

CB2A AUTHORISATION

VERSION 1.6.1

"According to the terms of paragraphs 2 and 3 of article L.122.5, the French Intellectual Property Code only authorizes "copies or reproductions strictly reserved for the private use of the copier and not intended for collective use" and also, subject to the explicit naming of the author and the source, that "analyses and short quotations are justified by their critical, controversial, educational, scientific or informative nature", while any representation or reproduction in full or in part, without the consent of the author or of his/her assigns or inheritors, is unlawful (article L.122.4). Any representation or reproduction not adhering to the aforementioned conditions, by any means whatsoever, would therefore constitute an infringement punishable by articles L.335.2 et seq. of the French Intellectual Property Code".

TABLE OF CONTENTS

| | |
|---|---|
| CB2A AUTHORISATION VERSION 1.6.1 | 1 |
| 1. OVERVIEW OF DOCUMENT | 2 |
| 2. PRESENTATION OF DOCUMENT | 3 |
| 2.1. PREFACE | 3 |
| 2.2. SCOPE OF PRESENT VERSION | 3 |
| 3. HISTORY | 4 |
| 4. LIST OF CHANGES IN VERSION 1.6.1 – JUNE 2020 | 5 |

1. OVERVIEW OF DOCUMENT

CB2A Authorisation documentation includes the following volumes:

Volume 0: Presentation of Document

Volume 1: General Principles

Volume 2: Data Field Dictionary

Volume 3.1: Network Management

Volume 3.2: Face-to-Face Payment/Unattended Payment

Volume 3.3: Remote Payment/Secured Electronic Commerce

2. PRESENTATION OF DOCUMENT

2.1. PREFACE

The present version includes all CB2A Authorisation documentation.

2.2. SCOPE OF PRESENT VERSION

The present version includes the following payment services:

- Face-to-face payment
- Unattended terminal payment
- Remote payment
- Secured electronic commerce
- Payment for Reservation and Rental of Goods or Services
- Recurring payment
- Unattended rental terminal payment
- Payment using Multi-Service Banking ATMs
- Funds transfer

The present version includes the following technologies:

- Card in contact mode
- Card in contactless mode
- Cardholder not present – Remote Payment
- Cardholder not present – Secured electronic commerce

The present version includes the following functionalities:

- Partial Authorisation
- Digital Wallets

3. HISTORY

| CB2A version | Publication date | Version | Comment |
|--------------|------------------|---------|---------------|
| CB2A 1.6.1 | | | First version |

4. LIST OF CHANGES IN VERSION 1.6.1 – JUNE 2020

CB2A Authorisation V1.6.1 June 2020
-
UPDATE DETAILS

Table of contents

| | |
|---|----|
| 1249 – New field 119 | 2 |
| 1193 – Corrections | 4 |
| 1194 - Resend counter for ecommerce resubmission | 6 |
| 1195 - Track 2 equivalent data – reversal | 7 |
| 1196 - Transactions linking..... | 8 |
| 1197 - Editorial change - Multiple payment | 11 |
| 1198 - Single TAP | 14 |
| 1212 - Alignment with MPADS | 18 |
| 1213 - MPAT - Debt recovery | 25 |
| 1214 - Reservation and rental (PLBS) - new payment use case | 28 |
| 1232 - Extension of the message sent back to the initiator | 29 |
| 1236 - BIN 8 | 32 |
| 1244 - Relay resistance protocol | 33 |

1249 – New field 119

Background:

The maximum size of the CB2A Authorisation protocol fields is limited to 255 bytes.

This limitation will soon cause problems due to the saturation of existing fields. After consulting with users, we have decided to create a new field with the same characteristics as a new CBAE field.

Implementation:

Volume 2 – Data dictionary

2.2 Data format and coding

2.2.1 Notation conventions

Table 1: Data type notations

| Notation | Description |
|----------|---|
| L | length of TLV (Type Length Value) |
| LL | length expressed in 2 significant characters (1 to 99) length coded on one byte and between 1 and 99 bytes |
| LLL | length expressed in 3 significant characters (1 to 255) length coded on one byte and between 1 and 255 bytes |
| LL2 | length coded on two bytes and between 1 and 999 bytes |
| 3 | fixed-length of 3 units ⁽¹⁾ |
| ...15 | variable length up to 15 units ⁽¹⁾ |
| 3...15 | variable length of 3 to 15 units ⁽¹⁾ |

Table 2: Data length notations

- 1) A unit is defined by the field type or the data element.

2.2.6.2 Variable-length fields

Variable-length fields are preceded by ~~a one~~ **byte or 2 bytes** indicating the field length. This length is coded in binary. Depending on the field type, a variable-length field can be from 1 to 255 ~~or 999 bytes long, up to the maximum length of the field format.~~

2.2.6.3 Fields with a TLV (Type Length Value) structure

B. "Binary" TLV fields

Each data element is coded as follows:

- "T": two binary bytes,
- "L": one binary byte (maximum length 255) or two binary bytes (maximum length 999),
- "V": the number of bytes defined by the length. The binary format is implicit for each type. The description may specify several fixed-length data elements.

2.3.1 Alphabetical list

...

| Data element | Field | Sub-field |
|---------------------------|-------|-----------|
| ... | | |
| Reserved for national use | 119 | |

...

2.3.2 List by field number

...

| No. | Type | Name | Format |
|-----|------|---------------------------|----------------|
| ... | ... | ... | |
| 119 | | Reserved for national use | LL2VAR b...999 |

...

2.3.3 List by field number

...

| | |
|-----------|--------------------------|
| Field 119 | Format : LLL2VAR b...999 |
|-----------|--------------------------|

Reserved for national use.

- ☐ Data type_____b2
- ☐ Data length_____b2
- ☐ Data value.

1193 – Corrections

Background:

Corrections and editorial changes to the 1.6.0 version

Field 55 type 009C does not provide a corresponding value for funds transfer debit.

Fields 56 type 012, 013 and 014 has been forgotten in 2.3.2. « list by field number ».

The 'E' (successful authentication, without cryptogram) value has been removed although it is still used (for Paylib, for example) in cardholder authentication of three domain secure results.

Some labels of ERT (Regulatory and Technical Environment) are clarified.

Implementation:

Volume 2 – Data dictionary

2.3.2. List by field number

| N° | Name | Format | | |
|-----|------|------------------------------------|--------|---------|
| ... | | ... | | |
| 56 | | Additional data | LLLVAR | b...255 |
| | ... | ... | | |
| | 012 | Mobile payment solution identifier | | n3 |
| | 013 | Type of transaction | | n2 |
| | 014 | Type of proof | | n2 |

2.3.3. Definition of the data fields used

Field 55 Format : LLLVAR b...255

Integrated circuit card system related data

Type = 009C: Transaction type

Data format: n2

Number of bytes transported: 1

Contains the transaction type used for an Application Usage Control (AUC). EMV concept which corresponds to the Service Code. The correspondence between the private values of field 3 and their equivalent to set in the "transaction type" data element (field 55 type 009C) is as follows:

| Field 03 - Private value | | Corresponding value- Field 55 type 009C | |
|--------------------------|------------------------|---|-------------------------------|
| 11 | Quasi-cash | 00 | Purchase of goods or services |
| 17 | Manual cash | 01 | Withdrawal |
| 28 | Quasi-cash refund | 20 | Credit: returns |
| 41 | Funds transfer, debit | 00 | Purchase of goods or services |
| 42 | Funds transfer, credit | 20 | Credit: returns |

Field 59 Format : LLLVAR b...255

Reserved for national use

...

Type = 200: ERT (Regulatory and technical environment)

Data format: b1

Number of bytes transported: 1

...

| Value | Description |
|---------------------------|---|
| Remote payment | |
| 20 | Unspecified Remote payment, manual entry via terminal |
| ... | |
| 24 | Open networks Internet, Cardholder Initiated Transaction |
| ... | |
| 27 | Open networks, recurring payments Internet, subsequent transaction |
| ... | |
| Unattended payment | |
| ... | |
| 48 | Unattended payment outside CB context Payment via an unattended machine for specific activities (highways, car parks, etc) |

...

Type = 0412: Three-Domain Secure Results

Data format: Structure

Number of bytes transported: 4

...

☐ Cardholder authentication _____an1

| Values | Description |
|--|--|
| In the CB nomenclature (Result of cardholder authentication) | |
| A | Proof of transit via ACS |
| E | Successful authentication, without cryptogram |
| N | Unsuccessful authentication |
| U | Call made to ACS |
| Y | Successful authentication, with cryptogram |
| Blank | Timeout on ACS or no call to ACS |

...

1194 - Resend counter for ecommerce resubmission

Background:

The field 56.0019 « Resend counter » is used for re-authorised messages in face-to-face payment. It is also required for resubmission in secured electronic commerce.

Implementation:

Change in Volume 3.3 – Remote payment and secured electronic commerce

| | |
|--|--|
| A: Authorisation request : 0100 | B: Response to authorisation request : 0110 |
|--|--|

| N° | Definition | A | B |
|------|-----------------|--------|------|
| 56 | Additional data | C(2) | C(2) |
| ... | ... | ... | ... |
| 0020 | Resend counter | C(158) | . |
| ... | ... | ... | ... |

| | |
|--|---|
| A: Payment reversal request : 0400/0401 | B: Response to payment reversal request : 0410 |
|--|---|

| N° | Definition | A | B |
|------|-----------------|----------|------|
| 56 | Additional data | C(2) | C(2) |
| ... | ... | ... | ... |
| 0020 | Resend counter | CQI(104) | . |
| ... | ... | ... | ... |

| N° | COMMENTS |
|-----|----------------------------|
| ... | ... |
| 2 | See list of types |
| ... | ... |
| 158 | Mandatory for resubmission |

1195 - Track 2 equivalent data – reversal

Background:

According to PCI-DSS, storing track data after authorisation is never permitted. The field 55 type 0057 « Track 2 equivalent data » was « mandatory if present in the initial request » in payment reversal request. It has been removed.

Implementation:

Change in Volume 3.2 – Face-to-Face Payment / ADM / SST / LAT Payment

| | |
|--|---|
| A: Payment reversal request : 0400/0401 | B: Response to payment reversal request : 0410 |
|--|---|

| N° | Definition | A | B |
|-----------------|---|---------------------|--------------|
| ... | ... | ... | ... |
| 55 | Integrated circuit card system related data | C(2) | C(2) |
| ... | ... | ... | ... |
| 0057 | Track 2 equivalent data | CQI(104) | . |
| ... | ... | ... | ... |

| N° | COMMENTS |
|-----|---|
| ... | ... |
| 2 | See list of types |
| ... | ... |
| 104 | Mandatory if present in the initial request |

1196 - Transactions linking

Background:

Some changes are done in the data dictionary to improve the chaining transactions rules:

- The fields 'Unique transaction Identifier' and 'Original unique transaction Identifier' are modified.
- In the new field 119 (see. change feet 1249), a new sub-field is created for a new identifier to link a refund transaction to the associated debit transaction.
This identifier is populated with the unique transaction Identifier of the associated debit transaction sent by the issuer in the authorisation request response.

Implementation:

Change in Volume 2 - Data Field Dictionary

2.3.1 Alphabetical list

| Data element | Field | Sub-field |
|-----------------------------------|-------|-----------|
| ... | | |
| Reserved for national use | 119 | |
| Debit unique reference identifier | 119 | 0047 |

2.3.1 List by field number

| No. | Type | Name | Format | |
|-----|------|--|--------|-----------|
| ... | ... | ... | | |
| 47 | | Additional data – national | LLLVAR | ans...255 |
| | 95 | Unique transaction identifier | | ans...50 |
| | 99 | Original unique transaction identifier | | ans...530 |
| ... | | | | |
| 119 | | Reserved for national use | LL2VAR | b...999 |
| | 0047 | Debit unique reference identifier | | ans...50 |

2.3.2 Definition of data fields used

...

Field 47 **Format : LLLVAR ans...255**

Additional data – national

...

TYPE = 95: UNIQUE TRANSACTION IDENTIFIER

Data format: ans...50

Number of bytes transported: ...50

...

TYPE = 99: ORIGINAL UNIQUE TRANSACTION IDENTIFIER

Data format: ans...530

Number of bytes transported: ...530

~~This data element contains the unique transaction identifier which is the reference for the identification of the initial transaction.~~

This data element contains the unique identifier of the transaction used as reference for linking.

Note that the first position of the data element contains the nomenclature.

...

Field 119 **Format : LLL2VAR b...999**

Reserved for national use (Données nationales).

☐ Data type _____ b2

| Type | Description | Repeatability |
|------|-----------------------------------|---------------|
| 0047 | Debit unique reference identifier | |

☐ Data length _____ b2

☐ Data value.

TYPE = 0047: DEBIT UNIQUE REFERENCE IDENTIFIER

Data format: ans...50

Number of bytes transported: ...50

Identifier of the debit transaction to which a credit transaction is associated. This debit is an authorized debit which can have been made in remote payment or in another payment method.

Change in Volume 3.3 – Remote payment / Secured electronic commerce

8. Messages description

| | |
|--|--|
| A: Authorisation request : 0100 | B: Response to authorisation request : 0110 |
|--|--|

| N° | Definition | A | B |
|------|-----------------------------------|--------|------|
| ... | | | |
| 119 | Reserved for national data | C(2) | C(2) |
| 0047 | Debit unique reference identifier | C(156) | . |

| | |
|--------------------------------|---------------------------------------|
| A: Reversal : 0400/0401 | B: Response to reversal : 0410 |
|--------------------------------|---------------------------------------|

| N° | Definition | A | B |
|------|-----------------------------------|----------|------|
| ... | | | |
| 119 | Reserved for national data | C(2) | C(2) |
| 0047 | Debit unique reference identifier | CQI(104) | |

| N° | COMMENTS |
|-----|---|
| ... | ... |
| 2 | See list of types |
| 3 | Mandatory if available |
| ... | |
| 104 | Mandatory if present in the initial request |
| ... | |
| 156 | Mandatory if available for a credit transaction |

1197 - Editorial change - Multiple payment

Background:

Different types of payment (payment on delivery, instalment, shipment payment,...) are within the scope of RTS SCA regulatory.

The paragraph « Requirements related to recurring payment » has to be renamed and modified.

Implementation:

Change in Volume 3.3 – Remote payment and secured electronic commerce

4 Requirements related to ~~recurring~~ **multiple** payment

4.1 Cardholder Initiated Transactions

- **Except for mobile payment solutions based on EMV data elements**, an Internet initial payment transaction (ERT* = 24) must include the data elements listed below, **subject to the presence condition**.

* ERT = Regulatory and Technical Environment

| Data | CB2A Authorisation field |
|------------------------------------|--|
| Cumulative total authorised amount | Field 54 type amount type 43 |
| 3DS protocol major version | Field 56 type 0022 |
| Cryptogram entry date and GMT time | Field 56 type 0017 |
| DS transaction ID | Field 56 type 0023 data element UUID applies to nomenclature 1 |
| ACS transaction ID | Field 56 type 0023 data element UUID applies to nomenclature 2 |
| Payment use case | Field 56 type 0028 |
| Service attribute | Field 59 type 0800 |
| Card-on-file action | Field 56 type 0029 |

| | |
|---|--------------------|
| Payment number | Field 56 type 0031 |
| Total number of payments | Field 56 type 0032 |
| Exemption indicator | Field 56 type 0033 |
| Authentication merchant name | Field 56 type 0036 |
| Authentication date | Field 56 type 0037 |
| Authentication amount | Field 56 type 0038 |
| Payment validity date | Field 56 type 0045 |
| Function code | Field 59 type 0100 |
| Card security code | Field 59 type 0300 |
| Transaction identifier or cryptogram provided by the acceptor | Field 59 type 0400 |
| Cardholder authentication value | Field 59 type 0401 |
| Electronic commerce transaction security type | Field 59 type 0407 |
| Cardholder authentication method used by the issuer | Field 59 type 0410 |
| Electronic commerce cryptogram calculation method | Field 59 type 0411 |
| Three-domain secure results | Field 59 type 0412 |
| Additional electronic commerce data elements | Field 59 type 0414 |
| Digital wallet name | Field 59 type 0415 |
| Electronic commerce indicator | Field 59 type 0416 |
| Digital wallet additional data | Field 59 type 0417 |
| Wallet identifier | Field 59 type 0418 |
| Three-domain secure results, others | Field 59 type 0419 |

- “Recurring payment transactions not made in secured electronic commerce mode” (ERT* = 28) do not contain neither specific electronic commerce data elements nor payment case identification data.

*Regulatory and Technical Environment (ERT)

4.2 Subsequent Transactions

- Transactions subsequent to an initial electronic commerce transaction (ERT* = 27) must include the data elements listed below, **subject to the presence condition**.

* ERT = Regulatory and Technical Environment

| Data | CB2A Authorisation field | CB2A Authorisation settings |
|--|--------------------------|---|
| Original unique transaction identifier | Field 47 type 99 | Same value as in field 47 type 95 of the initial transaction response |
| Debit unique transaction identifier | Field 119 type 0047 | Same value as in field 47 type 95 of the initial debit transaction response |
| Cumulative total authorised amount | Field 54 type amount 43 | Transaction specific value |
| Payment use case | Field 56 type 0028 | Same value as in field 56 type 0028 of the initial transaction |

| | | |
|---|---|---|
| Card-on-file action | Field 56 type 0029 | Absent |
| Payment number | Field 56 type 0031 | Transaction specific value |
| Total number of payments | Field 56 type 0032 | Same value as in field 56 type 0032 of the initial transaction |
| Exemption indicator | Field 56 type 0033 | Transaction specific value |
| Payment validity date | Field 56 type 0045 | Same value as in field 56 type 0045 of the initial transaction |
| DS transaction ID | Field 56 type 0046/ DS transaction ID | Copy of field 56 type 0023 data element UUID applies to nomenclature 1 of the initial transaction (*) |
| ACS transaction ID | Field 56 type 0046/ ACS transaction ID | Copy of field 56 type 0023 data element UUID applies to nomenclature 2 of the initial transaction (*) |
| Authentication merchant name | Field 56 type 0046/ Merchant name | Copy of field 56 type 0036 of the initial transaction (*) |
| Authentication date | Field 56 type 0046/ Authentication date | Copy of field 56 type 0037 of the initial transaction (*) |
| Authentication amount | Field 56 type 0046/ Authentication amount | Copy of field 56 type 0038 of the initial transaction (*) |
| Cardholder authentication value of the current transaction | Field 59 type 0401 | Absent |
| Electronic commerce transaction security type of the current transaction | Field 59 type 0407 | Absent |
| Cardholder authentication method used by the issuer of the current transaction | Field 59 type 0410 | Absent |
| Electronic commerce cryptogram calculation method of the current transaction | Field 59 type 0411 | Absent |
| Three-domain secure results of the current transaction | Field 59 type 0412 | Absent |
| Three-domain secure results, others of the current transaction | Field 59 type 0419 | Absent |
| Cardholder authentication value of the initial transaction | Field 59 type 0420/ Cardholder authentication value | Copy of field 59 type 0401 of the initial transaction(*) |
| Electronic commerce security type of the initial transaction | Field 59 type 0420/ Electronic commerce transaction security type | Copy of field 59 type 0407 of the initial transaction(*) |
| Cardholder authentication method of the initial transaction | Field 59 type 0420/ Cardholder authentication method | Copy of field 59 type 0410 de la transaction initiale(*) |
| Electronic commerce cryptogram calculation method of the initial transaction | Field 59 type 0420/ Cardholder authentication value calculation method | Copy of field 59 type 0411 of the initial transaction(*) |
| Result of using the secure remote payment architecture de la transaction initiale | Field 59 type 0420/ Result of using a secured remote payment architecture | Copy of field 59 type 0412 of the initial transaction(*) |
| Extension of the result of the secure payment architecture of the initial transaction | Field 59 type 0420/ Extension of result of using a secured payment architecture | Copy of field 59 type 0419 of the initial transaction(*) |

(*) If a data element is not significant, it is filled with the pad character specific to the format of the data element.

- "Recurring payment transactions not made in secured electronic commerce mode" (ERT* = 28) do not contain neither specific electronic commerce data elements nor payment case identification data.

* ERT = Regulatory and Technical Environment

1198 - Single TAP

Background:

Article 11 of the European technical provision EBA / RTS / 2017/02 (PSD2) specifies that a contactless transaction can be processed without strong authentication if it meets the following three conditions:

- Unit amount ≤ 50 €
- Amount accumulated since the last strong authentication ≤ 150 €
- Number of transactions since the last strong authentication ≤ 5

When the issuer server has identified a cardholder authentication need, three scenarii are possible:

1. "PIN Request / Single TAP" scenario: the response from the issuer server causes the Online PIN entering as a continuation of the current contactless transaction. This scenario involves resubmission of the original authorisation message completed with the PIN entered by the cardholder,
2. "CD-CVM" scenario: the acceptance system initiates a new transaction without contact with strong authentication (eg biometrics, CD-CVM, etc.),
3. "Fallback in contact mode" scenario: the response from the issuer server invites the acceptance system to initiate a new transaction on the contact interface.

Some protocol changes are needed :

- « Fallback in contact mode » already exists in authorisation request responses but the two others have to be added.
- For "PIN Request / Single TAP" scenario:
 - The issuer needs to know that the acceptor is able to manage it.
 - The authorisation request resubmission needs to be identified by the issuer.
- All schemes need data to be transmitted in field 55.9FC7. It needs a generic label.

Implementation:

Change to Volume 2 – Data dictionary

2.3.1. Alphabetical list

| Data element | Field no. | Sub-field no. |
|--|-----------|---------------|
| ... | | |
| Customer Exclusive Data (CED) Issuer Proprietary Data | 55 | 9F7C |

2.3.2. List by field number

| No. | Type | Name | Format |
|-----|------|--|---------|
| 55 | 9F7C | Customer Exclusive Data (CED) Issuer Proprietary Data | b ...32 |

2.3.3. Definition of the data fields used

Field 39 **Format : an2**

Response code

| Value | Description |
|-------|--------------------------------------|
| ... | |
| A2 | PIN request in single TAP mode |
| A3 | New TAP with required authentication |
| ... | |

...

Field 55 **Format : LLLVAR b...255**

Integrated circuit card system related data

☐ Data type _____ b2

| Type | Description | Repeatability |
|------|--|---------------|
| ... | | |
| 9F7C | Customer Exclusive Data (CED) Issuer Proprietary Data | |
| ... | | |

...

TYPE = 9F7C: ~~CUSTOMER EXCLUSIVE DATA (CED)~~ ISSUER PROPRIETARY DATA

Data format: b..32

Number of bytes transported: 32

Contains data to be sent to the issuer.

...

Field 59 **Format : LLLVAR b...255**
National data

...

Type = 0101: Message reason code

Data format: n4

Number of bytes transported: 2

| Value | Description |
|---|--|
| Values 1500 to 1999 specify the reason why a request message (0100) was sent instead of an advice (0120). | |
| ... | |
| 1680 | Authorisation following issuer PIN request |
| ... | |

...

Type = 0805: Optional Services Supported (Acceptor Domain)

Data format: b2

Number of bytes transported: 2

Bitmap describing the services supported by the acceptor. Several combinations of bits are possible.

A bit is set if the service is supported.

| Value | Description |
|-----------|-------------------------|
| Bits 16-4 | Reserved for future use |
| Bits 16-5 | Reserved for future use |
| Bit 4 | Single TAP |
| Bit 3 | Reversal |
| Bit 2 | Reserved for CB use |
| Bit 1 | Partial authorisation |

...

Change to Volume 3.2 – Face-to-face payment / Unattended payment
2.1 Response codes for a face-to-face payment authorization request

| Value | Description |
|-------|--------------------------------------|
| ... | |
| A2 | PIN request in single TAP mode |
| A3 | New TAP with required authentication |
| ... | |

7 Message descriptions

| |
|---|
| A: Payment autho. req. (EMV chip and contactless EMV chip): 0100 |
| B: Payment autho. request (magn. stripe and contactless magn. stripe): 0100 |
| C: Resp. to payment autho. req. (contact and contactless) : 0110 |

| N° | Definition | A | B | C |
|------|--|-------|------|------|
| ... | | | | |
| 55 | Integrated circuit card system related data | C(2) | C(2) | C(2) |
| ... | | | | |
| 9F7C | Customer Exclusive Data (CED) Issuer Proprietary Data | C(48) | | |
| ... | | | | |

| |
|--|
| A: Payment reversal request: 0400/0401 |
| B: Response to payment reversal request: 0400/0401 |
| C: Resp. to payment autho. req. (contact and contactless) : 0110 |

| N° | Definition | A | B |
|------|--|----------|------|
| ... | | | |
| 55 | Integrated circuit card system related data | C(2) | C(2) |
| ... | | | |
| 9F7C | Customer Exclusive Data (CED) Issuer Proprietary Data | CQI(104) | |
| ... | | | |

1212 - Alignment with MPADS

Background:

Some changes are done in the data dictionary to be aligned with MPADS :

- The name and length of field 59.0400 are modified (the data element may also contain a cryptogram),
- The label and definition for A1 authorisation request response code is clarified,
- The exemption label 'Strong authentication implemented by acceptor (wallet)' is modified to generalise its use,
- A new indicator is necessary to specify the unavailability of the 3DS Server module and inform the issuer during the authorisation request (or request for information),
- Merchant name, authentication date and authentication amount definitions are modified to generalise their use in a context different from the EMV Co,
- Some schemes need a merchant identifier dedicated to their programs.
- The field « Electronic commerce data elements, initial transaction » needs a precision,
- The field « Cardholder authentication value calculation method » needs to be clarified,
- The field « cardholder authentication method » is modified to generalise its use for all third-party Wallet,
- The « Requirements related to information requests » paragraph is clarified.

Implementation:

Field 119 created in change sheet 1196 will contain the new 3D indicator and merchant identifier for the scheme program .

Change in Volume 2 - Data Field Dictionary

2.3.1 Alphabetical list

| Data element | Field | Sub-field |
|---|-------|-----------|
| ... | | |
| Transaction identifier or cryptogram supplied by the acceptor | 59 | 0400 |
| ... | | |
| Reserved for national use | 119 | |
| Scheme program merchant identifier | 119 | 0009 |
| Three-domain secure components availability | 119 | 0013 |

2.3.2 List by field number

| No. | Type | Name | Format | |
|-----|------|---|--------|--------------|
| ... | ... | ... | | |
| 59 | | National data | LLLVAR | b...255 |
| | ... | | | |
| | 0400 | Transaction identifier or cryptogram supplied by the acceptor | | b...204...40 |
| ... | ... | | | |
| 119 | | Reserved for national use | LL2VAR | b...999 |
| | 0009 | Scheme program merchant identifier | | ans...8 |
| | 0013 | Three-domain secure components availability | | an1 |
| ... | | | | |

2.3.3 Definition of data fields used

Field 39 **Format : ans40**

Response code

...
The list of response codes that can be used is given below.

| Value | Description |
|-------|---|
| ... | ... |
| A1 | Soft decline (electronic commerce only) |
| ... | ... |
| A4 | Misused TRA exemption |

...

Field 56 **Format : LLLVAR b...255**

Additional data

...

TYPE = 0033: EXEMPTION INDICATOR

...

Indicates the exemption cases(s) for the transaction related to strong cardholder authentication.

☐ **Byte 1** **b1**

| Bit | Description |
|-----|---|
| ... | ... |
| 6 | Strong authentication implemented by acceptor (wallet) Delegated authentication |
| ... | ... |

...

TYPE = 0036: AUTHENTICATION MERCHANT NAME

Data format: ans40

Number of bytes transported: 40

~~Identifier assigned by the Directory Server to uniquely identify the merchant.~~

Name of the merchant presented for authentication.

TYPE = 0037: AUTHENTICATION DATE

Data format: n14 ((YYYYMMDDHHMMSS))

Number of bytes transported: 7

Date and time of authentication. ~~Corresponds to the EMVCo data element "purchaseDate".~~

TYPE = 0038: AUTHENTICATION AMOUNT

Data format: n12

Number of bytes transported: 6

Authentication amount. ~~Corresponds to the EMVCo data element "purchaseDate".~~

...

Field 59 National data

Format : LLLVAR b...255

Reserved for national use

...

TYPE = 0400: TRANSACTION IDENTIFIER OR CRYPTOGRAM SUPPLIED BY THE ACCEPTOR

Data format: b204...40

Number of bytes transported: 204...40

Contains a unique reference for a secured electronic commerce transaction (This identifier is used in certain electronic commerce cryptogram calculation methods.) ~~or a cryptogram generated by the acceptance solution.~~

...

TYPE = 0410: CARDHOLDER AUTHENTICATION METHOD

Data format: an2

Number of bytes transported: 2

Contains the cardholder authentication method.

For transactions performed with a third-party wallet, the data element contains the authentication method ~~defined in~~

~~the EMVCo 3DS protocol~~, when the wallet provides it for the transaction.

TYPE = 0411: CARDHOLDER AUTHENTICATION VALUE CALCULATION METHOD

Contains the calculation method used by the issuer to make the electronic commerce cryptogram.

- For 3DS **V1**: Its value is identical to the 3D-Secure PARES message <TX><cavvAlgorithm> XML tag.
- **For CB EMVCo 3DS : Its value is identical to the CB-AVALGO extension for Ares and RReq messages.**
- W: Cryptogram generated by a wallet solution

TYPE = 0420: ELECTRONIC COMMERCE DATA, INITIAL TRANSACTION

Data format: structure

Number of bytes transported: 22..58

Electronic commerce data from the initial transaction of a multiple payment. This data may be requested in the transactions subsequent to this initial transaction

- ☐ **Electronic commerce transaction security type** n2
- ☐ **Cardholder authentication method** ans2
- ☐ **Cardholder authentication value calculation method** an1
- ☐ **Result of using a secured remote payment architecture** ansb4
- ☐ **Extension of result of using a secured payment architecture** ansb10
- ☐ **Cardholder authentication value** b4..40

If a data element is not significant, it is valued with the padding character specific to the data format.

...

Field 119

Format : LLL2VAR b...999

Reserved for national use (Données nationales).

- ☐ Data type b2

| Type | Description | Repeatability |
|------|---|---------------|
| 0009 | Scheme program merchant identifier | |
| 0013 | Three-domain secure components availability | |
| ... | | |

- ☐ Data length b2
- ☐ Data value.

TYPE = 0009: SCHEME PROGRAM MERCHANT IDENTIFIER

Data format: ans...8

Number of bytes transported: ...8

Merchant identifier for the transaction scheme program

TYPE = 0013: THREE-DOMAIN SECURE COMPONENTS AVAILABILITY

Data format: an1

Number of bytes transported: 1

| Values | Description |
|--------|---------------------------------|
| 1 | Three-domain server unavailable |

Change in Volume 3.2 – Face-to-Face payment/Unattended payment

6 REQUIREMENTS RELATED TO CARD VALIDITY CHECK

...

~~Field 59 type 100 set to 108, field 4 set to 0 and populated field 59 type 0418 refers to a wallet enrolment.~~

Note: a field 59 type 0418 (Wallet Identifier) set indicates **a wallet registration**.

Change in Volume 3.3 – Remote payment secured electronic commerce

2.1. Response codes for a remote payment authorisation request

| No. | Description |
|-----|---|
| ... | |
| A1 | Soft decline (electronic commerce only) |
| ... | |
| A4 | Misused TRA exemption |
| ... | |

6. Requirements related to card validity check

The purpose of this transaction is to request information about a cardholder PAN (Primary Account Number).

Message type identifier:

- Request: 0100
- Response: 0110

Typical values:

- field 4 (Amount) = 0
- field 59 type 0100 (Function code) = 108 (card validity check)

~~Field 59 type 100 set to 108, field 4 set to 0 and populated field 59 type 0418 refers to a wallet enrolment.~~

The following specific values indicate a wallet registration :

- field 59 type 100 (Function code) set to 108 (card validity check)
- field 4 (Amount) set to 0
- field 59 type 0418 (Wallet Identifier) set

The following specific values indicate an card validity check before shipment :

- field 59 type 100 set to 108
- field 4 set to 0
- field 56 type 0028 (Payment use case) = 04 (Shipment payment)

8. Messages description
A: Authorisation request : 0100
B: Response to authorisation request : 0110

| N° | Definition | A | B |
|------|---|-----------|------|
| 56 | Additional data | C(2) | C(2) |
| ... | | | |
| 0010 | IP address | C(3) | |
| ... | | | |
| 0022 | 3DS protocol major version | C(3155) | |
| ... | | | |
| 0036 | Authentication merchant name | C(403157) | |
| 0037 | Authentication date | C(403157) | |
| 0038 | Authentication amount | C(403157) | |
| ... | | | |
| 119 | Reserved for national data | C(2) | C(2) |
| 0009 | Scheme program merchant identifier | C(3) | |
| 0013 | Three-domain secure components availability | C(3) | |

| N° | COMMENTS |
|-----|--|
| ... | ... |
| 2 | See list of types |
| 3 | Mandatory if available |
| ... | ... |
| 155 | Mandatory if 3DS authentication |
| ... | |
| 157 | Mandatory if provided by the implemented authentication solution |

1213 - MPAT - Debt recovery

Background:

A new service attribute is created to identify the debt recovery for Open Payment transit transactions.

The present condition of field 59.800 « service attribute » is modified.

Implementation:

Change in Volume 2 - Data Field Dictionary

2.3.3 Definition of the data fields used

Field 59

Format : LLLVAR b...255

National data

...

TYPE = 0800: SERVICE ATTRIBUTE

Data format: n2

Number of bytes transported: 1

| Values | Description |
|--------|------------------------------|
| 1 | No-show |
| 2 | Pre-Authorisation |
| 3 | Additional pre-authorisation |
| 5 | Aggregation |
| 6 | First recurring |
| 7 | Subsequent recurring |
| 11 | Debt recovery |

Change to Volume 3.2 – Face-to-face payment / ADM / SST / LAT payment

| | |
|---|---|
| A: Payment autho. req. (EMV chip and contactless EMV chip): 0100 | B: Payment autho. request (magn. stripe and contactless magn. stripe): 0110 |
| C : Resp. to payment autho. req. (contact and contactless) : 0110 | |

| N° | Definition | A | B | C |
|------|-------------------|-------|-------|------|
| ... | | | | |
| 59 | National data | C(2) | C(2) | C(2) |
| ... | | | | |
| 0800 | Service attribute | C(46) | C(46) | FQ |
| ... | | | | |

| | |
|--|---|
| A: Proximity wallets payment authorization request: 0100 | B: Response to proximity wallets payment autho. request: 0110 |
|--|---|

| N° | Definition | A | B |
|------|-------------------|-------|------|
| ... | | | |
| 59 | National data | C(2) | C(2) |
| ... | | | |
| 0800 | Service attribute | C(46) | FQ |
| ... | | | |

| N° | COMMENTS |
|-----|--|
| 2 | See list of types |
| ... | |
| 46 | Mandatory for debit transaction if pre-authorisation, additional invoice or cumulative amount Mandatory if needed to identify the corresponding service |

Change to Volume 3.3 – Remote payment and secured electronic commerce

| | |
|---|--|
| A: Authorisation request : 0100 | B: Response to authorisation request: 0110 |
|---|--|

| N° | Definition | A | B |
|------|-------------------|----------------------|------|
| ... | | | |
| 59 | National data | C(2) | C(2) |
| ... | | | |
| 0800 | Service attribute | C(13 46) | FQ |
| ... | | | |

| N° | COMMENTS |
|-----|---|
| 2 | See list of types |
| ... | |
| 13 | Mandatory for a debit transaction if ERT=27, 28 or 80, mandatory for a debit transaction if cumulative amount mandatory if available for a refund |
| | |
| 46 | Mandatory if needed to identify the corresponding service |
| ... | |

1214 - Reservation and rental (PLBS) - new payment use case

Background:

A new payment use case is identified for reservation and rental payments.

Implementation:

Change in Volume 2 - Data Field Dictionary

2.3.2. Definition of data fields used

| | |
|----------|--------------------------|
| Field 56 | Format : LLLVAR b ...255 |
|----------|--------------------------|

Additional data

...

➤ **TYPE = 0028: PAYMENT USE CASE**

Data format: n2

Number of bytes transported : 1

Identification of remote payment use cases.

| Values | Description |
|---------|---|
| 01 | Single payment |
| 02 | Recurring subscription - Fixed amount and limited duration subscription |
| 03 | Instalment payment |
| 04 | Shipment payment |
| 05 | Recurring subscription - Other subscription |
| 06 | Reservation and rental payment |
| 0607-99 | RFU |

1232 - Extension of the message sent back to the initiator

Background:

One specific TRD "Titres Restaurant dématérialisés" need is to be able to manage a 100 characters-size length message to send by the sender to the acceptance system because the actual data (field 44 type BC) is too short.

The user can use or field 44 type BC as actually or the new field to send back information to the acceptance system.

Implementation:

Field 119 created in change sheet 1212 will contain the extended message sent to the initiator.

Change to Volume 2 – Data dictionary

2.3.1. Alphabetical list

| Data element | Field no. | Sub-field no. |
|---|-----------|---------------|
| ... | | |
| Extended message to the transaction initiator | 119 | 00BC |

2.3.2. List by field number

| No. | Type | Name | Format |
|-----|------|---|-----------|
| 119 | 00BC | Extended message to the transaction initiator | ans ..101 |

2.3.3. Definition of the data fields used

Field 119 **Format : LLL2VAR b...999**

Reserved for national use

☐ **Data type** b2

| Type | Description | Repeatability |
|------|---|---------------|
| 00BC | Extended message to the transaction initiator | |

☐ **Data length** b2

☐ **Data value.**

TYPE = 00BC: EXTENDED MESSAGE TO THE TRANSACTION INITIATOR

Data format: ans...101

Number of bytes transported: ...101

The variable contains a text for the transaction initiator.

