



SLOVENSKI STANDARD SIST EN 3155-054:2009

01-januar-2009

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Aerospace series - Electrical contacts used in elements of connection - Part 054:
Contacts, electrical, male thermocouple NiAl, type C, crimp, class T - Product standard

Luft- und Raumfahrt - Elektrische Kontakte zur Verwendung in Verbindungselementen -
Teil 054: Elektrische Thermostiftkontakte NiAl, Typ C, crimpbar, Klasse T - Produktnorm
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Série aérospatiale - Contacts électriques utilisés dans les organes de connexion - Partie
054 : Contacts électriques, mâles, thermocouple NiAl, type C, à sertir, classe T - Norme
de produit
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Ta slovenski standard je istoveten z: EN 3155-054:2006

ICS:

49.060 Š^c\ } aš Ā^•[|b\ æ Aerospace electric
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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 3155-054

July 2006

ICS 49.060

English Version

**Aerospace series - Electrical contacts used in elements of
connection - Part 054: Contacts, electrical, male thermocouple
NiAl, type C, crimp, class T - Product standard**

Série aérospatiale - Contacts électriques utilisés dans les
organes de connexion - Partie 054 : Contacts électriques,
mâles, thermocouple NiAl, type C, à sertir, classe T -
Norme de produit

Luft- und Raumfahrt - Elektrische Kontakte zur Verwendung
in Verbindungselementen - Teil 054: Elektrische
Thermostiftkontakte NiAl, Typ C, crimpbar, Klasse T -
Produktnorm

This European Standard was approved by CEN on 9 March 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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, 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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Foreword

This European Standard (EN 3155-054:2006) 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 January 2007, and conflicting national standards shall be withdrawn at the latest by January 2007.

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.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, 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 3155-054:2006 (E)**1 Scope**

This standard specifies the required characteristics, tests and tooling applicable to male electrical contacts, thermocouple, NiAl, type C, 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 3155-055.

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.

EN 2591 (all parts), *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 contracts used in elements of connection — Part 002: List and utilization of contacts*

EN 3155-055, *Aerospace series — Electrical contacts used in elements of connection — Part 055: Contacts, electrical, female, thermocouple NiAl, type C, crimp, class T — Product standard*

EN 4049 (all parts), *Aerospace series — Thermocouple extension cable — Operating temperatures between -65 °C and 260 °C*

ISO 8056-1, *Aircraft — Nickel-chromium and nickel-aluminium thermocouple extension cables — Part 1: Conductors — General requirements and tests*

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

MIL-DTL-22520G, *Crimping Tools, Wire Termination, General Specification for ...*¹⁾

MIL-C-22520/1C, *Crimping Tools, Terminal, Hand, Wire Termination for Wire Barrel Sizes 12 through 20*¹⁾

MIL-C-22520/2C, *Crimping Tools, Terminal, Hand, Wire Termination for Wire Barrel Sizes 20 through 28*¹⁾

MIL-C-22520/7B, *Crimping Tools, Terminal, Hand, Wire Termination for Wire Barrel Sizes 16, 20 and 22*¹⁾

MIL-I-81969B, *Installing and Removal Tools, Connector Electrical Contacts, Type II, Class 2, Composition C*¹⁾

MIL-I-81969/14C, *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 Contacts*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.

