SLOVENSKI STANDARD
SIST EN 3155-014:2009

01-januar-2009

Aeronavtika - Električni kontakti za uporabo v veznih elementih - 014. del: Kontakti, električni, moški, tip A, nagubani, razred S - Standard za proizvod

Aerospace series - Electrical contacts used in elements of connection - Part 014: Contacts, electrical, male, type A, crimp, class S - Product standard

Luft- und Raumfahrt - Elektrische Kontakte zur Verwendung in Verbindungselementen - Teil 014: Elektrische Stiftkontakte, Typ A, crimpbar, Klasse S - Produktnorm

Série aérospatiale - Contacts électriques utilisés dans les organes de connexion - Partie 014 : Contacts électriques, mâles, type A, à sertir, classe S - Norme de produit

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49.060	Letalska in vesoljska električni na oprema in sistemi	Aerospace electric equipment and systems

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English Version

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

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Foreword

This document (EN 3155-014:2006) 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of an identical text or by endorsement, at the latest by June 2007, and conflicting national standards shall be withdrawn at the latest by June 2007.

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Introduction

The contacts defined by this standard are derived from those of SAE-AS39029/64 and, intermateable with those of SAE-AS39029/63. They are specified as a 200 °C class instead of 125 °C class as detailed in the MIL standard.

1 Scope

This standard specifies the required characteristics, tests and tooling applicable to male electrical contacts 014, type A, crimp, class S, 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 3155-015.

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-*, *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.* 1)

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

EN 3155-015, *Aerospace series — Electrical contacts used in elements of connection — Part 015: Contacts, electrical, female, type A, crimp, class S — Product standard.*

MIL-DTL-22520, *Crimping tools, terminal, hand or power actuated, wire termination, and tool kits general specification for.* 2)

MIL-I-81969, *Installing and removal tools, connector electrical contact, general specification for.* 2)

SAE-AS39029, *Contacts, electrical connector, general specification for.* 3)

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* All its parts quoted in Table 7.

1) Published as ASD Prestandard at the date of publication of this standard.

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

3) Published by: Society of Automotive Engineering (SAE), 400 Commonwealth Drive, Warrendale, PA 15096, USA.

SAE-AS39029/63, *Contacts, electrical connector, socket, crimp removable (for MIL-C-24308 connectors).* [3)]

SAE-AS39029/64, *Contacts, electrical connector, pin, crimp removable (for MIL-C-24308 connectors).* [3)]

3 Terms and definitions

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

4 Required characteristics

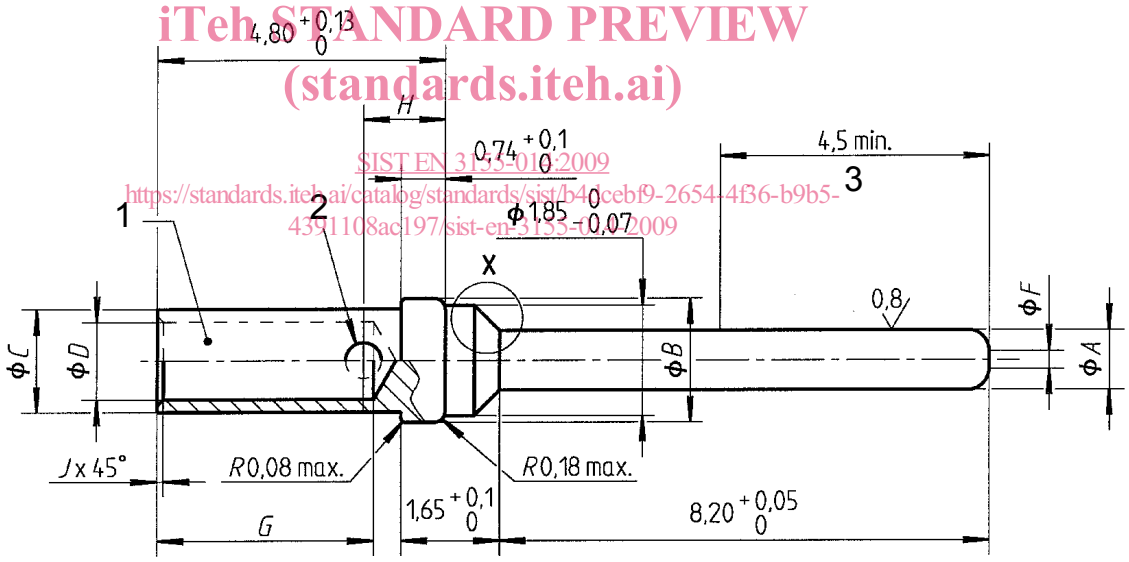
4.1 Specific characteristics

Type A contacts are for general application and class S corresponds to an operating temperature range from – 65 °C to 200 °C.