☐ **Control character** ans1

| Values | Description |
|--------|---|
| 0 | Reserved |
| 1 | Print |
| 2 | Display |
| 3 | Print and display |
| 4 | Print for cardholder only |
| 5 | Display for cardholder only |
| 6 | Print and display for the cardholder only |
| 7 | Print for acceptor only |
| 8 | Display for acceptor only |
| 9 | Print and display for the acceptor only |
| A | Print for the acceptor and the cardholder |
| B | Display for the acceptor and the cardholder |
| C | Print and display for the acceptor and the cardholder |
| F | Reserved for private use |

☐ **Response message** ans...100

Change in Volume 3.2 – Face-to-Face payment/Unattended payment

7. Description of messages

A: Payment autho. req. (EMV chip and contactless EMV chip) : **0100**
B: Payment autho. request (magn. Stripe and contactless magn. stripe) : **0100**
C: Resp. to payment autho. Req (contact and contactless) : **0110**

| N° | Description | A | B | C |
|------|---|---|---|------|
| ... | | | | |
| 119 | Reserved for national use | . | . | C(2) |
| ... | | | | |
| 00BC | Extended message to the transaction initiator | . | . | F |
| ... | | | | |

A: Proximity wallets payment authorization request : **0100**
B: Response to proximity wallets payment autho. request : **0110**

A: Payment reversal request : **0400/0401**
B: Response to Payment reversal request : **0410**

| N° | Description | A | B |
|------|---|---|------|
| ... | | | |
| 119 | Reserved for national use | . | C(2) |
| ... | | | |
| 00BC | Extended message to the transaction initiator | . | F |
| ... | | | |

Change in Volume 3.3 – Remote payment secured electronic commerce

7. Description of messages

A: Authorization request : **0100**
B: Response to authorization request : **0110**

| N° | Description | A | B |
|------|---|---|------|
| ... | | | |
| 119 | Reserved for national use | . | C(2) |
| ... | | | |
| 00BC | Extended message to the transaction initiator | . | F |
| ... | | | |

A: Payment reversal request : **0400/0401**
B: Response to Payment reversal request : **0410**

| N° | Description | A | B |
|------|---|---|------|
| ... | | | |
| 119 | Reserved for national use | . | C(2) |
| ... | | | |
| 00BC | Extended message to the transaction initiator | . | F |
| ... | | | |

1236 - BIN 8

Background:

Corrections and editorial changes to the 1.6.0 version

Present protocols use the data "Bank BIN" to identify an acquirer in the ecosystem, sometimes linked to its bank code. This data is named "Bank BIN" for historical reasons. Issuer BIN length will be soon increased to 8 digits but the acquirer identifier length will be kept. In order to avoid confusion, the data has been renamed "Acquirer identifier".

Implementation:

Volume 2 – Data dictionary

2.3.3. Definition of the data fields used

| Field 32 | Format : LLVAR n...11 |
|----------|-----------------------|
|----------|-----------------------|

Acquiring institution identification code

This field identifies the acquirer of the transaction, i.e. the institution presenting the transaction. Field 32 contains the identifier of the acquirer bank.

The structure is the following:

- ☐ ~~Bank BIN~~ Acquirer Identifier _____n6
- ☐ Bank code _____n5

1244 - Relay resistance protocol

Background:

A relay attack is where a fraudulent terminal is used to mislead an unsuspecting cardholder into transacting, where the actual transaction is relayed via a fraudulent Card (or simulator) to the authentic terminal of an unsuspecting merchant. It may also be that a fraudulent reader is used without the cardholder being aware of the transaction.

Relay resistance protocol aims to stop this kind of attack.

Implementation:

Change to Volume 2 – Data dictionary

2.3.3. Definition of the data fields used

Field 59 **Format : LLLVAR b...255**

Reserved for national use

...

TYPE = 0101: MESSAGE REASON CODE

Data format: n4

Transported lenght: 2

| Value | Description |
|-------|-----------------------------------|
| ... | |
| 1681 | Suspected relay attack |
| 1682 | Relay attack detection processing |
| ... | |

...

GENERAL PRINCIPLES

"According to the terms of paragraphs 2 and 3 of article L.122.5, the French Intellectual Property Code only authorizes "copies or reproductions strictly reserved for the private use of the copier and not intended for collective use" and also, subject to the explicit naming of the author and the source, that "analyses and short quotations are justified by their critical, controversial, educational, scientific or informative nature", while any representation or reproduction in full or in part, without the consent of the author or of his/her assigns or inheritors, is unlawful (article L.122.4). Any representation or reproduction not adhering to the aforementioned conditions, by any means whatsoever, would therefore constitute an infringement punishable by articles L.335.2 et seq. of the French Intellectual Property Code".

TABLE OF CONTENTS

| | |
|--|----|
| GENERAL PRINCIPLES | 1 |
| 1 INTRODUCTION | 3 |
| 2 PURPOSE OF AUTHORISATION PROTOCOL | 4 |
| 3 GENERAL PRINCIPLES | 5 |
| 3.1 ROLE OF CB2A AUTHORISATION PROTOCOL | 5 |
| 3.2 DEFINITIONS | 6 |
| 3.3 SERVICES | 6 |
| 3.3.1 Authorisation service | 6 |
| 3.3.2 Network management service | 6 |
| 4 OVERVIEW OF MESSAGES | 7 |
| 4.1 AUTHORISATION REQUESTS | 7 |
| 4.1.1 Dialog without network management | 7 |
| 4.1.2 Dialog with network management | 8 |
| 4.2 REVERSAL REQUESTS | 9 |
| 4.2.1 Dialog without network management | 9 |
| 4.2.2 Dialog with network management | 10 |
| 5 DEFINITION AND MANAGEMENT OF TIMERS | 11 |
| 5.1 NON-RESPONSE TIMER (TNR) | 11 |
| 5.2 GUARANTEED RESPONSE TIMER (TGR) | 11 |
| 5.3 INACTIVITY MONITORING TIMER (TSI) | 15 |
| 5.4 MAINTAINED ACTIVITY TIMER (TMA) | 16 |
| 5.5 MAINTAINED ACTIVITY MONITORING TIMER (TSM) | 19 |
| 5.6 EXAMPLES | 21 |
| 5.7 DEFAULT RECOMMENDATIONS | 21 |

1 INTRODUCTION

The present volume contains the following information:

- * Purpose of the authorisation protocol
- * General principles and role of CB2A Authorisation
- * Examples of standard exchanges

2 PURPOSE OF AUTHORISATION PROTOCOL

The CB2A Authorisation protocol is used in dialogs between an acceptance system and an acquirer system.

This authorisation service must have at least one authorisation request transaction.

Network management messages enable Big Retailers to manage the dialogs.

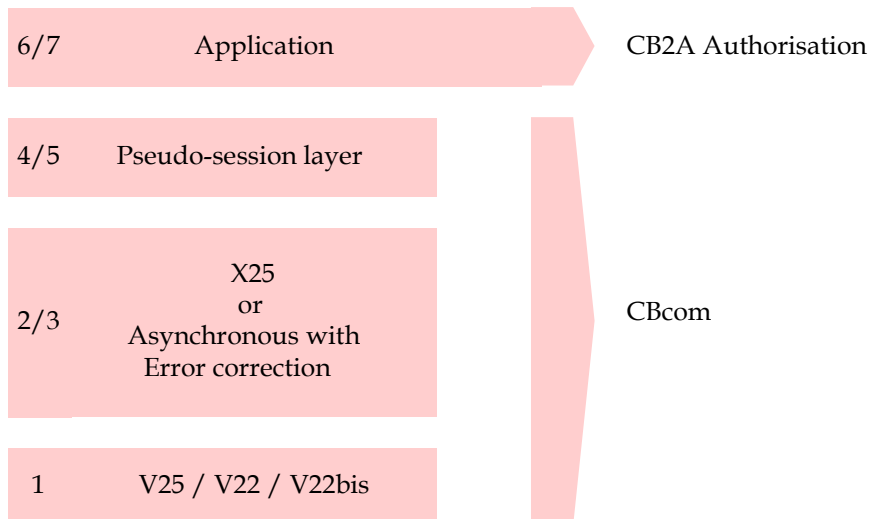
3 GENERAL PRINCIPLES

3.1 ROLE OF CB2A AUTHORISATION PROTOCOL

The CB2A Authorisation protocol and CBcom specifications are complementary documents. Their common features are the following:

- Optimisation of response times
- Compliance with international standards
- Simple to implement
- Easy to include new functionalities
- Secure access to the authorisation system.

The architecture is based on the OSI reference model and can be represented as follows:



3.2 DEFINITIONS

The term **message** refers to a set of data elements used to send information from an Acceptor to an Acquirer, and vice versa.

A **transaction** contains a request message and a request response message.

The term **equipment** refers to a hardware device in which the CB electronic payment software has been installed.

This definition includes stand-alone terminals, Online systems (Terminal + Server), systems with electronic payment software, CB electronic payment modules integrated in distribution systems for goods or services.

The term **Terminal** refers to any acceptance point device for cards.
This definition includes all devices able to acquire cardholder data.

3.3 SERVICES

3.3.1 AUTHORISATION SERVICE

This service is based on authorisation requests and the following messages:

- * 0100: authorisation request
- * 0110: authorisation request response.

3.3.2 NETWORK MANAGEMENT SERVICE

There are several types of network management messages:

- **sign-on**, used by a system to open a dialog in the Authorisation service
- **sign-off**, used by a system to close a dialog in the Authorisation service
- **echo test**, used by an Acceptor system to keep a session open, maintain an activity online, and check the status of the connection to its Acquirer partner.

Network management uses the following messages:

- 0800: request
- 0810: request response

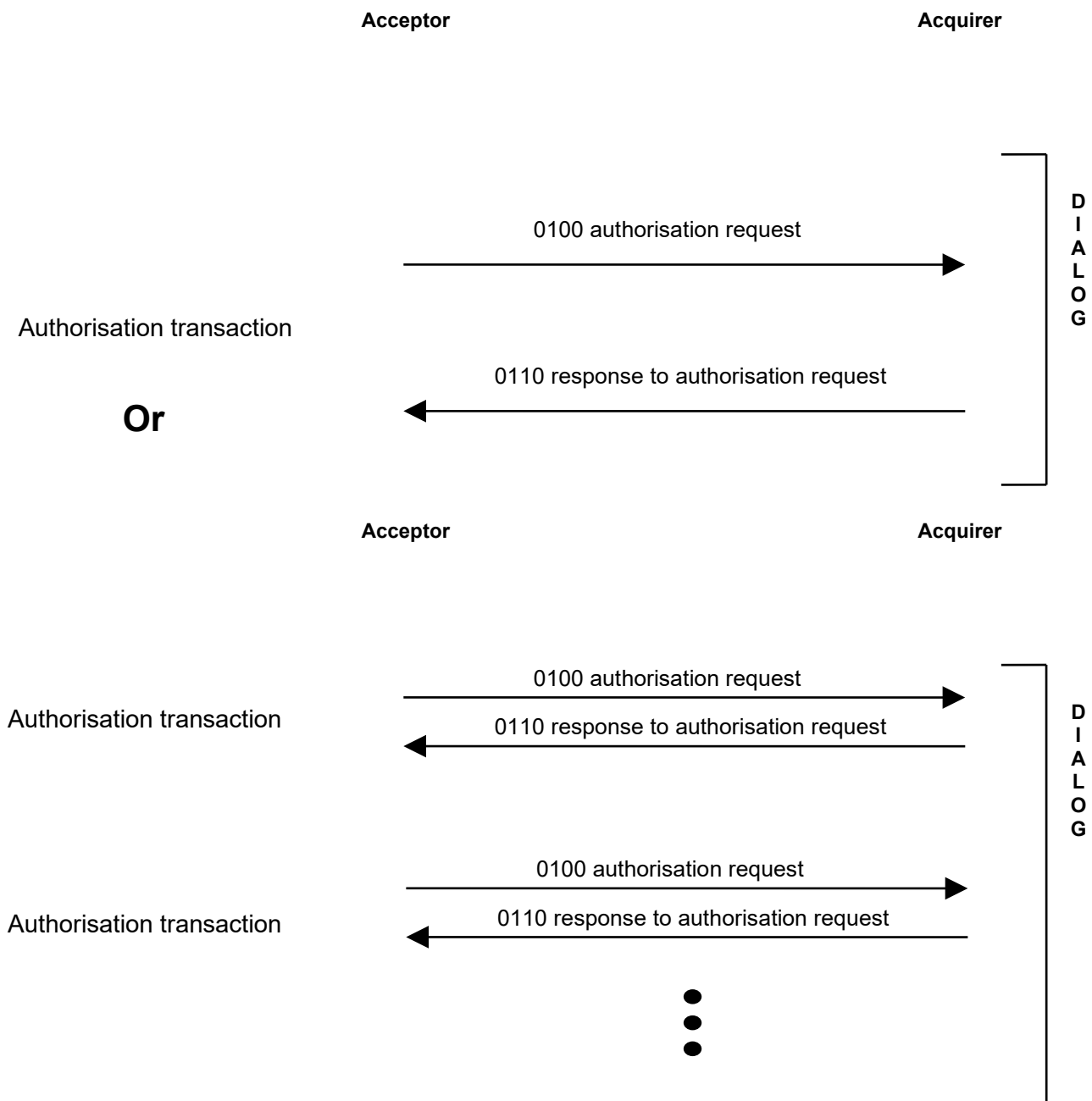
Only systems likely to maintain a session open for executing the authorisation service would find this service of benefit. These messages have therefore been introduced exclusively for use by "Big Retailer" Acceptors and Acquirer systems.

4 OVERVIEW OF MESSAGES

4.1 AUTHORISATION REQUESTS

4.1.1 DIALOG WITHOUT NETWORK MANAGEMENT

For acceptance systems that do not use the network management service, it is possible to have a single authorisation request or to have a succession of several authorisation requests. In this case, the dialog will be managed by both systems (acceptor and acquirer) by means of timers.



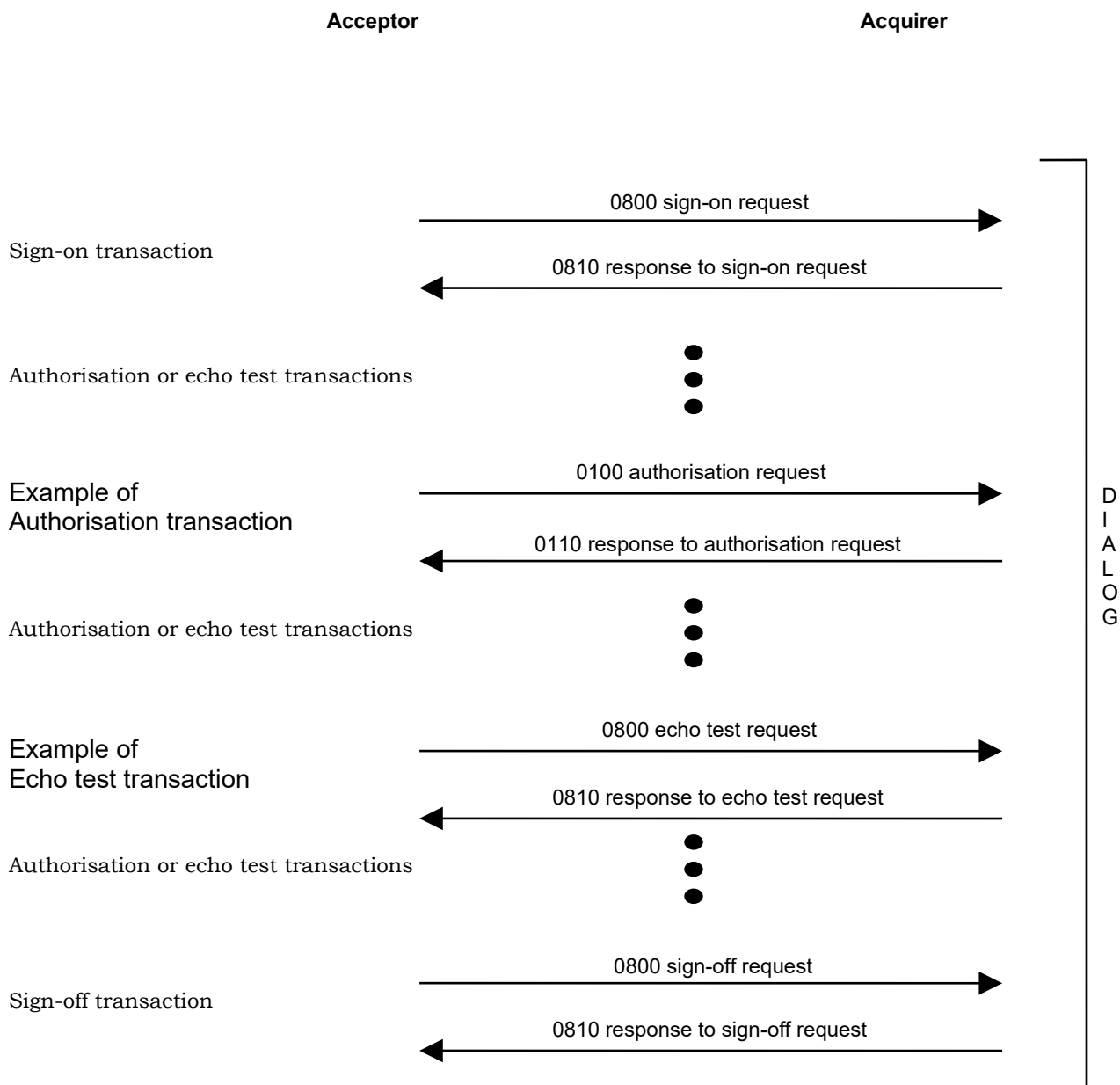
4.1.2 DIALOG WITH NETWORK MANAGEMENT

The dialog is always opened with a "sign-on" transaction.

The dialog is closed by a "sign-off" transaction unless there is a technical problem.

Only the acceptance system is authorised to initiate requests.

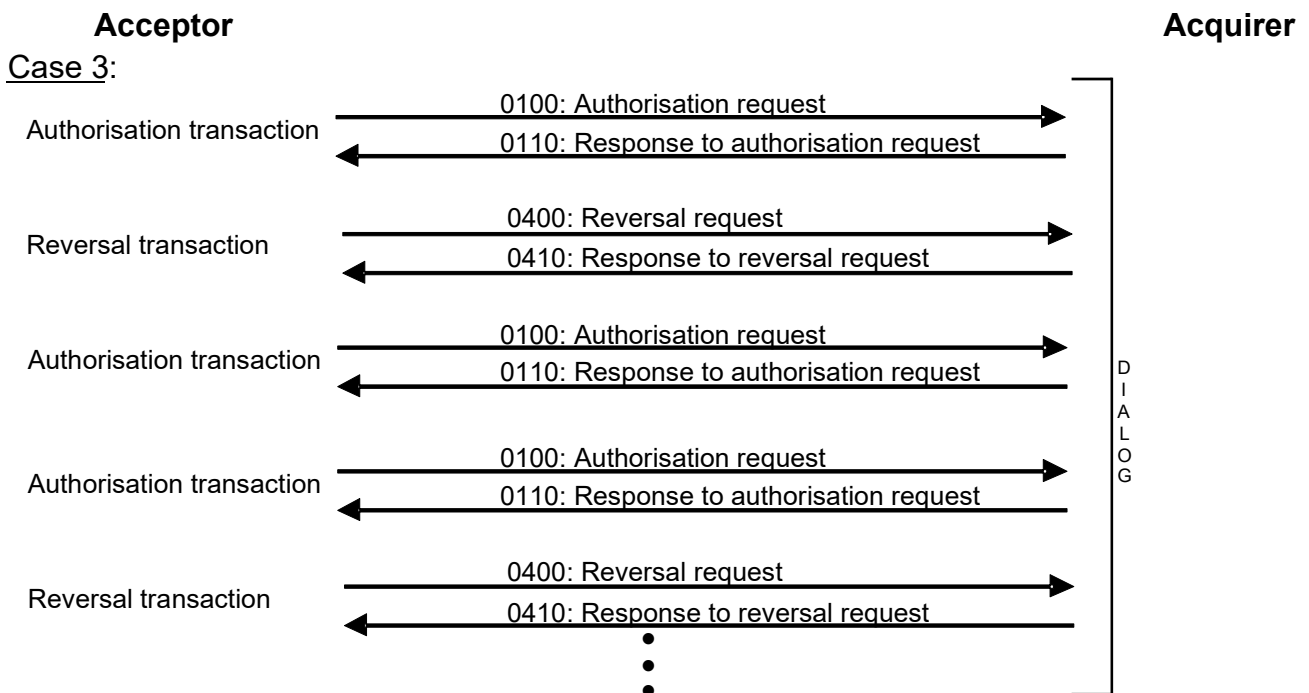
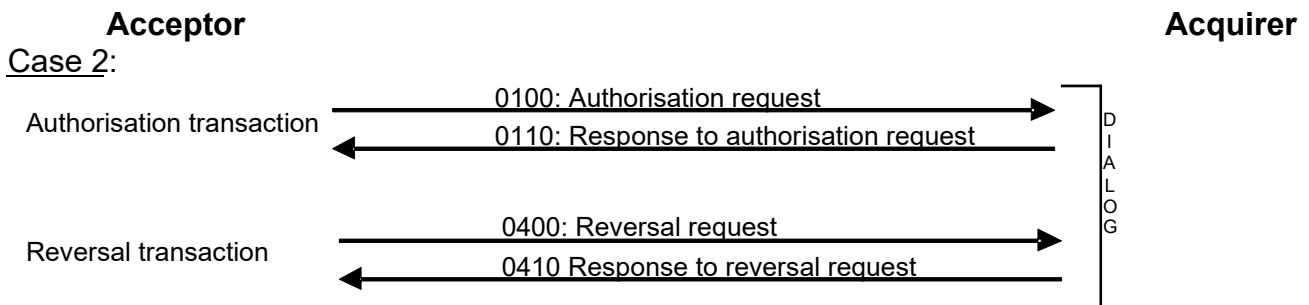
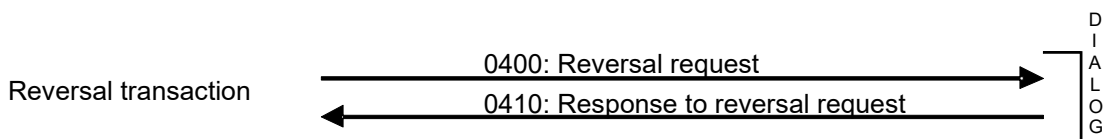
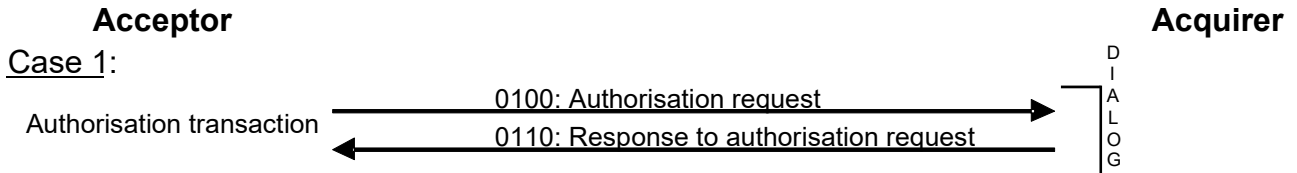
Between the sign-on and sign-off transactions, there may be a succession of authorisation and echo test transactions, which do not take place in any specified order.



4.2 REVERSAL REQUESTS

4.2.1 DIALOG WITHOUT NETWORK MANAGEMENT

For acceptance systems that do not use the network management service, it is possible to have a single authorisation/reversal request or to have a succession of several authorisation/reversal requests. In this case, the dialog will be managed by both systems (acceptor and acquirer) by means of timers.



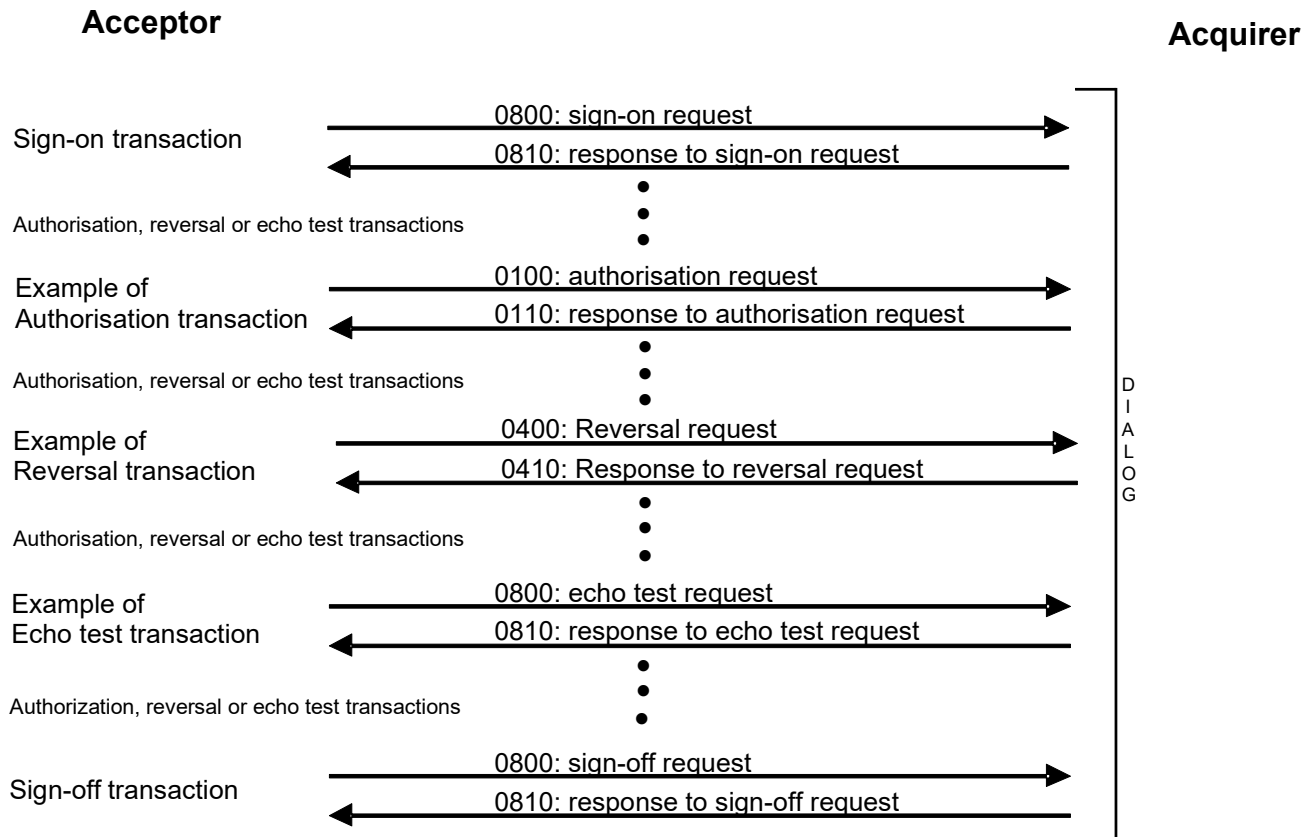
4.2.2 DIALOG WITH NETWORK MANAGEMENT

The dialog is always opened with a "sign-on" transaction.

The dialog is closed by a "sign-off" transaction unless there is a technical problem.

Only the acceptance system is authorised to initiate requests.

Between the sign-on and sign-off transactions, there may be a succession of authorisation, reversal and echo test transactions, which do not take place in any specified order.



5 DEFINITION AND MANAGEMENT OF TIMERS

This section describes the values related to the different timers for the Authorisation function.

The timers can only be negotiated in the long connection request (IPDU CN) or in the data transfers (IPDU DE) of network management messages (Sign-On/Sign-Off, Echo test).

In addition, during the timer negotiation the negotiated value takes effect as from the response until a new negotiation.

5.1 NON-RESPONSE TIMER (TNR)

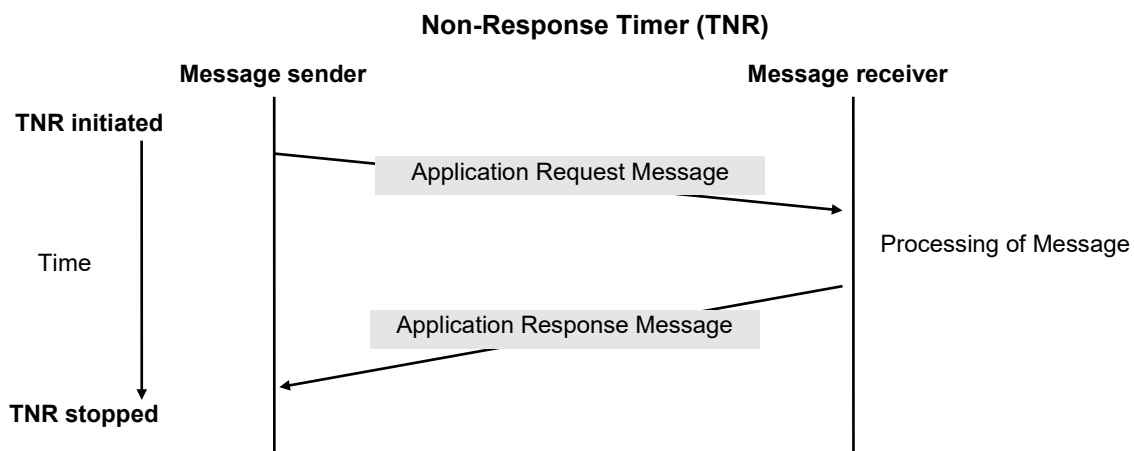
The issuing system monitors the response from the receiving system via the non-response timer (TNR). This timer is managed and initiated by the system which sent the message.

Description of timer:

- * Can be negotiated during the connection or during the transfer.
- * The issuing system initiates the non-response timer (TNR) when it sends a Request message.
- * The issuing system stops the non-response timer (TNR) when it receives the Response message.

Expected behaviour in case of a timeout:

- * IPDU_AB with a response code PI01 set to 27 is sent (TNR timer timeout).



5.2 GUARANTEED RESPONSE TIMER (TGR)

The guaranteed response timer (TGR) enables the receiving system to monitor the sending of the response.

Description of timer:

- * Can be negotiated during the connection or during the transfer.
- * The receiving system initiates the guaranteed response timer (TNR) when it sends a **Request** message.
- * The receiving system stops the guaranteed response timer (TNR) when it sends the Response message.

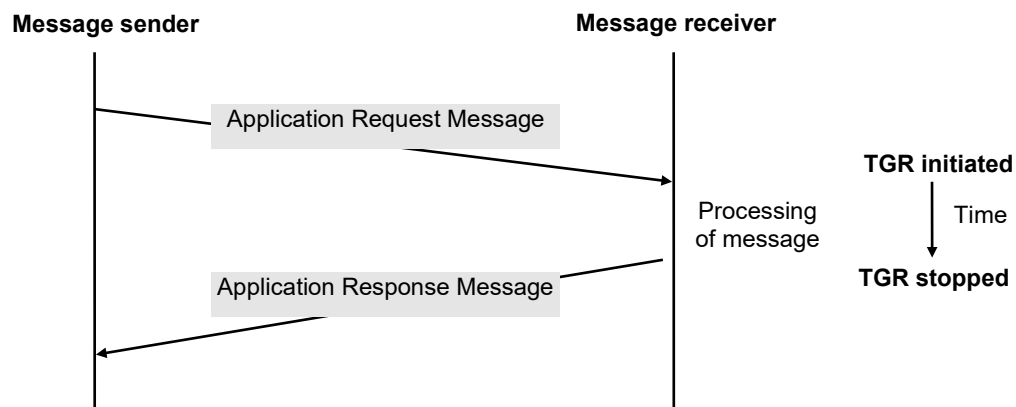
Expected behaviour in case of a timeout:

- * IPDU_AB with a response code PI01 set to 26 is sent (TGR timeout).
- * IPDU_AB with a response code PI01 set to 27 is sent (TNR timer timeout).

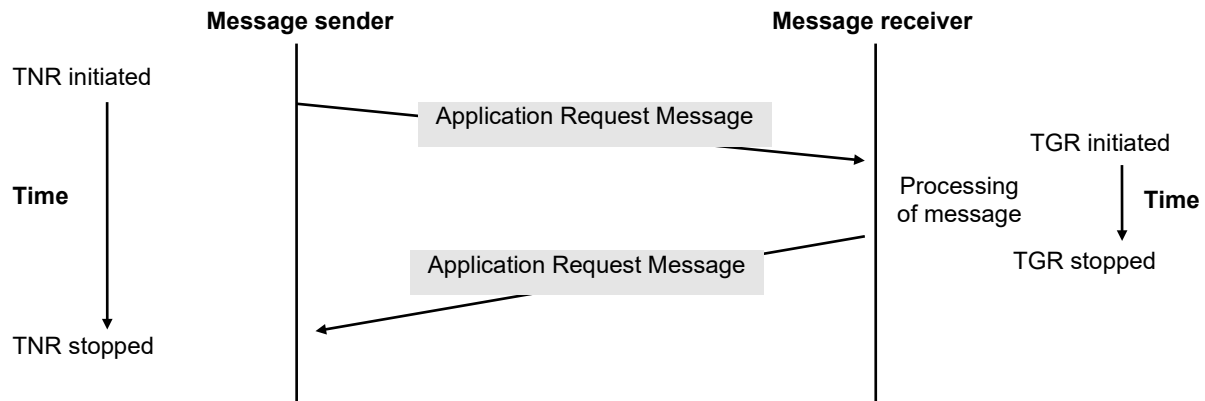
In all cases, the following is essential for the management of the dialog:

$$\text{TNR} > \text{TGR} + 2 * (\text{maximum transit time})$$

Guaranteed Response Timer (TGR)



Combination of Non-Response Timer (TNR) and Guaranteed Response Timer (TGR)



The TNR and TGR timers are initiated when a Request message that requires a Response is sent or received.

5.3 INACTIVITY MONITORING TIMER (TSI)

The inactivity monitoring timer (TSI) enables the receiving system to manage the absence of dialog (Pseudo-Session layer). The value can be negotiated.

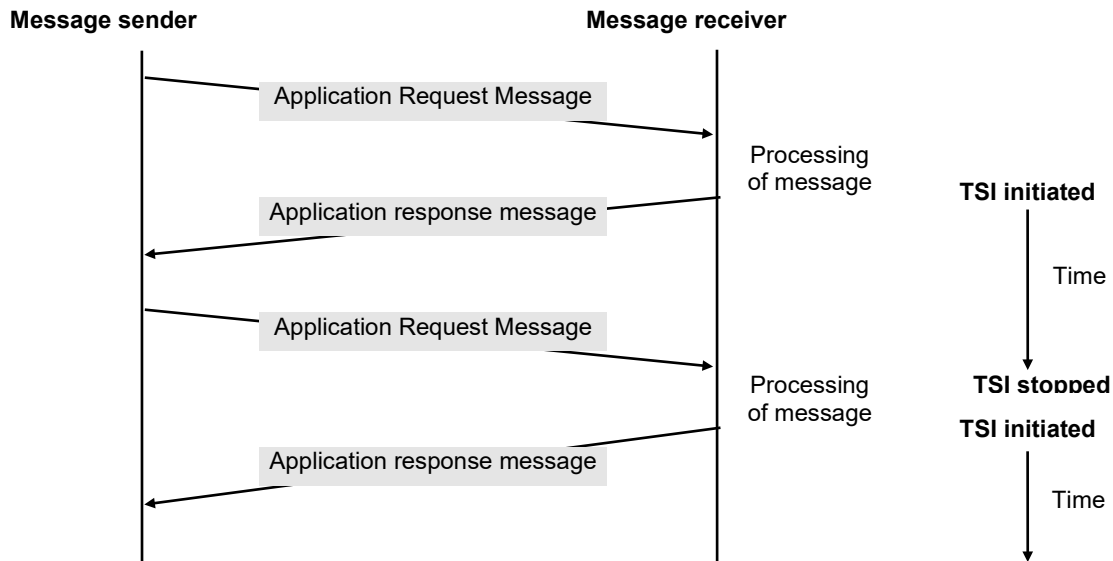
Description of timer:

- * Can be negotiated.
- * The receiving system initiates the inactivity monitoring timer (TSI) when it sends a Response message.

Expected behaviour in case of a timeout:

- * IPDU_AB with a response code PI01 set to 25 (TSI timeout).

Inactivity Monitoring Timer (TSI)



5.4 MAINTAINED ACTIVITY TIMER (TMA)

A specific message (echo test), which is sent when the maintained activity timer (TMA) times out, enables the sending system to confirm the availability of and connection to the receiving system.

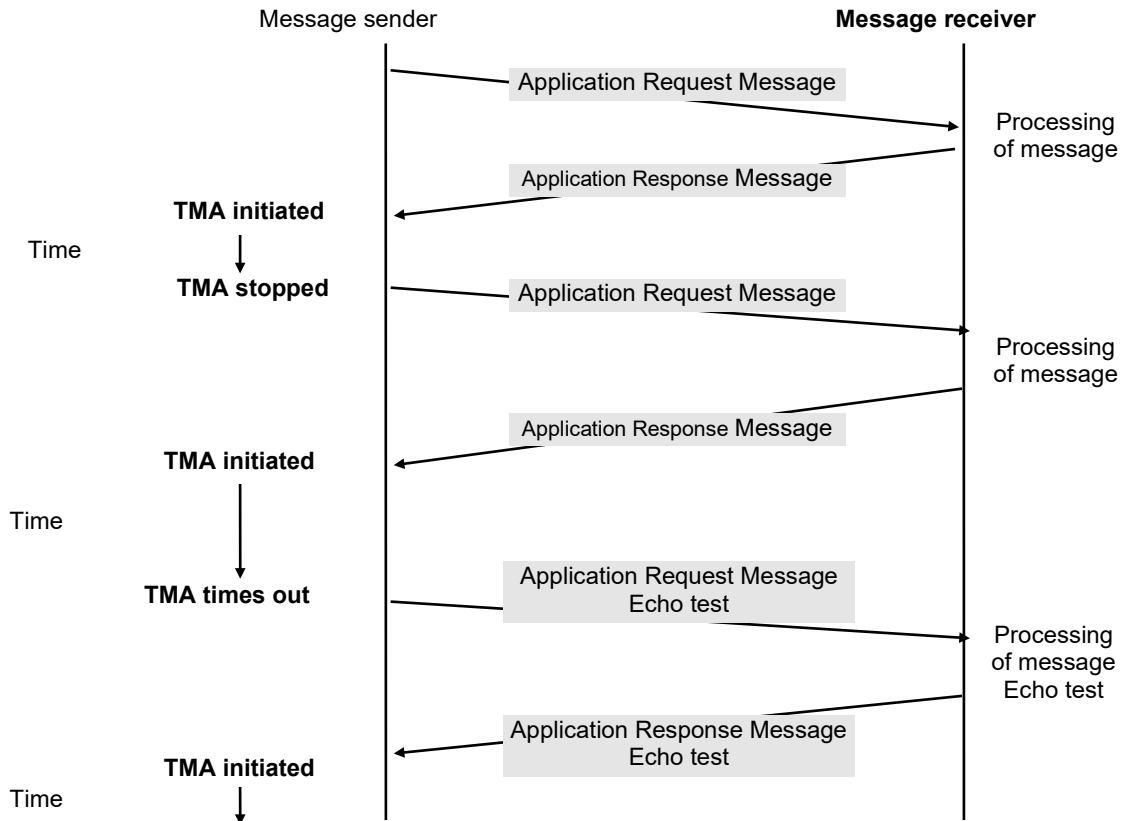
Description of timer:

- * The different parties must agree to use this timer.
- * Can be negotiated.
- * The sending system initiates the Maintained Activity Timer (TMA) when it receives a response and does not intend to send a new request.
- * The sending system stops the TMA when it wants to send transactions related to a service.

