

Aerospace series - Connectors, electrical, rectangular, modular - Operating temperature 175 °C continuous - Part 002: Specification of performance and contact arrangements

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 4165-002:2015 sisaldab Euroopa standardi EN 4165-002:2015 ingliskeelset teksti.	This Estonian standard EVS-EN 4165-002:2015 consists of the English text of the European standard EN 4165-002:2015.
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.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 22.07.2015.	Date of Availability of the European standard is 22.07.2015.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 49.060

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardikeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega:

Aru 10, 10317 Tallinn, Eesti; koduleht www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation:

Aru 10, 10317 Tallinn, Estonia; homepage www.evs.ee; phone +372 605 5050; e-mail info@evs.ee

English Version

**Aerospace series - Connectors, electrical, rectangular, modular -
Operating temperature 175 °C continuous - Part 002:
Specification of performance and contact arrangements**

Série aérospatiale - Connecteurs électriques rectangulaires
modulaires - Température d'utilisation 175 °C continu -
Partie 002: Spécification de performances et arrangement
de contacts

Luft- und Raumfahrt - Elektrischer Rechtecksteckverbinder
in modularer Bauweise - Betriebstemperatur 175 °C
konstant - Teil 002: Leistungsdaten und
Kontaktanordnungen

This European Standard was approved by CEN on 5 March 2015.

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.

CEN members are the national standards bodies of 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, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

Page

European foreword	3
1 Scope	4
2 Normative references	4
3 Terms and definitions	5
4 Synoptic	5
5 Description and codification of shell classes	6
6 Operating conditions	7
6.1 Combinations of plugs and receptacles	7
6.2 Combinations of protective covers and connectors	7
6.3 Combinations of accessories and connectors	8
6.4 Combinations of chimneys and accessories	8
6.5 Permissible cables and maximum permissible current	8
7 Operating characteristics	10
7.1 Electrical conditions	10
7.2 Climatic conditions	10
7.3 Mechanical conditions	10
8 Models types	11
9 Modules contact arrangements – Series 2 and series 3	12
10 Contacts	16
11 Sealing plugs	16
12 Rear accessories	16
13 Tooling contacts	16
14 Tooling accessories for modules	16
15 Assembly and wiring instructions	16
Annex A (informative) Synoptic	17
A.1 Synoptic connectors series II and III, classes F and classes W, 2 and 4 modules	17
Synoptic connectors series II, classes J, M and C, 2 and 4 modules	18
Annex B (informative) Synoptic, single module series II, classes M	19
Bibliography	20

European foreword

This document (EN 4165-002:2015) 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 2016, and conflicting national standards shall be withdrawn at the latest by January 2016.

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 4165-002:2007.

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, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This European standard defines a number of conditions common to rectangular electrical modular connectors for receptacles, plugs and rack and panel, with interchangeable modules and continuous operating temperature 175 °C.

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

EN 3155-002, *Aerospace series — Electrical contacts used in elements of connection — Part 002: List and utilization of contacts*

EN 3155-082, *Aerospace series — Electrical contacts used in elements of connection — Part 082: Contacts, electrical, female, type A, crimp, class S — Product standard*

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

EN 4165-001, *Aerospace series — Connectors, electrical, rectangular, modular — Operating temperature 175 °C continuous — Part 001: Technical specification*

EN 4165-003, *Aerospace series — Connectors, electrical, rectangular, modular — Operating temperature 175 °C continuous — Part 003: Modules series 2 and series 3 — Product standard*

EN 4165-004, *Aerospace series — Connectors, electrical, rectangular, modular — Operating temperature 175 °C continuous — Part 004: Stackable mounting receptacle 2 and 4 modules, series 2 — Product standard*

EN 4165-005, *Aerospace series — Connectors, electrical, rectangular, modular — Operating temperature 175 °C continuous — Part 005: Stackable mounting receptacle 2 and 4 modules, series 3 — Product standard*

EN 4165-006, *Aerospace series — Connectors, electrical, rectangular, modular — Operating temperature 175 °C continuous — Part 006: Plug for 2 and 4 modules, series 2 — Product standard*

EN 4165-007, *Aerospace series — Connectors, electrical, rectangular, modular — Operating temperature 175 °C continuous — Part 007: Plug for 2 and 4 modules, series 3 — Product standard*

EN 4165-008, *Aerospace series — Connectors, electrical, rectangular, modular — Operating temperature 175 °C continuous — Part 008: Rack and panel plug for 2 and 4 modules, series 2 — Product standard*

EN 4165-009, *Aerospace series — Connectors, electrical, rectangular, modular — Operating temperature 175 °C continuous — Part 009: Rack and panel plug for 2 and 4 modules, series 3 — Product standard*

EN 4165-010, *Aerospace series — Connectors, electrical, rectangular, modular — Operating temperature 175 °C continuous — Part 010: Rack and panel rear mounted plug 2 and 4 modules, series 2 — Product standard*

EN 4165-011, *Aerospace series — Connectors, electrical, rectangular, modular — Operating temperature 175 °C continuous — Part 011: Flange mounting receptacle 2 and 4 modules, series 2 — Product standard*

EN 4165-012, *Aerospace series — Connectors, electrical, rectangular, modular — Operating temperature 175 °C continuous — Part 012: Flange mounting receptacle 2 and 4 modules, series 3 — Product standard*

EN 4165-013, *Aerospace series — Connectors, electrical, rectangular, modular — Operating temperature 175 °C continuous — Part 013: Cable clamp 2 and 4 modules for connectors, series 2 and series 3 — Product standard*

EN 4165-014, *Aerospace series — Connectors, electrical, rectangular, modular — Operating temperature 175 °C continuous — Part 014: Shielded accessory body, 2 and 4 modules for connectors, series 2 and series 3 — Product standard*

EN 4165-015, *Aerospace series — Connectors, electrical, rectangular, modular — Operating temperature 175 °C continuous — Part 015: Round chimney for accessory (1 per module cavity) — Product standard*

EN 4165-016, *Aerospace series — Connectors, electrical, rectangular, modular — Operating temperature 175 °C continuous — Part 016: Double oval chimney for accessory (1 per 2 modules) — Product standard*

EN 4165-017, *Aerospace series — Connectors, electrical, rectangular, modular — Operating temperature 175 °C continuous — Part 017: Blank chimney for accessory (1 per module cavity) — Product standard*

EN 4165-018, *Aerospace series — Connectors, electrical, rectangular, modular — Operating temperature 175 °C continuous — Part 018: Protective cover for receptacle 2 and 4 modules, series 2 and series 3 — Product standard*

EN 4165-024, *Aerospace series — Connectors, electrical, rectangular, modular — Operating temperature 175 °C continuous — Part 024: Single module plug — Product standard*

EN 4165-025, *Aerospace series — Connectors, electrical, rectangular, modular — Operating temperature 175 °C continuous — Part 025: Module receptacle — Product norm*

EN 4165-026, *Aerospace series — Connectors, electrical, rectangular, modular — Operating temperature 175 °C continuous — Part 026: Accessories for single modules — Product norm*

EN 4165-027, *Aerospace series — Connectors, electrical, rectangular, modular — Operating temperature 175 °C continuous — Part 027: Rack and panel rear mounted plug for 2 and 4 modules, series 3 — Product standard*¹⁾

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

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 4165-001 apply.

4 Synoptic

For intermountabilities between plugs and receptacles, modules series 2 and series 3, male and female, see Annex A (informative) and Annex B (informative).

¹⁾ Published as ASD-STAN Prestandard at the date of publication of this European standard (<http://www.asd-stan.org/>).