1 ANEXO 2 Mensaje ISO 8583-1:1987 BIC (en éste documento ISO 8583)

1.1 Introducción

El presente Anexo muestra la mensajería online a intercambiar entre los Switch nacionales, detallando aquellos campos considerados tanto mandatorios como opcionales a fin de garantizar una interpretación correcta y buen funcionamiento en las transacciones de los medios de pago.

1.2 Objetivo

Este documento proporciona información acerca de la mensajería ISO:8583 la cual representa los tipos de mensajes financieros utilizados por los Cámaras de Compensación para Pagos con Tarjeta, con las Entidades que utilizan este mismo método.

Incluye una descripción global del mensaje: sus componentes, la estructura, el control del rechazo, y la diferencia entre el estándar de ISO y el estándar del producto utilizado por las Cámaras de Compensación para Pagos con Tarjetas.

1.3 Convenciones utilizadas en este manual

En esta sección se describen los acuerdos para la utilización de caracteres y formatos especiales.

El manual se describe en 2 idiomas español e inglés. La parte correspondiente al idioma inglés contiene los descriptivos internos de los mensajes respetando así la interpretación original de éstos.

Los valores usados para representar los atributos de los elementos de datos se describen a continuación:

A = Caracteres alfabéticos
N = Caracteres numéricos
S = Caracteres especiales
AN = Caracteres alfabéticos y numéricos
AS = Caracteres alfabéticos y especiales
NS = Caracteres numéricos y especiales
ANS = Caracteres alfabéticos, numéricos y especiales

El formato utilizado para representar la fecha así como la hora será la siguiente:

YY or YYYY	= Año
MM	= Mes
DD	=Día
HH	= Hora
MM	= Minuto
SS	= Segundo
Hh	= Centésimas de segundo
Mmmmmm	= Milésimas de segundo

1.4 Espacios en Blanco

Dentro de este manual será requerido distinguir los espacios en blanco para lo cual se utilizara el símbolo **b-** indicando el espacio mencionado.

1.5 Mensaje Iso Externo

El mensaje externo está basado en ISO 8583:1987 publicado por la Organización Internacional de la Estandarización (ISO), el cual permite intercambiar los mensajes entrantes y salientes que pueden ser configurados individualmente, basados en el sistema de las Cámaras de Compensación para Pagos con Tarjetas y las necesidades de la Entidad.

1.6 Componentes y Estructura del mensaje externo

El mensaje externo está estructurado y se basa en los siguientes elementos:

COMPONENTE	LONGITUD	SECCIÓN
ISO literal	3 bytes	14.6
Header	9 bytes	14.7
Message type identifier	4 bytes	14.8
Primary bit map	16 bytes	14.9
Data elements	Variable	14.10

1.6.1 ISO literal

El aplicativo utilizado por los mensajes ISO 8583 la cual requiere la inclusión de las letras "**ISO**" ya que es un indicador de inicio de mensaje externo. Estos tres caracteres deben estar siempre presentes en todos los mensajes. Ejemplo:

0030 86 C4 B8 94 00 00 03 67 49 53 4F 30 32 35 30 30 .....g**ISO**02500

0040 30 30 31 30 30 32 30 30 42 32 33 38 43 34 30 31 00100200B238C401
0050 32 38 41 31 38 30 31 41 30 30 30 30 30 30 30 30 28A1801A00000000
0060 31 30 30 30 30 31 42 43 30 30 30 30 30 30 30 30 100001BC00000000

1.6.2 Encabezado del mensaje externo (Header)

El Encabezado del mensaje externo es requerido para todos mensajes y debe incluir campos ISO en un inicio ya que es el indicador inicial para el Header. El encabezado del mensaje externo contiene 9 caracteres a lo largo del mensaje como se indica a continuación:

POSICIÓN	LONGITUD	DESCRIPCIÓN
1-2	**2**	**Product Indicator** Valid values are as follows: 00 = Base (network management messages) 02 = POS (Cualquier dispositivo)
2-3	**2**	**Release Number** DEFAULT = 60
5-7	**3**	**Status** Indicates whether there was a problem with the interpretation of the message. If the message was rejected because of a security failure, this field indicates the reason. Valid values are as follows: 000= Undetermined 196 = Generic key synchronization error1 199 = Security device failure 210 = MSG key synchronization error 211 = Invalid MSG error2 220 = MAC key synchronization error 221 = Invalid MAC error2 230 = PIN key synchronization error 231 = Invalid PIN error2 If the message was rejected because of bad data in the message, the ISO Host Interface process loads the bit map element number of the offending data element into this field and returns the message to the host.
8	**1**	**Originator Code (Acquirer)** Valid values are as follows: 7 = Interchange (Transacciones Normales) 6 = Interchange Interface process or remote banking standard unit interface process (Solo en corte mensaje 0800)
9	**1**	**Responder Code (Issuer)** Indicates the network entity that created the response. Valid values are as follows: 0 = Undetermined

1.6.3 Tipo de Identificación de Mensajes (Message type Identification)

La identificación del tipo mensaje es un código de cuatro-dígitos que identifica el propósito general del mensaje y es requerido para todos los mensajes. El estándar ISO

8583 define las clases y tipos de mensajes que determinan el tipo de transacción que se está realizando.
Estas clases y tipos se definen a continuación:

POSICIÓN	LONGITUD	DESCRIPCIÓN
1-2	2	**Clase de mensaje:** a) 02xx Financial Transaction b) 04xx Reversal c) 08xx Network Management
3-4	2	**Tipos de mensajes:** a) xx00 Request b) xx10 Request Response c) xx20 Advice (AVISO) d) xx21 Advice Repeat e) xx30 Advice Response

1.6.4 Message class: Financial Transaction

Los mensajes que inician con 02xx son mensajes financieros. Una transacción financiera aprobada afecta el saldo de la cuenta del titular de la tarjeta.