Expected behaviour in case of a timeout:

- * The sending system sends an echo test message when the maintained activity timer (TMA) times out. It reactivates the timer it receives the response to the maintained activity message (echo test).

Maintained Activity Timer (TMA)



5.5 MAINTAINED ACTIVITY MONITORING TIMER (TSM)

The two systems that agreed to monitor maintained activity (echo test) must execute mutual monitoring.
This monitoring is executed as follows:

- * The sending system activates the maintained activity timer (TMA).
- * The receiving system activates the maintained activity monitoring timer (TSM).

Description of timer:

- * The different parties must agree to use this timer.
- * Cannot be negotiated.
- * The receiving system activates the TSM as soon as it is possible to receive an echo test, in accordance with the defined rules.
- * The receiving system activates its maintained activity monitoring timer (TSM) when it has sent the response to the maintained activity message (echo test).
- * It stops the timer it when it receives a request message.

Expected behaviour in case of a timeout:

- * IPDU_AB with a response code PI01 set to 28 is sent (TSM timeout).

The receiving system deducts a possible TSM value from the negotiated value of the TMA, in compliance with the $TSM > TMA$ rule.

Note about the maintained activity monitoring timer (TSM) and the inactivity monitoring timer (TSI)

From a functional point of view, the TSM is a TSI whose value is higher than that of the TSI.

The TSI is activated upon receiving a message that does not require a response, but which requires another message or the sending of a response.

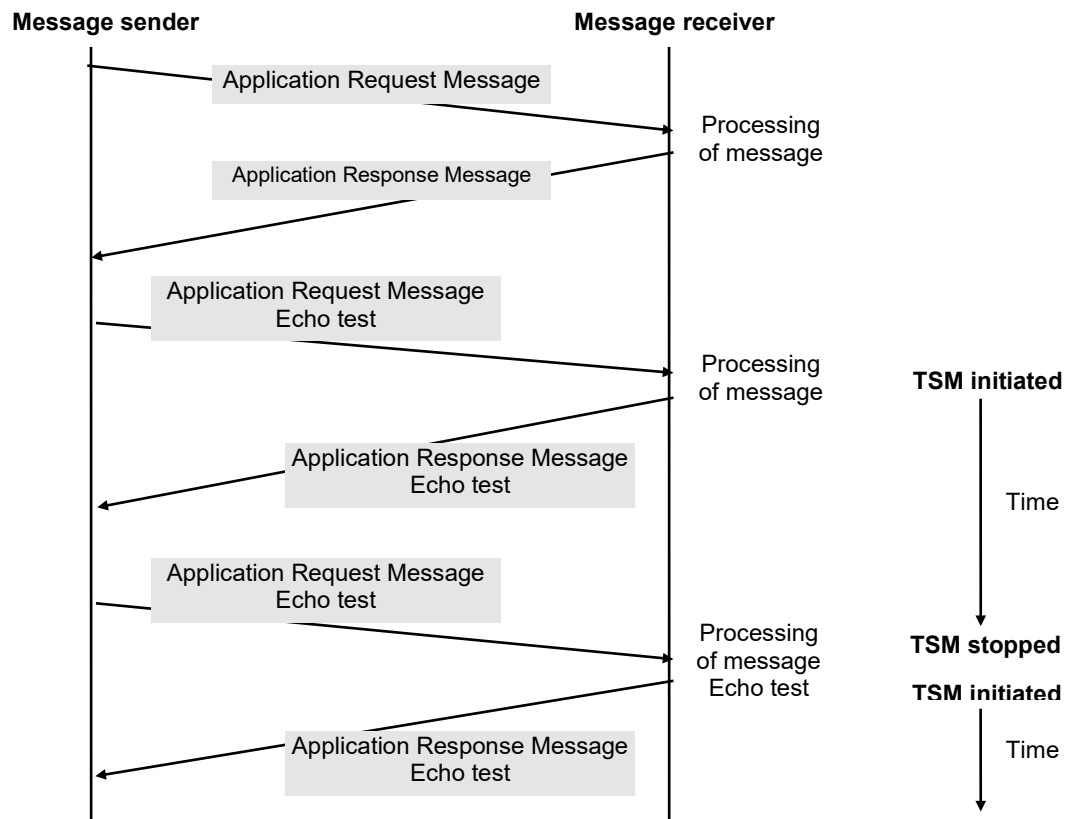
The purpose of the TSM is to monitor that activity over the line is properly maintained by echo test messages.

In transaction processing, the inactivity monitoring timer (TSI) and the maintained activity monitoring timer (TSM) have the same purpose (see the summary diagram below). As a result, they have the same meaning.

Meaning of a timeout:

- * The sending system is no longer online as an echo-test message should have been received.

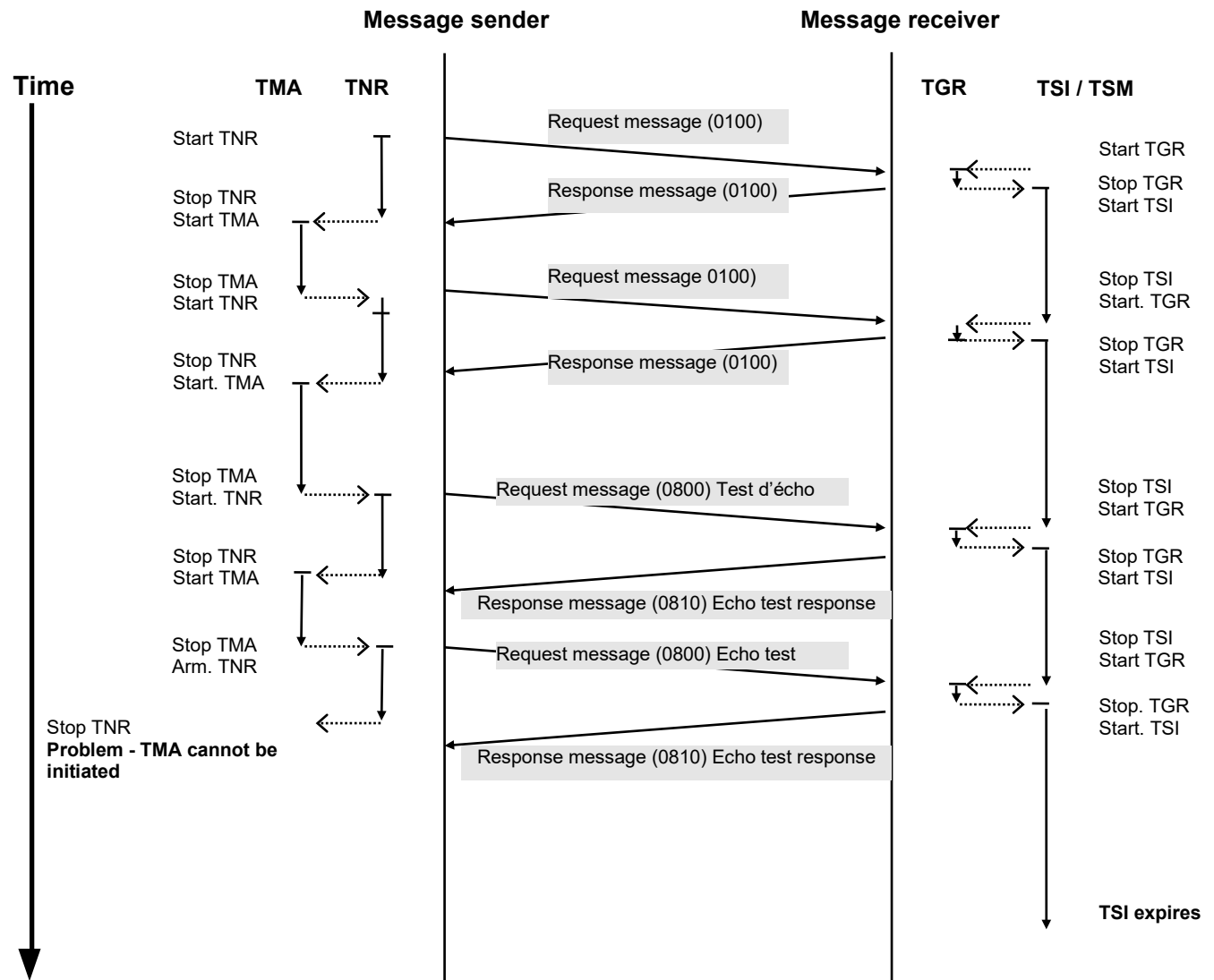
Maintained Activity Monitoring Timer (TSM)



5.6 EXAMPLES

Summary of TNR, TGR, TSI, TMA, TSM timers in transaction processing

In this context TSI and TSM have the same meaning



5.7 DEFAULT RECOMMENDATIONS

| Timer | Negotiable | Minimum value | Maximum value | Recommended value | Constraint |
|-------|------------|---------------|---------------|-------------------|------------|
| TNR | No | - | - | 50 sec | |
| TGR | No | - | - | 30 sec | < TNR |
| TSI | Yes | 2 min | 30 min | 13 min | |
| TMA | Yes | 2 min | 30 min | 12 min | < TSI |
| TSM | No | - | - | 15 min | > TSI |

DATA FIELD DICTIONARY

"According to the terms of paragraphs 2 and 3 of article L.122.5, the French Intellectual Property Code only authorizes "copies or reproductions strictly reserved for the private use of the copier and not intended for collective use" and also, subject to the explicit naming of the author and the source, that "analyses and short quotations are justified by their critical, controversial, educational, scientific or informative nature", while any representation or reproduction in full or in part, without the consent of the author or of his/her assigns or inheritors, is unlawful (article L.122.4). Any representation or reproduction not adhering to the aforementioned conditions, by any means whatsoever, would therefore constitute an infringement punishable by articles L.335.2 et seq. of the French Intellectual Property Code".

TABLE OF CONTENTS

| | | |
|--------|---|----|
| 1. | PREFACE..... | 3 |
| 1.1. | PURPOSE OF DOCUMENT | 3 |
| 1.2. | TECHNICAL INFORMATION PROVIDED IN DOCUMENT | 3 |
| 2. | DATA FIELD DICTIONARY | 4 |
| 2.1. | Description of data messages | 4 |
| 2.1.1. | Message structure..... | 4 |
| 2.1.2. | Message type identifier | 4 |
| 2.1.3. | Bitmap | 4 |
| 2.2. | Data format and coding | 5 |
| 2.2.1. | Notation conventions..... | 5 |
| 2.2.2. | Presentation conventions | 5 |
| 2.2.3. | Data field coding | 6 |
| 2.2.4. | Rules for filling a non-significant data element based on the field format or type used | 7 |
| 2.2.5. | Format for amounts | 7 |
| 2.2.6. | Field Structure..... | 8 |
| 2.3. | Data field descriptions | 11 |
| 2.3.1. | Alphabetical list | 11 |
| 2.3.2. | List by field number | 14 |
| 2.3.3. | Definition of data fields used | 18 |
| | Field 2 Format: LLVAR n ... 19..... | 19 |
| | Field 3 Format: n6..... | 19 |
| | Field 4 Format: n12..... | 19 |
| | Field 7 Format : n10 MMDDhhmmss | 20 |
| | Field 11 Format: n6..... | 20 |
| | Field 12 Format: n6 hhmmss | 20 |
| | Field 13 Format: n4 MMDD..... | 20 |
| | Field 14 Format: n4 AAMM | 20 |
| | Field 18 Format: n4..... | 20 |
| | Field 22 Format: n3..... | 21 |
| | Field 23 Format: n3..... | 21 |
| | Field 25 Format: n2..... | 22 |
| | Field 26 Format: n2..... | 22 |
| | Field 27 Format: n1..... | 22 |
| | Field 32 Format : LLVAR n ... 11..... | 22 |
| | Field 33 Format: LLVAR n ... 11..... | 23 |
| | Field 35 Format: LLVAR z ... 37 | 23 |
| | Field 37 Format: an12..... | 23 |
| | Field 38 Format: an6..... | 23 |
| | Field 39 Format: an2..... | 23 |
| | Field 41 Format: an8..... | 24 |
| | Field 42 Format: an15..... | 24 |
| | Field 43 Format: an40..... | 25 |
| | Field 44 Format: LLVAR ans 25..... | 25 |
| | Field 47 Format: LLVAR ans ... 255..... | 28 |
| | Field 48 Format: LLVAR ans ... 255..... | 31 |
| | Field 49 Format: n3..... | 32 |
| | Field 52 Format: b8...16 | 32 |
| | Field 53 Format: n16..... | 33 |
| | Field 54 Format: LLLVAR an ... 120..... | 34 |
| | Field 55 Format: LLLVAR b ... 255..... | 35 |
| | Field 56 Format: LLLVAR b ... 255..... | 41 |
| | Field 58 Format: LLLVAR ans ... 255..... | 50 |
| | Field 59 Format: LLLVAR b ... 255..... | 50 |
| | Field 70 Format: n3..... | 65 |
| | Field 90 Format: n42..... | 66 |
| | Field 95 Format: an42..... | 66 |
| | Field 112 Format: LLLVAR ans ... 255..... | 66 |
| | Field 115 Format: LLLVAR b ... 255..... | 69 |
| | Field 119 Format: LL2VAR b ... 999..... | 70 |

1. PREFACE

1.1. PURPOSE OF DOCUMENT

The Data Field Dictionary defines all the application data used by the CB protocols in compliance with the ISO 8583 (1987 version) standard.

It also specifies how the data is presented, i.e. the coding and format of the data fields.

Optional or mandatory use of data fields is not indicated in the Data Field Dictionary. This information is provided in the related reference documents.

1.2. TECHNICAL INFORMATION PROVIDED IN DOCUMENT

The Data Field Dictionary provides the following technical information:

- structure of data messages
- data coding rules
- data fields

It also indicates the message identifiers, fields, sub-fields and field values.

Important Note:

Transported data is subject to the rules defined in section 2.2, “DATA FORMAT AND CODING”. However, the final usage of the data element is described in the application.

2. DATA FIELD DICTIONARY

2.1. DESCRIPTION OF DATA MESSAGES

2.1.1. Message structure

The messages used by the CB2A AUTHORISATION protocol comply with the ISO 8583 standard.
Each message has one of the two following structures:

| | | | | | | |
|------------|--------|---------|-------|---------|-------|---------|
| Identifier | bitmap | field i | | field j | | field k |
|------------|--------|---------|-------|---------|-------|---------|

where i, j and k range from 2 to 64

or

| | | | | | | | |
|------------|--------|--------|---------|-------|---------|-------|---------|
| Identifier | bitmap | bitmap | field i | | field j | | field k |
|------------|--------|--------|---------|-------|---------|-------|---------|

where i, j and k range from 2 to 128.

A message includes the following parts:

- message type identifier
- 1 or 2 bitmaps
- data fields that appear by ascending field number within the message

2.1.2. Message type identifier

The message type identifier is a numeric 4-byte field coded in BCD.

This field is mandatory.

The identifiers used by the CB2A Authorisation protocol are the following:

| MTI ⁽¹⁾ | Meaning |
|--------------------|-------------------------------------|
| 0100 | Authorisation request |
| 0110 | Authorisation request response |
| 0400 | Reversal request |
| 0401 | Reversal request repeat |
| 0410 | Reversal request response |
| 0800 | Network management request |
| 0810 | Network management request response |

⁽¹⁾MTI = Message type identifier

2.1.3. Bitmap

Each bitmap contains 64 bits numbered from left to right.

Two bitmaps are defined. The first bitmap is mandatory, while the second is optional. The first bit of the first bitmap specifies the presence or absence of a second bitmap.

In each bitmap, a bit set to 1 indicates the presence of the associated field; a bit set to zero indicates its absence.

2.2. DATA FORMAT AND CODING

2.2.1. Notation conventions

The following tables list the notations used in the Data Fields Dictionary. These notations are used in the description of a field format and the value (or values) which are transported.

| Notation | Description |
|----------|---|
| a | alphabetic character ('A' to 'Z', 'a' to 'z') |
| n | numeric character ('0' to '9') |
| p | 'space' character |
| s | special character (space included) |
| an | alphanumeric character |
| as | alphabetic or special character |
| ns | numeric or special character |
| ans | alphanumeric or special character |
| b | binary data |
| z | codes relating to magnetic track 2 and/or 3 data |
| AA | year (2 numeric characters) |
| MM | month (2 numeric characters) |
| JJ | day (2 numeric characters) |
| hh | hour (2 numeric characters) |
| mm | minutes (2 numeric characters) |
| ss | seconds (2 numeric characters) |
| x | <p>"C" for credit, "D" for debit. Always associated with a numeric field which indicates a transaction amount. For example, x + n16 indicates credit or debit of an amount in 16 numeric characters. The amounts are associated with a specific meaning:</p> <ul style="list-style-type: none"> - "D" indicates a "cardholder debit" in the acceptor/acquirer relationship. It refers to an "acquirer bank debit", which means a "credit" for the acceptor. "D" = Acceptor credit - "C" indicates a "cardholder credit" in the acceptor/acquirer relationship. It refers to an "acquirer bank credit", which means a "debit" for the acceptor. "C" = Acceptor debit |

Table 1: Data type notations

| Notation | Description |
|----------|---|
| L | length of TLV (Type Length Value) |
| LL | coded on one byte and between 1 and 99 bytes |
| LLL | length coded on one byte and between 1 and 255 bytes |
| LL2 | length coded on two bytes and between 1 and 999 bytes |
| 3 | fixed-length of 3 units ⁽¹⁾ |
| ...15 | variable length up to 15 units ⁽¹⁾ |
| 3...15 | variable length of 3 to 15 units ⁽¹⁾ |

Table 2: Data length notations

(1) A unit is defined by the field type or the data element.

2.2.2. Presentation conventions

The following conventions are used in CB2A Authorisation:

- For fields with a TLV structure, the notation (12)(3)(456) refers to type 12, 3-byte length, set to '456'.
- In a data coding example, the notation [12][34][56] represents the hexadecimal value of the transported bytes.

2.2.3. Data field coding

2.2.3.1. Data in "numeric" format (n)

These data fields are coded in DCB.

2.2.3.2. Data in "binary" format (b) and 'z' format (Track 2 data)

These data fields are coded in binary.

If "character" data elements are transported in a binary field, a character set must be defined. In this context, EMV usually uses a limited ASCII character set (ASCII 128). For Cartes Bancaires purposes, the extended ASCII character set is used for data coding.

For the network, there is no alphabet conversion for fields of this type.

2.2.3.3. Data elements in "character" format (a, an, as, ns, ans, ...)

These data fields are coded in ASCII.

2.2.3.4. Summary table

The following table shows how the data in a given format is coded so that it can be transported inside a field in another format if necessary:

| Data format | Field format | | | |
|---|--------------|------------------------|------------------------------|----------------|
| | Numeric n | Binary b, ansb, ... | Characters a, an, ns, ... | Magstripe z |
| Numeric n | BCD (1) | | ASCII (2.1) | |
| Characters a, an, as, ns, ans, ... | | ASCII (3) | ASCII (2.2) | |
| Signed numeric x+n | | ASCII + BCD (4) | ASCII (2.3) | |
| Binary b, ansb, ansb, ... | | (5) | ASCII (6) | |
| Magstripe z | | | | (7) |

(1) BCD coding in quartets:

Data format: n12 (numeric, 12 positions)
 Data value: 12345
 Coding: (6 bytes) [00] [00] [00] [01] [23] [45]

(2) ASCII coding in bytes:

- (2.1) Data format: n12 (numeric, 12 positions)
 Data value: 12345
 ASCII coding: (12 bytes) [30] [30] [30] [30] [30] [30] [30] [31] [32] [33] [34] [35]
- (2.2) Data format: an12 (alphanumeric, 12 positions)
 Data value: AGENCE2
 ASCII coding: (12 bytes) [41] [47] [45] [4E] [43] [45] [32] [20] [20] [20] [20] [20]
- (2.3) Data format: x + n12 (signed numeric, 12 positions)
 Data value: C12345
 ASCII coding: (13 bytes) [43] [30] [30] [30] [30] [30] [30] [30] [31] [32] [33] [34] [35]

(3) ASCII coding in bytes:

*This coding is for transporting alphanumeric data in a binary format field.
This is possible when transporting EMV data, in which case the EMV standard requires that these data be coded using a limited ASCII character set.
For this reason, and for Cartes Bancaires purposes, the extended ASCII character set is used.*

Data format: ans12 (alphanumeric, 12 positions)
Data value: AGENCE 2
ASCII coding: (12 bytes) [41] [47] [45] [4E] [43] [45] [20] [32] [20] [20] [20] [20]

(4) Coding in ASCII (one byte) and in BCD (quartets):

*This coding is for transporting alphabetic and numeric data in a binary format field.
For Cartes Bancaires purposes, the following values are used for coding alphabetic data: [43] for Credit, and [44] for Debit.
These values represent the characters "C" and "D" in ASCII format.*

Data format: x + n12 (signed numeric, 12 positions)
Data value: C12345
ASCII coding: (7 bytes) [43] [00] [00] [00] [01] [23] [45]

(5) Binary coding (bytes):

Data format: b12 (binary, 12 positions)
Data value: 3CDE1245EF7684172048CBFF
Coding: (12 bytes) [3C] [DE] [12] [45] [EF] [76] [84] [17] [20] [48] [CB] [FF]

(6) Coding the data element's binary quartets in ASCII (bytes):

Data format: b6 (binary, 6 positions)
Data value: 3CDE1245EF76

Characters sent "3","C","D","E","1","2","4","5","E","F","7","6"

ASCII coding: (12 bytes) [33] [43] [44] [45] [31] [32] [34] [35] [45] [46] [37] [36]

(7) Coding of z-format data element in a z-format field:

Data format: z12 (12 positions)
Data value: 45567D874 (where D is the separator)
Coding: (6 bytes) [00] [04] [55] [67] [D8] [74]

2.2.3.5. Data in "bitmap" format (excluding field-presence bitmap)

In compliance with standard ASN.1 ITU-T Rec. X.690 of July 2002, the bits of a byte are numbered from 8 to 1, where bit 8 is the "most significant bit" and bit 1 the "least significant bit".

Bits 8 7 6 5 4 3 2 1
Numbering of bits in one-byte "bitmap" data

Bits 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
Numbering of bits in two-byte "bitmap" data

2.2.4. Rules for filling a non-significant data element based on the field format or type used

A non-significant data element is entirely filled with the pad character specific to its format unless its value is explicitly described.

2.2.5. Format for amounts

Amounts are expressed in the smallest unit of the currency (in cents for Euros) - see the list in ISO 4217.

2.2.6. Field Structure

2.2.6.1. Fixed-length fields

Fixed-length numeric fields are right-justified and left-filled with zeros if necessary. Binary fields occupy a whole number of bytes. Other fields are left-justified and right-filled with blanks.

Example: Coding the value '1000' in the "Transaction amount" field:
Field format: fixed, n12
Coding on 6 bytes: [00] [00] [00] [01] [00] [00]
where 0000000 pad character,
10000 transaction amount.

2.2.6.2. Variable-length fields

Variable-length fields are preceded by one byte or 2 bytes indicating the field length. This length is coded in binary. Depending on the field type, a variable-length field can be from 1 to 255 or 999 bytes long, up to the maximum length of the field format.

Variable-length numeric "n" or "z" fields (such as Track 2 data) are right-justified, with a leading zero if the length is an odd number (pad character).

Examples:

Coding the value '9876543210123456789' in the "Primary Account Number (PAN)" field
Field format: variable LLVAR n...19
Coding on 11 bytes: [13] [09] [87] [65] [43] [21] [01] [23] [45] [67] [89]
where 13 length: 19 positions (13 in hex)
0 pad character
9876543210123456789 Primary Account Number in 19 positions

Coding the value '9876543210123456' in the "Primary Account Number (PAN)" field
Field format: variable LLVAR n...19
Coding on 9 bytes: [10] [98] [76] [54] [32] [10] [12] [34] [56]
where 10 length: 16 positions (10 in hex)
9876543210123456 Primary Account Number in 16 positions

2.2.6.3. Fields with a TLV (Type Length Value) structure

TLV fields are variable-length fields containing one or more data elements with a TLV structure. They are structured as follows:

| | | | |
|--------------------|----------------|-----|----------------|
| Total field length | Data element 1 | ... | Data element n |
|--------------------|----------------|-----|----------------|

The total field length, as for all variable-length fields, is coded in binary on 1 byte. It expresses the length of the data elements as a number of bytes.

A data element is structured as follows:

- "T": data type;
- "L": data length (1 to 255). This is not included in the data length calculation. It expresses the number of bytes able to transport the value "V" that follows.
- "V": value of the data element based on the number of characters defined by the length.

A TLV field therefore has the following structure:

| Total length of field | Data element 1 | | | ... | Data element n | | |
|-----------------------|----------------|----------|---------|-----|----------------|----------|---------|
| | Type 1 | Length 1 | Value 1 | | Type n | Length n | Value n |

Data elements in a TLV field can be placed in any order. They are not necessarily placed in ascending order of the type.

The types related to EMV data are always coded in 2 bytes. They are right-justified and left-filled with zeros if necessary.

Example: "9F35" ('terminal type') is the coding in 2 bytes of EMV tag "9F35".
"0082" (Application Interchange Profile) is the coding in 2 bytes of EMV tag "82".
Data element coding varies according to the type (character/binary) of the TLV field.

A. "Character" TLV fields

The data elements of a TLV "character" field have an "ans" format. As a result, they are coded in ASCII. Each data element is coded as follows:

- "T": 2 characters (2 bytes)
- "L": 2 characters (2 bytes); the length is right-justified and left-filled with zeros
- "V": the number of characters (bytes) is defined by the length

Example: coding of field 44 (TLV field, LLVAR ans...25)

Representation(14)_L(AA)_{T1}(4)_{L1}(0021)_{V1}(BD)_{T2}(2)_{L2}(15)_{V2}

L : 14 (total field length)
T1 : AA (incorrect field)
L1 : 4 (length of V1)
V1 : 0021 (value error in field 2)
T2 : BD (Banking Interface number)
L2 : 2 (length of V2)
V2 : 15 (Banking Interface number 15)

ASCII coding [0E]_L
[41] [41]_{T1} [30] [34]_{L1} [30] [30] [32] [31]_{V1}
[42] [44]_{T2} [30] [32]_{L2} [31] [35]_{V2}

B. "Binary" TLV fields

Each data element is coded as follows:

- "T": 2 binary bytes
- "L": 1 binary byte (maximum length 255) or two binary bytes (maximum length 999),
- "V": the number of bytes is defined by the length. The binary format is implicit for each type. The description may specify several fixed-length data elements.

Example: coding of field 55 (TLV field, LLLVAR b...255)

Representation(11)_L(9C)_{T1}(1)_{L1}(00)_{V1}(9F37)_{T2}(4)_{L2}(F56BA536)_{V2}

L : 11 (total field length)
T1 : 9C (Transaction Type)
L1 : 1 (length of V1)
V1 : 00
T2 : 9F37 (Unpredictable Number)
L2 : 4 (length of V2)
V2 : F56BA536 (discriminating element)

Coding [0B]_L
[00] [9C]_{T1} [01]_{L1} [00]_{V1}
[9F] [37]_{T2} [04]_{L2} [F5] [6B] [A5] [36]_{V2}

2.2.6.4. Coding of types containing several data elements

Some types contain several data elements. There are two cases:

1. The type has a 'Structure' format. In this case, the coding and alignment rules specific to each of the data elements are applied. The data elements may have a different format.

Example 1:

Type: FFEE

Data format: Structure Number of bytes transported: 6

Field XX Format: b...255

| | Format | Value |
|----------------|--------|-------|
| Data element A | n1 | 1 |
| Data element B | n3 | 123 |
| Data element C | n5 | 456 |

Coding:

Data element A is n1, coded in 1 byte:

[01]

Data element B is n3, coded in 2 bytes:

[01][23]

Data element C is n5, coded in 3 bytes:

[00][04][56]

Therefore: [FF][EE]_T [06]_L [01][01][23][00][04][56]_V

A B C

Example 2: Field XX Format: b...255

Type: FFEE

Data format: Structure Number of bytes transported: 5

| | Format | Value |
|----------------|--------|-------|
| Data element A | n1 | 1 |
| Data element B | b2 | 5F6 |
| Data element C | n4 | 1999 |

Coding:

Data element A is n1, coded in 1 byte:

[01]

Data element B is b2, coded in 2 bytes:

[05][F6]

Data element C is n4, coded in 2 bytes:

[19][99]

Therefore: [FF][EE]_T [05]_L [01][05][F6][19][99]_V

A B C

- If the type does not have a 'Structure' format, coding and alignment rules must be applied. All data elements have an identical format.

Example: Field XX

Format: b...255

Type: FFEE

Data format: n9 Number of bytes transported: 5

| | Format | Value |
|----------------|--------|-------|
| Data element A | n1 | 1 |
| Data element B | n3 | 123 |
| Data element C | n5 | 456 |

Coding: As the type format is 'n9', the data is coded in 5 bytes. A quartet is attributed to each data element according to its format. In the example, as the format of the TLV type is numeric and contains an odd number of characters, the value of the type is right-justified and left-filled with a zero.

Therefore: [FF][EE]_T [05]_L [01][12][30][04][56]_V

A B C

2.3. DATA FIELD DESCRIPTIONS

2.3.1. Alphabetical list

The table below presents an alphabetical list of the data elements used in the CB2A Authorisation protocol. Each data element is shown with the field number used to transport it, and (when necessary) the sub-field for data transported in a TLV field structure.

| Data element | Field/sub-field |
|--|-----------------|
| 3DS protocol major version | 56 type 0022 |
| Acceptance system card product code | 56 type 0005 |
| Acceptance system country code | 59 type 0205 |
| Acceptance system logical number | 59 type 0203 |
| Acceptor contract number | 59 type 0202 |
| Acquiring institution identification code | 32 |
| Additional amounts | 54 |
| Additional card reading capabilities | 47 type 30 |
| Additional data | 56 |
| Additional data - national | 47 |
| Additional electronic commerce data elements | 59 type 0414 |
| Additional electronic commerce transaction data | 56 type 0046 |
| Additional response data | 44 |
| Amount, authorised | 55 type 9F02 |
| Amount, other | 55 type 9F03 |
| Amount, transaction | 4 |
| Application Cryptogram (ARQC) | 55 type 9F26 |
| Application cryptogram verification results | 44 type CB |
| Application Expiration Date | 55 type 5F24 |
| Application Identifier (AID) | 55 type 9F06 |
| Application Interchange Profile (AIP) | 55 type 0082 |
| Application selection indicator | 56 type 0002 |
| Application Selection Registered Proprietary Data | 55 type 9F0A |
| Application Transaction Counter (ATC) | 55 type 9F36 |
| Application type identifier | 112 type 03 |
| Authentication amount | 56 type 0038 |
| Authentication date | 56 type 0037 |
| Authentication merchant name | 56 type 0036 |
| Authorisation identification response | 38 |
| Authorisation identification response length | 27 |
| BDK (Base Derivation Key) name | 48 type 0002 |
| BDK (Base Derivation Key) version | 48 type 0003 |
| BIC | 112 type 09 |
| Bit Map Extended | 1 |
| Brand selected | 56 type 0003 |
| Card acceptor identification code | 42 |
| Card acceptor name/location | 43 |
| Card acceptor terminal identification | 41 |
| Card application type | 55 type DF81 |
| Card-on-file action | 56 type 0029 |
| Card security code | 59 type 0300 |
| Card security code verification results | 59 type 0301 |
| Card sequence number | 23 |
| Card type indicator | 56 type 0018 |
| Cardholder address | 56 type 0006 |
| Cardholder address checking information | 44 type CC |
| Cardholder authentication method | 59 type 0410 |
| Cardholder authentication value | 59 type 0401 |
| Cardholder authentication value calculation method | 59 type 0411 |
| Cardholder authentication value processing information | 59 type 0409 |
| Cardholder postcode | 56 type 0008 |
| Cardholder total amount | 59 type 0207 |

DATA FIELD DICTIONARY

Version 1.6.1 - Volume 2

CB2A Authorisation

June 2020

| Data element | Field/sub-field |
|---|-----------------|
| Cardholder verification method (CVM) results | 55 type 9F34 |
| CB2A specification date | 47 type 33 |
| Contactless device | 55 type DF86 |
| Counterparty last name and first name | 112 type 07 |
| Counterparty PAN | 112 type 06 |
| Cryptogram entry date and GMT time | 56 type 0017 |
| Cryptogram information data | 55 type 9F27 |
| Currency code, transaction | 49 |
| Data equivalent to ISO track 1 read in contactless mode | 55 type 56 |
| Data equivalent to ISO track 2 read in contactless mode | 55 type DF6B |
| Date, expiration | 14 |
| Date, local transaction | 13 |
| Debit unique reference identifier | 119 type 0047 |
| Delivery address | 56 type 0009 |
| Digital wallet additional data | 59 type 0417 |
| Digital wallet name | 59 type 0415 |
| Electronic commerce data, initial transaction | 59 type 0420 |
| Electronic commerce indicator | 59 type 0416 |
| Electronic commerce transaction security type | 59 type 0407 |
| ERT (Regulatory and Technical Environment) | 59 type 0200 |
| Exemption indicator | 56 type 0033 |
| Extended message to the transaction initiator | 119 type 00BC |
| Field conversion | 44 type AC |
| Field conversion by acquirer (field 32) or forwarder (field 33) | 47 type 20 |
| File number | 47 type 24 |
| Final merchant identifier | 56 type 0027 |
| Forwarding institution identification code | 33 |
| Function code | 59 type 0100 |
| Funds transfer data | 112 |
| Funds transfer reason | 112 type 08 |
| IBAN | 112 type 10 |
| ICC processing results | 55 type DF80 |
| IDPA (Point of interaction identifier assigned by an acquirer) | 47 type 97 |
| IDSA (Acceptance system identifier assigned by an acquirer) | 47 type A0 |
| Incorrect field | 44 type AA |
| Independent sales organisation | 56 type 0024 |
| Integrated circuit card system related data | 55 |
| IP address | 56 type 0010 |
| Issuer Action Code – Default | 56 type 9F0D |
| Issuer Action Code – Denial | 56 type 9F0E |
| Issuer Action Code - Online | 56 type 9F0F |
| Issuer authentication data | 55 type 0091 |
| Issuer application data | 55 type 9F10 |
| Issuer proprietary data | 55 type 9F7C |
| Issuer script results | 55 type FF00 |
| Issuer script template 1 | 55 type 0071 |
| Issuer script template 2 | 55 type 0072 |
| ITP PA (Point of interaction terminal application identifier) | 59 type 0215 |
| ITP SA (Acceptance system terminal application identifier) | 59 type 0201 |
| Kernel ID used | 55 type DF68 |
| KSN | 48 type 0001 |
| Language preference | 56 type 5F2D |
| List of installed kernels | 56 type 0040 |
| Location category code | 47 type 08 |
| Marketplace identifier | 56 type 0026 |
| Merchant type | 18 |
| Message reason code | 59 type 0101 |
| Message to the transaction initiator | 44 type BC |
| Mobile payment solution identifier | 56 type 0012 |
| Modified electronic commerce security type | 59 type 0413 |
| National data | 59 |
| Network management information code | 70 |
| Number of articles | 56 type 0011 |
| Optional services supported (acceptor domain) | 59 type 0805 |

| Data element | Field/sub-field |
|---|-----------------|
| Order giver's account number at the organiser | 112 type 05 |
| Original data elements | 90 |
| Original transaction data | 112 type 01 |
| Original unique transaction identifier | 47 type 99 |
| Oscar Acceptance System identifier | 115 type 0002 |
| Oscar certificate | 115 type 0003 |
| Oscar data | 115 |
| Oscar PoS identifier | 115 type 0001 |
| Payment Account Reference | 56 type 0056 |
| Payment facilitator data | 56 type 0001 |
| Payment facilitator identifier | 56 type 0025 |
| Payment number | 56 type 0031 |
| Payment use case | 56 type 0028 |
| Payment validity date | 56 type 0045 |
| PIN data | 52 |
| PIN length | 26 |
| Point of interaction extended logical number | 59 type 0216 |
| Point of interaction information | 47 type 31 |
| Point of interaction logical number | 59 type 0204 |
| Point of service condition code | 25 |
| Point of service entry mode | 22 |
| Primary Account Number (PAN) | 2 |
| Processing code | 3 |
| Replacement amounts | 95 |
| Resend counter | 56 type 0020 |
| Reserved for national use | 119 |
| Responding machine identifier | 58 |
| Response code | 39 |
| Responsibility transfer information | 44 type CD |
| RTT (Terminal processing results) | 55 type DF85 |
| Reserved for national use | 119 |
| Retrieval reference number | 37 |
| Risk scoring service | 59 type 0802 |
| Scheme program merchant identifier | 119 type 0009 |
| Security Data | 48 |
| Security error | 44 type AB |
| Security related control information | 53 |
| Serial number | 56 type 0019 |
| Service activation code | 44 type AF |
| Service attribute | 59 type 0800 |
| SIRET | 47 type 96 |
| Systems trace audit number | 11 |
| TASA (Card acceptor application type) | 59 type 020B |
| Telephone number | 44 type BB |
| Terminal capabilities | 55 type 9F33 |
| Terminal Transaction Date | 55 type 009A |
| Terminal Transaction Qualifiers (TTQ) | 55 type 9F66 |
| Terminal Type (Type de Terminal) | 55 type 9F35 |
| Terminal Verification Results (TVR) | 55 type 0095 |
| Three-domain secure components availability | 119 type 0015 |
| Three-domain secure results | 59 type 0412 |
| Three-domain secure results, others | 59 type 0419 |
| Time, local transaction | 12 |
| Total number of payments | 56 type 0032 |
| Track 2 data | 35 |
| Track 2 equivalent data | 55 type 0057 |
| Track or equivalent data cryptogram processing information | 44 type CA |
| Transaction identifier or cryptogram supplied by the acceptor | 59 type 0400 |
| Transaction type | 55 type 009C |
| Transaction year | 59 type 0102 |
| Transmission date and time | 7 |
| Type of proof | 56 type 0014 |
| Type of transaction | 56 type 0013 |
| Unique transaction identifier | 47 type 95 |

| Data element | Field/sub-field |
|----------------------|-----------------|
| Unpredictable number | 55 type 9F37 |
| UUID container | 56 type 0023 |
| Wallet identifier | 59 type 0418 |

