AS/NZS ISO 8601.1:2021
ISO 8601-1:2019

Australian/New Zealand Standard™

Date and time — Representations for information interchange

Part 1: Basic rules

AS/NZS ISO 8601.1:2021

This Joint Australian/New Zealand Standard™ was prepared by Joint Technical Committee IT-019, Information and Documentation, Information Technology — Learning, Education, Training and Research. It was approved on behalf of the Council of Standards Australia on 19 July 2021 and by the New Zealand Standards Approval Board on 04 August 2021.

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Originated in Australia as AS ISO 8601—2003.
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Jointly revised in part and redesignated as AS/NZS ISO 8601.1:2021.

Preface

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee IT-019, Information and Documentation, Information Technology — Learning, Education, Training and Research, to supersede AS ISO 8601:2007, *Data elements and interchange formats—Information interchange—Representation of dates and times.*

The objective of this document is to specify representations of dates of the Gregorian calendar and times based on the 24-h clock, as well as composite elements of them, as character strings for use in information interchange. It is also applicable for representing times and time shifts based on Coordinated Universal Time (UTC).

This document excludes the representation of date elements from non-Gregorian calendars or times not from the 24-h clock. This document does not address character encoding of representations specified in this document.

This document is identical with, and has been reproduced from, ISO 8601-1:2019, *Date and time — Representations for information interchange — Part 1: Basic rules*.

As this document has been reproduced from an International Standard, a full point substitutes for a comma when referring to a decimal marker.

Australian or Australian/New Zealand Standards that are identical adoptions of international normative references may be used interchangeably. Refer to the online catalogue for information on specific Standards.

The terms “normative” and “informative” are used in Standards to define the application of the appendices or annexes to which they apply. A “normative” appendix or annex is an integral part of a Standard, whereas an “informative” appendix or annex is only for information and guidance.

Contents

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established 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. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 154, *Processes, data elements and documents in commerce, industry and administration*.

This first edition of ISO 8601-1, together with ISO 8601-2, cancels and replaces ISO 8601:2004, which has been technically revised.

The main changes compared to ISO 8601:2004 are as follows:

— conversion of the content as Part 1 with the Part title “Basic rules” due to the addition of another Part 2 “Extensions” of ISO 8601;

— replacement of the term “midnight” with “beginning of day”, disallowing the value “24” for hour;

— update of terms and definitions:

  — “time point” is now “time”;

  — “local time” is now “local time of day”;

  — added definition for “time of day” and “local time scale”;

  — updated definitions for “standard time of day”, “local time of day” and “UTC of day” to rely on “time of day”;

  — combined two “day” terms in different domains for consistency;

  — change of the representation of “leap seconds”;

— clarification of “calendar day” expressions intended to mean “calendar day of week” (etc.);

— amendment of the recurring time interval (3.1.1.11) to provide a link to ISO 8601-2:2019 which contains in Clause 5 the “repeat rules for recurring time intervals”.

A list of all parts in the ISO 8601 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

The purpose of this document is to provide a standard set of date and time format representations for information interchange, in order to minimize the risk of misinterpretation, confusion and their consequences.

This document specifies a set of date and time format representations utilizing numbers, alphabets and symbols defined in ISO/IEC 646. These representations are meant to be both human recognizable and machine readable.

This document retains the most commonly used expressions for date and time of day and their representations from earlier International Standards in the field, including earlier editions of ISO 8601 and its predecessors.

NOTES

Australian/New Zealand Standard

Date and time — Representations for information interchange

Part 1: Basic rules

1 Scope

This document specifies representations of dates of the Gregorian calendar and times based on the 24-hour clock, as well as composite elements of them, as character strings for use in information interchange. It is also applicable for representing times and time shifts based on Coordinated Universal Time (UTC).

This document excludes the representation of date elements from non-Gregorian calendars or times not from the 24-hour clock. This document does not address character encoding of representations specified in this document.

2 Normative references

There are no normative references in this document.

3 Terms, definitions and symbols

3.1 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1.1 Basic concepts

3.1.1.1
date
time (3.1.1.2) on the *calendar* (3.1.1.18) *time scale* (3.1.1.5)

Note 1 to entry: Common forms of date include *calendar date* (3.1.2.7), *ordinal date* (3.1.2.8) or *week date* (3.1.2.9).

3.1.1.2
time
mark attributed to an *instant* (3.1.1.3) or a *time interval* (3.1.1.6) on a specified *time scale* (3.1.1.5)

Note 1 to entry: The term "time" is often used in common language. However, it should only be used if the meaning is clearly visible from the context.

Note 2 to entry: On a time scale consisting of successive time intervals, such as a *clock* (3.1.1.9) or *calendar* (3.1.1.18), distinct instants may be expressed by the same time.

Note 3 to entry: This definition corresponds with the definition of the term "date" in IEC 60050-113:2011, 113-01-12.

3.1.1.3
instant
point on the *time axis* (3.1.1.4)

Note 1 to entry: An instantaneous event occurs at a specific instant.