

International Standard



268

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Aircraft — Mechanical and electromechanical indicators — General requirements

Aéronefs — Instruments de bord mécaniques et électromécaniques — Caractéristiques générales

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been set up 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.

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.

International Standard ISO 268 was developed by Technical Committee ISO/TC 20, *Aircraft and space vehicles*, and was circulated to the member bodies in January 1978.

It has been approved by the member bodies of the following countries :

Australia	Germany, F. R.	Spain
Austria	India	Sweden
Belgium	Italy	Turkey
Brazil	Japan	United Kingdom
Canada	Mexico	USA
Chile	Poland	USSR
Czechoslovakia	Romania	Yugoslavia
France	South Africa, Rep. of	

The member body of the following country expressed disapproval of the document on technical grounds :

Netherlands

This International Standard cancels and replaces ISO Recommendation R 268-1962, of which it constitutes a technical revision.

Aircraft — Mechanical and electromechanical indicators — General requirements

1 Scope and field of application

This International Standard states the requirements which are generally applicable to mechanical and electromechanical indicators for use in aircraft. It is to be read in conjunction with specifications for individual indicators.

For the purpose of this International Standard, an indicator is regarded as a unit primarily concerned with the visual display of information.

2 References

ISO 2655, *Environmental tests for aircraft equipment — Part 2.5 : Waterproofness*.

IEC Publication 68-2-17, *Basic environmental testing procedures — Part 2.1 : Test Q : Sealing*.

3 Cases for indicators

3.1 The size and type of the finished indicator case shall be declared by the manufacturer in sufficient detail to facilitate subsequent installation.

3.2 Any limitation in the use of a mounting for which the indicator has been declared shall be stated by the manufacturer. During vibration and acceleration testing the declared mounting shall be used.

3.3 An indicator case with electrical connections shall be earthed through a connector terminal pin or bonding point. Unless otherwise required by the individual specification, no internal electrical circuit, excluding low voltage internal lighting circuits, shall be returned via this case/earth bonding connection. The current-carrying capacity of the case earthing wire shall be greater than the current-carrying capacity of the associated air-frame wiring.

3.4 The design and construction of the indicator case shall be such that the indicator's specified performance is unaffected when the indicator, installed in accordance with the relevant declarations, is subjected to the test for drip-proof equipment in accordance with ISO 2655, and to tests for resistance to other fluids, as required by the individual specification.

3.5 The legibility of the indicator shall not be significantly affected by any misting inside the glass under the conditions of use for which it is declared.

3.6 A hermetically-sealed indicator shall withstand the sealing test specified in IEC Publication 68-2-17.

3.7 If a pressure-measuring indicator is vented to the surrounding atmosphere, the vent shall not affect the performance of the indicator. It shall be suitably screened to prevent the ingress of dust and sand. Preferably, the vent should be protected against inadvertent closure and located at approximately the lowest point connecting with the interior when the indicator is in the normal position.

3.8 An indicator required by the individual specification to have an airtight or pressure-resisting case shall be capable of withstanding, without damage or leakage greater than that permitted by the individual specification, external pressures from 100 kPa¹⁾ (1 000 mbar) above that of the interior to 20 kPa (200 mbar) below that of the interior, and there shall be no interference between the pointer and the cover glass during and after the application of pressure.

3.9 The sealing of the indicator shall not preclude easy access to its interior for servicing purposes.

1) 1 kPa = 1 kN/m²