2.3.2. List by field number

All fields of the ISO 8583 standard can be used in the CB2A Authorisation protocol, but only the significant fields are presented below. The table indicates whether or not the field is used in the CB2A Authorisation protocol.

| No. | Type | Name | Format |
|-----|------|--|---------------------|
| 1 | | Bit Map Extended | |
| 2 | | Primary Account Number (PAN) | LLVAR n ...19 |
| 3 | | Processing code | n 6 |
| 4 | | Amount, transaction | n 12 |
| 5 | | See ISO 8583 standard | n 12 |
| 6 | | See ISO 8583 standard | n 12 |
| 7 | | Transmission date and time | MMDDh hmmss n 10 |
| 8 | | See ISO 8583 standard | n 8 |
| 9 | | See ISO 8583 standard | n 8 |
| 10 | | See ISO 8583 standard | n 8 |
| 11 | | Systems trace audit number | n 6 |
| 12 | | Time, local transaction | hhmmss n 6 |
| 13 | | Date, local transaction | MMDD n 4 |
| 14 | | Date, expiration | YYMM n 4 |
| 15 | | See ISO 8583 standard | n 4 |
| 16 | | See ISO 8583 standard | n 4 |
| 17 | | See ISO 8583 standard | n 4 |
| 18 | | Merchant type | n 4 |
| 20 | | See ISO 8583 standard | n 3 |
| 21 | | See ISO 8583 standard | n 3 |
| 22 | | Point of service entry mode | n 3 |
| 23 | | Card sequence number | n 3 |
| 24 | | See ISO 8583 standard | n 3 |
| 25 | | Point of service condition code | n 2 |
| 26 | | PIN length | n 2 |
| 27 | | Authorisation identification response length | n 1 |
| 28 | | See ISO 8583 standard | x+n 8 |
| 29 | | See ISO 8583 standard | x+n 8 |
| 30 | | See ISO 8583 standard | x+n 8 |
| 31 | | See ISO 8583 standard | x+n 8 |
| 32 | | Acquiring institution identification code | LLVAR n ...11 |
| 33 | | Forwarding institution identification code | LLVAR n ...11 |
| 34 | | See ISO 8583 standard | LLVAR ns ...28 |
| 35 | | Track 2 data | LLVAR z ...37 |
| 36 | | See ISO 8583 standard | LLLVAR z ...104 |
| 37 | | Retrieval reference number | an 12 |
| 38 | | Authorisation identification response | an 6 |
| 39 | | Response code | an 2 |
| 40 | | See ISO 8583 standard | an 3 |
| 41 | | Card acceptor terminal identification | ans 8 |
| 42 | | Card acceptor identification code | ans 15 |
| 43 | | Card acceptor name/location | ans 40 |
| 44 | | Additional response data | LLVAR ans ...25 |
| | AA | Incorrect field | ans 4,6,8 |
| | AB | Security error | ans 5 |
| | AC | Field conversion | ans ...21 |
| | AF | Service activation code | ans 1 |
| | BB | Telephone number | ans ...21 |
| | BC | Message to the transaction initiator | ans ...21 |
| | CA | Track or equivalent data cryptogram processing information | ans 1 |
| | CB | Application cryptogram verification results | ans 1 |
| | CC | Cardholder address checking information | ans 2 |
| | CD | Responsibility transfer information | ans 1 |

DATA FIELD DICTIONARY

Version 1.6.1 - Volume 2

CB2A Authorisation

June 2020

| No. | Type | Name | Format |
|-----|------|---|-------------------|
| 45 | | See ISO 8583 standard | LLVAR ans ...76 |
| 46 | | See ISO 8583 standard | LLLVAR ans ...255 |
| 47 | | Additional data - national | LLLVAR ans ...255 |
| | 08 | Location category code | ans ...8 |
| | 20 | Field conversion by acquirer (field 32) or forwarder (field 33) | ans ... |
| | 24 | File number | anp 12 |
| | 30 | Additional card reading capabilities | n 1 |
| | 31 | Point of interaction information | n 1 |
| | 33 | CB2A specification date | n 4 |
| | 95 | Unique transaction identifier | ans ..50 |
| | 96 | SIRET | ans 14 |
| | 97 | IDPA (Point of interaction identifier assigned by an acquirer) | ans 8 |
| | 99 | Original unique transaction identifier | ans..50 |
| | A0 | IDSA (Acceptance system identifier assigned by an acquirer) | ans 8 |
| 48 | | Security Data | LLLVAR ans ...255 |
| | 0001 | KSN | b10..12 |
| | 0002 | BDK (Base Derivation Key) name | b2..15 |
| | 0003 | BDK (Base Derivation Key) version | n..10 |
| 49 | | Currency code, transaction | n 3 |
| 50 | | See ISO 8583 standard | n 3 |
| 51 | | See ISO 8583 standard | n 3 |
| 52 | | PIN data | b 8..16 |
| 53 | | Security related control information | n 16 |
| 54 | | Additional amounts | LLLVAR an ...120 |
| 55 | | Integrated circuit card system related data | LLLVAR b ...255 |
| | 0056 | Data equivalent to ISO track 1 read in contactless mode | ans ...76 |
| | 0057 | Track 2 equivalent data | b ...19 |
| | 0071 | Issuer Script Template 1 | b ...128 |
| | 0072 | Issuer Script Template 2 | b ...128 |
| | 0082 | Application Interchange Profile (AIP) | b 2 |
| | 0091 | Issuer Authentication Data | b 8...16 |
| | 0095 | Terminal Verification Results (TVR) | b 5 |
| | 009A | Terminal Transaction Date | n 6 |
| | 009C | Transaction type | n 2 |
| | 5F24 | Application Expiration Date | YYMMDD n 6 |
| | 9F02 | Amount, authorised | n 12 |
| | 9F03 | Amount, other | n 12 |
| | 9F06 | Application identifier (AID) | b 5...16 |
| | 9F0A | Application Selection Registered Proprietary Data | b 4...32 |
| | 9F10 | Issuer application data | b ...32 |
| | 9F26 | Application Cryptogram (ARQC) | b 8 |
| | 9F27 | Cryptogram Information Data | b 1 |
| | 9F33 | Terminal capabilities | b 3 |
| | 9F34 | Cardholder verification method (CVM) results | b 3 |
| | 9F35 | Terminal Type (Type de Terminal) | n 2 |
| | 9F36 | Application Transaction Counter (ATC) | b 2 |
| | 9F37 | Unpredictable Number | b 4 |
| | 9F66 | Terminal Transaction Qualifiers (TTQ) | structure 4 |
| | 9F6B | Data equivalent to ISO track 2 read in contactless mode | b ...19 |
| | 9F7C | Issuer proprietary data | b ...32 |
| | DF68 | Kernel ID used | b 1 |
| | DF80 | ICC processing results | n 2 |
| | DF81 | Card application type | n 1 |
| | DF85 | RTT (Terminal processing results) | b 5 |
| | DF86 | Contactless device | b ...35 |
| | FF00 | Issuer script results | b ...5 |
| 56 | | Additional data | LLLVAR b ...255 |
| | 0001 | Payment facilitator data | structure 27 |
| | 0002 | Application selection indicator | n2 |
| | 0003 | Brand selected | b1 |
| | 0005 | Acceptance system card product code | an3 |
| | 0006 | Cardholder address | ansp..40 |
| | 0008 | Cardholder postcode | ansp..10 |

DATA FIELD DICTIONARY

Version 1.6.1 - Volume 2

CB2A Authorisation

June 2020

| No. | Type | Name | Format |
|-----|------|---|---------------------|
| | 0009 | Delivery address | ans80 |
| | 0010 | IP address | ans15 |
| | 0011 | Number of articles | n2 |
| | 0012 | Mobile payment solution identifier | n3 |
| | 0013 | Type of transaction | n2 |
| | 0014 | Type of proof | n2 |
| | 0017 | Cryptogram entry date and GMT time | n12 |
| | 0018 | Card type indicator | n1 |
| | 0019 | Serial number | ans..35 |
| | 0020 | Resend counter | n1 |
| | 0022 | 3DS protocol major version | an1 |
| | 0023 | UUID container | ans37 |
| | 0024 | Independent sales organisation | ans15 |
| | 0025 | Payment facilitator identifier | ans15 |
| | 0026 | Marketplace identifier | ans15 |
| | 0027 | Final merchant identifier | ans15 |
| | 0028 | Payment use case | n2 |
| | 0029 | Card-on-file action | an1 |
| | 0031 | Payment number | n2 |
| | 0032 | Total number of payments | n2 |
| | 0033 | Exemption indicator | b2..3 |
| | 0036 | Authentication merchant name | ans40 |
| | 0037 | Authentication date | n14 |
| | 0038 | Authentication amount | n12 |
| | 0040 | List of installed kernels | b1..8 |
| | 0045 | Payment validity date | n6 |
| | 0046 | Additional electronic commerce transaction data | structure 126 |
| | 0056 | Payment Account Reference | ans29 |
| | 5F2D | Language preference | an2 |
| | 9F0D | Issuer Action Code – Default | b5 |
| | 9F0E | Issuer Action Code – Denial | b5 |
| | 9F0F | Issuer Action Code - Online | b5 |
| 57 | | See ISO 8583 standard | LLLVAR ans ...255 |
| 58 | | Responding machine identifier | LLLVAR ans ...255 |
| 59 | | National data | LLLVAR b ...255 |
| | 0100 | Function code | n 3 |
| | 0101 | Message reason code | n 4 |
| | 0102 | Transaction year | n 2 |
| | 0200 | ERT (Regulatory and Technical Environment) | b 1 |
| | 0201 | ITP SA (Acceptance system terminal application identifier) | n 12 |
| | 0202 | Acceptor contract number | n 7 |
| | 0203 | Acceptance system logical number | n 3 |
| | 0204 | Point of interaction logical number | n 3 |
| | 0205 | Acceptance system country code | n 3 |
| | 0207 | Cardholder total amount | n 12 |
| | 020B | TASA (Card acceptor application type) | b 5...16 |
| | 0215 | ITP PA (Point of interaction terminal application identifier) | n 12 |
| | 0216 | Point of interaction extended logical number | an 3 |
| | 0300 | Card security code | structure 1, 3 or 4 |
| | 0301 | Card security code verification results | structure 2 |
| | 0400 | Transaction identifier or cryptogram supplied by the acceptor | b4...40 |
| | 0401 | Cardholder authentication value | b 20..40 |
| | 0407 | Electronic commerce transaction security type | n 2 |
| | 0409 | Cardholder authentication value processing information | anp 1 |
| | 0410 | Cardholder authentication method | ans 2 |
| | 0411 | Cardholder authentication value calculation method | an 1 |
| | 0412 | Three-domain secure results | structure 4 |
| | 0413 | Modified electronic commerce security type | b 1 |
| | 0414 | Additional electronic commerce data elements | structure 3..40 |
| | 0415 | Digital wallet name | an 2 |
| | 0416 | Electronic commerce indicator | an 2 |
| | 0417 | Digital wallet additional data | an12..24 |
| | 0418 | Wallet identifier | n6 |
| | 0419 | Three-domain secure results, others | structure 10 |

| No. | Type | Name | Format |
|-----|------|---|-------------------|
| | 0420 | Electronic commerce data, initial transaction | structure 22..58 |
| | 0800 | Service attribute | n 2 |
| | 0802 | Risk scoring service | structure 1..24 |
| | 0805 | Optional services supported (acceptor domain) | b 2 |
| 60 | | See ISO 8583 standard | LLLVAR ans ...1 |
| 61 | | See ISO 8583 standard | LLLVAR ans ...3 |
| 62 | | Reserved for private use | LLLVAR ans ...255 |
| 63 | | Reserved for private use | LLLVAR ans ...255 |
| 64 | | See ISO 8583 standard | b 8 |
| 65 | | See ISO 8583 standard | b 11 |
| 66 | | See ISO 8583 standard | n 1 |
| 67 | | See ISO 8583 standard | n 2 |
| 68 | | See ISO 8583 standard | n 3 |
| 69 | | See ISO 8583 standard | n 3 |
| 70 | | Network management information code | n 3 |
| 71 | | See ISO 8583 standard | n 4 |
| 72 | | See ISO 8583 standard | n 4 |
| 73 | | See ISO 8583 standard | n 6 |
| 74 | | See ISO 8583 standard | n 10 |
| 75 | | See ISO 8583 standard | n 10 |
| 76 | | See ISO 8583 standard | n 10 |
| 77 | | See ISO 8583 standard | n 10 |
| 78 | | See ISO 8583 standard | n 10 |
| 79 | | See ISO 8583 standard | n 10 |
| 80 | | See ISO 8583 standard | n 10 |
| 81 | | See ISO 8583 standard | n 10 |
| 82 | | See ISO 8583 standard | n 12 |
| 83 | | See ISO 8583 standard | n 12 |
| 84 | | See ISO 8583 standard | n 12 |
| 85 | | See ISO 8583 standard | n 12 |
| 86 | | See ISO 8583 standard | n 16 |
| 87 | | See ISO 8583 standard | n 16 |
| 88 | | See ISO 8583 standard | n 16 |
| 89 | | See ISO 8583 standard | n 16 |
| 90 | | Original data elements | n 42 |
| 91 | | See ISO 8583 standard | an 1 |
| 92 | | See ISO 8583 standard | an 2 |
| 93 | | See ISO 8583 standard | an 5 |
| 94 | | See ISO 8583 standard | an 7 |
| 95 | | Replacement amounts | an 42 |
| 96 | | See ISO 8583 standard | b 8 |
| 97 | | See ISO 8583 standard | x+n 16 |
| 98 | | See ISO 8583 standard | ans 25 |
| 99 | | See ISO 8583 standard | LLVAR n ...11 |
| 100 | | See ISO 8583 standard | LLVAR n ...11 |
| 101 | | See ISO 8583 standard | LLVAR ans ...17 |
| 102 | | See ISO 8583 standard | LLVAR ans ...28 |
| 103 | | See ISO 8583 standard | LLVAR ans ...28 |
| 104 | | See ISO 8583 standard | LLLVAR ans ...100 |
| 105 | | See ISO 8583 standard | LLLVAR ans ...255 |
| 106 | | See ISO 8583 standard | LLLVAR ans ...255 |
| 107 | | See ISO 8583 standard | LLLVAR ans ...255 |
| 108 | | See ISO 8583 standard | LLLVAR ans ...255 |
| 109 | | See ISO 8583 standard | LLLVAR ans ...255 |
| 110 | | See ISO 8583 standard | LLLVAR ans ...255 |
| 111 | | See ISO 8583 standard | LLLVAR ans ...255 |
| 112 | | Funds transfer data | LLLVAR ans ...255 |
| | 01 | Original transaction data | ans 1..99 |
| | 03 | Application type identifier | an 2 |
| | 05 | Order giver's account number at the organiser | ans1..35 |
| | 06 | Counterparty PAN | n..19 |
| | 07 | Counterparty last name and first name | ans1..30 |
| | 08 | Funds transfer reason | ans1..40 |
| | 09 | BIC | ans1..11 |

| No. | Type | Name | Format |
|-----|------|---|-------------------|
| | 10 | IBAN | an..34 |
| 113 | | See ISO 8583 standard | LLLVAR ans ...255 |
| 114 | | See ISO 8583 standard | LLLVAR ans ...255 |
| 115 | | Oscar data | LLLVAR b ...255 |
| | 0001 | Oscar PoS identifier | ans..107 |
| | 0002 | Oscar Acceptance System identifier | ans..71 |
| | 0003 | Oscar certificate | ans..35 |
| 116 | | See ISO 8583 standard | LLLVAR ans ...255 |
| 117 | | See ISO 8583 standard | LLLVAR ans ...255 |
| 118 | | See ISO 8583 standard | LLLVAR ans ...255 |
| 119 | | Reserved for national use | LLL2VAR b...999 |
| | 0009 | Scheme program merchant identifier | ans...8 |
| | 0013 | Three-domain secure components availability | an1 |
| | 0047 | Debit unique reference identifier | ans...50 |
| | 00BC | Extended message to the transaction initiator | ans...101 |
| 120 | | See ISO 8583 standard | LLLVAR ans ...255 |
| 121 | | See ISO 8583 standard | LLLVAR ans ...255 |
| 122 | | See ISO 8583 standard | LLLVAR ans ...255 |
| 123 | | See ISO 8583 standard | LLLVAR ans ...255 |
| 124 | | See ISO 8583 standard | LLLVAR ans ...255 |
| 125 | | See ISO 8583 standard | LLLVAR ans ...255 |
| 126 | | See ISO 8583 standard | LLLVAR ans ...255 |
| 127 | | See ISO 8583 standard | LLLVAR ans ...255 |
| 128 | | See ISO 8583 standard | b8 |

2.3.3. Definition of data fields used

This section defines the data fields used by the application protocols. These fields are a sub-set of those defined by ISO 8583 standard. The definition given here is more restrictive than that provided in the standard. The purpose is to simplify implementation and indicate the choices made relative to French and foreign bank cards.

Any type not defined in the CB2A Authorisation protocol is reserved for CB use, unless it is explicitly declared for private use in the dictionary.

The value of any data element not defined in the CB2A Authorisation protocol is reserved for CB use, unless it is declared explicitly for private use in the dictionary.

Any non-defined field in the CB2A Authorisation protocol, but defined in ISO 8583, can be used in agreements between users.

Basic principles for data fields

- Any decodable* data field that is received and expected is processed in accordance with the specifications.
- Any decodable* data field that is received and not expected is not processed. It is not sent back and does not generate a chargeback.
- Any data field explicitly declared with a "mandatory absent" condition results in a chargeback, if received.
- Data elements that are received but not decodable* are rejected.

* A data field is considered decodable if its structure is described in the dictionary and if it complies with the description.

- Fixed: data field format is described
- Variable without a TLV structure: data field format is described
- Variable with a TLV structure: data field has a TLV structure (the type is not necessarily described)

Field 2 Format: LLVAR n ...19

Field 2

Format: LLVAR n ...19

Primary Account Number

This field contains the Primary Account Number (PAN) related to the card.

Field 3

Format: n6

Processing code

☐ Transaction description _____ n2

| Value | Description |
|----------|--|
| 00 | Purchase of goods or services |
| 10 | Financial transaction without cash dispensing (e.g. bank transfer request) |
| 11 | Quasi-cash |
| 14 | Card capture |
| 15 | Authorisation to issue a certificate |
| 17 | Counter withdrawal |
| 18 to 19 | Reserved for private use |
| 20 | Credit (returns) |
| 28 | Quasi-cash refund |
| 30 | Available funds enquiry |
| 36 | Balance enquiry (copy) |
| 37 | Card return |
| 41 | Funds transfer, debit |
| 42 | Funds transfer, credit |
| 90 to 99 | Reserved for private use |

☐ Account type assigned to debit _____ n2

| Value | Description |
|-------|----------------------------------|
| 00 | Payment with no special features |
| 33 | Deferred clearing |

☐ Account type assigned to credit _____ n2

| Value | Description |
|-------|----------------------------------|
| 00 | Payment with no special features |

Field 4

Format: n12

Amount, transaction

Transaction amount stated in the local currency of the acquirer or the transaction's originating location.

The amount is expressed in the smallest unit of the currency - see the list in ISO 4217.

The currency used is specified in field 49.

Field 7 Format : n10 MMDDhhmmss

Field 7

Format : n10 MMDDhhmmss

Transmission date and time

Date and GMT time at which the message was sent. Once this has been set, this data element remains unchanged throughout the duration of the message.

Note: This is the date and time when the response was sent (not when the transaction began).

Field 11

Format: n6

Systems trace audit number

This field is used to reference the transaction in a unique manner and is managed by the initiator.

This transaction reference must be unique for an acquirer (field 32), acceptor (field 42), terminal ID (field 41), date (field 13) and time (field 12).

For an acceptance system application, field 11 must provide a unique reference for the transaction between two data capture sessions.

Field 12

Format: n6 hhmmss

Time, local transaction

Local time at which the transaction took place on an acceptor's premises. Once set, this data remains unchanged throughout the duration of the transaction.

Seconds are not printed on payment terminal receipts and are set to zero in field 12.

Field 13

Format: n4 MMDD

Date, local transaction

Local date on which the transaction took place on the card acceptor's premises. Once set, this data remains unchanged throughout the duration of the transaction.

Field 14

Format: n4 AAMM

Date, expiration

Card expiry date.

When present, this field must contain a significant value with YYMM structure.

Field 18

Format: n4

Merchant type

This code indicates the acceptor's type of activity.

This code corresponds to the MCC (Merchant Category Code).

When present, this field must contain a significant value. The latest updates and values of this field are specified in Annex A of the ISO 18245 standard.

Field 22 Format: n3

Field 22

Format: n3

Point of service entry mode

Values used:

☐ **PAN entry mode** _____ quartets 1 and 2

| Value | Description |
|-------|---|
| 00 | Not specified |
| 01 | Manual |
| 02 | Magstripe only (track 2 or track 1 data) |
| 03 | Barcode |
| 04 | Optical reader |
| 05 | Chip only (1) |
| 07 | Contactless using chip data |
| 10 | Card-on-File |
| 81 | Chip mode with fallback to magstripe (track 2) mode (2) |
| 82 | Provided by a server (Wallet) |
| 83-89 | Reserved for private use |
| 91 | Contactless using magstripe data |
| 92-99 | Reserved for private use |

(1) The result(s) of attempt(s) to access the chip are present in field 55, type DF80.

(2) The result(s) of attempt(s) to access the chip can be present in field 55, type DF80, if they are available.

☐ **PIN entry capability** _____ quartet 3

| Value | Description |
|-------|--------------------------|
| 0 | Not specified |
| 1 | PIN entry |
| 2 | PIN input capability |
| 8-9 | Reserved for private use |

PAN entry mode also specifies how the expiry date is entered.

PIN entry capability refers to the action performed for the current transaction.

Field 23

Format: n3

Card Sequence Number

Number used to distinguish between cards assigned to the same Primary Account Number (field 2).

Field 25Format: n2

Field 25

Format: n2

Point of service condition code

Any field 25 value not defined in the present dictionary can be used in agreements between users, providing that the value is compliant with ISO 8583.

Values:

| Value | Description |
|-------|--|
| 00 | Normal conditions |
| 01 | Customer not present |
| 02 | Unattended terminal able to retain card |
| 03 | Suspicious merchant |
| 07 | Telephone device request (via call center) |
| 08 | Mail/telephone order |
| 10 | Customer identity verified |
| 11 | Suspected fraud |
| 12 | Security reasons |
| 15 | Customer terminal (Home terminal) |
| 27 | Unattended terminal unable to retain card |
| 52-99 | Reserved for private use |

If there are several special conditions, it is recommended to give the highest priority to fraud or security description codes.

Priority should then be given to the most detailed description rather than a general description.

Field 26

Format: n2

PIN length

This data element specifies the maximum PIN length that can be input.

Possible values: 4 to 12.

Field 27

Format: n1

Authorisation identification response length

Maximum length of the authorisation number that the requester is able to process.

Field 32

Format : LLVAR n...11

Acquiring institution identification code

This field identifies the acquirer of the transaction, i.e. the institution presenting the transaction.

Field 32 contains the identifier of the acquirer bank.

The structure is the following:

- ☐ **Acquirer identifier** _____ n6
- ☐ **Bank code** _____ n5

Field 33 Format: LLVAR n ...11

Field 33

Format: LLVAR n ...11

Forwarding institution identification code

Field 33 identifies the intermediate institutions between the acceptor and the acquirer.

Field 35

Format: LLVAR z ... 37

Track 2 data

Contains track 2 in compliance with the ISO 7813 standard.

Field 37

Format: an12

Retrieval reference number

Field 38

Format: an6

Authorisation identification response

Field 38 is defined only by the issuer in a response.

Field 39

Format: an2

Response code

This field contains the following:

- Request message: reason for the request
- Response message: result of the response to the request.

Any field 39 value not defined in the present dictionary can be used in agreements between users, providing that the value is compliant with ISO 8583.

The list of response codes that can be used is given below.

| Value | Description |
|-------|---|
| 00 | Approved or completed successfully |
| 02 | Refer to card issuer |
| 03 | Invalid merchant |
| 04 | Pick-up |
| 05 | Do not honour |
| 07 | Pick-up card, special condition |
| 08 | Honour with identification |
| 10 | Approved for partial amount |
| 12 | Invalid transaction |
| 13 | Invalid amount |
| 14 | Invalid card number (no such number) |
| 15 | No such issuer |
| 17 | Customer cancellation |
| 20 | Invalid response (error in server domain) |
| 21 | No action taken |
| 25 | Unable to locate record on file |
| 30 | Format error |
| 31 | Bank not supported by switch |

Field 41 Format: an8

| Value | Description |
|-------|---|
| 32 | Completed partially |
| 33 | Expired card |
| 34 | Suspected fraud |
| 38 | Allowable PIN tries exceeded |
| 41 | Lost card |
| 43 | Stolen card, pick-up |
| 51 | Not sufficient funds |
| 54 | Expired card |
| 55 | Incorrect PIN |
| 56 | No card record |
| 57 | Transaction not permitted to cardholder |
| 58 | Transaction not permitted to terminal |
| 59 | Suspected fraud |
| 60 | Card acceptor contact acquirer |
| 61 | Exceeds withdrawal amount limit |
| 63 | Security violation |
| 68 | Response received too late |
| 75 | Allowable number of PIN tries exceeded |
| 76 | Card already in the exception file, previous record stored |
| 90 | Cutoff is in process |
| 91 | Issuer or switch is inoperative |
| 94 | Duplicated transmission |
| 96 | System malfunction |
| 97 | General monitoring timeout |
| 98 | Server unavailable, network re-routing requested |
| 99 | Initiator domain incident |
| A0 | Fallback in contact mode |
| A1 | Soft decline (electronic commerce only) |
| A2 | PIN request in single TAP mode |
| A3 | New TAP with required authentication |
| A4 | Misused TRA exemption |
| R1 | Revocation of all e recurring payments for the card at the merchant |
| R3 | Revocation of all recurring payments for the card |

The values used for the different services (e.g. face-to-face payment, remote payment) and the associated actions (forcing, blocking, ...) are indicated in the services.

Field 41

Format: an8

Card acceptor terminal identification

Transports the content of envelope 41 provided during a parameter downloading.

Field 42

Format: an15

Card acceptor identification code

Transports the content of envelope 41 provided during a parameter downloading.

Field 43 Format: an40

Field 43

Format: an40

Card acceptor name/location

Field is structured as follows:

☐ **Name, town and region** _____ **ans38**

The data elements are separated by a backslash ("").

As for every fixed-length "ans" field, the "name\town\region" structure is left-justified and right-filled with spaces.

☐ **Country** _____ **ans2**

This data element is specified according to the alphabetic coding conventions of ISO 3166 (France: "FR").

Example:

a) DURAND\PARIS\07..... (23 spaces) FR

b) *if town is unknown*
DUMONT\75002..... (25 spaces) FR

c) *if region is unknown*
MERCIER\LYON\ (25 spaces) FR

Note: When this data is part of the envelope 43 provided during a parameter downloading, the acceptor system ignore the above description and return the content of the envelope 43 without modification.

Field 44

Format: LLVAR ans 25

Additional response data

Field 44 has a TLV (Value Length Type) structure.

• The structure of the data elements is the following:

☐ **Data type** _____ **ans2**

| Type | Description |
|-------|--|
| AA | Incorrect field |
| AB | Security error |
| AC | Field conversion |
| AF | Service activation code |
| BB | Telephone number |
| BC | Message to the transaction initiator |
| CA | Track or equivalent data cryptogram processing information |
| CB | Application cryptogram verification results |
| CC | Cardholder address checking information |
| CD | Responsibility transfer information |
| RA-ZZ | Reserved for private use |

☐ **Data length** _____ **ans2**

The two characters of the length are not counted in the data length. The length is right-justified and left-filled with a zero character.

☐ **Data value**

The data has the number of characters defined by the length.

There are different possible values for the data element. The value depends on the data element type.

The possible values for field 44 are indicated in the list of data element types.

Field 44 Format: LLVAR ans 25

TYPE = AA: INCORRECT FIELD

Data format: ans4, 6, 8

Number of bytes transported: 4, 6 or 8

The variable contains:

- The number of the incorrect field (3 characters)
- If it is a TLV field, may contain the type of the incorrect sub-field (2 or 4 characters). If it is a field including several consecutive sub-fields, may contain the position of the beginning of the incorrect sub-field (2 character)
- An error code:

| | |
|---|-------------------------|
| 1 | Value error |
| 2 | Format error |
| 3 | Missing mandatory field |

In some cases; Type AA can provide information on incorrect fields of response codes:

- If field 39=20 (security error in the server domain) and field 39=30 (format error): Type AA identifies the incorrect field (and maybe also the sub-field),
- If field 39=12 (invalid transaction): Type AA identifies field 001 (bitmap) to indicate that the transaction is not included. Field 003 (processing code) to indicate that the associated service is not open
- If field 39=13 (invalid amount): Type AA may indicate the invalid amount in the case of a reversal (field 4 or field 95),
- If field 39=25 (unable to locate record in file): in the case of a reversal, Type AA may indicate the field (and maybe sub-fields) which are preventing the association (field absent or incorrect),

Field 44 can contain several data elements related to incorrect fields.

TYPE = AB: SECURITY ERROR

Data format: ans5

Number of bytes transported: 5

TYPE = AC: FIELD CONVERSION

Data format: ans...21

Number of bytes transported: ...21.

Type AC provides information on field values that have been converted. It enables the transport of the former field value and the conversion initiator.

The variable contains the following:

- Conversion initiator (1 character)

| | |
|---|--------------------|
| 0 | e-rsb |
| 1 | Visa gateway |
| 2 | MasterCard gateway |
| 9 | Other |

- Converted field number (3 characters)
- Original value of converted field (n characters)

Field 44 can contain several data elements related to field conversion.

Field 44Format: LLVAR ans 25

TYPE = AF: SERVICE ACTIVATION CODE

Data format: ans1

Number of bytes transported: 1

This data element is used to indicate a call trigger sent by an acquiring system to an acceptance system:

| | |
|---|--------------------------------|
| 1 | No call activation |
| 2 | Activate parameter downloading |
| 3 | Activate data capture |
| 4 | RFU |

TYPE = BB: TELEPHONE NUMBER

Data format: ans...21

Number of bytes transported: ...21

The variable contains:

- the country dialling code (3 characters and may be preceded by spaces)
- the correspondent's telephone number (including the regional dialling code)

Type BB can be used for an issuer call process in order to indicate the telephone number.

TYPE = BC: MESSAGE TO THE TRANSACTION INITIATOR

Data format: ans...21

Number of bytes transported: ...21

The variable contains a message for the transaction initiator.

☐ **Control character** _____ **ans1**

| | |
|---|---|
| 1 | Print |
| 2 | Display |
| 3 | Print and display |
| 4 | Print for cardholder only |
| 5 | Display for cardholder only |
| 6 | Print and display for the cardholder only |
| 7 | Print for acceptor only |
| 8 | Display for acceptor only |
| 9 | Print and display for acceptor only |
| A | Print for acceptor and cardholder |
| B | Display for acceptor and cardholder |
| C | Print and display for acceptor and cardholder |
| F | Reserved for private use |

☐ **Response message** _____ **ans...20**

TYPE = CA: TRACK OR EQUIVALENT DATA CRYPTOGRAM PROCESSING INFORMATION

Data format: ans1

Number of bytes transported: 1

TYPE = CB: APPLICATION CRYPTOGRAM VERIFICATION RESULTS

Data format: ans1

Number of bytes transported: 1

Field 47 Format: LLVAR ans ...255

TYPE = CC:
INFORMATION

CARDHOLDER ADDRESS CHECKING

Data format: ans2

Number of bytes transported: 2

❑ **Nomenclature** _____ ans1

| Values | Description |
|--------|-------------|
| 0 | CB |

❑ **Result of control** _____ ans1

Nomenclature used by CB:

| Value | Label |
|-------|--|
| A | Postcode and address fully match |
| B | Postcode and address partially match |
| C | Postcode and address do not match |
| D | Control was not performed or was not performed for all data elements |

TYPE = CD: INFORMATION RELATING TO LIABILITY SHIFT

Data format: ans1

Number of bytes transported: 1

This data element can be used by the acquirer to inform the merchant of eligibility for the transfer of responsibility. The acquirer can use this data element to inform the merchant that it is eligible for a liability shift. The procedure for this data element is related to the specific requirements of each acquirer in relation to its merchants.

| Values | Description |
|--------|-------------|
| 0 | Unknown |
| 1 | Shift |
| 2 | No shift |

Field 47

Format: LLVAR ans ...255

Additional data – National

Field 47 has a TLV (Type Length Value) structure.

- The structure of the data elements is the following:

❑ **Data type** _____ ans2

Within the scope of the CB2A Authorisation protocol, the possible values for the data element type are the following:

| Type | Description | Repeatability |
|------|---|---------------|
| 08 | Location category code | |
| 20 | Field conversion by acquirer (field 32) or forwarder (field 33) | X |
| 24 | File number | |
| 30 | Additional card reading capabilities | |
| 31 | Point of interaction information | |
| 33 | CB2A specification date | |
| 95 | Unique transaction identifier | |
| 96 | SIRET | |
| 97 | IDPA (Point of interaction identifier assigned by an acquirer) | |
| 99 | Original unique transaction identifier | |
| A0 | IDSA (Acceptance system identifier assigned by an acquirer) | |

Field 47 Format: LLVAR ans ...255

☐ **Data length** _____ **ans2**

Two-character length is not included in the length of the variable. The length is right-justified and left-filled with a zero character.

☐ **Data value**

The number of characters of the variable is determined by the length.
The possible values of the variable are determined by the data element type.

- Content of the data elements depends on the type:

TYPE = 08: LOCATION CATEGORY CODE

Data format: ans...8

Number of bytes transported: ...8

This data element is related to the sales unit. It is used to specify a Point of Sale's location (see SICB).

TYPE = 20: FIELD CONVERSION BY ACQUIRER (FIELD 32) OR FORWARDER (FIELD 33)

Data format: ans...

Number of bytes transported: variable

The variable contains the following:

- Number of the converted field (3 characters)
- Original value of the converted field (n characters)

If a field has several conversions, only the first one is used for field 47, type 20.

Field 47 can contain several data elements related to field conversion (information about different fields).

TYPE = 24: FILE NUMBER

Data format: anp12

Number of bytes transported: 12

Serves as a reference for a reservation or a rental invoice identified as such by the archive manager (i.e. the acquirer, or the acceptor under the acquirer's responsibility). This field is identical for all authorisation requests related to the invoice.

TYPE = 30: ADDITIONAL CARD READING CAPABILITIES

Data format: n 1

Number of bytes transported: 1

| Value | Description |
|-------|--------------------------------|
| 1 | Active contactless application |

TYPE = 31: POINT OF INTERACTION INFORMATION

Data format: n 1

Number of bytes transported: 1

| Value | Description |
|-------|----------------------------|
| 1 | Mobile acceptance solution |

Field 47 Format: LLVAR ans ...255

TYPE = 33: CB2A SPECIFICATION DATE

Data format: n 4

Number of bytes transported: 4

Release date of the CB2A specification in YYYY format

TYPE = 95: UNIQUE TRANSACTION IDENTIFIER

Data format: ans...50

Number of bytes transported: ...50

☐ **Nomenclature** _____ **an1**

The nomenclature value identifies the entity responsible for this encoding; it does not specify the scheme responsible for the transaction.

| Values | Description |
|--------|-------------------------|
| 1 | CB |
| 2 | MasterCard |
| 3 | Visa |
| 4 | Discover |
| 5-9 | Reserved for future use |
| A-Z | Reserved for future use |

☐ **Unique transaction identifier** _____ **ans..49**

The data element contains a transaction identifier generated by the authorisation system.

Note : it is the responsibility of the acquirer to send the data in the format that is accepted by the acceptor in the acceptor to acquirer protocol.

TYPE = 96: SIRET (COMPANY REGISTRATION NUMBER)

Data format: ans14

Number of bytes transported: 14

TYPE = 97: IDPA (POINT OF INTERACTION IDENTIFIER ASSIGNED BY AN ACQUIRER)

Data format: ans8

Number of bytes transported: 8

TYPE = 99: ORIGINAL UNIQUE TRANSACTION IDENTIFIER

Data format: ans...50

Number of bytes transported: ...50

This data element contains the unique identifier of the transaction used as reference for linking.

Note that the first position of the data element contains the nomenclature.

TYPE = A0: IDSA (ACCEPTANCE SYSTEM IDENTIFIER ASSIGNED BY AN ACQUIRER)

Data format: ans8

Number of bytes transported: 8

Field 48 Format: LLVAR ans ...255

Field 48

Format: LLVAR ans ...255

Security Data

This field is used to transport security data in messages.

The data elements transported in this field are coded in binary.

☐ **Data type** _____ **b2**

| Type | Description | Repeatability |
|------|-----------------------------------|---------------|
| 0001 | KSN | |
| 0002 | BDK (Base Derivation Key) name | |
| 0003 | BDK (Base Derivation Key) version | |

☐ **Data element length** _____ **b1**

The data element length is coded in binary (one byte) and is not included in the calculation of the data element length.

☐ **Data element value**

The number of characters of the variable is determined by the length.

The possible values of the variable are determined by the data element type.

TYPE = 0001: KSN (KEY SERIAL NUMBER)

Data format: b10..12

Number of bytes transported: 10..12

If a DUKPT is used to encrypt the PIN, this field will contain a 10- or 12-byte KSN (Key Serial Number).

TYPE = 0002: BDK (BASE DERIVATION KEY) NAME

Data format: b2..15

Number of bytes transported: 2..15

The BDK Name data is used to transmit the identifier of the BDK key from which the PIN encryption key is derived. This identifier is formatted as follows:

| | |
|---------------------|--|
| Byte 1 | BDK Key Identifier Type (see values below) |
| Bytes 2 to 5 | Identifier of the BDK key according to the type indicated by octet 1 |

Byte 1 (BDK Key Identifier Type) of the Identifier field may be set as follows:

| Value | Description |
|---|---|
| Values 00 to 7F Use reserved for CB2A specification | 01 <u>Identifier Type "DUKPT 2009"</u> The identifier of the BDK key is 5 bytes long and corresponds to the Key Set Identifier (KSI) described in standard ANSI X9.24-1: 2009. The Version field is not sent. |
| | 02 <u>Identifier Type "DUKPT 2017"</u> The identifier of the BDK key is 4 bytes long and corresponds to the BDK ID described in standard ANSI X9.24-3: 2017. The Version field is not sent. |
| | 03 <u>Only Label</u> The identifier consists of a series of ASCII characters (up to 14 characters). The Version field is not sent. |

Field 49 Format: n3

| Value | | Description |
|--------------------------------|----------------|---|
| | 04 | Label and version The identifier consists of a series of ASCII characters (up to 14 characters). The Version field must be transmitted and be valued according to the YYYYMMDDhh (GMT) format. |
| | 05 | Format « OGDC CB » The Identifier of the key is 14 bytes (bytes 2 to 15 of the Identifier field). Its format is described in the document "FORMATS DE DISTRIBUTION ET D'INTRODUCTION DES CLES CB" The Version field is not sent. |
| | Autres valeurs | RFU |
| Values 80 to FF Owner's use | 80 to FF | The use and content of bytes 2 to 15 of the Identifier field as well as the use or not of the Version field are defined bilaterally between the manufacturer and the manager of the BDK key. |

TYPE = 0003: BDK (BASE DERIVATION KEY) VERSION

Data format: n10

Number of bytes transported: 5

Field 49

Format: n3

Currency code, transaction

Specifies the currency used to express the transaction amount defined in field 4. This is the local currency code of the acquirer or the transaction's originating location.

