SLOVENSKI STANDARD
SIST EN 3661-006:2009

01-julij-2009

Aeronavtika - Odklopniki, enopolni, temperaturno kompenzirani, nazivni tok od 20 A do 50 A - 006. del: S polariziranim signalnim kontaktom - Razliļ ica z zbiralkami - Standard za proizvod

Aerospace series - Circuit breakers, single-pole, temperature compensated, rated current 20 A to 50 A - Part 006: With polarized signal contact - Bus bar version - Product standard

Luft- und Raumfahrt - Schutzschalter, einpolig, Temperaturkompensiert, Nennströme von 20 A bis 50 A - Teil 006: Mit polarisiertem Signalkontakt - Sammelschienenversion - Produktnorm

Série aérospatiale - Disjoncteurs unipolaires compensés en température, intensités nominales 20 A à 50 A - Partie 006 : Avec contact de signalisation polarisé - Version pour barres bus - Norme de produit

Ta slovenski standard je istoveten z: EN 3661-006:2006

ICS:

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

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EUROPEAN STANDARD

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

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Foreword

This European Standard (EN 3661-006:2006) 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of an identical text or by endorsement, at the latest by February 2007, and conflicting national standards shall be withdrawn at the latest by February 2007.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, 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.

1 Scope

This standard specifies the characteristics of single-pole circuit breakers, temperature compensated with a rated current from 20 A to 50 A, used in aircraft on-board circuits at a temperature between – 55 °C and 125 °C and at an altitude of 15 000 m max.

These circuit breakers are operated by a push-pull type single push button (actuator), with delayed action "trip-free" tripping with a polarized signal contact which is open when main contacts are closed, and inversely.

They are connected on supply side by means of bus-bar. They will continue to function up to the short-circuit current.

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 3155-016, *Aerospace series — Electrical contacts used in elements of connection — Part 016: Contacts, electrical, male, type A, crimp, class S — Product standard.*

EN 3661-001, *Aerospace series — Circuit breakers, single-pole, temperature compensated, rated current 20 A to 50 A — Part 001: Technical specification.*

EN 3841-305, *Aerospace series — Circuit breakers — Test methods — Part 305: Short-circuit performance.*

EN 6113, *Aerospace series — Circuit breaker, connecting and attachment hardware.*[1)]

TR 6083, *Aerospace series — Cut-outs for installation of electrical components.*[2)]

MIL-I-81969/1A, *Installing and removal tools, connector electrical contact, type III, class 2, composition C.*[3)]

MIL-I-81969/14C, *Installing and removal tools, connector electrical contact, type III, class 2, composition B.*[3)]

MIL-S-19500, *Semiconductor device, diode, silicon, fast recovery.*[3)]

FED-STD-595B, *Colors used in Government Procurement.*

3 Dimensions and mass

3.1 Dimensional characteristics

The circuit breakers do not have to correspond to the pictorial illustration, only the dimensions given shall be adhered to.

Dimensions are in millimetres.

See Figure 1.

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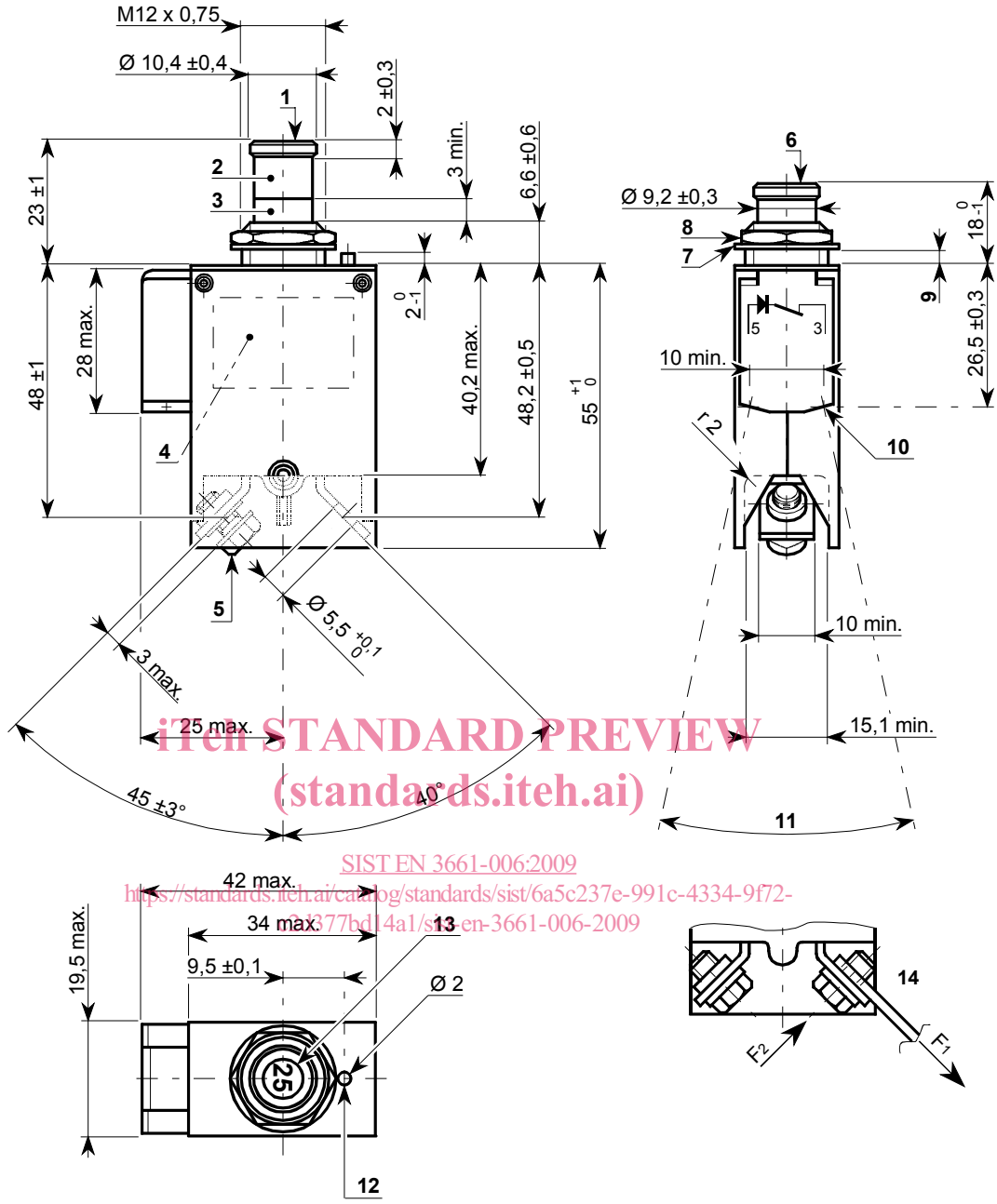
1) Published as AECMA Prestandard at the date of publication of this standard.

