
International Standard



8668/2

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Aircraft — Terminal junction systems — Part 2 : Tests

Aéronefs — Systèmes de raccordement à modules amovibles — Partie 2: Essais

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Foreword

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Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

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Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

Aircraft — Terminal junction systems — Part 2 : Tests

1 Scope and field of application

This part of ISO 8668 specifies the test procedures and performance requirements for the characteristics of aircraft terminal junction systems specified in ISO 8668/1 and shall be read in conjunction with it.

2 References

ISO 8668/1, *Aircraft — Terminal junction systems — Part 1: Characteristics.*

IEC Publication 68-2-1, *Basic environmental testing procedures — Part 2: Tests — Tests A: Cold.*

IEC Publication 68-2-2, *Basic environmental testing procedures — Part 2: Tests — Tests B: Dry heat.*

IEC Publication 68-2-3, *Basic environmental testing procedures — Part 2: Tests — Test Ca: Damp heat, steady state.*

IEC Publication 68-2-6, *Basic environmental testing procedures — Part 2: Tests — Test Fc and guidance: Vibration (sinusoidal).*

IEC Publication 68-2-11, *Basic environmental testing procedures — Part 2: Tests — Test Ka: Salt mist.*

IEC Publication 68-2-27, *Basic environmental testing procedures — Part 2: Tests — Test Ea: Shock.*

IEC Publication 68-2-30, *Basic environmental testing procedures — Part 2: Tests — Test Db and guidance: Damp heat, cyclic (12 + 12-hour cycle).*

3 Test details

The tests and performance requirements shall comply with the details given in the table on the following pages.

Test No.	Title of test	Test procedure	Test results required																		
1	Contact insertion force	Carry out the test individually on each contact or as specified in the detail specification. Insert the crimp contact using the appropriate insertion tool until the locking system operates. Check that the contact is effectively locked by applying to the cable a slight tensile force which in any case is less than that specified for the contact retention test.	The insertion force shall be not greater than the following values: <table><tr><th>Contact size</th><th colspan="2">Insertion force</th></tr><tr><td></td><th>N</th><th>lbf</th></tr><tr><td>22</td><td>23</td><td>5</td></tr><tr><td>20</td><td>45</td><td>10</td></tr><tr><td>16</td><td>68</td><td>15</td></tr><tr><td>12</td><td>68</td><td>15</td></tr></table>	Contact size	Insertion force			N	lbf	22	23	5	20	45	10	16	68	15	12	68	15
Contact size	Insertion force																				
	N	lbf																			
22	23	5																			
20	45	10																			
16	68	15																			
12	68	15																			
2	Internal electrical continuity	This test is not performed in type approval testing but as a production acceptance test, carried out on 100 % of the specimens. All the groups of contacts shall be checked. In the case of feed-through modules, in addition to checking the internal groups, the electrical continuity shall also be checked for two contacts designated by the same mark on either side of the module. The current intensity for the test shall not exceed 1 A.	The electrical continuity of all the contacts of each group shall comply with the diagram corresponding to the identification marking of the internal electrical connections indicated on the module and on the detail specification.																		
3	Insulation resistance	Carry out the test on completely wired specimens. Measure the insulation resistance using a 500 ± 50 V d.c. voltage, applied for 60 ± 5 s between the points below in 3a for feed-back modules and 3b for feed-through modules.	The insulation resistance shall be not less than 5 000 MΩ.																		
3a	Feed-back modules	Apply the voltage specified above — between the assembly of contacts of connected groups (one contact per group) of the modules on the one hand and the frame or test support on the other; — between one contact of a group of one module and in succession any contact of the other adjacent groups of the module; — between all the contacts of the connected group or groups (one contact per group) of a module and the contacts (one contact per group) of connected groups of adjacent modules.																			
3b	Feed-through modules	The measurement shall be carried out on a single side; on the other side the conductors shall be insulated one from another. The points of application shall be the same as specified in 3a for feed-back modules.																			