SLOVENSKI STANDARD
SIST EN 3475-809:2009

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Aeronavtika - Elektriļ ni kabli za uporabo v zraļ nih plovilih - Preskusne metode - 809. del: Neenakomernost upornosti

Aerospace series - Cables, electrical, aircraft use - Test methods - Part 809: Resistance unbalance

Luft- und Raumfahrt - Elektrische Leitungen für Luftfahrtverwendung - Prüfverfahren - Teil 809: Widerstandsunsymmetrie

Série aérospatiale - Câbles électriques à usage aéronautique - Méthodes d'essais - Partie 809: Déséquilibre de résistance

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ICS:

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

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Aerospace series - Cables, electrical, aircraft use - Test methods - Part 809: Resistance unbalance

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COMITÉ EUROPÉEN DE NORMALISATION
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Foreword

This document (EN 3475-809:2009) 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of an identical text or by endorsement, at the latest by September 2009, and conflicting national standards shall be withdrawn at the latest by September 2009.

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1 Scope

This standard specifies methods for measuring resistance unbalance for digital data transmission cable.

It shall be used together with EN 3475-100.

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 3475-100, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 100: General.*

EN 3475-301, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 301: Ohmic resistance per unit length.*

3 Preparation of specimens

The measurements may be performed on production drums and/or on the final delivery package.

4 Apparatus

Wheatstone bridges, automatic or semi-automatic equipment may also be used with an accuracy of ± 0,5 %.

5 Method

The conductor resistance unbalance is usually determined at the same time that conductor resistance measurements are made (EN 3475-301). The resistance measure of each conductor of any pair shall be performed at or corrected to 20 °C temperature. The temperature correction shall be performed as described in test method EN 3475-301.

After measurement, the resistance unbalance calculation is:

$$|DR_1| = \frac{R_a - R_b}{R_a + R_b} \times 100 \qquad |DR_2| = \frac{R_c - R_d}{R_c + R_d} \times 100$$

where

R_a, R_b are the resistance of each conductor of the pair 1; and

R_c, R_d are the resistance of each conductor of the pair 2 (in case of quad cable).

Used expression for DR_1 and DR_2 are percent resistance unbalance.

6 Requirement

The resistance unbalance obtained shall not exceed the values specified in the product standard.