SLOVENSKI STANDARD
SIST EN 4531-002:2012

01-september-2012

Nadomešča:
SIST EN 4531-002:2009

Aeronavtika - Konektorji, optični, okrogli, z enim ali več zatiči, priključeni z navojnim obročkom - Izravnani kontakti - 002. del: Specifikacija lastnosti in razporeditev kontaktov

Aerospace series - Connectors, optical, circular, single and multipin, coupled by threaded ring - Flush contacts - Part 002: Specification of performance and contact arrangements

Luft- und Raumfahrt - Optische Rundsteckverbinder mit Schraubkupplung - Bündige Kontakte - Teil 002: Leistungsdaten und Kontaktanordnungen

Série aérospatiale - Connecteurs optiques circulaires à accouplement par bague filetée - Contacts affleurants - Partie 002 : Spécification de performances et arrangements des contacts

Ta slovenski standard je istoveten z: **EN 4531-002:2012**

ICS:

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

SIST EN 4531-002:2012 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

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English Version

Aerospace series - Connectors, optical, circular, single and multipin, coupled by triple start threaded ring - Flush contacts - Part 002: Specification of performance and contact arrangements

Série aérospatiale - Connecteurs optiques circulaires à accouplement par bague filetée à trois filets - Contacts affleurants - Partie 002: Spécification de performances et arrangements des contacts

Luft- und Raumfahrt - Optische Rundsteckverbinder mit dreigängiger Schraubkupplung - Bündige Kontakte - Teil 002: Leistungsdaten und Kontaktanordnungen

This European Standard was approved by CEN on 10 September 2011.

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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.

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Foreword

This document (EN 4531-002:2012) 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 November 2012, and conflicting national standards shall be withdrawn at the latest by November 2012.

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This document supersedes EN 4531-002:2007.

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1 Scope

This European standard defines the performance and contact arrangements of circular optical connectors, coupled by triple start threaded ring.

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 3645-001, *Aerospace series — Connectors, electrical, circular, scoop-proof, triple start threaded coupling, operating temperature 175 °C or 200 °C continuous — Part 001: Technical specification*

EN 4531 (all parts), *Aerospace series — Connectors, optical, circular, single and multipin, coupled by triple start threaded ring — Flush contacts*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 4531-001 apply.

4 Description and codification of models

See Table 1.

Table 1

Environmental class	Description
J	Composite receptacles and plugs, cadmium plated, olive drab – 2 000 h salt spray
M	Composite receptacles and plugs, nickel-plated – 2 000 h salt spray
X	Composite receptacles and plugs, without plating – 2 000 h salt spray
Z	Nickel-Bronze receptacles and plugs, black Zinc-Nickel plated – 500 h salt spray
F	Aluminium receptacles and plugs, Nickel plated – 48 h salt spray
W	Aluminium receptacles and plugs, Cadmium plated – 500 h salt spray
N	Aluminium receptacles and plugs, Hard anodic non conductive – 500 h salt spray
K	Stainless steel receptacles and plugs – 500 h salt spray
S	Stainless steel receptacles and plugs, Nickel plated – 500 h salt spray

5 Operating conditions

5.1 Optical performances

The optical performances are defined in the product standards in relationship with the used cable.

5.2 Combinations of plugs and receptacles

Table 2 shows the combinations:

1) which achieve the characteristics specified for each model;
2) for the characteristics of the pair of connectors of the component with the lowest performance;
3) for other combinations subject to the approval of the Design Authority.

Table 2

Receptacle shell	Plug shell								
	J	M	X	Z	F	W	N	K	S
J	1)	3)	2)	2)	3)	2)	2)	3)	3)
M	3)	1)	2)	3)	2)	3)	3)	3)	3)
X	2)	2)	1)	2)	2)	2)	2)	3)	3)
Z	2)	3)	2)	1)	3)	2)	2)	3)	3)
F	3)	2)	2)	3)	1)	3)	3)	3)	3)
W	2)	3)	2)	2)	3)	1)	2)	3)	3)
N	2)	3)	2)	2)	3)	2)	1)	3)	3)
K	3)	3)	3)	3)	3)	3)	3)	1)	2)
S	3)	3)	3)	3)	3)	3)	3)	2)	1)

5.3 Material of the sleeves

See Table 3.

Table 3

	Sleeve code	Description	Sleeve material
Male insert	A	No sleeve	N/A
Female insert	B	Termini with Zirconia ceramic or similar ferule	Zirconia ceramic or similar
	C	Termini with metallic ferule	Phosphor bronze or similar

5.4 Sleeve force

See EN 4531-001.

