



# SLOVENSKI STANDARD SIST EN 2714-014:2010

01-januar-2010

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Aerospace series - Cables, electrical, single and multicore for general purpose -  
Operating temperatures between - 55 °C and 260 °C - Part 014: DR family, 5 to 10  
cores, taped, screened (braided) and jacketed, UV laser printable - Product standard

**iTeh STANDARD PREVIEW**

Luft- und Raumfahrt - Leitungen, (elektrisch, ein- und mehradrig, für allgemeine  
Verwendung - Betriebstemperaturen zwischen - 55 °C und 260 °C - Teil 014: DR-  
Familie, 5 bis 10 Adern, umwickelt, geschirmt (Umflechtung) und ummantelt, UV-Laser  
bedruckbar - Produktnorm

<https://standards.iteh.ai/catalog/standards/sist/948cbce7-28ad-4b89-bbd9-b97a6288ee50/sist-en-2714-014-2010>

Série aérospatiale - Câbles, électriques, mono et multiconducteurs d'usage général -  
Températures de fonctionnement comprises entre - 55°C et 260 °C - Partie 014: Famille  
DR, de 5 à 10 conducteurs, enrubannés, blindés (tressés) et gainés, marquables au  
laser UV - Norme de produit

**Ta slovenski standard je istoveten z: EN 2714-014:2009**

**ICS:**

49.060 Š^cp \ aš Ā^• [ |b \ æ Aerospace electric  
^|\ dā } aš ] !^ { aš Ā ã c^ { ã equipment and systems

**SIST EN 2714-014:2010 en**

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EUROPEAN STANDARD

EN 2714-014

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 2009

ICS 49.060

English Version

**Aerospace series - Cables, electrical, single and multicore for general purpose - Operating temperatures between - 55 °C and 260 °C - Part 014: DR family, 5 to 10 cores, taped, screened (braided) and jacketed, UV laser printable - Product standard**

Série aérospatiale - Câbles, électriques, mono et multiconducteurs d'usage général - Températures de fonctionnement comprises entre - 55°C et 260 °C - Partie 014: Famille DR, de 5 à 10 conducteurs, enrubannés, blindés (tressés) et gainés, marquables au laser UV - Norme de produit

Luft- und Raumfahrt - Leitungen, elektrisch, ein- und mehradrig, für allgemeine Verwendung - Betriebstemperaturen zwischen - 55 °C und 260 °C - Teil 014: DR-Familie, 5 bis 10 Adern, umwickelt, geschirmt (Umflechtung) und ummantelt, UV-Laser bedruckbar - Produktnorm

This European Standard was approved by CEN on 3 October 2009.

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.



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

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## Foreword

This document (EN 2714-014:2009) 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 May 2010, and conflicting national standards shall be withdrawn at the latest by May 2010.

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 2714-014:2009 (E)****1 Scope**

This European Standard specifies the characteristics of UV laser printable DR family, 5 to 10 cores, taped, screened (braided) and jacketed electrical lightweight cables for use in the on-board electrical systems of aircraft, at operating temperatures between - 55 °C and 260 °C. Nevertheless, if needed, - 65 °C is also acceptable as shown by cold test.

It shall also be possible to mark these cables by qualified compatible marking.

These markings shall satisfy the requirements of EN 3838.

**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 2235:2006, *Aerospace series — Single and multicore electrical cables, screened and jacketed*

EN 2267-009, *Aerospace series — Cables, electrical, for general purpose — Operating temperatures between - 55 °C and 260 °C — Part 009: DRA family, single and multicore assembly — Product standard*

EN 2714-002:2005, *Aerospace series — Cables, electrical, single and multicore for general purpose — Operating temperatures between - 55 °C and 260 °C — Part 002: Screened and jacketed — General*

EN 2714-013, *Aerospace series — Cables, electrical, single and multicore for general purpose — Operating temperatures between - 55 °C and 260 °C — Part 013: DR family, screened (spiral) and jacketed, UV laser printable — Product standard*

EN 3475-100:2002<sup>1)</sup>, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 100: General*

EN 3838, *Aerospace series — Requirements and tests on user-applied markings on aircraft electrical cables*<sup>2)</sup>  
 EN 4434, *Aerospace series — Copper or copper alloy lightweight conductors for electrical cables — Product standard (Normal and tight tolerances)*

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

TR 6058, *Aerospace series — Cable code identification list*<sup>3)</sup>

**3 Terms and definitions**

For the purposes of this document, the terms and definitions given in EN 3475-100:2002 apply.

