



SLOVENSKI STANDARD SIST EN 3155-004:2009

01-januar-2009

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Aerospace series - Electrical contacts used in elements of connection - Part 004:
Contacts, electrical, male, type A, crimpbar, class T - Product standard

Luft- und Raumfahrt - Elektrische Kontakte zur Verwendung in Verbindungselementen -
Teil 004: Elektrische Stiftkontakte, Typ A, crimpbar, Klasse T - Produktnorm

Série aérospatiale - Contacts électriques utilisés dans les organes de connexion - Partie
004 : Contacts électriques, mâles, type A, à sertir, classe T - Norme de produit

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Ta slovenski standard je istoveten z: EN 3155-004:2007

ICS:

49.060 Š^cp\ æš Ā^•[|b\ æ Aerospace electric
^|\ dā} æ[]!^{\ æš Ā ã c^{\ ã equipment and systems

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EUROPEAN STANDARD

EN 3155-004

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EUROPÄISCHE NORM

March 2007

ICS 49.060

English Version

Aerospace series - Electrical contacts used in elements of
connection - Part 004: Contacts, electrical, male, type A, crimp,
class T - Product standard

Série aérospatiale - Contacts électriques utilisés dans les
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in Verbindungselementen - Teil 004: Elektrische
Stiftkontakte, Typ A, crimpbar, Klasse T - Produktnorm

This European Standard was approved by CEN on 6 January 2006.

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 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This document (EN 3155-004:2007) has been prepared by the AeroSpace and Defense 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 September 2007, and conflicting national standards shall be withdrawn at the latest by September 2007.

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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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

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EN 3155-004:2007 (E)**0 Introduction**

The contacts defined by this standard are derived from those of MIL-C-39029/4 and, intermateable with those of MIL-C-39029/5. They are specified as a 260 °C class instead of a 200 °C class as detailed in the MIL standard.

1 Scope

This standard specifies the required characteristics, tests and tooling applicable to male electrical contacts 004, type A, crimp, class T, used in elements of connection according to EN 3155-002.

It shall be used together with EN 3155-001.

The associated female contacts are defined in EN 3155-005.

2 Normative references

The following referenced documents are indispensable for the application 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.

ISO 8843, *Aircraft — Crimp-removable contacts for electrical connectors — Identification system*

EN 2083, *Aerospace series — Copper or copper alloy conductors for electrical cables — Product standard*

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

EN 3155-001, *Aerospace series — Electrical contacts used in elements of connection — Part 001: Technical specification*

EN 3155-002, *Aerospace series — Electrical contacts used in elements of connection — Part 002: List and utilization of contacts*

EN 3155-005, *Aerospace series — Electrical contacts used in elements of connection — Part 005: Contacts, electrical, female, type A, crimp, class T — Product standard*

MIL-DTL-22520, *Crimping tools, terminal, hand or power actuated, wire termination, and tool kits, general specification for*¹⁾

MIL-C-22520/1, *Crimping tools, terminal, hand, wire termination for wire barrel sizes 12 through 20*¹⁾

MIL-C-22520/2, *Crimping tools, terminal, hand, wire termination for wire barrel sizes 20 through 28*¹⁾

MIL-C-22520/7, *Crimping tools, terminal, hand, wire termination for wire barrel sizes 16, 20 and 22*¹⁾

MIL-C-39029/4, *Contacts, electrical connector, pin, crimp removable, (for MIL-C-26482 series 2, MIL-C-81703 series 3, MIL-C-83723 series I and III, and MIL-C-83733 connectors)*¹⁾

MIL-C-39029/5, *Contacts, electrical connector, socket, crimp removable, (for MIL-C-26482 series 2, MIL-C-81703 series 3, MIL-C-83723 series I and III, and MIL-C-83733 connectors and MIL-S-12883/40 and /41 relay sockets)*¹⁾

MIL-I-81969/14, *Installing and removal tools, connector electrical contact, type III, class 2, composition B*¹⁾

MIL-I-81969/30, *Installing and removal tools, connector electrical contact, type II, class 2, composition C for unwired*¹⁾

1) Published by: Department of Defense (DOD), the Pentagon, Washington D.C. 20301 USA

3 Definitions

For the purposes of this standard, the definitions given in EN 3155-001 apply.

4 Required characteristics

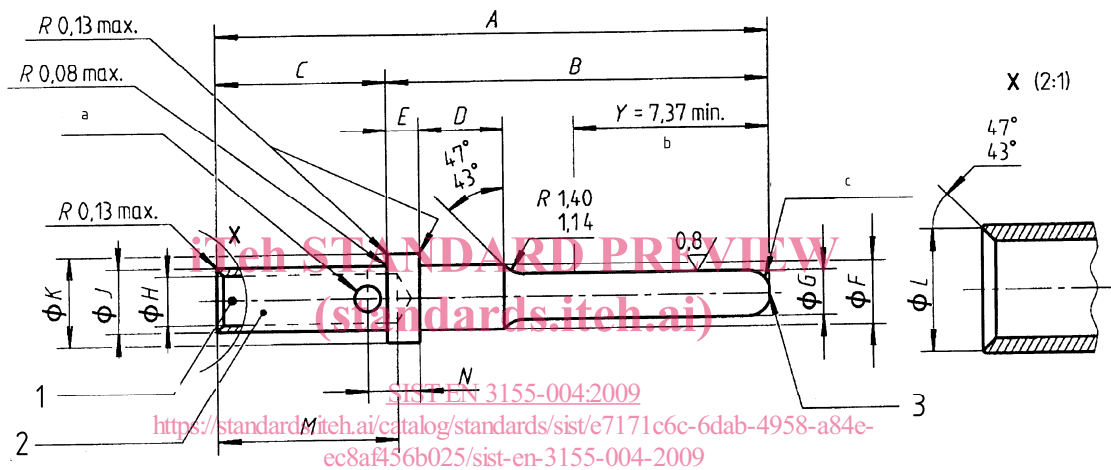
4.1 Specific characteristics

Type A contacts are for general application and class T corresponds to an operating temperature range from $-65\text{ }^{\circ}\text{C}$ to $150\text{ }^{\circ}\text{C}$.

