



DPC: 24/30487022 DC

**BSI Group Headquarters**

389 Chiswick High Road London W4 4AL

Tel: +44 (0)20 8996 9000

Fax: +44 (0)20 8996 7400

www.bsigroup.com

Date: 01 November 2024

Origin: International

**Latest date for receipt of comments: 25 December 2024**

Project No. 2024/00341

Responsible committee: ICT/2 ICT Accessibility

Interested committees:

Title: Draft BS ISO/IEC 9995-1 Information technology - Keyboard layouts for text and office systems. Part 1: General principles governing keyboard layouts.

Please notify [admin.start@bsigroup.com](mailto:admin.start@bsigroup.com) if you are aware of any keywords that might assist in clarifying or identifying the standard or of the content of this standard:

- i) has any issues related to 3rd party IPR, patent or copyright
- ii) affects other national standard(s)
- iii) requires additional national guidance or information

**WARNING: THIS IS A DRAFT AND MUST NOT BE REGARDED OR USED AS A BRITISH STANDARD. THIS DRAFT IS NOT CURRENT BEYOND 25 December 2024**

This draft is issued to allow comments from interested parties; all comments will be given consideration prior to publication. No acknowledgement will normally be sent. **See overleaf for information on the submission of comments.**

No copying is allowed, in any form, without prior written permission from BSI except as permitted under the Copyright, Designs and Patent Act 1988 or for circulation within a nominating organization for briefing purposes. Electronic circulation is limited to dissemination by e-mail within such an organization by committee members.

Further copies of this draft may be purchased from BSI Shop <http://shop.bsigroup.com> or from BSI Customer Services, Tel: +44(0) 20 8996 9001 or email [cservices@bsigroup.com](mailto:cservices@bsigroup.com). British, International and foreign standards are also available from BSI Customer Services.

Information on the co-operating organizations represented on the committees referenced above may be obtained from <https://standardsdevelopment.bsigroup.com/>.

E-mail: [admin.start@bsigroup.com](mailto:admin.start@bsigroup.com)

## Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

For national standards, comments will be reviewed by the relevant UK national committee and the resulting standards published as a British Standard.

## UK Vote

Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

## Submission of Comments

- **Annotated drafts are not acceptable and will be rejected.**
- All comments should be submitted online at <https://standardsdevelopment.bsigroup.com/>. You will need to register in order to comment.

## Template for comments and secretariat observations

|                  |                        |
|------------------|------------------------|
| Date: xx/xx/20xx | Document: ISO/DIS xxxx |
|------------------|------------------------|

| 1  | 2                                          | (3)                          | 4               | 5                                                                                                                                  | (6)                                                                      | 7                                                  |
|----|--------------------------------------------|------------------------------|-----------------|------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|----------------------------------------------------|
| MB | Clause No./ Subclause No./Annex (e.g. 3.1) | Paragraph/ Figure/Table/Note | Type of comment | Comment (justification for change) by the MB                                                                                       | Proposed change by the MB                                                | Secretariat observations on each comment submitted |
|    | 3.1                                        | Definition 1                 | ed              | Definition is ambiguous and needs clarifying.                                                                                      | Amend to read '...so that the mains connector to which no connection...' |                                                    |
|    | 6.4                                        | Paragraph 2                  | te              | The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK. | Delete reference to UV photometer.                                       |                                                    |



# DRAFT International Standard

## ISO/IEC DIS 9995-1

### Information technology — Keyboard layouts for text and office systems —

#### Part 1: General principles governing keyboard layouts

*Technologies de l'information — Disposition des claviers conçus  
pour la bureautique —*

*Partie 1: Principes généraux pour la disposition des claviers*

ICS: 35.180

ISO/IEC JTC 1/SC 35

Secretariat: **AFNOR**

Voting begins on:  
**2024-11-01**

Voting terminates on:  
**2025-01-24**

This document is circulated as received from the committee secretariat.

THIS DOCUMENT IS A DRAFT CIRCULATED FOR COMMENTS AND APPROVAL. IT IS THEREFORE SUBJECT TO CHANGE AND MAY NOT BE REFERRED TO AS AN INTERNATIONAL STANDARD UNTIL PUBLISHED AS SUCH.

IN ADDITION TO THEIR EVALUATION AS BEING ACCEPTABLE FOR INDUSTRIAL, TECHNOLOGICAL, COMMERCIAL AND USER PURPOSES, DRAFT INTERNATIONAL STANDARDS MAY ON OCCASION HAVE TO BE CONSIDERED IN THE LIGHT OF THEIR POTENTIAL TO BECOME STANDARDS TO WHICH REFERENCE MAY BE MADE IN NATIONAL REGULATIONS.

RECIPIENTS OF THIS DRAFT ARE INVITED TO SUBMIT, WITH THEIR COMMENTS, NOTIFICATION OF ANY RELEVANT PATENT RIGHTS OF WHICH THEY ARE AWARE AND TO PROVIDE SUPPORTING DOCUMENTATION.

