

SLOVENSKI STANDARD

SIST EN 3660-062:2022

01-julij-2022

Nadomešča:

SIST EN 3660-062:2016

Aeronavtika - Dodatki za okrogle in pravokotne električne in optične konektorje - 062. del: Kabelska spojka, tip K, 90°, za toplotno skrčljive dele, oklopljena, tesnjena, samozapiralna - Standard za proizvod

Aerospace series - Cable outlet accessories for circular and rectangular electrical and optical connectors - Part 062: Cable outlet, style K, 90°, for heat shrinkable boot, shielded, sealed, self-locking - Product standard

Luft- und Raumfahrt - Endgehäuse für elektrische und optische Rund- und Rechtecksteckverbinder - Teil 062: Endgehäuse, Bauform K, 90°, für wärmeschrumpfende Bauteile, Schirmanschluß, abgedichtet, selbstsichernd - Produktnorm

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Série aérospatiale - Accessoires arrière pour connecteurs circulaires et rectangulaires électriques et optiques - Partie 062 : Raccord, type K, coudé à 90°, blindé, étanche, pour manchon thermorétractable, à freinage interne - Norme de produit

Ta slovenski standard je istoveten z: EN 3660-062:2022

ICS:

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

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 3660-062

May 2022

ICS 49.060

Supersedes EN 3660-062:2016

English Version

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This European Standard was approved by CEN on 26 August 2019.

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.

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 3660-062:2022) 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 November 2022, and conflicting national standards shall be withdrawn at the latest by November 2022.

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 3660-062:2016.

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 3660-062:2022 (E)**1 Scope**

This product standard defines a range of cable outlets, style K, 90°, shielded, sealed, self-locking (anti-rotational), for heat shrinkable boot, and/ or metallic bands for use under the following conditions:

The mating connectors are listed in EN 3660-002.

Temperature range, Class N	: – 65 °C to 200 °C;
Class K	: – 65 °C to 260 °C;
Class W	: – 65 °C to 175 °C;
Class T	: – 65 °C to 175 °C (Nickel PTFE plating);
Class Z	: – 65 °C to 175 °C (Black zinc nickel plating).

Associated electrical accessories: EN 3660-033 Metallic band (for shield termination).

These cable outlets are designed for termination of overall shielding braid and/or individual cable shields. They accommodate/permit the termination of heat shrinkable boots.

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

EN 3660-001, *Aerospace series — Cable outlet accessories for circular and rectangular electrical and optical connectors — Part 001: Technical specification*

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

EN 3660-033, *Aerospace series — Cable outlet accessories for circular and rectangular electrical and optical connectors — Part 033: Stainless steel banding band, style Z, for attachment of individual and/or overall screens to cable outlets — Product standard*

EN 3909, *Aerospace series — Test fluids and test methods for electrical and optical components and sub-assemblies*

EN 60529, *Degrees of protection provided by enclosures (code IP)*

DIN 82, *Knurls*

*) All its parts quoted in this document.

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 3660-001 apply.

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

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

3.1

self-locking/anti rotational

a self-locking or anti rotational mechanism provides a nut rotation with moderate torque in the mated direction and provides a greater torque in the unmated direction

4 Characteristics

4.1 Dimensions and mass

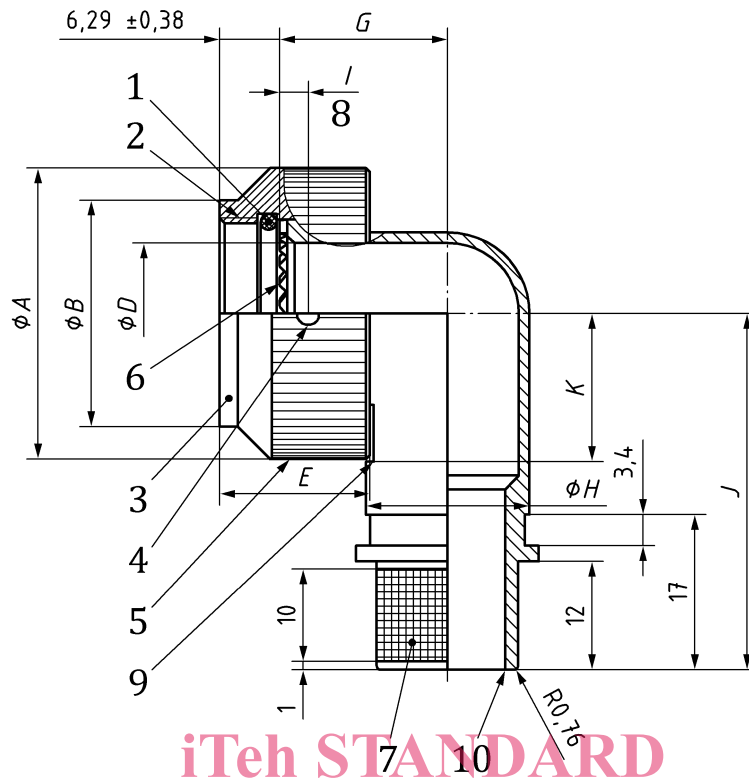
For dimensions and mass, see Figures 1 to Figure 3 and Table 1, Table 2 to Table 5.

