

SLOVENSKI STANDARD

SIST EN 3660-005:2019

01-januar-2019

Nadomešča:

SIST EN 3660-005:2010

Aeronavtika - Dodatki za okrogle in pravokotne električne in optične konektorje - 005. del: Kabelska spojka, tip A, 90°, netesnjena, z razbremenilno sponko - Standard za proizvod

Aerospace series - Cable outlet accessories for circular and rectangular electrical and optical connectors - Part 005: Cable outlet, style A, 90°, unsealed with clamp strain relief - Product standard

Luft- und Raumfahrt - Endgehäuse für elektrische und optische Rund- und Rechtecksteckverbinder - Teil 005: Endgehäuse, Bauform A, 90° Ausführung, nicht abgedichtet, mit Zugentlastungsklemme - Produktnorm

Série aérospatiale - Accessoires arrière pour connecteurs circulaires et rectangulaires électriques et optiques - Partie 005 : Raccord coudé à 90° non étanche type A avec brides serre-câbles - Norme de produit

Ta slovenski standard je istoveten z: EN 3660-005:2018

ICS:

31.220.10	Vtiči in vtičnice, konektorji	Plug-and-socket devices. Connectors
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
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 3660-005

October 2018

ICS 49.060

Supersedes EN 3660-005:2009

English Version

Aerospace series - Cable outlet accessories for circular and rectangular electrical and optical connectors - Part 005: Cable outlet, style A, 90°, unsealed with clamp strain relief - Product standard

Série aérospatiale - Accessoires arrière pour connecteurs circulaires et rectangulaires électriques et optiques - Partie 005 : Raccord, type A, coudé à 90°, non étanche, avec brides serre-câbles - Norme de produit

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This European Standard was approved by CEN on 11 June 2018.

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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.

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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 3660-005:2018) 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 April 2019, and conflicting national standards shall be withdrawn at the latest by April 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.

This document supersedes EN 3660-005:2009.

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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

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EN 3660-005:2018 (E)

1 Scope

This European Standard defines a range of cable outlets, style A, 90°, unsealed with clamp strain relief for use under the following conditions:

Associated electrical connector(s) : EN 3660-002

Temperature range,	Class N	: – 65 °C to 200 °C
	Class W	: – 65 °C to 175 °C
	Class K	: – 65 °C to 260 °C
	Class A	: – 65 °C to 260 °C

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 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*

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:

