International Standard 764

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION•МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ•ORGANISATION INTERNATIONALE DE NORMALISATION

Horology — Antimagnetic watches

Horlogerie — Montres antimagnétiques

Second edition — 1984-04-15

UDC 681.114 — 758.38 : 621.317.4 **Ref. No. ISO 764-1984 (E)**

Descriptors : horological industry, time measuring instruments, watches, magnetic properties, antiferromagnetism, tests, magnetic tests.

Price based on 2 pages

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 764 was developed by Technical Committee ISO/TC 114, *Horology*, and was circulated to the member bodies in March 1983.

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

Czechoslovakia	India	Poland
France	Japan	Switzerland
Germany, F.R.	Mexico	USSR

No member body expressed disapproval of the document.

This second edition cancels and replaces the first edition (i.e. ISO 764-1973).

Printed in Switzerland

Horology — Antimagnetic watches

1 Scope and field of application

This International Standard specifies the minimum requirements for antimagnetic watches and describes the corresponding method of test.

It is based on the simulation of the accidental exposure of a watch to a magnetic field of 4 800 A/m.

2 Reference

ISO 3158, *Timekeeping instruments — Symbolization of control positions.*

3 Definitions

For the purpose of this International Standard, the following definitions apply.

3.1 antimagnetic watch : A watch complying with the minimum requirements of this International Standard.

3.2 residual effect : The difference of rates observed under the conditions of test specified in this International Standard.

4 Minimum requirements

When tested as specified in clause 5, an antimagnetic watch shall comply with the following minimum requirements.

4.1 Mechanical watch

4.1.1 It shall not stop during the three phases indicated in 5.3.2.2.

4.1.2 The residual effect shall not exceed 30 s per day when the movement has a casing diameter exceeding 20 mm or an area exceeding 314 mm^2.

4.1.3 The residual effect shall not exceed 45 s per day when the movement has a casing diameter not exceeding 20 mm or an area not exceeding 314 mm^2.

4.2 Quartz watch

4.2.1 It shall not stop during the three phases indicated in 5.3.2.2.

4.2.2 The residual effect shall not exceed 1,5 s per day.

5 Method of test

A wristwatch shall be tested without the bracelet, unless the latter forms an integral part of the watch.

5.1 Test temperature

Throughout the test period, the ambient temperature shall be between 18 and 25 °C and shall not vary by more than 2 °C.

5.2 Apparatus

The apparatus used shall be able to produce a homogeneous and continuous magnetic field of an intensity of $4\,800\,^{0}_{-400}$ A/m (admitted variation ± 1 %) in the three directions corresponding to the three axes of a trihedral rectangle.

5.3 Procedure

The first measurement shall be taken 1 h after maximum winding for mechanical watches and after 2 h of function for quartz watches.

5.3.1 Checking of the rate before the magnetic test

The rate shall be checked for at least 1 min in position CH (see ISO 3158) for mechanical watches and in position CH or FH for quartz watches. The checking is made by the use of an apparatus for measuring the instantaneous rate.

5.3.2 Magnetic test

5.3.2.1 Fix the watch on the stand as intended in the test machine, in position CH, or in position CH or FH if it is a quartz watch.

5.3.2.2 Switch on the machine, and check that the magnetic field has reached the required intensity (see 5.2). Observe the working of the watch for 1 min, during which time it shall undergo the effect of the magnetic field according to one of the following specified axes. Reduce the intensity of the magnetic field progressively, and then switch off the machine.