For cable entry dimensions, see 4.2.

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Key

- 1) O-Ring
- 2) Thread C
- 3) Marking
- 4) Four (4) tooling holes spaced 90° apart. $\varnothing 2,60$, depth, 1,27
- 5) Straight knurl. Pitch manufacturer's option
- 6) Number of teeth N
- 7) RKV 08 DIN 82. Figure 2. (Please note there may be crossover dependent on diameter and pitch)
- 8) Minimum penetration of $\varnothing D$ from the front of serrations
- 9) Optional clearance feature, see Table 2.
- 10) Break edge

NOTE 1 Cable outlets may be manufactured as cast, fabricated or machined (manufactures option).

NOTE 2 No sharp edges/burrs permissible on internal or external surfaces/joints.

Surface finish of $\sqrt{1,6} \mu\text{m max.}$ on all internal surfaces.

NOTE 3 Reference clearance feature (9) when nut is in the uncoupled position the nut shall not contact the shell body.

NOTE 4 Valley of start of tooth to be at vertical centre line of accessory at position shown:

- within $\pm 3^\circ$ for shell sizes 09-13;
- within $\pm 2^\circ$ for shell sizes 15-19;
- within $\pm 1^\circ$ for shell sizes 21 and larger.

Figure 1 — Cable outlet

Table 1 — Fixed dimensions of shell

Dimensions in millimetres

Shell size	$\varnothing A$ max.	$\varnothing B$ max.	C Thread	$\varnothing D$ min.	E max.	G max.	$\varnothing H$ max.	J max.	I min.	N Number of teeth
09	21,79	15,24	M12 × 1,0-6H	6,7	16,76	14,85	10,2	31,05	2,9	12
11	24,99	18,21	M15 × 1,0-6H	9,9	16,76	16,60	13,7	34,21	2,9	16
13	29,39	21,18	M18 × 1,0-6H	12,8	16,76	18,15	16,8	37,95	2,9	20
15	32,49	25,14	M22 × 1,0-6H	16,0	16,76	19,50	17,9	39,65	2,9	24
17	35,71	28,12	M25 × 1,0-6H	19,2	16,76	21,10	21,2	41,25	2,9	28
19	38,50	31,09	M28 × 1,0-6H	21,4	16,76	22,10	23,2	43,75	2,9	32
21	41,70	34,06	M31 × 1,0-6H	24,6	16,76	23,60	26,2	46,91	2,9	36
23	44,91	36,90	M34 × 1,0-6H	27,7	16,76	25,20	29,4	50,10	2,9	40
25	47,98	39,88	M37 × 1,0-6H	30,9	16,76	26,90	32,6	53,26	1,7	44

Table 2 — Feature 9 dimensions (optional)

Dimensions in millimetres

Shell size	Depth of flat max.	K max.
09	0,60	11,20
11	0,60	12,80
13	0,60	15,00
15	0,60	16,55
17	0,60	18,15
19	0,60	19,55
21	0,60	21,15
23	0,60	22,75
25	0,60	24,30