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

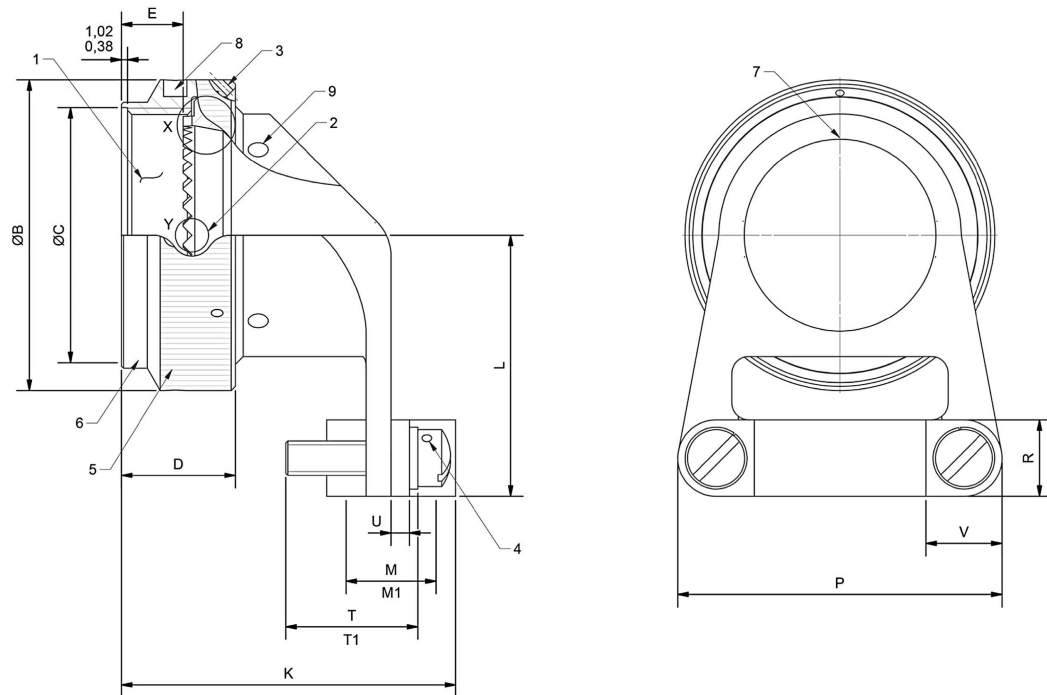
4 Characteristics

4.1 Dimensions and mass

For dimensions and mass, see Figure 1 and Table 1.

For interface dimensions, see 4.2.

* All parts quoted in this European Standard.



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Detail Z

Key

- | | |
|---|---|
| 1 Thread A | 6 Marking (see Clause 6) |
| 2 Teeth N (see Table 2) | 7 Valley of start tooth to be at vertical centre line of accessory at position shown. See Note 4. |
| 3 Three off wire lock holes equi-spaced for 0,8 mm max. diameter wire | 8 Four blind holes for torque wrench equi-spaced (see Figure 1, detail Z) |
| 4 Fillister head screw with wire locking hole | 9 Drain holes, manufacturer's option. |
| 5 Knurled, manufacturer's option | |
- NOTE 1 For details X and Y, see 4.2.2.
- NOTE 2 Coupling nut to be captive on cable outlet body but free to rotate.
- NOTE 3 Dimension K is the dimension for the clamp in its maximum in the closed position for M_1 entry size.
- 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 08-12
 - Within $\pm 2^\circ$ for shell sizes 14-18
 - Within $\pm 1^\circ$ for shell sizes 20 and larger

^a The location of blind holes axis can be left to the manufacturer's preference. Location of blind holes is not mandatory.

Figure 1

EN 3660-005:2018 (E)

Table 1

Shell size	<i>A</i> Thread Class 2B inches	$\varnothing B$ max. mm	$\varnothing C$ + 0,64 0 mm	<i>D</i> 0 - 1,57 mm	<i>E</i> ^a 0 - 0,56 mm	<i>K</i> $\pm 1,57$ mm	<i>L</i> $\pm 1,57$ mm	<i>M</i> ^b Wire accommodation	
								max.	min.
								mm	
08	0,500-20UNF	19,47	12,74	13,72	7,75	28,97	18,95	5,2	3,2
10	0,625-24UNEF	22,47	15,88	13,72	7,75	30,05	20,45	7,3	4,8
12	0,750-20UNEF	25,47	19,05	13,72	7,75	34,95	22,02	9,8	7,4
14	0,875-20UNEF	28,67	22,23	13,72	7,75	36,47	23,62	11,3	9,0
16	1,000-20UNEF	31,67	25,40	13,72	7,75	40,26	25,25	15,1	12,8
18	1,063-18UNEF	34,67	27,00	13,72	7,75	43,10	29,74	16,3	13,2
20	1,188-18UNEF	37,67	30,18	13,72	7,75	46,29	31,34	17,9	15,0
22	1,313-18UNEF	40,67	33,35	13,72	7,75	49,45	32,92	19,5	16,3
24	1,438-18UNEF	44,07	36,53	13,72	7,75	52,63	34,49	20,3	18,0
28	1,750-18UNS	50,97	44,45	17,30	7,75	60,25	39,93	20,7	19,0