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1) And all parts of EN 3475 quoted in Table 2.

2) Published as ASD-STAN Prestandard at the date of publication of this standard.

3) Published as ASD-STAN Technical Report at the date of publication of this standard.

## 4 Materials and construction

### 4.1 Materials

These cables shall consist of the following:

- cores according to EN 2267-009;
- number of cores five to ten.

5 to 10-core cables shall be twisted together according to EN 2235.

Fillers cores shall be permitted for 5, 6, 7, 8, 9 and 10-core cables.

#### Tape:

- layer of polyimide with wall thickness (nominal value) of 25 µm;
- direction of winding immaterial – overlap 15 % minimum.

#### Screen:

- nickel-plated copper stranded braid;
- for dimensions of strands, see Table 1;
- material according to EN 4434, tests according to EN 3475-100;
- construction according to EN 2235.

#### Outer jacket:

- Shall be defined to satisfy all required characteristics of Clause 5.

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### 4.2 Construction

See EN 4434 and Table 1.

This table shall be completed on request.

Table 1

Number of cores	Code for nominal section	Nominal section mm <sup>2</sup>	AWG <sup>1</sup>	Linear resistance at 20 °C	Screen strands nominal diameter mm	External diameter max. mm	Mass max. kg/km
				max. Ω/km			
5	001	0,15	26	165,00	–	–	–
	002	0,25	24	117,00	0,10	3,29	26,20
	004	0,4	22	61,70	–	–	–
	006	0,6	20	34,10	–	–	–
	010	1	18	21,70	0,12	5,26	76
	012	1,2	16	14,90		6,10	102,2
	020	2	14	11,20		7,05	135
	030	3	12	6,99	0,15	8,41	205,6
	051	5	10	4,22	–	–	–
6	001	0,15	26	165,00	–	–	–
	002	0,25	24	117,00	0,12	3,65	32,3
	004	0,4	22	61,70	–	–	–
	006	0,6	20	34,10	–	–	–
	010	1	18	21,70	–	–	–
	012	1,2	16	14,90	–	–	–
	020	2	14	11,20	–	–	–
	030	3	12	6,99	–	–	–
	051	5	10	4,22	–	–	–
7	001	0,15	26	165,00	–	–	–
	002	0,25	24	117,00	0,12	3,8	34,6
	004	0,4	22	61,70	–	–	–
	006	0,6	20	34,10	–	–	–
	010	1	18	21,70	–	–	–
	012	1,2	16	14,90	–	–	–
	020	2	14	11,20	–	–	–
	030	3	12	6,99	–	–	–
	051	5	10	4,22	–	–	–

(continued)



Table 1 (concluded)

Number of cores	Code for nominal section	Nominal section mm <sup>2</sup>	AWG <sup>1</sup>	Linear resistance at 20 °C	Screen strands nominal diameter mm	External diameter max. mm	Mass max. kg/km
				max. Ω/km			
8	001	0,15	26	165,00	–	–	–
	002	0,25	24	117,00	0,12	4,37	42,95
	004	0,4	22	61,70	–	–	–
	006	0,6	20	34,10	–	–	–
	010	1	18	21,70	–	–	–
	012	1,2	16	14,90	–	–	–
	020	2	14	11,20	–	–	–
	030	3	12	6,99	–	–	–
	051	5	10	4,22	–	–	–
9	001	0,15	26	165,00	–	–	–
	002	0,25	24	117,00	–	–	–
	004	0,4	22	61,70	–	–	–
	006	0,6	20	34,10	–	–	–
	010	1	18	21,70	–	–	–
	012	1,2	16	14,90	–	–	–
	020	2	14	11,20	–	–	–
	030	3	12	6,99	–	–	–
	051	5	10	4,22	–	–	–
10	001	0,15	26	165,00	–	–	–
	002	0,25	24	117,00	0,12	4,74	48,75
	004	0,4	22	61,70	–	–	–
	006	0,6	20	34,10	–	–	–
	010	1	18	21,70	–	–	–
	012	1,2	16	14,90	–	–	–
	020	2	14	11,20	–	–	–
	030	3	12	6,99	–	–	–
	051	5	10	4,22	–	–	–

<sup>1</sup> AWG = Closest American Wire Gage.

### 4.3 Colour coding of cores and jacket

See EN 2714-002.