Los mensajes soportados son los siguientes:

TIPO	DESCRIPCIÓN
0200	Transacción financiera de solicitud *Financial Transaction Request*
0210	Transacción financiera de respuesta *Financial Transaction Response*
0220	Transacción financiera de aviso *Financial Transaction Advice*
0230	Transacción financiera de respuesta de aviso *Financial Transaction Advice Response*

1.6.4.1 Financial Transaction Request (0200)

CATEGORÍA	**Interactivo**
ASOCIACIÓN	Requiere un mensaje de respuesta (0210)
FLUJO	Adquirente - SWITCH - SWITCH Autorizador

Un mensaje Financial Transaction Request (0200) solicita la aprobación de una transacción, como ejemplo una Compra.

Cada transacción se diferencia por el Data Element Procesing Code. El mensaje 0200 requiere una respuesta con un mensaje 0210 con un código de aprobación o rechazo de la transacción de acuerdo a los códigos de respuesta descritos en el estándar ISO.

1.6.4.2 Financial Transaction Request Response (0210)

CATEGORÍA	**Interactivo**
ASOCIACIÓN	Requiere previo un mensaje 0200
FLUJO	Autorizador - SWITCH - SWITCH - Adquirente

Un mensaje 0210 es la respuesta a un mensaje 0200 con un código de aprobación o rechazo de la transacción de acuerdo a los códigos de respuesta.

1.6.4.3 Financial Transaction Advice (0220)

CATEGORÍA	**Interactivo**
ASOCIACIÓN	Requiere previo un mensaje 0200
FLUJO	Adquirente - **SWITCH** - **SWITCH** Autorizador

Transacción de aviso (advice) que confirma el monto de una transacción previamente autorizada, como ejemplo puede ser una transacción de ajuste (mensaje 0220 con Processing Code 22). Los mensajes 220 son condicionales entre las Cámaras de Compensación para Pagos con Tarjetas ya que dependen de la funcionalidad del adquirente.

1.6.4.4 Financial Transaction Advice Response (0230)

CATEGORÍA	**Interactivo**
ASOCIACIÓN	Requiere previo un mensaje 0220
FLUJO	Autorizador - **SWITCH** - **SWITCH** Adquirente

Un mensaje 0230 es el mensaje de respuesta a uno de aviso 0220.

1.6.5 Message class: Reverse

La clase de mensajes 04xx se utiliza para realizar reversos de un mensaje de requerimiento que previamente fue autorizado. Los mensajes Soportados son los siguientes:

TIPO	DESCRIPCIÓN
0420	Notificación de reverso del Adquirente *Acquirer Reversal Advice*
0430	Respuesta de notificación de reverso del Adquirente *Acquirer Reversal Response*

1.6.5.1 Acquirer Reversal Advice (0420)

CATEGORÍA	**Interactivo**
ASOCIACIÓN	No es obligatorio la respuesta del mensaje 0430
FLUJO	Adquirente - **SWITCH** - **SWITCH** - Autorizador

Un mensaje (0420) notifica al autorizador el reverso de la transacción que previamente había sido autorizada. El Mensaje (0420) requiere una respuesta, siendo un mensaje 0430. Este tipo de mensaje es generado cuando los mensajes 0200 ó 0220 no fueron atendidos por el Emisor.

1.6.5.2 Acquirer Reversal Advice (0430)

CATEGORÍA	**No Interactivo**
ASOCIACIÓN	
FLUJO	Autorizador - **SWITCH** - **SWITCH** - Adquirente

Respuesta a la solicitud de mensajes 0420 ó 0421.

1.6.6 Message class: Network/ Administration

Tipos de mensajes 08xx y 05xx.
Los mensajes 08xx son utilizados para la administración de mensajes de la red y para realizar funciones de seguridad. Los mensajes son los siguientes:

TIPO	DESCRIPCIÓN
0800	Solicitud de administración de la red Network Management Request
0810	Respuesta de solicitud de la administración de la red Network Management Request Response
0820	Repetición de aviso de solicitud de la administración de la red Network Management Request Advice Repeat

1.6.6.1 Network Management Request (0800)

CATEGORÍA	**No Interactivo**
ASOCIACIÓN	Requiere respuesta 0810
FLUJO	**SWITCH** - **SWITCH**

Es usado para enviar mensajes de Echo Test, Logon, Logoff, cutover.

1.6.6.2 Network Management Request Response (0810)

Es la respuesta del Echo Test, Logon, Logoff, cutover.

CATEGORÍA	**No Interactivo**
ASOCIACIÓN	
FLUJO	**SWITCH - SWITCH**

Los mensajes 05xx son utilizados para la administración de mensajes de la red para realizar funciones de control y conciliación.

TIPO	DESCRIPCIÓN
0500	Solicitud de reconciliación del Adquirente *Acquirer Reconciliation Request*
0510	Respuesta a la solicitud de reconciliación del Adquirente *Acquirer Reconciliation Request Response*
0520	Aviso de reconciliación del Adquirente *Acquirer Reconciliation Advice*
0530	Respuesta del aviso de reconciliación del Adquirente *Acquirer Reconciliation Advice Response*

Importante: Este tipo de mensajes no se intercambian entre las Cámaras de Compensación para Pagos con Tarjetas.

1.7 Bitmap Primario

El BITMAP primario es un campo de 16 posiciones que es requerido para todos los mensajes. Representa los datos de los 64 bits iniciales. En el BITMAP se identifica con 1 la presencia o con 0 la ausencia de los primeros 64 elementos del mensaje.

De los 16 bytes que están en notación hexadecimal al realizar la conversión a binario se despliega los elementos de datos que están presentes o ausentes.

