



SLOVENSKI STANDARD
oSIST prEN 3375-009:2022
01-september-2022

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 - Typ 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: prEN 3375-009

ICS:

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

oSIST prEN 3375-009:2022

en,fr,de

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

DRAFT
prEN 3375-009

July 2022

ICS 49.060

Will supersede EN 3375-009:2016

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 - Typ WX -
Produktnorm

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee ASD-STAN.

If this draft becomes a European Standard, 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.

This draft European Standard was established by CEN 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.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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

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Contents	Page
European 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	9
7 Identification and marking	9
7.1 Designation	9
7.2 Identification and marking	10
7.3 Colour of the marking on the jacket	10
7.4 Colour of components	10
8 Packaging	10
9 Technical specification	10
Annex A (informative) Evolution sheet	11

European foreword

This document (prEN 3375-009:2022) 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 document 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 document is currently submitted to the CEN Enquiry.

This document supersedes EN 3375-009:2016.

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[oSIST prEN 3375-009:2022](https://standards.iteh.ai/catalog/standards/sist/30735b42-b4dc-41d5-b426-3b43d61bde28/osist-pren-3375-009-2022)

<https://standards.iteh.ai/catalog/standards/sist/30735b42-b4dc-41d5-b426-3b43d61bde28/osist-pren-3375-009-2022>

prEN 3375-009:2022 (E)**1 Scope**

This document specifies the required characteristics of single braid, 120 ohms, size 26, electrical cable type WX, UV laser markable, intended for digital data transmissions.

It is used together with EN 3375-001.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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*

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 Products*

TR 6058,¹ *Aerospace series — Cable code identification list*

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

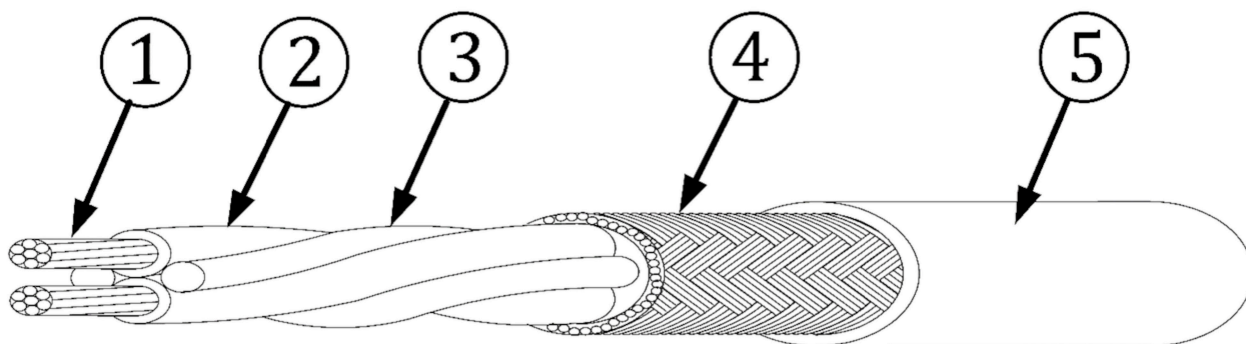
- IEC Electropedia: available at <https://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

4 Required characteristics**4.1 Dimensions and mass**

Shall be according to Figure 1 and Table 1.

* All parts quoted in this European standard.

¹) Published as ASD-STAN Standard at the date of publication of this document by AeroSpace and Defence industries Association of Europe — Standardization (ASD-STAN), <https://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 7.4)
- ③ two expanded fluorocarbon fillers
- ④ silver (C) plated copper strands (Ø 0,08 mm) braided screen
- ⑤ outer sheath: Fluorocarbon (colour: see 7.4)

Figure 1**Table 1**

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

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:
 - $100 < Z_C < 120 \Omega$ up to 20 MHz
 - $108 < Z_C < 132 \Omega$ up to 1 MHz
- Capacitance: 45 pF/m max.
- Capacitance unbalance: 3,5 % max

prEN 3375-009:2022 (E)

- Attenuation max:
 - 3 dB/100 m up to 1 MHz
 - 8 dB/100 m up to 5 MHz
- Transfer impedance ($Z_t/m\Omega/m$) max.:
 - direct current: 50
 - 1 MHz: 50
 - 10 MHz: 50
 - 30 MHz: 100

5 Tests

Shall be according to EN 3375-001 and EN 3475-100 and series EN 3475 as listed in 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: <ul style="list-style-type: none"> — 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 \geq 1 500 $M\Omega \times km$	Applicable at 20 °C: \geq 1 500 $M\Omega \times km$
304	Surface resistance	Applicable 1 250 $M\Omega \times mm$	applicable 1 250 $M\Omega \times mm$
305	Overload resistance	Not applicable	Not applicable
306	Continuity of conductors	Applicable	Applicable
307	Corona extinction voltage	Not applicable	Not applicable
401	Accelerated ageing	Applicable (230 \pm 5) °C/ 168 h	Applicable (230 \pm 5) °C/ 168 h

EN 3475-	Designation of the test	Carried out on	
		Component ^a	Cable
		Mandrel \varnothing 15 mm Load = 0,5 daN	Mandrel \varnothing 35 mm Load = 0,5 daN
402	Shrinkage and delamination	Applicable $T = (200 \pm 5) ^\circ\text{C}$ 0,8 mm max.	Applicable $T = (200 \pm 5) ^\circ\text{C}$ 2,0 mm max.
403	Delamination and blocking	Applicable $T = (200 \pm 5) ^\circ\text{C}$ Mandrel \varnothing 15 mm	Applicable $T = (200 \pm 5) ^\circ\text{C}$ Mandrel \varnothing 35 mm
404	Thermal shock	Applicable $T = (200 \pm 5) ^\circ\text{C}$ 0,8 mm max.	Applicable $T = (200 \pm 5) ^\circ\text{C}$ 2,0 mm max.
405	Bending at ambient temperature	Not applicable	Applicable Load = 0,5 daN Mandrel \varnothing 35 mm
406	Cold bend test	Applicable Load = 0,5 daN Mandrel \varnothing 15 mm	Applicable Load = 0,5 daN Mandrel \varnothing 35 mm
407	Flammability	Not applicable	Applicable Flame extinction < 3 s Load = 0,5 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	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

prEN 3375-009:2022 (E)

EN 3475-	Designation of the test	Carried out on	
		Component ^a	Cable
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	Applicable Braid: TBC
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 shell 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
701	Strippability and adherence of insulation to the conductor	Applicable 0,5 daN	Applicable
702	Screen pushback capability	Not applicable	Applicable
703	Permanence of manufacturer's marking	Not applicable	Applicable
704	Flexibility	Not applicable	Not applicable
705	Contrast measurement	Not applicable	Applicable $K \geq 50$ %
706	Laser markability	Not applicable	Applicable