4.2 Dimensions and mass

See Figures 1, 2, 3 and 4 and Table 1.

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



⌀ 010	Diameter general concentricity		⌀ 0,025	⌀ *C* and ⌀ *D*

Key

1 Colour bands, see Table 2.
2 ⌀ *E* (one side only).
3 Contact active area protection

Figure 1

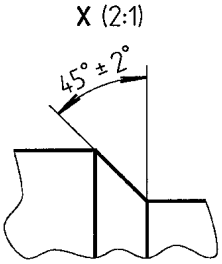


Figure 2

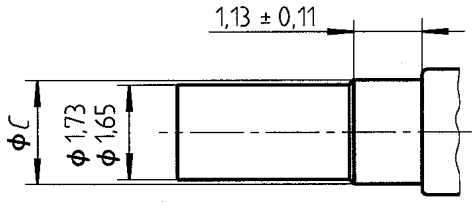
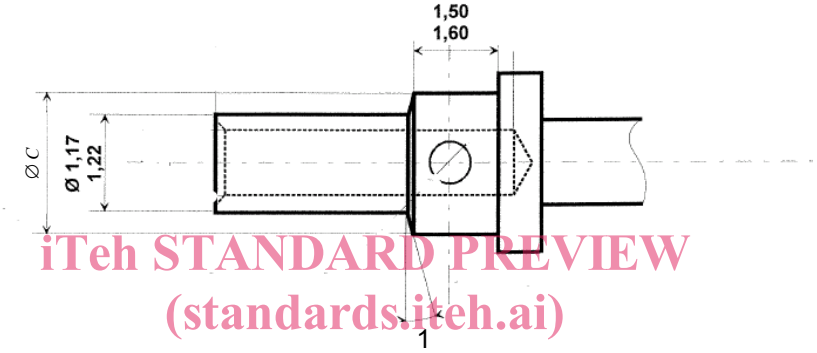


Figure 3 — Barrel 20-20



Key

1 14° to 16°

Figure 4 — Barrel 20-22

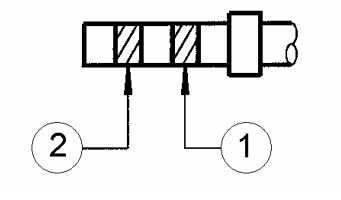
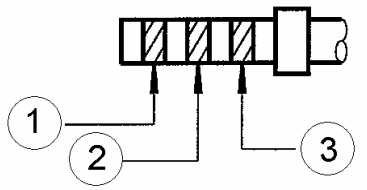
Table 1

Size		*A*	*B*	*C*	*D*	*E*	*F*	*G*	*H*	*K*	Mass
Contact	Barrel						max.				g max.
20	22	1,04 0,99	2,16 2,08	1,80 1,73	0,90 0,85	0,85 0,60	0,30	4,70 3,60	1,40 1,24	0,15 0,10	0,15
20	20	1,04 0,99	2,16 2,08	1,80 1,73	1,17 1,09	0,85 0,60	0,30	4,70 3,60	1,40 1,24	0,15 0,10	0,15
20	18	1,04 0,99	2,16 2,08	1,80 1,73	1,35 1,30	0,85 0,60	0,30	4,70 3,60	1,40 1,24	0,15 0,10	0,15

4.3 Marking by colour code

See Table 2.

Table 2

Size		Two bands according to ISO 8843 		Three bands according to SAE-AS39029/64 [a] 		
Contact	**Barrel**	**① Band 1**	**② Band 2**	**① Band 1**	**② Band 2**	**③ Band 3**
20	22	Red	Green	–	–	–
20	20	Red	Red	Orange	Blue	White
20	18	Red	Brown [b]	–	–	–

[a] Contacts supplied with three colour bands must conform to this EN standard.

[b] Violet colour band not to be used for new manufacture.

4.4 Material and surface treatment

— Body material: copper alloy

— Surface treatment: gold on an appropriate undercoat, selective protection permitted, thickness of protection not specified.

4.5 Permissible cables

See Table 3.

Table 3

Size		Size of conductors			Rated test current A
Contact	**Barrel**	**AECMA Code**	**Section mm²**	**AWG [a]**	
20	22	004 002 001	0,40 0,25 0,15	22 24 26	5,0 3,0 2,0
20	20	006 004 002	0,60 0,40 0,25	20 22 24	7,5 5,0 3,0
20	18	010 006 004 002	1,00 0,60 0,40 0,25	18 20 22 24	7,5 7,5 5,0 3,0

[a] AWG = Closest American Wire Gage.