Al convertir los 64 bits a 16 bytes, los primeros 64 bits son divididos en 4 grupos de 16, entonces, a cada grupo de 4 bits se asigna su equivalente hexadecimal según la siguiente tabla:

VALOR HEXADECIMAL	VALOR BINARIO	VALOR HEXADECIMAL	VALOR BINARIO
0	0000	8	1000
1	0001	9	1001
2	0010	A	1010
3	0011	B	1011
4	0100	C	1100
5	0101	D	1101
6	0110	E	1110
7	0111	F	1111

Estos valores permiten identificar que campos están habilitados en el mensaje, como ejemplo se muestra el siguiente bitmap:

B	**2**	**3**	**8**	**C**	**4**	**0**	**1**	**2**	**8**	**A**	**1**	**8**	**0**	**1**	**A**
10 11	00 10	001 1	10 00	110 0	01 00	00 00	00 01	00 10	10 00	101 0	00 01	10 00	00 00	00 01	**101 0**
1,3 ,4	**7,**	**11, 12**	**13**	**17, 18**	**22,**		**32**	**35**	**37**	**41, 43**	**48**	**49**		**60**	**61, 63**

En este ejemplo la transacción tiene los siguientes campos habilitados:

1,3,4,7,11,12,13,17,18,22,32,35,37,41,43,48,49,60,61,63

1.8 Data elements

1.8.1 Tipos de Configuración de Datos

M = Mandatorio. El elemento se requiere en el mensaje.

b- (espacio en blanco) = No Usado. El elemento no es incluido en el mensaje.

O- Opcional

La Cámara de Compensación para Pagos con Tarjeta intercambiará los datos Mandatarios y Condicionales entre todas las Entidades y no realiza validaciones para la autorización o rechazo de las transacciones.

TABLA DE MENSAJES

Campo	Data Element	200	210	220	230	420	430
P-1	Bit map, Secondary					M	M
P-3	Processing Code	M	M	M	M	M	M
P-4	Transaction Amount	M	M	M	M	M	M
P-7	Transmission Date and Time	M	M	M	M	M	M
P-11	Systems Trace Audit Number	M	M	M	M	M	M
P-12	Local Transaction Time	M	M	M	O	M	
P-13	Local Transaction Date	M	M	M		M	
P-15	Settlement Date		M			M	
P-17	Capture Date	M	M	M	O	M	
P-18	Merchant Type	M		M			
P-22	Point of Service Entry Mode	M	M	M	M		
P-32	Acquiring Institution ID Code	M	M	M	M	M	M
P-35	Track 2 Data	M	M	M		M	M
P-37	Retrieval Reference Number	M	M	M	M	M	M
P-38	Authorization ID Response		M	M		M	
P-39	Response Code		M	M	M	M	M
P-41	Card Acceptor Terminal ID	M	M	M	M	M	M
P-43	Card Acceptor Name/Location	M		M		M	
P-44	Additional Response Data		O	O			
P-48	Retailer Data	M		M	M	M	
P-49	Transaction Currency Code	M	M	M	M	M	M

P-60	Terminal Data	M		M		M	
P-61	Card Issuer- Category-Response Code Data	M	M	M	M	M	M
P-62	Postal Code	M		M		M	
P-63	Additional Data	M	M	M			
S-90	Original Data Elements					M	M

Campo	Data Element	800	810
P-1	Bitmap, Secondary	M	M
P-7	Transmission Date and Time	M	M
P-11	Systems Trace Audit Number	M	M
P-15	Settlement Date	O	O
P-39	Response Code		M
P-48	Retailer Data	O	M
P-60	Terminal Data	O	
P-61	Card Issuer- Category-Response Code Data	O	O
P-62	Card Issuer- Category	O	O
P-63	Additional Data	O	O
S-70		M	M

Importante: Los mensajes 05XX no se intercambian entre Cámaras de Compensación para Pagos con Tarjetas, son exclusivamente de conciliación.

1.9 Data Elements 1 to 63

En este capítulo se desglosarán los primeros 63 Data Elements de los mensajes que son usados para el intercambio de transacciones financieras.

- **P-1 SECONDARY Bit Map**

CAMPO	DATA ELEMENT	VALOR	0200	0210	0220	0230	0420	0430	0800	0810
P-1	Secondary Bitmap	AN 16					M	M	M	M

The secondary bit map identifies the presence or absence of data elements 65 through 126 in the external message. It functions the same as the primary bit map, except that the

primary bit map identifies the presence or absence of data elements 1 through 64 and the secondary bit map identifies the presence or absence of data elements 65 through 126.

The secondary bit map is required if any of data elements 65 through 126 are included in the message. Otherwise, it is not used.

The presence or absence of the secondary bit map is identified by bit position 1 in the primary bit map. Data elements 65 through 126 cannot be included in the message if the secondary bit map is not present.

- **P-3 Processing Code**

CAMPO	DATA ELEMENT	VALOR	0200	0210	0220	0230	0420	0430
P-3	Processing Code	N 6	M	M	M	M	M	M

The Processing Code data element contains a series of digits used to describe the effect of a transaction on the customer account and the accounts affected. This data element is mandatory for all messages except network management messages.

The Valid Values are:

Processing Code

00 ISO = Normal Purchase
01 ISO = Cash Advance
02 ISO = Debit Adjustment
09 ISO = Purchase with Cashback
20 ISO = Returns
30 ISO = Balance inquiry

00	Normal purchase
00	Preauthorization purchase1
00	Preauthorization purchase completion1
80	Mail or phone order
20	Returns
01	Withdrawal or cash advance
81	Card Verification
31	Balance inquiry
09	Goods and services with cash disbursement
04	Check verification
03	Check guarantee

22 Credit adjustment
02 Debit adjustment
14 Cash advance adjustment
65 Pago de servicios
19 Purchase with cash back adjustment
98 Card activation
99 Additional card activation
28 Replenishment
17 Full redemption

IMPORTANTE: El valor que actualmente se utiliza es 00: Normal Purchase

Subfields 2 and 3:

00 / 30 No account / Credit type
00 / 10 No account / Savings type
00 / 20 No account / Checking type
10 / 00 Savings / No account
20 / 00 Checking / No account
30 / 00 Credit / No account

- **P-4 Transaction Amount**

CAMPO	DATA ELEMENT	VALOR	0200	0210	0220	0230	0420	0430
P-4	Transaction Amount	N 12	M	M	M	M	M	M

The Transaction Amount data element contains the amount of funds requested (either for debit or credit) in the currency of the source location of the transaction.