Shell size	M_1^b		P	R	Screw size Class 2A	T^b	T_1^b	U	V	Mass	
	Wire accommodation									Classes N, A, W, T and Z	Class K
	max.	min.									
	mm										
			$\pm 0,5$ mm	$\pm 0,5$ mm	Inches	mm	$\pm 0,8$ mm	max. mm	min. mm	g	
08	5,2	3,2	18,6	6,35	6-32UNC	12,7	12,7	2,2	7,30	13,12	31,12
10	7,3	4,8	20,6	6,35	6-32UNC	12,7	12,7	2,2	7,10	15,46	38,04
12	10,6	7,4	24,6	6,35	6-32UNC	12,7	15,9	2,2	6,80	17,28	43,04
14	12,0	9,0	26,1	6,35	6-32UNC	12,7	15,9	2,2	6,60	21,03	49,69
16	16,0	12,8	33,0	6,35	6-32UNC	12,7	15,9	2,2	7,80	24,84	63,27
18	18,0	13,2	36,4	9,53	8-32UNC	15,9	19,1	2,2	9,00	29,93	67,14
20	21,0	15,0	39,0	9,53	8-32UNC	15,9	22,3	2,2	8,80	32,34	79,70
22	24,3	16,3	41,5	9,53	8-32UNC	15,9	25,4	2,2	8,80	39,08	92,44
24	27,5	18,0	44,6	9,53	8-32UNC	15,9	28,6	2,2	9,20	44,37	101,24
28	30,0	19,0	50,8	12,70	8-32UNC	19,5	31,8	2,2	12,10	57,02	162,12

^a *E* dimension is taken when the coupling nut is pulled in forward position.

^b *M* and *T* dimensions are for variant A; *M*₁ and *T*₁ dimensions are for variants B. *M* and *M*₁ diameters are clamp hardware limits and not wire bundle accommodation sizes.

4.2 Interface dimensions

4.2.1 Associated connection

See EN 3660-002.

4.2.2 Front interface

See Figure 2, Figure 3 and Table 2.

All dimensions are in millimetres.

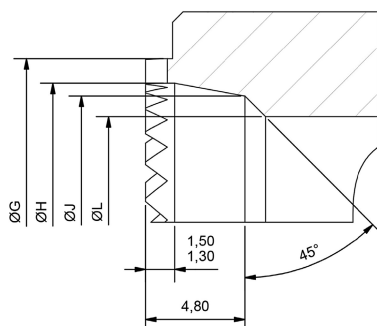


Figure 2 — Detail X

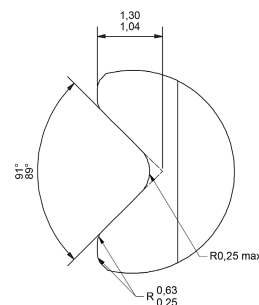


Figure 3 — Detail Y

Table 2

Shell size	$\varnothing G$ Ref.	$\varnothing H$ + 0,10 0	$\varnothing J$ + 0,18 0	$\varnothing L$ + 0,18 0	N Number of teeth
08	11,10	9,15	7,92	6,68	12
10	14,53	12,36	11,13	9,35	15
12	17,45	15,30	14,07	12,62	21
14	20,62	18,48	17,25	14,68	24
16	23,80	21,65	20,42	17,73	30
18	25,20	23,08	21,85	19,86	33
20	28,37	26,25	25,02	23,04	36
22	31,55	29,43	28,20	26,21	39
24	34,72	32,60	31,37	29,13	42
28	42,75	38,90	37,67	35,10	54

4.3 Material and finish

Material/Finish	Class N	:	Aluminium/Electroless nickel plated
Material/Finish	Class W	:	Aluminium/Olive drab cadmium plated
Material/Finish	Class K	:	Stainless steel/Passivated
Material/Finish	Class A	:	Aluminium/Black anodized
Material/Finish	Class T	:	Aluminium (Nickel PTFE plated)
Material/Finish	Class Z	:	Aluminium (Black zinc nickel plated)