

Implementation of EN 28583 : 1991

**Bank card originated messages
— Interchange message
specifications — Content for
financial transactions**

This European Standard EN 28583 : 1991 has the status of a
British Standard

National foreword

This British Standard is the English language version of EN 28583 : 1991 and implements it as the UK national standard. This British Standard supersedes BS 7100 : 1990, which is withdrawn.

This British Standard is published under the direction of the Information Systems Technology Standards Policy Committee whose Technical Committee IST/12 has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international committee any enquiries on interpretation, or proposals for change, and keep UK interests informed;
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English version

Bank card originated messages — Interchange message specifications — Content for financial transactions

(ISO 8583 — 1st edition, 1987)

Messages initiés par carte bancaire —
Spécifications d'échange de messages —
Contenu pour les transactions financières
(ISO 8583 - 1ère édition, 1987)

Nachrichten in Verbindung mit Bankkarten —
Beschreibung des Nachrichtenaustausches.
Inhalt für den Zahlungsverkehr
(ISO 8583 — 1 Ausgabe 1987)

This European Standard was approved by CEN on 13 March 1991 and is identical to the ISO standard as referred to.

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

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Foreword

The Technical Board has decided to submit the International Standard Bank card originated messages — Interchange message specifications — Content for financial transactions to Formal Vote and the result was positive.

According to the CEN/CENELEC Common Rules, the following countries are bound to implement this standard:

Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

Endorsement Notice

The text of the International Standard ISO 8583, edition 1, 1987, was approved by CEN as an European Standard without any modification.

INTERNATIONAL STANDARD

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INTERNATIONAL ORGANIZATION FOR STANDARDIZATION
ORGANISATION INTERNATIONALE DE NORMALISATION
МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ

Bank card originated messages — Interchange message specifications — Content for financial transactions

*Messages initiés par carte bancaire — Spécifications d'échange de messages — Contenu
pour les transactions financières*

Reference number
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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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 8583 was prepared by Technical Committee ISO/TC 68, *Banking*.

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

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Bank card originated messages — Interchange message specifications — Content for financial transactions

0 Introduction

Services of the financial industry include the exchange of electronic messages relating to financial transactions. Agreements on applications 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 applications specifications. The application specification can remain at private level. Designers of such applications have complete design freedom within the overall constraint that messages must be convertible to the interface format in order that international interchange may take place.

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

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

1 Scope and field of application

This International Standard specifies a common interface by which bank card originated messages relating to a financial transaction may be interchanged between private systems. It specifies message structure, format and content, data elements and values for data elements.

The data elements and terminology used in this International Standard are derived from ISO 7580. Only those data elements shown in table 1 are incompatible with ISO 7580.

Table 1 — Incompatibilities between this International Standard and ISO 7580

Data element	ISO 7580	ISO 8583
Additional data — ISO	ans .. 132	ans .. 999
Additional response data	ans .. 14	ans .. 25
Amount, net settlement	an 12	× + n 16
Amount, settlement	n 8	n 12
Amount, transaction	n 8	n 12
Credits, gross amount	n .. 12	n 16
Credits, reversal gross amount	n .. 12	n 16
Debits, gross amount	n .. 12	n 16
Debits, reversal gross amount	n .. 12	n 16

Additionally, Date, Transmission and Transmission time have been consolidated into Transmission date and time; Requesting organization identification is identified as Forwarding institution identification code; Card issuer identification code is derived from Primary account number or Primary account number extended; and Message security key is identified as File security code.

2 References

ISO 3166, *Codes for the representation of names of countries*.

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

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

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

ISO 7810, *Identification cards — Physical characteristics*.

1) At present at stage of draft.

ISO 7811, *Identification cards — Recording technique*

- *Part 1: Embossing.*
- *Part 2: Magnetic stripe.*
- *Part 3: Location of embossed characters on ID-1 cards.*
- *Part 4: Location of read-only magnetic track — Tracks 1 and 2.*
- *Part 5: Location of read-write magnetic track — Track 3.*

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

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

3 Definitions

For the purpose of this International Standard the following 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.

3.2 advice: Message which notifies a party of an action that has been taken, requiring no approval.

3.3 authorization: The approval or guarantee given by the card issuer to the acquirer (and/or card acceptor).

3.4 card acceptor: Party accepting the card and presenting transaction data to an acquirer.