Decimalization of the amount is implied by the Transaction Currency Code (P-49) data element. For example, if the currency code indicates U.S. dollars, 000000001000 would indicate $10.00. However, if the currency code indicates lire, the amount would be 1000 lire.

The value in the Transaction Amount data element can be negative for balance inquiries. In this case, the first byte of the field in this data element contains a minus sign (–).

Este campo puede variar al presentarse una transacción de CashBack, esto es debido a que se realizara la suma del monto de la compra + el retiro de efectivo el cual se mostrara en el Data Element de Campos Adicionales.

- **P-7 Transmission Date and Time**

CAMPO	DATA ELEMENT	VALOR	0200	0210	0220	0230	0420	0430	0800	0810
P-7	Transmission Date and Time	N10 (MMDDhhmmss)	M	M	M	M	M	M	M	M

The Transmission Date and Time data element contains the time the message is initiated by the message originator. This time is set for each outgoing message and is expressed in Greenwich mean time. The Transmission Date and Time data element is mandatory for all message types.

- **P-11 Systems Trace Audit Number**

CAMPO	DATA ELEMENT	VALOR	0200	0210	0220	0230	0420	0430	0800	0810
P-11	Systems Trace Audit Number	N6	M	M	M	M	M	M	M	M

The Systems Trace Audit Number data element contains a number that must be set by a message sender and echoed by a message receiver. It is used for matching responses to original messages and is not intended to remain the same throughout the life of a transaction (for example, a reversal may not have the same number as the original transaction). The Systems Trace Audit Number data element is mandatory for all messages.

Network Management

In network management messages, the systems trace audit number is used to match the network management request with its response. The ISO Host Interface process generates the number on outgoing 0800 messages and expects it to be returned in the corresponding 0810 messages. On outgoing 0810 messages, the ISO Host Interface process echoes the number sent in the corresponding 0800 messages.

- **P-12 Local Transaction Time**

CAMPO	DATA ELEMENT	VALOR	0200	0210	0220	0230	0420	0430
P-12	Local Transaction Time	N6 (HHMMSS)	M	M	M	O	M	

The Local Transaction Time data element contains the local time at which the transaction began at the card acceptor location. Since a terminal can be geographically removed from the system by one or more time zones, processes maintain time zone offsets for terminals defined to the system. These offsets allow processes to compute local transaction times and dates for transactions originating at terminals. The time zone offset for a terminal is applied to the system date and time to derive the local date and time for the transaction.

When a transaction originates at an acquirer host, it is assumed that the content of this data element is the terminal local time.

The Local Transaction Time data element carries the time as six characters (HHMMSS). Internally, processes carry this time as eight characters (HHMMSShh), which includes hundredths of seconds in the right-most two positions.

- **P-13 Local Transaction Date**

CAMPO	DATA ELEMENT	VALOR	0200	0210	0220	0230	0420	0430
P-13	Local Transaction Date	N4 (MMDD)	M	M	M		M	

The Local Transaction Date data element contains the local month and day that the transaction began.
Since a terminal can be geographically removed from the system by one or more time zones, processes maintain time zone offsets for terminals defined to the system. These offsets allow processes to compute local transaction times and dates for transactions originating at terminals. The time zone offset of the terminal is applied to the system date and time to derive the local date and time for the transaction. When a transaction originates at an acquirer host, it is assumed that the content of this data element is the terminal local date.

The Local Transaction Date data element carries the date as four characters (MMDD). Internally, processes carry this date as six characters (YYMMDD), which includes the year in the left-most two positions

- **P-15 Settlement Date**

CAMPO	DATA ELEMENT	VALOR	0200	0210	0220	0230	0420	0430	0800	0810

P-15	Settlement Transaction Date	N4 (YYMM)		M			M		O	O

The Settlement Date data element is used to hold the interchange settlement date. The interchange settlement date is the date the transaction is settled by the interchange if an interchange is involved in the transaction.

When the transaction is introduced to interchange system, or sent to an interchange system for authorization, this data element carries the settlement date for the transaction on that system, while the Capture Date (P-17) data element carries the settlement date for the transaction on the system.

The Settlement Date data element carries the date as four characters (MMDD). Internally, the products carry this date as six characters (YYMMDD), which includes the year in the left-most two positions. On incoming messages, the year is set to the current year. On outgoing messages, the year is truncated.

The date in the Settlement Date data element is required only when there is an interchange involved in the transaction. It is considered conditional in a number of messages (varying by SYSTEM product).

- **P-17 Capture Date**

CAMPO	DATA ELEMENT	VALOR	0200	0210	0220	0230	0420	0430
P-17	Capture Date	N4 (MMDD)	M	M	M	O	M	

The Capture Date data element contains the month and day the transaction was processed by a process. This date equates to the date of the transaction log file to which the transaction is logged (each product has its own transaction log file). The processes move to a new processing date each day at logical network cutover.

The Capture Date data element carries the date as four characters (MMDD). Internally, processes carry this date as six characters (YYMMDD), which includes the year in the left-most two positions.

- **P-18 Merchant Type**

CAMPO	DATA ELEMENT	VALOR	0200	0210	0220	0230	0420	0430
P-18	Merchant Type	N4	M		M			

The Merchant Type data element contains the ***Standard Industrial Classification*** (SIC) code of the retailer involved in the transaction. An identifier for the retailer or merchant that owns or operates the terminal at which this transaction originated.

