SLOVENSKI STANDARD
SIST EN 3567-003:2004

01-maj-2004

Aerospace series - In-line couplers for use in multiplex data bus systems in accordance with MIL-STD-1553B - Part 003: Single in-line couplers - Product standard

Aerospace series - In-line couplers for use in multiplex data bus systems in accordance with MIL-STD-1553B - Part 003: Single in-line couplers - Product standard

Luft- und Raumfahrt - Leitungskoppler für die Anwendung in Multiplex-Datenbussystemen
nach MIL-STD-1553B - Teil 003: Einfach-Leitungskoppler - Produktnorm

Série aérospatiale - Coupleurs en ligne utilisés dans les systemes multiplexés de bus de données suivant MIL-STD-1553B - Partie 003: Coupleurs en ligne simples - Norme de produit

Ta slovenski standard je istoveten z: **EN 3567-003:2001**

ICS:

49.060	Letalska in vesoljska elektriļna oprema in sistemi	Aerospace electric equipment and systems

SIST EN 3567-003:2004 **en**

EUROPEAN STANDARD

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English version

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This European Standard was approved by CEN on 4 June 2001.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Management Centre or to any CEN member.

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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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

Management Centre: rue de Stassart, 36 B-1050 Brussels

Foreword

This European Standard has been prepared by the European Association of Aerospace Manufacturers (AECMA).

After inquiries 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 AECMA, 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 May 2002, and conflicting national standards shall be withdrawn at the latest by May 2002.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This standard specifies the required characteristics and performance requirements for single in-line couplers for use in multiplex data bus systems in accordance with MIL-STD-1553B.

It shall be used together with EN 3567-001.

2 Normative references

This European Standard incorporates by dated or undated reference provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 2591-100	Aerospace series – Elements of electrical and optical connection – Test methods – Part 100: General [1)]
EN 2591-205	Aerospace series – Elements of electrical and optical connection – Test methods – Part 205: Housing (shell) electrical continuity
EN 3375-003	Aerospace series – Cables, electrical, for digital data transmissions – Part 003: Single braid – Product standard [2)]
EN 3375-004	Aerospace series – Cables, electrical, for digital data transmissions – Part 004: Double braid – Product standard [2)]
EN 3375-005	Aerospace series – Cables, electrical, for digital data transmissions – Part 005: Double braid and metallic layer – Product standard [2)]
EN 3567-001	Aerospace series – In-line couplers for use in multiplex data bus systems in accordance with MIL-STD-1553B – Part 001: Technical specification
MIL-HDBK-217	Reliability prediction of electronic equipment [3)]
MIL-STD-1553B	Digital time division command/Response multiplex data [3)]

3 Terms and definitions

For the purposes of this standard, the terms and definitions given in EN 2591-100 apply.

4 Description

Single in-line couplers are composed of the following:

- one coupling transformer and two isolation resistors;
- a screened, environmentally sealed and corrosion resistant enclosure protected with an outer insulation;
- cables according to EN 3375-003, EN 3375-004 and EN 3375-005 installed during manufacture.

1) Published as AECMA Prestandard at the date of publication of this standard
2) In preparation at the date of publication of this standard
3) Published by: Department of Defense (DOD), the Pentagon, Washington D.C. 20301 USA.

5 Required characteristics

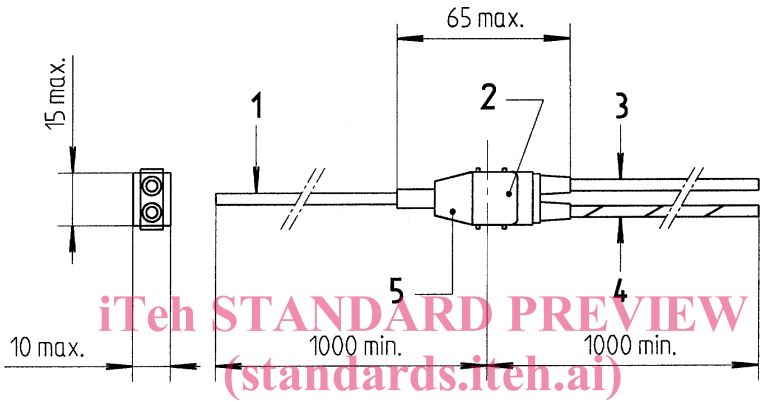
See EN 3567-001.

