INTERNATIONAL STANDARD

ISO 19235

First edition
2015-10-15

Analogue quartz clocks — Timing accuracy

Horloges analogiques à quartz — Précision du temps

Reference number
ISO 19235:2015(E)

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Foreword

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The committee responsible for this document is ISO/TC 114, *Horology*, Subcommittee SC 14, *Table and wall clocks.*

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Introduction

Each year, there is a large number of analogue quartz clocks produced and this International Standard aims to provide quality information for consumers and producers. This International Standard will help producers by giving them quality control methods and customers by informing them about expectations they could have on those products.

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Analogue quartz clocks — Timing accuracy

1 Scope

This International Standard specifies the basic parameters, requirements, and testing methods of timing accuracy for analogue quartz clocks, hereinafter referred to as "the quartz clock".

This International Standard applies to analogue quartz table and wall clocks which the oscillator frequency is 32 768 Hz and the nominal voltage is DC 1,5 V. Analogue quartz clock movements can refer to it.

This International Standard does not apply to the following quartz clocks:

— clocks for particular applications such as clocks used in aircraft, ship, vehicle, and facilities;

— clocks incorporated into other products;

— clocks in which time is radio-synchronized.

2 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

2.1
mean instantaneous rate
$\overline{m}$
arithmetic mean value of three instantaneous rates of the quartz clock separately measured on three successive days, in "s/d" or "s/m"

2.2
voltage coefficient
C_U
variation rate of instantaneous rate of the quartz clock caused by the variation of source voltage

2.3
temperature coefficient
C_t
variation rate of instantaneous rate of the quartz clock caused by the variation of temperature

2.4
nominal voltage
U_n
voltage for which the movement is destined

3 Basic parameters and requirements of timing accuracy

3.1 Mean instantaneous rate, $\overline{m}$

After the quartz clock has been continuously running for 3 d, the mean instantaneous rate shall be within –1,0 s/d to +1,0 s/d.

3.2 Voltage coefficient, C_U

The voltage coefficient, C_U, shall be within –1,0 s/(d·V) to +1,0 s/(d·V).

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