

Guide to

Design and use of identification cards having integrated circuits with contacts —

**Part 2: Contact locations and minimum
size**

This European Standard EN 27 816-2:1989 has the status of a
British Standard

Cooperating organizations

The European Committee for Standardization, under whose supervision this European Standard was prepared, comprises the national standards organizations of the following Western European countries.

Austria	Oesterreichisches Normungsinstitut
Belgium	Institut belge de normalisation
Denmark	Dansk Standardiseringsraad
Finland	Suomen Standardisoimisliito, r.y.
France	Association française de normalisation
Germany	Deutsches Institut für Normung e.V.
Greece	Hellenic Organization for Standardization
Iceland	Technological Institute of Iceland
Ireland	National Standards Authority of Ireland
Italy	Ente Nazionale Italiano di Unificazione
Luxemburg	Inspection du Travail et des Mines
Netherlands	Nederlands Normalisatie-instituut
Norway	Norges Standardiseringsforbund
Portugal	Instituto Português da Qualidade
Spain	Asociación Española de Normalización y Certificación
Sweden	Standardiseringskommissionen i Sverige
Switzerland	Association suisse de normalisation
United Kingdom	British Standards Institution

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The following BSI references relate to the work on this standard:
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Amendments issued since publication

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National foreword

This Part of this British Standard has been prepared under the direction of the Information Systems Technology Standards Policy Committee (IST/-). It is the UK implementation of, and is identical to, ISO 7816-2:1988 *“Identification cards — Integrated circuit(s) cards with contacts — Part 2: Dimensions and location of the contacts”*, published by the International Organization for Standardization (ISO), which has been endorsed by CEN as EN 27816-2:1989. The title of the British Standard differs in order to reflect more accurately the actual contents of the text, taking into account also the features identified in the paragraphs below (headed “Special attention”) and in the other Parts of this British Standard.

The following list includes all Parts of the international standard. A number of related standards is listed at the end of this national foreword.

- *Part 1: Physical characteristics;*
- *Part 2: Dimensions and locations of the contacts;*
- *Part 3: Electronic signals and exchange protocols;*
- Addendum 1: *Structure and processing of commands in an asynchronous transmission;*
- Addendum 2: *Block transmission protocol of half duplex asynchronous transmission (in development);*
- *Part 4: Inter-industry commands for interchange (in development).*

ISO 7816-1:1987 and ISO 7816-2:1988 have been adopted by CEN as European Standards and are published as BS EN 27816-1:1991 and BS EN 27816-2:1991 respectively. ISO 7816-3:1987 has been published as BS 7109-3:1990. It is expected that CEN will also adopt ISO 7816-3 as a European Standard. When this happens, BS 7109-3:1990 will be superseded by BS EN 27816-3.

This standard implements the international text without change for the reasons given below (see “Reasons for implementation”), even though particular attention is drawn (see “Special attention”) to some features that may need special consideration when this standard is being used. (UK participation in future development, revision or amendment of the international standard will include requests for attention to these points.)

The UK actively participated in the development of the international standard through BSI Technical Committee IST/17 and fully approved publication of the international standard.

The information provided, together with other relevant Parts of this standard, is considered sufficient to act in the UK as a basis for the design, implementation and use of identification cards of the types covered by the international standard.

There are no plans at present to supplement this British Standard with any additional guidance, and any comments or enquiries on the international standard or its application should be addressed to the Secretary to IST/17 at the BSI headquarters address.

Reasons for implementation

- a) Because information technology equipment, services and systems tend to be, and generally need to be, designed purchased and used in a world-wide context IST/- policy is to agree, wherever possible, standards at international level and not to prepare unique national standards. At the time of its approval, the text of the international standard was considered to be the best that could be achieved, taking into account both the needs of the “market place” and the “state of the art” in this subject area, and the international standardization process.

- b) Further development of the international text at international level has been accorded relatively low priority in relation to other projects in the same international committee, however, attention is drawn to the 1990 deadline for the transitional contacts positions (see Figure 3). The standard will be reviewed in due course.
- c) The Commission of the European Communities has mandated CEN to produce European Standards (ENs) [or, where this cannot be achieved, Harmonization Documents (HDs) or Draft European Standards (ENVs)] in this subject area for application throughout the Common Market by 1992. ISO 7816-2:1988 has been adopted without change as the Reference Document for the EN (or HD or ENV) and publication of this British Standard fulfils the UK obligation under CEN/CENELEC Common Rules to implement nationally each agreed European Standard.
- d) Publication of British Standards corresponding to the international standards in which IST/- resources were invested will ensure that the BSI Catalogue becomes, and then remains, a comprehensive first source of information for UK users of information technology equipment and services about the availability of international standards on information technology subjects. In turn, this will facilitate UK use of, and access to, those standards.

Special attention Special attention is drawn to the following features of the international standard that, ideally, require further consideration at international level, but it is emphasised that these features do not prevent use of this standard as a set of basic guidelines and, with appropriate care, products can be effectively standardized. Users of this British Standard, however, might need supplementary information on these features from the BSI Technical Committee or from experts in the field.

It should be noted that, whilst agreements between individual trading or communicating partners can be made, and might suffice, additional care might be needed to avoid creating agreements that differ only slightly between different parties.

- a) For application of this standard in the UK, the transitional contacts position (see Figure 3) is not acceptable, however, it will be used in some countries, e.g. France, until 1990.
- b) The ISO text, despite its title, actually covers minimum rectangular surface area of each contact, gives alternative locations (some of which will cease to be recognized after 1990) and specifically excludes maximum dimensions and shape of contacts and the shape and surface of the conductive zones that include each contact.

Cross-references

International standards	Corresponding British Standards
ISO 7810:1985	BS EN 27810:1991 <i>Guide to the design, construction and use of identification cards</i> (Identical)
ISO 7816-1:1987	BS EN 27816 <i>Guide to the design and use of identification cards having integrated circuit(s) with contacts</i> Part 1:1991 <i>Physical characteristics</i> (Identical)

Related standards

In addition to the standards listed under “cross-references”, the following standards are related to this standard or this subject area:

ISO 7580, *Identification cards — Card originated messages — Content for financial transactions*¹⁾.

ISO 7811, *Identification cards — Recording techniques*.

ISO 7811-1, *Embossing*.

ISO 7811-2, *Magnetic stripe*.

ISO 7811-3, *Location of embossed characters on ID-1 cards*.

ISO 7811-4, *Location of read-only magnetic tracks — Tracks 1 and 2*.

ISO 7811-5, *Location of read-write magnetic tracks — Track 3*.

ISO 7812, *Identification cards — Numbering system and registration procedure for issuer identifiers*.

ISO 7813, *Identification cards — Financial transaction cards*.

ISO 8583, *Bank card originated messages — Interchange message specifications — Content for financial transactions*¹⁾.

ISO DIS 10373, *Identification cards — Test methods (in preparation, see “Special attention” note a) in National foreword of BS EN 27816-1:1991)*.

Information on the availability of interim ISO documents, as well as up-to-date information on existing and projected British Standards publications in the general area of Information Technology, is included in the “BASIC LIST” and regular Newsletter published as part of the BSI Information Technology Services (BITS) initiative.

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A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i to iv, the EN title page, pages 2 to 10, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

¹⁾ It is not intended in UK to implement ISO 7580 as an indential British Standard and ISO 8583 should be used instead.