
Aeronavtika - Konektorji, vtič in vtičnica, električni, pravokotni, zamenljivi tip, s stojalom in ploščo, s stalno delovno temperaturo do 150 °C - 002. del: Specifikacija lastnosti in razporeditev kontaktov

Aerospace series - Connectors, plug and receptacle, electrical, rectangular, interchangeable insert type, rack to panel, operating temperature 150 °C continuous - Part 002: Specification of performance and contact arrangements

Luft- und Raumfahrt - Elektrischer Rechtecksteckverbinder, freie und feste Bauform, auswechselbare Isolierkörper, Gestell-Einschubsteckverbinder, Betriebstemperatur 150 °C konstant - Teil 002: Leistungsdaten und Kontaktanordnungen

[SIST EN 3682-002:2009](https://standards.iteh.ai/catalog/standards/sist/c0ef9ab3-bed2-4097-babd-10c1c690e28f/en-3682-002-2009)

Série aérospatiale - Connecteurs électriques rectangulaires rackables, fiches et embases, à inserts interchangeables, température d'utilisation 150 °C continu - Partie 002: Spécification de performances et arrangements de contacts

Ta slovenski standard je istoveten z: EN 3682-002:2006

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49.060

Letalska in vesoljska
električna oprema in sistemi

Aerospace electric
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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 3682-002

July 2006

ICS 49.060

English Version

**Aerospace series - Connectors, plug and receptacle, electrical,
rectangular, interchangeable insert type, rack to panel, operating
temperature 150 °C continuous - Part 002: Specification of
performance and contact arrangements**

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konstant - Teil 002: Leistungsdaten und
Kontaktanordnungen

This European Standard was approved by CEN on 16 March 2006.

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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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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Management Centre: rue de Stassart, 36 B-1050 Brussels

Contents

Page

Foreword.....	3
Introduction	4
1 Scope	4
2 Normative references	4
3 Description of models	6
4 Terminology	6
5 Operating conditions.....	6
5.1 Permissible cables	6
5.2 Operating characteristics	6
6 Product standards	7
7 Polarization.....	7
8 Contact arrangements and insert combinations.....	10
8.1 Contact arrangements.....	10
8.2 Insert combinations.....	19
9 Contacts.....	22
10 Filler plugs.....	22
11 Rear accessories	23
12 Tooling	23
13 Assembly and wiring instruction	23

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[SIST EN 3682-002:2009](https://standards.iteh.ai/catalog/standards/sist/c0ef9ab3-bed2-4097-babd-d061b708a5a3/sist-en-3682-002-2009)

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Foreword

This European Standard (EN 3682-002:2006) has been prepared by the AeroSpace and Defense 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 2007, and conflicting national standards shall be withdrawn at the latest by January 2007.

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.

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Introduction

This family of connectors is derived from MIL-C-83527 with which it is intermateable.

1 Scope

This standard defines the common conditions for plug and receptacle, rack to panel with interchangeable insulators and continuous temperature rating 150 °C.

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 3155-026, *Aerospace series — Electrical contacts used in elements of connection — Part 026: Contacts, electrical, male, type A, crimp, class R — Product standard*

EN 3155-027, *Aerospace series — Electrical contacts used in elements of connection — Part 027: Contacts, electrical, female, type A, crimp, class R — Product standard*

EN 3155-028, *Aerospace series — Electrical contacts used in elements of connection — Part 028: Contacts, electrical, coaxial, shielded size 16, male, type D, crimp, class R — Product standard*¹⁾

EN 3155-029, *Aerospace series — Electrical contacts used in elements of connection — Part 029: Contacts, electrical, coaxial, shielded size 16, female, type D, crimp, class R — Product standard*¹⁾

EN 3155-030, *Aerospace series — Electrical contacts used in elements of connection — Part 030: Contacts, electrical, coaxial, shielded size 12, male, type D, crimp, class R — Product standard*²⁾

EN 3155-031, *Aerospace series — Electrical contacts used in elements of connection — Part 031: Contacts, electrical, coaxial, size 12, female, type D, crimp, class R — Product standard*²⁾

EN 3155-032, *Aerospace series — Electrical contacts used in elements of connection — Part 032: Contacts, electrical, coaxial, size 05, male, type D, crimp, class R — Product standard*²⁾