5.5 Climatic conditions

Temperature range: refer to product standard.

Fluid resistance: see EN 4531-001.

Corrosion resistance: see Table 1.

5.6 Mechanical conditions

Mechanical endurance: refer to product standard.

6 Type codes

See Table 4.

Table 4

Type code	EN 4531- Product standard	Description
0	003	Square flange receptacle
7	004	Jam nut receptacle
5	005	Plug

7 Polarization

See EN 3645-001.

8 Shell sizes and contact arrangements

See Table 5 and Figures 1 to 7. View of the front side of the male insert.

Table 5

Shell		Contacts layout	
Shell size	**Size code**	**Number of ways**	**Arrangement code**
9	A	1	01
11	B	2	02
13	C	4	04
15	D	6	06
19	F	8	08
21	G	12	12
25	J	24	24

Size 9-01
1 optical way

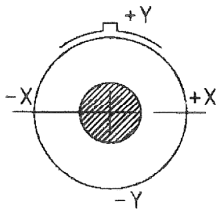

Figure 1

Size 11-02
2 optical ways

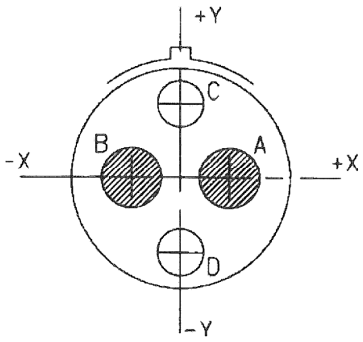

Figure 2

Size 13-04
4 optical ways

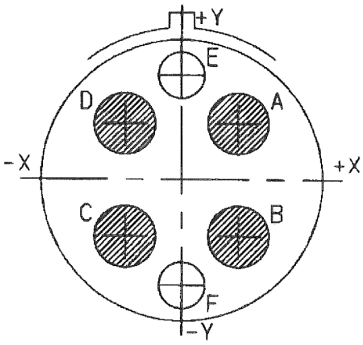

Figure 3

Size 15-06
6 optical ways

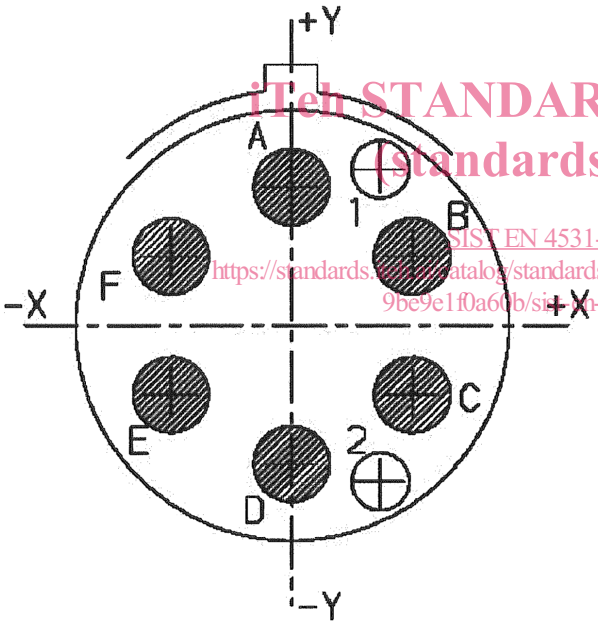

Figure 4

Size 19-08
8 optical ways

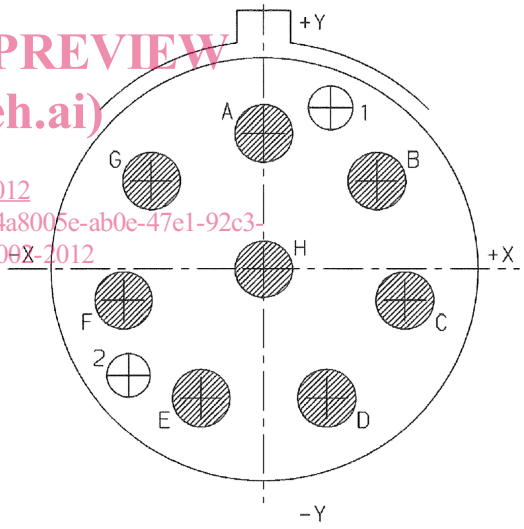

Figure 5