

SLOVENSKI STANDARD

SIST EN 3660-001:2019

01-september-2019

Nadomešča:

SIST EN 3660-001:2016

Aeronavtika - Dodatki za okrogle in pravokotne električne in optične konektorje - 001. del: Tehnična specifikacija

Aerospace series - Cable outlet accessories for circular and rectangular electrical and optical connectors - Part 001: Technical specification

Luft- und Raumfahrt - Endgehäuse für elektrische und optische Rund- und Rechtecksteckverbinder - Teil 001: Technische Lieferbedingungen

Série aérospatiale - Accessoires arrière pour connecteurs circulaires et rectangulaires électriques et optiques - Partie 001 : Spécification technique

Ta slovenski standard je istoveten z: **EN 3660-001:2019**

ICS:

31.220.99	Druge elektromehanske komponente	Other electromechanical components
49.060	Letalska in vesoljska električna oprema in sistemi	Aerospace electric equipment and systems

SIST EN 3660-001:2019

en,fr,de

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EUROPEAN STANDARD

EN 3660-001

NORME EUROPÉENNE

EUROPÄISCHE NORM

June 2019

ICS 49.060

Supersedes EN 3660-001:2016

English Version

Aerospace series - Cable outlet accessories for circular and rectangular electrical and optical connectors - Part 001: Technical specification

Série aérospatiale - Accessoires arrière pour connecteurs circulaires et rectangulaires électriques et optiques - Partie 001 : Spécification technique

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This European Standard was approved by CEN on 26 February 2018.

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.

iTeh STANDARD PREVIEW

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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	5
4 Conditions of use	5
5 Design and description	6
6 Dimensions and mass	6
7 Operation	6
8 Tests.....	7
9 Quality assurance.....	9
10 Designation and marking.....	13
11 Delivery condition	14
12 Packaging.....	14
13 Storage	14

[SIST EN 3660-001:2019](https://standards.iteh.ai/catalog/standards/sist/0d50044d-da98-4ee4-91e2-f7950c86b4fe/sist-en-3660-001-2019)
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European foreword

This document (EN 3660-001:2019) 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 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 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by December 2019, and conflicting national standards shall be withdrawn at the latest by December 2019.

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.

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, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

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EN 3660-001:2019 (E)**1 Scope**

This document defines cable outlet accessories for use with circular and rectangular, electrical and optical connectors on aerospace equipment. These may be sealed or unsealed and include accessories suitable for the suppression of radio frequency and electromagnetic interference.

This document is used in conjunction with circular and rectangular electrical and optical connectors for varying temperature ranges, environmental conditions, fire resistant and non-fire resistant applications as designated in the product standards.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 2591-, *Aerospace series — Elements of electrical and optical connection — Test methods**

EN 3660-002, *Aerospace series — Cable outlet accessories for circular and rectangular electrical and optical connectors — Part 002: Index of product standards*

EN 9100, *Aerospace series — Quality Management Systems — Requirements for Aviation, Space and Defense Organizations*

EN 9133, *Aerospace series — Quality Management Systems — Qualification Procedure for Aerospace Standard Products*

ISO 261, *ISO general purpose metric screw threads — General plan¹⁾*

<https://standards.iteh.ai/catalog/standards/sist/0d50044d-da98-4ee4-91e2-5970e81d461d-sist/3660-001-2019>

ISO 263, *ISO inch screw threads — General plan and selection for screws, bolts and nuts — Diameter range 0,06 to 6 in¹⁾*

ISO 965-1, *ISO general-purpose metric screw threads — Tolerances — Part 1: Principles and basic data¹⁾*

EN 60529:1992+A2:2013, *Degrees of protection provided by enclosures (IP code)*

IEC 60050-581, *International Electrotechnical Vocabulary — Part 581: Electromechanical components for electronic equipment²⁾*

MIL-HDBK-454B, *General Guidelines for Electronic Equipment³⁾*

* All parts quoted in this standard.

1) Published by: International Organization for Standardization (ISO), <http://www.iso.ch/>

2) Published by: International Electrotechnical Commission (IEC), <http://www.iec.ch/>

3) Published by: Department of Defense (DOD), <http://www.defenselink.mil/>

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60050-581 apply together with the following.

