



SLOVENSKI STANDARD SIST EN 3375-006:2009

01-maj-2009

5 YfcbUj h_U!`9`Y_f] b]_UV]`nUX[[HJb]`dfYbcg`dcXUh_cj `!`\$\$* "XY.`9bc`b]`cd`Yh!
+, `c\ a cj `!`H]d`LA `!`GfUbxUF`X`nUdfc]nj cX

Aerospace series - Cable, electrical, for digital data transmission - Part 006: Single braid
- 78 Ohms - Type XM - Product standard

Luft- und Raumfahrt - Elektrische Leitungen für Digitaldatenübertragungen - Teil 006:
Einzel geschirmt - 78 Ohm - Type XM - Produktnorm

Série aérospatiale - Câbles électriques pour transmission de données numériques -
Partie 006 : Simple tresse - 78 Ohms - Type XM - Norme de produit

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Ta slovenski standard je istoveten z: EN 3375-006:2006

ICS:

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

SIST EN 3375-006:2009

en,de

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 3375-006

December 2006

ICS 49.060

English Version

**Aerospace series - Cable, electrical, for digital data transmission
- Part 006: Single braid - 78 Ohms - Type XM - Product standard**

Série aérospatiale - Câbles électriques pour transmission
de données numériques - Partie 006 : Simple tresse - 78
Ohms - Type XM - Norme de produit

Luft- und Raumfahrt - Elektrische Leitungen für
Digitaldatenübertragungen - Teil 006: Einzel geschirmt - 78
Ohms - Type XM - Produktnorm

This European Standard was approved by CEN on 28 August 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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Foreword

This document (EN 3375-006:2006) 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.

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 3375-006:2006 (E)**1 Scope**

This standard specifies the required characteristics of single braid, 78 Ohms, size 24 electrical cable type XM, 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.

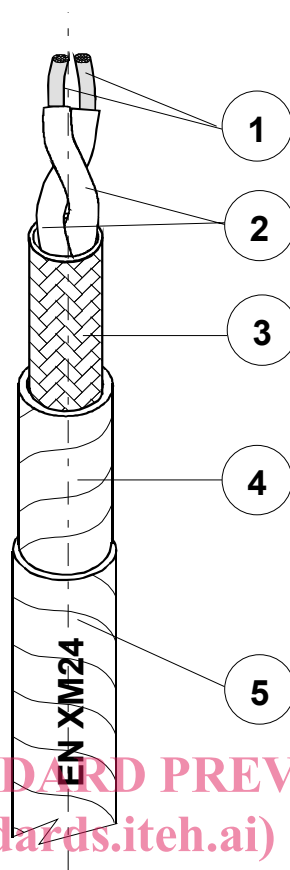
4 Required characteristics**4.1 Dimensions and mass**

See Figure 1 and Table 1.

* 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.



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Key

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- ① Two cores size 24 – Nickel – plated copper alloy
 ② Insulation of elements: Fluorocarbon (colour: see 7.5)
 ③ Braid screening, overlap 65 % minimum, nickel-plated copper strands (strands $\varnothing = 0,08$ mm)
 ④ First tape: polyimide
 ⑤ Polyimide without external coating (colour: see 7.5)

Figure 1

Table 1

Composition N × mm	Core (AECMA EN 2083) diameter min. max. mm		Insulator diameter min. max. mm		Sheath external diameter max. mm	Mass max. g/m
	19 × 0,12	0,55	0,62	1,13	1,33	3,10

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

— Operating temperature : – 55 °C to 200 °C
(ambient + heating)

EN 3375-006:2006 (E)

- Minimum static bend radius : $R = 25$ mm
- Resistance to environment:
 - Resistant to fluids : as per EN 3475-411
 - Non flammable : as per EN 3475-407
- Twisting pitch ranging between 8 and 16 times the external diameter of the dual-conductor assembly.

4.3 Electrical characteristics

- Impedance : $(78 \pm 7) \Omega$ from 1 MHz to 200 MHz
- Capacitance : 64 pF/m ± 10 %
- Attenuation maximum : $- 0,035$ dB/m at 1 MHz
 $- 0,15$ dB/m at 10 MHz
- For information: maximum voltage rating 250 V AC

5 Tests

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

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Table 2

EN 3475-	Designation of the test	Carried out on	
		Component ^a	Cable
201	Visual examination	Applicable	Applicable
202	Mass	Not applicable	Applicable ≤ 15 kg/km
203	Dimensions	Applicable	Applicable
301	Ohmic resistance per unit length	Not applicable	Applicable 117 Ω /km maximum
302	Voltage proof test	Not applicable	Applicable Elements: 1 500 V AC Jacket: <ul style="list-style-type: none"> • Dry: 1 000 V AC • Immersion: 500 V AC
303	Insulation resistance	Not applicable	Applicable ≥ 1 500 M Ω \times km at 20 °C
304	Surface resistance	Applicable	Applicable 1 250 M Ω .mm
305	Overload resistance	Not applicable	Not applicable

continued

Table 2 (continued)

EN 3475-	Designation of the test	Carried out on	
		Component ^a	Cable
306	Continuity of conductors	Applicable	Applicable
307	Corona extinction voltage	Not applicable	Not applicable
401	Accelerated ageing	Not applicable	Applicable <i>T</i> = operating Temperature 30 °C 168 h Mandrel Ø 50 mm Load = 0,7 daN
402	Shrinkage and delamination	Applicable <i>T</i> °C = (200 ± 5) °C 0,8 mm max.	Applicable <i>T</i> °C = (200 ± 5) °C 2 mm max.
403	Delamination and blocking	Not applicable	Applicable <i>T</i> °C = 200 °C Mandrel Ø 50 mm
404	Thermal shock	Applicable <i>T</i> °C = (200 ± 5) °C 0,8 mm max.	Applicable <i>T</i> °C = (200 ± 5) °C 2 mm max.
405	Bending at ambient temperature	Not applicable	Applicable Load = 0,7 daN Mandrel Ø 50 mm
406	Cold bend test	Not applicable	Applicable Load = 0,7 daN Mandrel Ø 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
501	Dynamic cut-through	Not applicable	Applicable at 23 °C: 1,0 daN at 200 °C: 0,5 daN

continued