

Aerospace series — Connectors, electrical, circular, scoop-proof, triple start threaded coupling, operating temperature 175 °C or 200 °C continuous —

**Part 002: Specification of performance
and contact arrangements**

ICS 49.060

National foreword

This British Standard is the UK implementation of EN 3645-002:2007.

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A list of organizations represented on this committee can be obtained on request to its secretary.

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English Version

**Aerospace series - Connectors, electrical, circular, scoop-proof,
triple start threaded coupling, operating temperature 175 °C or
200 °C continuous - Part 002: Specification of performance and
contact arrangements**

Série aérospatiale - Connecteurs électriques circulaires à
accouplement par filetage, à pas rapide à trois filets,
température d'utilisation 175 °C ou 200 °C continu - Partie
002 : Spécification de performances et arrange-ments des
contacts

Luft- und Raumfahrt - Elektrische Rundsteckverbinder,
kontaktgeschützt, dreigängige Gewinde-Schnellkupplung,
Betriebstemperatur 175 °C oder 200 °C konstant - Teil 002:
Leistungsdaten und Kontaktanordnungen

This European Standard was approved by CEN on 30 September 2005.

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Foreword

This document (EN 3645-002:2007) 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of an identical text or by endorsement, at the latest by September 2007, and conflicting national standards shall be withdrawn at the latest by September 2007.

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0 Introduction

This family of connectors is derived from DOD-C-38999/30A series III, with which it is intermateable and interchangeable.

1 Scope

This standard defines the performances and contact arrangements for threaded ring coupling circular connectors, fire-resistant or non fire-resistant, intended for use in a temperature range from – 65 °C to 175 °C or 200 °C continuous.

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 2591-209, *Aerospace series — Elements of electrical and optical connection — Test methods — Part 209: Current temperature derating*

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

EN 3155-008, *Aerospace series — Electrical contacts used in elements of connection — Part 008: Contacts, electrical, male, type A, crimp, class S — Product standard*

EN 3155-009, *Aerospace series — Electrical contacts used in elements of connection — Part 009: Contacts, electrical, female, type A, crimp, class S — Product standard*

EN 3155-010, *Aerospace series — Electrical contacts used in elements of connection — Part 010: Contacts, electrical, triaxial, size 8, male, type D, crimp, class R — Product standard*¹⁾

EN 3155-011, *Aerospace series — Electrical contacts used in elements of connection — Part 011: Contacts, electrical, triaxial, size 8, female, type D, crimp, class R — Product standard*¹⁾

EN 3155-012, *Aerospace series — Electrical contacts used in elements of connection — Part 012: Contacts, electrical, triaxial, size 8, male, type D, solder, class R — Product standard*

EN 3155-013, *Aerospace series — Electrical contacts used in elements of connection — Part 013: Contacts, electrical, triaxial, size 8, female, type D, solder, class R — Product standard*

EN 3155-024, *Aerospace series — Electrical contacts used in elements of connection — Part 024: Contacts, electrical, triaxial, size 8, male, type D, crimp, class S — Product standard*

EN 3155-025, *Aerospace series — Electrical contacts used in elements of connection — Part 025: Contacts, electrical, triaxial, size 8, female, type D, crimp, class S — Product standard*

EN 3197, *Aerospace series — Installation of aircraft electrical and optical interconnection systems*

EN 3645 (series), *Aerospace series — Connectors, electrical, circular, scoop-proof, triple start threaded coupling, operating temperature 175 °C or 200 °C continuous — Product standard*

EN 3645-001, *Aerospace series — Connectors, electrical, circular, scoop-proof, triple start threaded coupling, operating temperature 175 °C or 200 °C continuous — Part 001: Technical specification*

EN 3660-002, *Aerospace series — Cable outlet accessories for circular and rectangular electrical and optical connectors — Part 002: Index of product standards*²⁾

1) In preparation at the date of publication of this standard.

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

EN 4529-002, *Aerospace series — Elements of electrical and optical connection — Sealing plugs — Part 002: Index of products standards*

DOD-C-38999/30A, *Connectors, elec., cir. miniature, high density, quick disconnect (bayonet, threaded, and breech coupling), environ. resistant, removable crimp and hermetic solder contacts, plug, lanyard release, fail-safe, triple start threaded coupling, removable crimp contacts sockets, ser. III, metric*³⁾

MIL-C-39029/106A, *Contacts, electrical connector, socket, crimp removable, (for MIL-C-38999 series I, III and IV and MIL-C-29600 series A connectors)*³⁾

MIL-C-39029/107A, *Contacts, electrical connector, pin, crimp removable, (for MIL-C-38999 Series I, III and IV and MIL-C-29600 series A connectors)*³⁾

3 Description and codification of class

See Table 1.

Table 1

Model		Description
Connector	W	Receptacles and plugs, cadmium-plated aluminium alloy, olive drab — 500 h salt spray — Plug with grounding spring — Crimp, removable contacts — Maximum operating temperature 175 °C continuous
	J	Receptacles and plugs, cadmium-plated composite, olive drab — 2 000 h salt spray — Plug with grounding spring — Crimp, removable contacts — 1 500 matings — Maximum operating temperature 175 °C continuous
	K	Receptacles and plugs, passivated stainless steel — 500 h salt spray — Plug with grounding spring — Fire-resistant — Crimp, removable contacts — Maximum operating temperature 200 °C continuous
	F	Receptacles and plugs, nickel-plated aluminium alloy — 48 h salt spray — Plug with grounding spring — Crimp, removable contacts — Maximum operating temperature 200 °C continuous
	M	Receptacles and plugs, nickel-plated composite — 2 000 h salt spray — Plug with grounding spring — Crimp, removable contacts — 1 500 matings — Maximum operating temperature 200 °C continuous
	Y	Hermetic receptacle, passivated stainless steel — Solder contacts — Maximum operating temperature 200 °C continuous
Protective cover	K	Protective cover for plug in passivated corrosion resisting steel — Maximum operating temperature 200 °C continuous
	F	Protective cover for receptacle or plug in nickel-plated aluminium alloy — Maximum operating temperature 200 °C continuous
	W	Protective cover for receptacle or plug in olive-green cadmium-plated aluminium alloy — Maximum operating temperature 175 °C continuous
Dummy receptacle	K	Dummy receptacle in passivated stainless steel — Maximum operating temperature 200 °C continuous
	F	Dummy receptacle in nickel-plated aluminium alloy — Maximum operating temperature 200 °C continuous
	W	Dummy receptacle in olive-green cadmium-plated aluminium alloy — Maximum operating temperature 175 °C continuous

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

4 Definitions

See EN 3645-001.

5 Operating conditions

5.1 Combinations of plugs and receptacles

Table 2 shows the combinations marked by (X) which achieve the characteristics specified for each model.

For other combinations, the characteristics of the pair of connectors are those of the component with the lowest performance.

Other combinations may be used subject to the approval of the design authority.

Table 2

Receptacle model	Plug model				
	W	F	J	M	K
W	X	—	X	—	—
F	—	X	—	X	—
J	X	—	X	—	—
M	—	X	—	X	—
Y	—	—	—	X	X
K	—	—	—	—	X

5.2 Combinations of protective covers and connectors

See Table 3.

Table 3

Flight cap for receptacle	Receptacle model	Dummy receptacle Flight cap for plug	Plug model
W	J W	W	J W
F	M F	F	M F
K	Y K	K	K