

SLOVENSKI STANDARD
SIST EN 4612-002:2019**01-november-2019****Nadomešča:****SIST EN 4612-002:2011**

Aeronavtika - Kabli, električni, za splošne namene, eno- ali večžilni - Družina XLETFE - Oplaščeni ali zaslonjeni in oplaščeni - 002. del: Splošno

Aerospace series - Cables, electrical, for general purpose, single and multicore assembly - XLETFE Family - Jacketed or screened and jacketed - Part 002: General

Luft- und Raumfahrt - Ein- und mehradrige elektrische Leitungen für allgemeine Verwendung - XLETFE Familie - mit Mantel oder geschirmt und Mantel - Teil 002: Allgemeines
(standards.iteh.ai)

Série aérospatiale - Câbles, électriques, d'usage général, mono et multiconducteurs - Famille XLETFE - Gainés ou blindés et gainés - Partie 002 : Généralités

Ta slovenski standard je istoveten z: EN 4612-002:2019**ICS:**

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

SIST EN 4612-002:2019**en,fr,de**

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EUROPEAN STANDARD

EN 4612-002

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 2019

ICS 49.060

Supersedes EN 4612-002:2011

English Version

Aerospace series - Cables, electrical, for general purpose, single and multicore assembly - XLETFE Family - Jacketed or screened and jacketed - Part 002: Genera

Série aérospatiale - Câbles, électriques, d'usage
général, mono et multiconducteurs - Famille XLETFE -
Gainés ou blindés et gainés - Partie 002 : Généralités

Luft- und Raumfahrt - Ein- und mehradrige elektrische
Leitungen für allgemeine Verwendung - XLETFE
Familie - mit Mantel oder geschirmt und Mantel - Teil
002: Allgemeines

This European Standard was approved by CEN on 5 May 2019.

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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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, 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: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (EN 4612-002:2019) 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 February 2020, and conflicting national standards shall be withdrawn at the latest by February 2020.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 4612-002:2011.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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EN 4612-002:2019 (E)**1 Scope**

This document specifies the characteristics of UV laser printable jacket, tin plated copper conductor, electrical cables Crosslinked Ethylene Tetra Fluoro Ethylene co-polymer (XLETFFE) family for use in the on board electrical systems of aircraft operating at temperatures between – 65 °C and 135 °C at 600 V rms at sea level. This insulation system has been used in aerospace applications using 115 V (phase-to-neutral) 400 Hz ac and 28 Vdc. Verification of the suitability of cables for use in other electrical systems is the responsibility of the user.

These jacketed cables are suitable for airframe use without additional protection when the jacket is present. When the jacket is stripped back the cores may need additional protection. In case of conflict between this standard and other referenced documents the requirements of this standard shall take precedence.

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 2084, *Aerospace series — Cables, electrical, general purpose, with conductors in copper or copper alloy — Technical specification*

EN 2235, *Aerospace series — Single and multicore electrical cables, screened and jacketed — Technical specification*

EN 3475-100 (all parts), *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*

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

EN 4611 (all parts), *Aerospace series — Cables, electrical, for general purpose, single and multicore assembly — XLETFFE Family*

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

FED-STD-595B, *Colours used in government procurement* ¹⁾

TR 6058, *Aerospace series — Cable code identification list* ²⁾

1) Published by: DoD National (US) Mil. Department of Defense, <http://www.defenselink.mil/>

2) Published as Technical Report at the date of publication of this standard by (ASD-STAN), <http://www.asd-stan.org>

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

4 List of product standards

EN 4612-003, *Aerospace series — Cables, electrical, for general purpose, single and multicore assembly — XLETFE Family — Jacketed or screened and jacketed — Part 003: Tin plated copper — Operating temperatures, between - 65 °C and 135 °C — Single extruded wall for open applications, with jacket without screen — UV laser printable — Product standard*

EN 4612-004, *Aerospace series — Cables, electrical, for general purpose, single and multicore assembly — XLETFE Family — Jacketed or screened and jacketed — Part 004: Tin plated copper — Operating temperatures, between - 65 °C and 135 °C — Single extruded wall for open applications, with jacket and screen (braid) — UV laser printable — Product standard*

