



SLOVENSKI STANDARD SIST EN 3716-001:2009

01-julij-2009

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Aerospace series - Connector, single-way, with triaxial interface, for transmission of digital data - Part 001: Technical specification

Luft- und Raumfahrt - Steckverbinder, triaxial für digitale Datenübertragung in einer Richtung - Teil 001: Technische Lieferbedingungen

Série aérospatiale - Connecteur, monovoie, avec interface triaxiale, pour transmission de données numériques - Partie 001: Spécification technique

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Ta slovenski standard je istoveten z: EN 3716-001:2006

ICS:

49.060 Š^æ\ æš Ą^•[|b\ æ Aerospace electric
^|\ dā} æ[]!^ { æš Ą ã c^ { ã equipment and systems

SIST EN 3716-001:2009

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 3716-001

May 2006

ICS 49.060

English Version

Aerospace series - Connector, single-way, with triaxial interface, for transmission of digital data - Part 001: Technical specification

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This European Standard was approved by CEN on 20 February 2006.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, 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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EUROPEAN COMMITTEE FOR STANDARDIZATION
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EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This European Standard (EN 3716-001:2006) has been prepared by the European Association of Aerospace Manufacturers - Standardization (AECMA-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 AECMA, 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 2006, and conflicting national standards shall be withdrawn at the latest by November 2006.

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, 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 3716-001:2006 (E)**1 Scope**

This standard applies to single-way connectors with triaxial interfaces used in the transmission of digital data, with the two-core shielded cables in accordance with EN 3375-003, EN 3375-004 and EN 3375-005.

This standard defines the general characteristics of connectors with screw couplings usable up to a frequency of 5 MHz. It specifies the conditions of qualification, acceptance and quality assurance. It defines the test programmes and groups.

Temperature class: – 65°C to 150°C

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 3155-001, *Aerospace series — Electrical contacts used in elements of connection — Part 001: Technical specification.* ¹⁾

EN 3375-003, *Aerospace series — Cables, electrical, for signal data transmissions — Part 003: Cable, bifilar, double-braid — Product standard.* ²⁾

EN 3375-004, *Aerospace series — Cables, electrical, for signal data transmissions — Part 004: Cable, bifilar, single-braid — Product standard.* ²⁾

EN 3375-005, *Aerospace series — Cables, electrical, for signal data transmissions — Part 005: Cable, bifilar, double-braid, high immunity — Product standard.* ²⁾

EN 3716-*, *Aerospace series — Connector, single-way, with triaxial interface, for transmission of digital data.*

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

MIL-DTL-5624U, *Turbine fuel, aviation, grades JP-4 and JP-5.* ³⁾

MIL-HDBK-454A, *General guidelines for electronic equipment.* ³⁾

MIL-PRF-7808L, *Lubricating oil, aircraft turbine engine, synthetic base, NATO code number O- 148.* ³⁾

MIL-PRF-23699F, *Lubricating oil, aircraft turbine engine, synthetic base, NATO code number O-156.* ³⁾

MIL-PRF-87937D, *Cleaning compound aerospace equipment.* ³⁾

QPL-5606-31, *Hydraulic fluid, petroleum base; aircraft; missile and ordnance.* ³⁾

* And all parts quoted.

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

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

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

FED-STD-H28, *Screw thread standards for federal services*.³⁾

AMS1424D, *Fluid, Deicing/Anti-Icing, Aircraft, SAE Type I*.⁴⁾

3 Terms and definitions

For the purposes of this standard, the terms and definitions given in EN 2591-100 and EN 3155-001 apply.

4 Description

4.1 General

The triaxial connectors are the solder or crimp contact type, with mechanical end stop.

The coupling system is the screw type; at the end of coupling the housings are mechanically stopped.

4.2 Receptacle

Fixing is by nut, anti-vibration washer and gasket seal.

4.3 Plug

The knurled coupling ring mounted permanently on the plug allows the connectors to be coupled and decoupled.