EN 3155-033, *Aerospace series — Electrical contacts used in elements of connection — Part 033: Contacts, electrical, coaxial, size 05, female, type D, crimp, class R — Product standard*²⁾

EN 3155-034, *Aerospace series — Electrical contacts used in elements of connection — Part 034: Contacts, electrical, triaxial, size 08, male, type D, crimp, class R — Product standard*²⁾

EN 3155-035, *Aerospace series — Electrical contacts used in elements of connection — Part 035: Contacts, electrical, triaxial, size 08, female, type D, crimp, class R — Product standard*²⁾

EN 3155-039, *Aerospace series — Electrical contacts used in elements of connection — Part 039: Contacts, electrical, coaxial, size 16, female, type D, solder, class R — Product standard*¹⁾

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

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

EN 3155-040, Aerospace series — Electrical contacts used in elements of connection — Part 040: Contacts, electrical, coaxial, size 12, male, type D, solder, class R — Product standard ¹⁾

EN 3155-041, Aerospace series — Electrical contacts used in elements of connection — Part 041: Contacts, electrical, coaxial, size 12, female, type D, solder, class R — Product standard ¹⁾

EN 3155-042, Aerospace series — Electrical contacts used in elements of connection — Part 042: Contacts, electrical, triaxial, size 08, male 042, type D, solder, class P — Product standard

EN 3155-043, Aerospace series — Electrical contacts used in elements of connection — Part 043: Contacts, electrical, triaxial, size 08, female 043, type D, solder, class P — Product standard

EN 3155-063, Aerospace series — Electrical contacts used in elements of connection — Part 063: Contacts, electrical, coaxial, size 01, male, type D, crimp, class R — Product standard ²⁾

EN 3155-064, Aerospace series — Electrical contacts used in elements of connection — Part 064: Contacts, electrical, coaxial, size 01, female, type D, crimp, class R — Product standard ²⁾

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

EN 3682-001, Aerospace series — Connectors, plug and receptacle, electrical, rectangular, interchangeable insert type, rack to panel, operating temperature 150 °C continuous — Part 001: Technical specification

EN 3682-003, Aerospace series — Connectors, plug and receptacle, electrical, rectangular, interchangeable insert type, rack to panel, operating temperature 150 °C continuous — Part 003: Inserts — Product standard ¹⁾

EN 3682-004, Aerospace series — Connectors, plug and receptacle, electrical, rectangular, interchangeable insert type, rack to panel, operating temperature 150 °C continuous — Part 004: Size 2 receptacle — Product standard ¹⁾

EN 3682-005, Aerospace series — Connectors, plug and receptacle, electrical, rectangular, interchangeable insert type, rack to panel, operating temperature 150 °C continuous — Part 005: Size 2 plug — Product standard ¹⁾

EN 3682-006, Aerospace series — Connectors, plug and receptacle, electrical, rectangular, interchangeable insert type, rack to panel, operating temperature 150 °C continuous — Part 006: Size 3 receptacle — Product standard ¹⁾

EN 3682-007, Aerospace series — Connectors, plug and receptacle, electrical, rectangular, interchangeable insert type, rack to panel, operating temperature 150 °C continuous — Part 007: Plug size 3 — Product standard ¹⁾

EN 3682-008, Aerospace series — Connectors, plug and receptacle, electrical, rectangular, interchangeable insert type, rack to panel, operating temperature 150 °C continuous — Part 008: Receptacle size 4 — Product standard ¹⁾

EN 3682-009, Aerospace series — Connectors, plug and receptacle, electrical, rectangular, interchangeable insert type, rack to panel, operating temperature 150 °C continuous — Part 009: Size 4 plug — Product standard ¹⁾

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

MIL-C-83527A, Connectors, plug and receptacle, electrical, rectangular multiple insert type, rack to panel, environment resisting, 150 °C total continuous operating temperature ³⁾

¹⁾ and ²⁾ see page 4.

³⁾ Published by: Department of Defense (DOD), the Pentagon, Washington, D.C. 20301 USA.

