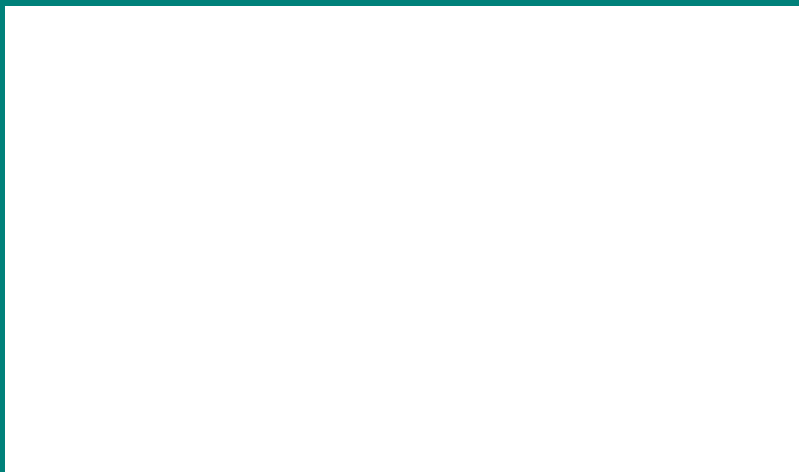


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Aerospace series – Cables, electrical, aircraft use – Test methods – Part 802: Capacitance unbalance



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Denna standard ersätter SS-EN 3475-802, utgåva 1.

The European Standard EN 3475-802:2009 has the status of a Swedish Standard. This document contains the official English version of EN 3475-802:2009.

This standard supersedes the Swedish Standard SS-EN 3475-802, edition 1.

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 3475-802

February 2009

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English Version

Aerospace series - Cables, electrical, aircraft use - Test methods - Part 802: Capacitance unbalance

Série aérospatiale - Câbles électriques à usage
aéronautique - Méthodes d'essais - Partie 802:
Déséquilibre de capacité

Luft- und Raumfahrt - Elektrische Leitungen für
Luftfahrtverwendung - Prüfverfahren - Teil 802:
Kapazitätsdifferenz

This European Standard was approved by CEN on 11 July 2008.

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Contents

Page

Foreword.....	3
1 Scope	4
2 Normative references	4
3 Preparation of specimens	4
4 Apparatus	4
5 Method	4
6 Requirement	6

Foreword

This document (EN 3475-802:2009) 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of an identical text or by endorsement, at the latest by August 2009, and conflicting national standards shall be withdrawn at the latest by August 2009.

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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1 Scope

This standard specifies a method for measuring the capacitance unbalance for digital data transmission cable (within a pair or quad).

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 3475-801, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 801: Capacitance per unit length*

3 Preparation of specimens

These shall be stripped and prepared for connection to the measuring device.

4 Apparatus

The capacitance shall be measured with an unbalance bridge at a frequency of $(1\,000 \pm 100)$ Hz. Various types of automatic or semiautomatic equipment may also be used.

5 Method

5.1 Screened pair capacitance unbalance

Capacitance shall be measured as indicated in EN 3475-801.

The length of the sample shall be 3 m or more.

Capacitance unbalance as a percentage shall be determined from the following formula:

$$D_c = 100 \frac{4(C_a - C_b)}{2(C_a + C_b) - C_c}$$

5.2 Screened quad capacitance unbalance pair to pair

Pair to pair capacitance unbalance is illustrated in Figure 1, where 1 and 2 represent the two conductors of a pair and 3 and 4 represent the two conductors of another pair.

The length of the sample shall be at least 100 m or more.

Capacitance unbalance pair to pair per unit of length shall be determined from the following formula:

$$C_{pp}' = C_{13} + C_{24} - C_{23} - C_{14}$$