
**Financial transaction card originated
messages — Interchange message
specifications —**

**Part 1:
Messages, data elements and code
values**

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*Messages initiés par cartes de transaction financière — Spécifications
d'échange de messages —*

Partie 1: Messages, éléments de données et valeurs de code

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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.

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

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member 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 shall not be held responsible for identifying any or all such patent rights.

ISO 8583-1 was prepared by Technical Committee ISO/TC 68, *Banking, securities and other financial services*, Subcommittee SC 6, *Retail financial services*.

ISO 8583 consists of the following parts, under the general title *Financial transaction card originated messages — Interchange message specifications*:

- *Part 1: Messages, data elements and code values*
- *Part 2: Application and registration procedures for Institution Identification Codes (IIC)*
- *Part 3: Maintenance procedures for messages, data elements and code values*

Introduction

Services of the financial industry include the exchange of electronic messages relating to financial transactions. Agreements on application specifications are generally at a private level. This International Standard is designed as an interface specification enabling messages to be exchanged between systems adopting a variety of application specifications. The application specification may remain at the private level. Designers of such applications have complete design freedom within the overall constraint that messages shall be convertible to this interface format in order that international interchange may take place.

This International Standard uses a concept called a bit map, whereby each data element is assigned a position indicator in a control field, or bit map. A one in the assigned position indicates the presence of a data element in a specific message. A zero in the assigned position indicates the absence of a data element in a specific message.

Data representation used in individual systems is subject to the commercial relationships between the parties contracting to each system. The message formats specified in this International Standard are designed to ensure that compatibility between systems conforming to this International Standard is always feasible.

In a number of cases, the names of data elements and message classes can become confusing when used in descriptive paragraphs. The word authorization is a typical example. It is an activity undertaken by a card issuer, it is the name of a message class where an acquirer requests a card issuer to undertake the activity and it is also a word used in many data element names.

To aid clarity, the following conventions are followed within this International Standard:

- data element names have the first letter capitalized;
- data element names are shown in *italics* except when used in tables or figures;
- message class names are shown capitalized when the context refers to their use in messages or transactions.

ISO 8583:1993 has been revised to be published in three parts. A number of changes have been made to accommodate the latest advances in payment technologies and the opportunity has also been taken to improve the layout and readability. A summary of the most significant changes between ISO 8583:2003 (all parts) and ISO 8583:1993 is provided in Annex F.

Financial transaction card originated messages — Interchange message specifications —

Part 1: Messages, data elements and code values

1 Scope

This part of ISO 8583 specifies a common interface by which financial transaction card-originated messages can be interchanged between acquirers and card issuers.

It specifies message structure, format and content, data elements and values for data elements. The method by which settlement takes place is not within the scope of this part of ISO 8583.

NOTE With the proliferation of technology available to financial institutions to offer services to customers, a range of tokens (financial transaction cards, digital certificates etc.) now exist for identifying account relationships. In order to maintain clarity, this part of ISO 8583 will continue to refer only to financial transaction cards as the token. However, readers should be aware that the actual token issued by a financial institution may be different.

2 Normative references

[ISO 8583-1:2003](https://www.iso.org/standard/40161.html)

[ds.itech.ai/catalog/standards/sist/c2f8cdef-6d25-4ec7-a714-138fb4f00fff/iso-8583-1-2003](https://www.iso.org/standard/40161.html)

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 3166 (all parts), *Codes for the representation of names of countries and their subdivisions*

ISO 4217, *Codes for the representation of currencies and funds*

ISO 4909, *Bank cards — Magnetic stripe data content for track 3*

ISO 7372, *Trade data interchange — Trade data elements directory*

ISO 7811-2, *Identification cards — Recording technique — Part 2: Magnetic stripe — Low coercivity*

ISO 7812-1, *Identification cards — Identification of issuers — Part 1: Numbering system*

ISO 7813, *Identification cards — Financial transaction cards*

ISO 7816-6, *Identification cards — Integrated circuit(s) cards with contacts — Part 6: Interindustry data elements*

ISO 8583-2, *Financial transaction card originated messages — Interchange message specifications — Part 2: Application and registration procedures for Institution Identification Codes (IIC)*

ISO 8583-1:2003(E)