3.5 cardholder: Customer associated with the primary account number requesting the transaction from the card acceptor.

3.6 cardholder accounts transfer: The movement of funds by a cardholder from one of his accounts to another of his accounts both of which are held by the same financial institution.

3.7 card issuer: Institution (or its agent) which issues the identification card to the cardholder.

3.8 credit transaction: A claim for funds by the cardholder for the credit of his account. At the same time it provides details of funds acknowledged as payable by the acquirer (and/or the card acceptor) to the card issuer.

3.9 debit transaction: An approval by the cardholder of the debit to his account. At the same time it provides a claim of funds made by the acquirer (and/or the card acceptor) against the card issuer.

3.10 interactive message: Message to be transmitted and responded to while the transaction is taking place.

3.11 intermediate network facility: Any message processing entity positioned between the acquirer and the issuer.

3.12 message: A set of data elements used to exchange information between institutions (or their agents). No communications (header/trailer, protocol, or character code) or security implications are assumed or identified.

3.13 non-interactive message: Message transmitted after the transaction has taken place and where there is no urgency implied for the response. On-line telecommunication methods may be used for message transmission or off-line message transmission may be used (e.g. magnetic tape).

3.14 point of service (POS): Location where transaction is originated.

3.15 processing fee: A cost associated with the handling and routing of messages not relating to either cardholder service or equipment (e.g. ATM) usage charges.

3.16 request: Message originating an interactive series of messages.

3.17 reversal: A message informing the sender of the original message that the message cannot be processed as instructed, i.e. is undeliverable, unprocessable or cancelled by the receiver.

3.18 reversal credit: A credit arising from the reversal of a previous debit.

3.19 reversal debit: A debit arising from the reversal of a previous credit.

3.20 reversal transfer: A debit and credit arising from the reversal of a previous transfer.

3.21 routing: The directional flow of messages by which the acquirer and card issuer communicate with each other directly or via (an) intermediate network facility(ies) which may act as agent(s) for the original parties involved in the message flow.

3.22 settlement: A transfer of funds to complete one or more prior transactions made, subject to final accounting.

3.23 settlement institution: Financial institution (or its agent) accepting responsibility for reimbursing the acquirer, card issuer or intermediate network facility for an approved financial transaction.

3.24 transaction: A collection of related messages designed to complete (insofar as this is possible) the intention of the initiator of the original message, and normally concluded by a debit or credit transaction. Amendments or reversals carried out subsequently are to be considered as a separate transaction set.

3.25 transaction fee: A fee charged (for example by the acquirer) for transaction activity.

4 Message structure

Each message identified in this International Standard is constructed in the following sequence: message type identifier (see 4.1), one or more bit maps (see 4.2), and a series of data elements in the order of the bit map representation (see 4.3). Clause 5 reflects each message and its interrelationship with other messages.

4.1 Message type identifier

A four-digit numeric field describing each message class and function. Every message shall start with a message type identifier.

4.1.1 Structure of the message type identifier

Digits one and two identify the class of message:

00XX	Reserved for ISO use
01XX	Authorization messages
02XX	Financial transaction messages
03XX	File update messages
04XX	Reversal messages
05XX	Reconciliation control messages
06XX	Administrative messages
07XX	Reserved for ISO use
08XX	Network management messages
09XX-79XX	Reserved for ISO use
80XX-89XX	Reserved for national use
90XX-99XX	Reserved for private use

When digits one and two range between 01 and 08 digits three and four represent the message function and the transmission mode. Digits three and four are valued at:

00-19	Transaction processed, interactive
20-39	Transaction processed, non-interactive
40-59	Reserved for ISO use
60-79	Reserved for national use
80-99	Reserved for private use

4.1.2 Message repeats

In 4.1.3 whenever a repeat message is identified that repeat message is identical to its original message with the single exception of the message type identifier.

4.1.3 Description of message type identifier

4.1.3.1 Authorization messages

0100	Authorization request
0101	Authorization request repeat

Routing: From acquirer to card issuer

Type: Interactive

Purpose: Requests approval authorization or guarantee for a transaction to proceed. It is not intended to permit the application of this transaction to the cardholder's account for the purpose of issuing a bill or statement.

An 0110 Authorization request response is required.

