



SLOVENSKI STANDARD
SIST EN 3155-005:2008
01-junij-2008

5 YfcbUj H_U!`9`Y_f] b]`cbHU_H`nUi dcfUWc`j`j Ynb]`Y`Ya YbH]`!`\$\$)`"XY.
?cbHU_H]žYY_f] b]žyYbg_]žhd`5`žbU i VUb]žfUhfYX`H`!`GHubXUfX`nUdfc]nj cX

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

Luft- und Raumfahrt - Elektrische Kontakte zur Verwendung in Verbindungselementen -
Teil 005: Elektrische Buchsenkontakte, Typ A, crimpbar, Klasse T - Produktnorm

iTeh STANDARD PREVIEW

(ctrique utilisés dans les organes de connexion) - Partie
005 : Contacts électriques, femelles, type A, à sertir, classe T - Norme de produit

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ICS 49.060

English Version

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

Série aérospatiale - Contacts électriques utilisés dans les organes de connexion - Partie 005 : Contacts électriques, femelles, type A, à sertir, classe T - Norme de produit

Luft- und Raumfahrt - Elektrische Kontakte zur Verwendung in Verbindungselementen - Teil 005: Elektrische Buchsenkontakte, Typ A, crimpbar, Klasse T - Produktnorm

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

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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 Central Secretariat has the same status as the official versions.

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Foreword

This European Standard (EN 3155-005:2006) has been prepared by the European Association of Aerospace Manufacturers - Standardization (AECMA-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 AECMA, 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of an identical text or by endorsement, at the latest by October 2006, and conflicting national standards shall be withdrawn at the latest by October 2006.

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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, 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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0 Introduction

The contacts defined by this standard are derived from those of MIL-C-39029/5 and, intermateable with those of MIL-C-39029/4. 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 and tests applicable to female 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 3155-004.

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 3155-004, *Aerospace series — Electrical contacts used in elements of connection — Part 005: Contacts, electrical, male, 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, *Installing and removal tools, connector electrical contact, general specification for*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

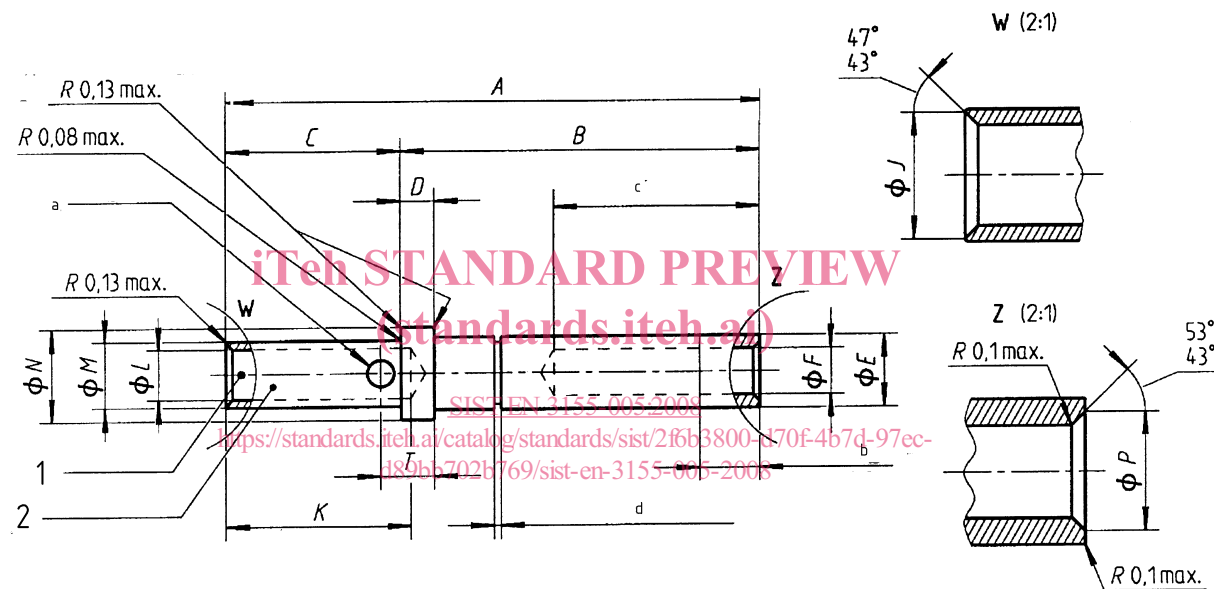
4.1 Specific characteristics

Type A contacts are for general application and class T corresponds to an operating temperature range from -65 °C to 260 °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 |
| a $\varnothing H$ (one side only) | c 7,37 min., see note 2 |
| b G max., see note 1 | d 0,25 max., see note 3 |

NOTE 1 Point at which a square ended gauge pin of the same basic diameter as the mating contact first engages the female contact spring member.