Reference number  
ISO/IEC DIS 9995-1:2024(en)

Full document details: 24/30487022 DC



**COPYRIGHT PROTECTED DOCUMENT**

© ISO/IEC 2024

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
CP 401 • Ch. de Blandonnet 8  
CH-1214 Vernier, Geneva  
Phone: +41 22 749 01 11  
Email: [copyright@iso.org](mailto:copyright@iso.org)  
Website: [www.iso.org](http://www.iso.org)

Published in Switzerland

# Contents

Page

|                                                                     |           |
|---------------------------------------------------------------------|-----------|
| <b>Foreword</b>                                                     | <b>iv</b> |
| <b>Introduction</b>                                                 | <b>v</b>  |
| <b>1 Scope</b>                                                      | <b>1</b>  |
| <b>2 Normative references</b>                                       | <b>1</b>  |
| <b>3 Terms and definitions</b>                                      | <b>1</b>  |
| <b>4 Conformance</b>                                                | <b>3</b>  |
| 4.1 Conformance with this document                                  | 3         |
| 4.2 General conformance requirement                                 | 4         |
| 4.3 Claims of conformance                                           | 4         |
| <b>5 Divisions of the keyboard</b>                                  | <b>4</b>  |
| 5.1 General                                                         | 4         |
| 5.2 Logical division of keyboard into groups and levels             | 4         |
| 5.2.1 General                                                       | 4         |
| 5.2.2 Group and level select mechanisms                             | 5         |
| 5.2.3 Usage of Level 4                                              | 5         |
| 5.3 Physical division of keyboard into sections and zones           | 6         |
| 5.4 Placement of sections                                           | 7         |
| <b>6 Methods of indicating allocations to keys</b>                  | <b>8</b>  |
| <b>7 Key position numbering system</b>                              | <b>8</b>  |
| 7.1 Principle of the grids                                          | 8         |
| 7.2 Designation of key positions                                    | 9         |
| 7.3 Reference positions for the rows and columns                    | 10        |
| 7.4 Key location numbering requirements                             | 10        |
| <b>8 General principles of key labelling and symbol positioning</b> | <b>10</b> |
| 8.1 General                                                         | 10        |
| 8.2 Positions of the symbols on the keys                            | 11        |
| 8.2.1 General                                                       | 11        |
| 8.2.2 Columnar placement                                            | 11        |
| 8.2.3 Group-1-prioritized placement                                 | 12        |
| 8.2.4 Level-4-including placement                                   | 13        |
| 8.2.5 Multigroup placement                                          | 15        |
| 8.3 Capital/small letter pairs                                      | 16        |
| 8.4 Minimum required size of keytop symbols                         | 16        |
| <b>9 Key arrangement and distances</b>                              | <b>16</b> |
| 9.1 Key arrangement                                                 | 16        |
| 9.2 Other requirements                                              | 16        |
| <b>Annex A (informative) Examples of national standards</b>         | <b>17</b> |
| <b>Bibliography</b>                                                 | <b>18</b> |

## Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of the joint technical committee is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

ISO/IEC 9995-1 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 35, *User interfaces*.

This fourth edition cancels and replaces the third edition (ISO/IEC 9995-1:2009), which has been technically revised. The main modifications are:

- A Level 4 is allowed, albeit not recommended.
- The [clause 8](#) “General principles of key labelling and symbol positioning” is enhanced to be usable for keyboard layouts according to the state of the art, showing characters of up to four levels and of several groups.

ISO/IEC 9995 consists of the following parts, under the general title *Information technology — Keyboard layouts for text and office systems*:

- *Part 1: General principles governing keyboard layouts*
- *Part 2: Alphanumeric section*
- *Part 3: “Latin International” keyboard layout*
- *Part 4: Numeric section*
- *Part 5: Editing and function section*
- *Part 7: Symbols used to represent functions*
- *Part 8: Allocation of letters to the keys of a numeric keypad*
- *Part 9: Groups and mechanisms for multilingual and multiscript input*
- *Part 10: Conventional symbols and methods to represent graphic characters not uniquely recognizable by their glyph on keyboards and in documentation*
- *Part 11: Functionality of dead keys and repertoires of characters entered by dead keys*
- *Part 12: Keyboard group selection*

## Introduction

ISO/IEC 9995 defines a framework for the layout of all alphanumeric and numeric keyboards across the widest spectrum of today's and upcoming applications using keyboards. The functions to be performed by keyboards are grouped into three categories that correspond to the main physical sections of the keyboard.

Application of ISO/IEC 9995 in the design of keyboards will provide the user with a unified, predictable user-machine interface by dividing the keyboard into functional areas and sections and allocating functions to keys. One of the major tasks of a universal-usage keyboard is to accommodate the larger sets of characters required by the various applications for which keyboards are used today. This was achieved by permitting the allocation of more than one graphic character or control function to each of the keys of a keyboard, predominantly in the alphanumeric section.

ISO/IEC 9995 specifies the requirements for keyboard layouts and allocation of keycap imprints (including letters, numerals, symbols, and other markings) on alphanumeric and numeric input devices for all types of information and communication technology apparatus and systems including:

- personal computers, workstations, computer terminals, visual display terminals (VDTs);
- electronic typewriters and other machines with alphanumeric and numeric keyboards;
- mobile computer systems including ultra-mobile personal computers (UMPCs), personal digital assistants (PDAs) and multimedia devices with hardware keyboards (e.g. linear keyboards, foldable keyboards) or virtual keyboards (e.g. touchscreens, projection keyboards);
- electronic document scanners and multifunction devices incorporating alphanumeric and/or numeric keyboards;
- calculators, telephones and automated teller machines having alphanumeric and/or numeric keypads/keyboards.

The primary layout within the alphanumeric zone is established in most countries by a national standard or by national usage. Allocation guidelines are provided in ISO/IEC 9995-2. An exemplary layout (the "Latin International" keyboard layout) is specified in ISO/IEC 9995-3.

ISO/IEC 9995 specifies the allocation of functions (graphic characters and/or control functions) to keys. The graphic characters and the control functions have been given common names intended to be familiar to the users of a keyboard. In general, keyboards are not expected to generate coded control functions, but the operation of a control function key can cause a number of coded control functions to appear in data interchange to achieve the desired effect.

The effects of those keys that affect keyboard states are specified in other parts of ISO/IEC 9995.

