SLOVENSKI STANDARD
SIST EN 4626-001:2008

01-november-2008

Aeronavtika - Konektorji, optiļ ni, pravokotni, veļ kontaktni, s stojalom in ploģļ o, vdolbina Quadrax, s premerom kapice 2,5 mm - Delovna temperatura - 65 ĄC do 125 ĄC (odvisna od kabla) - Izravnani kontakti - 1. del: Tehniļ na specifikacija

Aerospace series - Connectors, optical, rectangular, multicontact, rack and panel, Quadrax cavity, 2,5 mm diameter ferrule - Operating temperatures - 65 °C to 125 °C (cable dependent) - Flush contacts - Part 001: Technical specification

Luft- und Raumfahrt - Optische Rechtecksteckverbinder, Quadrax-Kontaktkammer, Durchmesser 2,5 mm Ferrule - Betriebstemperaturen - 65 °C bis 125 °C (vom Kabel abhängig) - Bündige Kontakte - Teil 001: Technische Lieferbedingungen

Série aérospatiale - Connecteurs, optique, rectangulaire, à contacts multiples, rackables, cavité Quadrax, ferrule diamètre 2,5 mm - Température d'utilisation - 65 °C à 125 °C (selon câble) - Contacts affleurants - Partie 001: Spécification technique

Ta slovenski standard je istoveten z: **EN 4626-001:2008**

ICS:

49.060	Letalska in vesoljska elektriļ na oprema in sistemi	Aerospace electric equipment and systems

SIST EN 4626-001:2008 **en**

EUROPEAN STANDARD

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EUROPÄISCHE NORM

EN 4626-001

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ICS 49.060

English Version

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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This document (EN 4626-001:2008) 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of an identical text or by endorsement, at the latest by February 2009, and conflicting national standards shall be withdrawn at the latest by February 2009.

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Introduction

This family of fibre optic contact sub-assemblies are suitable for use in ARINC 600 connectors with size 8 Quadrax cavities in aerospace onboard applications. It provides easy access for optical contact end face cleaning.

1 Scope

This standard specifies the general characteristics, the conditions for qualification, acceptance and quality assurance, as well as the test programs and groups for fibre sub-assembly contact in rack and panel connectors, intended for use in a temperature range from − 65 °C to 125 °C continuous (cable dependent).

This standard specifies a pair of adaptors to fit with standard Quadrax cavities and EN 4531-101 optical contact.

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

EN 4531-101, *Aerospace series — Connectors, optical, circular, single and multipin, coupled by threaded ring — Flush contacts — Part 101: Optical contact for EN 4641-100 cable − 55 °C to 125 °C — Product standard* 1)

EN 4626-002, *Aerospace series — Connectors, optical, rectangular, multicontact, rack and panel, Quadrax cavity, 2,5 mm diameter ferrule — Operating temperatures − 65 °C to 125 °C (cable dependent) — Flush contacts — Part 002: Specification of performance and contact arrangements*

EN 9133, *Aerospace series — Quality management systems — Qualification procedure for aerospace standard parts*

ARINC 600, *Air transport avionics — Equipment interfaces* 2)

3 Terms and definitions

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

* And all its parts quoted in this standard.

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

2) Published by: Aeronautical Radio, Inc. 2551 Riva road, Annapolis, Maryland 21401.

4 Description

4.1 Optical sub-assembly and adaptor

The optical sub-assembly comprises of an EN 4531-101 fibre optic contact, male and female adaptors allowing positioning of the fibre optic contact in either a plug or receptacle Quadrax size 8 cavity or a single part which integrates the EN 4531-101 contact and adaptor.

The female adaptor is characterised by the integral alignment sleeve providing precise alignment of the optical ferrules.

The optical contact sub-assemblies are polarized by means of keyways in the adaptors and keys on the contact body.

4.2 Materials and surface treatment

4.2.1 Requirements

When dissimilar metals are in close contact, adequate protection against corrosion shall be used for the electromotive force of the cell not to exceed 0,25 V (see EN 3197).

4.2.2 Housing and inserts

The connector housing and insert arrangement information are detailed in ARINC 600 standards.

4.2.3 Optical contacts

Details of the optical contacts and alignment sleeves are detailed in EN 4531-101.

4.2.4 Adaptor

The adaptor shall be of suitable material as specified in the product standard.