NOTE 2 This dimension represents both the length of the bore $\varnothing F$ which includes the active zone of protection (see EN 3155-001, 5.3.2).

NOTE 3 Clearance between sleeve and body of the contact

Figure 1

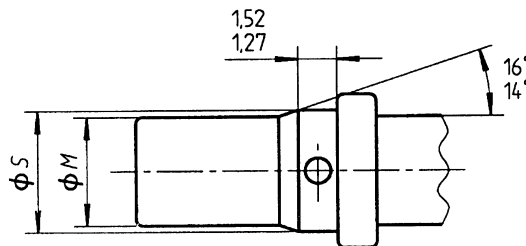


Figure 2 — Barrel, contacts 16-18 and 12-12

Table 1

| Size | | A max. | B | C | D | E | F min. | G max. | H |
|---------|--------|-----------|-------|------|------|------|-----------|-----------|------|
| Contact | Barrel | | | | | | | | |
| 20 | 20 | 16,66 | 12,32 | 4,34 | 0,84 | 1,98 | 1,05 | 1,14 | 0,81 |
| | | | 12,17 | 4,06 | 0,74 | 1,93 | | | 0,66 |
| 20 | 18 | 16,66 | 12,32 | 4,34 | 0,84 | 1,98 | 1,05 | 1,14 | 0,81 |
| | | | 12,17 | 4,06 | 0,74 | 1,93 | | | 0,66 |
| 16 | 16 | 19,28 | 12,70 | 6,53 | 1,22 | 2,87 | 1,63 | 1,27 | 1,07 |
| | | | 12,55 | 6,25 | 1,12 | 2,79 | | | 0,91 |
| 16 | 14 | 19,28 | 12,70 | 6,53 | 1,22 | 2,87 | 1,63 | 1,27 | 1,07 |
| | | | 12,55 | 6,25 | 1,12 | 2,79 | | | 0,91 |
| 16 | 18 | 19,28 | 12,70 | 6,53 | 1,22 | 2,87 | 1,63 | 1,27 | 1,07 |
| | | | 12,55 | 6,25 | 1,12 | 2,79 | | | 0,91 |
| 12 | 12 | 19,28 | 12,70 | 6,53 | 1,22 | 4,09 | 2,43 | 1,27 | 1,07 |
| | | | 12,55 | 6,25 | 1,12 | 4,01 | | | 0,91 |

| Size | | J | K | L | M | N | P min. | S | T | Mass g max. |
|---------|--------|------|------|------|------|------|-----------|------|------|-------------------|
| Contact | Barrel | | | | | | | | | |
| 20 | 20 | 1,68 | 4,72 | 1,27 | 1,98 | 2,62 | 1,52 | — | 1,73 | 0,31 |
| | | 1,57 | 3,99 | 1,22 | 1,93 | 2,54 | | | 1,35 | |
| 20 | 18 | 1,68 | 4,72 | 1,35 | 1,98 | 2,62 | 1,52 | — | 1,73 | 0,31 |
| | | 1,57 | 3,99 | 1,30 | 1,93 | 2,54 | | | 1,35 | |
| 16 | 16 | 2,26 | 7,21 | 1,73 | 2,62 | 3,38 | 2,21 | — | 2,16 | 0,68 |
| | | 2,11 | 6,35 | 1,68 | 2,56 | 3,30 | | | 1,73 | |
| 16 | 14 | 2,26 | 7,21 | 1,95 | 2,62 | 3,38 | 2,21 | — | 2,16 | 0,68 |
| | | 2,11 | 6,35 | 1,90 | 2,56 | 3,30 | | | 1,73 | |
| 16 | 18 | 1,68 | 7,21 | 1,35 | 1,98 | 3,38 | 2,21 | 2,62 | 2,16 | 0,68 |
| | | 1,57 | 6,35 | 1,30 | 1,93 | 3,30 | | 2,56 | 1,73 | |
| 12 | 12 | 3,45 | 7,21 | 2,59 | 3,83 | 4,83 | 3,18 | 4,01 | 2,16 | 1,38 |
| | | 3,30 | 6,35 | 2,49 | 3,76 | 4,75 | | 3,94 | 1,73 | |

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, thickness of protection not specified, selective protection permitted.

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 or 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.