4.2 Dimensions and mass

See Figures 1 and 2 and Table 1.

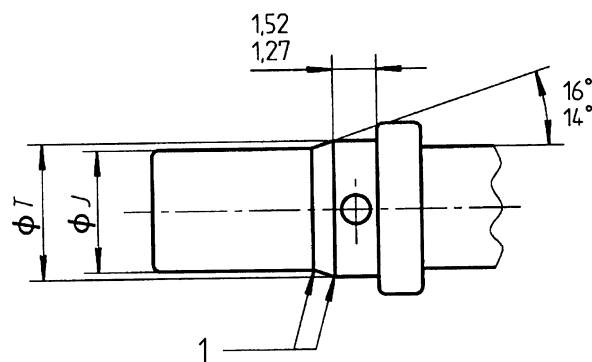
Dimensions and tolerances are given in millimetres and apply after surface treatment.



Key

- 1 White dot
- 2 Colour bands, see Table 2
- 3 Flat Ø S
- a Ø P (one side only)
- b Contact active area protection
- c Approximately spherical

Figure 1



Key

- 1 Radii

Figure 2 — Barrel, contacts 16-18 and 12-12

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Table 1

Size		A max.	B	C	D	E	F	G	H
Contact	Barrel								
20	20	18,29	13,94	4,34	3,30	0,84	1,98	1,04	1,27
			13,79	4,06	3,17	0,74	1,93	0,99	1,22
20	18	18,29	13,94	4,34	3,30	0,84	1,98	1,04	1,35
			13,79	4,06	3,17	0,74	1,93	0,99	1,30
16	16	20,85	14,33	6,53	3,30	1,22	2,62	1,61	1,73
			14,17	6,25	3,17	1,12	2,56	1,56	1,68
16	14	20,85	14,33	6,53	3,30	1,22	2,62	1,61	1,95
			14,17	6,25	3,17	1,12	2,56	1,56	1,90
16	18	20,85	14,33	6,53	3,30	1,22	2,62	1,61	1,35
			14,17	6,25	3,17	1,12	2,56	1,56	1,30
12	12	20,85	14,33	6,53	3,05	1,22	3,83	2,41	2,59
			14,17	6,25	2,92	1,12	3,76	2,36	2,49

Size		J	K	L	M	N	P	S	T	Mass g max.
Contact	Barrel									
20	20	1,98	2,62	1,68	4,75	1,73	0,81	0,51	—	0,30
		1,93	2,54	1,57	3,94	1,35	0,66	0,23	—	
20	18	1,98	2,62	1,68	4,75	1,73	0,81	0,51	—	0,30
		1,93	2,54	1,57	3,94	1,35	0,66	0,23	—	
16	16	2,62	3,38	2,26	7,21	2,16	1,07	0,81	—	0,65
		2,56	3,30	2,11	6,35	1,73	0,91	0,43	—	
16	14	2,62	3,38	2,26	7,21	2,16	1,07	0,81	—	0,65
		2,56	3,30	2,11	6,35	1,73	0,91	0,43	—	
16	18	1,98	3,38	1,68	7,21	2,16	1,07	0,81	2,62	0,65
		1,93	3,30	1,57	6,35	1,73	0,91	0,43	2,56	
12	12	3,83	4,83	3,45	7,21	2,16	1,07	1,57	4,01	1,36
		3,76	4,75	3,30	6,35	1,73	0,91	1,19	3,94	

4.3 Marking by colour code

See Table 2.

Table 2

Size		Two bands according to ISO 8843		
Contact	Barrel	Band 1	Band 2	Dot
20	20	Red	Red	White
20	18	Red	Brown ^a	White
16	16	Blue	Blue	White
16	14	Blue	White ^b	White
16	18	Blue	Brown ^a	White
12	12	Yellow	Yellow	White

^a Violet Colour band not to be used for new manufacture.
^b Orange colour band not to be used for new manufacture.

Key

- 1 Dot
- 2 Band 1
- 3 Band 2

4.4 Material, surface treatment

- Body material: copper alloy.
- Surface treatment: gold on appropriate undercoat in copper alloy. Thickness of protection not specified. Selective protection acceptable.

4.5 Permissible cables

See Table 3.

Table 3

Size		Size of conductors			Rated test current A
Contact	Barrel	AECMA code	Section mm ²	AWG ^a	
22	20	006	0,60	20	7,5
		004	0,40	22	5,0
		002	0,25	24	3,0
20	18	010	1,00	18	7,5
		006	0,60	20	7,5
		004	0,40	22	5,0
		002	0,25	24	3,0
16	16	012	1,20	16	13,0
		010	1,00	18	10,0
		006	0,60	20	7,5
16	14	020	2,00	14	13,0
		012	1,20	16	13,0
		010	1,00	18	10,0
		006	0,60	20	7,5
16	18	010	1,00	18	11,0
		006	0,60	20	7,5
		004	0,40	22	5,0
		002	0,25	24	3,0
12	12	030	3,00	12	23,0
		020	2,00	14	17,0

^a AWG = Closest American Wire Gage

4.6 Tooling

4.6.1 Crimping tools

Conform to MIL-DTL-22520, see Table 4.

The qualification selector numbers used for crimping copper and copper alloy conductors in cables EN 2083 are indicated in Table 4.

It is the responsibility of the user if the parameters in Table 4 are changed for service use.