4.4 Materials and surface treatment

When dissimilar metals are in close contact, adequate protection against corrosion shall be used to ensure that the electro-chemical potential difference does not exceed 0,25 V.

a) Housing

Copper alloy, tin plated.

b) Contact

Copper alloy, gold-plated over an appropriate undercoat.

c) Insert

The materials used shall have electrical and mechanical characteristics compatible with the required use.

d) Ferrule

Material identical to that used for housing.

5 Design

The insert is not removable.

4) Published by Society of Automotive Engineers Inc. (SAE) 400 Commonwealth Drive, Warrendale, PA 15096-001, USA.

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It is retained mechanically in the housing.

The fronts of the inserts are designed to guarantee the seal when the connectors are mated.

6 Definition drawings and masses

6.1 General

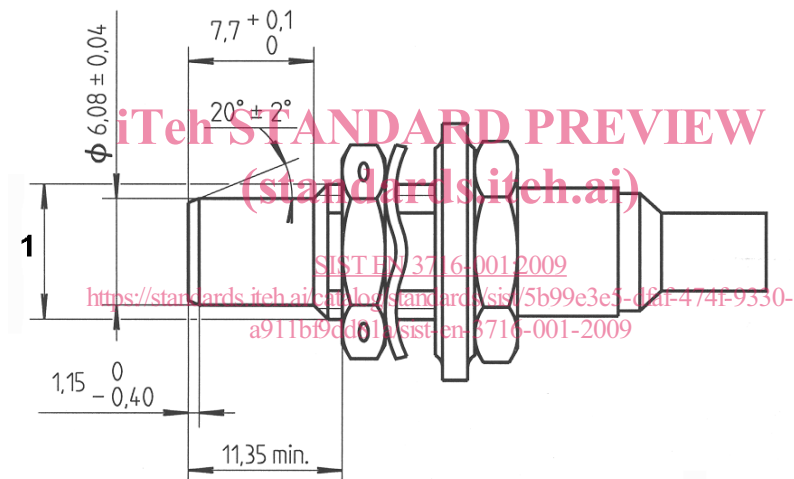
The general definition drawings and masses of the receptacles, plugs and flight caps are given in the product standards.

6.2 Receptacle mating dimensions

6.2.1 With socket contact

See Figures 1 and 2.

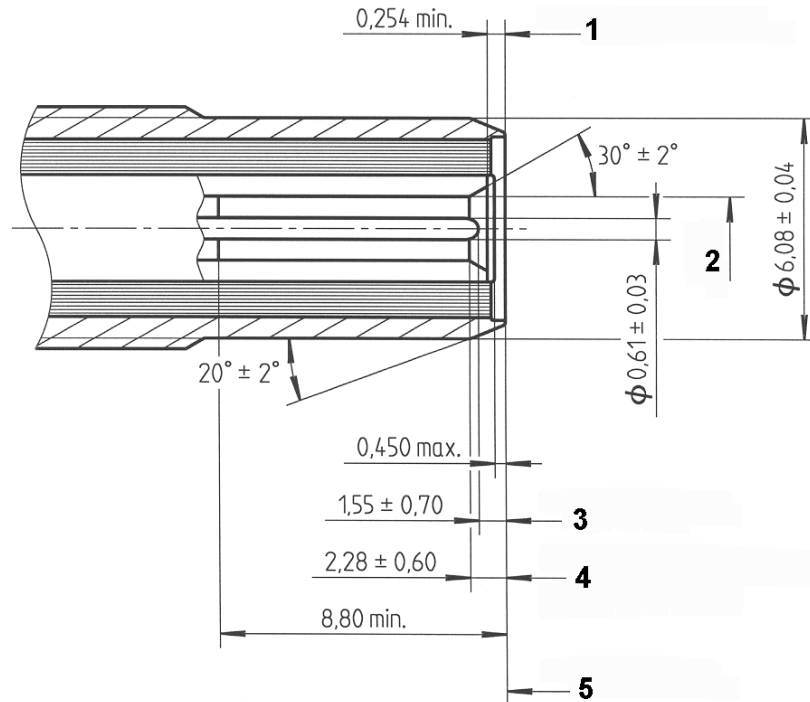
Dimensions and tolerances are in millimetres.