2) Published as AECMA Technical Report at the date of publication of this standard.

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



Key

1 Push button released
2 Green colour according to FED-STD-595B No. 34090
3 White
4 Marking area, see Clause 8.
5 Connecting screw and washer
6 Push button pressed
7 Lockwasher
8 Attachment nut
9 1 to 3 max.
10 Gauge 20 connection pins according to EN3155-016M2018
11 Indicative value 30° ± 5° (see note)
12 Positioning lug in accordance with the panel cut-out, as per TR6083C202
13 Rated current marking (white on green)
14 Bus-bar side

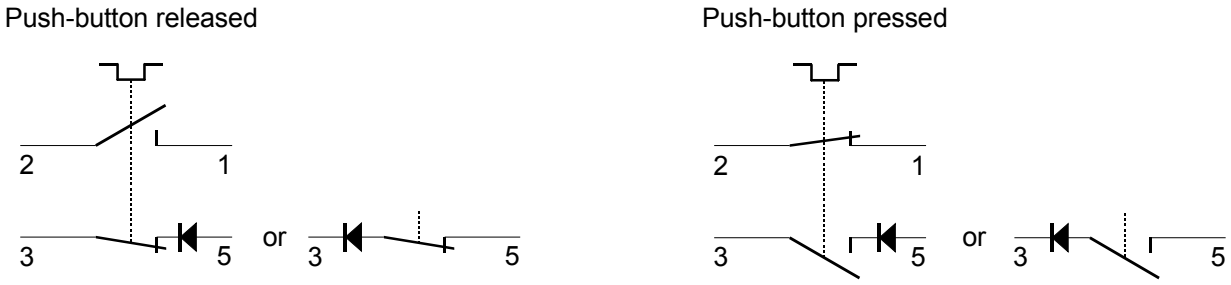
F1 and **F2**: see EN 3661-001 "Mechanical tests".

NOTE Tools noted in Subclause 4.2.4 shall be applied without interfering with the terminal 2 connection, even if the circuit breakers are grouped.

Figure 1 — Configuration – Dimensions – Tolerances

3.2 Electrical diagram

See Figure 2.



Terminal No.:

1 and **2**: Main contacts

3 and **5**: Signal contacts

Figure 2 — Electrical diagram

3.3 Mass

75 g max. (delivery code A including hardware).

3.4 Panel mounting

See EN 3661-001.

4 Characteristics

4.1 Material, surface treatment

See EN 3661-001.

4.2 Mechanical characteristics

4.2.1 Fasteners

See EN 6113.

4.2.2 Recommended tightening torque of attaching nut for installation

(5,25 ± 0,25) Nm.

4.2.3 Recommended tightening torque of connection hardware for installation

(2,35 ± 0,15) Nm.

4.2.4 Recommended tools for contacts of auxiliary contact insertion and extraction

— plastic MIL-I-81969/14-11;

— metallic MIL-I-81969/1-02.

4.2.5 Resistance to vibrations

4.2.5.1 Combined test: ambient temperature at 70 °C and vibrations

Sinusoidal: 10 g_n, see EN 3661-001.

Random: 5,8 g_n, see EN 3661-001.

Low frequencies: 10 g_n, see EN 3661-001.

4.2.5.2 Combined test: ambient temperature at 85 °C, altitude and vibrations

Sinusoidal: 3 g_n, see EN 3661-001.

4.2.6 Resistance to shocks

50 g_n, see EN 3661-001.

4.2.7 Mechanical endurance

See Table 6.

4.3 Environment characteristics

4.3.1 Humidity

See EN 3661-001.

4.3.2 Corrosion

See EN 3661-001.

4.3.3 Contaminating fluids

See EN 3661-001.

4.3.4 Over-voltage caused by lightning

See EN 3661-001.

4.4 Electrical characteristics

4.4.1 Nominal voltages of main contacts

See Table 1.

Table 1

Nominal voltage	28 V d.c.
	26 V a.c., 360 Hz to 800 Hz
	115 V a.c., 360 Hz to 800 Hz