0102	Authorization completion confirmation
0103	Authorization completion confirmation repeat

Routing: From acquirer to card issuer

Type: Interactive

Purpose: May be sent after receipt of an 0110 Authorization request response to indicate that the authorization actions specified by the 0110 have been completed.

An 0112 Authorization completion response may be sent in reply to an 0102 Authorization completion confirmation and shall be sent in reply to an 0103 Authorization completion confirmation repeat.

0110 Authorization request response

Routing: From card issuer to acquirer

Type: Interactive

Purpose: Shall be sent in response to either an 0100 Authorization request or an 0101 Authorization request repeat and carries the answers to that request.

0112 Authorization completion response

Routing: From card issuer to acquirer

Type: Interactive

Purpose: May be sent to indicate receipt of an 0102 Authorization completion confirmation and shall be sent to indicate receipt of an 0103 Authorization completion confirmation repeat.

0120	Authorization advice
0121	Authorization advice repeat

Routing: From acquirer to card issuer

Type: Non-interactive

Purpose: Advises of an authorization carried out on behalf of the card issuer. It is not intended to permit application of this transaction to the cardholder's account for the purpose of issuing a bill or statement.

An 0130 Authorization advice response may be sent in reply to an 0120 Authorization advice message and shall be sent in reply to an 0121 Authorization advice repeat.

0122	Authorization advice completion confirmation
0123	Authorization advice completion confirmation repeat

Routing: From acquirer to card issuer

Type: Non-interactive

Purpose: May be sent after receipt of an 0130 Authorization advice response to indicate that the authorization actions specified by the 0130 have been completed in a successful, partially successful, or unsuccessful manner.

An 0132 Authorization advice completion response may be sent in reply to an 0122 Authorization advice completion confirmation and shall be sent in reply to an 0123 Authorization advice completion confirmation repeat.

0130 Authorization advice response

Routing : From card issuer to acquirer

Type : Non-interactive

Purpose : May be sent to indicate receipt of an 0120 Authorization advice and shall be sent in reply to an 0121 Authorization advice repeat.

0132 Authorization advice completion response

Routing : From card issuer to acquirer

Type : Non-interactive

Purpose : May be sent to indicate receipt of an 0122 Authorization advice completion confirmation and shall be sent to indicate receipt of an 0123 Authorization advice completion confirmation repeat.

4.1.3.2 Financial transaction messages

0200 Financial transaction request

0201 Financial transaction request repeat

Routing : From acquirer to card issuer

Type : Interactive

Purpose : Requests approval for a transaction, which if approved can be immediately applied to the cardholder's account for billing or statement purposes.

An 0210 Financial transaction request response is required.

0202 Financial transaction completion confirmation

0203 Financial transaction completion confirmation repeat

Routing : From acquirer to card issuer

Type : Interactive

Purpose : May be sent after receipt of an 0210 Financial transaction request response to indicate that the transaction was completed in a successful, partially successful, or unsuccessful manner.

An 0212 Financial transaction completion response may be sent in reply to an 0202 Financial transaction completion confirmation and shall be sent in reply to an 0203 Financial transaction completion confirmation repeat.

0210 Financial transaction request response

Routing : From card issuer to acquirer

Type : Interactive

Purpose : Shall be sent in response to either an 0200 Financial transaction request or an 0201 Financial transaction request repeat and carries the answer to that request. An approval initiates the updating of settlement or reconciliation controls between the acquirer and card issuer.

0212 Financial transaction completion response

Routing : From card issuer to acquirer

Type : Interactive

Purpose : May be sent to indicate receipt of an 0202 Financial transaction completion confirmation and shall be sent to indicate receipt of an 0203 Financial transaction completion confirmation repeat.

0220 Financial transaction advice

0221 Financial transaction advice repeat

Routing : From acquirer to card issuer

Type : Non-interactive

Purpose : Advises of a previously completed financial transaction message to be applied to the cardholder's account for billing or statement purposes.

An 0230 Financial transaction advice response may be sent in reply to an 0220 Financial transaction advice and shall be sent in reply to an 0221 Financial transaction advice repeat.

0222 Financial transaction advice completion confirmation

0223 Financial transaction advice completion confirmation repeat

Routing : From acquirer to card issuer

Type : Non-interactive

Purpose : May be sent after receipt of an 0230 Financial transaction advice response to indicate that the transaction was completed in a successful, partially successful, or unsuccessful manner.

