# SLOVENSKI STANDARD
# SIST EN 2854-002:2022

**01-marec-2022**

**Nadomešča:**
**SIST EN 2854-002:2009**

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**Aeronavtika - Električni kabli za splošno uporabo - Delovne temperature med –55 °C in 260 °C - 002. del: Splošno**

Aerospace series - Cables, electrical for general purpose - Operating temperatures between -55 °C and 260 °C - Part 002: General



Luft- und Raumfahrt - Elektrische Leitungen für allgemeine Verwendung - Betriebstemperaturen zwischen -55 °C und 260 °C - Teil 002: Allgemeines

Série aérospatiale - Câbles électriques d'usage général - Températures de fonctionnement comprises entre -55 °C et 260 °C - Partie 002 : Généralités



**Ta slovenski standard je istoveten z:** **EN 2854-002:2021**

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**ICS:**

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

**SIST EN 2854-002:2022** **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

# EN 2854-002

December 2021

ICS 49.060

Supersedes EN 2854-002:2009

English Version

# Aerospace series - Cables, electrical for general purpose - Operating temperatures between -55 °C and 260 °C - Part 002: General

Série aérospatiale - Câbles électriques d'usage général - Températures de fonctionnement comprises entre -55 °C et 260 °C - Partie 002 : Généralités

Luft- und Raumfahrt - Elektrische Leitungen für allgemeine Verwendung - Betriebstemperaturen zwischen -55 °C und 260 °C - Teil 002: Allgemeines

This European Standard was approved by CEN on 10 October 2021.

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.



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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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## European foreword

This document (EN 2854-002:2021) 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 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 2022, and conflicting national standards shall be withdrawn at the latest by June 2022.

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 2854-002:2009.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this document: 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.

# 1 Scope

This document specifies the list of product standards and common characteristics of electrical cables for use in the on-board electrical systems of aircraft at operating temperatures between –55 °C and 260 °C (except otherwise specified in product document).

# 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 2083, *Aerospace series — Copper and copper alloy conductors for electrical cables — Product standard*

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

EN 3475-100, *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*[1)]



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



# 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:



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

# 4 List of product standards

EN 2854-003, Aerospace series — Cables, electrical for general purpose — Operating temperatures between –55 °C and 260 °C — Part 003: Product standard

# 5 Materials and construction

## 5.1 Materials

These cable conductors shall be made of nickel-plated copper according to EN 2083 code D (except otherwise specified in product standards).

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/.

2) 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/.

## 5.2 Construction

### 5.2.1 Number of cores

See Table 1.

**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 |
| Factor for overall dimensions | — | 2,00 | 2,15 | 2,40 | 2,70 | 3,00 | 3,00 | 3,30 | 3,60 | 4,00 |

For 2 cores or more:

factor for mass: 1,03;

factor for ohmic resistance: 1,03.

### 5.2.2 Colour coding of single core cables

See Table 2.

**Table 2**

| 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 | |
| M | Not yet allocated |
| N | |
| P | |
| Q | |
| R | |
| S | |
| T | |
| U | |
| V | |
| W | |

[a] For information: international colour code

Preferred colour: white.

### 5.2.3 Colour coding of unscreened, unjacketed multicore cables

See Table 3 and Table 4.

**Table 3 — Code P**

| Number of cores in cables | Colours | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 2 | Red | Blue | — | — | — | — | — | — | — | — |
| 3 | Red | Blue | Yellow | — | — | — | — | — | — | — |
| 4 | Red | Blue | Yellow | Green | — | — | — | — | — | — |
| 5 | Red | Blue | Yellow | Green | White | — | — | — | — | — |
| 6 | Red | Blue | Yellow | Green | White | Black | — | — | — | — |
| 7 | Red | Blue | Yellow | Green | White | Black | Brown | — | — | — |
| 8 | Red | Blue | Yellow | Green | White | Black | Brown | Orange | — | — |
| 9 | Red | Blue | Yellow | Green | White | Black | Brown | Orange | Purple | — |
| 10 | Red | Blue | Yellow | Green | White | Black | Brown | Orange | Purple | Grey |



**Table 4 — Code R**



| Number of cores in cables | Colours | | | |
|---|---|---|---|---|
| 2 | White | Blue | — | — |
| 3 | White | Blue | Yellow | — |
| 4 | White | Blue | Yellow | Green |



## 6 Identification and marking

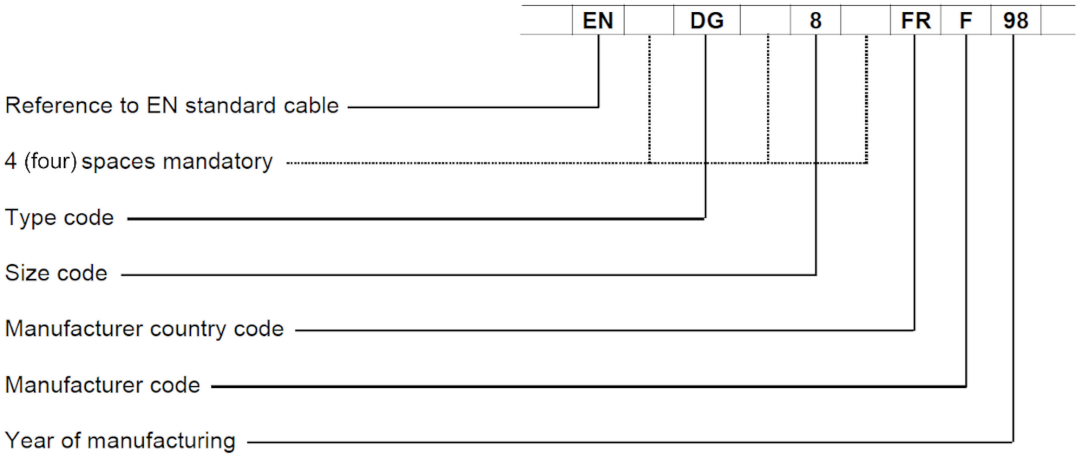
The identification and marking of cables by the manufacturer shall be in accordance with EN 2084.

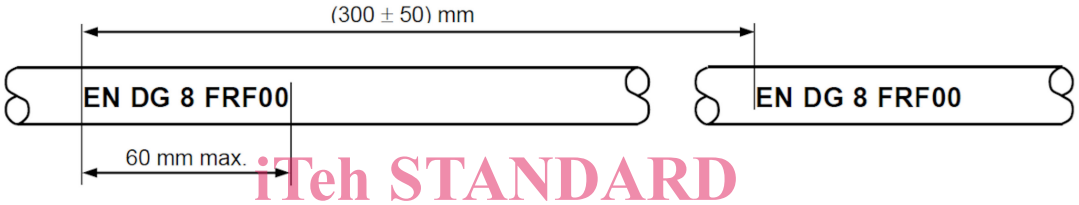
As the designation, required for orders, is generally too long, for use in electrical drawings a shorter cross designation (without colour information) is given in TR 6058 plus the corresponding AWG.

EXAMPLE Designation: EN 2854-003A090A

Cross reference: DG 8

This shorter designation is used for identification and marking as in the following example.






For multicore cable, each core shall be marked with his own designation.

The cables shall be capable of being printed with the user-applied markings according to EN 3838.



## 7 Technical specification

It shall be in accordance with EN 2084.

# Annex A
(informative)

# Standard evolution form

The main changes with respect to the previous edition are listed in Table A.1.

**Table A.1 — Main changes to previous edition**

| prEN/EN Number | Edition | Publication Date | Modification |
|---|---|---|---|
| prEN 2854-002 | P2 | 07/2006 | Technical revision. |