5 Design

5.1 Housing

Connector housing is defined in the ARINC 600 standard. Quadrax cavity arrangements will be defined in Technical Report in preparation.

5.2 Optical contact

See EN 4531-101.

5.3 Adaptor

The adaptor is designed to provide mechanical retention and accurate alignment of the EN 4531-101 fibre optic contact within an ARINC 600 housing containing Quadrax size 8 cavities.

The adaptor is keyed and mechanically retained in the ARINC 600 Quadrax size 8 insert cavity.

The design permits installation of individual adaptors and contacts without removal of the connertor insert.

Fitting and removal of the adaptor will be from the rear of the connector insert using the tool specified in the relevant adaptor product standard.

5.4 Connector and optical contact coupling sequence

During normal coupling the mechanical properties of the connectors provide the following coupling sequence: Shells — Polarizing keys – Optical contacts – Adaptor. Refer to the ARINC 600 specification for mechanical interconnecting requirements.

6 Drawings

6.1 Definition drawings

The general intermateability dimensions of receptacles and plugs are given below.

Optical contact dimensions are defined in the product standard.

6.2 Coupling condition

The stated dimensions are included to ensure that no mechanical interference occurs between the ferrule of the female adaptor and male adaptor body during the coupling cycle. See Figure 1.

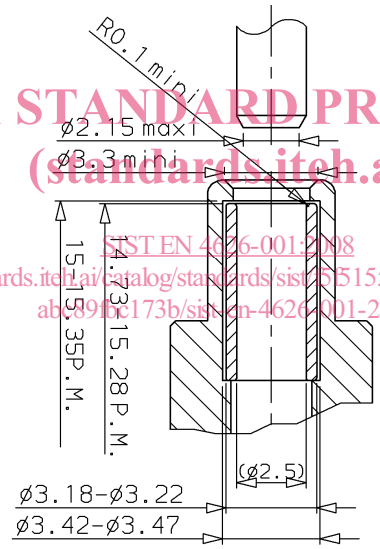

Figure 1

6.3 Contact mating dimensions with male Quadrax insert (unmated position)

See Figure 2.

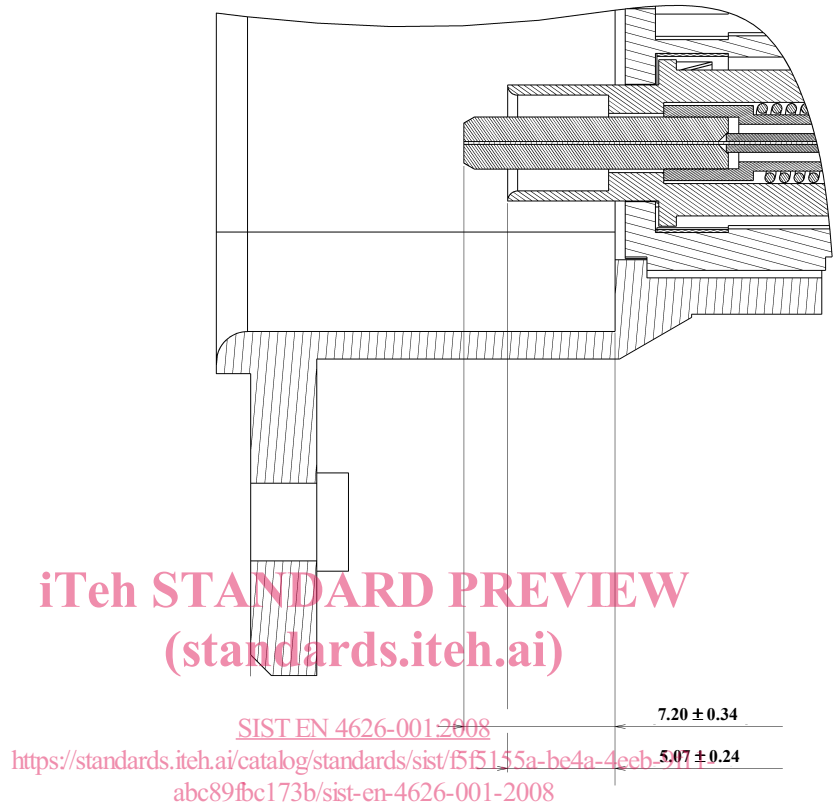

Figure 2