An 0232 Financial transaction advice completion response may be sent in reply to an 0222 Financial transaction advice completion confirmation and shall be sent in reply to an 0223 Financial transaction advice completion confirmation repeat.

0230 Financial transaction advice response

Routing : From card issuer to acquirer

Type : Non-interactive

Purpose : May be sent to indicate receipt of an 0220 Financial transaction advice and shall be sent to indicate receipt of an 0221 Financial transaction advice repeat.

0232 Financial transaction advice completion response

Routing : From card issuer to acquirer

Type : Non-interactive

Purpose : May be sent to indicate receipt of an 0222 Financial transaction advice completion confirmation and shall be sent to indicate receipt of an 0223 Financial transaction advice completion confirmation repeat.

4.1.3.3 File update messages

0300 Acquirer file update request

Routing : From acquirer to card issuer

Type : Interactive

Purpose : Contains instructions to add, change, delete or replace a file or record.

An 0310 Acquirer file update request response is required.

0302 Card issuer file update request

Routing : From card issuer to acquirer

Type : Interactive

Purpose: Contains instructions to add, change, delete or replace a file or record.

An 0312 Card issuer file update request response is required.

0310 Acquirer file update request response

Routing : From card issuer to acquirer

Type : Interactive

Purpose: Shall be sent in response to an 0300 Acquirer file update request and denotes the result of that message.

0312 Card issuer file update request response

Routing : From acquirer to card issuer

Type : Interactive

Purpose: Shall be sent in response to an 0302 Card issuer file update request and denotes the result of that message.

0320 Acquirer file update advice

Routing : From acquirer to card issuer

Type : Non-interactive

Purpose: Contains instructions to add, change, delete or replace a file or record.

An 0330 Acquirer file update advice response may be sent in reply to this message.

0322 Card issuer file update advice

Routing : From card issuer to acquirer

Type : Non-interactive

Purpose: Contains instructions to add, change, delete or replace a file or record.

An 0332 Card issuer file update advice response may be sent in reply to this message.

0330 Acquirer file update advice response

Routing : From card issuer to acquirer

Type : Non-interactive

Purpose: May be sent in response to an 0320 Acquirer file update advice and denotes the result of that message.

0332 Card issuer file update advice response

Routing : From acquirer to card issuer

Type : Non-interactive

Purpose: May be sent in response to an 0322 Card issuer file update advice and denotes the result of that message.

4.1.3.4 Reversal messages**0400 Acquirer reversal request****0401 Acquirer reversal request repeat**

Routing : From acquirer to card issuer or intermediate network facility

Type : Interactive

Purpose: Reverses (partially or wholly) an earlier authorization or transaction.

An 0410 Acquirer reversal request response shall be sent in reply to this message.

0402 Card issuer reversal request**0403 Card issuer reversal request repeat**

Routing : From card issuer to acquirer

Type : Interactive

Purpose: Reverses (partially or wholly) an earlier authorization or transaction.

An 0412 Card issuer reversal request response shall be sent in reply to this message.

0410 Acquirer reversal request response

Routing : From card issuer to acquirer

Type : Interactive

Purpose: Shall be sent in response to an 0400 Acquirer reversal request or 0401 Acquirer reversal request repeat, and denotes the disposition of that message.

0412 Card issuer reversal request response

Routing : From acquirer to card issuer

Type : Interactive

Purpose: Shall be sent in response to an 0402 Card issuer reversal request or 0403 Card issuer reversal request repeat and denotes the disposition of that message.

0420 Acquirer reversal advice**0421 Acquirer reversal advice repeat**

Routing : From acquirer to card issuer

Type : Non-interactive

Purpose: Reverses (partially or wholly) an earlier authorization or transaction.

An 0430 Acquirer reversal advice response may be sent in reply to an 0420 Acquirer reversal advice message and shall be sent in reply to an 0421 Acquirer reversal advice repeat.

0422 Card issuer reversal advice**0423 Card issuer reversal advice repeat**

Routing : From card issuer to acquirer

Type : Non-interactive

Purpose: Reverses (partially or wholly) an earlier authorization or transaction.

An 0432 Card issuer reversal advice response may be sent in reply to an 0422 Card issuer reversal advice and shall be sent in reply to an 0423 Card issuer reversal advice repeat.