Key

- 1 5/16 – 32 UNEF 2A according to FED-STD-H28

Figure 1



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Key

1 End of socket contact

2 \varnothing compatible with intermediate pin

3 End of pin contact

4 Point of contact with a flat-ended pin $\varnothing 1,850 \pm 0,005$

5 Reference plane

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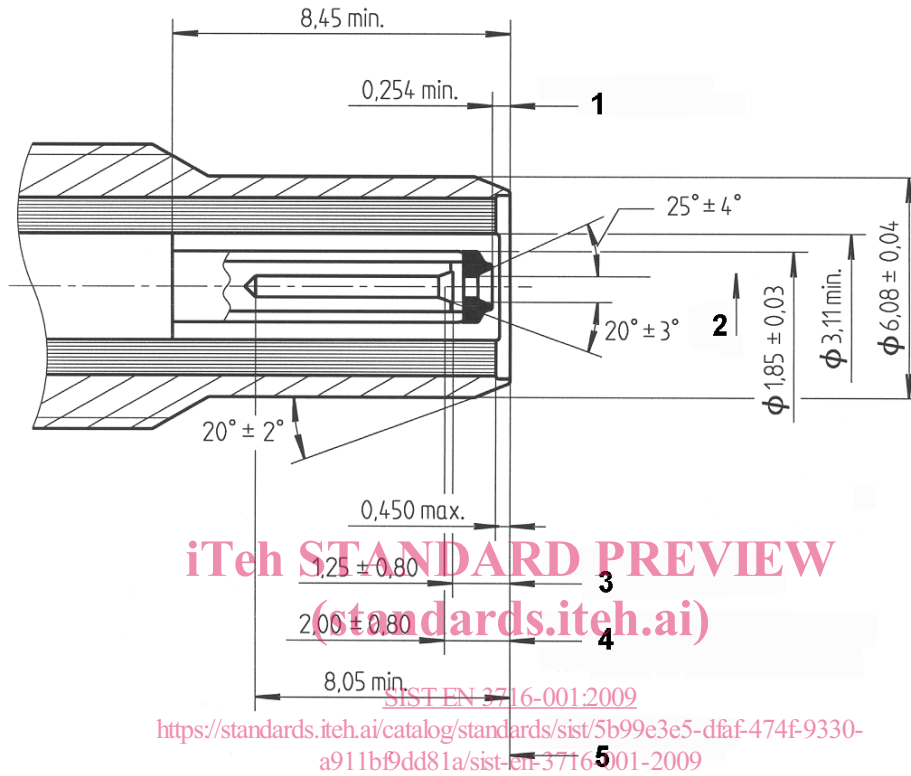
Figure 2

EN 3716-001:2006 (E)

6.2.2 With pin contact

See Figure 3.

Dimensions and tolerances are in millimetres.



Key

- 1 End of insulator
- 2 Ø compatible with intermediate pin
- 3 End of pin contact
- 4 Point of contact with a flat-ended pin $\varnothing 1,850 \pm 0,005$
- 5 Reference plane

