



SLOVENSKI STANDARD

SIST EN 3375-009:2016

01-november-2016

Nadomešča:

SIST EN 3375-009:2009

Aeronavtika - Električni kabli za digitalni prenos podatkov - 009. del: Enojni oplet - Bus CAN - 120 ohm - Tip WX - Standard za proizvod

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

Ta slovenski standard je istoveten z: EN 3375-009:2016

ICS:

29.060.20	Kabli	Cables
49.060	Letalska in vesoljska električna oprema in sistemi	Aerospace electric equipment and systems

SIST EN 3375-009:2016

en,fr,de

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EUROPEAN STANDARD

EN 3375-009

NORME EUROPÉENNE

EUROPÄISCHE NORM

September 2016

ICS 49.060; 49.090

Supersedes EN 3375-009:2009

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 4 April 2016.

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-CENELEC 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-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

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<https://standards.iteh.ai/catalog/standards/sist/76bd476b-bf67-4989-97ad-d10d7f5f3125/sist-en-3375-009-2016>

European foreword

This document (EN 3375-009:2016) 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 March 2017, and conflicting national standards shall be withdrawn at the latest by March 2017.

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.

This document supersedes EN 3375-009:2009.

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, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

EN 3375-009:2016 (E)**1 Scope**

This European 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 documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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*

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*¹⁾

3 Terms and definitions

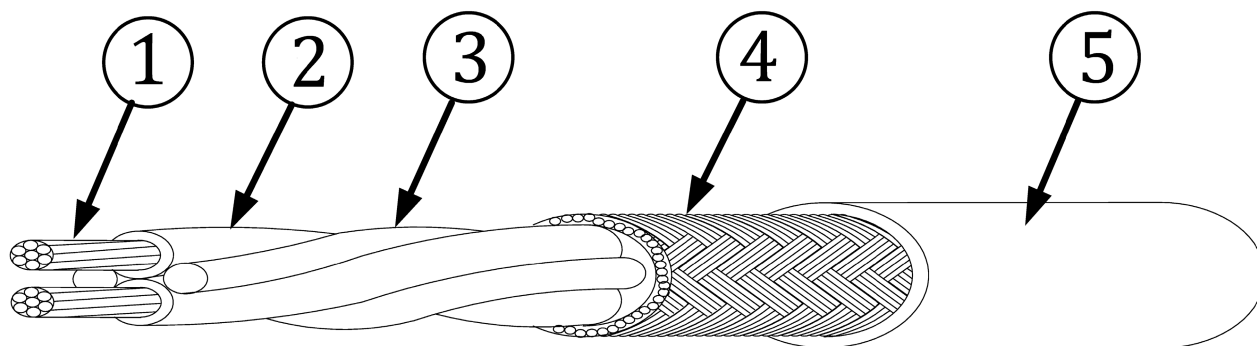
For the purposes of this document, the terms and definitions given in EN 3475-100 apply.

4 Required characteristics**4.1 Dimensions and mass**

See Figure 1 and Table 1.

* All parts quoted in this European Standard.

1) Published as ASD-STAN Technical Report at the date of publication of this European Standard.
<http://www.asd-stan.org/>



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 (\varnothing 0,08 mm) braided screen
- ⑤ Outer sheath: Fluorocarbon (colour: see 7.5)

Figure 1

Table 1

Conductor	Insulation		Braid screen	Outer sheath		Mass
	min.	max.	diameter	min.	max.	
$N \times \text{mm}$	mm		mm	mm		g/m
$7 \times 0,16$	0,46	0,48	1,12	2,70	2,90	18

4.2 General characteristics

- Operating temperature: $-55\text{ }^{\circ}\text{C}$ to $200\text{ }^{\circ}\text{C}$
- Minimum static bending radius: $R = 20\text{ mm}$
- Minimum dynamic bending radius: $R = 30\text{ mm}$

4.3 Electrical characteristics

- Impedance: $100 < Z_c < 120\ \Omega$ up to 20 MHz
: $108 < Z_c < 132\ \Omega$ 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 ($Z_t/\text{m}\Omega/\text{m}$) max.:
 - direct current: 50
 - 1 MHz: 50

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- 10 MHz.....: 50
- 30 MHz.....: 100

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

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 of cables confined inside a harness	Not applicable	Not applicable
418	Thermal endurance for conductors	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	Applicable / The impedance shall be conform to the values specified in 4.3
514	Porosity of copper cladding on aluminium strands	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
604	Resistance to dry arc propagation	Not applicable	Not applicable
605	Wet short circuit test	Not applicable	Not applicable