0430 Acquirer reversal advice response

Routing : From card issuer to acquirer

Type : Non-interactive

Purpose: May be sent in response to an 0420 Acquirer reversal advice and shall be sent in response to a 0421 Acquirer reversal advice repeat and denotes the disposition of that message.

0432 Card issuer reversal advice response

Routing : From acquirer to card issuer

Type : Non-interactive

Purpose: May be sent in response to an 0422 Card issuer reversal advice and shall be sent in response to an 0423 Card issuer reversal advice repeat and denotes the disposition of that message.

4.1.3.5 Reconciliation control messages

0500 Acquirer reconciliation request

0501 Acquirer reconciliation request repeat

Routing : From acquirer to card issuer

Type : Interactive

Purpose: Requests confirmation of acquirer totals (number and value) since last 0500 Acquirer reconciliation request, in order to effect settlement between the parties.

An 0510 Acquirer reconciliation request response shall be sent in reply to this message.

0502 Card issuer reconciliation request

0503 Card issuer reconciliation request repeat

Routing : From card issuer to acquirer

Type : Interactive

Purpose: Request confirmation of card issuer totals (number and value) since last 0502 Card issuer reconciliation request, in order to effect settlement between the parties.

An 0512 Card issuer reconciliation request response shall be sent in reply to this message.

0510 Acquirer reconciliation request response

Routing : From card issuer to acquirer

Type : Interactive

Purpose: Shall be sent in response to an 0500 Acquirer reconciliation request or 0501 Acquirer reconciliation request repeat and denotes the disposition of, or answers, that message.

0512 Card issuer reconciliation request response

Routing : From acquirer to card issuer

Type : Interactive

Purpose: Shall be sent in response to an 0502 Card issuer reconciliation request or 0503 Card issuer reconciliation request repeat and denotes the disposition of, or answers, that message.

0520 Acquirer reconciliation advice

0521 Acquirer reconciliation advice repeat

Routing : From acquirer to card issuer

Type : Non-interactive

Purpose: Advises of totals (number and value) since last 0520 Acquirer reconciliation advice, in order to effect settlement between the parties.

An 0530 Acquirer reconciliation advice response may be sent in reply to an 0520 Acquirer reconciliation advice and shall be sent in reply to an 0521 Acquirer reconciliation advice repeat.

0522 Card issuer reconciliation advice

0523 Card issuer reconciliation advice repeat

Routing : From card issuer to acquirer

Type : Non-interactive

Purpose: Advises of totals (number and value) since last 0522 Card issuer reconciliation advice, in order to effect settlement between the parties.

An 0532 Card issuer reconciliation advice response may be sent in reply to an 0522 Card issuer reconciliation advice and shall be sent in reply to an 0523 Card issuer reconciliation advice repeat.

0530 Acquirer reconciliation advice response

Routing : From card issuer to acquirer

Type : Non-interactive

Purpose: May be sent in response to an 0520 Acquirer reconciliation advice and shall be sent in response to a 0521 Acquirer reconciliation advice repeat and denotes the disposition of, or answers, that message.

0532 Card issuer reconciliation advice response

Routing : From acquirer to card issuer

Type : Non-interactive

Purpose: May be sent in response to an 0522 Card issuer reconciliation advice and shall be sent in response to an 0523 Card issuer reconciliation advice repeat and denotes the disposition of, or answers, that message.

4.1.3.6 Administrative messages

0600 Administrative request

0601 Administrative request repeat

Routing : Between any two communicating parties (acquirer, card issuer or intermediate network facility)

Type : Interactive

Purpose: Requests confirmation of data in a format other than identified in this International Standard.

An 0610 Administrative request response is required in reply.

0610 Administrative request response

Routing : From receiver to originator of related administrative request message

Type : Interactive

Purpose: Shall be sent in response to an 0600 Administrative request or 0601 Administrative request repeat message and denotes the disposition of that message.

0620 Administrative advice

0621 Administrative advice repeat

Routing : Between any two communicating parties (acquirer, card issuer or intermediate network facility)

Type : Non-interactive

Purpose: Transmits data in a format other than identified in this International Standard.

An 0630 Administrative advice response may be sent in reply to an 0620 Administrative advice and shall be sent in reply to an 0621 Administrative advice repeat.