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- **P-22 Point of Service Entry Mode**

CAMPO	DATA ELEMENT	VALOR	0200	0210	0220	0230	0420	0430
P-22	Point of Service Entry Mode	N3	M	M	M	M		

The Point of Service Entry Mode data element is a single field that contains two codes. The first code is two digits in length and indicates the method by which Track data or the primary account number (PAN) was entered into the system. The second code is one digit in length and indicates the entry capabilities available at the point of service.

Note: A value of 01 in the first code of the Point of Service Entry Mode indicates that the Track data was entered manually and that the PIN entry capabilities at the point of service are unknown.

012: MANUAL
902: SLIED
052 : EMV
800: Fallback

Values by position :

Place 1-2

00: Unknown
01: Manual
03: Bar code read
04: OCR Coding read
05: Integrated circuit read
07: eCommerce

80: FallBack
81: Electronic Commerce
90: Magnetic stripe read and exact content of
track1 o track2 included
91: Contactless (Track2 o Track1 completo)

place 3:
0: Unknown
1: Terminal can accept entry of PINs
2:Terminal cannot accept entry PINs
8: Terminal PIN pad down
9: Reserved for future use

IMPORTANTE: Los valores que actualmente se utilizan en las primeras dos posiciones son:
00: Unknown
01: Manual
05: Integrated circuit read
80: FallBack
90: Magnetic stripe read and exact content of track1 o track2 included.

- **P-32 Acquiring Institution Identification Code**

CAMPO	DATA ELEMENT	VALOR	0200	0210	0220	0230	0420	0430
P-32	Acquiring Institution ID Code	N11	M	M	M	M	M	M

The Acquiring Institution Identification Code data element contains a code that identifies the acquiring institution for the transaction, or its agent. The acquiring institution may be different from the card acceptor.

- **P-35 TRACK 2 DATA**

CAMPO	DATA ELEMENT	VALOR	0200	0210	0220	0230	0420	0430
P-35	TRACK 2 DATA	ANS37	M	M	M		M	M

Importante: Por normativa en 2010 se determinó que este campo los valores de este campo serán cifradas y/o enviadas por canal cifrado a fin de garantizar la protección de datos sensitivos.

- **P-37 Retrieval Reference Number**

CAMPO	DATA ELEMENT	VALOR	0200	0210	0220	0230	0420	0430

P-37	Retrieval Reference Number	AN12	M	M	M	M	M	M

The Retrieval Reference Number data element contains a number assigned by the message initiator to uniquely identify a transaction. This number remains unchanged for all messages throughout the life of a transaction.

When the transaction originates from an acquirer host, the number comes from the original 0200 message from that acquirer.

- **P-38 Authorization Identification Response**

CAMPO	DATA ELEMENT	VALOR	0200	0210	0220	0230	0420	0430
P-38*	Authorization ID Response	AN6		M	M		M	

The Authorization Identification Response data element contains a response identification number assigned by the authorizing institution. They may also be generated by an interchange or host.

External message defaults include the Authorization Identification Response data element as a mandatory data element in a number of cases; however.

Importante: Este Data Element podrá ser utilizado en transacciones de tipo 0200 exclusivamente cuando el Adquirente utilice devoluciones.

- **P-39 Response Code**

CAMPO	DATA ELEMENT	VALOR	0200	0210	0220	0230	0420	0430	0800	0810
P-39	Response Code	AN2		M	M	M	M	M		M

The Response Code data element contains a code that indicates the disposition of a message.

Network Management

The Response Code data element is mandatory in 0810 messages. Valid values for this code in 0810 messages are as follows:

00 = Approved
05 = Denied
12 = Bad check digits
91 = DPC down

- **P-41 Card Acceptor Terminal Identification**

CAMPO	DATA ELEMENT	VALOR	0200	0210	0220	0230	0420	0430
P-41	Card Acceptor Terminal ID	ANS16	M	M	M	M	M	M

The Card Acceptor Terminal Identification data element contains a unique code identifying the terminal at the card acceptor location.

- **P-43 Card Acceptor Name/Location**

CAMPO	DATA ELEMENT	VALOR	0200	0210	0220	0230	0420	0430
P-43	Card Acceptor Name/Location	ANS 40	M		M		M	

The Card Acceptor Name/Location data element contains the name and location of the card acceptor that defines the point of service in both local and interchange environments.

The Card Acceptor Name/Location data element is mandatory in 0200, 0420 messages.

When a reversal (0420 message) is generated by the ISO Host Interface process because of a late or unsolicited approval response, the regular structure of this data element is not available to be included in the 0420 message. In this case, the following text appears in this data element instead:

** REVERSAL FOR LATE/UNSOL RESPONSE **

In any other reversal situation, this data element is copied from the original transaction request. The structure of this data element is provided below.

POSITION	LENGTH	DESCRIPTION
1-22	22	**Terminal Owner** The name of the institution owning the terminal
23–35	13	**Terminal City** The city in which the transaction-originating terminal is located.
36–38	3	**Terminal State** A code indicating the state or province in which the transaction-originating terminal is located
39–40	2	**Terminal Country** A code indicating the country in which the transaction-originating terminal is located

- **P-44 ADDITIONAL RESPONSE DATA**

CAMPO	DATA ELEMENT	VALOR	0200	0210	0220	0230	0420	0430

P-44	Additional response data	ANS 30		O	O			

The Retailer Data element carries the information required to identify the retailer involved in the transaction. It is mandatory for all authorization, financial transaction, reversal, and reconciliation.

POSITION	LENGTH	DESCRIPTION
1–2	2	**Field Length Indicator** This field must be set to a value of 02.
3	1	**Response Data** Este valor no se utiliza.
4	1	**Address Verification Status** A code identifying the result of comparing address verification information received in the transaction and address verification information contained in the database for the processor.