EN 4612-005, *Aerospace series — Cables, electrical, for general purpose, single and multicore assembly — XLETFE Family — Jacketed or screened and jacketed — Part 005: Tin plated copper — Operating temperatures, between - 65 °C and 135 °C — Dual extruded wall for open applications, with jacket without screen — UV laser printable — Product standard*

EN 4612-006, *Aerospace series — Cables, electrical, for general purpose, single and multicore assembly — XLETFE Family — Jacketed or screened and jacketed — Part 006: Tin plated copper — Operating temperatures, between - 65 °C and 135 °C — Dual extruded wall for open applications, with jacket and screen (braid) — UV laser printable — Product standard*

EN 4612-007, *Aerospace series — Cables, electrical, for general purpose, single and multicore assembly — XLETFE Family — Jacketed or screened and jacketed — Part 007: Silver plated copper — Operating temperatures, between - 65 °C and 150 °C — Single extruded wall for open applications, with jacket without screen — UV laser printable — Product standard*

EN 4612-008, *Aerospace series — Cables, electrical, for general purpose, single and multicore assembly — XLETFE Family — Jacketed or screened and jacketed — Part 008: Silver plated copper — Operating temperatures, between - 65 °C and 150 °C — Single extruded wall for open applications, with jacket and screen (braid) — UV laser printable — Product standard*

EN 4612-009, *Aerospace series — Cables, electrical, for general purpose, single and multicore assembly — XLETFE Family — Jacketed or screened and jacketed — Part 009: Silver plated copper — Operating temperatures, between - 65 °C and 150 °C — Dual extruded wall for open applications, with jacket without screen — UV laser printable — Product standard*

EN 4612-010, *Aerospace series — Cables, electrical, for general purpose, single and multicore assembly — XLETFE Family — Jacketed or screened and jacketed — Part 010: Silver plated copper — Operating temperatures, between - 65 °C and 150 °C — Dual extruded wall for open applications, with jacket and screen (braid) — UV laser printable — Product standard*

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EN 4612-011, *Aerospace series — Cables, electrical, for general purpose, single and multicore assembly — XLETFE Family — Jacketed or screened and jacketed — Part 011: Nickel plated copper — Operating temperatures, between - 65 °C and 150 °C — Dual extruded wall for open applications, with jacket without screen — UV laser printable — Product standard*

EN 4612-012, *Aerospace series — Cables, electrical, for general purpose, single and multicore assembly — XLETFE Family — Jacketed or screened and jacketed — Part 012: Nickel plated copper — Operating temperatures, between - 65 °C and 150 °C — Dual extruded wall for open applications, with jacket and screen (braid) — UV laser printable — Product standard*

5 Materials and construction**5.1 Materials**

Core cables shall be qualified to the appropriate EN 4611 specification as specified in the product standard.

Screens and braids shall be nickel or silver or tin-plated copper or copper alloy as specified in the product specification.

Cable jackets shall be XLETFE.

5.2 Construction**5.2.1 General**

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See individual product standards.

5.2.2 Number of cores

See Table 1.

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Table 1

Number of cores	1	2	3	4	5	6	7	8	9	10
Code	A	B	C	D	E	F	G	H	J	K

5.2.3 Colour coding of single core cables

Unless specified by the purchaser coding shall be as follows:

See Table 2.

Table 2 — Colour code

Code	Colour ^a
A	Red (2)
B	Blue (6)
C	Yellow (4)
D	Green (5)
E	White (9)
F	Black (0)
G	Brown (1)
H	Orange (3)
J	Purple (7)
K	Grey (8)
L	Light Red (2L)
M	Not allocated
N	Not allocated
P	See Table 3.
Q	See Table 3.
R	See Table 3.
S	See Table 3.
T	Not allocated.
U	Not allocated.
V	Not allocated.
W	Not allocated.
^a For information: International colour code	

Unless otherwise specified in the product standard or contract when UV markable red is specified as the cable outer insulation or jacket then light red (2L) shall be used. Light red shall be a good match to Munsell 2.5R 6.9 to 7.4 or Federal Standard 595B — 31638 to 31668 or RAL 3015.

5.2.4 Colour coding of unscreened, multicore cables

Unless specified by the purchaser coding shall be as follows: See Table 3.