

SLOVENSKI STANDARD

SIST EN 3660-065:2016

01-marec-2016

Nadomešča:

SIST EN 3660-065:2010

Aeronavtika - Dodatki za okrogle in pravokotne električne in optične konektorje - 065. 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 065 : 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 065: Endgehäuse, Bauform K, 90°, für wärmeschrumpfende Bauteile, Schirmanschluss, abgedichtet, selbtsichernd - Produktnorm

Série aérospatiale - Accessoires arrière pour connecteurs circulaires et rectangulaires électriques et optiques - Partie 065: Raccord type K, coudé 90°, blindé, étanche, pour manchon thermorétractable, auto-freiné - Norme de produit

Ta slovenski standard je istoveten z: EN 3660-065:2016

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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en,fr,de

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EUROPEAN STANDARD

EN 3660-065

NORME EUROPÉENNE

EUROPÄISCHE NORM

January 2016

ICS 49.060

Supersedes EN 3660-065:2009

English Version

Aerospace series - Cable outlet accessories for circular and rectangular electrical and optical connectors - Part 065 : Cable outlet, style K, 90°, for heat shrinkable boot, shielded, sealed, self locking - Product standard

Série aérospatiale - Accessoires arrière pour connecteurs circulaires et rectangulaires électriques et optiques - Partie 065 : Raccord type K, coudé 90°, blindé, étanche, pour manchon thermorétractable, auto-freiné pour EN 2997 - Norme de produit

Luft- und Raumfahrt - Endgehäuse für elektrische und optische Rund- und Rechtecksteckverbinder - Teil 065: Endgehäuse, Bauform K, 90°, für wärmeschrumpfende Bauteile, Schirmanschluss, abgedichtet, selbstsichernd - Produktnorm

This European Standard was approved by CEN on 8 June 2015.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, 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: Avenue Marnix 17, B-1000 Brussels

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European foreword

This document (EN 3660-065:2016) 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 European 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 July 2016, and conflicting national standards shall be withdrawn at the latest by July 2016.

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 3660-065:2009.

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

EN 3660-065:2016 (E)**1 Scope**

This European Standard defines a range of cable outlets, style K, 90°, shielded, sealed, self-locking (anti-rotational) for heat shrinkable boot, and or with metallic bands under the following conditions.

The mating connectors are listed in EN 3660-002.

NOTE Class N in EN 3660-001 cross refers to class F in EN 3660-065.

Temperature range, Class F (N)	:	– 65 °C to 200 °C (See note above);
Class K	:	– 65 °C to 200 °C;
Class KE	:	– 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 (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.

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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 2591-¹⁾, *Aerospace series — Elements of electrical and optical connection — Test methods*

EN 2997 (all parts), *Aerospace series — Connectors, electrical, circular, coupled by threaded ring, fire-resistant or non fire-resistant, operating temperatures – 65 °C to 175 °C continuous, 200 °C continuous, 260 °C peak*

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*²⁾

AS85049A, *Connector accessories, electrical general specification for*-³⁾

IEC 60529, *Degrees of protection provided by enclosures (IP Code)*

DIN 82, *Knurling*

3 Terms and definitions

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

(Self-locking / anti rotational definition) 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 Figure 1 and Table 1 to Table 4.

For cable entry dimensions, see 4.2.

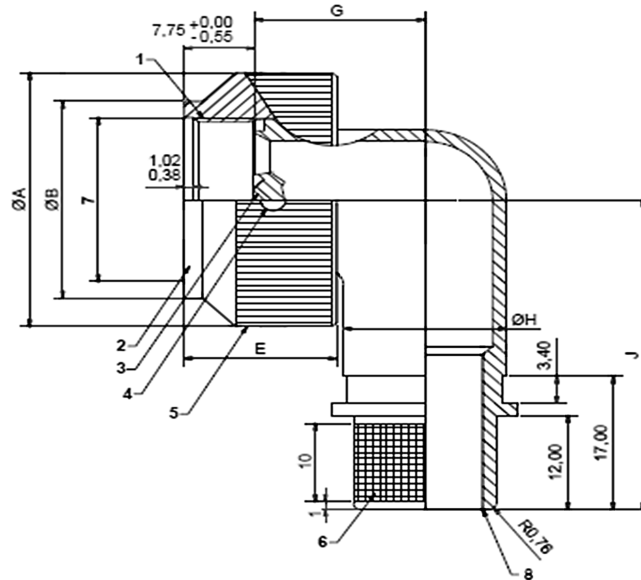
All dimensions are in millimetres.

1) All its parts quoted in this European Standard.

2) In preparation at the date of publication of this European Standard.

3) Published by: SAE National (US) Society of Automotive Engineers <http://www.sae.org/>

EN 3660-065:2016 (E)

**Key**

- 1 Thread *C*
- 2 Marking
- 3 Number of teeth *N*
- 4 Four tooling holes spaced 90° apart, Ø 2,60, depth 1,27
- 5 Straight knurl. Pitch manufacturer's option.
- 6 RKV 08 DIN 82. Figure 2. (Please note there may be crossover dependent on diameter and pitch)
- 7 Clearance on thread *C*
- 8 Break edge

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

- within $\pm 3^\circ$ for shell sizes 08-12;
- within $\pm 2^\circ$ for shell sizes 14-18;
- within $\pm 1^\circ$ for shell sizes 20 and larger.

