
INTERNATIONAL STANDARD



1466

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Lever-operated manual switches for aircraft — Performance requirements

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Descriptors : aircraft, aircraft equipment, switches, design, dimensions, ratings, tests.

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.

Prior to 1972, the results of the work of the Technical Committees were published as ISO Recommendations; these documents are now in the process of being transformed into International Standards. A part of this process, International Standard ISO 1466 replaces ISO Recommendation R 1466-1970 drawn up by Technical Committee ISO/TC 20, *Aircraft and space vehicles*.

The Member Bodies of the following countries approved the Recommendation :

Australia	Israel	Switzerland
Belgium	Italy	Thailand
Brazil	Netherlands	Turkey
Canada	New Zealand	United Kingdom
Czechoslovakia	Poland	U.S.S.R.
Egypt, Arab Rep. of	Portugal	Yugoslavia
France	South Africa, Rep. of	
India	Spain	

No Member Body expressed disapproval of the Recommendation.

Lever-operated manual switches for aircraft — Performance requirements

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies performance requirements for two classes of single-hole fixing, lever-operated manual switches for use in nominal 28 V d.c. and 115/200 V three-phase, 400 Hz a.c. systems in aircraft.

Class 1 switches are sealed and are suitable for higher altitude and temperature conditions than are Class 2 switches, which are sealed only at the lever entry.

2 REFERENCES

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

ISO/R 493, *Dimensions for single-hole mounting, lever-operated switches for aircraft*.

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

ISO . . . , *Aircraft equipment — Environmental and operational conditions*.²⁾

3 DESIGN REQUIREMENTS

3.1 The switch shall be suitable for either of the following temperature and altitude classifications :

Class 1 : Suitable for use at altitudes up to 21 400 m, and at temperatures within the range -40 to $+70$ °C, and should not suffer damage or deterioration when subjected to -65 °C.

Class 2 : Suitable for use at altitudes up to 6 100 m and for occasional use at 18 300 m, and at temperatures within the range -20 to $+55$ °C, and should not suffer damage or deterioration when subjected to -40 °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.

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 at right angles 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/R 493.

5 OPERATION

5.1 The switch lever action shall be positive and it shall not be possible during normal usage for the lever to stay in any position other than a fully operated position. The operation of the switch shall not be affected adversely by the speed of the movement of the lever.

5.2 It shall not be possible to rotate the lever about its longitudinal axis.

5.3 The angular movement of the lever shall be between 18 and 23° nominally from the central position with a tolerance of $\pm 2^\circ$.

1) At present at the stage of draft.

2) In preparation.