



SLOVENSKI STANDARD

SIST EN 3545-002:2008

01-september-2008

Aeronavtika - Konektorji, električni, pravokotni, s tesnilno kapo ali brez nje, plastilni ohišje, zaporni mehanizem, delovna temperatura med -55 °C in 175 °C - 002. del: Specifikacija lastnosti in razporeditev kontaktov

Aerospace series - Connectors, electrical, rectangular, with sealed and non-sealed rear, plastic housing, locking device, operating temperatures - 55 °C to 175 °C - Part 002: Specification of performance and contact arrangements

Luft- und Raumfahrt - Elektrische Rechtecksteckverbinder mit und ohne hintere Abdichtung, Plastikgehäuse, Verriegelungssystem, Betriebstemperaturen von - 55 °C bis 175 °C - Teil 002: Leistungsdaten und Kontaktanordnungen

Série aérospatiale - Connecteurs électriques, rectangulaires, étanches et non étanches à l'arrière, à boîtier en plastique, à verrouillage, températures d'utilisation - 55 °C à 175 °C - Partie 002: Spécification de performances et d'arrangement des contacts

Ta slovenski standard je istoveten z: EN 3545-002:2008

ICS:

49.060	Letalska in vesoljska električna oprema in sistemi	Aerospace electric equipment and systems
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English Version

Aerospace series - Connectors, electrical, rectangular, with
sealed and non-sealed rear, plastic housing, locking device,
operating temperatures - 55 °C to 175 °C - Part 002:
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Verriegelungssystem, Betriebstemperaturen von - 55 °C bis
175 °C - Teil 002: Leistungsdaten und Kontaktanordnungen

This European Standard was approved by CEN on 14 March 2008.

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 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 Management Centre has the same status as the official versions.

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Foreword

This document (EN 3545-002:2008) 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 2008, and conflicting national standards shall be withdrawn at the latest by December 2008.

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 3545-002:2005.

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

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1 Scope

This standard specifies conditions which are common to rectangular electrical connectors with sealed and non-sealed rear, plastic housing, locking device, for operating temperatures from – 55 °C to 175 °C.

It shall be used together with EN 3545-001.

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 2591-100, *Aerospace series — Elements of electrical and optical connection — Test methods — Part 100: General.*

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 3155-003, *Aerospace series — Electrical contacts used in elements of connection — Part 003: Contacts, electrical, female, type A, crimp, class S — Product standard.*

EN 3155-008, *Aerospace series — Electrical contacts used in elements of connection — Part 008: Contacts, electrical, male, type A, crimp, class S — Product standard.*

EN 3155-070, *Aerospace series — Electrical contacts used in elements of connection — Part 070: Contacts, electrical, male, type A, crimp, class S — Product standard.*

EN 3155-071, *Aerospace series — Electrical contacts used in elements of connection — Part 071: Contacts, electrical, female, type A, crimp, class S — Product standard.*

EN 3197, *Aerospace series — Installation of aircraft electrical and optical interconnection systems.*¹⁾

EN 3545-001, *Aerospace series — Connectors, electrical, rectangular, with sealed and non-sealed rear, plastic housing, locking device, operating temperatures – 55 °C to 175 °C — Part 001: Technical specification.*

EN 3545-003, *Aerospace series — Connectors, electrical, rectangular, with sealed and non-sealed rear, plastic housing, locking device, operating temperatures – 55 °C to 175 °C — Part 003: Connectors with female contacts — Product standard.*

EN 3545-004, *Aerospace series — Connectors, electrical, rectangular, with sealed and non-sealed rear, plastic housing, locking device, operating temperatures – 55 °C to 175 °C — Part 004: Connectors with male contacts — Product standard.*

EN 3545-005, *Aerospace series — Connectors, electrical, rectangular, with sealed and non-sealed rear, plastic housing, locking device, operating temperatures – 55 °C to 175 °C — Part 005: Female coding and attachment system for mounting on free housing (plug) — Product standard.*

1) Published as ASD Prestandard at the date of publication of this standard.

EN 3545-006, *Aerospace series — Connectors, electrical, rectangular, with sealed and non-sealed rear, plastic housing, locking device, operating temperatures – 55 °C to 175 °C — Part 006 : Male coding and attachment system for mounting on fixed housing (receptacle) — Product standard.*

EN 3545-007, *Aerospace series — Connectors, electrical, rectangular, with sealed and non-sealed rear, plastic housing, locking device, operating temperatures – 55 °C to 175 °C — Part 007: Cable clamp — Product standard.*

EN 3545-008, *Aerospace series — Connectors, electrical, rectangular, with sealed and non-sealed rear, plastic housing, locking device, operating temperatures – 55 °C to 175 °C — Part 008: Tools for assembly/removal of coding and attachment system — 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 2591-100 apply.