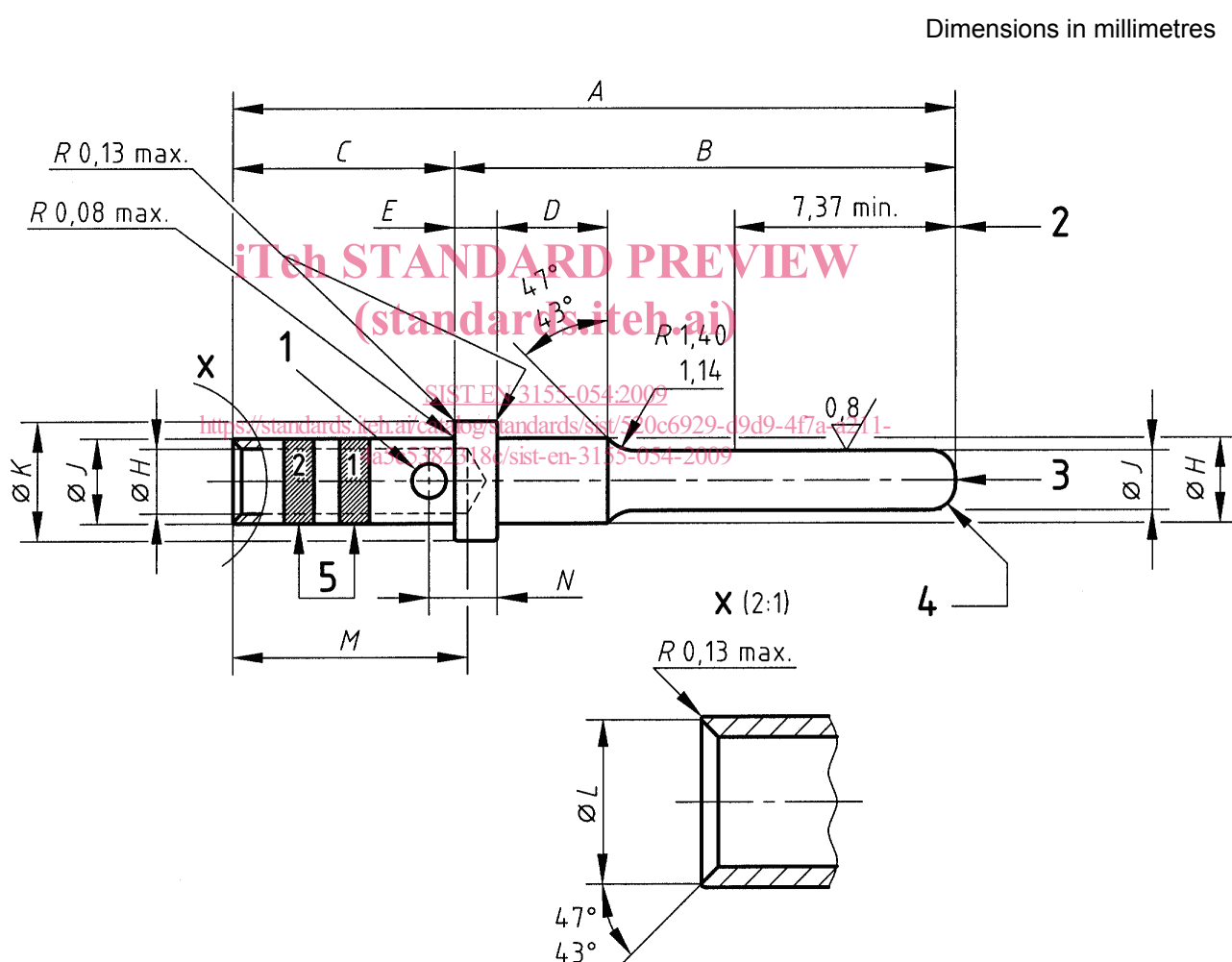
4 Required characteristics

4.1 General

Type C contacts are for thermocouple application. Class T corresponds to an operating temperature range from -65 °C to 260 °C.

4.2 Dimensions and mass

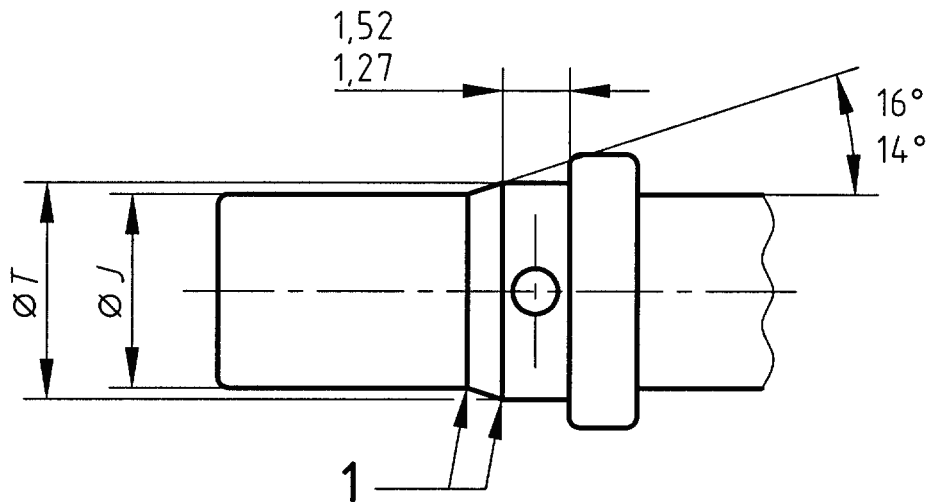
See Figure 1, Figure 2 and Table 1.



Key

- | | |
|-------------------------------------|---------------------------|
| 1 Diameter P (on one side only) | 4 Approximately spherical |
| 2 Active zone of contact protection | 5 Marking, see 4.3. |
| 3 Flat diameter S | |

Figure 1

**Key**

1 Radii

Figure 2 — Barrel, contact sizes 16-18**Table 1**

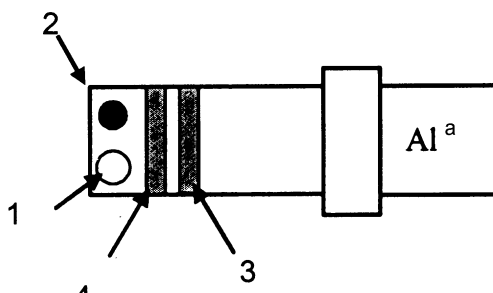
Size		A	B	C	D	E	F	G	H
Contact	Barrel	max.							
20	20	18,29	13,94	4,34	3,30	0,84	1,98	1,04	1,27
			13,79	4,06	3,17	0,74	1,93	0,99	1,22
20	18	18,29	13,94	4,34	3,30	0,84	1,98	1,04	1,35
			13,79	4,06	3,17	0,74	1,93	0,99	1,30
16	16	20,85	14,33	6,53	3,30	1,22	2,62	1,61	1,73
			14,17	6,25	3,17	1,12	2,56	1,56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

Size		J	K	L	M	N	P	S	T	Mass
Contact	Barrel									g
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	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	

4.3 Marking by colour code

Marking shall be in accordance with ISO 8843 and Table 2. Either the alloy type or coloured dot shall be used to identify the contact material.

Table 2



Size		Colour	
Contact	Barrel	Band 1	Band 2
20	20	Red	Red
20	18	Red	Brown
16	16	Blue	Blue
16	18	Blue	Brown

Key

1 White dot
2 Black dot
3 Band 1
4 Band 2

^a Alloy type identification to be produced by engraving, stamping or pressing without deformation of the contact.

4.4 Material

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NiAl (no protective plating)

4.5 Permissible cables

Cables shall be in accordance with EN 4049-002 and Table 3.

Table 3

Size		Size of conductors		
Contact	Barrel	AECMA code	Section mm ²	AWG ^a
20	20	006	0,60	20
		004	0,40	22
20	18	010	1,00	18
		006	0,60	20
16	16	004	0,40	22
		012	1,20	16
16	18	010	1,00	18
		006	0,60	20
16	18	010	1,00	18
		006	0,60	20
16	18	004	0,40	22

^a AWG — nearest American Wire Gauge.