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>

3.1

backshell

non-preferred term, use cable outlet accessory

3.2

cable screen termination

a device for terminating the cable screen to the cable outlet and giving electrical continuity

3.3

cable tie

a flexible strap or cord for securing a cable bundle to a cable outlet

3.4

coupling nut

an accessory or part of a component which secures the cable outlet to the body of the connector

4 Conditions of use

4.1 General

In accordance with the individual the product standard, refer to EN 3660-002.

4.2 Accessory styles

See Table 1.

Table 1

Style	Description
A	Cable outlet, unsealed
B	Cable outlet, sealed
C	Cable outlet, shielded, unsealed
D	Cable outlet, shielded, sealed
E	Conduit adapter, unsealed
F	Conduit adapter, sealed
G	Adaptor (misc. incl. rectangular), unsealed
H	Adaptor (misc. incl. rectangular), sealed
J	Cable outlet, for heat shrinkable boot, sealed
K	Cable outlet, for heat shrinkable boot, shielded, sealed
Z	Various components, tools

4.3 Material/finish classes

See Table 2.

Table 2

Class	Temperature range	Material/finish
A	– 65 °C to 175 °C	Aluminium/black anodised
J	– 65 °C to 175 °C	Non-metallic/olive drab cadmium plated
K	– 65 °C to 260 °C	Stainless steel/passivated
M	– 65 °C to 200 °C	Non-metallic/electroless nickel plated
N	– 65 °C to 200 °C	Aluminium/electroless nickel plated
P	– 65 °C to 175 °C	Non-metallic/unplated
T	– 65 °C to 175 °C	Aluminium /Nickel PTFE(Teflon) plated
W	– 65 °C to 175 °C	Aluminium/olive drab cadmium plated
Z	– 65 °C to 175 °C	Aluminium/ Black zinc nickel plated

5 Design and description

5.1 Design

Cable outlet accessories shall be designed and constructed to withstand normal handling incident to installation and maintenance in service. They shall be capable of being fitted to and removed from connectors by use of hand only unless otherwise specified in the product standard. The cable outlet accessory product standard shall contain outline drawings relating to general installation and interchangeability.

5.2 Materials

Materials shall be suitable for the purpose intended and as specified in the product standard. When a definite material is not specified, a material shall be used which will enable the accessory to meet the performance requirements specified in the product standard.

When dissimilar materials are employed in intimate contact with each other, protection against corrosion shall be used to ensure that the differential electromotive potential does not exceed 0,25 V.

5.3 Finish

The finish shall be in accordance with the product standard.

5.4 Threads

The threads shall conform to either ISO 261, ISO 263 or ISO 965-1 where applicable.

6 Dimensions and mass

The dimensions of cable outlets and their mass shall be as defined in the product standard.

7 Operation

Installation instructions and tooling, where necessary, shall be defined in the product standard.

8 Tests

Tests from the parts of EN 2591-100 applicable to cable outlet accessories are detailed in Table 3.

All tests shall be carried out with the cable outlet accessory fitted to a receptacle connector or simulation thereof unless otherwise specified in the product standard.

Table 3 (1 of 2)

EN 2591-	Designation of the test	Remarks
101	Visual inspection	Initial examination. Details to be examined: Identification of materials in accordance with the product standard. — Identification; — Appearance; — Marking; — Surface finish. Final examination. No loosening of parts, cracks, excessive wear, detached part, etc. shall be observed.
102	Examination of dimensions and mass	In accordance with the product standard. NOTE In the case of an approved inspection system, piece parts (without relation to manufacturing batches of finished products) can be used for dimensional inspection.
205	Housing (shell) electrical continuity	In accordance with the product standard
212	Surface transfer impedance (from 100 MHz to 1 GHz) ^a	In accordance with the product standard
212	Shielding effectiveness from 100 MHz to 1 GHz	In accordance with the product standard
214	Indirect lightning strike	In accordance with the product standard. Test set up and mounting should be as per EN 2591-214, except the accessory under test shall be fitted directly to an empty receptacle connector or suitable simulation thereof (no plug connector is required).
301	Endurance at temperature	In accordance with the product standard
305	Rapid change of temperature	In accordance with the product standard
306	Mould growth	Unless otherwise required by the product standard Method A. Duration 28 days. Nil Growth. No prior washing. No surface etching.
307	Salt mist	In accordance with the product standard
308	Sand and dust	In accordance with the product standard