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Standards

Irish Standard
I.S. EN 4645-001:2010

Aerospace series - Connectors, optical, circular, single and multipin, coupled by threaded ring, self-locking 1,25 mm diameter ferrule with removable alignment sleeve holder - Part 001: Technical specification

I.S. EN 4645-001:2010

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English Version

Aerospace series - Connectors, optical, circular, single and multipin, coupled by threaded ring, self-locking 1,25 mm diameter ferrule with removable alignment sleeve holder - Part 001: Technical specification

Série aérospatiale - Connecteurs optiques circulaires à accouplement par bague fileté, auto-freinante ferrule 1,25 équipés d'un porte sleeve démontable - Partie 001 : Spécificaton technique

Luft- und Raumfahrt - Optische Rundsteckverbinder mit Schraubkupplung, selbstsichernd, Einzel- und Multipin, Ferrulendurchmesser 1,25 mm, demontierbarer Zentrierhülsenhalter - Teil 001: Technische Lieferbedingungen

This European Standard was approved by CEN on 10 October 2009.

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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 CEN Management Centre has the same status as the official versions.

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Foreword

This document (EN 4645-001:2010) 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of an identical text or by endorsement, at the latest by July 2010, and conflicting national standards shall be withdrawn at the latest by July 2010.

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.

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Introduction

This family of fibre optic connectors is derived from MIL-DTL-38999 series III and EN 3645-001. It is suitable for use on aerospace onboard applications. It provides easy access for optical contact end face cleaning.

Standards for optical contacts are defined in EN 4639-002.

The connectors with shell size 11 and 13 are 100 % scoop proof. The optical contacts are capable of accepting single cable sizes up to a maximum of 2 mm outside diameter.

1 Scope

This standard specifies the general characteristics, the conditions for qualification, acceptance and quality assurance, as well as the test programs and groups for threaded ring coupling circular fibre optic self-locking connectors, fire-resistant or non fire-resistant, intended for use in a temperature range from – 65 °C to 150 °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.

ISO 68-1:1998, *ISO general purpose screw threads — Basic profile — Part 1: Metric screw threads*

ISO 261:1998, *ISO general purpose metric screw threads — General plan*

ISO 262:1998, *ISO general purpose metric screw threads — Selected sizes for screws, bolts and nuts*

ISO 965-1:1998, *ISO general-purpose metric screw threads — Tolerances — Part 1: Principles and basic data*

EN 2591-100*, *Aerospace series — Elements of electrical and optical connection — Test methods — Part 100: General.*

EN 3197, *Aerospace series — Installation of aircraft electrical and optical interconnection systems¹⁾*

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 4531-002, *Aerospace series — Connectors, optical, circular, single and multipin, coupled by threaded ring — Flush contacts — Part 002: Specification of performance and contact arrangements*

EN 4639-002, *Aerospace series — Connectors, optical, rectangular, modular, multicontact, 1,25 diameter ferrule, with removable alignment sleeve holder — Part 002: List of product standards*

EN 4639-101, *Aerospace series — Connectors, optical, rectangular, modular, multicontact, 1,25 diameter ferrule, with removable alignment sleeve holder — Part 101: Optical contact for cable EN 4641-100 — Operating temperatures between – 65 °C and 125 °C — Product standard*

EN 4639-102, *Aerospace series — Connectors, optical, rectangular, modular, multicontact, 1,25 diameter ferrule, with removable alignment sleeve holder — Part 102: Optical contact for cable EN 4641-102 — Operating temperatures between – 55 °C and 100 °C — Product standard*

EN 4645-003, *Aerospace series — Connectors, optical, circular, single and multipin, coupled by threaded ring, self-locking 1,25 mm diameter ferrule with removable alignment sleeve holder — Part 003: Square flange receptacle — Product standard*

* And all parts quoted in this standard.

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

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