

Aerospace series - Connectors, electrical, circular,
coupled by threaded ring, fire-resistant or non
fire-resistant, operating temperatures - 65 °C to 175 °C
continuous, 200 °C continuous, 260 °C peak - Part 001:
Technical specification

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 2997-001:2017 sisaldab Euroopa standardi EN 2997-001:2017 ingliskeelset teksti.	This Estonian standard EVS-EN 2997-001:2017 consists of the English text of the European standard EN 2997-001:2017.
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English Version

**Aerospace series - Connectors, electrical, circular, coupled
by threaded ring, fire-resistant or non fire-resistant,
operating temperatures - 65 °C to 175 °C continuous, 200
°C continuous, 260 °C peak - Part 001: Technical
specification**

Série aérospatiale - Connecteurs électriques circulaires
à accouplement par bague fileté, résistant au feu ou
non, températures d'utilisation - 65 °C à 175 °C
continu, 200 °C continu, 260 °C en pointe - Partie 001:
Spécification technique

Luft- und Raumfahrt - Elektrische Rundsteckverbinder
mit Schraubkupplung, feuerbeständig oder nicht
feuerbeständig, Betriebstemperaturen - 65 °C bis 175
°C konstant, 200 °C konstant, 260 °C Spitze - Teil 001:
Technische Lieferbedingungen

This European Standard was approved by CEN on 6 February 2017.

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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.

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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 2997-001:2017) 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 December 2017, and conflicting national standards shall be withdrawn at the latest by December 2017.

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

This document supersedes EN 2997-001:2011.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

This family of connectors is derived from MIL-DTL-83723 series III, type T which it is intermateable with.

It is particularly suitable for use on aircraft engines and in zones of severe environmental conditions on board aircraft, applying EN 2282.

These connectors are distinguishable from MIL-DTL-83723 by:

- a) the mechanical stop for coupling being achieved manually;
- b) the coupling system having a self-locking nut that features a greater resistance to decoupling;
- c) the variety of the functional classes and models, including models with integrated cable outlets.

1 Scope

This European Standard specifies the general characteristics, the conditions for qualification acceptance and quality assurance, and the test programs and groups for threaded ring coupling circular connectors, fire resistant or non-fire resistant, intended for use in a temperature range from – 65 °C to 175 °C continuous, 200 °C continuous or 260 °C peak according to the classes and models.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 2267-002, *Aerospace series — Cables, electrical, for general purpose — Operating temperatures between – 55 °C and 260 °C — Part 002: General*

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

EN 2346-002, *Aerospace series — Cable, electrical, fire resistant — Operating temperatures between – 65 °C and 260 °C — Part 002: General*

EN 2591 (all parts), *Aerospace series — Elements of electrical and optical connection — Test methods*

EN 2997 (all parts), *Aerospace series — Connectors, electrical, circular, coupled by threaded ring, fire-resistant or non-fire resistant, operating temperatures – 65 °C to 175 °C continuous, 200 °C continuous, 260 °C peak*

EN 3155-001, *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*

EN 3660-003, *Aerospace series — Cable outlet accessories for circular and rectangular electrical and optical connectors — Part 003: Grommet nut, style A for EN 2997 and EN 4067 — Product standard*

EN 3660-004, *Aerospace series — Cable outlet accessories for circular and rectangular electrical and optical connectors — Part 004: Cable outlet, style A, straight, unsealed with clamp strain relief for EN 2997 and EN 4067 — Product standard*

EN 3660-033, *Aerospace series — Cable outlet accessories for circular and rectangular electrical and optical connectors — Part 033: Band — Product standard* ¹⁾

EN 3909, *Aerospace series — Test fluids for electrical and optical components and sub-assemblies*

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

EN 4067 (all parts), *Aerospace series — Connectors, electrical, circular, scoop-proof, coupled by threaded ring, fire-resistant, operating temperature 260 °C peak*

EN 4529-003, *Aerospace series — Elements of electrical and optical connection — Sealing plugs — Part 003: Class T — Product standard*

EN 9133, *Aerospace series — Quality management systems — Qualification procedure for aerospace standard parts*

ISO 263, *ISO Inch screw threads — General plan and selection for screws, bolts and nuts — Diameter range 0,06 to 6 in*

MIL-HDBK-454B, *General guidelines for electronic equipment* ²⁾

MIL-DTL-83723, *Connector, electrical circular, environment resistant, receptacles and plugs, general specification for* ²⁾

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 2591-100 apply.

4 Description

4.1 General

Different variants of materials, housings and contact arrangements are provided according to the model and class.

These connectors use crimp or solder contacts of sizes 22, 20, 16 and 12.

The receptacles and plugs contain either male contacts or female contacts.

The contacts fitted in the classes Y and YE receptacles are exclusively of the male non-removable solder type.

The connectors are polarized by means of keyways and keys; polarization shall be obtained before the male contacts enter the insert of the female contacts and before the coupling ring is engaged. The position of the keying arrangement is given in Table 5. Masking of the blue colour band on the receptacle provides visual indication of full coupling.

Only the connectors housing sizes 8, 10 and 12 with size 22 contacts are mechanical scoop proof.

2) Published by: Defense Logistic Agency (DLA), <http://www.dscc.dla.mil/Programs/MilSpec/>