
5 YfcbUj H_UË?cbY_hcf1žYY_hf] b]ždfUj c_cfb]žg`hYgb]bc`_Udc`U]`VfYn`b`Yž
d`Ugh] b]a`c\]y`Ya žnUdcfb]a`a`Y`Ub]na`ca`žn`XY`cj`bc`hYa`dYfUi`fc`a`YX`Ë`)`š7`]b
%+) `š7`Ë`\$\$&`"XY` .`GdYVWZ`_UVY`U`Ughbcgh]`]b`f`UndcfYX]hYj`_`cbfU`hcj

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

SIST EN 3545-002:2006

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

Ta slovenski standard je istoveten z: EN 3545-002:2005

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49.060

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en

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English Version

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This European Standard was approved by CEN on 26 September 2005.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

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Foreword

This European Standard (EN 3545-002:2005) has been prepared by the European Association of Aerospace Manufacturers - Standardization (AECMA-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 AECMA, 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 May 2006, and conflicting national standards shall be withdrawn at the latest by May 2006.

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.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, 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.*¹⁾

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.*²⁾

EN 3155-071, *Aerospace series — Electrical contacts used in elements of connection — Part 071: Contacts, electrical, female, type A, crimp, class S — Product standard.*²⁾

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⁾

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

2) In preparation 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.*¹⁾

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 systems — Product standard.*²⁾

EN 4529-002, *Aerospace series — Elements of electrical and optical connection — Sealing plugs — Part 002: Index of product standards.*¹⁾

3 Terms and definitions

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

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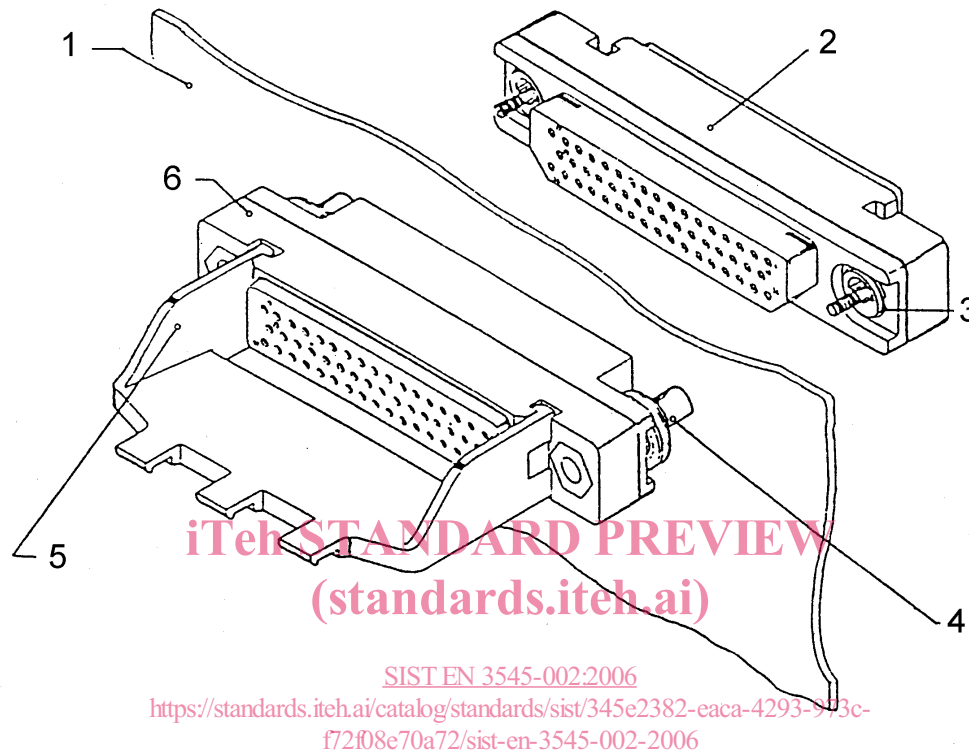
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4 Operating conditions

4.1 Installation principle

See Figure 1.



Key

- 1 Panel
- 2 Connector with female or male contacts (see EN 3545-003 or EN 3545-004)
- 3 Female coding and attachment system for mounting on free housing (see EN 3545-005)
- 4 Male coding and attachment system for mounting on fixed housing (see EN 3545-006)
- 5 Cable clamp (see EN 3545-007)
- 6 Connector with female or male contacts (see EN 3545-003 or EN 3545-004)

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: 1 300 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.