- **P-48 Retailer Data POS**

CAMPO	DATA ELEMENT	VALOR	0200	0210	0220	0230	0420	0430
P-48	Retailer Data Pos	ANS 30	M		M	M	M	

The Retailer Data element carries the information required to identify the retailer involved in the transaction. It is mandatory for all authorization, financial transaction, reversal, and reconciliation control messages, with the exception of 0430 messages.
The structure of this data element is provided below.

POSITION	LENGTH	DESCRIPTION
1–3	3	**Field Length Indicator** This field must be set to a value of 027.
4–22	19	**Retailer ID** The retailer ID of the retailer initiating the transaction.
23–26	4	**Retailer Group** The retailer group to which the retailer initiating the transaction belongs
27–30	4	**Retailer Region** The retailer region to which the retailer initiating the transaction belongs

- **P-48 Network management message additional data**

CAMPO	DATA ELEMENT	VALOR	0800	0810
P-48	Network Management Message Additional Data	ANS 9	O	M

Format: ANS 9 (includes a 3-position field length indicator)
Used By: Network Management Messages. The Network Management Message Additional Data element contains additional information. The structure of this data element is provided below.

POSITION	LENGTH	DESCRIPTION
1–3	3	**Field Length Indicator** The value in this field must match the length of data placed in the Additional Data field
4	1	**Number of Keys** Indicates the number of keys supported by the interface process. Valid values are as follows: 1 = Combined keys (inbound and outbound keys are equal) b, 0, 2 = Separate keys (b indicates a blank character)
5	1	**Key Length** Indicates the type of key management supported by the interface process. Valid values are as follows: 0, 1 = Single-length key exchange keys (KEKs) 2 = Double-length key exchange keys (KEKs)
6	1	**Key Processor Type** Indicates if the interface process is the main, secondary, or co-network key processor. Valid values are as follows: 0, N = None or not applicable C = Co-network M = Main S = Secondary
7	1	**MAC Type** Indicates the level of MACs supported by the interface process. Valid values are as follows: b, 0 = No MAC support (b indicates a blank character) 1 = Hardware MAC support 2 = Software MAC support
8	1	**MAC Data Type** Indicates the character set in which the data will be authenticated. Valid values are as follows: b, 0 = ASCII (b indicates a blank character) 1 = EBCDIC
9	1	**MAC Key Length** Indicates the type of MAC keys supported by the interface process. Valid values are as follows: 0, 1 = Single-length MAC keys 2 = Double-length MAC keys

- **P-49 Transaction Currency Code**

CAMPO	DATA ELEMENT	VALOR	0200	0210	0220	0230	0420	0430

P-49	Transaction Currency Code	N3	M	M	M	M	M	M

The Transaction Currency Code data element contains a code that defines the currency of the source location of the transaction.

POS:

The code in the Transaction Currency Code data element identifies the currency that applies to the Transaction Amount (P-4) data element. It is mandatory for all authorization, financial transaction, reversal, and reconciliation control messages. For more information consult the ***Official country names used by the ISO 3166/MA***

Importante: En el intercambio de transacciones en México (transacciones) que se utiliza actualmente es el valor 484.

- **P-60 Terminal Data**

CAMPO	DATA ELEMENT	VALOR	0200	0210	0220	0230	0420	0430	0800	0810
P-60	Terminal Data	ANS 19	M		M		M		M	

The Terminal Data element carries terminal information required for processing. For transactions introduced into the POS system by an acquirer host, these subelements must come from the original request sent by that host.

This data element is mandatory for all authorization, financial transaction, reversal, and reconciliation control messages, with the exception of 0430 messages.

The structure of this data element is provided below.

POSITION	LENGTH	DESCRIPTION
1–3	3	**Field Length Indicator** This field must be set to a value of 016.
4–7	4	**Terminal Owner FIID** The FIID of the institution owning the terminal.
8–11	4	**Terminal Logical Network** The logical network in which the terminal is located.
12–15	4	**Terminal Time Offset** The number of minutes to be added to the system time to arrive at the local time of the terminal originating the transaction. The value in this field is expressed as three digits preceded by a plus or minus sign
16–19	4	**Pseudo Terminal ID** A value used by interchanges to identify the terminal involved in a transaction

- **P-61 Card Issuer-Category- Response Code Data**

CAMPO	DATA ELEMENT	VALOR	0200	0210	0220	0230	0420	0430	0800	0810
P-61	Card Issuer-Category-Response Code Data	ANS 22	M	M	M	M	M	M	M	M

The Card Issuer-Category-Response Code Data element is used to carry the FIID and logical network of the card issuer, the transaction category, and some additional response code data. It is mandatory for authorization, financial transaction, and reversal messages.
The structure of this data element is provided below.

POSITION	LENGTH	DESCRIPTION
1–3	3	**Field Length Indicator** This field must be set to a value of 019.
4–7	4	**Card Issuer FIID** The FIID of the card issuer.
8–11	4	**Card Logical Network** The logical network of the card issuer.
12	1	**Category** A code used to further identify the type of transaction
16–19	4	**Pseudo Terminal ID** A value used by interchanges to identify the terminal involved in a transaction
13-14	2	**Save Account Indicator** A two-position code, indicating the actual type of account on which the transaction was performed. The ranges of valid values are as follows: 01–09 = Checking accounts 11–19 = Savings accounts 31–39 = Credit accounts
15-22	8	**Interchange Response Code** Response codes and reason codes supplied by an interchange

- **P-62 POSTAL CODE**

CAMPO	DATA ELEMENT	VALOR	0200	0210	0220	0230	0420	0430	0800	0810
P-62	Additional Data	N13	M		M		M		M	M

The structure of this data element is provided below.

POSITION	LENGTH	DESCRIPTION
1–3	3	**Field Length Indicator** This field must be set to a value of 010.
4–13	10	**Postal Code** The postal code of the terminal. This code is left-justified and blank-filled to the right.