ISO 8583-3:—¹⁾, *Financial transaction card originated messages — Interchange message specifications — Part 3: Maintenance procedures for messages, data elements and code values*

ISO 8601, *Data elements and interchange formats — Information interchange — Representation of dates and times*

ISO 8825 (all parts), *Information technology — ASN.1 encoding rules*

ISO 9564-1, *Banking — Personal Identification Number (PIN) management and security — Part 1: Basic principles and requirements for online PIN handling in ATM and POS systems*

ISO 9807, *Banking and related financial services — Requirements for message authentication (retail)*

ISO 13492, *Banking — Key management related data element (retail)*

ISO 18245:—²⁾, *Retail financial services — Merchant category codes*

3 Terms and definitions

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

3.1 acquirer
financial institution (or its agent) which acquires from the card acceptor the data relating to the transaction and initiates that data into an interchange system

NOTE The acquirer remains unchanged throughout a transaction.

3.2 address verification
process of comparing data from the point of service (POS) with that held by the card issuer to verify the cardholder's billing address

3.3 advice
message where the sender notifies the receiver of an activity that has been taken, requiring no approval but requiring a response

3.4 aggregation
total amount of a number of transactions where details of the individual transactions that make up the total are not provided or recoverable

3.5 attended transaction
transaction where the acquirer has indicated that the card, cardholder and card acceptor representative are all present at the time of the transaction

3.6 authentication
action of proving that someone or something is genuine

1) To be published. (Revision of ISO 8583-3:1998)

2) To be published.

3.7**authorizing agent**

institution that acts on behalf of and with the authority of the card issuer

3.8**card acceptor**

party accepting the card and presenting transaction data to an acquirer

3.9**cardholder**

customer associated with the primary account number requesting the transaction from the card acceptor

3.10**card issuer**

financial institution (or its agent) which issues the financial transaction card to the cardholder

NOTE The card issuer remains unchanged throughout a transaction.

3.11**card issuer back up total**

total amount for all transactions (for an agreed set of parameters) provided when the detail of each transaction has been lost

3.12**credit transaction**

claim for funds by the cardholder for the credit of his account

NOTE At the same time, the transaction provides details of funds acknowledged as payable by the acquirer (and/or the card acceptor) to the card issuer.

3.13**dataset**

group of related sub-elements within a composite data element

NOTE See 5.4.4.1.

3.14**dataset bit map****DBM**

bit map used to identify the presence (denoted by 1) or absence (denoted by 0) of sub-elements within a dataset

NOTE See 5.4.4.4.

3.15**debit transaction**

approval by the cardholder of the debit to his account

NOTE At the same time, the transaction provides a claim of funds made by the acquirer (and/or the card acceptor) against the card issuer.

3.16**electronic purse**

application within an integrated circuit card (ICC)

NOTE The application allows the cardholder to have electronic value stored in the purse.

3.17

fallback

transaction that is processed using a card reading technology that is not the card issuer's preferred card reading technology

NOTE This might be where a magnetic stripe is used, although the card has an ICC containing the same application as identified on the magnetic stripe, and the POS has an ICC reader or the magnetic stripe read failed and the card details were keyed into the POS.

3.18

file

collection of *Data record* data elements

3.19

forwarding institution

institution within a transaction flow that sends a message forward from the originating institution

NOTE See 6.2.5.

3.20

inquiry

message (from the authorization message class) that requests information

3.21

institution identification code

unique number assigned to an institution participating in financial card originated message interchange

NOTE See 6.2.5 and 10.2.

3.22

instruction

message where the sender notifies the receiver of an activity to be taken

NOTE An instruction acknowledgement is not sent unless the receiver specifically requests one.

3.23

instruction acknowledgement

message where the receiver notifies the sender that one or more instruction messages has been received

NOTE No financial liability is implied in sending the instruction acknowledgement message.

3.24

linked load

electronic purse load transaction where the account providing the electronic purse is the same as the account providing the funds

NOTE Only one transaction is sent to the institution to both authenticate the purse and to secure the value for the load.

3.25

load transaction

transaction performed whereby value from the cardholder's source of funds (e.g. the funding account or cash) is transferred to an electronic purse

NOTE In return, the electronic purse card issuer receives payment from the cardholder's funding source.

