
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

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

Ta slovenski standard je istoveten z: prEN 3682-002

ICS:

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Letalska in vesoljska
električna oprema in sistemi

Aerospace electric
equipment and systems

oSIST prEN 3682-002:2026

en,fr,de

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

DRAFT
prEN 3682-002

September 2026

ICS

Will supersede EN 3682-002:2013

English Version

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electrical, rectangular, interchangeable insert type, rack to
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Einschubsteckverbinder, Betriebstemperatur 150 °C
konstant - Teil 002: Leistungsdaten und
Kontaktanordnungen

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee ASD-STAN.

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Contents	Page
European foreword	3
Introduction	4
1 Scope.....	5
2 Normative references.....	5
3 Terms and definitions.....	5
4 Description of models	5
5 Operating conditions.....	5
5.1 Permissible cables.....	5
5.2 Operating characteristics	6
5.2.1 Electrical conditions	6
5.2.2 Climatic conditions.....	7
5.2.3 Mechanical conditions	7
6 Product standards	7
7 Polarization.....	7
8 Contact arrangements and insert combinations	13
8.1 Contact arrangements.....	13
8.2 Insert combinations.....	25
9 Contacts	28
10 Sealing plugs	28
11 Tooling.....	28
12 Assembly and wiring instruction	28
Bibliography	29

European foreword

This document (prEN 3682-002:2026) has been prepared by ASD-STAN.

After enquiries and votes carried out in accordance with the rules of this Association, this document has received the approval of the National Associations and the Official Services of the member countries of ASD-STAN, prior to its presentation to CEN.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 3682-002:2013.

prEN 3682-002:2026 includes the following significant technical changes with respect to EN 3682-002:2013:

- Table 6 insert combinations: introduction of codes 288 to 292 and update of code 263;
- update of contact arrangements.

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Introduction

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

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1 Scope

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

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 3197, *Aerospace series — Design and installation of aircraft electrical and optical interconnection systems*

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 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 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp/>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1

LRU

line replaceable unit

4 Description of models

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

5 Operating conditions

5.1 Permissible cables

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

Table 1

Size		Size of conductors Standard cables	Outer diameter of cables	
Contact	Barrel		mm	
		AWG ^a	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		—	3,69	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

The electrical conditions shall be the following:

- 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;
 - quadrax 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

The climatic conditions shall be the following:

- operating temperatures:
 - minimum temperature: $-65\text{ }^{\circ}\text{C}$;
 - maximum temperature: $150\text{ }^{\circ}\text{C}$;
- corrosion resistance and fluid resistance shall be in accordance with EN 3682-001.

5.2.3 Mechanical conditions

Mechanical endurance shall be: 500 mating and unmating operations.

6 Product standards

Associated product standards are given in Table 2.

Table 2 — Components and associated product standards

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

7 Polarization

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

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.

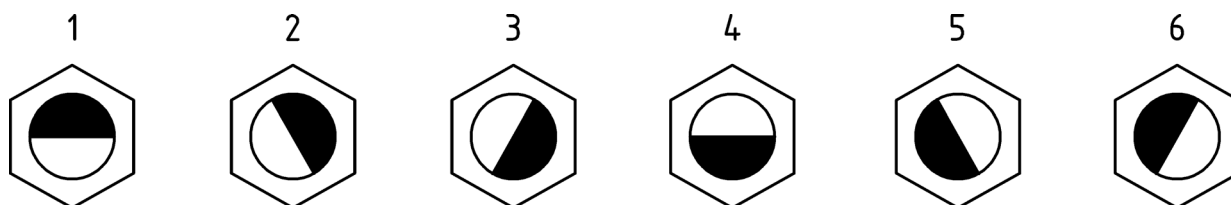


Figure 1