- **P-63 Additional Data**

CAMPO	DATA ELEMENT	VALOR	0200	0210	0220	0230	0420	0430	0800	0810
P-63	Additional Data	ANS 600	M	M	M				M	M

The Additional Data element contains message tokens. This data element is conditional for all messages. For incoming messages, any token included in the message Tokens are carried in the external message in the same general structure as they are carried in the internal message. The major difference is that, in the external message, all tokens are in ASCII format.

If token data is added to data element P-63 (Ver Anexo 14 de este documento), the first item following the field length indicator is a Header token. The Header token contains a count of the number of tokens associated with the message and the overall length of all token data. The Header token is added to the message when the first token is added, and is updated each time a subsequent token is added.

The token header for the first token is located after the Header token. Each token that is added to the message has its own token header. Unlike the Header token, which contains information about all tokens in the message, the token header contains information about one specific token. The token header identifies the individual token and contains the length of the individual token. The token header is followed by the token data. Together, the token header and the token data form a single token. The combination of token header and token data is repeated for each token in the message.

Example: &_0000200022!_Q200002_03

Token Basics and Examples

As described previously, the internal message consists of a series of core fields— known as the STM, PSTM, or TSTMH—followed by some number of function-specific tokens. Tokens are only added to the message as they are needed, so it is possible for an internal message to have no tokens associated with it. When the first token is required to process the transaction, the system adds two tokens to the message. The first token is the Header token. The second token is whatever token needed to be added to the message. When subsequent tokens are needed, they are added to the message individually. The general layout of an internal message with message tokens is illustrated below.

Standard Internal Message with Tokens

STM/PSTM/TSTM	**Header Token**	**Token**	**Token**	**Token**	**...**

Header Token

The Header token contains a count of the number of tokens associated with the message and the overall-length of all token data. The Header token is added to the message when the first token is added, and is updated each time a subsequent token is added. The Header token is illustrated below.

Eye Catcher	Count	Length
&	00002	00030

The first field in the Header token contains an eye catcher. The eye catcher makes it easy to locate token information when viewing internal messages. The eye catcher in the Header token is an ampersand **(&)**.
The second field contains the token count. In the example, the token count field contains the value 2. This indicates that there are two tokens in the internal message—the Header token plus one additional token.

Among the symbol **(&)** Eye catcher and the Count will exist a space the one which this represented by " ".

The final field contains the overall length of token data. The length includes the total length of the Header token, plus the length of each individual token added to the message.

Description Header Token:

Position		Level Field Name and Description	Data Type
1–12		**HEADER-TKN**	
1	**02**	**EYE-CATCHER**	**PIC X(1)**
		Indicates the start of token data. The only valid value is an ampersand **(&)**.	
2	**02**	**USER-FLD1**	**PIC X(1)**
		space “ ”	
3–7	**02**	**CNT**	**PIC 9(5)**
		The count of the number of tokens, including the Header token, that are present in the token data buffer.	
8–12	**02**	**LGTH**	**PIC 9(5)**
		The length of all token data, including the Header token and token header structures, present in a token data buffer.	

Token Headers

Each token that is added to the message has its own token header. Unlike the Header token, which contains information about all tokens in the message, the token header contains information about one specific token. The token header identifies the individual token and contains the binary length of the individual token. The token header is followed by the token data. Together, the token header and the token data form a single token. The general format of a token is illustrated below.

Data Token

Eye Catcher	Token ID	Token	Length Token Data
!	13	30	11101361109261209...

The first field in the data token is another eye catcher. The eye catcher separates each token in the message from the previous token. The eye catcher in data tokens is always an exclamation point **(!)**.

Among the symbol **(!)** Eye Catcher and the Token ID will exist a space the one which this represented by " ".SYSTEM tokens are carried in their entirety in ASCII format. The general structure of this data element is provided below:

Description Token Header

POSITION	LEVEL	FIELD NAME AND DESCRIPTION	DATA TYPE
1–10	**TKN-HEADER**		
1	**02**	**EYE-CATCHER** Indicates the start of an individual token. The only valid value is an exclamation point (!). **Note:** If the Super Extract process converts a token to EBCDIC, the exclamation point in this field is translated to a vertical bar (|).	**PIC X(1)**
2	**02**	**USER-FLD1** Space " "	**PIC X(1)**
3 – 4	**02**	**TKN-ID** The two-byte ASCII representation of the token ID. The token ID uniquely identifies a token.	**PIC X(2)**
5 – 9	**02**	**LGTH** The length of the token data for the token identified by the TKN-ID field.	**PIC 9(5)**
10	**02**	**USER-FLD2** Space " "	**PIC X(1)**

Descripción General de Token

POSITION	LENGTH	DESCRIPTION
1 - 3	**3**	**Field Length Indicator** The field length indicator value is the sum of the lengths of the Header token, all token headers, and token data being used.
4 - 15	**12**	**Header Token**
15 - 24	**10**	**Token Header**
a–b	**n**	**Token Data**
…	**…**	**…**
w- x	**10**	**Token Header**
y - z	**n**	**Token Data**

1.10 Data Elements 70 Y 90

This section contains descriptions for data elements 65 through 126

- **S-70 Network Management Information Code**

CAMPO	DATA ELEMENT	VALOR	0800	0810
S-70	Network Management Information Code	N3	M	M

The Network Management Information Code data element contains a code that is used to manage the online processing status. This code identifies the purpose of a network management request message.

The following codes are supported:

001 = Logon
002 = Logoff
161 = Change key
162 = New key
163 = Repeat key
164 = Verify key
201= Cutover
301 = Echo-test

This data element is mandatory for 0800 and 0810 messages.

The Network Management Information Code data element contains a code that is used to manage the online processing status. This code identifies the purpose of a network management request message. The following codes are supported:

001 = Logon
002 = Logoff
161 = Change key
162 = New key
163 = Repeat key
164 = Verify key
201= Cutover
301 = Echo-test

This data element is mandatory for 0800 and 0810 messages.

