SLOVENSKI STANDARD
oSIST prEN 2714-014:2023

01-september-2023

Aeronavtika - Eno- ali večžilni električni kabli za splošno uporabo - Delovne temperature med –55 °C in 260 °C - 014. del: Družina DR, 4 do 11 žil, oviti, oklopljeni (opleteni) in oplaščeni, z možnostjo UV-laserskega tiskanja - Standard za proizvod

Aerospace series - Cables, electrical, single and multicore for general purpose - Operating temperatures between - 55 °C and 260 °C - Part 014: DR family, 4 to 11 cores, taped, screened (braided) and jacketed, UV laser printable - Product standard

Luft- und Raumfahrt - Leitungen, elektrisch, ein- und mehradrig, für allgemeine Verwendung - Betriebstemperaturen zwischen -55 °C und 260 °C - Teil 014: DR-Familie, 4- bis 11-adrig, umwickelt, geschirmt (Umflechtung) und ummantelt, UV-Laser-bedruckbar - Produktnorm

Série aérospatiale - Câbles, électriques, mono et multiconducteurs d'usage général - Températures de fonctionnement comprises entre -55 °C et 260 °C - Partie 014 : Famille DR, 4 à 11 conducteurs, ruban, blindés (tressés) et gainés, marquable au laser UV - Norme de produit

Ta slovenski standard je istoveten z: **prEN 2714-014**

ICS:

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

oSIST prEN 2714-014:2023 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

DRAFT
prEN 2714-014

June 2023

ICS 49.060

Will supersede EN 2714-014:2016

English Version

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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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (prEN 2714-014:2023) 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-STAN, prior to its presentation to CEN.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 2714-014:2016.

The main changes with respect to the previous edition are as follows:

— EN 2714-014 (P3), 09/2016 — General editorial improvements and update of Table 1: addition of cores 1, 2 and 3.

1 Scope

This document specifies the characteristics of UV laser printable DR family, 4 to 11 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 is possible to mark these cables by qualified compatible marking, in line with EN 3838.

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 2235:2022, *Aerospace series - Single and multicore electrical cables, screened and jacketed - Technical specification*

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 2714-002:2016, *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, [*] Aerospace series — Cables, electrical, aircraft use — Test methods

EN 3838, *Aerospace series - Requirements and tests on user-applied markings on aircraft electrical cables*

EN 4434, *Aerospace series - Copper or copper alloy lightweight conductors for electrical cables - Product standard (Normal and tight tolerances)*

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

[*] All parts quoted in this document.

[1] Published as ASD-STAN Technical Report at the date of publication of this document by AeroSpace and Defence industries Association of Europe — Standardization (ASD-STAN), https://www.asd-stan.org/.

3 Terms, definitions and symbols

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

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

— ISO Online browsing platform: available at https://www.iso.org/obp/

— IEC Electropedia: available at https://www.electropedia.org/

4 Materials and construction

4.1 Materials

These cables shall consist of the following:

— cores according to EN 2267-009;

— number of cores 4 to 11.

4 to 11 -core cables shall be twisted together according to EN 2235:2022.

Fillers cores shall be permitted for 5, 6, 8, 9, 10 and 11 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 2235:2022.

Outer jacket:

— shall be defined to satisfy all required characteristics of Clause 5.

4.2 Construction

See EN 4434 and Table 1.

This table shall be completed on request.

Table 1 ***(1 of 4)***

Number of cores	Code for nominal section	Nominal section mm²	AWG[a]	Linear resistance at 20 °C max. Ω/km	Screen strands nominal diameter mm	External diameter max. mm	Mass max. kg/km
1	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	—	—	—
2	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	0,12	4,13	35,24
	012	1,2	16	14,90	0,12	4,72	45,51
	020	2	14	11,20	—	—	—
	030	3	12	6,99	—	—	—
	051	5	10	4,22	—	—	—
3	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	—	—	—

Table 1 ***(2 of 4)***

Number of cores	Code for nominal section	Nominal section mm²	AWG[a]	Linear resistance at 20 °C max. Ω/km	Screen strands nominal diameter mm	External diameter max. mm	Mass max. kg/km
4	001	0,15	26	165,00	—	—	—
	002	0,25	24	117,00	—	—	—
	004	0,4	22	61,70	0,10	3,45	28,3
	006	0,6	20	34,10	0,12	4,19	44,3
	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	—	—	—
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	0,12	3,87	37,5
	006	0,6	20	34,10	0,12	4,60	55,5
	010	1	18	21,70	0,12	5,26	76
	012	1,2	16	14,90	0,12	6,10	102,2
	020	2	14	11,20	0,12	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	31,3
	004	0,4	22	61,70	—	—	—
	006	0,6	20	34,10	0,15	5,15	70
	010	1	18	21,70	—	—	—
	012	1,2	16	14,90	0,15	6,77	126,7
	020	2	14	11,20	—	—	—
	030	3	12	6,99	—	—	—
	051	5	10	4,22	—	—	—

Table 1 ***(3 of 4)***

Number of cores	Code for nominal section	Nominal section mm²	AWG[a]	Linear resistance at 20 °C max. Ω/km	Screen strands nominal diameter mm	External diameter max. mm	Mass max. kg/km
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	0,12	4,19	46,8
	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	—	—	—
8	001	0,15	26	165,00	—	—	—
	002	0,25	24	117,00	0,12	4,27	39,5
	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	0,12	4,86	58,8
	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	—	—	—