The codes are listed in the ISO 4217 standard document.

Note

the code for the Euro is 978.

Field 52

Format: b8...16

PIN data

This data element is coded in formats "0", "3" or "4" as defined in the ISO 9564 standard.

Field 53 Format: n16

Field 53

Format: n16

Security related control information

Field 53 contains information that is required to use the security-related data contained in the message.

☐ **Not used** _____ **quartet 1**

☐ **Verifications used by the requester** _____ **quartet 2**

In the absence of the Online PIN, only the "Verifications used by the requester" data element is used in the field 53.
The values are the following:

| | |
|----------|---|
| 0 | PIN not controlled by the requester |
| 1 | PIN controlled and correct |
| 2 | PIN controlled and incorrect |
| 3 | PIN controlled and incorrect, maximum number of PIN entry tries reached |

☐ **Not used** _____ **quartets 3 to 5**

☐ **PIN or key encryption mode** _____ **quartet 6**

☐ **PIN encryption type**

| Values | Description |
|---------------|--------------------|
| 0 | No encryption |
| 2 | Triple DES |
| 3 | DUKPT2009 |
| 4 | DUKPT2017 |

☐ **PIN format** _____ **quartets 7 and 8**

| Values | Description |
|---------------|--------------------|
| 00 | No PIN |
| 01 | ISO 9564-0 format |
| 02 | ISO 9564-3 format |
| 03 | ISO 9564-4 format |

☐ **Encryption algorithm** _____ **quartets 9 and 10**

| Values | Description |
|---------------|--------------------|
| 00 | No encryption |
| 01 | 3DES |
| 02 | AES128 |
| 03 | AES192 |
| 04 | AES256 |

☐ **Not used** _____ **quartets 11 to 16**

Field 54 Format: LLLVAR an ... 120

Field 54

Format: LLLVAR an ... 120

Additional amounts

This field contains up to 6 data elements. Each data element is composed of four fixed-length parts defined below.

☐ **Account type** _____ n2

| Values | Description |
|--------|--|
| 00 | Payment with no special features (debit) |
| 30 | Credit transaction |

☐ **Amount type** _____ n2

| Values | Description |
|--------|---------------------------------------|
| 43 | Cumulative total of authorised amount |
| 57 | Original amount |

An amount type can be found in several data elements.

☐ **Currency code** _____ n3

The codes are listed in ISO 4217. The numeric list is used in this case.

☐ **Amount** _____ (x+n12) an13

The 'x' in the format describes the type of amount (D or C).

Field 55 Format: LLLVAR b ...255

Field 55

Format: LLLVAR b ...255

Integrated circuit card system related data

Field 55 is used to transport all the data related to the integrated circuit (eg the data necessary for the acceptance of EMV cards).

In the case of EMV:

- data are transported in binary without transcoding,
- indicated data formats are those defined in the EMV specifications.

☐ **Data type** _____ **b2**

| Type | Description | Repeatability |
|------|---|---------------|
| | EMV specific data | |
| 0056 | Data equivalent to ISO track 1 read in contactless mode | |
| 0057 | Track 2 equivalent data | |
| 0071 | Issuer Script Template 1 | X |
| 0072 | Issuer Script Template 2 | X |
| 0082 | Application Interchange Profile (AIP) | |
| 0091 | Issuer Authentication Data | |
| 0095 | Terminal Verification Results (TVR) | |
| 009A | Terminal Transaction Date | |
| 009C | Transaction type | |
| 5F24 | Application Expiration Date | |
| 9F02 | Amount, authorised | |
| 9F03 | Amount, other | |
| 9F06 | Application identifier (AID) | |
| 9F0A | Application Selection Registered Proprietary Data | |
| 9F10 | Issuer application data | |
| 9F1F | Track 1 Discretionary Data | |
| 9F26 | Application Cryptogram (ARQC) | |
| 9F27 | Cryptogram Information Data | |
| 9F33 | Terminal capabilities | |
| 9F34 | Cardholder verification method (CVM) results | |
| 9F35 | Terminal Type | |
| 9F36 | Application Transaction Counter (ATC) | |
| 9F37 | Unpredictable Number | |
| 9F66 | Terminal Transaction Qualifiers (TTQ) | |
| 9F6B | Data equivalent to ISO track 2 read in contactless mode | |
| 9F7C | Issuer proprietary data | |
| FF00 | Issuer script results | X |

| Type | Description | Repeatability |
|------|-----------------------------------|---------------|
| | CB-specific data | |
| DF68 | Kernel ID used | |
| DF80 | ICC processing results | X |
| DF81 | Card application type | |
| DF85 | RTT (Terminal processing results) | |
| DF86 | Contactless device | |

☐ **Data element length** _____ **b1**

The data element length is coded in binary (one byte) and is not included in the calculation of the data element length.

☐ **Data element value**

The number of characters of the variable is determined by the length.
The possible values of the variable are determined by the data type.

Field 55Format: LLLVAR b ...255

TYPE = 0056: DATA EQUIVALENT TO ISO TRACK 1 READ IN CONTACTLESS MODE

Data format: ans...76

Number of bytes transported: ...76

Contains the data elements related to track 1 equivalent data (as defined in ISO 7813) and contained in a contactless integrated circuit application.

Field separators are kept. The start and end delimiters and the LRC character must not be sent.

Field 55 type 0056 contains all track 1 equivalent data, as read in contactless mode.

TYPE = 0057: TRACK 2 EQUIVALENT DATA

Data format: b...19

Number of bytes transported: ...19

Contient les éléments de données équivalents à la piste ISO2 telle que définie dans ISO/IEC 7813, excluant les caractères de début et de fin ainsi que le LRC.

Contains the data elements related to the track 2 equivalent data (as defined in ISO/IEC 7813), excluding start and end characters as well as the LRC.

TYPE = 0071: ISSUER SCRIPT TEMPLATE 1

Data format: b...128

Number of bytes transported: ...128

Contains issuer-specific data elements sent to the integrated circuit **before** the **second** "Generate AC" command is executed.

This data element usually contains one or more 'Issuer Script Command' data elements (tag 86), each of which is used in the dialog between the terminal and the card.

IMPORTANT: This data is repeatable. However, the total length of all the occurrences of these data elements must not exceed 128 bytes. In this specific case, the length of an occurrence is not limited only to the length of the value but to the total length of the TLV structure, i.e.

$\text{number_of_occurrences} * 3 \text{ (3 bytes for the tag and the length)} + \sum \text{value_length} \leq 128$.

TYPE = 0072: ISSUER SCRIPT TEMPLATE 2

Data format: b...128

Number of bytes transported: ...128

Contains issuer-specific data sent to the chip **after** the **second** "Generate AC" command is executed.

This data element can contain one or more 'Issuer Script Command' data elements (tag 86), each of which is used in the dialog between the terminal and the card.

IMPORTANT: This data element is repeatable. However, the total length of all the occurrences of these data elements must not exceed 128 bytes. In this specific case, the length of an occurrence is not limited only to the length of the value but to the total length of the TLV structure, i.e.

$\text{number_of_occurrences} * 3 \text{ (3 bytes for the tag and the length)} + \sum \text{value_length} \leq 128$.

TYPE = 0082: APPLICATION INTERCHANGE PROFILE (AIP)

Data format: b2

Number of bytes transported: 2

Contains the specific functions of the integrated circuit application (information supplied by the card).

TYPE = 0091: ISSUER AUTHENTICATION DATA

Data format: b8...16

Number of bytes transported: 8...16

Data sent to the card for issuer authentication.

Field 55 Format: LLLVAR b ...255

TYPE = 0095: TERMINAL VERIFICATION RESULTS (TVR)

Data format: b5

Number of bytes transported: 5

Results of the different controls performed by the terminal.

TYPE = 009A: TERMINAL TRANSACTION DATE (EMV TAG 9A)

Data format: n6 (YYMMDD)

Number of bytes transported: 3

Indicates the terminal local date on which the authorisation transaction was performed. Used for calculating the ARQC.

TYPE = 009C: TRANSACTION TYPE

Data format: n2

Number of bytes transported: 1

Contains the transaction type used for an Application Usage Control (AUC). EMV concept which corresponds to the Service Code. The correspondence between the private values of field 3 and their equivalent to set in the "transaction type" data element (field 55 type 009C) is as follows:

| Field 03 - Private value | | Corresponding value- Field 55 type 009C | |
|--------------------------|------------------------|---|-------------------------------|
| 11 | Quasi-cash | 00 | Purchase of goods or services |
| 17 | Manual cash | 01 | Withdrawal |
| 28 | Quasi-cash refund | 20 | Credit: returns |
| 41 | Funds transfer, debit | 00 | Purchase of goods or services |
| 42 | Funds transfer, credit | 20 | Credit: returns |

TYPE = 5F24: APPLICATION EXPIRATION DATE

Data format: n6 (YYMMDD)

Number of bytes transported: 3

Contains the application expiration date of the EMV card.

TYPE = 9F02: AMOUNT, AUTHORISED

Data format: n12

Number of bytes transported: 6

Indicates the amount that the terminal communicates to the card.

TYPE = 9F03: AMOUNT, OTHER

Data format: n12

Number of bytes transported: 6

This type can contain the secondary amount associated with a transaction, e.g. for Cashbacks.

TYPE = 9F06: APPLICATION IDENTIFIER (AID)

Data format: b5...16

Number of bytes transported: 5...16.

Contains the identifier of the card application (see ISO 7816-5).

Field 55Format: LLLVAR b ...255

TYPE = 9F0A: APPLICATION SELECTION REGISTERED PROPRIETARY DATA

Data format: b4...32

Number of bytes transported: 4...32

Contains the proprietary card data assigned by EMVCo to specific markets.
This data element comes from the card and contains TLVs. Can be greater than 32 bytes.
The terminal transports the first TLVs of the card data element up to the maximum size of the field.

TYPE = 9F10: ISSUER APPLICATION DATA (IAD)

Data format: b...32

Number of bytes transported: ...32

Contains the data elements that the issuer wants to return in the authorisation messages.

TYPE = 9F1F: TRACK 1 DISCRETIONARY DATA

Data format: ans ..54

Number of bytes transported..54

TYPE = 9F26: APPLICATION CRYPTOGRAM (ARQC)

Data format: b8

Number of bytes transported: 8

Certificate returned by the integrated circuit in response to a cryptogram generation instruction. This certificate is used to authenticate the card.

TYPE = 9F27: CRYPTOGRAM INFORMATION DATA

Data format: b1

Number of bytes transported: 1

Code which specifies the type of certificate returned by the integrated circuit and the action to be performed by the terminal.

TYPE = 9F33: TERMINAL CAPABILITIES

Data format: b3

Number of bytes transported: 3

Specifies the terminal capabilities in a table.

TYPE = 9F34: CARDHOLDER VERIFICATION METHOD (CVM) RESULTS

Data format: b3

Number of bytes transported: 3

Specifies the results of the last cardholder authentication method.

TYPE = 9F35: TERMINAL TYPE

Data format: n2

Number of bytes transported: 1

Code which specifies the environment of an acceptance system, its communications capabilities and its operational controls.

Field 55Format: LLLVAR b ...255

TYPE = 9F36: APPLICATION TRANSACTION COUNTER (ATC)

Data format: b2

Number of bytes transported: 2

Specifies the transaction number processed by the card application. The counter is incremented by the integrated circuit.

TYPE = 9F37: UNPREDICTABLE NUMBER

Data format: b4

Number of bytes transported: 4

A unique variable associated with the generation of the ARQC application cryptogram (discriminating element).

TYPE = 9F66: TERMINAL TRANSACTION QUALIFIERS (TTQ)

Data format: structure

Number of bytes transported: 4

Terminal status during the transaction.

TYPE = 9F6B: DATA EQUIVALENT TO ISO TRACK 2 READ IN CONTACTLESS MODE

Data format: b...19

Number of bytes transported: ...19

Contains the track 2 equivalent data elements (as defined in ISO 7813) that are specified in a contactless integrated circuit application.

The field separators are kept. The start and end delimiters and the LRC character must not be sent.

Field 55 type 9F6B contains complete track 2 equivalent data exactly as it was read in contactless mode.

When this data contains an odd number of significant characters, it is right filled with a quartet filled with a 'F' hex value.

TYPE = 9F7C: ISSUER PROPRIETARY DATA

Data format: b..32

Number of bytes transported: 32

Contains data to be sent to the issuer.

TYPE = DF68: KERNEL ID USED

Data format: b1

Number of bytes transported: 1

Kernel identifier used to process the transaction.

Field 55 Format: LLLVAR b ...255

TYPE = DF80: ICC PROCESSING RESULTS

Data format: n2

Number of bytes transported: 1

This variable specifies the results of the processing performed by the acceptor on the card's integrated circuit.

| MEANING | |
|--|--|
| 0x values: Basic processing | |
| 00 | Integrated circuit processing completed successfully |
| 01 | ICC reader out of order or disconnected |
| 1x values: Valid response to chip reset controls not received | |
| 10 | No response to the reset |

Field 55 can contain several data elements related to the results of processing performed on the integrated circuit.

TYPE = DF81: CARD APPLICATION TYPE

Data format: n1

Number of bytes transported: 1

| | |
|----------|--|
| 2 | EMV |
| 3 | Contactless integrated circuit – magstripe context |

TYPE = DF85: RTT (TERMINAL PROCESSING RESULTS)

Data format: b5

Number of bytes transported: 5

Contains the result of the various controls performed by the terminal for a payment in contactless chip mode.

TYPE = DF86: CONTACTLESS DEVICE

Data format: b...35

Number of bytes transported: ...35

Contains the Form Factor received by the terminal from the integrated circuit.
Structure of the data element:

- 2 bytes: tag containing the form factor
- 1 byte: length
- Up to 32 bytes: value

TYPE = FF00: ISSUER SCRIPT RESULTS

Data format: b...5

Number of bytes transported: ...5

Specifies the results of the issuer script processing.

Field 56 Format: LLLVAR b ...255

Field 56

Format: LLLVAR b ...255

Additional data

☐ **Data type** _____ **b2**

| Type | Description | Repeatability |
|------|---|---------------|
| | ISO 8583 (V93) standardised data | |
| 0001 | Payment facilitator data | |
| 0002 | Application selection indicator | |
| 0003 | Brand selected | |
| 0005 | Acceptance system card product code | |
| 0006 | Cardholder address | |
| 0008 | Cardholder postcode | |
| 0009 | Delivery address | |
| 0010 | IP address | |
| 0011 | Payment facilitator data | |
| 0012 | Mobile payment solution identifier | |
| 0013 | Type of transaction | |
| 0014 | Type of proof | |
| 0017 | Cryptogram entry date and GMT time | |
| 0018 | Card type indicator | |
| 0019 | Serial number | |
| 0020 | Resend counter | |
| 0022 | 3DS protocol major version | |
| 0023 | UUID Container | X |
| 0024 | Independent sales organisation | |
| 0025 | Payment facilitator identifier | |
| 0026 | Marketplace identifier | |
| 0027 | Final merchant identifier | |
| 0028 | Payment use case | |
| 0029 | Card-on-file action | |
| 0031 | Payment number | |
| 0032 | Total number of payments | |
| 0033 | Exemption indicator | |
| 0036 | Authentication merchant name | |
| 0037 | Authentication date | |
| 0038 | Authentication amount | |
| 0040 | List of installed kernels | |
| 0045 | Payment validity date | |
| 0046 | Additional electronic commerce transaction data | |
| 0056 | Payment Account Reference | |
| 5F2D | Language preference | X |
| 9F0D | Issuer Action Code – Default | |
| 9F0E | Issuer Action Code – Denial | |
| 9F0F | Issuer Action code - Online | |

☐ **Data element length** _____ **b1**

The data length is coded in binary (one byte) and is not included in the calculation of the data element length.

☐ **Data element value**

The number of characters of the variable is determined by the length.
The possible values of the variable are determined by the data type.

TYPE = 0001: PAYMENT FACILITATOR DATA

Data format: structure

Number of bytes transported: 27

Field 56Format: LLLVAR b ...255

- ☐ **Payment Facilitator ID** _____ n11
- ☐ **Independent Sales Organisation ID** _____ n11
- ☐ **Sub-Merchant ID** _____ ans15

TYPE = 0002: APPLICATION SELECTION INDICATOR

Data format: n2

Number of bytes transported: 1

Data element used to specify whether the card application selection corresponds to the acquirer default selection or cardholder selection.

| Value | Meaning |
|-------|----------------------|
| 0 | Selection by default |
| 1 | Cardholder selection |

TYPE = 0003: BRAND SELECTED

Data format: b1

Number of bytes transported: 1

Indicates the brand selected by the cardholder.

| Values | Description |
|--------|--------------------------|
| 00 | CB |
| 01 | VISA |
| 02 | Vpay |
| 03 | Electron |
| 04 | MasterCard |
| 05 | Maestro |
| 06 | JCB |
| 07 | Discover |
| 80-99 | Reserved for private use |

TYPE = 0005: ACCEPTANCE SYSTEM CARD PRODUCT CODE

Data format: an3

Number of bytes transported: 3

Card product identifier provided by the acceptance system.

TYPE = 0006: CARDHOLDER ADDRESS

Data format: ansp..40

Number of bytes transported: ..40

Cardholder address.

TYPE = 0008: CARDHOLDER POSTCODE

Data format: ansp..10

Number of bytes transported: ..10

Cardholder postcode.

Field 56Format: LLLVAR b ...255

TYPE = 0009: DELIVERY ADDRESS

Data format: ans80

Number of bytes transported: 80

Delivery address for the order.

The address has the following fields: number and street name, postcode and country. The fields are separated by asterisks.

TYPE = 0010: IP ADDRESS

Data format: ans15

Number of bytes transported: 15

Cardholder IP address.

The two address formats are the following:

- IPv4 is represented in decimal notation with four numbers between 0 and 255, separated by points. For example, 5.10.255.1
- IPv6 is represented by eight groups of four hexadecimal digits, each group representing 16 bits (two bytes). The groups are separated by colons (:).
For example, IPv6: 2019: 0d8e: 113a: 1111: 0101: 8a2e: 0370: 7334

TYPE = 0011: NUMBER OF ARTICLES

Data format: n2

Number of bytes transported: 1

Number of articles in the cart.

TYPE = 0012: MOBILE PAYMENT SOLUTION IDENTIFIER

Data format: n3

Number of bytes transported: 2

Mobile payment solution identifier

☐ **Nomenclature**

n1

| Values | Description |
|--------|-------------|
| 0 | CB |
| 1-9 | RFU |

☐ **Identifier**

n2

| Values | Description |
|--------|-------------|
| 00 | Apple Pay |
| 01 | Samsung Pay |
| 02 | Android Pay |

Any other value can be used within the scope of agreements between users.

Field 56Format: LLLVAR b ...255

TYPE = 0013: TYPE OF TRANSACTION

Data format: n2

Number of bytes transported: 1

Type of transaction processed.

| Values | Description |
|--------|-----------------------|
| 00 | In-app payment |
| 01 | Browser-based payment |

TYPE = 0014 : TYPE OF PROOF

Data format: n2

Number of bytes transported: 1

Type of proof generated by the payment solution.

| Values | Description |
|--------|-----------------------------|
| 00 | EMV |
| 01 | Secured electronic commerce |

TYPE = 0017: CRYPTOGRAM ENTRY DATE AND GMT TIME

Data format: n12(YYMMDDhhmmss)

Number of bytes transported: 6

GMT date and GMT for card security code entry.

TYPE = 0018: CARD TYPE INDICATOR

Data format: n1

Number of bytes transported: 1

TYPE = 0019: SERIAL NUMBER

Data format: ans..35

Number of bytes transported: .35

Serial number of the acceptance system or point of acceptance.

TYPE = 0020: RESEND COUNTER

Data format: n1

Number of bytes transported: 1

Counter used for re-authorised messages.

Field 56Format: LLLVAR b ...255

TYPE = 0022: 3DS PROTOCOL MAJOR VERSION

Data format: an1

Number of bytes transported: 1

| Values | Description |
|--------|----------------|
| 1 | Version 3DS v1 |
| 2 | Version 3DS v2 |

TYPE = 0023: UUID CONTAINER

Data format: ans37

Number of bytes transported: 37

- **Nomenclature** _____ **ans1**

| Values | Description |
|--------|--------------------|
| 1 | DS Transaction ID |
| 2 | ACS Transaction ID |
| 9 | RFU |
| A-Z | RFU |

- **UUID** _____ **ans36**

TYPE = 0024: INDEPENDENT SALES ORGANIZATION

Data format: ans15

Number of bytes transported: 15

TYPE = 0025: PAYMENT FACILITATOR IDENTIFIER

Data format: ans15

Number of bytes transported: 15

TYPE = 0026: MARKETPLACE IDENTIFIER

Data format: ans15

Number of bytes transported: 15

TYPE = 0027: FINAL MERCHANT IDENTIFIER

Data format: ans15

Number of bytes transported: 15

Field 56Format: LLLVAR b ...255

TYPE = 0028: PAYMENT USE CASE

Data format: n2

Number of bytes transported: 1

Identification of remote payment use cases.

| Values | Description |
|--------|---|
| 01 | Single payment |
| 02 | Recurring subscription - Fixed amount and limited duration subscription |
| 03 | Instalment payment |
| 04 | Shipment payment |
| 05 | Recurring subscription - Other subscription |
| 06 | Reservation and rental payment |
| 07-99 | RFU |

TYPE = 0029: CARD-ON-FILE ACTION

Data format: an1

Number of bytes transported: 1

| Values | Description |
|--------|-------------|
| 1 | Add card |
| 2 | Keep card |

TYPE = 0031: PAYMENT NUMBER

Data format: n2

Number of bytes transported: 1

Payment number in progress.

TYPE = 0032: TOTAL NUMBER OF PAYMENTS

Data format: n2

Number of bytes transported: 1

Total number of payments planned.

Field 56Format: LLLVAR b ...255

TYPE = 0033: EXEMPTION INDICATOR

Data format: b2..3

Number of bytes transported: 2..3

Indicates the exemption cases(s) for the transaction related to strong cardholder authentication..

☐ **Byte 1** _____ b1

| Bit | Description |
|-----|--|
| 8 | Issuer transaction risk analysis |
| 7 | Recurring operations with identical amounts and a specified duration |
| 6 | Delegated authentication |
| 5 | Authentication implementation is not technically possible |
| 4 | Low amount |
| 3 | Acceptor/acquirer transaction risk analysis |
| 2 | Trusted beneficiary |
| 1 | Secure corporate paymentprocess and protocol |

☐ **Byte 2** _____ b1

| Bit | Description |
|-----|--|
| 5-8 | RFU |
| 4 | Unattended terminal for transport fare and parking fee |
| 3 | Out of RTS SCA scope |
| 2 | Other cases |
| 1 | Transaction risk analysis – merchant in CB Low Risk Merchant program |

☐ **RFU** _____ b1

TYPE = 0036: AUTHENTICATION MERCHANT NAME

Data format: ans40

Number of bytes transported: 40

Name of the merchant presented for authentication.

TYPE = 0037: AUTHENTICATION DATE

Data format: n14(YYYYMMDDHHMMSS)

Number of bytes transported: 7

Date and time of authentication.

TYPE = 0038: AUTHENTICATION AMOUNT

Data format: n12

Number of bytes transported: 6

Amount of authentication.

Field 56Format: LLLVAR b ...255

TYPE = 0040: LIST OF INSTALLED KERNELS

Data format: b1..8

Number of bytes transported: 1..8

The description of this list is provided here for information only. The reference description can be found in the functional documents.

☐ **Byte 1** _____ b1

| Value | Description |
|-------|-------------|
| Bit 8 | RFU |
| Bit 7 | C7 |
| Bit 6 | C6 |
| Bit 5 | C5 |
| Bit 4 | C4 |
| Bit 3 | C3 |
| Bit 2 | C2 |
| Bit 1 | RFU |

☐ **Byte 2** _____ b1

| Value | Description |
|-------|-------------|
| Bit 8 | RFU |
| Bit 7 | RFU |
| Bit 6 | RFU |
| Bit 5 | RFU |
| Bit 4 | RFU |
| Bit 3 | C-PACE |
| Bit 2 | WISE |
| Bit 1 | PURE |

☐ **Bytes 3 to 8** _____ b6

Reserved for CN use.

TYPE = 0045: PAYMENT VALIDITY DATE

n6(YYMMDD)

Number of bytes transported: 3

Validity date for a multiple payment.

Field 56Format: LLLVAR b ...255

TYPE = 0046: ADDITIONAL DATA – INITIAL TRANSACTION ELECTRONIC COMMERCE

Data format: structure

Number of bytes transported: 126

Electronic commerce data for the initial transaction of a multiple payment. These data elements may be requested in transactions subsequent to the initial transaction.

- ☐ 3DS protocol major version _____ n2
- ☐ ACS transaction ID _____ ans36
- ☐ DS transaction ID _____ ans36
- ☐ Authentication merchant name _____ ans40
- ☐ Authentication date _____ n14
- ☐ Authentication amount _____ n12

TYPE = 0056: PAYMENT ACCOUNT REFERENCE

Data format: ans29

Number of bytes transported: 29

Payment Account Reference linked to the underlying PAN.

TYPE = 5F2D: LANGUAGE PREFERENCE

Data format: an2

Number of bytes transported: 2

Indicates a list of 1 to 4 language(s) order by preference.

TYPE = 9F0D: ISSUER ACTION CODE - DEFAULT

Data format: b5

Number of bytes transported: 5

Indicates the issuer default preference to reject a transaction that should have been online improved but that the terminal can not handle online.

TYPE = 9F0E: ISSUER ACTION CODE - DENIAL

Data format: b5

Number of bytes transported: 5

Indicates the issuer conditions to reject a transaction without trying an online connexion.

TYPE = 9F0F: ISSUER ACTION CODE - ONLINE

Data format: b5

Number of bytes transported: 5

Indicates the issuer conditions to accept a transaction online.

Field 58 Format: LLLVAR ans ...255

Field 58

Format: LLLVAR ans ...255

Responding machine identifier

Field 58 is used in a response when an authorisation has been sent by the issuer or its representative and in network management messages.

Field 59

Format: LLLVAR b ...255

National data

☐ Data type _____ b2

| Type | Description | Repeatability |
|------|---|---------------|
| | ISO 8583 (V93) standardised data | |
| 0100 | Function code | |
| 0101 | Message reason code | X |
| 0102 | Transaction year | |

| Type | Description | Repeatability |
|------|---|---------------|
| | CB-specific data | |
| 0200 | Transaction regulatory and technical environment (ERT) | |
| 0201 | ITP SA (Acceptance system terminal application identifier) | |
| 0202 | Acceptor contract number | |
| 0203 | Acceptance system logical number | |
| 0204 | Point of interaction logical number | |
| 0205 | Acceptance system country code | |
| 0207 | Cardholder total amount | |
| 020B | TASA (Card acceptor application type) | |
| 0215 | ITP PA (Point of interaction terminal application identifier) | |
| 0216 | Point of interaction extended logical number | |

| Type | Description | Repeatability |
|------|---|---------------|
| | Security data | |
| 0300 | Card security code | |
| 0301 | Card security code verification results | |

| Type | Description | Repeatability |
|------|---|---------------|
| | Electronic commerce data | |
| 0400 | Transaction identifier or cryptogram supplied by the acceptor | |
| 0401 | Cardholder authentication value | |
| 0407 | Electronic commerce transaction security type | |
| 0409 | Cardholder authentication value processing information | |
| 0410 | Cardholder authentication method | |
| 0411 | Cardholder authentication value calculation method | |
| 0412 | Three-domain secure results | |
| 0413 | Modified electronic commerce security type | |
| 0414 | Additional electronic commerce data elements | |
| 0415 | Digital wallet name | |
| 0416 | Electronic commerce indicator | |
| 0417 | Digital wallet additional data | |
| 0418 | Wallet identifier | |
| 0419 | Three-domain secure results, others | |
| 0420 | Electronic commerce data elements, initial transaction | |

Field 59Format: LLLVAR b ...255

| Type | Description | Repeatability |
|-------------|---|---------------|
| | Data relating to payment for the reservation and rental of goods or services | |
| 0800 | Service attribute | |

| Type | Description | Repeatability |
|-------------|--|---------------|
| | Other | |
| 0802 | Risk scoring service | |
| 0805 | Optional services supported (acceptor) | |

❑ **Data element length** _____ **b1**

The data element length is coded in binary (one byte) and is not included in the calculation of the data element length.

❑ **Data element value**

The number of characters of the variable is determined by the length.
The possible values of the variable are determined by the data type.

ISO 8583 (V93) STANDARD DATA

TYPE = 0100: FUNCTION CODE

Data format: n3

Number of bytes transported: 2

The function code specifies the purpose of a message within its message class.

Values 100 to 199 are used in authorization request messages:

| | |
|----------------|--|
| 100 | Original authorisation – accurate amount |
| 101 | Original authorisation – estimated amount |
| 102 | Reauthorisation – accurate amount |
| 103 | Reauthorisation – estimated amount |
| 104 | Resubmission – accurate amount |
| 105 | Resubmission – estimated amount |
| 106 | Incremental authorisation – accurate amount |
| 107 | Incremental authorisation – estimated amount |
| 108 | Card Validity Check |
| 163 | Additional charges |
| 164 | No-show |
| 165 | Late operation |
| 180-199 | Reserved for private use |

In the case of a "standard" authorisation request, the function code used is 100 (original authorisation – accurate amount).

Field 59 Format: LLLVAR b ...255

TYPE = 0101: MESSAGE REASON CODE

Data format: n4

Number of bytes transported: 2

The message reason code provides the receiver with an authorisation or reversal request message, and the reason or the purpose of the message.

The following values comply with ISO 8583 V93 in relation to message reason code values.

Any other value compliant with the standard can be used within the scope of agreements between users.

| Value | Description |
|--|---|
| Values 1500 to 1999 specify the reason why a request message (0100) was sent instead of an advice (0120). | |
| 1503 | Terminal random selection |
| 1506 | On line forced by card acceptor |
| 1507 | On line forced by card acceptance device to be updating |
| 1508 | On line forced by terminal |
| 1509 | On line forced by card issuer (service code) |
| 1510 | Over floor limit |
| 1511 | Merchant suspicious |
| 1512 | BIN not allowed |
| 1513 | Card not allowed |
| 1651 | Cumulative/cardholder/application |
| 1652 | BIN monitored |
| 1653 | Unknown BIN |
| 1654 | PAN monitored |
| 1655 | Pre-authorisation request |
| 1656 | Forced by issuer (flow control) |
| 1657 | Foreign currency |
| 1658 | Unknown transaction currency code |
| 1659 | Card refused |
| 1660 | Call following an ARQC issued by the card |
| 1663 | Bin refused |
| 1664 | Strictly online |
| 1665 | Offline with online capability |
| 1671 | Contactless chip transaction using magstripe data |
| 1672 | Card in SDA mode |
| 1679 | Provision for cumulative amounts |
| 1680 | Authorisation following issuer PIN request |
| 1681 | Suspected relay attack |
| 1682 | Relay attack detection processing |
| 1776-1999 | Reserved for private use |

| Value | Description |
|---|---|
| Values 4000 to 4499 indicate the reason why a reversal message (0400) was sent | |
| 4000 | Customer cancellation |
| 4007 | Card acceptor device unable to complete transaction |
| 4200 | Cardholder decision |
| 4201 | Terminal decision |
| 4202 | Card decision |
| 4203 | Cardholder or terminal decision |
| 4204 | Acceptor decision |
| 4351-4499 | Reserved for private use |

TYPE = 0102: TRANSACTION YEAR

Data format: n2

Number of bytes transported: 1

Year transaction was processed. This data element is returned as a complement to field 13.

Field 59Format: LLLVAR b ...255

CB SPECIFIC DATA

TYPE = 0200: ERT (REGULATORY AND TECHNICAL ENVIRONMENT)

Data format: b1

Number of bytes transported: 1

The following table shows all values that can be used in this type. Any values not listed may be considered as RFU (Reserved for future use):

| Value | Description |
|----------------------------------|--|
| - Face-to-face payment: | |
| 10 | Face to face payment |
| - Remote payment: | |
| 20 | Remote payment, manual entry via terminal |
| 21 | Remote payment, Telephone |
| 22 | Remote payment, Mail order |
| 24 | Internet, Cardholder Initiated Transaction |
| 25 | Remote payment, Television |
| 27 | Internet, subsequent transaction |
| 28 | Recurring payment via another form of order |
| - Telepayment | |
| 30 | Telepayment |
| - Unattended payment: | |
| 41 | Payment via a Category 1 unattended vending machine – Level 1: ADM |
| 42 | Payment via a Category 2.1 unattended vending machine – Level 1: ADM |
| 43 | Payment via an unattended vending machine with mandatory cardholder authentication |
| 44 | Reserved for future use |
| 45 | Payment via a Category 1 unattended vending machine – Level 2: SST |
| 46 | Payment via a Category 2.1 unattended vending machine – Level 2: SST |
| 47 | Payment via a Category 2.2 unattended vending machine – Level 2: SST |
| 48 | Payment via an unattended machine for specific activities (highways, car parks, etc) |
| 49 | Payment via a Category 1 unattended vending machine – Level 3: LAT |
| 50 | Payment via a Category 2.1 unattended vending machine – Level 3: LAT |
| 51 | Payment via a Category 2.2 unattended vending machine – Level 3: LAT |
| 52 | Reserved for future use |
| 53 | Reserved for future use |
| 54 | Payment via a Category 1 multi-service self-service banking terminal (ADM) |
| 55 | Payment via a Category 2.1 multi-service self-service banking terminal (ADM) |
| 56 | Payment via a Category 2.2 multi-service self-service banking terminal (ADM) |
| 57 | Payment via rental unattended vending machine I |
| 58 | Transport access network |
| 59 | Reserved for future use |
| - Quasi-cash payment | |
| 60 | Quasi-cash (corresponds to the standard case) |
| 63 | Quasi-cash, Television |
| 64 | Quasi-cash, Internet |
| 65 | Quasi-cash, Unattended vending machine |
| - Gateway-specific values | |
| 75 | Counter withdrawal |
| - Pre-authorisation: | |
| 80 | Pre-authorisation |
| - Private values: | |
| 90-99 | |
| - Funds transfer: | |
| B0 | Funds transfer via mail or telephone |
| B1 | Funds transfer via internet |
| B2 | Face-to-face funds transfer |
| B3 | Funds transfer via an unattended terminal |

Field 59Format: LLLVAR b ...255

REFERENCE INFORMATION :

| CB NATIONAL CLASSIFICATION OF UNATTENDED TERMINALS | |
|---|--|
| Category 1 unattended terminal | Transaction amount is known before the good or service is provided. |
| Category 2 – 1 unattended terminal | Transaction amount is not known until the completion of the transaction. Amount can generally be estimated either by the user or by the unattended terminal based on the user request. |
| Category 2 – 2 unattended terminal | Transaction amount is not known until the completion of the transaction. Amount cannot be estimated in advance. |
| INTERNATIONAL CLASSIFICATION | |
| Level 1 unattended unattended terminal | ADM: Zero floor limit authorisation and PIN control |
| Level 2 unattended terminal | SST: Zero floor limit authorisation but no PIN control |
| Level 3 unattended terminal | LAT: No authorisation request and no PIN control |
| Level 4 unattended terminal | In-flight commerce (not allowed for intra-regional transactions) |

TYPE = 0201: ITP SA (ACCEPTANCE SYSTEM TERMINAL APPLICATION IDENTIFIER)

Data format: n12

Number of bytes transported: 6

Acceptance system terminal application identifier.

| | |
|--|----|
| Manufacturer code | n3 |
| Reference specifications version | n3 |
| Terminal model reference | n3 |
| Interbank application software version | n3 |

TYPE = 0202: ACCEPTOR CONTRACT NUMBER

Data format: n7

Number of bytes transported: 4

TYPE = 0203: ACCEPTANCE SYSTEM LOGICAL NUMBER

Data format: n3

Number of bytes transported: 2

TYPE = 0204: POINT OF INTERCATION LOGICAL NUMBER

Data format: n3

Number of bytes transported: 2

TYPE = 0205: ACCEPTANCE SYSTEM COUNTRY CODE

Data format: n3

Number of bytes transported: 2

Country code of the card acceptor. Coding must comply ISO 3166 in which the code is represented by three numeric characters.

Field 59 Format: LLLVAR b ...255

TYPE = 0207: CARDHOLDER TOTAL AMOUNT

Data format: n12

Number of bytes transported: 6

Cardholder information which contains the following for a given application: cumulative amount of all completed debit transactions, including transactions in progress (total amount expressed in the transaction currency or its counter-value). The amount is expressed in the currency of the transaction amount in progress.

TYPE = 020B: TASA (CARD ACCEPTOR APPLICATION TYPE)

Data format: b5...16

Number of bytes transported: 5...16

Identifies the card acceptor application that originated the message. Its structure is based on the AID in ISO 7816-5. It includes the following:

☐ **Application supplier identifier** _____ **b5**

Values: any value compliant with ISO 7816-5.

☐ **Application type identifier** _____ **b...11**

Values: any value compliant with ISO 7816-5.

In the CB environment, the length of this field is 7.