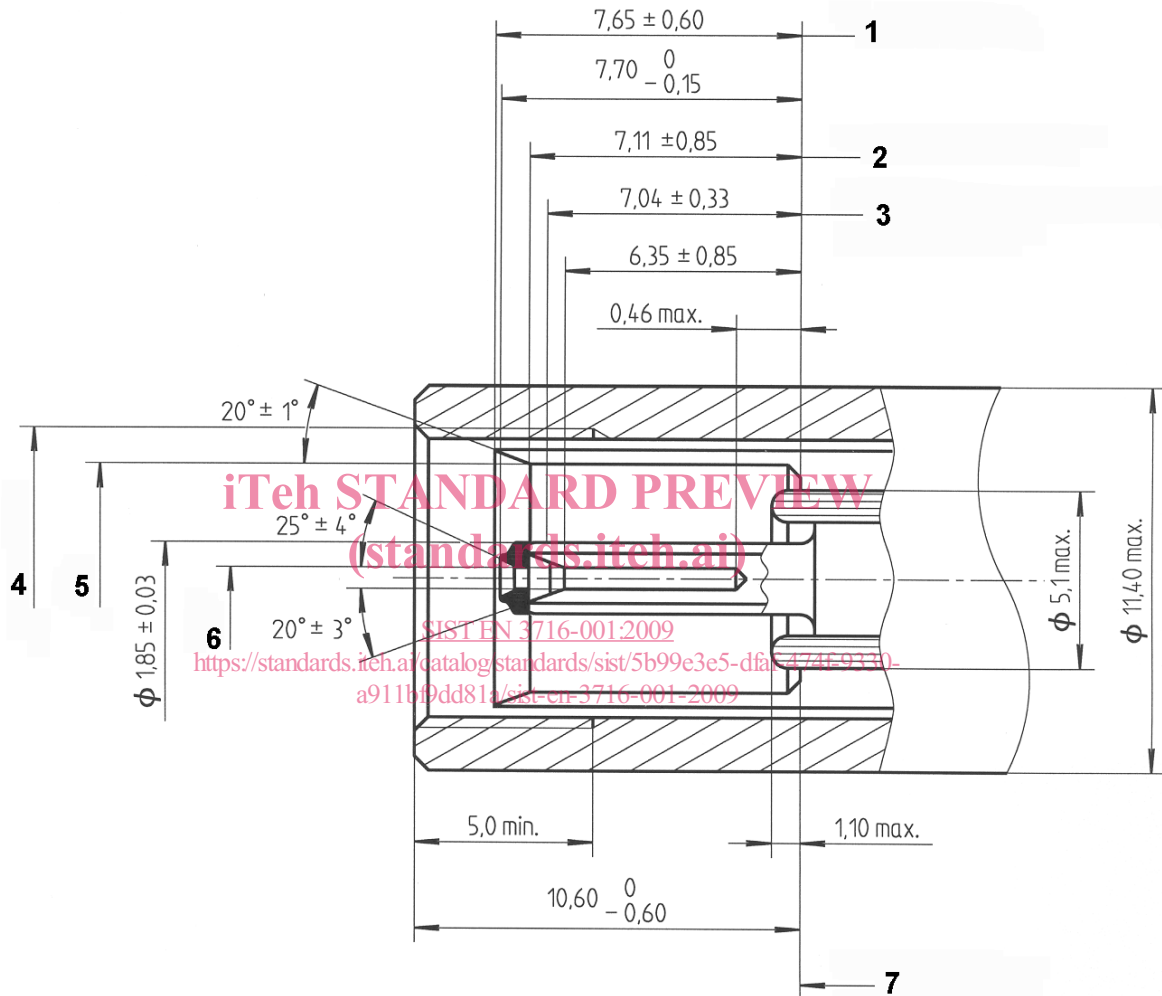
Figure 3

6.3 Mating dimensions of plug

6.3.1 With pin contact

See Figure 4.

Dimensions and tolerances are in millimetres.



Key

- 1 End of insulator
- 2 End of contact $\phi 1,85$
- 3 Point of contact with a flat-ended pin $\phi 6,080 \pm 0,005$
- 4 5/16 – 32 UNEF 2A according to FED-STD-H28
- 5 ϕ compatible with external pin $\phi 6,08 \pm 0,04$
- 6 ϕ compatible with internal pin $\phi 0,61 \pm 0,03$
- 7 Reference plane (mechanical stop)

Figure 4