6 Dimensions, electrical diagram and mass

6.1 Dimensions

Dimensions are in millimetres.

See figure 1.



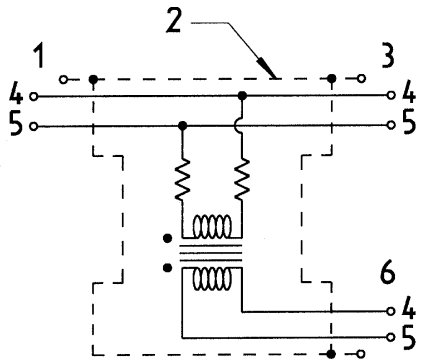
Key

1 J1 – Bus
2 Marking
3 J2 – Bus
4 J3 – Stub
5 Enclosure with outer insulation

Figure 1

6.2 Electrical diagram

See figure 2.



Key

1 J1 – Bus
2 Screening
3 J2 – Bus
4 Blue
5 White
6 J3 – Stub

Figure 2

6.3 Mass

10 g including all components (sealing sleeves, etc.) but excluding cable.

7 Performance requirements

Operating temperature range: – 65 °C to 150 °C or – 65 °C to 200 °C

Screening continuity according to EN 2591-205 at ambient temperature : 10 mΩ max.

Insulation resistance:

- outer jacket: 100 MΩ min.;
- between screening and conductors: 100 MΩ min.

Voltage proof test:

- outer jacket: 500 V r.m.s.;
- between screening and conductors: 500 V r.m.s.

Surface transfer impedance: see table 1.

Table 1

Coupler frequency	Maximal surface transfer impedance: Z_T in ohms per metre		
	EN 3567-003 RA	EN 3567-003 RB	EN 3567-003 RC
Direct current	45×10^{-3}	15×10^{-3}	15×10^{-3}
1 MHz	45×10^{-3}	5×10^{-3}	$2{,}5\times10^{-3}$
10 MHz	45×10^{-3}	5×10^{-3}	$2{,}5\times10^{-3}$
30 MHz	100×10^{-3}	10×10^{-3}	10^{-4}
100 MHz	Not applicable		
NOTE Values not defined for couplers of code S			

Salt mist: 500 h

Immersion at low air pressure: 1,1 kPa (30 000 m)

Fluid resistance: EN 3567-001, table 1

Shock: method A, severity 300

Vibrations:

- random, level J (1 to 41,7);
- gunfire.

Tensile strength: 100 N

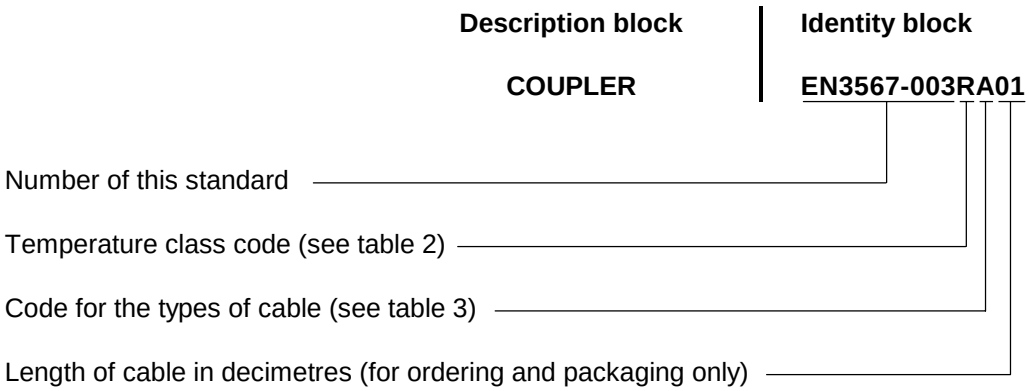
Mean Time Between Failure (MTBF): according to MIL-HDBK-217

8 Quality assurance

See EN 3567-001.

9 Designation

EXAMPLE:



NOTE If necessary the code I9005 shall be placed between the description block and the identity block.

Table 2

Temperature class °C	Code
150	R
200	S

Table 3

Type of cable	Code
EN 3375-003	A
EN 3375-004	B
EN 3375-005	C

10 Marking

See EN 3567-001.

If the product is too small for the marking to be easily read, a sleeve with appropriate marking shall be used on the cable.

11 Delivery conditions

See EN 3567-001.

12 Packaging

See EN 3567-001.

13 Storage

See EN 3567-001.