3.26**maintenance agency****MA**

group responsible for the administrative duties related to the maintenance of this part of ISO 8583, excluding the institution identification code

NOTE See Clause 10.

3.27**message**

set of data elements used to exchange information between institutions (or their agents)

NOTE No communications (header/trailer, protocol, or character code) or security implications are assumed or identified.

3.28**message bit map**

series of bits used to identify the presence (denoted by 1) or absence (denoted by 0) of each data element in a message

NOTE See 5.3.

3.29**message class**

set of messages which supports the specific activities being performed

3.30**message function**

identification of the purpose of a message and the activity involved

3.31**notification**

message where the sender notifies the receiver of an activity taken

NOTE A notification acknowledgement is not sent unless the receiver specifically requests one.

3.32**notification acknowledgement**

message where the receiver notifies the sender that one or more notification messages has been received

NOTE No financial liability implied in sending the notification acknowledgement.

3.33**payment**

movement of funds from a cardholder account to another party

EXAMPLE A utility bill payment.

3.34**point of service****POS**

card acceptor location where the cardholder agrees the transaction takes place

3.35**receiving institution**

institution within a transaction flow that receives a message before it reaches the final destination

NOTE See 6.2.5.

3.36

registration authority

group responsible for the administrative duties related to the maintenance of institution identification codes

NOTE See Clause 10.

3.37

registration and maintenance management group

RMMG

group responsible for the allocation of institution identification codes (as specified in ISO 8583-2) and the approval of changes to this part of ISO 8583 (as specified in ISO 8583-3)

NOTE See Clause 10.

3.38

repeat

resending of a request or advice message for which no response was received within the expected time

3.39

replacement authorization

authorization used when a previous authorization was approved and a subsequent authorization is required

NOTE This is used when, for example, the *Amount transaction* is now different from the originally approved amount (see 8.2.1).

3.40

representment

transaction (from the financial presentment message class) originated by an acquirer to partially or wholly recover funds previously charged back to the acquirer by a card issuer

NOTE See 8.4.1.

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3.41

request

message where the sender informs the receiver that a transaction is in progress

NOTE A response is required to complete the activity.

3.42

response

message where the sender informs the receiver that a request or advice message was received

NOTE The response instructs the receiver on what action to take to complete the original request or advice.

3.43

resubmission

re-entry of a request message which was previously denied or rejected

NOTE See 8.2.1 and 8.4.1.

3.44

settlement

transfer of funds to complete one or more prior transactions made, subject to final accounting

3.45

settlement institution

financial institution (or its agent) at which the accounts are held by the parties settling

NOTE This institution, acting on information provided by the parties, transfers the appropriate funds between the accounts.

3.46**supplementary authorization**

authorization used when a previous authorization was approved and one or more subsequent authorizations are required for additional amounts

NOTE See 8.2.1.

3.47**tag-length-value (basic encoding rules)****TLV/BER**

method of encoding data, as specified in ISO 8825 (all parts)

3.48**transaction**

one or more related messages within the same message class designed to complete (insofar as this is possible) the intention of the sender of the original message

3.49**transaction destination institution**

final institution receiving the request, advice, notification or instruction message in a transaction

NOTE The transaction destination remains unchanged throughout the transaction.

3.50**transaction information document**

any type of transaction information including form sets, sales slips, vouchers, terminal receipts, record of charge, substitute drafts etc.

3.51**transaction originator institution**

institution initiating the request, advice, notification or instruction message in a transaction

NOTE The transaction originator remains unchanged throughout the transaction.

3.52**transfer**

movement of funds by a cardholder from one of its accounts to another of its accounts

NOTE Both accounts are held by the same financial institution.

3.53**truncation**

transactions stopped at some point in the process before they reach the receiver

3.54**unattended transaction**

transaction where the acquirer has indicated that one or other of the card, cardholder or card acceptor representative are not present at the time of the transaction

3.55**unlinked load**

electronic purse load transaction where the account providing the electronic purse is different from the account providing the funds

NOTE There is one transaction to the institution providing the electronic purse to authenticate the purse and another transaction to the institution providing the funds to secure the value for the load.

3.56**unload transaction**

transaction performed whereby value from an electronic purse is transferred to a cardholder's account