



**International
Standard**

ISO 1966

**Crimped joints for aircraft electrical
cables**

*Raccordements sertis pour câbles électriques utilisés à bord des
aéronefs*

**Second edition
2026-07**

Sample Document

get full document from standards.iteh.ai

Sample Document

get full document from standards.iteh.ai



COPYRIGHT PROTECTED DOCUMENT

© ISO 2026

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

	Page
Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Design requirements	2
4.1 General.....	2
4.2 Crimped joints.....	3
4.3 Wires.....	3
4.4 Tools and dies.....	3
5 Dimension	3
6 Strength and performance	4
7 Marking	4
8 Tests	4
9 Type tests	4
9.1 Test conditions.....	4
9.2 Test sequence and specimens.....	4
9.3 Inspection.....	5
9.4 Voltage drop test.....	5
9.5 Climatic test.....	6
9.6 Load and temperature cycling tests.....	6
9.7 Cycling current ageing.....	6
9.8 Rapid change of temperature.....	6
9.9 Salt mist.....	7
9.10 Sinusoidal vibrations with passage of current.....	8
9.11 Tensile test.....	8
9.12 Insulation grip tests.....	8
9.13 Tensile tests on conductor crimp alone.....	8
9.14 Additional tests for insulated joints.....	8
9.14.1 Samples.....	8
9.14.2 Fluid resistance.....	9
9.14.3 Heat ageing.....	9
9.14.4 Low temperature crimping.....	9
9.14.5 Dielectric strength.....	9
9.14.6 Flammability.....	9
10 Production control tests	10
10.1 Terminations and cable splices.....	10
10.2 Tools and dies.....	10
11 Users' control tests	10
11.1 Routine inspection of crimped joints.....	10
11.2 Quality control tests.....	10
Bibliography	13

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 20, *Aircraft and space vehicles*, Subcommittee SC 1, *Aerospace electrical requirements*.

This second edition cancels and replaces the first edition (ISO 1966:1973), which has been technically revised.

The main changes are as follows:

- addition of [Clause 2](#);
- addition of requirements for different crimp barrel materials and coating materials (see [4.1](#));
- addition of subclause [4.3](#);
- addition of requirements for the overall dimensions of the crimped joints (see [Clause 6](#));
- revision of requirements for type test (see [Clause 9](#));
- revision of the tables for test current, voltage drop and tensile strength tensile ([Table 2](#) and [Table 3](#)).

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

This document serves as an essential reference standard for aerospace manufacturers, engineers and quality control professionals to promote consistency and safety of aircraft electrical systems.

Sample Document

get full document from standards.iteh.ai

Sample Document

get full document from standards.iteh.ai

Crimped joints for aircraft electrical cables

1 Scope

This document specifies the design requirements (and tests) for the crimping of insulated and non-insulated joints to general purpose electrical cables for aircraft, with conductors of copper, copper alloy, aluminium or aluminium alloy, in locations in which the stabilized conductor temperature does not exceed the values specified for the relevant type of cable, i.e. 105 °C, 190 °C or 260 °C. This document specifies the type of cable to use for the joints (see 4.1).

The document also contains recommendations relating to the inspection of such connections and the tools used to perform the crimping operation. Because satisfactory crimping is dependent upon the maintenance and setting of tools, it also contains recommendations for tests to confirm their serviceability.

NOTE Testing of crimped joints to assess their suitability for aircraft shows that certain environmental conditions, for example vibration, have no significant effect on the performance of the joints. Therefore, such tests are not provided in this document.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

IEC 60068-2-6:2022, *Environmental testing — Part 2-6: Tests — Test Fc: Vibration (sinusoidal)*

IEC 60068-2-11:2021, *Tests - Test Ka: Salt mist*

IEC 60352-2:2024, *Solderless connections — Part 2: Crimped connections — General requirements, test methods and practical guidance*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1 termination

permanent connection formed by the end of an electrical cable conductor with a *terminal end* (3.2) or a *pin or socket contact* (3.3)

3.2 terminal end

connecting device with barrel(s) accommodating an electrical cable conductor with or without additional provision to accommodate and secure the insulation

3.3 pin or socket contact

contact used in a plug or socket (receptacle) with a barrel at one end to accommodate an electrical cable conductor with or without additional provision to secure the insulation