Figure 1

Table 1 — Fixed dimensions of shell

Dimensions in millimetres

Shell size	$\varnothing A$ max.	$\varnothing B$ max.	C Thread	E max.	G max.	$\varnothing H$ max.	J max.
08	22,48	15,67	0,500-20UNF	15,3	16,1	10,2	31,05
10	25,65	18,64	0,625-24UNEF	15,3	17,9	13,7	34,21
12	28,83	21,79	0,750-20UNEF	15,3	19,4	16,8	37,95
14	32,00	24,99	0,875-20UNEF	15,3	20,0	17,9	39,65
16	35,18	28,24	1,000-20UNEF	15,3	21,6	21,2	41,25
18	38,55	30,94	1,062-18UNEF	15,3	22,6	23,2	43,75
20	41,53	34,16	1,188-18UNEF	15,3	24,1	26,2	46,91
22	44,70	37,29	1,312-18UNEF	15,3	25,7	29,4	50,10
24	47,89	40,46	1,438-18UNEF	15,3	27,4	32,6	53,29
28	54,23	49,45	1,750-18UNS	15,3	30,9	39,6	56,46

Table 2 — Mass for classes F (N), T, W, Z, K and KE

Nominal mass in grams

Shell size code	End-fitting - size code											Length code wiring chamber	
	A	B	C	D	E	F	G	H	J	K	L		M
08	13,3	13,6	—	—	—	—	—	—	—	—	—	—	F (N), T, W, Z
	33,8	34,4	—	—	—	—	—	—	—	—	—	—	K and KE
10	15,9	16,5	17,2	17,9	—	—	—	—	—	—	—	—	F (N), T, W, Z
	40,0	41,9	43,6	45,5	—	—	—	—	—	—	—	—	K and KE
12	19,4	19,8	20,2	21,1	21,7	22,2	—	—	—	—	—	—	F (N), T, W, Z
	48,8	49,9	51,0	53,3	54,8	56,2	—	—	—	—	—	—	K and KE
14	23,9	24,3	24,7	25,1	25,9	26,5	27,7	—	—	—	—	—	F (N), T, W, Z
	58,8	59,9	61,0	62,0	64,3	66,0	69,1	—	—	—	—	—	K and KE
16	28,1	28,6	29,0	29,3	29,6	29,9	31,7	32,7	—	—	—	—	F (N), T, W, Z
	69,5	70,6	71,7	72,6	73,3	74,1	78,9	81,7	—	—	—	—	K and KE
18	30,9	31,3	31,7	32,0	32,3	32,6	33,7	35,3	—	—	—	—	F (N), T, W, Z
	77,5	78,6	79,7	80,6	81,3	82,1	85,2	89,2	—	—	—	—	K and KE

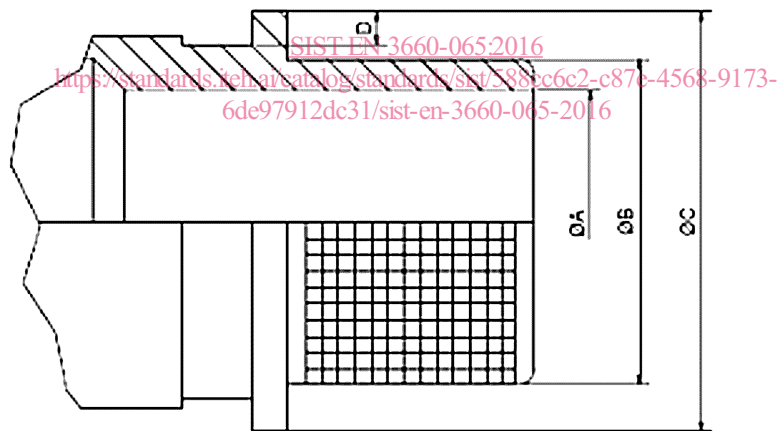
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Shell size code	End-fitting – size code												Length code wiring chamber
	A	B	C	D	E	F	G	H	J	K	L	M	
20	38,0	38,4	38,8	39,1	39,4	39,7	40,3	41,7	42,7	—	—	—	F (N), T, W, Z
	94,1	95,3	96,3	97,3	98,0	98,8	100,3	104,1	106,6	—	—	—	K and KE
22	41,9	42,3	42,7	43,1	43,3	43,7	44,2	44,6	45,8	47,0	—	—	F (N), T, W, Z
	104,9	106,0	107,1	108,0	108,7	109,6	111,1	112,1	115,2	118,2	—	—	K and KE
24	51,1	51,5	51,9	52,3	52,6	52,9	53,5	53,8	54,6	55,2	56,6	—	F (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	—	K and KE
28	67,8	68,2	68,6	69,0	69,3	69,6	70,2	70,5	71,3	71,9	72,5	73,9	F (N), T, W, Z
	168,8	169,9	171,0	172,0	172,6	173,5	175,0	176,0	178,0	179,5	180,3	183,3	K and KE

4.2 Cable entry dimensions

See Figure 2, Table 4.

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NOTE No burrs or sharp edges permitted

Figure 2 — Cable entry

Table 3

Dimensions in millimetres

Cable entry size code	$\varnothing A$	$\varnothing B$	$\varnothing C$	D min.	Bundle/ Cable diameter	
	$\pm 0,1$	$\pm 0,1$	$\pm 0,3$	$+0,2$ 0	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 outlet shall be selected in accordance with the diameter of the cable bundle.						

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4.3 Associated connectors

See EN 3660-002.