospace series — Connectors, electrical, circular, scoop-proof, triple start threaded coupling, operating temperature $175\text{ }^{\circ}\text{C}$ or $200\text{ }^{\circ}\text{C}$ continuous — Part 003: Receptacle square flange mounting — Product standard*

EN 3645-004, *Aerospace series — Connectors, electrical, circular, scoop-proof, triple start threaded coupling, operating temperature $175\text{ }^{\circ}\text{C}$ or $200\text{ }^{\circ}\text{C}$ continuous — Part 004: Receptacle, hermetic, square flange mounting — Product standard*

EN 3645-005, *Aerospace series — Connectors, electrical, circular, scoop-proof, triple start threaded coupling, operating temperature $175\text{ }^{\circ}\text{C}$ or $200\text{ }^{\circ}\text{C}$ continuous — Part 005: Receptacle, hermetic, round flange, solder mounting — Product standard*

EN 3645-006, *Aerospace series — Connectors, electrical, circular, scoop-proof, triple start threaded coupling, operating temperature $175\text{ }^{\circ}\text{C}$ or $200\text{ }^{\circ}\text{C}$ continuous — Part 006: Protective cover for receptacle — Product standard*

EN 3645-007, *Aerospace series — Connectors, electrical, circular, scoop-proof, triple start threaded coupling, operating temperature $175\text{ }^{\circ}\text{C}$ or $200\text{ }^{\circ}\text{C}$ continuous — Part 007: Protective cover for plug — Product standard*

EN 3645-008, *Aerospace series — Connectors, electrical, circular, scoop-proof, triple start threaded coupling operating temperature $175\text{ }^{\circ}\text{C}$ or $200\text{ }^{\circ}\text{C}$ continuous — Part 008: Non release plug with grounding ring — Product standard*

¹ Published as ASD-STAN Standard at the date of publication of this document by ASD-STAN, <https://www.asd-stan.org/>.

EN 3645-009, *Aerospace series — Connectors, electrical, circular, scoop-proof, triple start threaded coupling, operating temperature 175 °C or 200 °C continuous — Part 009: Receptacle, round flange, jam nut mounting — Product standard*

EN 3645-010, *Aerospace series — Connectors, electrical, circular, scoop-proof, triple start threaded coupling, operating temperature 175 °C or 200 °C continuous — Part 010: Receptacle, hermetic, round flange, jam nut mounting — Product standard*

EN 3645-011, *Aerospace series — Connectors, electrical, circular, scoop-proof, triple start threaded coupling, operating temperature 175 °C or 200 °C continuous — Part 011: Lanyard release plug with grounding fingers — Type 1 — Product standard*

EN 3645-012, *Aerospace series — Connectors, electrical, circular, scoop-proof, triple start threaded coupling, operating temperature 175 °C or 200 °C continuous — Part 012: Lanyard release plug with grounding fingers — Type 2 — Product standard*

EN 3645-013, *Aerospace series — Connectors, electrical, circular, scoop-proof, triple start threaded coupling, operating temperature 175 °C or 200 °C continuous — Part 013: Dummy receptacle — Product standard*

EN 4529-002, *Aerospace series — Elements of electrical and optical connection — Sealing plugs — Part 002: Index of product standards*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 3645-001 apply.

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

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

4 Description and codification of class

According to Table 1.

Table 1

Model		Description
Connector	W	Receptacles and plugs, cadmium-plated aluminium alloy, olive drab — 500 h salt spray — Plug with grounding spring — Crimp, removable contacts — Maximum operating temperature 175 °C continuous
	J	Receptacles and plugs, cadmium-plated composite, olive drab — 2 000 h salt spray — Plug with grounding spring — Crimp, removable contacts — 1 500 matings — Maximum operating temperature 175 °C continuous
	V	Receptacles and plugs, zinc-nickel plated composite, non reflective dark — with Zero hexavalent chromium compounds (see Table 2 list) added by any actor of the Supply Chain or used in the manufacturing process. — The coating shall consist of a zinc nickel alloy that has a minimum of 120 g/kg and maximum 200 g/kg of nickel, the balance being zinc — 2 000 h salt spray — Plug with grounding spring — Crimp, removable contacts — 1 500 matings — Maximum operating temperature 175 °C continuous