For CB, the chosen values are:

- Application supplier registered identifier:
- Application type identifier:

A000000042

the values are limited to b2, and shown below:

| Byte 1 | |
|--------|------------------------------|
| 00 | Not specified ⁽²⁾ |
| 20 | EMV/track 2 ⁽¹⁾ |
| 21 | Wallets |
| 40-80 | Private values |

| Byte 2 | | | |
|--------|---|--|--------------|
| 10 | Face-to-face payment | | |
| 20 | Remote payment | Manual entry via terminal | |
| 21 | | Telephone | |
| 22 | | Mail order | |
| 24 | | Internet | |
| 25 | | Television | |
| 30 | Telepayment | Not specified | |
| 33 | | Television | |
| 41 | Payment via unattended terminal | Category 1 | Level 1 ADM |
| 42 | | Category 2.1 | Level 1: ADM |
| 43 | | Payment via an unattended terminal with mandatory cardholder authentication | |
| 44 | | Reserved for future use | |
| 45 | | Category 1 | Level 2: SST |
| 46 | | Category 2.1 | Level 2: SST |
| 47 | | Category 2.2 | Level 2: SST |
| 48 | | Payment via an unattended machine for specific markets (highways, parking,etc) | |
| 49 | | Category 1 | Level 3: LAT |
| 50 | | Category 2.1 | Level 3: LAT |
| 51 | | Category 2.2 | Level 3: LAT |
| 52 | | Reserved for future use | |
| 53 | | Reserved for future use | |
| 54 | Payment via multi-service banking ATM | | |
| 57 | Payment via rental unattended vending machine | | |

Field 59Format: LLLVAR b ...255

| Byte 2 | | |
|--------|--------------------------|--|
| 58 | Transport access network | |
| 60 | Quasi-cash | Quasi-cash (standard case) |
| 63 | | Quasi-cash Television |
| 64 | | Quasi-cash, Internet |
| 65 | | Quasi-cash unattended terminal vending machine |
| 75 | Withdrawal | Counter withdrawal |
| 80 | Pre-authorisation/Rental | |
| 85-89 | | |
| 90-99 | Private values | |
| B0 | Funds transfer | Funds transfer via mail or telephone |
| B1 | | Funds transfer via internet |
| B2 | | Face-to-face funds transfer |
| B3 | | Funds transfer via unattended terminal |
| B4-F9 | RFU | |

(1) For payments related to the reservation and rental of goods or services, value 20 is used when the application allows chip and magstripe data capture. May also be used for manual entry of cardholder data.

(2) For payments related to the reservation and rental of goods or services, value 00 is used when the application only allows manual entry of cardholder data.

TASA/ERT correspondence table

| Card acceptor application type (TASA) | | Regulatory and Technical Environment (ERT) | |
|---------------------------------------|--|--|--|
| Face-to-face payment | | | |
| 10 | Face-to-face payment | 10 | Face-to-face payment |
| Remote payment | | | |
| 20 | Remote payment: Manual entry via terminal | 20 | Remote payment, Manual entry via terminal |
| 20 | Remote payment: Manual entry via terminal | 28 | Recurring payment via another type of order |
| 21 | Remote payment: Telephone | 21 | Remote payment: Telephone |
| 22 | Remote payment: Mail order | 22 | Remote payment: Mail order |
| 24 | Remote payment: Internet | 24 | Internet, Cardholder Initiated Transaction |
| 24 | Remote payment: Internet | 27 | Internet, Subsequent Transaction |
| 25 | Remote payment: Television | 25 | Remote payment: Television |
| Telepayment | | | |
| 30 | Telepayment: not specified | 30 | Telepayment: not specified |
| 33 | Telepayment: television | 33 | Telepayment: television |
| Payment by unattended terminal | | | |
| 41 | Payment via a Category 1 unattended terminal - Level 1: ADM | 41 | Payment via a Category 1 unattended terminal - Level 1: ADM |
| 42 | Payment via a Category 2.1 unattended terminal – Level 1: ADM | 42 | Payment via a Category 2.1 unattended terminal – Level 1: ADM |
| 43 | Payment via an unattended terminal with mandatory cardholder authentication | 43 | Payment via an unattended terminal with mandatory cardholder authentication |
| 45 | Payment via a Category 2 unattended terminal – Level 1: SST | 45 | Payment via a Category 2 unattended terminal – Level 1: SST |
| 46 | Payment via a Category 2.1 unattended terminal – Level 2: SST | 46 | Payment via a Category 2.1 unattended terminal – Level 2: SST |
| 47 | Payment via a Category 2.2 unattended terminal – Level 2: SST | 47 | Payment via a Category 2.2 unattended terminal – Level 2: SST |
| 48 | Payment via an unattended machine for specific activities (highways, car parks, etc) | 48 | Payment via an unattended machine for specific activities (highways, car parks, etc) |
| 49 | Payment via a Category 1 unattended terminal | 49 | Payment via a Category 1 unattended terminal |
| 50 | Payment via a Category 2.1 unattended terminal – Level 3: LAT | 50 | Payment via a Category 2.1 unattended terminal – Level 3: LAT |
| 51 | Payment via a Category 2.2 unattended terminal – Level 3: LAT | 51 | Payment via a Category 2.2 unattended terminal – Level 3: LAT |
| 54 | Payment via a Category 1 multi-service banking ATM – Level 1: ADM | 54 | Payment via a Category 1 multi-service banking ATM – Level 1: ADM |
| 54 | Payment via a Category 1 multi-service banking ATM – Level 1: ADM | 55 | Payment via a Category 2.1 multi-service banking ATM – Level 1: ADM |

Field 59 Format: LLLVAR b ...255

| Card acceptor application type (TASA) | | Regulatory and Technical Environment (ERT) | |
|--|---|---|---|
| 54 | Payment via a Category 1 multi-service banking ATM – Level 1: ADM | 56 | Payment via a Category 2.2 multi-service banking ATM – Level 1: ADM |
| 57 | Payment via rental unattended vending machine | 57 | Payment via rental unattended vending machine |
| 58 | Transport access network | 58 | Transport access network |
| Quasi-cash | | | |
| 60 | Quasi-cash (standard case) | 60 | Quasi-cash (standard case) |
| 63 | Quasi-cash Television | 63 | Quasi-cash Television |
| 64 | Quasi-cash, Internet | 64 | Quasi-cash, Internet |
| 65 | Quasi-cash unattended terminal vending machine | 65 | Quasi-cash unattended terminal vending machine |
| Counter withdrawal | | | |
| 75 | Counter withdrawal | 75 | Counter withdrawal |
| Pre-authorisation | | | |
| 80 | Pre-authorisation | 80 | Pre-authorisation |
| Funds transfer | | | |
| B0 | Funds transfer via mail or telephone | B0 | Funds transfer via mail or telephone |
| B1 | Funds transfer via internet | B1 | Funds transfer via internet |
| B2 | Face-to-face funds transfer | B2 | Face-to-face funds transfer |
| B3 | Funds transfer via unattended terminal | B3 | Funds transfer via unattended terminal |

TYPE = 0215: ITP PA (POINT OF INTERACTION TERMINAL APPLICATION IDENTIFIER)

Data format: n12

Number of bytes transported: 6

Point of acceptance terminal application identifier.

| | |
|--|----|
| Manufacturer code | n3 |
| Reference specifications version | n3 |
| Terminal model reference | n3 |
| Interbank application software version | n3 |

TYPE = 0216: POINT OF INTERACTION EXTENDED LOGICAL NUMBER

Data format: an3

Number of bytes transported: 3

Field 59Format: LLLVAR b ...255

DATA RELATED SECURITY ASPECTS

TYPE = 0300: CARD SECURITY CODE

Data format: Structure

Number of bytes transported: 1, 3 or 4

☐ **Information on card security code presence** _____ n2

| | |
|----|--|
| 00 | Card security code (3 characters) not sent by the merchant |
| 01 | Card security code (3 characters) present |
| 02 | Card security code (3 characters) present on cardholder's card, but illegible (therefore not sent) |
| 09 | 3 characters : cardholder informed merchant that no card security code is printed on card |
| 10 | Card security code (4 characters) not sent by the merchant |
| 11 | Card security code (4 characters) present |
| 12 | Card security code (4 characters) present on cardholder's card, but illegible (therefore not sent) |
| 19 | 4 characters : cardholder informed merchant that no card security code is printed on card |

☐ **Card security code value** _____ n3...4

Present only if the data element 'Information on presence of card security code ' is set to 01 or 11 (i.e. card security code is present).

The card security code is 3 characters long for CB cards and 4 for American Express cards.

☐ **Information on card security code verification** _____ n1

| | |
|---|---|
| 0 | Card security code verification response code requested |
| 1 | Card security code verification response code requested and card security code verification results requested |

TYPE = 0301: CARD SECURITY CODE VERIFICATION RESULTS

Data format: Structure

Number of bytes transported: 2

DATA RELATED TO ELECTRONIC COMMERCE

TYPE = 0400: TRANSACTION IDENTIFIER OR CRYPTOGRAM SUPPLIED BY THE ACCEPTOR

Data format: b4...40

Number of bytes transported: 4...40

Contains an unique reference for a secured electronic commerce transaction (This identifier is used in certain electronic commerce cryptogram calculation methods) or a cryptogram generated by the acceptance solution.

TYPE = 0401: CARDHOLDER AUTHENTICATION VALUE

Data format: b20..40

Number of bytes transported: 20..40

Contains the data elements related to the result of a secured electronic commerce or wallet transaction authentication.

Field 59Format: LLLVAR b ...255

TYPE = 0407: ELECTRONIC COMMERCE SECURITY TYPE

Data format: n2

Number of bytes transported: 1

| Value | Description |
|-------|---|
| 08 | Non-secured electronic commerce transaction |
| 09 | Secured by any means other than those corresponding to the other values |
| 20 | Secured electronic commerce |
| 21 | Secured via mobile |

TYPE = 0409: CARDHOLDER AUTHENTICATION VALUE PROCESSING INFORMATION

Data format: anp1

Number of bytes transported: 1

TYPE = 0410: CARDHOLDER AUTHENTICATION METHOD

Data format: ans2

Number of bytes transported: 2

Contains the cardholder authentication method.

For CB transactions performed with a third-party Wallet, the data element contains the authentication method when the Wallet provides it for the transaction.

TYPE = 0411: CARDHOLDER AUTHENTICATION VALUE CALCULATION METHOD

Data format: an1

Number of bytes transported: 1

Contains the calculation method used by the issuer to make the electronic commerce cryptogram.

- For 3DS V1: Its value is identical to the 3D-Secure PAREs message <TX><cavvAlgorithm> XML tag.
- For CB EMVCo 3DS: Its value is identical to the CB-AVALGO extension for Ares and RReq messages.
- W: Cryptogram generated by a wallet solution

Field 59Format: LLLVAR b ...255

TYPE = 0412: THREE-DOMAIN SECURE RESULTS

Data format: Structure

Number of bytes transported: 4

Describes the result of exchanges using a secured remote payment architecture.

☐ **Nomenclature** _____ **n1**

Specifies the result of the use of the secured remote payment architecture.

| Values | Description |
|--------|-------------|
| 0 | CB |

☐ **Cardholder authentication** _____ **an1**

| Values | Description |
|--|---|
| In the CB nomenclature (Result of cardholder authentication) | |
| A | Proof of transit via ACS |
| E | Successful authentication, without cryptogram |
| N | Unsuccessful authentication |
| U | Call made to ACS |
| Y | Successful authentication, with cryptogram |
| Blank | Timeout on ACS or no call to ACS |

☐ **Registration control** _____ **b2**

Bitmap of events related to cardholder registration (VERes and CRRes messages). This data element is only significant only with 3D Secure v1 in the CB nomenclature.

| Values | Description |
|-----------|--|
| Bit 16-11 | Reserved for CB use |
| Bit 10 | Card absent from directory service cache (CRRes) |
| Bit 9 | Card absent from MasterCard cache (CRRes) |
| Bit 8 | Card absent from Visa cache (CRRes) |
| Bit 7 | Card registered (VERes – 'Y' type) |
| Bit 6 | Timeout or VERes - type 'U' when calling ACS |
| Bit 5 | Timeout or VERes - type 'U' when calling Visa Directory Server |
| Bit 4 | Timeout or VERes - type 'U' when calling MasterCard Directory Server |
| Bit 3 | Card not registered in ACS (VERes –type 'N') |
| Bit 2 | Card not registered in MasterCard (VERes –type 'N') |
| Bit 1 | Card not registered in Visa (VERes –type 'N') |

TYPE = 0413: MODIFIED ELECTRONIC COMMERCE SECURITY TYPE

Data format: b1

Number of bytes transported: 1

Informes the acceptor and/or the CB acquirer that the security mode initially planned for the transaction has been changed.

| Values | Description |
|--------|---|
| 09 | Secured by any means other than those corresponding to the other values |

Field 59Format: LLLVAR b ...255

TYPE = 0414: ADDITIONAL ELECTRONIC COMMERCE DATA ELEMENTS

Data format: Structure

Number of bytes transported: 3..40

☐ **Nomenclature** _____ an1

| Values | Description |
|--------|-------------|
| 3 | CB |

☐ **Type of additional data** _____ an2

| Values | Description |
|------------------------|-------------|
| In the CB nomenclature | |
| 01 | MasterPass |
| 02 | Paylib |

☐ **Value of additional data** _____ ans..37

If "Nomenclature" = "3" and "Type of additional data" = "01", the format is as follows:

☐ **Wallet Program Data** an3

| Value | Wallet identifier |
|-------|-------------------------------|
| 101 | MasterPass remote |
| 102 | MasterPass remote NFC Payment |

If "Nomenclature" = "3" and "Type of additional data" = "02", the format is as follows:

☐ **Additional Authentication Method** _____ an2

Value that specifies the method used by Paylib to authenticate the transaction.

| Values | Authentication method used |
|--------|---|
| 00 | No authentication |
| 01 | Repeatable password (e.g. date of birth, password, postal code) |
| 02 | OTP via telephone (e.g. SMS, SVI, token) |
| 03 | OTP via secured software element (e.g. SEA) |
| 04 | OTP via secured hardware element (e.g. CAP, SIM) |

☐ **Additional Authentication Reason Code** _____ an2

Reason for authentication request

| Initial use | Risk management engine unavailable | Risk management engine requests additional strong authentication | No additional authentication requested | Value of field 'Additional Authentication Reason Code' |
|-------------|------------------------------------|--|--|--|
| √ | | | √ | 01 |
| √ | | √ | | 02 |
| √ | √ | | | 03 |
| | | | √ | 11 |
| | | √ | | 12 |
| | √ | | | 13 |

Field 59 Format: LLLVAR b ...255

TYPE = 0415: DIGITAL WALLET NAME

Data format: an2

Number of bytes transported: 2

The following table shows all values that can be used

| Values | Description |
|--------|-------------|
| 03 | MasterPass |
| 04 | Paylib |

TYPE = 0416: ELECTRONIC COMMERCE INDICATOR

Data format: an2

Number of bytes transported: 2

Electronic Commerce Indicator based on secured architecture

TYPE = 0417: DIGITAL WALLET ADDITIONAL DATA

Data format: an12..24

Number of bytes transported: 12..24

The content of this data element is described in the functional specifications of the wallet.

☐ **Clearing transaction data** _____ n12

☐ **Additional data** _____ an..12

TYPE = 0418: WALLET IDENTIFIER

Data format: n6

Number of bytes transported: 3

Identifier related to wallet approval.

The content of this data element is described in the functional specifications of the digital wallet.

☐ **Network** _____ n2

☐ **Technology** _____ n2

☐ **Brand** _____ n2

Field 59Format: LLLVAR b ...255

TYPE = 0419: THREE-DOMAIN SECURE RESULTS, OTHERS

Data format: Structure Number of bytes transported: 10

☐ **3DS authentication type** _____ **an2**

| Values | Description |
|--------|-------------------------------|
| CH | Challenge |
| FR | Frictionless |
| FD | Frictionless in stand-in mode |

☐ **Merchant request for authentication** _____ **n2**

| Values | Description |
|--------|---|
| 01 | No preference – default value if the data element is absent or not set to a value |
| 02 | No authentication |
| 03 | Authentication requested |
| 04 | Authentication required |

☐ **Transaction status reason** _____ **n2**

Corresponds to the "Transaction Status Reason" data element in the EMVCo 3DS v2 specification. Provided in ARes or RReq messages.

Default value of "00" if the data element is absent or not set to a value.

☐ **Transaction cancellation indicator** _____ **n2**

Corresponds to the "Challenge Cancellation Indicator" data element in the EMVCo 3DS v2 specification. Provided in RReq messages.

Default value of "00" if the data element is absent or not set to a value.

☐ **CB 3DS score** _____ **anp2**

Corresponds to the "CB-SCORE" data element defined by CB as an extension to the ARes message in the EMVCo 3DS v2 protocol.

Padding characters (spaces) used by default if the data element is absent or not set to a value.

☐ **Reserved for future use** _____ **an3**

TYPE = 0420: ELECTRONIC COMMERCE DATA, INITIAL TRANSACTION

Data format: structure

Number of bytes transported: 22..58

Electronic commerce data from the initial transaction of a multiple payment. This data may be requested in the transactions subsequent to this initial transaction

☐ **Electronic commerce transaction security type** _____ **n2**

☐ **Cardholder authentication method** _____ **ans2**

☐ **Cardholder authentication value calculation method** _____ **an1**

☐ **Result of using a secured remote payment architecture** _____ **ansb4**

☐ **Extension of result of using a secured payment architecture** _____ **ansb10**

☐ **Cardholder authentication value** _____ **b4..40**

When absent, data is filled with four bytes of zero.

Field 59 Format: LLLVAR b ...255

DATA RELATED TO PAYMENT FOR THE RESERVATION AND RENTAL OF GOODS OR SERVICES

TYPE = 0800: SERVICE ATTRIBUTE

Data format: n2

Number of bytes transported: 1

| Values | Description |
|--------|---------------------------------|
| 1 | No-show |
| 2 | Pre-authorisation |
| 3 | Additional pre-authorisation |
| 5 | Aggregation |
| 6 | Multiple payment, first payment |
| 7 | Multiple payment, other payment |
| 11 | Debt recovery |

TYPE = 0802: RISK SCORING SERVICE

Data format: structure

Number of bytes transported: 1..24

☐ **Service identifier** _____ b1

| Values | Description |
|----------|-------------------------------|
| 09 | Risk scoring for the acquirer |
| 90 to 99 | Private risk scoring |

☐ **Service data** _____ b..23

Format for the data element related to the e-rsb risk scoring service (Service identifier = 09 and 0A):

☐ **Notation service value** _____ b1

| Values | Description |
|--------|-------------------------|
| 00-FF | e-rsb service reference |

☐ **Notation value** _____ b2

| Values | Description |
|-----------|---------------|
| 0000-FFFF | Note or score |

☐ **Notation reference value** _____ b2

| Values | Description |
|-----------|---------------------------|
| 0000-FFFF | Notation system reference |

☐ **Score reason value** _____ b2

| Values | Description |
|-----------|---------------------------------|
| 0000-FFFF | Notation source or score reason |

☐ **Action proposal** _____ b2

| Values | Description |
|-----------|-----------------|
| 0000-FFFF | Action proposal |

☐ **Additional service data** _____ b12

| Values | Description |
|--------|-------------|
| | Future uses |

Field 70 Format: n3

OTHER

TYPE = 0805: OPTIONAL SERVICES SUPPORTED (ACCEPTOR DOMAIN)

Data format: b2

Number of bytes transported: 2

Bitmap describing the services supported by the acceptor. Several combinations of bits are possible. A bit is set if the service is supported.

| Value | Description |
|------------------|-------------------------|
| Bits 16-5 | Reserved for future use |
| Bit 4 | Single TAP |
| Bit 3 | Reversal |
| Bit 2 | Reserved for CB use |
| Bit 1 | Partial authorisation |

Field 70

Format: n3

Network management information code

In a 0800 message (network management message), the possible values of field 70 are:

| Value | Description |
|------------|---------------------------|
| 001 | Dialog opening (sign-on) |
| 002 | Dialog closure (sign-off) |
| 301 | Echo test |

Field 90 Format: n42

Field 90

Format: n42

Original data elements

Used with reversal requests to identify the original transaction (cancel or change authorisation).
All field elements must be set.

☐ **Message identifier** _____ quartets 1 to 4

| Value | Description |
|-------|---|
| 0100 | The reversal is related to an authorisation request message |

☐ **System trace audit number** _____ quartets 5 to 10

Value: field 11 of the original authorisation request.

☐ **Authorisation transmission date and time** _____ quartets 11 to 20

Value: field 7 of the original authorisation request.

☐ **Authorisation acquiring institution identifier** _____ quartets 21 to 31

Value: field 32 of the original authorisation request, left-filled with zeros.

☐ **Reserved for future use** _____ quartets 32 to 42

Value: zeros.

Field 95

Format: an42

Replacement amounts

Specifies the amount actually provided to the cardholder in a reversal transaction.

☐ **New amount** _____ an12

☐ **Reserved for future use** _____ an30

This amount is expressed in the currency specified in field 49.

Field 112

Format: LLLVAR ans ...255

Funds transfer data

This field contains all data required in funds transfer management.

☐ **Data type** _____ an2

| Type | Description |
|------|---------------------------------------|
| 01 | Original transaction data |
| 03 | Application type identifier |
| 05 | Payer/account number |
| 06 | Counterparty PAN |
| 07 | Counterparty last name and first name |
| 08 | Funds transfer reason |
| 09 | BIC |
| 10 | IBAN |

☐ **Data element length** _____ n2

Field 112 Format: LLLVAR ans ...255

☐ **Data element value**

TYPE = 01: ORIGINAL TRANSACTION DATA

Data format: ans1..99

Number of bytes transported: 1..99

Information about the person or entity that initiated the funds transfer.

☐ **Nomenclature** _____ **ans1**

| Values | Description |
|--------|-------------|
| 3 | CB |

☐ **Origin reference** _____ **ans..98**

TYPE = 03: APPLICATION TYPE IDENTIFIER TRANSACTION

Data format: an2

Number of bytes transported: 2

Specifies the type of application that initiated the funds transfer transaction.

| Values | Description |
|------------------------|---|
| CB nomenclature | |
| CC | Card to card transfer |
| DE | Electronic purse account unloading |
| EB | B2B collaborative economy |
| EC | B2C collaborative economy |
| PA | Payment for business-to-individual services |
| PG | Payment of winnings |
| RA | Refund for purchases not paid by card |
| RE | Funds transfer via funds receiver |

TYPE = 05: PAYER/ACCOUNT NUMBER

Data format: ans1..35

Number of bytes transported: 1..35

TYPE = 06: COUNTERPARTY PAN

Data format: n..19

Number of bytes transported: 19

Specifies the PAN of the PAN counterparty in field 2 in a card-to-card transfer transaction.

TYPE = 07: COUNTERPARTY LAST NAME AND FIRST NAME

Data format: ans1..30

Number of bytes transported: 1..30

TYPE = 08: FUNDS TRANSFER REASON

Data format: ans1..40

Number of bytes transported: 1..40

Field 112 Format: LLLVAR ans ...255

TYPE = 09: BIC (BANK IDENTIFIER CODE)

Data format: ans1..11

Number of bytes transported: 1..11

International identifier of bank.

TYPE = 10: IBAN

Data format: an ...34

Number of bytes transported: ...34

IBAN of the payer.

IBAN complies with ISO 13616.

☐ **Country code** _____ **an2**
Alphabetic code compliant with ISO 3166.

☐ **Control character** _____ **an2**
Check digits calculated in compliance with paragraph 6 of ISO 13616.

☐ **BBAN** _____ **an...30**

This is specific to each banking institution and uniquely identifies a customer's account in a financial institution. The BBAN is the same length for each country. In France, it corresponds to the "RIB" (23 characters).

The IBAN of an account managed by a banking institution whose country code is "FR" (France) is 27 characters long. The structure of a BBAN or RIB data for an account held in France is:

Domiciliary bank code: an 5

Branch code: an 5

Bank account number: an 11

Check digits ('RIB key'): an 2

Field 115 Format: LLLVAR b ...255

Field 115

Format: LLLVAR b ...255

Oscar data

☐ **Data type** _____ **b2**

| Type | Description | Repeatability |
|------|------------------------------------|---------------|
| 0001 | Oscar PoS identifier | |
| 0002 | Oscar Acceptance System identifier | |
| 0003 | Oscar certificate | |

☐ **Data element length** _____ **b1**

☐ **Data element value**

TYPE = 0001: OSCAR PoS IDENTIFIER

Data format: ans..107

Number of bytes transported: ..107

Identification of the CB OSCar terminal.

This field includes EPAS data elements from the CB OSCar server (POIComponent = "TERM"):

"Identification.ProviderIdentification", "Identification.Identification" and "Identification.SerialNumber", each separated by an anti-slash ("\").

TYPE = 0002: OSCAR ACCEPTANCE SYSTEM IDENTIFIER

Data format: ans..71

Number of bytes transported:..71

Identification of the CB OSCar terminal in the case of an integrated/distributed system.

This field includes EPAS data elements from the CB OSCar server (POIComponent = "SERV"):

"Identification.ProviderIdentification" and "Identification.Identification", each separated by an anti-slash ("\").

TYPE = 0003: OSCAR CERTIFICATE

Data format: ans..35

Number of bytes transported:...35

Identification of the CB OSCar terminal.

Reference of the OSCar certificate assigned to the solution

This field contains the EPAS data element "Assessment.Number" of the CB OSCar application (POIComponent = "APLI").

Field 119 Format: LL2VAR b...999

Field 119

Format: LL2VAR b...999

Reserved for national use

☐ **Data type** _____ **b2**

| Type | Description | Repeatability |
|------|---|---------------|
| 0009 | Scheme program merchant identifier | |
| 0013 | Three-domain secure components availability | |
| 0047 | Debit unique reference identifier | |
| 00BC | Extended message to the transaction initiator | |

☐ **Data element length** _____ **n2**

☐ **Data element value**

TYPE = 0009: SCHEME PROGRAM MERCHANT IDENTIFIER

Data format: ans...8

Number of bytes transported: ...8

Merchant identifier for the transaction scheme program

TYPE = 0013: THREE-DOMAIN SECURE COMPONENTS AVAILABILITY

Data format: an1

Number of bytes transported: 1

| Value | Description |
|-------|------------------------|
| 1 | 3DS server unavailable |

TYPE = 0047: DEBIT UNIQUE REFERENCE IDENTIFIER

Data format: ans...50

Number of bytes transported: ...50

Identifier of the debit transaction to which a credit transaction is associated. This debit is an authorized debit which can have been made in remote payment or in another payment method.

Field 119 Format: LL2VAR b...999

TYPE = 00BC: EXTENDED MESSAGE TO THE TRANSACTION INITIATOR

Data format: ans1...101

Number of bytes transported: ...101

☐ **Control character** _____ **ans1**

| Values | Description |
|--------|---|
| 0 | Reserved |
| 1 | Print |
| 2 | Display |
| 3 | Print and display |
| 4 | Print for cardholder only |
| 5 | Display for cardholder only |
| 6 | Print and display for the cardholder only |
| 7 | Print for acceptor only |
| 8 | Display for acceptor only |
| 9 | Print and display for the acceptor only |
| A | Print for the acceptor and the cardholder |
| B | Display for the acceptor and the cardholder |
| C | Print and display for the acceptor and the cardholder |
| F | Reserved for private use |

☐ **Response message** _____ **ans...100**

NETWORK MANAGEMENT

“According to the terms of paragraphs 2 and 3 of article L.122.5, the French Intellectual Property Code only authorizes "copies or reproductions strictly reserved for the private use of the copier and not intended for collective use" and also, subject to the explicit naming of the author and the source, that "analyses and short quotations are justified by their critical, controversial, educational, scientific or informative nature", while any representation or reproduction in full or in part, without the consent of the author or of his/her assigns or inheritors, is unlawful (article L.122.4). Any representation or reproduction not adhering to the aforementioned conditions, by any means whatsoever, would therefore constitute an infringement punishable by articles L.335.2 et seq. of the French Intellectual Property Code".

TABLE OF CONTENTS

| | |
|--|---|
| NETWORK MANAGEMENT | 1 |
| 1. INTRODUCTION | 3 |
| 1.1. Sign-On/Sign-Off transaction | 4 |
| 1.2. ECHO TEST Transaction | 4 |
| 2. RESPONSE CODES | 5 |
| 2.1. Response codes for a Sign-On/Sign-Off transaction | 5 |
| 2.2. Response codes for an echo test transaction | 5 |
| 3. MESSAGE DESCRIPTIONs | 6 |

1. INTRODUCTION

The Network Management Service includes three types of network management requests. All these requests are dedicated exclusively to terminals/devices used by Big Retailers.

- Sign-On
- Sign-Off
- Echo test

The message type identifier (0800/0810) by itself cannot identify these different messages. The value for field 70 (Network Management Code) is used to identify the transaction.

Request messages (0800) are only initiated by Big Retailer equipment. Response messages (0810) are always returned by the Acquiring System.

SPECIFIC INFORMATION RELATED TO BIG RETAILERS

Big Retailers are merchants which produce large flows of authorisation transactions. Due to these high volumes and for reasons related to Service Quality and scaling, Acquiring Systems can set up dedicated TRANSPAC connections.

These dedicated connections are referred to as “reserved” and are different from the standard connections used for *CB2A Authorisation/EMA* and *CB2A Authorisation/Non-EMA* terminals.

For such reserved connections, Big Retailer and Acquirer Systems can use the following network management specifications:

| | |
|-------------------------|--------------------------------|
| Echo Test | (Application level) |
| Sign-on/Sign-off | (Application level) |
| NRT, IMT and AMT Timers | (CBcom - Pseudo-session level) |

Note: All the above specifications are optional.

1.1. SIGN-ON/SIGN-OFF TRANSACTION

The Sign-On transaction is used to open a dialog at the application layer.

The Sign-Off transaction is used to close a dialog at the application layer.

Between the above two transactions, a dialog is established during which authorisation and echo test transactions can be exchanged.

In addition to the sign-on function, these messages transport data enabling mutual identification of the parties.

Message type identifier:

- request message = network management request: 0800
- response message = network management request response: 0810

The network management code (field 70) is used to identify the message:

- sign-on transaction: field 70 = 001
- sign-off transaction: field 70 = 002

1.2. ECHO TEST TRANSACTION

Big Retailer equipment uses the echo activity to ensure the availability of the point of access and the connection to it.

This network management transaction includes the following messages:

- 0800 'echo test' request sent by the "Big Retailer" equipment
- 0810 'echo test' request response message returned by the acquirer system

Value '301' in field 70 (network management code) identifies the transaction.

After the Acquirer system receives an echo request message (0800), it replies with a response message (0810) including a response code (field 39). Value '00' indicates that the service is provided.

When a response (0810) is received with a field 39 value different from '00', the "Big Retailer" equipment must disconnect.

If there is no response within a specified period of time (see CBcom, TNR timer), the acceptance system can re-send the request or disconnect.

2. RESPONSE CODES

A response code (field 39) returned in a response message triggers action or processing by the receiving system. Only the common and significant response codes are presented in the tables below.

2.1. RESPONSE CODES FOR A SIGN-ON/SIGN-OFF TRANSACTION

| No. | Description |
|-----|---|
| 00 | Approved or completed successfully |
| 12 | Invalid transaction |
| 30 | Format error |
| 31 | Unknown acquiring institution identification code |
| 90 | Temporary system shutdown |
| 96 | System malfunction |

Refer to the relevant specifications in the Reference Manuals (MPE, MPA) for further information about the actions to take.

2.2. RESPONSE CODES FOR AN ECHO TEST TRANSACTION

| No. | Description |
|-----|---|
| 00 | Approved or completed successfully |
| 12 | Invalid transaction |
| 30 | Format error |
| 31 | Unknown acquiring institution identification code |
| 58 | Transaction not permitted for terminal |
| 90 | Temporary system shutdown |
| 96 | System malfunction |

Refer to the relevant specifications in the Reference Manuals (MPE, MPA) for further information about the actions to take.

3. MESSAGE DESCRIPTIONS

Table legends

The term "transaction" refers to a set of "requests/responses".
The term "message" refers either to a request or to a response.

Field presence conditions

X Mandatory
C Conditional: the condition making this field mandatory is stated in a note (nn); in all other cases, the field is optional
F Optional
. The field may be present, but it is not processed by the receiving system.
Non-applicable - Field is not defined in the standard.

Field contents

S Message-specific value
Q Value is equal to request value
QI Value is equal to initial request value
RI Value is equal to initial response value

Note

- All fields undefined in the CB2A Authorisation protocol, but which comply with ISO 8583 (v87) can be used.
- The condition "mandatory if available" means that the data element must be transported by the protocol when provided by the application

X: Mandatory C: Conditional F: Optional .: Non-processed field S: Message specific value Q: Same value as in the request QI: Same value as in the initial request RI: Same value as in the initial response

| | |
|------------------------------------|--|
| A: Echo test request : 0800 | B: Response to echo test request : 0810 |
|------------------------------------|--|

| N° | Définition | A | B |
|----|--|-------|-------|
| 1 | Bit Map, extended | X | X |
| 7 | Transmission date and time | XS | XS |
| 11 | Systems trace audit number | XS | XQ |
| 32 | Acquiring institution identification code | F | FQ |
| 33 | Forwarding institution identification code | C(21) | CQ(9) |
| 39 | Response code | . | XS |
| 41 | Card acceptor terminal identification | C(35) | FQ |
| 42 | Card acceptor identification code | F | CQ(9) |
| 44 | Additional response data | . | C(2) |
| AA | Incorrect field | . | C(19) |
| BB | Telephone number | . | FS |
| BC | Message to the transaction initiator | . | FS |
| 58 | Responding machine identifier | . | FS |
| 70 | Network management information code | X | XQ |

X: Mandatory C: Conditional F: Optional .: Non-processed field S: Message specific value Q: Same value as in the request QI: Same value as in the initial request RI: Same value as in the initial response

| | |
|-------------------------------------|---|
| A: Sign-on / Sign-off : 0800 | B: Response to Sign-on / Sign-off : 0810 |
|-------------------------------------|---|

| N° | Définition | A | B |
|------|--|-------|-------|
| 1 | Bit Map, extended | X | X |
| 7 | Transmission date and time | XS | XS |
| 11 | Systems trace audit number | XS | XQ |
| 32 | Acquiring institution identification code | F | FQ |
| 33 | Forwarding institution identification code | C(21) | CQ(9) |
| 39 | Response code | . | XS |
| 41 | Card acceptor terminal identification | C(35) | FQ |
| 42 | Card acceptor identification code | C(15) | CQ(9) |
| 44 | Additional response data | . | C(2) |
| AA | Incorrect field | . | C(19) |
| BB | Telephone number | . | FS |
| BC | Message to the transaction initiator | . | FS |
| 47 | Additional data - national | C(2) | C(2) |
| 96 | SIRET | C(29) | FQ |
| A0 | IDSA (card acceptor terminal identifier) | C(29) | FQ |
| 58 | Responding machine identifier | . | F |
| 59 | National data | C(2) | C(2) |
| 0202 | Acceptor contract number | C(15) | FQ |
| 0203 | Acceptance system logical number | C(15) | XQ |
| 70 | Network management information code | XS | XQ |

| N° | COMMENTAIRES |
|----|---|
| 2 | See list of types |
| 9 | Mandatory if present in the request, otherwise absent |
| 15 | Mandatory if "forwarding institution identifier" is absent |
| 19 | Mandatory if "response code"=30, optional if "response code"=12 |
| 21 | Mandatory in case of one or more intermediaries between Acceptor and Acquirer, otherwise absent |
| 29 | Mandatory if available, otherwise absent |
| 35 | Mandatory if parameters downloaded |

FACE-TO-FACE PAYMENT UNATTENDED PAYMENT

“According to the terms of paragraphs 2 and 3 of article L.122.5, the French Intellectual Property Code only authorizes "copies or reproductions strictly reserved for the private use of the copier and not intended for collective use" and also, subject to the explicit naming of the author and the source, that "analyses and short quotations are justified by their critical, controversial, educational, scientific or informative nature", while any representation or reproduction in full or in part, without the consent of the author or of his/her assigns or inheritors, is unlawful (article L.122.4). Any representation or reproduction not adhering to the aforementioned conditions, by any means whatsoever, would therefore constitute an infringement punishable by articles L.335.2 et seq. of the French Intellectual Property Code".

TABLE OF CONTENTS

| | | |
|--------|---|----|
| 1. | INTRODUCTION | 3 |
| 1.1. | OVERVIEW | 3 |
| 2. | RESPONSE CODES | 4 |
| 2.1. | Response codes for a face-to-face payment authorisation request..... | 4 |
| 2.2. | Response codes for an unattended payment authorisation request..... | 5 |
| 2.3. | Response codes for a face-to-face/unattended payment reversal request | 5 |
| 2.4. | Response codes for a response to a reversal request related to face-to-face/unattended payment..... | 6 |
| 3. | REQUIREMENTS RELATED TO PAYMENT FOR THE RESERVATION AND RENTAL OF GOODS OR SERVICES..... | 7 |
| 3.1. | Authorisation request transaction for face-to-face payment | 7 |
| 3.2. | Authorisation request transaction for unattended payment..... | 7 |
| 4. | REQUIREMENTS RELATED TO CONTACTLESS PAYMENT | 8 |
| 4.1. | EMV ICC CONTACTLESS TRANSACTIONS | 8 |
| 4.2. | CONTACTLESS CHIP TRANSACTIONS USING MAGSTRIPE DATA | 8 |
| 5. | REQUIREMENTS RELATED TO REVERSALS AND PARTIAL AUTHORISATIONS | 9 |
| 5.1. | INFORMATION ON DATA ELEMENT VALUES | 9 |
| 5.1.1. | Fields 4, 54 and 95..... | 9 |
| 5.1.2. | Field 3 in 0400/0401 messages | 9 |
| 5.1.3. | Field 4 in 0110 messages | 9 |
| 5.1.4. | Field 4 in 0400 messages | 9 |
| 5.1.5. | Field 54 in 0110 messages | 9 |
| 5.1.6. | Field 95 in 0400 messages | 9 |
| 6. | REQUIREMENTS RELATED TO INFORMATION REQUESTS..... | 10 |
| 7. | MESSAGE DESCRIPTIONS | 11 |

1. INTRODUCTION

The present volume describes the following:

- Face-to-face payments
- Standard unattended payment
- Payments on multiservice banking ATMs
- Payments on rental terminals
- Face-to-face payments for the reservation and rental of goods or services

1.1. OVERVIEW

The purpose of this service is to:

- request a debit or credit payment authorisation without online PIN verification
- obtain a response to this authorisation request (approval or reason for decline)
- reverse a previously granted authorisation to inform the issuer of the final transaction amount
- obtain a response to this reversal request.

Message type identifier:

- request message = authorisation request: 0100
- response message = authorisation request response: 0110
- request message = authorisation reversal request: 0400
- request message = authorisation reversal repeat request: 0401
- response message = authorisation reversal request response: 0410

2. RESPONSE CODES

A response code (field 39) returned in a response message generates an action by the receiver.

Only significant and commonly used response codes are presented in the tables below.

