SLOVENSKI STANDARD

SIST EN 4639-002:2008

01-marec-2008

Aeronavtika - Konektorji, optiļ ni, pravokotni, modularni, veļ kontaktni, premer kapice 1,25, s snemljivo centrirno puġo - 002. del: Seznam standardov za proizvod

Aerospace series - Connectors, optical, rectangular, modular, multicontact, 1,25 diameter ferrule, with removable alignment sleeve holder - Part 002: List of product standards

Luft- und Raumfahrt - Optischer Rechtecksteckverbinder, modular, Mehrfachkontakt, Ferrulendurchmesser 1,25 mm, demontierbarer Zentrierhülsenhalter - Teil 002: Übersicht über die Einzelnormen

Série aérospatiale - Connecteurs optiques rectangulaires, modulaires multicontacts, férule 1,25, équipés d'un porte sleeve démontable - Partie 002 : Liste des normes de produit

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This European Standard was approved by CEN on 21 June 2007.

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Foreword

This document (EN 4639-002:2007) 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of an identical text or by endorsement, at the latest by June 2008, and conflicting national standards shall be withdrawn at the latest by June 2008.

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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.

1 Scope

This standard defines the performance and contact arrangements of rectangular modular optical connectors.

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 4639-001, *Aerospace series — Connectors, optical, rectangular, modular, multicontact, 1,25 diameter ferrule, with removable alignment sleeve holder — Part 001: Technical specification.*

EN 4639-003, *Aerospace series — Connectors, optical, rectangular, modular, multicontact, 1,25 diameter ferrule, with removable alignment sleeve holder — Part 003: Male optical module — Product standard.*

EN 4639-004, *Aerospace series — Connectors, optical, rectangular, modular, multicontact, 1,25 diameter ferrule, with removable alignment sleeve holder — Part 004: Female optical module — Product standard.*

EN 4639-005, *Aerospace series — Connectors, optical, rectangular, modular, multicontact, 1,25 diameter ferrule, with removable alignment sleeve holder — Part 005: Removable alignment sleeve holder — Product standard.*

EN 4639-101, *Aerospace series — Connectors, optical, rectangular, modular, multicontact, 1,25 diameter ferrule, with removable alignment sleeve holder — Part 101: Optical contact for cable EN 4641-100 — Operating temperatures between – 65 °C and 125 °C — Product standard.*

EN 4639-102, *Aerospace series — Connectors, optical, rectangular, modular, multicontact, 1,25 diameter ferrule, with removable alignment sleeve holder — Part 102: Optical contact for cable EN 4641-102 — Operating temperatures between – 55 °C and 100 °C — Product standard.*

EN 4639-103, *Aerospace series — Connectors, optical, rectangular, modular, multicontact, 1,25 diameter ferrule, with removable alignment sleeve holder — Part 103: Optical contact for cable EN 4641-101 — Operating temperatures between – 55 °C and 150 °C — Product standard.* [1)]

EN 4641-100, *Aerospace series — Cable optical — 125 µm diameter cladding — Part 100: Outer diameter 1,8 mm, tight structure — Product standard.* [1)]

EN 4641-101, *Aerospace series — Cable optical — 125 µm diameter cladding — Part 101: Outer diameter 0,9 mm — Product standard.* [1)]

EN 4641-102, *Aerospace series — Cable optical — 125 µm diameter cladding — Part 102: Outer diameter 1,8 mm, semi loose structure — Product standard.* [1)]

EN 4644-001, *Aerospace series — Connector, electrical and optical, rectangular, modular, rectangular inserts — Operating temperature 175 °C continuous — Part 001: Technical specification.* [1)]

EN 4644-011, *Aerospace series — Connector, electrical and optical, rectangular, modular, rectangular inserts — Operating temperature 175 °C continuous — Part 011: Male housing size 1, class A, C and E – Product standard.* [1)]

EN 4644-012, *Aerospace series — Connector, electrical and optical, rectangular, modular, rectangular inserts — Operating temperature 175 °C continuous — Part 012: Female housing size 1, class A, C and E — Product standard.* [1)]

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

EN 4644-013, *Aerospace series — Connector, electrical and optical, rectangular, modular, rectangular inserts — Operating temperature 175 °C continuous — Part 013: Male housing size 1 with ground blocks, class B and F — Product standard.* [1)]

EN 4644-014, *Aerospace series — Connector, electrical and optical, rectangular, modular, rectangular inserts — Operating temperature 175 °C continuous — Part 014: Female housing size 1 with ground blocks, class B and F — Product standard.* [1)]