EN 3682-002:2006 (E)

3 Description of models

Electrical rectangular rack panel connectors, environmental resisting with 3 shell sizes 2, 3 and 4, crimp contact Class R.

4 Terminology

See EN 3682-001.

5 Operating conditions

5.1 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

Size		Size of conductors Standard cables	Outer diameter of cables	
Contact	Barrel	AWG ^a	mm min.	max.
22	22	22 24 26	0,76	1,32
20	20	20 22 24	0,89	1,52
16	16	16 18 20	1,21	2,03
12	12	12 14	2,31	2,90
Cavity #8		—	5,71	6,86
Cavity #5		—	4,85	5,49
Cavity #1		—	10,62	10,97
^a AWG: Closest American Wire Gauge.				

5.2 Operating characteristics

5.2.1 Electrical conditions

- Rated current: according to standards for contacts
- Insulation resistance at ambient temperature: 5 000 MΩ

— Withstand voltage at sea level:

22 AWG contacts:	1 300 V r.m.s
Thicker gauge contacts	1 500 V r.m.s
Triaxial contacts	500 V r.m.s
Coaxial contacts	500 V r.m.s

— Withstand voltage at 33 000 m

connectors mated together	750 V r.m.s
connectors unmated	200 V r.m.s

5.2.2 Climatic conditions

— Operating temperatures:

minimum temperature:	– 65 °C
maximum temperature:	150 °C

— Corrosion resistance and fluid resistance: see EN 3682-001

5.2.3 Mechanical conditions (standards.iteh.ai)

Mechanical endurance: 500 mating and unmating operations.

<https://standards.iteh.ai/catalog/standards/sist/c0ef9ab3-bed2-4097-babd-d061b708a5a3/sist-en-3682-002-2009>

6 Product standards

See Table 2.

Table 2

Component	EN 3682-
Inserts	003
Receptacle size 2	004
Plug size 2	005
Receptacle size 3	006
Plug size 3	007
Receptacle size 4	008
Plug size 4	009

7 Polarization

Figures 1 and 2 and Tables 3 and 4 show the various positions of the coding keys, which provide 99 standard different locating codes.

EN 3682-002:2006 (E)

The shaded area indicates the male key and the lighted area corresponds to the female key. Keys are viewed from the front of the connector, and the top of the connector is facing upwards.