2.1. RESPONSE CODES FOR A FACE-TO-FACE PAYMENT AUTHORISATION REQUEST

| No. | Description |
|-----|---|
| 00 | Successful approval/completion |
| 02 | Refer to card issuer |
| 03 | Invalid merchant |
| 04 | Pickup |
| 05 | Do not honour |
| 07 | Pickup card, special conditions |
| 08 | Honour with cardholder identification |
| 10 | Approved for partial amount |
| 12 | Invalid transaction |
| 13 | Invalid amount |
| 14 | Invalid card number (no such number) |
| 15 | No such issuer |
| 17 | Customer cancellation |
| 19 | Re-enter transaction |
| 20 | Invalid response (error in server domain) |
| 30 | Format error |
| 31 | Bank not supported by switch |
| 33 | Expired card |
| 34 | Suspected fraud |
| 38 | Allowable PIN tries exceeded |
| 41 | Lost card |
| 43 | Stolen card, pick-up |
| 51 | not sufficient funds |
| 54 | Expired card |
| 55 | Incorrect PIN |
| 56 | No card record |
| 57 | Transaction not permitted to cardholder |
| 58 | Transaction not permitted to terminal |
| 59 | Suspected fraud |
| 60 | Card acceptor contact acquirer |
| 63 | Security violation |
| 68 | Response received too late |
| 75 | Allowable number of PIN-entries exceeded |
| 91 | Issuer or switch is inoperative |
| 94 | Duplicate transmission |
| 96 | System malfunction |
| 97 | General monitoring timeout |
| 98 | Server inaccessible (set by the server) |
| A0 | Fallback in contact mode |
| A2 | PIN request in single TAP mode |
| A3 | New TAP with required authentication |

For information about the actions to be taken, refer to the specifications in MPE (Electronic Payment Manual).

2.2. RESPONSE CODES FOR AN UNATTENDED PAYMENT AUTHORISATION REQUEST

| No. | Description |
|-----|---|
| 00 | Successful approval/completion |
| 02 | Refer to card issuer |
| 03 | Invalid merchant |
| 04 | Pickup |
| 05 | Do not honour |
| 07 | Pickup card, special condition |
| 08 | Honour with cardholder identification |
| 10 | Approved for partial amount |
| 12 | Invalid transaction |
| 13 | Invalid amount |
| 14 | Invalid card number (no such number) |
| 15 | No such issuer |
| 20 | Invalid response (error in server domain) |
| 30 | Format error |
| 31 | Bank not supported by switch |
| 33 | Expired card |
| 34 | Suspected fraud |
| 38 | Allowable PIN tries exceeded |
| 41 | Lost card |
| 43 | Stolen card, pick-up |
| 51 | not sufficient funds |
| 54 | Expired card |
| 55 | Incorrect PIN |
| 56 | No card record |
| 57 | Transaction not permitted to cardholder |
| 58 | Transaction not permitted to terminal |
| 59 | Suspected fraud |
| 60 | Card acceptor contact acquirer |
| 61 | Exceeds withdrawal amount limit |
| 63 | Security violation |
| 68 | Response received too late |
| 75 | Allowable number of PIN-entries exceeded |
| 91 | Issuer or switch is inoperative |
| 94 | Duplicate transmission |
| 96 | System malfunction |
| 97 | General monitoring timeout |
| 98 | Server inaccessible (set by the server) |
| A0 | Fallback in contact mode |

For information about the actions to be taken, refer to the specifications in MPE (Electronic Payment Manual).

2.3. RESPONSE CODES FOR A FACE-TO-FACE/UNATTENDED PAYMENT REVERSAL REQUEST

| No. | Description |
|-----|--------------------------------|
| 00 | Successful approval/completion |
| 17 | Customer cancellation |
| 21 | No action taken |
| 32 | Partial completion (ISO 8583) |
| 99 | Malfunction |

2.4. RESPONSE CODES FOR A RESPONSE TO A REVERSAL REQUEST RELATED TO FACE-TO-FACE/UNATTENDED PAYMENT

| No. | Description |
|-----|---|
| 03 | Invalid merchant |
| 12 | Invalid transaction |
| 13 | Invalid amount |
| 14 | Invalid card number (no such number) |
| 15 | No such issuer |
| 20 | Invalid response (error in server domain) |
| 25 | Unable to locate record in file |
| 30 | Format error |
| 31 | Bank not supported by switch |
| 56 | No card record |
| 63 | Security violation |
| 90 | Cutoff |
| 91 | Issuer or switch is inoperative |
| 94 | Duplicate transmission |
| 96 | System malfunction |
| 97 | General monitoring timeout |
| 98 | Server inaccessible (set by the server) |

3. REQUIREMENTS RELATED TO PAYMENT FOR THE RESERVATION AND RENTAL OF GOODS OR SERVICES

3.1. AUTHORISATION REQUEST TRANSACTION FOR FACE-TO-FACE PAYMENT

The purpose of this transaction is to request an authorisation for face-to-face payment.

The response to this authorisation request provides approval or the reason for decline.

Typical values:

- field 22 position 1 and 2 (PAN entry mode) <> 01
 - field 59 type 0100 (Function code) = 101
 - field 59 type 0101 (Reason code) = 1655
 - field 59 type 0200 (ERT*) = 80
 - field 59 type 0800 (service attribute) = 2
- *Regulatory and Technical Environment (ERT)

3.2. AUTHORISATION REQUEST TRANSACTION FOR UNATTENDED PAYMENT

The purpose of this transaction is to request an authorisation for unattended payment.

The response to this authorisation request provides approval or the reason for decline.

Typical values:

- field 22 position 1 and 2 (PAN entry mode <> 01
 - field 59 type 0100 (Function code) = 101
 - field 59 type 0101 (Reason code) = 1655
 - field 59 type 0200 (ERT*) = 80
 - field 59 type 0800 (service attribute) = 2
- *Regulatory and Technical Environment (ERT)

4. REQUIREMENTS RELATED TO CONTACTLESS PAYMENT

4.1. EMV ICC CONTACTLESS TRANSACTIONS

Typical values:

- field 22 position 1 and 2 (Point of service entry mode) = 07
- field 55 type DF81 (Card application type) = 2
- field 55 type DF85 (Result of terminal processing) is completed

4.2. CONTACTLESS CHIP TRANSACTIONS USING MAGSTRIPE DATA

Typical values:

- field 22 position 1 and 2 (Point of service entry mode) = 91
- field 55 type DF81 (Card application type) = 3
- field 55 type 0056 (Track 1 equivalent data read in contactless mode) set if track 1 data was read
- field 55 type 9F6B (Track 2 equivalent data read in contactless mode) set if track 2 data was read
- field 59 type 0101 (Message reason code) = 1671

5. REQUIREMENTS RELATED TO REVERSALS AND PARTIAL AUTHORISATIONS

Partial authorisation is performed in two steps:

- Indication in the authorisation request message that the merchant terminal supports partial authorisations (bit no. 1 in field 59 type 0805)
- Partial authorisation granted by the issuer

For unattended payments - as the transaction amount is not known before the goods have been distributed, terminals must perform a reversal as soon as the actual amount is known in order to update the cardholder's payment limit.

Bit no. 3 in field 59 type 0805 is used to indicate that the acceptance system is performing the reversal.

5.1. INFORMATION ON DATA ELEMENT VALUES

5.1.1. Fields 4, 54 and 95

| Field | | Authorisation | | Reversal | |
|-------|--------------------|--------------------------------------|---|--|---|
| No. | Field name | Request | Response | Request | Response |
| 4 | Transaction amount | Authorisation amount Condition: X | Authorised amount Condition: X | Authorised amount Condition: X | Authorised amount Condition: XQ |
| 54-57 | Original amount | | Authorisation amount Condition: mandatory for partial authorisations | | |
| 95 | Replacement amount | | | Final transaction amount Condition: X | Final transaction amount Condition: FQ |

5.1.2. Field 3 in 0400/0401 messages

The value of field 3 is equal to that of the initial request.

5.1.3. Field 4 in 0110 messages

- For full authorisations, the value must be equal to the value in the request.
- For partial authorisations (field 39=10), the value must be equal to the authorised amount.

5.1.4. Field 4 in 0400 messages

- For full authorisations, the value must be equal to the value in the request.
- For partial authorisations (field 39=10), the value must be equal to the authorised amount
- If there is no response to the authorisation request, the value must be equal to the value in the request

5.1.5. Field 54 in 0110 messages

- For full authorisations, this field is absent.
- For partial authorisations (field 39=10), the value of the "amount" of field 54 must be equal to the value of field 4 of the request.

5.1.6. Field 95 in 0400 messages

- When the final transaction amount is equal to the authorised amount (reversal with no effect), the value must be equal to the value of field 4 (transaction amount).
- When the final transaction amount is equal to zero (full reversal), the value of this field must be equal to zero.

6. REQUIREMENTS RELATED TO CARD VALIDITY CHECK

The purpose of this transaction is to request information about a cardholder PAN (Primary Account Number).

Message type identifier:

- Request: 0100
- Response: 0110

Typical values:

- field 59 type 100 (Function code) set to 108 (Card Validity Check)
- field 4 (Amount) set to 0

Note: a field 59 type 0418 (Wallet Identifier) set indicates **a wallet registration**.

7. MESSAGE DESCRIPTIONS

How to read the tables:

The term "transaction" refers to a request/response.
The term "message" refers to either a request or to a response.

Data field presence conditions

| | |
|----------|--|
| X | Mandatory |
| C | Conditional: the condition making this field mandatory is stated in a note (nn); in all other cases, the field is optional |
| F | Optional |
| . | The field may be present, but it is not processed by the receiver |

Field values

| | |
|-----------|--|
| S | Message-specific value |
| Q | Value is equal to request value |
| QI | Value is equal to initial request value |
| RI | Value is equal to initial response value |

Note:

- All fields undefined in CB2A Authorisation can be used, providing they are compliant with ISO 8583 (v87).
- The condition "Mandatory if available" means that the data element must be transported by the protocol when provided by the application.

X: Mandatory C: Conditional F: Optional .: Non-processed field S: Message specific value Q: Same value as in the request QI: Same value as in the initial request RI: Same value as in the initial response

A: Payment autho. req. (EMV chip and contactless EMV chip) : **0100** **B:** Payment autho. request (magn. stripe and contactless magn. stripe) : **0100**
C: Resp. to payment autho. req. (contact and contactless) : **0110**

| N° | Définition | A | B | C |
|----|--|--------|--------|---------|
| 1 | Bit Map, extended | C(1) | C(1) | C(1) |
| 2 | Primary Account Number | X | X | XQ |
| 3 | Processing code | X | X | XQ |
| 4 | Amount, transaction | X | X | X |
| 7 | Transmission date and time | C(117) | C(117) | . |
| 11 | Systems trace audit number | XS | XS | XQ |
| 12 | Time, local transaction | XS | XS | FQ |
| 13 | Date, local transaction | XS | XS | FQ |
| 14 | Date, expiration | . | X | FQ |
| 18 | Merchant type | X | X | FQ |
| 22 | Point of service entry mode | X | X | FQ |
| 23 | Card sequence number | C(84) | . | CQ(84) |
| 25 | Point of service condition code | X | X | FQ |
| 26 | Pin length | C(30) | C(30) | FQ |
| 27 | Authorisation identification response length | C(7) | C(7) | . |
| 32 | Acquiring institution identification code | X | X | XQ |
| 33 | Forwarding institution identification code | C(21) | C(21) | FQ |
| 35 | Track 2 data | C(12) | C(128) | . |
| 37 | Retrieval reference number | F | F | C(79) |
| 38 | Authorisation identification response | . | . | C(10) |
| 39 | Response code | . | . | XS |
| 41 | Card acceptor terminal identification | X | X | XQ |
| 42 | Card acceptor identification code | X | X | XQ |
| 43 | Card acceptor name/location | C(63) | C(63) | FQ |
| 44 | Additional response data | . | . | C(2) |
| AA | Incorrect field | . | . | C(69) |
| AB | Security error | . | . | C(12) |
| AC | Field conversion | . | . | F |
| AF | Service activation code | . | . | F |
| BB | Telephone number | . | . | F |
| BC | Message to the transaction initiator | . | . | F |
| CA | Track or equivalent data cryptogram processing information | . | . | C(12) |
| CB | Application cryptogram verification results | . | . | C(12) |
| CD | Information related to liability shift | . | . | F |
| 47 | Additional data - national | C(2) | C(2) | C(2) |
| 08 | Location category code | C(63) | C(63) | FQ |
| 24 | File number | C(145) | C(145) | CQ(145) |
| 30 | Additional card reading capabilities | C(3) | C(3) | FQ |
| 31 | Point of interaction information | C(3) | C(3) | FQ |
| 33 | CB2A specification date | C(3) | C(3) | . |
| 95 | Unique transaction identifier | . | . | C(3) |
| 96 | SIRET | C(63) | C(63) | FQ |

X: Mandatory C: Conditional F: Optional .: Non-processed field S: Message specific value Q: Same value as in the request QI: Same value as in the initial request RI: Same value as in the initial response

A: Payment autho. req. (EMV chip and contactless EMV chip) : **0100** **B:** Payment autho. request (magn. stripe and contactless magn. stripe) : **0100**
C: Resp. to payment autho. req. (contact and contactless) : **0110**

| N° | Définition | A | B | C |
|------|---|--------|--------|---------|
| 97 | IDPA | C(63) | C(63) | FQ |
| 99 | Original unique transaction identifier | C(3) | C(3) | F |
| A0 | IDSA (card acceptor terminal identifier) | C(63) | C(63) | FQ |
| 48 | Security Data | C(2) | C(2) | . |
| 0001 | KSN | C(31) | C(31) | . |
| 0002 | BDK name | C(29) | C(29) | . |
| 0003 | BDK version | C(154) | C(154) | . |
| 49 | Currency code, transaction | X | X | XQ |
| 52 | PIN data | C(32) | C(32) | C(12) |
| 53 | Security related control information | X | X | X |
| 54 | Additionnal amounts | C(118) | . | C(118) |
| 43 | Cumulative total authorised amount | C(150) | . | CQ(150) |
| 57 | Original amount | . | . | C(115) |
| 55 | Integrated circuit card system related data | C(2) | C(2) | C(2) |
| 0056 | Data equivalent to ISO track 1 read in contactless mode | C(48) | C(48) | . |
| 0057 | Track 2 equivalent data | C(84) | C(48) | . |
| 0071 | Issuer Script Template 1 | . | . | C(24) |
| 0072 | Issuer Script Template 2 | . | . | C(24) |
| 0082 | Application Interchange Profile (AIP) | X | C(48) | . |
| 0091 | Issuer Authentication Data | . | . | C(24) |
| 0095 | Terminal Verification Results (TVR) | C(5) | . | . |
| 009A | Terminal Transaction Date | C(138) | . | . |
| 009C | Transaction type | X | . | . |
| 5F24 | Application expiration date | X | . | FQ |
| 9F02 | Amount, authorized | C(135) | . | . |
| 9F06 | Application Identifier (AID) | X | C(48) | . |
| 9F0A | Application selection registered proprietary data | C(84) | C(84) | . |
| 9F10 | Issuer application data | C(85) | C(85) | . |
| 9F1F | Track 1 Discretionary Data | C(48) | C(48) | . |
| 9F26 | Application Cryptogram | C(5) | . | . |
| 9F27 | Cryptogram Information Data (CID) | C(5) | . | . |
| 9F33 | Terminal capabilities | X | C(101) | . |
| 9F34 | Cardholder Verification Method Results | C(29) | . | . |
| 9F35 | Terminal type | C(3) | C(3) | . |
| 9F36 | Application Transaction Counter (ATC) | C(5) | . | . |
| 9F37 | Unpredictable Number | C(5) | . | . |
| 9F66 | Terminal transaction qualifiers (TTQ) | C(48) | . | . |
| 9F6B | Data equivalent to ISO track 2 read in contactless mode | . | C(48) | . |
| 9F7C | Issuer Proprietary Data | C(48) | . | . |
| DF68 | Kernel ID used | C(48) | C(48) | . |
| DF80 | ICC processing results | C(127) | C(29) | FQ |
| DF81 | Card application type | X | C(49) | FQ |

X: Mandatory C: Conditional F: Optional .: Non-processed field S: Message specific value Q: Same value as in the request QI: Same value as in the initial request RI: Same value as in the initial response

A: Payment autho. req. (EMV chip and contactless EMV chip) : **0100** **B:** Payment autho. request (magn. stripe and contactless magn. stripe) : **0100**
C: Resp. to payment autho. req. (contact and contactless) : **0110**

| N° | Définition | A | B | C |
|------|---|--------|-------|--------|
| DF85 | RTT (Terminal processing results) | C(48) | . | . |
| DF86 | Contactless device | C(48) | C(48) | . |
| 56 | Additional data | C(2) | C(2) | C(2) |
| 0001 | Payment facilitator data | C(3) | C(3) | . |
| 0002 | Application selection indicator | C(3) | C(3) | . |
| 0003 | Brand selected | C(3) | C(3) | . |
| 0019 | Serial number | C(3) | C(3) | . |
| 0020 | Resend counter | C(3) | . | . |
| 0024 | Independent sales organisation | C(3) | C(3) | . |
| 0025 | Payment facilitator identifier | C(3) | C(3) | . |
| 0026 | Market place identifier | C(3) | C(3) | . |
| 0027 | Final merchant identifier | C(3) | C(3) | . |
| 0040 | List of installed kernels | C(3) | C(3) | . |
| 0056 | Payment Account Reference | . | . | C(108) |
| 5F2D | Language preference | C(153) | . | . |
| 9F0D | Issuer Action Code - Default | C(153) | . | . |
| 9F0E | Issuer Action Code - Denial | C(153) | . | . |
| 9F0F | Issuer Action Code - Online | C(153) | . | . |
| 59 | National data | C(2) | C(2) | C(2) |
| 0100 | Function code | C(47) | C(47) | FQ |
| 0101 | Message reason code | X | X | FQ |
| 0102 | Transaction year | XS | XS | CQ(95) |
| 0200 | ERT (Regulatory and Technical Environment) | X | X | FQ |
| 0201 | ITP SA (Acceptance system terminal application identifier) | X | X | FQ |
| 0202 | Acceptor contract number | X | X | FQ |
| 0203 | Acceptance system logical number | X | X | FQ |
| 0204 | Point of interaction logical number | C(151) | C(22) | FQ |
| 0205 | Acceptance system country code | C(63) | C(63) | FQ |
| 0207 | Cardholder total amount | C(5) | C(5) | FQ |
| 020B | TASA (Card acceptor application type) | X | X | FQ |
| 0215 | ITP PA (Point of interaction terminal application identifier) | C(3) | C(3) | FQ |
| 0216 | Point of interaction extended logical number | C(152) | . | FQ |
| 0800 | Service attribute | C(46) | C(46) | FQ |
| 0805 | Optional services supported (acceptor domain) | C(3) | C(3) | . |
| 112 | Funds transfer data | C(2) | C(2) | . |
| 01 | Original transaction data | C(94) | C(94) | . |
| 03 | Application type identifier | C(94) | C(94) | . |
| 08 | funds transfer reason | C(147) | . | . |
| 10 | IBAN | C(147) | . | . |
| 115 | Oscar data | C(2) | C(2) | . |
| 0001 | Oscar PoS identifier | C(3) | C(3) | . |
| 0002 | Oscar Acceptance System identifier | C(3) | C(3) | . |

X: Mandatory C: Conditional F: Optional .: Non-processed field S: Message specific value Q: Same value as in the request QI: Same value as in the initial request RI: Same value as in the initial response

| | | | | |
|--|--|--|--|--|
| A: Payment autho. req. (EMV chip and contactless EMV chip) : 0100 B: Payment autho. request (magn. stripe and contactless magn. stripe) : 0100 C: Resp. to payment autho. req. (contact and contactless) : 0110 | | | | |
|--|--|--|--|--|

| N° | Définition | A | B | C |
|------|---|--------|--------|------|
| 0003 | Oscar certificate | C(3) | C(3) | . |
| 119 | Reserved for national use | C(2) | C(2) | C(2) |
| 0047 | Debit unique reference identifier | C(156) | C(156) | F |
| 00BC | Extended message to the transaction initiator | . | . | F |

X: Mandatory C: Conditional F: Optional .: Non-processed field S: Message specific value Q: Same value as in the request QI: Same value as in the initial request RI: Same value as in the initial response

| | |
|--|---|
| A: Proximity wallets payment authorization request : 0100 | B: Response to proximity wallets payment autho. request : 0110 |
|--|---|

| N° | Définition | A | B |
|----|--|--------|---------|
| 1 | Bit Map, extended | C(1) | C(1) |
| 2 | Primary Account Number | X | XQ |
| 3 | Processing code | X | XQ |
| 4 | Amount, transaction | X | X |
| 7 | Transmission date and time | C(117) | . |
| 11 | Systems trace audit number | XS | XQ |
| 12 | Time, local transaction | XS | FQ |
| 13 | Date, local transaction | XS | FQ |
| 14 | Date, expiration | X | FQ |
| 18 | Merchant type | X | FQ |
| 22 | Point of service entry mode | X | FQ |
| 25 | Point of service condition code | X | FQ |
| 27 | Authorisation identification response length | C(7) | . |
| 32 | Acquiring institution identification code | X | XQ |
| 33 | Forwarding institution identification code | C(21) | FQ |
| 35 | Track 2 data | C(12) | . |
| 37 | Retrieval reference number | F | C(79) |
| 38 | Authorisation identification response | . | C(10) |
| 39 | Response code | . | XS |
| 41 | Card acceptor terminal identification | X | XQ |
| 42 | Card acceptor identification code | X | XQ |
| 43 | Card acceptor name/location | C(63) | FQ |
| 44 | Additional response data | . | C(2) |
| AA | Incorrect field | . | C(69) |
| AB | Security error | . | C(12) |
| AC | Field conversion | . | F |
| AF | Service activation code | . | F |
| BB | Telephone number | . | F |
| BC | Message to the transaction initiator | . | F |
| CA | Track or equivalent data cryptogram processing information | . | C(12) |
| CB | Application cryptogram verification results | . | C(12) |
| CD | Information related to liability shift | . | F |
| 47 | Additional data - national | C(2) | C(2) |
| 08 | Location category code | C(63) | FQ |
| 24 | File number | C(145) | CQ(145) |
| 30 | Additional card reading capabilities | C(3) | FQ |
| 31 | Point of interaction information | C(3) | FQ |
| 33 | CB2A specification date | C(3) | . |
| 95 | Unique transaction identifier | . | C(3) |
| 96 | SIRET | C(63) | FQ |
| 97 | IDPA | C(63) | FQ |
| 99 | Original unique transaction identifier | C(3) | F |

X: Mandatory C: Conditional F: Optional .: Non-processed field S: Message specific value Q: Same value as in the request QI: Same value as in the initial request RI: Same value as in the initial response

| | |
|---|--|
| A: Proximity wallets payment authorization request : 0100 | B: Response to proximity wallets payment autho. request : 0110 |
|---|--|

| N° | Définition | A | B |
|------|---|--------|---------|
| A0 | IDSA (card acceptor terminal identifier) | C(63) | FQ |
| 49 | Currency code, transaction | X | XQ |
| 53 | Security related control information | X | X |
| 54 | Additionnal amounts | C(118) | C(118) |
| 43 | Cumulative total authorised amount | C(150) | CQ(150) |
| 57 | Original amount | . | C(115) |
| 56 | Additional data | C(2) | C(2) |
| 0001 | Payment facilitator data | C(3) | . |
| 0002 | Application selection indicator | C(3) | . |
| 0003 | Brand selected | C(3) | . |
| 0019 | Serial number | C(3) | . |
| 0020 | Resend counter | C(3) | . |
| 0024 | Independent sales organisation | C(3) | . |
| 0025 | Payment facilitator identifier | C(3) | . |
| 0026 | Market place identifier | C(3) | . |
| 0027 | Final merchant identifier | C(3) | . |
| 0056 | Payment Account Reference | . | C(108) |
| 5F2D | Language preference | C(153) | . |
| 9F0D | Issuer Action Code - Default | C(153) | . |
| 9F0E | Issuer Action Code - Denial | C(153) | . |
| 9F0F | Issuer Action Code - Online | C(153) | . |
| 59 | National data | C(2) | C(2) |
| 0100 | Function code | C(47) | FQ |
| 0101 | Message reason code | X | FQ |
| 0102 | Transaction year | XS | CQ(95) |
| 0200 | ERT (Regulatory and Technical Environment) | X | FQ |
| 0201 | ITP SA (Acceptance system terminal application identifier) | X | FQ |
| 0202 | Acceptor contract number | X | FQ |
| 0203 | Acceptance system logical number | X | FQ |
| 0204 | Point of interaction logical number | C(151) | FQ |
| 0205 | Acceptance system country code | C(63) | FQ |
| 0207 | Cardholder total amount | C(5) | FQ |
| 020B | TASA (Card acceptor application type) | X | FQ |
| 0215 | ITP PA (Point of interaction terminal application identifier) | C(3) | FQ |
| 0216 | Point of interaction extended logical number | C(152) | FQ |
| 0401 | Cardholder authentication value | C(5) | . |
| 0409 | Cardholder authentication value processing information | . | X |
| 0411 | Cardholder authentication value calculation method | C(5) | . |
| 0417 | Digital wallet additional data | C(3) | . |
| 0418 | Wallet identifier | X | . |
| 0800 | Service attribute | C(46) | FQ |
| 0805 | Optional services supported (acceptor domain) | C(3) | . |

X: Mandatory C: Conditional F: Optional .: Non-processed field S: Message specific value Q: Same value as in the request QI: Same value as in the initial request RI: Same value as in the initial response

| | |
|--|---|
| A: Proximity wallets payment authorization request : 0100 | B: Response to proximity wallets payment autho. request : 0110 |
|--|---|

| N° | Définition | A | B |
|------|------------------------------------|--------|---|
| 112 | Funds transfer data | C(2) | . |
| 01 | Original transaction data | C(94) | . |
| 03 | Application type identifier | C(94) | . |
| 08 | funds transfer reason | C(147) | . |
| 10 | IBAN | C(147) | . |
| 115 | Oscar data | C(2) | . |
| 0001 | Oscar PoS identifier | C(3) | . |
| 0002 | Oscar Acceptance System identifier | C(3) | . |
| 0003 | Oscar certificate | C(3) | . |

X: Mandatory C: Conditional F: Optional .: Non-processed field S: Message specific value Q: Same value as in the request QI: Same value as in the initial request RI: Same value as in the initial response

| | |
|--|---|
| A: Payment reversal request : 0400/0401 | B: Response to payment reversal request : 0410 |
|--|---|

| N° | Définition | A | B |
|----|---|----------|--------|
| 1 | Bit Map, extended | C(1) | C(1) |
| 2 | Primary Account Number | XQI | XQ |
| 3 | Processing code | XQI | XQ |
| 4 | Amount, transaction | X | XQ |
| 7 | Transmission date and time | XS | FS |
| 11 | Systems trace audit number | XS | XQ |
| 12 | Time, local transaction | XS | FQ |
| 13 | Date, local transaction | XS | FQ |
| 14 | Date, expiration | CQI(104) | FQ |
| 18 | Merchant type | XQI | FQ |
| 22 | Point of service entry mode | XQI | FQ |
| 23 | Card sequence number | CQI(104) | CQ(9) |
| 25 | Point of service condition code | XQI | FQ |
| 32 | Acquiring institution identification code | XQI | XQ |
| 33 | Forwarding institution identification code | C(21) | FQ |
| 37 | Retrieval reference number | CRI(116) | FQ |
| 38 | Authorisation identification response | CRI(10) | . |
| 39 | Response code | XS | XS |
| 41 | Card acceptor terminal identification | XQI | XQ |
| 42 | Card acceptor identification code | XQI | XQ |
| 43 | Card acceptor name/location | CQI(104) | FQ |
| 44 | Additional response data | . | C(2) |
| AA | Incorrect field | . | C(106) |
| AB | Security error | . | C(12) |
| AC | Field conversion | . | F |
| AF | Service activation code | . | F |
| BC | Message to the transaction initiator | . | F |
| 47 | Additional data - national | C(2) | C(2) |
| 08 | Location category code | CQI(104) | FQ |
| 24 | File number | CQI(104) | CQ(9) |
| 30 | Additional card reading capabilities | CQI(104) | FQ |
| 31 | Point of interaction information | CQI(104) | FQ |
| 33 | CB2A specification date | CQI(104) | . |
| 95 | Unique transaction identifier | CRI(116) | FQ |
| 96 | SIRET | CQI(104) | FQ |
| 97 | IDPA | CQI(104) | FQ |
| 99 | Original unique transaction identifier | CQI(104) | . |
| A0 | IDSA (card acceptor terminal identifier) | CQI(104) | FQ |
| 49 | Currency code, transaction | XQI | XQ |
| 52 | PIN data | C(12) | . |
| 53 | Security related control information | XS | XS |
| 55 | Integrated circuit card system related data | C(2) | C(2) |

X: Mandatory C: Conditional F: Optional .: Non-processed field S: Message specific value Q: Same value as in the request QI: Same value as in the initial request RI: Same value as in the initial response

| | |
|--|---|
| A: Payment reversal request : 0400/0401 | B: Response to payment reversal request : 0410 |
|--|---|

| N° | Définition | A | B |
|------|--|----------|--------|
| 0056 | Data equivalent to ISO track 1 read in contactless mode | CQI(104) | . |
| 0095 | Terminal Verification Results (TVR) | C(104) | . |
| 5F24 | Application expiration date | CQI(104) | . |
| 9F02 | Amount, authorized | CQI(104) | . |
| 9F06 | Application Identifier (AID) | CQI(104) | . |
| 9F0A | Application selection registered proprietary data | CQI(104) | . |
| 9F10 | Issuer application data | C(104) | . |
| 9F1F | Track 1 Discretionary Data | CQI(104) | . |
| 9F33 | Terminal capabilities | CQI(104) | . |
| 9F35 | Terminal type | CQI(104) | . |
| 9F36 | Application Transaction Counter (ATC) | CQI(104) | . |
| 9F66 | Terminal transaction qualifiers (TTQ) | CQI(104) | . |
| 9F7C | Issuer Proprietary Data | CQI(104) | . |
| DF68 | Kernel ID used | CQI(104) | . |
| DF81 | Card application type | CQI(104) | FQ |
| DF85 | RTT (Terminal processing results) | C(104) | . |
| DF86 | Contactless device | C(104) | . |
| FF00 | Issuer script results | C(29) | . |
| 56 | Additional data | C(2) | C(2) |
| 0001 | Payment facilitator data | CQI(104) | . |
| 0003 | Brand selected | CQI(104) | . |
| 0019 | Serial number | CQI(104) | . |
| 0020 | Resend counter | CQI(104) | . |
| 0024 | Independent sales organisation | CQI(104) | . |
| 0025 | Payment facilitator identifier | CQI(104) | . |
| 0026 | Market place identifier | CQI(104) | . |
| 0027 | Final merchant identifier | CQI(104) | . |
| 0040 | List of installed kernels | CQI(104) | . |
| 0056 | Payment Account Reference | C(108) | C(108) |
| 5F2D | Language preference | CQI(104) | . |
| 9F0D | Issuer Action Code - Default | CQI(104) | . |
| 9F0E | Issuer Action Code - Denial | CQI(104) | . |
| 9F0F | Issuer Action Code - Online | CQI(104) | . |
| 59 | National data | C(2) | C(2) |
| 0100 | Function code | CQI(104) | . |
| 0101 | Message reason code | XS | FQ |
| 0102 | Transaction year | XS | FQ |
| 0200 | ERT (Regulatory and Technical Environment) | XQI | FQ |
| 0201 | ITP SA (Acceptance system terminal application identifier) | XQI | . |
| 0202 | Acceptor contract number | XQI | FQ |
| 0203 | Acceptance system logical number | XQI | FQ |
| 0204 | Point of interaction logical number | CQI(104) | . |

X: Mandatory C: Conditional F: Optional .: Non-processed field S: Message specific value Q: Same value as in the request QI: Same value as in the initial request RI: Same value as in the initial response

| | |
|--|---|
| A: Payment reversal request : 0400/0401 | B: Response to payment reversal request : 0410 |
|--|---|

| N° | Définition | A | B |
|------|---|----------|------|
| 0205 | Acceptance system country code | CQI(104) | . |
| 0207 | Cardholder total amount | CQI(104) | . |
| 020B | TASA (Card acceptor application type) | XQI | . |
| 0215 | ITP PA (Point of interaction terminal application identifier) | CQI(104) | . |
| 0216 | Point of interaction extended logical number | CQI(104) | . |
| 0417 | Digital wallet additional data | CQI(104) | . |
| 0418 | Wallet identifier | CQI(104) | . |
| 90 | Original data elements | XS | FQ |
| 95 | Replacement amounts | XS | FQ |
| 112 | Funds transfer data | C(2) | . |
| 01 | Original transaction data | C(94) | . |
| 03 | Application type identifier | C(94) | . |
| 08 | funds transfer reason | CQI(104) | . |
| 10 | IBAN | CQI(104) | . |
| 115 | Oscar data | C(2) | . |
| 0001 | Oscar PoS identifier | CQI(104) | . |
| 0002 | Oscar Acceptance System identifier | CQI(104) | . |
| 0003 | Oscar certificate | CQI(104) | . |
| 119 | Reserved for national use | C(2) | C(2) |
| 0047 | Debit unique reference identifier | CQI(104) | . |
| 00BC | Extended message to the transaction initiator | . | F |

X: Mandatory C: Conditional F: Optional .: Non-processed field S: Message specific value Q: Same value as in the request QI: Same value as in the initial request RI: Same value as in the initial response

A: Authorization request (via voice authorization center) : **0100** **B:** Response to authorization request via call center : **0110**

| N° | Définition | A | B |
|------|--|-------|--------|
| 1 | Bit Map, extended | C(1) | C(1) |
| 2 | Primary Account Number | X | XQ |
| 3 | Processing code | X | XQ |
| 4 | Amount, transaction | X | XQ |
| 7 | Transmission date and time | FS | FS |
| 11 | Systems trace audit number | XS | XQ |
| 12 | Time, local transaction | XS | FQ |
| 13 | Date, local transaction | XS | FQ |
| 14 | Date, expiration | X | FQ |
| 18 | Merchant type | X | FQ |
| 22 | Point of service entry mode | X | FQ |
| 23 | Card sequence number | . | CQ(84) |
| 25 | Point of service condition code | X | FQ |
| 27 | Authorisation identification response length | C(7) | . |
| 32 | Acquiring institution identification code | X | XQ |
| 33 | Forwarding institution identification code | C(21) | FQ |
| 35 | Track 2 data | C(12) | . |
| 37 | Retrieval reference number | F | C(79) |
| 38 | Authorisation identification response | . | C(10) |
| 39 | Response code | . | XS |
| 41 | Card acceptor terminal identification | X | XQ |
| 42 | Card acceptor identification code | X | XQ |
| 43 | Card acceptor name/location | F | FQ |
| 44 | Additional response data | . | C(2) |
| AA | Incorrect field | . | C(69) |
| AB | Security error | . | C(12) |
| AC | Field conversion | . | F |
| AF | Service activation code | . | F |
| BB | Telephone number | . | F |
| BC | Message to the transaction initiator | . | F |
| CA | Track or equivalent data cryptogram processing information | . | C(12) |
| CB | Application cryptogram verification results | . | C(12) |
| 47 | Additional data - national | C(2) | C(2) |
| 08 | Location category code | C(63) | FQ |
| 33 | CB2A specification date | C(3) | . |
| 96 | SIRET | C(63) | FQ |
| 97 | IDPA | C(63) | FQ |
| A0 | IDSA (card acceptor terminal identifier) | C(63) | FQ |
| 49 | Currency code, transaction | X | XQ |
| 53 | Security related control information | X | X |
| 55 | Integrated circuit card system related data | . | C(2) |
| 0071 | Issuer Script Template 1 | . | C(24) |

X: Mandatory C: Conditional F: Optional .: Non-processed field S: Message specific value Q: Same value as in the request QI: Same value as in the initial request RI: Same value as in the initial response

A: Authorization request (via voice authorization center) : **0100** **B:** Response to authorization request via call center : **0110**

| N° | Définition | A | B |
|------|--|-------|--------|
| 0072 | Issuer Script Template 2 | . | C(24) |
| 0091 | Issuer Authentication Data | . | C(24) |
| 5F24 | Application expiration date | . | FQ |
| DF80 | ICC processing results | . | FQ |
| DF81 | Card application type | . | FQ |
| 59 | National data | C(2) | C(2) |
| 0100 | Function code | C(47) | FQ |
| 0101 | Message reason code | X | FQ |
| 0102 | Transaction year | XS | CQ(95) |
| 0200 | ERT (Regulatory and Technical Environment) | X | FQ |
| 0201 | ITP SA (Acceptance system terminal application identifier) | X | FQ |
| 0202 | Acceptor contract number | X | FQ |
| 0203 | Acceptance system logical number | X | FQ |
| 0204 | Point of interaction logical number | C(22) | FQ |
| 0205 | Acceptance system country code | C(63) | FQ |
| 0207 | Cardholder total amount | X | FQ |
| 020B | TASA (Card acceptor application type) | X | FQ |
| 0300 | Card security code | C(11) | . |

| N° | COMMENTAIRES |
|-----|---|
| 1 | Mandatory if one of fields 65 to 128 is present |
| 2 | See list of types |
| 3 | Mandatory if available |
| 5 | Mandatory for debit transaction |
| 7 | Mandatory if Acceptor cannot receive "Authorisation, identification response" up to six digits |
| 9 | Mandatory if present in the request, otherwise absent |
| 10 | Mandatory if authorisation granted, otherwise optional |
| 11 | Mandatory if transaction is made via a call center |
| 12 | Must be absent |
| 21 | Mandatory in case of one or more intermediaries between Acceptor and Acquirer, otherwise absent |
| 22 | Mandatory for a clustered or concentrated system, otherwise absent |
| 24 | Mandatory if EMV transaction or contactless EMV transaction and if provided by Issuer, otherwise absent |
| 29 | Mandatory if available, otherwise absent |
| 30 | Mandatory if PIN is present, otherwise absent |
| 31 | Mandatory if DUKPT used to encrypt the PIN |
| 32 | Mandatory if remote PIN verification, otherwise absent |
| 46 | Mandatory if needed to identify the corresponding service |
| 47 | Mandatory for debit transaction in case of a pre-authorisation, additional invoice, cumulative amount or unattended terminal with network access |
| 48 | Mandatory if available for a contactless transaction |
| 49 | Mandatory for contactless transactions, otherwise absent |
| 63 | Mandatory if data element was provided to the system (parameters downloading), otherwise absent |
| 69 | Mandatory if "response code"=30, optional if "response code"=12, 13 or 20, otherwise absent |
| 79 | Mandatory in the response if present in the request (identical value to request), or if managed by the Acquirer, otherwise absent |
| 84 | Mandatory if present in card application, otherwise absent |
| 85 | Mandatory for a debit transaction if present in the card application, otherwise absent |
| 94 | Mandatory for a funds transfer transaction |
| 95 | Mandatory if field 13 is present, otherwise absent |
| 101 | Mandatory for contactless transactions or if pre-authorisation |
| 104 | Mandatory if present in the initial request |
| 106 | Mandatory if response code = 30 |
| 108 | May be present. Presence conditions are specific to each scheme. |
| 115 | Mandatory for partial authorisation |
| 116 | Mandatory if present in the initial response |
| 117 | Mandatory if reversals management capability |
| 118 | Mandatory if at least one of the following amount types is present |
| 127 | Mandatory for a contact transaction, mandatory if available for a contactless transaction |
| 128 | Mandatory for a contact transaction, must be absent for a contactless transaction |
| 135 | Mandatory if the amount used for calculating the certificate is not available in other data elements of the message |
| 138 | Mandatory if the date used for calculating the certificate is not available in other data elements of the message |
| 145 | Mandatory for a debit transaction in case of a pre-authorisation, additional invoice, cumulative amount or unattended terminal with network access; mandatory if available for an Original Credit |
| 147 | Mandatory if available for an Original Credit |
| 150 | Mandatory if a cumulative authorisation is calculated for an unattended terminal with network access otherwise mandatory if available |
| 151 | Mandatory for a clustered or concentrated system and if field 59 type 0216 is absent, otherwise absent |
| 152 | Mandatory for a clustered or concentrated system and if field 59 type 0204 is absent, otherwise absent |
| 153 | Mandatory if available for a contactless transaction if required by the used scheme |

| N° | COMMENTAIRES |
|-----|---|
| 154 | Mandatory if required by the BDK key identifier type (byte 1 of field 48 type 0002), otherwise absent |
| 156 | Mandatory if available for a credit transaction |

REMOTE PAYMENT SECURED ELECTRONIC COMMERCE

"According to the terms of paragraphs 2 and 3 of article L.122.5, the French Intellectual Property Code only authorizes "copies or reproductions strictly reserved for the private use of the copier and not intended for collective use" and also, subject to the explicit naming of the author and the source, that "analyses and short quotations are justified by their critical, controversial, educational, scientific or informative nature", while any representation or reproduction in full or in part, without the consent of the author or of his/her assigns or inheritors, is unlawful (article L.122.4). Any representation or reproduction not adhering to the aforementioned conditions, by any means whatsoever, would therefore constitute an infringement punishable by articles L.335.2 et seq. of the French Intellectual Property Code".