EN 4644-021, *Aerospace series — Connector, electrical and optical, rectangular, modular, rectangular inserts — Operating temperature 175 °C continuous — Part 021: Male housing size 2 class A, C and E — Product standard.* [1)]

EN 4644-022, *Aerospace series — Connector, electrical and optical, rectangular, modular, rectangular inserts — Operating temperature 175 °C continuous — Part 022: Female housing size 2 class A, C and E — Product standard.* [1)]

EN 4644-023, *Aerospace series — Connector, electrical and optical, rectangular, modular, rectangular inserts — Operating temperature 175 °C continuous — Part 023: Female housing size 2 with flange class A, C and E — Product standard.* [1)]

EN 4644-024, *Aerospace series — Connector, electrical and optical, rectangular, modular, rectangular inserts — Operating temperature 175 °C continuous — Part 024: Male housing size 2 with ground blocks class B and F — Product standard.* [1)]

EN 4644-025, *Aerospace series — Connector, electrical and optical, rectangular, modular, rectangular inserts — Operating temperature 175 °C continuous — Part 025: Female housing size 2 with ground block class B and F — Product standard.* [1)]

EN 4644-026, *Aerospace series — Connector, electrical and optical, rectangular, modular, rectangular inserts — Operating temperature 175 °C continuous — Part 026: Female housing size 2 with flange and ground block class B and F — Product standard.* [1)]

EN 4644-201, *Aerospace series — Connector, electrical and optical, rectangular, modular, rectangular inserts — Operating temperature 175 °C continuous — Part 201: Rear accessories — Product standard.* [1)]

TR 4647, *Aerospace series — Fibres and cables, optical aircraft use — Technical Report — Termination procedure for EN 4639 10X contact.* [1)]

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 4639-001 apply.

4 Product type and codification

See Table 1.

Table 1 — Product type and codification

Connector type		Optical module	Optical contact		
			Cable (B) EN 4641-100	Cable (A) EN 4641-101	Cable (C) EN 4641-102
Plug connector dual module	EN 4644-021 EN 4644-024	EN 4639-003 or EN 4639-004 + EN 4639-005	EN 4639-101	EN 4639-103	EN 4639-102
Plug connector single module	EN 4644-011 EN 4644-013	EN 4639-003 or EN 4639-004 + EN 4639-005	EN 4639-101	EN 4639-103	EN 4639-102
Receptacle connector dual module	EN 4644-022 EN 4644-023 EN 4644-025 EN 4644-026	EN 4639-003 or EN 4639-004 + EN 4639-005	EN 4639-101	EN 4639-103	EN 4639-102
Receptacle connector single module	EN 4644-012 EN 4644-014	EN 4639-003 or EN 4639-004 + EN 4639-005	EN 4639-101	EN 4639-103	EN 4639-102

5 Operating conditions

5.1 Climatic conditions

Operating temperatures:

— Depending to the cable

Corrosion and fluid resistance:

— Salt mist: 96 h

— Fluid resistance: see EN 4639-001.

5.2 Mechanical conditions

Mechanical endurance: see EN 4644-001.

6 Permissible cables

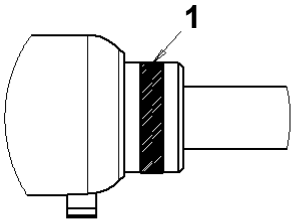
The sealing performance of these connectors is achieved with cables of outside jacket dimensions given in Table 2.

Table 2

Cable designation	Fibre	Outer diameter cable	EN designation cable
A	62,5 / 125	0,9 mm	EN 4641-101
B	62,5 / 125	1,8 mm (tight structure)	EN 4641-100
C	62,5 / 125	1,8 mm (semi loose structure)	EN 4641-102
D	9 / 125	In preparation	In preparation
E	50 / 125		

7 Contact code

Coding by colour band: see Figure 1 and Table 3.



Key

1 Colour band
For multimode : no colour band
For single mode PC : blue band
For single mode APC : green band

Figure 1

Table 3

Contact designation	Contact code	Cable structure type
Fibre optic contact for tight structure cable EN 4639-101	MT	EN 4641-100
Fibre optic contact for semi loose structure cable EN 4639-102	ML	EN 4641-102

8 Material of the alignment sleeves

See Table 4.

Table 4

Sleeve material code	Recommendation	Material of the sleeves
01	Single mode silica fibre Multimode silica fibre 50/125, 62,5/125, 100/140 µm	Zirconia ceramic or similar
02	Multimode fibre	Phosphor bronze or similar

9 Contact arrangements

See Table 5 and Figure 2.

Table 5

Arrangement		
	code	Number of contacts
12 fibre optic contacts	EF12	12