SLOVENSKI STANDARD
SIST EN 3375-007:2009

01-maj-2009

Aeronavtika - Elektriļ ni kabli za digitalni prenos podatkov - 007. del: Dvojni oplet - 77 ohmov - Tip WW - Standard za proizvod

Aerospace series - Cable, electrical, for digital data transmission - Part 007: Double braid - 77 Ohms - Type WW - Product standard

Luft- und Raumfahrt - Elektrische Leitungen für Digitaldatenübertragungen - Teil 007: Doppelt geschirmt - 77 Ohm - Type WW - Produktnorm

Série aérospatiale - Câbles électriques pour transmission de données numériques - Partie 007 : Double tresse - 77 Ohms - Type WW - Norme de produit

Ta slovenski standard je istoveten z: **EN 3375-007:2006**

ICS:

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

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English Version

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Foreword

This document (EN 3375-007:2006) 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of an identical text or by endorsement, at the latest by June 2007, and conflicting national standards shall be withdrawn at the latest by June 2007.

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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, 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 specifies the required characteristics of double braid, 77 Ohms, size 26 electrical cable type WW, intended for digital data transmissions.

Main electrical characteristics are given in 4.3.

It shall be used together with EN 3375-001 and EN 3375-002.

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 2083, *Aerospace series — Copper or copper alloy conductors for electrical cables — Product standard*.

EN 2084, *Aerospace series — Cables, electric, single-core, general purpose, with conductors in copper or copper alloy — Technical specification*.

EN 2235, *Aerospace series — Single and multicore electrical cables, screened and jacketed — Technical specification.*

EN 3375-001, *Aerospace series — Cable, electrical, for digital data transmission — Technical specification*. [1)]

EN 3375-002, *Aerospace series — Cable, electrical, for digital data transmission — General*. [1)]

EN 3475-100*, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 100: General.*

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

TR 6058, *Aerospace series — Cable code and identification list.* [2)]

3 Terms and definitions

For the purposes of this standard, the terms and definitions given in EN 3475-100 apply.

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* And all parts quoted in this standard.

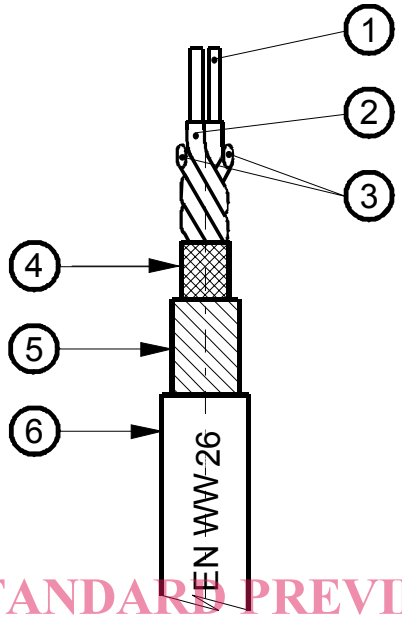
1) Published as ASD Prestandard at the date of publication of this standard.

2) Published as ASD Technical Report at the date of publication of this standard.

4 Required characteristics

4.1 Dimensions and mass

See Figure 1 and Table 1.



Key

① Two cores size 26, according to EN 2083 C001 (AWG 26)
② Insulation of elements: Fluorocarbon (colour: see 7.5)
③ Two fillers
④ Braid screen, silver plated copper (strand ∅ = 0,08 mm)
⑤ Braid screen, silver plated copper (strand ∅ = 0,08 mm)
⑥ Outer sheath fluorocarbon (colour: see 7.5)

Figure 1

Table 1

Core (AECMA EN 2083)			Insulation	Braid screen		Outer sheath		Mass
				④	⑤			
Composition	diameter		diameter	diameter		diameter		
	min.	max.	max.	max.		min.	max.	max.
N × mm	mm		mm	mm		mm		g/m
19 × 0,10	0,45	0,53	0,85	2,00	2,40	2,80	3,00	21

4.2 General characteristics (according to EN 2235 and EN 3475-100)

— Operating temperature ..... : – 65 °C to 200 °C

— Bend radius recommended minimum bend radius ..... : $R = 20$ mm

— Twisting pitch ranging between 8 and 16 times the external diameter of the dual-conductor assembly.

4.3 Electrical characteristics

— Impedance ..... : (77 ± 7) Ω at 1 MHz

— Capacitance ..... : 75 pF/m max.

— Attenuation maximum ..... : 4,1 dB/100 m at 1 MHz

— For information: maximum voltage rating 250 V AC

— Transfer impedance (Zt/mΩ/m):

- direct current ..... : 30
- 1 MHz ..... : 15
- 10 MHz ..... : 15
- 30 MHz ..... : 15
- 100 MHz ..... : N.A.

5 Tests

According to EN 3375-001 and EN 3475-100. See Table 2.

Table 2

EN 3475-	Designation of the test	Carried out on	
		Component [a]	Cable
201	Visual examination	Applicable	Applicable
202	Mass	Not applicable	Applicable see Table 1.
203	Dimensions	Applicable	Applicable see Table 1.
301	Ohmic resistance per unit length	Not applicable	Applicable 153 Ω/km maximum
302	Voltage proof test	Not applicable	Applicable Elements: 1 500 V AC Jacket: • Dry: 1 000 V AC • Immersion: 500 V AC
303	Insulation resistance	Not applicable	Applicable ≥ 1 500 MΩ × km at 20 °C

continued

Table 2 *(continued)*

EN 3475-	Designation of the test	Carried out on	
		Component [a]	Cable
304	Surface resistance	Applicable	Applicable 1 250 MΩ.mm
305	Overload resistance	Not applicable	Not applicable
306	Continuity of conductors	Applicable	Applicable
307	Corona extinction voltage	Not applicable	Not applicable
401	Accelerated ageing	Not applicable	Applicable T = operating Temperature 230 °C 168 h Mandrel ∅ 50 mm Load = 0,25 daN
402	Shrinkage and delamination	Applicable T °C = 200 °C 0,8 mm max.	Applicable T °C = 200 °C 2 mm max.
403	Delamination and blocking	Not applicable	Applicable T °C = 200 °C Mandrel ∅ 50 mm
404	Thermal shock	Applicable T °C = 200 °C 0,8 mm max.	Applicable T °C = 200 °C 2 mm max.
405	Bending at ambient temperature	Not applicable	Applicable Load = 1 daN Mandrel ∅ 50 mm
406	Cold bend test	Not applicable	Applicable Load = 1 daN Mandrel ∅ 50 mm
407	Flammability	Not applicable	Applicable Load = 1 daN
408	Fire resistance	Not applicable	Not applicable
409	Air-excluded ageing	Not applicable	Not applicable
410	Thermal endurance	Not applicable	Not applicable
411	Resistance to fluids	Not applicable	Applicable
412	Humidity resistance	Not applicable	Not applicable
413	Wrap back test	Not applicable	Not applicable
414	Differential scanning calorimeter (DSC test)	Not applicable	Not applicable
415	Rapid change of temperature	Not applicable	Not applicable
416	Thermal stability	Not applicable	Not applicable
417	Fire resistance inside harness	Not applicable	Not applicable
418	Conductor thermal endurance	Not applicable	Not applicable

continued