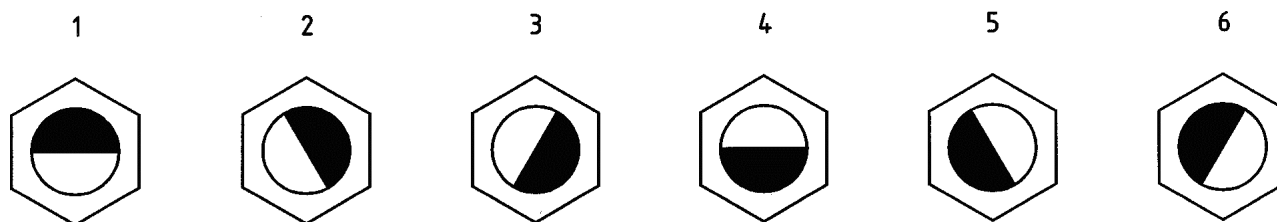


Figure 1

Table 3

Position	left	centre	right	Position	left	centre	right	Position	left	centre	right	Position	left	centre	right
00	—	—	—	25	1	1	3	50	2	2	5	75	3	3	1
01	1	1	1	26	2	1	3	51	3	2	5	76	4	3	1
02	2	1	1	27	3	1	3	52	4	2	5	77	5	3	1
03	3	1	1	28	4	1	3	53	5	2	5	78	6	3	1
04	4	1	1	29	5	1	3	54	6	2	5	79	1	3	6
05	5	1	1	30	6	1	3	55	1	2	4	80	2	3	6
06	6	1	1	31	1	1	2	56	2	2	4	81	3	3	6
07	1	1	6	32	2	1	2	57	3	2	4	82	4	3	6
08	2	1	6	33	3	1	2	58	4	2	4	83	5	3	6
09	3	1	6	34	4	1	2	59	5	2	4	84	6	3	6
10	4	1	6	35	5	1	2	60	6	2	4	85	1	3	5
11	5	1	6	36	6	1	2	61	1	2	3	86	2	3	5
12	6	1	6	37	1	1	1	62	2	2	3	87	3	3	5
13	1	1	5	38	2	2	1	63	3	2	3	88	4	3	5
14	2	1	5	39	3	2	1	64	4	2	3	89	5	3	5
15	3	1	5	40	4	2	1	65	5	2	3	90	6	3	5
16	4	1	5	41	5	2	1	66	6	2	3	91	1	3	4
17	5	1	5	42	6	2	1	67	1	2	2	92	2	3	4
18	6	1	5	43	1	2	6	68	2	2	2	93	3	3	4
19	1	1	4	44	2	2	6	69	3	2	2	94	4	3	4
20	2	1	4	45	3	2	6	70	4	2	2	95	5	3	4
21	3	1	4	46	4	2	6	71	5	2	2	96	6	3	4
22	4	1	4	47	5	2	6	72	6	2	2	97	1	3	3
23	5	1	4	48	6	2	6	73	1	3	1	98	2	3	3
24	6	1	4	49	1	2	5	74	2	3	1	99	3	3	3

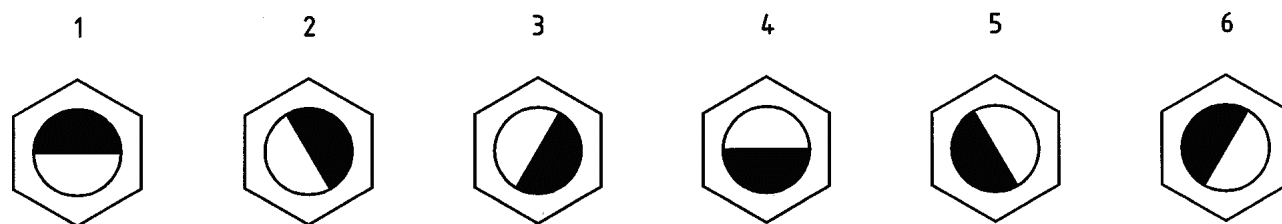


Figure 2

Table 4

Position	left	centre	right	Position	left	centre	right	Position	left	centre	right	Position	Left	centre	right
00	—	—	—	25	2	4	4	50	6	3	3	75	4	2	2
01	4	4	4	26	2	4	3	51	6	3	2	76	4	2	1
02	4	4	3	27	2	4	2	52	6	3	1	77	4	2	6
03	4	4	2	28	2	4	1	53	6	3	6	78	4	2	5
04	4	4	1	29	2	4	6	54	6	3	5	79	5	2	4
05	4	4	6	30	2	4	5	55	1	3	4	80	5	2	3
06	4	4	5	31	3	4	4	56	1	3	3	81	5	2	2
07	5	4	4	32	3	4	3	57	1	3	2	82	5	2	1
08	5	4	3	33	3	4	2	58	1	3	1	83	5	2	6
09	5	4	2	34	3	4	1	59	1	3	6	84	5	2	5
10	5	4	1	35	3	4	6	60	1	3	5	85	6	2	4
11	5	4	6	36	3	4	5	61	2	3	4	86	6	2	3
12	5	4	5	37	4	3	4	62	2	3	3	87	6	2	2
13	6	4	4	38	4	3	3	63	2	3	2	88	6	2	1
14	6	4	3	39	4	3	2	64	2	3	1	89	6	2	6
15	6	4	2	40	4	3	1	65	2	3	6	90	6	2	5
16	6	4	1	41	4	3	6	66	2	3	5	91	1	2	4
17	6	4	6	42	4	3	5	67	3	3	4	92	1	2	3
18	6	4	5	43	5	3	4	68	3	3	3	93	1	2	2
19	1	4	4	44	5	3	3	69	3	3	2	94	1	2	1
20	1	4	3	45	5	3	2	70	3	3	1	95	1	2	6
21	1	4	2	46	5	3	1	71	3	3	6	96	1	2	5
22	1	4	1	47	5	3	6	72	3	3	5	97	2	2	4
23	1	4	6	48	5	3	5	73	4	2	4	98	2	2	3
24	1	4	5	49	6	3	4	74	4	2	3	99	2	2	2