TABLE OF CONTENTS

| | | |
|--------|---|----|
| 1. | INTRODUCTION | 3 |
| 2. | RESPONSE CODES | 4 |
| 2.1. | Response codes for a remote payment authorisation request | 4 |
| 2.2. | Response codes for a remote payment reversal request | 5 |
| 2.3. | Response codes for a response to a remote payment reversal request | 5 |
| 3. | Requirements related to payments for the RESERVATION AND rental of goods and services | 6 |
| 3.1. | Authorisation request transaction related to remote payment | 6 |
| 3.2. | Information request | 6 |
| 4. | Requirements related to multiple payment | 7 |
| 5. | Requirements related to reversals and partial authorisations | 10 |
| 5.1. | Information on data element values | 10 |
| 5.1.1. | Fields 4 and 95 | 10 |
| 5.1.2. | Field 3 in 0400/0401 messages | 10 |
| 5.1.4. | Field 4 in 0400 messages | 10 |
| 5.1.5. | Field 95 in 0400 messages | 10 |
| 6. | Requirements related to card validity check | 11 |
| 7. | Requirements related to aggregated transactions | 12 |
| 8. | MESSAGE DESCRIPTIONS | 13 |

1. INTRODUCTION

The present volume describes the following:

- Non-secure remote payment
- Secured electronic commerce
- Recurring payment
- Remote payment for the reservation and rental of goods or services

The purpose of this service is to:

- request a debit or credit authorisation related to remote payment
- obtain a response to this authorisation request (approval or reason for decline)
- reverse an authorisation previously granted to inform the issuer of the final transaction amount
- obtain the response to this reversal request.

Message type identifier:

- request message = authorisation request: 0100
- response message = authorisation request response: 0110
- request message = authorisation reversal request: 0400
- request message = authorisation reversal repeat request: 0401
- response message = authorisation reversal request response: 0410

2. RESPONSE CODES

A response code (field 39) returned in a response message generates an action by the receiver.

Only significant and commonly used response codes are presented in the tables below.

2.1. RESPONSE CODES FOR A REMOTE PAYMENT AUTHORISATION REQUEST

| No. | Description |
|-----|---|
| 00 | Successful approval/completion |
| 02 | Refer to card issuer |
| 03 | Invalid merchant |
| 04 | Pickup |
| 05 | Do not honour |
| 07 | Pickup card, special conditions |
| 08 | Honour with cardholder identification |
| 10 | Approved for partial amount |
| 12 | Invalid transaction |
| 13 | Invalid amount |
| 14 | Invalid card number (no such number) |
| 15 | No such issuer |
| 20 | Invalid response (error in server domain) |
| 30 | Format error |
| 31 | Bank not supported by switch |
| 33 | Expired card |
| 34 | Suspected fraud |
| 41 | Lost card |
| 43 | Stolen card |
| 51 | Insufficient funds or credit limit exceeded |
| 54 | Expired card |
| 56 | No card record |
| 57 | Transaction not permitted to cardholder |
| 58 | Transaction not permitted to terminal |
| 59 | Suspected fraud |
| 60 | Card acceptor contact acquirer |
| 63 | Security violation |
| 68 | Response received too late |
| 91 | Issuer or switch is inoperative |
| 94 | Duplicate transmission |
| 96 | System malfunction |
| 97 | General monitoring timeout |
| 98 | Server inaccessible (set by the server) |
| A1 | Soft decline (electronic commerce only) |
| A4 | Misused TRA exemption |
| R1 | Revocation of all the recurring payments for card |
| R3 | Revocation of all recurring payments for card |

For information about the actions to be taken, refer to the specifications in MPE (Electronic Payment Manual).

2.2. RESPONSE CODES FOR A REMOTE PAYMENT REVERSAL REQUEST

| No. | Description |
|-----|--|
| 00 | Successful approval/completion |
| 17 | Customer cancellation |
| 21 | No action taken (unable to back out prior transaction) |
| 32 | Partial completion (ISO 8583) |
| 99 | Malfunction |

2.3. RESPONSE CODES FOR A RESPONSE TO A REMOTE PAYMENT REVERSAL REQUEST

| No. | Description |
|-----|---|
| 03 | Invalid merchant or service provider |
| 12 | Invalid transaction |
| 13 | Invalid amount |
| 14 | Invalid PAN |
| 15 | No such issuer |
| 20 | Invalid response (error in server domain) |
| 25 | Unable to locate record in file |
| 30 | Format error |
| 31 | Unknown acquiring institution identification code |
| 56 | No card record |
| 63 | Security rules violation |
| 90 | Temporary system failure |
| 91 | Card issuer or network inaccessible/ Issuer unavailable or switch inoperative |
| 94 | Duplicate transmission |
| 96 | System malfunction |
| 97 | General monitoring timeout |
| 98 | Server inaccessible (set by the server) |

3. REQUIREMENTS RELATED TO PAYMENTS FOR THE RESERVATION AND RENTAL OF GOODS AND SERVICES

3.1. AUTHORISATION REQUEST TRANSACTION RELATED TO REMOTE PAYMENT

The purpose of this transaction is to request an authorisation for remote payment.

The response to this authorisation request provides approval or the reason for decline.

Message type identifier:

- Request: 0100
- Response: 0110

Typical values:

- field 22 positions 1 and 2 (PAN entry mode) = 01
 - field 59 type 0100 (Function code) = 101 (initial authorisation - estimated amount) or 163 (additional invoice)
 - field 59 type 0101 (Reason code) = 1655 in the initialisation message
 - field 59 type 0200 (ERT*) = 80 or 24 for a secured electronic commerce transaction
 - field 59 type 0800 (service attribute) = 2 or 3
 - field 47 type 24 (file number) of an additional invoice (function code = 163) must be equal to that in the initial request.
- *Regulatory and Technical Environment (ERT)

3.2. INFORMATION REQUEST

The purpose of this transaction is to request information about a PAN.

Message type identifier:

- Request: 0100
- Response: 0110

Typical values:

- field 4 (Amount) = 0
 - field 59 type 0100 (Function code) = 108 (information request)
 - field 59 type 0101 (Reason code) = 1655
 - field 59 type 0200 (ERT*) = 80
 - field 59 type 0800 (service attribute) = 2
- *Regulatory and Technical Environment (ERT)

4. REQUIREMENTS RELATED TO MULTIPLE PAYMENT

1. Cardholder Initiated Transactions

- **Except for mobile payment solutions based on EMV data elements**, an Internet Cardholder Initiated Transaction (ERT* = 24) must include the data elements listed below, **subject to the presence condition**.

* ERT = Regulatory and Technical Environment

| Data | CB2A Authorisation field |
|---|--|
| Cumulative total authorised amount | Field 54 type amount type 43 |
| 3DS protocol major version | Field 56 type 0022 |
| Cryptogram entry date and GMT time | Field 56 type 0017 |
| DS transaction ID | Field 56 type 0023 data element UUID applies to nomenclature 1 |
| ACS transaction ID | Field 56 type 0023 data element UUID applies to nomenclature 2 |
| Payment use case | Field 56 type 0028 |
| Service attribute | Field 59 type 0800 |
| Card-on-file action | Field 56 type 0029 |
| Payment number | Field 56 type 0031 |
| Total number of payments | Field 56 type 0032 |
| Exemption indicator | Field 56 type 0033 |
| Authentication merchant name | Field 56 type 0036 |
| Authentication date | Field 56 type 0037 |
| Authentication amount | Field 56 type 0038 |
| Payment validity date | Field 56 type 0045 |
| Function code | Field 59 type 0100 |
| Card security code | Field 59 type 0300 |
| Transaction identifier or cryptogram provided by the acceptor | Field 59 type 0400 |
| Cardholder authentication value | Field 59 type 0401 |
| Electronic commerce transaction security type | Field 59 type 0407 |
| Cardholder authentication method used by the issuer | Field 59 type 0410 |
| Electronic commerce cryptogram calculation method | Field 59 type 0411 |
| Three-domain secure results | Field 59 type 0412 |
| Additional electronic commerce data elements | Field 59 type 0414 |
| Digital wallet name | Field 59 type 0415 |
| Electronic commerce indicator | Field 59 type 0416 |
| Digital wallet additional data | Field 59 type 0417 |
| Wallet identifier | Field 59 type 0418 |
| Three-domain secure results, others | Field 59 type 0419 |

- “Recurring payment transactions not made in secured electronic commerce mode” (ERT* = 28) do not contain neither specific electronic commerce data elements nor payment case identification data.

*Regulatory and Technical Environment (ERT)

2. Subsequent Transactions

- Transactions subsequent to an initial electronic commerce transaction (ERT* = 27) must include the data elements listed below, **subject to the presence condition**.

* ERT = Regulatory and Technical Environment

| Data | CB2A Authorisation field | CB2A Authorisation settings |
|--|--|---|
| Original unique transaction identifier | Field 47 type 99 | Same value as in field 47 type 95 of the initial transaction response |
| Debit unique transaction identifier | Field 119 type 0047 | Same value as in field 47 type 95 of the initial debit transaction response |
| Cumulative total authorised amount | Field 54 type amount 43 | Transaction specific value |
| Payment use case | Field 56 type 0028 | Same value as in field 56 type 0028 of the initial transaction |
| Card-on-file action | Field 56 type 0029 | Absent |
| Payment number | Field 56 type 0031 | Transaction specific value |
| Total number of payments | Field 56 type 0032 | Same value as in field 56 type 0032 of the initial transaction |
| Exemption indicator | Field 56 type 0033 | Transaction specific value |
| Payment validity date | Field 56 type 0045 | Same value as in field 56 type 0045 of the initial transaction |
| DS transaction ID | Field 56 type 0046/ DS transaction ID | Copy of field 56 type 0023 data element UUID applies to nomenclature 1 of the initial transaction (*) |
| ACS transaction ID | Field 56 type 0046/ ACS transaction ID | Copy of field 56 type 0023 data element UUID applies to nomenclature 2 of the initial transaction (*) |
| Authentication merchant name | Field 56 type 0046/ Merchant name | Copy of field 56 type 0036 of the initial transaction (*) |
| Authentication date | Field 56 type 0046/ Authentication date | Copy of field 56 type 0037 of the initial transaction (*) |
| Authentication amount | Field 56 type 0046/ Authentication amount | Copy of field 56 type 0038 of the initial transaction (*) |
| Cardholder authentication value of the current transaction | Field 59 type 0401 | Absent |
| Electronic commerce transaction security type of the current transaction | Field 59 type 0407 | Absent |
| Cardholder authentication method used by the issuer of the current transaction | Field 59 type 0410 | Absent |
| Electronic commerce cryptogram calculation method of the current transaction | Field 59 type 0411 | Absent |
| Three-domain secure results of the current transaction | Field 59 type 0412 | Absent |
| Three-domain secure results, others of the current transaction | Field 59 type 0419 | Absent |
| Cardholder authentication value of the initial transaction | Field 59 type 0420/ Cardholder authentication value | Copy of field 59 type 0401 of the initial transaction(*) |
| Electronic commerce security type of the initial transaction | Field 59 type 0420/ Electronic commerce transaction security type | Copy of field 59 type 0407 of the initial transaction(*) |
| Cardholder authentication method of the initial transaction | Field 59 type 0420/ Cardholder authentication method | Copy of field 59 type 0410 de la transaction initiale(*) |
| Electronic commerce cryptogram calculation method of the initial transaction | Field 59 type 0420/ Cardholder authentication value calculation method | Copy of field 59 type 0411 of the initial transaction(*) |

| | | |
|---|---|--|
| Result of using the secure remote payment architecture de la transaction initiale | Field 59 type 0420/ Result of using a secured remote payment architecture | Copy of field 59 type 0412 of the initial transaction(*) |
| Extension of the result of the secure payment architecture of the initial transaction | Field 59 type 0420/ Extension of result of using a secured payment architecture | Copy of field 59 type 0419 of the initial transaction(*) |

(*) If a data element is not significant, it is filled with the pad character specific to the format of the data element.

- "Recurring payment transactions not made in secured electronic commerce mode" (ERT* = 28) do not contain neither specific electronic commerce data elements nor payment case identification data.

* ERT = Regulatory and Technical Environment

5. REQUIREMENTS RELATED TO REVERSALS AND PARTIAL AUTHORISATIONS

Partial authorisation is performed in two steps:

- Indication in the authorisation request message that the merchant terminal supports partial authorisations (bit no. 1 in field 59 type 0805)
- Partial authorisation granted by the issuer

5.1. INFORMATION ON DATA ELEMENT VALUES

5.1.1. Fields 4 and 95

| Field | | Authorisation | | Reversal | |
|-------|--------------------|--------------------------------------|--|--|--|
| No. | Field name | Request | Response. | Request | Response. |
| 4 | Transaction amount | Authorisation amount Condition: X | → Authorised amount Condition: X | → Authorised amount Condition: X | → Authorised amount Condition: XQ |
| 95 | Replacement amount | | | Final transaction amount Condition: X | → Final transaction amount Condition: FQ |

5.1.2. Field 3 in 0400/0401 messages

The value of field 3 is equal to that of the initial request.

5.1.3. Field 4 in 0110 messages

- For full authorisations, the value must be equal to the value in the request.
- For partial authorisations (field 39=10), the value must be equal to the authorised amount.

5.1.4. Field 4 in 0400 messages

- The value must be equal to that of the request.
- If there is no response to the authorisation request, the value must be equal to the value in the request.

5.1.5. Field 95 in 0400 messages

- When the final transaction amount is equal to the authorised amount (reversal with no effect), the value must be equal to the value of field 4 (transaction amount).
- When the final transaction amount is equal to zero (full reversal), the value of this field must be equal to zero.

6. REQUIREMENTS RELATED TO CARD VALIDITY CHECK

The purpose of this transaction is to request information about a cardholder PAN (Primary Account Number).

Message type identifier:

- Request: 0100
- Response: 0110

Typical values:

- field 4 (Amount) = 0
- field 59 type 0100 (Function code) = 108 (card validity check)

The following specific values indicate a wallet registration:

- field 59 type 100 (Function code) set to 108 (card validity check)
- field 4 (Amount) set to 0
- field 59 type 0418 (Wallet Identifier) set to the identifier

The following specific values indicate a card validity check before shipment:

- field 59 type 100 set to 108
- field 4 set to 0
- field 56 type 0028 (Payment use case) = 04 (Shipment payment)

7. REQUIREMENTS RELATED TO AGGREGATED TRANSACTIONS

The purpose of this transaction is to request a pre-authorisation for a maximum amount. The transaction is then completed when the actual amount of the purchases is known or when the maximum amount is reached.

Message type identifier:

- Request: 0100
- Response: 0110

Typical values:

- field 59 type 0100 (Function code) = 101 (estimated amount)
- field 59 type 0101 (Message reason code) = 1679 (Provision for cumulative amounts)
- field 59 type 0800 (Service attribute) = '5' (Cumulative invoice)

8. MESSAGE DESCRIPTIONS

How to read the tables:

The term "transaction" refers to a request/response.
The term "message" refers to either a request or to a response.

Data field presence conditions

X Mandatory
C Conditional: the condition making this field mandatory is stated in a note (nn); in all other cases, the field is optional
F Optional
. The field may be present, but it is not processed by the receiver
Non-applicable - Field is not defined in the standard.
.

Field values

S Message-specific value
Q Value is equal to request value
QI Value is equal to initial request value
RI Value is equal to initial response value

Note:

- All fields undefined in CB2A Authorisation can be used, providing they are compliant with ISO 8583 (v87).
- The condition "Mandatory if available" means that the data element must be transported by the protocol when provided by the application.

X: Mandatory C: Conditional F: Optional .: Non-processed field S: Message specific value Q: Same value as in the request QI: Same value as in the initial request RI: Same value as in the initial response

| | |
|--|--|
| A: Authorisation request : 0100 | B: Response to authorization request : 0110 |
|--|--|

| N° | Définition | A | B |
|----|--|--------|---------|
| 1 | Bit Map, extended | C(1) | C(1) |
| 2 | Primary Account Number | XS | XQ |
| 3 | Processing code | XS | XQ |
| 4 | Amount, transaction | XS | XQ |
| 7 | Transmission date and time | C(117) | . |
| 11 | Systems trace audit number | XS | XQ |
| 12 | Time, local transaction | XS | FQ |
| 13 | Date, local transaction | XS | FQ |
| 14 | Date, expiration | XS | FQ |
| 18 | Merchant type | XS | FQ |
| 22 | Point of service entry mode | XS | FQ |
| 23 | Card sequence number | C(141) | CQ(141) |
| 25 | Point of service condition code | XS | FQ |
| 27 | Authorisation identification response length | C(7) | . |
| 32 | Acquiring institution identification code | XS | XQ |
| 33 | Forwarding institution identification code | C(21) | FQ |
| 37 | Retrieval reference number | C(23) | C(79) |
| 38 | Authorisation identification response | . | C(10) |
| 39 | Response code | . | XS |
| 41 | Card acceptor terminal identification | XS | XQ |
| 42 | Card acceptor identification code | XS | XQ |
| 43 | Card acceptor name/location | C(159) | . |
| 44 | Additional response data | . | C(2) |
| AA | Incorrect field | . | C(69) |
| AB | Security error | . | C(12) |
| AC | Field conversion | . | FS |
| AF | Service activation code | . | FS |
| BB | Telephone number | . | FS |
| BC | Message to the transaction initiator | . | FS |
| CA | Track or equivalent data cryptogram processing information | . | C(12) |
| CB | Application cryptogram verification results | . | C(12) |
| CC | Cardholder address checking information | . | C(3) |
| CD | Information related to liability shift | . | F |
| 47 | Additional data - national | C(2) | C(2) |
| 08 | Location category code | C(63) | FQ |
| 24 | File number | C(146) | CQ(146) |
| 33 | CB2A specification date | C(3) | . |
| 95 | Unique transaction identifier | . | C(3) |
| 96 | SIRET | C(63) | FQ |
| 97 | IDPA | C(63) | FQ |
| 99 | Original unique transaction identifier | C(3) | F |
| A0 | IDSA (card acceptor terminal identifier) | C(63) | FQ |

X: Mandatory C: Conditional F: Optional .: Non-processed field S: Message specific value Q: Same value as in the request QI: Same value as in the initial request RI: Same value as in the initial response

| | |
|--|--|
| A: Authorisation request : 0100 | B: Response to authorization request : 0110 |
|--|--|

| N° | Définition | A | B |
|------|---|--------|-------|
| 49 | Currency code, transaction | XS | XQ |
| 53 | Security related control information | XS | XS |
| 54 | Additionnal amounts | C(118) | . |
| 43 | Cumulative total authorised amount | C(3) | . |
| 55 | Integrated circuit card system related data | C(2) | . |
| 0082 | Application Interchange Profile (AIP) | C(148) | . |
| 0095 | Terminal Verification Results (TVR) | C(148) | . |
| 009A | Terminal Transaction Date | C(139) | . |
| 009C | Transaction type | C(148) | . |
| 9F02 | Amount, authorized | C(140) | . |
| 9F10 | Issuer application data | C(148) | . |
| 9F26 | Application Cryptogram | C(136) | . |
| 9F27 | Cryptogram Information Data (CID) | C(148) | . |
| 9F33 | Terminal capabilities | C(4) | . |
| 9F36 | Application Transaction Counter (ATC) | C(148) | . |
| 9F37 | Unpredictable Number | C(148) | . |
| 56 | Additional data | C(2) | C(2) |
| 0001 | Payment facilitator data | C(3) | . |
| 0002 | Application selection indicator | C(3) | . |
| 0003 | Brand selected | C(3) | . |
| 0005 | Acceptance system card product code | C(3) | . |
| 0006 | Cardholder address | C(3) | . |
| 0008 | Cardholder postcode | C(3) | . |
| 0009 | Delivery address | C(3) | . |
| 0010 | IP address | C(3) | . |
| 0011 | Number of articles | C(3) | . |
| 0012 | Mobile payment solution identifier | C(137) | . |
| 0013 | Type of transaction | C(137) | . |
| 0014 | Type of proof | C(137) | . |
| 0017 | Cryptogram entry date and GMT time | C(3) | . |
| 0018 | Card type indicator | . | C(12) |
| 0020 | Resend counter | C(158) | . |
| 0022 | 3DS protocol major version | C(155) | . |
| 0023 | UUID container | C(103) | . |
| 0024 | Independent sales organisation | C(3) | . |
| 0025 | Payment facilitator identifier | C(3) | . |
| 0026 | Market place identifier | C(3) | . |
| 0027 | Final merchant identifier | C(3) | . |
| 0028 | Payment use case | C(3) | . |
| 0029 | Card-on-file action | C(3) | . |
| 0031 | Payment number | C(3) | . |
| 0032 | Total number of payments | C(3) | . |

X: Mandatory C: Conditional F: Optional .: Non-processed field S: Message specific value Q: Same value as in the request QI: Same value as in the initial request RI: Same value as in the initial response

| | |
|--|--|
| A: Authorisation request : 0100 | B: Response to authorization request : 0110 |
|--|--|

| N° | Définition | A | B |
|------|---|--------|--------|
| 0033 | Exemption indicator | C(3) | . |
| 0036 | Merchant name | C(157) | . |
| 0037 | Authentication date | C(157) | . |
| 0038 | Authentication amount | C(157) | . |
| 0045 | Payment validity date | C(3) | . |
| 0046 | Additional data - initial transaction electronic commerce | C(3) | . |
| 0056 | Payment Account Reference | . | C(108) |
| 59 | National data | C(2) | C(2) |
| 0100 | Function code | C(98) | FQ |
| 0101 | Message reason code | XS | FQ |
| 0102 | Transaction year | XS | CQ(95) |
| 0200 | ERT (Regulatory and Technical Environment) | XS | FQ |
| 0201 | ITP SA (Acceptance system terminal application identifier) | XS | FQ |
| 0202 | Acceptor contract number | X | FQ |
| 0203 | Acceptance system logical number | XS | FQ |
| 0204 | Point of interaction logical number | C(22) | FQ |
| 0205 | Acceptance system country code | C(148) | . |
| 0207 | Cardholder total amount | C(6) | FQ |
| 020B | TASA (Card acceptor application type) | X | FQ |
| 0215 | ITP PA (Point of interaction terminal application identifier) | C(3) | FQ |
| 0300 | Card security code | C(130) | C(12) |
| 0301 | Card security code verification result | . | C(12) |
| 0400 | Transaction identifier or cryptogram supplied by the acceptor | C(99) | . |
| 0401 | Cardholder authentication value | C(122) | . |
| 0407 | Electronic commerce security type | C(17) | . |
| 0409 | Cardholder authentication value processing information | . | C(12) |
| 0410 | Cardholder authentication method | C(3) | . |
| 0411 | Cardholder authentication value calculation method | C(29) | . |
| 0412 | Three-domain secure results | C(102) | . |
| 0413 | Modified electronic commerce security type | . | C(29) |
| 0414 | Additional electronic commerce data elements | C(133) | . |
| 0415 | Digital wallet name | C(125) | . |
| 0416 | Electronic commerce indicator | C(29) | . |
| 0417 | Digital wallet additional data | C(132) | . |
| 0418 | Wallet identifier | C(134) | . |
| 0419 | Three-domain secure results, others | C(149) | FQ |
| 0420 | Data related to initial electronic commerce transaction | C(3) | . |
| 0800 | Service attribute | C(46) | FQ |
| 0802 | Risk scoring service | . | C(3) |
| 0805 | Optional services supported (acceptor domain) | C(3) | . |
| 112 | Funds transfer data | C(2) | . |
| 01 | Original transaction data | C(94) | . |

X: Mandatory C: Conditional F: Optional .: Non-processed field S: Message specific value Q: Same value as in the request QI: Same value as in the initial request RI: Same value as in the initial response

| | |
|--|--|
| A: Authorisation request : 0100 | B: Response to authorization request : 0110 |
|--|--|

| N° | Définition | A | B |
|------|---|--------|------|
| 03 | Application type identifier | C(94) | . |
| 05 | Payer account number | C(142) | . |
| 06 | Counterparty PAN | C(142) | . |
| 07 | Counterparty last name and first name | C(144) | . |
| 08 | funds transfer reason | C(147) | . |
| 09 | BIC | F | . |
| 10 | IBAN | C(147) | . |
| 115 | Oscar data | C(2) | . |
| 0001 | Oscar PoS identifier | C(3) | . |
| 0002 | Oscar Acceptance System identifier | C(3) | . |
| 0003 | Oscar certificate | C(3) | . |
| 119 | Reserved for national use | C(2) | C(2) |
| 0009 | Scheme program merchant identifier | C(3) | . |
| 0013 | Three-domain secure components availability | C(3) | . |
| 0047 | Debit unique reference identifier | C(156) | F |
| 00BC | Extended message to the transaction initiator | . | F |

X: Mandatory C: Conditional F: Optional .: Non-processed field S: Message specific value Q: Same value as in the request QI: Same value as in the initial request RI: Same value as in the initial response

| | |
|--|---|
| A: Payment reversal request : 0400/0401 | B: Response to payment reversal request : 0410 |
|--|---|

| N° | Définition | A | B |
|------|---|----------|--------|
| 1 | Bit Map, extended | C(1) | C(1) |
| 2 | Primary Account Number | XQI | XQ |
| 3 | Processing code | XQI | XQ |
| 4 | Amount, transaction | X | XQ |
| 7 | Transmission date and time | XS | FS |
| 11 | Systems trace audit number | XS | XQ |
| 12 | Time, local transaction | XS | FQ |
| 13 | Date, local transaction | XS | FQ |
| 14 | Date, expiration | XQI | FQ |
| 18 | Merchant type | XQI | FQ |
| 22 | Point of service entry mode | XQI | FQ |
| 23 | Card sequence number | FQI | . |
| 25 | Point of service condition code | XQI | FQ |
| 32 | Acquiring institution identification code | XQI | XQ |
| 33 | Forwarding institution identification code | C(21) | FQ |
| 37 | Retrieval reference number | CRI(116) | FQ |
| 38 | Authorisation identification response | CRI(10) | . |
| 39 | Response code | XS | XS |
| 41 | Card acceptor terminal identification | XQI | XQ |
| 42 | Card acceptor identification code | XQI | XQ |
| 43 | Card acceptor name/location | CQI(104) | . |
| 44 | Additional response data | . | C(2) |
| AA | Incorrect field | . | C(106) |
| AB | Security error | . | C(12) |
| AC | Field conversion | . | F |
| AF | Service activation code | . | F |
| BC | Message to the transaction initiator | . | F |
| 47 | Additional data - national | C(2) | C(2) |
| 08 | Location category code | CQI(104) | FQ |
| 24 | File number | CQI(104) | FQ |
| 33 | CB2A specification date | CQI(104) | . |
| 95 | Unique transaction identifier | CRI(116) | FQ |
| 96 | SIRET | CQI(104) | FQ |
| 97 | IDPA | CQI(104) | FQ |
| 99 | Original unique transaction identifier | CQI(104) | . |
| A0 | IDSA (card acceptor terminal identifier) | CQI(104) | FQ |
| 49 | Currency code, transaction | XQI | XQ |
| 53 | Security related control information | XS | XS |
| 55 | Integrated circuit card system related data | C(2) | . |
| 0082 | Application Interchange Profile (AIP) | FQI | . |
| 0095 | Terminal Verification Results (TVR) | FQI | . |
| 009A | Terminal Transaction Date | FQI | . |

X: Mandatory C: Conditional F: Optional .: Non-processed field S: Message specific value Q: Same value as in the request QI: Same value as in the initial request RI: Same value as in the initial response

| | |
|--|---|
| A: Payment reversal request : 0400/0401 | B: Response to payment reversal request : 0410 |
|--|---|

| N° | Définition | A | B |
|------|---|----------|--------|
| 009C | Transaction type | FQI | . |
| 9F02 | Amount, authorized | FQI | . |
| 9F10 | Issuer application data | FQI | . |
| 9F26 | Application Cryptogram | FQI | . |
| 9F27 | Cryptogram Information Data (CID) | FQI | . |
| 9F33 | Terminal capabilities | CQI(104) | . |
| 9F36 | Application Transaction Counter (ATC) | FQI | . |
| 9F37 | Unpredictable Number | FQI | . |
| 56 | Additional data | C(2) | C(2) |
| 0001 | Payment facilitator data | CQI(104) | . |
| 0003 | Brand selected | CQI(104) | . |
| 0005 | Acceptance system card product code | CQI(104) | . |
| 0012 | Mobile payment solution identifier | CQI(104) | . |
| 0020 | Resend counter | CQI(104) | . |
| 0024 | Independent sales organisation | CQI(104) | . |
| 0025 | Payment facilitator identifier | CQI(104) | . |
| 0026 | Market place identifier | CQI(104) | . |
| 0027 | Final merchant identifier | CQI(104) | . |
| 0056 | Payment Account Reference | C(108) | C(108) |
| 59 | National data | C(2) | C(2) |
| 0100 | Function code | CQI(104) | . |
| 0101 | Message reason code | XS | FQ |
| 0102 | Transaction year | XS | FQ |
| 0200 | ERT (Regulatory and Technical Environment) | XQI | FQ |
| 0201 | ITP SA (Acceptance system terminal application identifier) | XQI | . |
| 0202 | Acceptor contract number | XQI | FQ |
| 0203 | Acceptance system logical number | XQI | FQ |
| 0204 | Point of interaction logical number | CQI(104) | . |
| 0205 | Acceptance system country code | FQI | . |
| 0207 | Cardholder total amount | CQI(104) | . |
| 020B | TASA (Card acceptor application type) | XQI | . |
| 0215 | ITP PA (Point of interaction terminal application identifier) | CQI(104) | . |
| 0400 | Transaction identifier or cryptogram supplied by the acceptor | CQI(104) | . |
| 0401 | Cardholder authentication value | CQI(104) | . |
| 0407 | Electronic commerce security type | CQI(104) | . |
| 0411 | Cardholder authentication value calculation method | CQI(104) | . |
| 0412 | Three-domain secure results | CQI(104) | . |
| 0414 | Additional electronic commerce data elements | CQI(104) | . |
| 0415 | Digital wallet name | CQI(104) | . |
| 0416 | Electronic commerce indicator | CQI(104) | . |
| 0417 | Digital wallet additional data | CQI(104) | . |
| 0418 | Wallet identifier | CQI(104) | . |

X: Mandatory C: Conditional F: Optional .: Non-processed field S: Message specific value Q: Same value as in the request QI: Same value as in the initial request RI: Same value as in the initial response

| | |
|--|---|
| A: Payment reversal request : 0400/0401 | B: Response to payment reversal request : 0410 |
|--|---|

| N° | Définition | A | B |
|------|---|----------|------|
| 0419 | Three-domain secure results, others | CQI(104) | . |
| 0800 | Service attribute | CQI(104) | . |
| 90 | Original data elements | XS | FQ |
| 95 | Replacement amounts | XS | FQ |
| 112 | Funds transfer data | C(2) | . |
| 01 | Original transaction data | CQI(104) | . |
| 03 | Application type identifier | CQI(104) | . |
| 05 | Payer account number | CQI(104) | . |
| 06 | Counterparty PAN | CQI(104) | . |
| 07 | Counterparty last name and first name | CQI(104) | . |
| 08 | funds transfer reason | CQI(104) | . |
| 09 | BIC | FQI | . |
| 10 | IBAN | CQI(104) | . |
| 115 | Oscar data | C(2) | . |
| 0001 | Oscar PoS identifier | CQI(104) | . |
| 0002 | Oscar Acceptance System identifier | CQI(104) | . |
| 0003 | Oscar certificate | CQI(104) | . |
| 119 | Reserved for national use | C(2) | C(2) |
| 0047 | Debit unique reference identifier | CQI(104) | . |
| 00BC | Extended message to the transaction initiator | . | F |

| N° | COMMENTAIRES |
|-----|---|
| 1 | Mandatory if one of fields 65 to 128 is present |
| 2 | See list of types |
| 3 | Mandatory if available |
| 4 | Mandatory if application type identifier = 20xx |
| 6 | Mandatory for debit transaction, mandatory if available for refund |
| 7 | Mandatory if Acceptor cannot receive "Authorisation, identification response" up to six digits |
| 10 | Mandatory if authorisation granted, otherwise optional |
| 12 | Must be absent |
| 17 | Mandatory for an electronic commerce debit transaction, mandatory if available for a refund, |
| 21 | Mandatory in case of one or more intermediaries between Acceptor and Acquirer, otherwise absent |
| 22 | Mandatory for a clustered or concentrated system, otherwise absent |
| 23 | Mandatory in case of pre-authorisation; if managed by the Acquirer; identical value for all related transactions |
| 29 | Mandatory if available, otherwise absent |
| 46 | Mandatory if needed to identify the corresponding service |
| 63 | Mandatory if data element was provided to the system (parameters downloading), otherwise absent |
| 69 | Mandatory if "response code"=30, optional if "response code"=12, 13 or 20, otherwise absent |
| 79 | Mandatory in the response if present in the request (identical value to request), or if managed by the Acquirer, otherwise absent |
| 94 | Mandatory for a funds transfer transaction |
| 95 | Mandatory if field 13 is present, otherwise absent |
| 98 | Mandatory for a debit transaction in case of a pre-authorisation, additional invoice, no-show transaction or cumulative amount, mandatory if available for a refund transaction |
| 99 | Mandatory if available and if field 59 type 0407 = 20 |
| 102 | Mandatory for a debit transaction if e-commerce transaction security type = 20, mandatory if available for a refund, |
| 103 | Mandatory if available for CB 3DS v2 transaction |
| 104 | Mandatory if present in the initial request |
| 106 | Mandatory if response code = 30 |
| 108 | May be present. Presence conditions are specific to each scheme. |
| 116 | Mandatory if present in the initial response |
| 117 | Mandatory if reversals management capability |
| 118 | Mandatory if at least one of the following amount types is present |
| 122 | Mandatory for all "3DS debit transactions authenticated with proof or certified authentication attempt"; mandatory for a debit transaction using an open wallet; otherwise absent |
| 125 | Mandatory if a digital wallet is used and if field 59 type 0418 is absent |
| 130 | Mandatory unless additional invoice |
| 132 | Mandatory if available for a digital wallet and if field 59 type 0418 is set, otherwise absent |
| 133 | Mandatory if field 59 type 0415 is set |
| 134 | Mandatory if a digital wallet is used and if field 59 type 0415 is absent, otherwise absent |
| 136 | Mandatory for a secured e-commerce debit transaction executed in EMV mode, otherwise absent |
| 137 | Mandatory if available and if a mobile payment solution is used, otherwise absent |
| 139 | Mandatory for a secured e-commerce debit transaction carried out in EMV mode and if the date used for calculating the certificate is not available in other data elements of the message, mandatory if available for a credit transaction, otherwise absent |
| 140 | Mandatory for a secured e-commerce debit transaction executed in EMV mode and if the date used for calculating the certificate is not available in other data elements of the message; mandatory if available for a credit transaction, otherwise absent |
| 141 | Mandatory if available for secured e-commerce transactions executed in EMV mode, otherwise absent |
| 142 | Mandatory for a card-to-card funds transfer |
| 144 | mandatory if available for a card-to-card funds transfer or an Original Credit |
| 146 | Mandatory for debit transaction in case of a pre-authorisation, additional invoice, cumulative amount; mandatory for a card-to-card |

| N° | COMMENTAIRES |
|-----|---|
| | funds transfer or Original Credit; mandatory if available for an unattended terminal with network access; mandatory if available for a credit |
| 147 | Mandatory if available for an Original Credit |
| 148 | Mandatory for a secured electronic commerce debit transaction executed in EMV mode; mandatory if available for a credit transaction, otherwise absent |
| 149 | Mandatory if a 3DS v2 architecture is used |
| 155 | Mandatory if 3DS authentication |
| 156 | Mandatory if available for a credit transaction |
| 157 | Mandatory if provided by the implemented authentication solution |
| 158 | Mandatory for resubmission |
| 159 | Mandatory for a card-to-card funds transfer or if data element was provided to the system (parameters downloading), otherwise absent |