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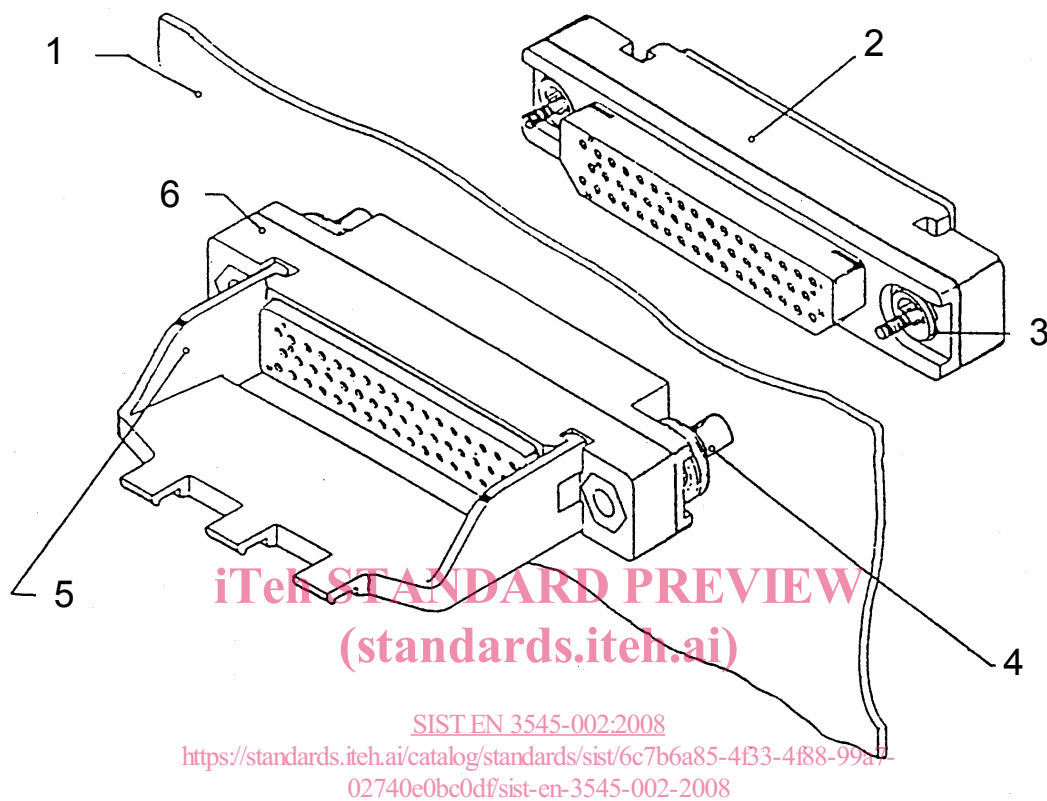
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4 Operating conditions

4.1 Installation principle

See Figure 1.



4.2 Combination of connectors

The combination of a male housing connector with a female housing connector is possible only if:

- the contact layout;
 - the attachment/coding systems;
- are correctly associated.

4.3 Plug/connector coupling

Not applicable

4.4 Permissible cables

The performance of these connectors is achieved with the cables of the dimensions given in Table 1 and using the accessories and wiring tools specified.

Table 1

Contact size	External wire diameter mm	
	min.	max.
22 ^a	0,75	1,27
22 ^b	0,75	1,45
20	0,85	1,80
16	1,20	2,40
12	1,90	3,70
10	2,38	5,20
8	c	c
^a For arrangement 02 and 03. ^b For arrangement 12 and 13. ^c The cables for size 8 contacts are specified in the contact product standard.		

The use of cables exceeding the maximum diameter indicated is prohibited.

Cables smaller than the minimum diameter may be used, subject to a concession, provided that the requirements according to EN 3197 are observed.

4.5 Operating characteristics

4.5.1 Electrical conditions

These conditions are:

- insulating resistance at ambient temperature: 5 000 MΩ
- withstand voltage (sea level):
 - contact size 22: 1 500 V r.m.s.;
 - contact sizes 20, 16, 12, 10 and 8: 1 500 V r.m.s.
- permissible nominal current in contacts

Table 2 specifies the permissible nominal current at extreme temperatures in the contacts, according to their size and to the wire used.

Heating due to current flow should not cause the maximum temperature to be exceeded. See EN 2591-209.