

5 YfcbUj h_U!`?cbY_lcf`žcdh] b]ždfUj c_cfb]žj Y_cbfU_hb]žg'gfc`Uca `]b`d`cý cž
j Xc`V]bUEi UXfU žg`dfYa Yfca ` _Ud]WY`&ž` a a `!`8 Ycj bUHya dYfUhi fU!*) `š7`Xc`%&)
š7`ftXj]gbUcX`_UV`Uk!`afUj bUb]`_cbfU_h]!`&\$%`XY. `Cdh] b]`_cbfU_hfbcXg`_cdLnU
j h] b]Vt`!`GHubXUfX`nUdfc]nj cX

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 201: Optical contact (sub-assembly) for receptacle - Product standard

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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 201 Optische Kontakt (Unterbaugruppe) für festen 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 201: Contact optique (sous-ensemble) pour embase - Norme produit

Ta slovenski standard je istoveten z: EN 4626-201:2009

ICS:

49.060 Š`æp` \`æš` Á`^`[|b` \`æ Aerospace electric
^|\`dã` }`æ]` !`^`{` æš` Á`ã` c`{` ã equipment and systems

SIST EN 4626-201:2009 en

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EUROPEAN STANDARD

EN 4626-201

NORME EUROPÉENNE

EUROPÄISCHE NORM

February 2009

ICS 49.090

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 201: Optical contact (sub-assembly) for receptacle - Product standard

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This European Standard was approved by CEN on 4 July 2008.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN Management Centre or to any CEN member.

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.

CEN members are the national standards bodies of 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 United Kingdom.



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Foreword

This document (EN 4626-201:2009) 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 August 2009, and conflicting national standards shall be withdrawn at the latest by August 2009.

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.

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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EN 4626-201:2009 (E)**1 Scope**

This standard defines the installed dimension information of EN 4531-101 fibre optic contact in the EN 4626-004 receptacle adaptor, together with performance requirements and assembly information based on EN 4641-100 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 EN 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 4626-004, *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 004: Adaptor for receptacle*

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 male adaptor (for receptacle)

Optical adaptor is defined in EN 4626-004.

See Figure 1.

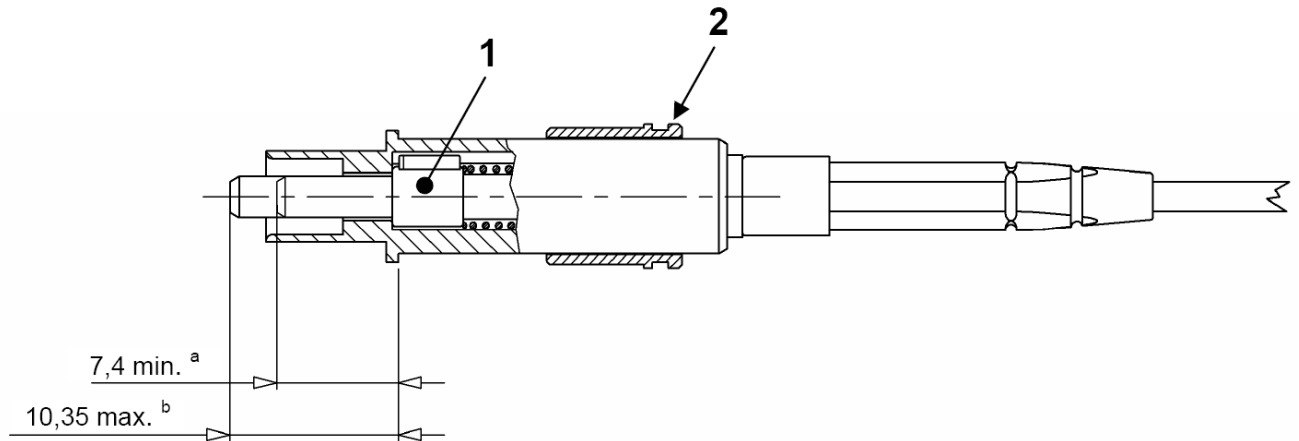
Dimensions are in millimetres.

* 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 Defence (DOD), the Pentagon, Washington, D.C. 20301 USA.



Key

- 1 See EN 4531-101.
- 2 Alignment boot
- ^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.

5 Technical specification

See EN 4626-001.

6 Tests

6.1 Tests according to EN 2591-100

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 cleaning probe wetted with a suitable accepted cleaning solution to wipe the end face of the contacts.
- 2) remove excess cleaning fluid with an aerosol free agent, s.a dry air.
- 3) mate the connector halves.

The cleaning procedure is the same for male and female inserts in either plug or receptacle.