
INTERNATIONAL STANDARD



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Aircraft — Lever-operated manual switches (Class 3) — Performance requirements

Aéronefs — Interrupteurs à levier à commande manuelle (classe 3) — Caractéristiques

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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.

International Standard ISO 3456 was drawn up by Technical Committee ISO/TC 20, *Aircraft and space vehicles*, and circulated to the Member Bodies in August 1974.

It has been approved by the Member Bodies of the following countries :

Australia	Poland	United Kingdom
Belgium	Romania	U.S.A.
Canada	South Africa, Rep. of	U.S.S.R.
Germany	Spain	Yugoslavia
Mexico	Turkey	

The Member Bodies of the following countries expressed disapproval of the document on technical grounds :

France
Italy

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Aircraft — Lever-operated manual switches (Class 3) — Performance requirements

1 SCOPE AND FIELD OF APPLICATION

1.1 This International Standard specifies the performance requirements for single- and triple-hole mounting, lever-operated manual switches Class 3 for use in nominal 28 V d.c. and 115/200 V three-phase, 400 Hz a.c. systems in aircraft.

1.2 The switches are environmentally sealed and suitable for higher altitude and temperature conditions than are Class 2 switches which are sealed only at the lever entry. They do not have the positive action features of the Class 1 and Class 2 switches specified in ISO 1466.

2 REFERENCES

ISO/R 224, *Standard form of declaration of performance of aircraft electrical equipment*.

ISO 1466, *Lever-operated manual switches for aircraft — Performance requirements*.

ISO 1540, *Aircraft — Electrical power systems — Characteristics*.¹⁾

ISO 3282, *Aircraft — Dimensions for single- and triple-hole mounting (Class 3) lever-operated switches*.¹⁾

Environmental tests for aircraft equipment :

ISO 2650, *Part 1 — Scope and applicability*.

ISO 2651, *Part 2.1 — Temperature, pressure and humidity*.¹⁾

ISO 2652, *Part 2.2 — Humidity (24 h cycle)*.¹⁾

ISO 2655, *Part 2.5 — Waterproofness*.

ISO 2658, *Part 2.8 — Mould growth*.

ISO 2668, *Part 3.1 — Vibration*.²⁾

ISO 2669, *Part 3.2 — Constant acceleration*.²⁾

ISO 2683, *Part 5.1 — Explosion proofness*.¹⁾

ISO 2684, *Part 5.2 — Fluid contamination*.

3 DESIGN REQUIREMENTS

3.1 The switch shall be suitable for use at altitudes up to 20 000 m and at temperatures within the range -40°C to $+70^{\circ}\text{C}$, and shall not suffer damage or deterioration when subjected to storage temperatures in the range -65°C to $+85^{\circ}\text{C}$.

3.2 The switch shall be suitable for mounting through the panel from the rear and shall operate satisfactorily when mounted in any attitude. Other methods of mounting are permissible if specified in the applicable individual specification.

3.3 The switch may be the two- or three-position type, with one or more poles; it may be self-retaining and/or spring-return. It should preferably be designed to allow the incorporation of integral locking of the lever in any or all positions.

3.4 The method of operation of the switch shall be by means of a single lever, moving in a plane perpendicular to the mounting panel. The relationship of the lever positions to the keyways, and the relationship of the terminal numbers to the lever positions shall be stated in the individual specification.

3.5 The switch terminals shall be identified by number in the sequence shown in the individual specification.

4 DIMENSIONS

The envelope and fixing dimensions for the switch shall comply with ISO 3282.

5 OPERATION

5.1 It shall not be possible to rotate the lever about its longitudinal axis, unless otherwise specified in the applicable individual specification.

1) At present at the stage of draft

2) In preparation