
Aeronavtika - Konektorji, optil'ni, pravokotni, vel' kontaktni, s stojalom in pločl' o, vdolbina Quadrax, s premerom kapice 2,5 mm - Delovna temperatura -65 ºC do 125 ºC (odvisna od kabla) - Izravnani kontakti - 101. del: Optil'ni kontakt (podsklop) za vtil' - Standard za proizvod

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 101: Optical contact (sub-assembly) for plug - Product standard

STANDARD PREVIEW
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Luft- und Raumfahrt - Optische Rechtecksteckverbinder, Quadrax-Kontaktkammer, Durchmesser 2,5 mm Ferrule - Betriebstemperaturen - 65 °C bis 125 °C (vom Kabel abhängig) - Bündige Kontakte - Teil 101 Optische Kontakt (Unterbaugruppe) für freien Steckverbinder - Produktnorm

Série aérospatiale - Connecteurs, optique, rectangulaire, à contacts multiples, rackables, cavité Quadrax, fêrulle diamètre 2,5 mm - Température d'utilisation - 65 °C à 125 °C (selon câble) - Contacts affleurants - Partie 101 : Contact optique (sous-ensemble) pour fiche - Norme produit

Ta slovenski standard je istoveten z: EN 4626-101:2008

ICS:

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

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 101: Optical contact (sub-
assembly) for plug - Product standard

Série aérospatiale - Connecteurs, optique, rectangulaire, à
contacts multiples, rackables, cavité Quadrax, fêrulle
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°C (selon câble) - Contacts affleurants - Partie 101 :
Contact optique (sous-ensemble) pour fiche - Norme
produit

Luft- und Raumfahrt - Optische Rechtecksteckverbinder,
Quadrax-Kontaktkammer, Durchmesser 2,5 mm Ferrule -
Betriebstemperaturen - 65 °C bis 125 °C (vom Kabel
abhängig) - Bündige Kontakte - Teil 101: Optische Kontakt
(Unterbaugruppe) für freien Steckverbinder - Produktnorm

This European Standard was approved by CEN on 28 December 2007.

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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 Management Centre has the same status as the official versions.

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Foreword

This document (EN 4626-101:2008) 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 October 2008, and conflicting national standards shall be withdrawn at the latest by October 2008.

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.

This standard was reviewed by the Domain Technical Coordinator of ASD-STAN's Electrical Domain.

After inquiries and votes carried out in accordance with the rules of ASD-STAN defined in ASD-STAN's General Process Manual, this standard has received approval for Publication.

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.

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1 Scope

This standard defines the installed dimension information of EN 4531-101 fibre optic contact in the EN 4626-003 plug adaptor, together with performance requirements and assembly information based on EN C2\10\A specification (62,5 µm/125 µm fibre and 1,8 mm outside diameter cable).

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

EN 4626-001, *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.* ¹⁾

EN 4626-003, *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 003: Adaptor for plug.* ¹⁾

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

MIL-I-81969/8B, *Installing and removal tools, connector electrical contact, types I and II, class 2, composition A.* ³⁾

MIL-I-81969/14C, *Installing and removal tools, connector electrical contact, type III, class 2, composition B.* ³⁾

3 Optical contact dimensions

See EN 4531-101.

4 Position of the optical contact in the female adaptor (for plug)

Optical adaptor is defined in EN 4626-003.

See Figure 1.

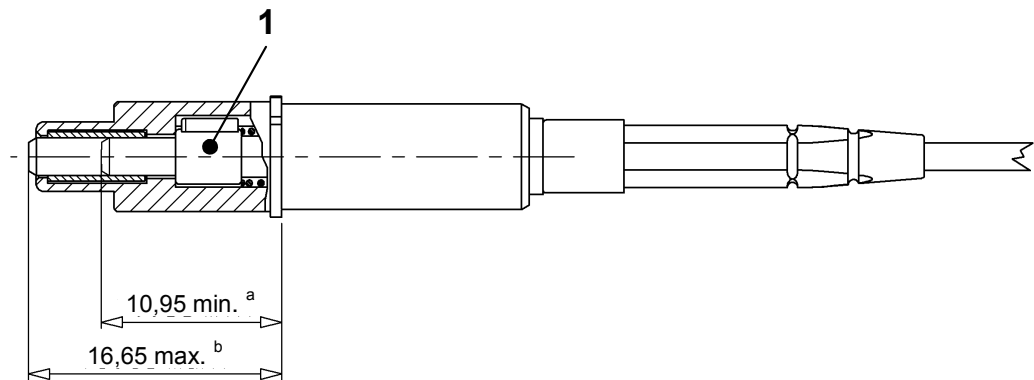
Dimensions are in millimetres.

* And all its parts quoted in this standard.

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

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

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



Key

- 1 See EN 4531-101.
- ^a Rear bottoming position
- ^b Relaxed position

Figure 1

Spring force when connector is mated:

Typical: 9 N (minimum 5 N, maximum 13 N).

Spring outer diameter shall be 3,95 mm maximum.

Add the mass: $(0,9 \pm 0,2)$ g.

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5 Technical specification

See EN 4626-001.

6 Tests

6.1 Tests according to EN 2591-100 Standard

See Table 1.

Table 1

EN 2591-	Designation of the test	Details
6101	Visual examination	No loosening of parts, cracks, excessive wear, or detached parts. Optical face undamaged and free from contamination when examined at 100 × magnification minimum.
102	Examination of dimensions and mass	Dimensions according to Figure 1
6301	Endurance at temperature	1 000 hours at 125 °C
6305	Rapid change of temperature	5 cycles $T_A = 125\text{ °C}$ $T_B = -55\text{ °C}$
6307	Salt mist	48 hours
6315	Fluid resistance	Applicable for no metallic adaptor
6321	Damp heat, cyclic test	Connector mated, two cycles method A
6402	Shock	Method A, severity 50, 11 ms.
6403	Vibrations	Method B, Figure 3, Table 2, level E. Two axes (X and Y), 8 hours/axe (checked with ARINC 600)
6406	Mechanical endurance	500 cycles for connector Maintenance ageing: 10 cycles
408	Mating and unmating forces	Any configuration of layout must not exceed the maximum value defined in ARINC 600 specification for mating force
601	Insertion loss	1 dB maximum during and after test
602	Variation of attenuation and optical discontinuity	No optical discontinuity > 0,5 µs. Threshold at 1 dB
604	Cleaning capability of optical face	Applicable
605	Return loss	RL < - 21 dB

6.2 Additional test

See EN 4626-001.

7 Assembly process instruction

7.1 Cleaning

The connector design allows easy access for cleaning of the optical end faces. With the connectors unmated the process for cleaning should include:

- 1) With the contacts remaining in the connectors use a lint free tissue or gleaning prob wetted with a suitable accepted cleaning solution to wipe the end face of the contact.
- 2) Remove excess cleaning fluid with aerosol free agent dry air.
- 3) Mate the connector halves.