Table 3 — Mass for classes K, N, W, T and Z

Dimensions in grams

Shell size code	Cable entry size code												Classes
	A	B	C	D	E	F	G	H	J	K	L	M	
09	13,3	13,6	14,7	15,5	—	—	—	—	—	—	—	—	N,T, W,Z
	33,8	34,4	42,9	43,9	—	—	—	—	—	—	—	—	K
11	15,9	16,5	17,2	17,9	19,4	20,3	—	—	—	—	—	—	N,T, W,Z
	40,0	41,9	43,6	45,5	54,7	57,3	—	—	—	—	—	—	K
13	19,4	19,8	20,2	21,1	21,7	22,2	25,4	26,9	—	—	—	—	N,T, W,Z
	48,8	49,9	51,0	53,3	54,8	56,2	68,0	75,9	—	—	—	—	K
15	23,9	24,3	24,7	25,1	25,9	26,5	27,7	30,5	32,3	—	—	—	N,T, W,Z
	58,8	59,9	61,0	62,0	64,3	66,0	69,1	86,9	92,0	—	—	—	K
17	28,1	28,6	29,0	29,3	29,6	29,9	31,7	32,7	36,9	39,2	—	—	N,T, W,Z
	69,5	70,6	71,7	72,6	73,3	74,1	78,9	81,7	103,5	110,1	—	—	K
19	30,9	31,3	31,7	32,0	32,3	32,6	33,7	35,3	40,7	43,3	—	—	N,T, W,Z
	77,5	78,6	79,7	80,6	81,3	82,1	85,2	89,2	114,2	121,6	—	—	K
21	38,0	38,4	38,8	39,1	39,4	39,7	40,3	41,7	42,7	45,4	47,2	—	N,T, W,Z
	94,1	95,3	96,3	97,3	98,0	98,8	100,3	104,1	106,6	127,4	132,6	—	K
23	41,9	42,3	42,7	43,1	43,3	43,7	44,2	44,6	45,8	47,0	52,9	54,8	N,T, W,Z
	104,9	106,0	107,1	108,0	108,7	109,6	111,1	112,1	115,2	118,2	148,8	154,1	K
25	51,1	51,5	51,9	52,3	52,6	52,9	53,5	53,8	54,6	55,2	56,6	59,3	N,T, W,Z
	125,8	126,9	128,0	129,0	129,6	130,5	132,0	133,0	135,0	136,5	140,3	165,7	K

4.2 Cable entry dimensions

See Figure 2 and Table 4.

Dimensions in millimetres

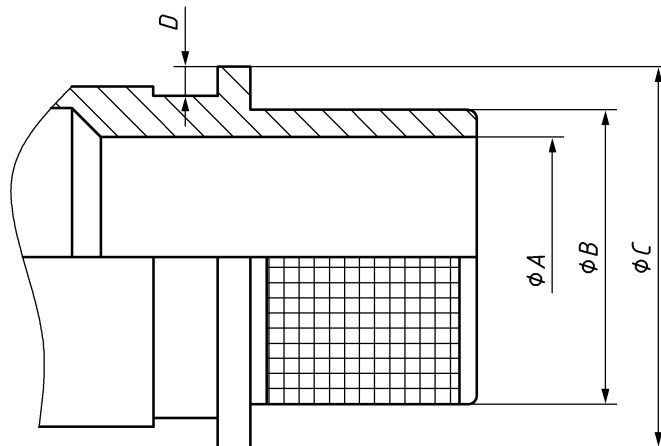


Figure 2 — Cable entry

Table 4

Dimensions in millimetres

Cable entry size code	$\varnothing A$ $\pm 0,1$	$\varnothing B$ $\pm 0,1$	$\varnothing C$ $\pm 0,3$	D $+0,2$ 0	Bundle/cable diameter	
					min.	max.
A	4,7	7,7	12,2	1,12	2,0	4,0
B	6,4	9,4	14,0	1,12	3,9	5,5
C	7,9	11,0	15,5	1,12	5,4	7,5
D	9,5	12,6	17,1	1,12	7,4	9,0
E	11,1	14,1	18,7	1,12	9,4	10,5
F	12,7	15,7	20,3	1,12	10,4	12,0
G	15,9	18,9	23,5	1,12	12,4	15,5
H	19,1	22,0	26,7	1,12	15,4	18,5
J	22,2	25,2	29,8	1,75	18,4	21,5
K	25,5	28,4	33,0	1,75	21,4	25,0
L	28,6	31,5	36,2	1,75	25,4	28,0
M	31,8	34,7	39,4	1,75	28,4	31,0
NOTE The cable entry shall be selected in accordance with the maximum diameter of the cable bundle.						

4.3 Associated connectors

See EN 3660-002.

4.4 Standard front interface

See Figure 3 and Table 5.