



SLOVENSKI STANDARD SIST EN 3375-009:2009

01-maj-2009

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Aerospace series - Cable, electrical, for digital data transmission - Part 009: Single braid
- CAN Bus - 120 Ohms - Type WX - Product standard

Luft- und Raumfahrt - Elektrische Leitungen für Digitaldatenübertragungen - Teil 009:
Einfach Geschirmt - Bus CAN 120 Ohm - Type WX - Produktnorm

Série aérospatiale - Câbles électriques pour transmission de données numériques -
Partie 009: Simple tresse - Bus CAN - 120 Ohms - Type WX - Norme de produit

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Ta slovenski standard je istoveten z: **EN 3375-009:2009**

ICS:

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

SIST EN 3375-009:2009

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EUROPEAN STANDARD

EN 3375-009

NORME EUROPÉENNE

EUROPÄISCHE NORM

February 2009

ICS 49.060

English Version

Aerospace series - Cable, electrical, for digital data transmission
- Part 009: Single braid - CAN Bus - 120 Ohms - Type WX -
Product standard

Série aérospatiale - Câbles électriques pour transmission
de données numériques - Partie 009: Simple tresse - Bus
CAN - 120 Ohms - Type WX - Norme de produit

Luft- und Raumfahrt - Elektrische Leitungen für
Digitaldatenübertragungen - Teil 009: Einfach Geschirmt -
Bus CAN - 120 Ohm - Type WX - Produktnorm

This European Standard was approved by CEN on 11 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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Contents

Page

Foreword.....	3
1 Scope	4
2 Normative references	4
3 Terms and definitions	4
4 Required characteristics	4
4.1 Dimensions and mass	4
4.2 General characteristics	5
4.3 Electrical characteristics	5
5 Tests.....	6
6 Quality assurance	8
7 Identification and marking (according to EN 3375-002 and TR 6058).....	9
7.1 Designation	9
7.2 Short designation	9
7.3 Marking	9
7.4 Colour of the marking on the jacket	9
7.5 Colour of components	9
8 Packaging	9
9 Technical specification	9

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Foreword

This document (EN 3375-009:2009) 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 3375-009:2009 (E)**1 Scope**

This standard specifies the required characteristics of single braid, 120 Ohms, size 26, electrical cable type WX, intended for digital data transmissions.

It shall be used together with EN 3375-001.

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 3375-001, *Aerospace series — Cable, electrical, for digital data transmission — Part 001: Technical specification*

EN 3375-002, *Aerospace series — Cable, electrical, for digital data transmission — Part 002: 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 identification list*²

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3 Terms and definitions

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

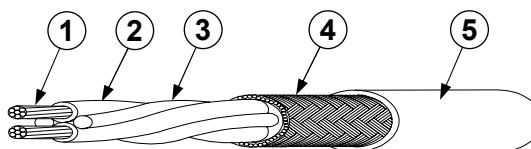
4 Required characteristics**4.1 Dimensions and mass**

See Figure 1 and Table 1.

* And all parts quoted in Table 2.

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.



Key

- ① Two size 26 stranded silver plated copper alloy conductors
- ② Insulation material of the two elements: Fluorocarbon (colour: see 7.5)
- ③ Two expanded fluorocarbon fillers
- ④ Silver (C) plated copper strands (Ø 0,08 mm) braided screen
- ⑤ Outer sheath: Fluorocarbon (colour: see 7.5)

Figure 1

Table 1

Composition N × mm	Conductor diameter		Insulation diameter	Braid screen ④ diameter	Outer sheath diameter		Mass max. g/m
	min. mm	max. mm	max. mm	max. mm	min. mm	max. mm	
7 × 0,16	0,46	0,48	1,12	2,60	2,70	2,90	18

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4.2 General characteristics

- Operating temperature.....: – 55 °C to 200 °C
- Minimum static bending radius: R = 20 mm
- Minimum dynamic bending radius.....: R = 30 mm

4.3 Electrical characteristics

- Impedance.....: 100 < Z_c < 120 Ω up to 20 MHz
: 108 < Z_c < 132 Ω up to 1 MHz
- Capacitance.....: 45 pF/m max.
- Capacitance unbalance.....: 3,5 % max.
- Attenuation max.....: 3 dB/100 m up to 1 MHz
: 8 dB/100 m up to 5 MHz
- Transfer impedance (Z_t/mΩ/m) max.:
 - direct current.....: 50
 - 1 MHz.....: 50
 - 10 MHz.....: 50
 - 30 MHz.....: 100

EN 3375-009:2009 (E)

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	Applicable	Applicable 18 kg/km max.
203	Dimensions	Applicable	Applicable
301	Ohmic resistance per unit length	Applicable 145 Ω/km max.	Not applicable
302	Voltage proof test	Applicable 1 000 V AC	Applicable. Between: - shield and jacket: 500 V AC - cores: 1 000 V AC - cores and shield: 1 000 V AC
303	Insulation resistance	Applicable at 20 °C ≥ 500 MΩ × km	Applicable at 20 °C: ≥ 500 MΩ × km
304	Surface resistance	Applicable 500 MΩ × mm	Not applicable
305	Overload resistance	Not applicable	Not applicable
306	Continuity of conductors	Applicable	Applicable
307	Corona extinction voltage	Not applicable	Not applicable
401	Accelerated ageing	Applicable (230 ± 5) °C / 168 h Mandrel Ø 15 mm Load = 0,5 daN	Applicable (230 ± 5) °C / 168 h Mandrel Ø 35 mm Load = 0,5 daN
402	Shrinkage and delamination	Applicable T = (200 ± 5) °C 0,8 mm max.	Applicable T = (200 ± 5) °C 2,0 mm max.
403	Delamination and blocking	Applicable T = (200 ± 5) °C Mandrel Ø 15 mm	Applicable T = (200 ± 5) °C Mandrel Ø 35 mm
404	Thermal shock	Applicable T = (200 ± 5) °C 0,8 mm max.	Applicable T = (200 ± 5) °C 2,0 mm max.
405	Bending at ambient temperature	Not applicable	Applicable Load = 0,5 daN Mandrel Ø 35 mm
406	Cold bend test	Applicable Load = 0,5 daN Mandrel Ø 15 mm	Applicable Load = 0,5 daN Mandrel Ø 35 mm
407	Flammability	Not applicable	Applicable Flame extinction < 3 s Load = 0,5 daN

continued

Table 2 (continued)

EN 3475-	Designation of the test	Carried out on	
		Component ^a	Cable
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	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 daN at operating temperature: 0,5 daN
502	Notch propagation	Not applicable	Applicable Notch = 0,05 mm Mandrel Ø 50 mm
503	Scrape abrasion	Not applicable	Applicable F = 0,5 daN
504	Torsion	Not applicable	Not applicable
505	Tensile test on conductors and strands	Applicable F > 60 N	Not applicable
506	Plating continuity	Applicable	Applicable (shield strands)
507	Adherence of plating	Applicable	Applicable (shield strands)
508	Plating thickness	Not applicable	Not applicable
509	Solderability	Applicable	Applicable
510	Tensile strength and elongation of extruded insulation, sheath and jacket material	Not applicable	Not applicable
511	Cable-to-cable abrasion	Not applicable	Not applicable
512	Flexure endurance	Not applicable	Not applicable
513	Deformation resistance (Installation with plastic cable ties)	Not applicable	Not applicable
514	Porosity of copper cladding	Not applicable	Not applicable
601	Smoke density	Not applicable	Applicable
602	Toxicity	Not applicable	Applicable
603	Resistance to wet arc tracking	Not applicable	Not applicable

continued