- **S-90 Original Data Elements**

CAMPO	DATA ELEMENT	VALOR	0200	0210	0220	0230	0420	0430
S-90	Original Data Elements	N42					M	M

The Original Data Elements data element contains a group of five sub-elements included in a reversal or adjustment message. The information in these sub-elements identifies the original transaction being reversed or adjusted.

In the case of adjustments, the first two digits of the Processing Code (P-3) data element contain one of the following values:

02 = Debit adjustment
14 = Cash advance adjustment
19 = Purchase with cash back adjustment

22 = Credit adjustment

Information for data element S-90 is not always available through applications. Therefore, it is recommended that systems interfacing with applications use other information to uniquely identify a transaction. One or more of the following data elements can be used to uniquely identify a transaction:

P-12 Local Transaction Time
P-13 Local Transaction Date
P-35 Primary Account Number (from Track 2 Data)
P-37 Retrieval Reference Number
P-41 Card Acceptor Terminal Identification
P-45 Primary Account Number (from Track 1 Data)

POS

The structure of this data element is provided below.

POSITION	LENGTH	DESCRIPTION
1 – 4	4	**Original Transaction Type** The transaction type identifying the original transaction.
5 – 16	12	**Original Sequence Number** The sequence number identifying the original transaction.
17 – 20	4	**Transaction Date** The date of the original transaction.
21 -28	8	**Transaction Time** The time of the original transaction.
29 – 32	4	**Original Capture Date** The date the original transaction was posted.
33 - 42	10	Filler

1.10.1 Processing codes

La siguiente tabla despliega los valores de código de procesamiento para los mensajes Financieros los cuales deberán de ajustarse según la necesidad correspondiente.

ISO	
00	Goods and services
80	Reserved for private use
20	Returns
01	Withdrawal or cash advance
81	Reserved for private use

31	Balance inquiry
09	Goods and services with cash disbursement
04	Check verification
03	Check guarantee
22	Credit adjustment
02	Debit adjustment
14	Reserved for private use
19	Reserved for private use
98	Card activation
99	Additional card activation
28	Replenishment
17	Full redemption

Importante: El valor que se intercambia actualmente es 00.

1.10.2 Códigos de Respuesta de ISO

Los códigos de respuesta se registran en el campo P-39, estos se describen en la siguiente tabla:

ISO	
00	Approved or completed successfully (if balances are not present)
01	Refer to card issuer
02	Refer to special conditions for card issuer
03	Invalid merchant
04	Pick-up card
05	Do not honor
06	Error
07	Pick-up card, special condition
08	Honor with identification
09	Request in progress
11	Approved (VIP)
12	Invalid transaction
13	Invalid amount
14	Invalid card number (no such number)
15	No such issuer
30	Format error
31	Bank not supported by switch
33	Expired card
34	Suspected fraud
35	Card acceptor contact acquirer
36	Restricted card
37	Card acceptor call acquirer security
38	Allowable PIN tries exceeded
39	No credit account
41	Lost card
43	Stolen card, pick-up

51	Not sufficient funds
54	Expired card
55	Incorrect personal identification number
56	No card record
57	Transaction not permitted to cardholder
58	Transaction not permitted to terminal
61	Exceeds withdrawal amount limit
62	Restricted card
65	Exceeds withdrawal frequency limit
68	Response received too late
75	Allowable number of PIN tries exceeded
76	Reserved for private use
77	Reserved for private use
78	Reserved for private use
79	Reserved for private use
80	Reserved for private use
81	Reserved for private use
82	Reserved for private use
83	Reserved for private use
84	Reserved for private use
85	Reserved for private use
86	Reserved for private use
87	Reserved for private use
88	Reserved for private use
89	Reserved for private use
90	Cutoff is in process, a switch is ending business for a day and starting the next (transaction can be sent again in a few minutes)
91	Issuer or switch is inoperative
92	Financial institution or intermediate network
	facility cannot be found for routing
94	Duplicate transmission
96	System malfunction
N0	Reserved for private use
N1	Reserved for private use
N2	Reserved for private use
N3	Reserved for private use
N4	Reserved for private use
N5	Reserved for private use
N6	Reserved for private use
N7	Reserved for private use
N8	Reserved for private use
N9	Reserved for private use
O0	Reserved for private use
O1	Reserved for private use
O2	Reserved for private use
O3	Reserved for private use
O4	Reserved for private use
OS	Reserved for private use
O6	Reserved for private use
O7	Reserved for private use
O8	Reserved for private use

O9	Reserved for private use
P0	Reserved for private use
P1	Reserved for private use
P2	Reserved for private use
P3	Reserved for private use
P4	Reserved for private use
PS	Reserved for private use
P6	Reserved for private use
P7	Reserved for private use
P8	Reserved for private use
P9	Reserved for private use
Q0	Reserved for private use
Q1	Reserved for private use
Q2	Reserved for private use
Q3	Reserved for private use
Q4	Reserved for private use
Q5	Reserved for private use
Q6	Reserved for private use
Q7	Reserved for private use
Q8	Reserved for private use
Q9	Reserved for private use
R0	Reserved for private use
R1	Reserved for private use
R2	Reserved for private use
R3	Reserved for private use
R4	Reserved for private use
R5	Reserved for private use
R6	Reserved for private use
R7	Reserved for private use
R8	Reserved for private use
S4	PTLF full
S5	Reserved for private use
S6	Reserved for private use
S7	Reserved for private use
S8	Reserved for private use
S9	Reserved for private use
T1	Reserved for private use
T2	Reserved for private use
T3	Reserved for private use
T4	Reserved for private use
T5	Reserved for private use
T6	Reserved for private use
T7	Reserved for private use

1.11 Uso mensajes no reconocidos

Si el aplicativo usado recibe un mensaje externo que no puede ser procesado o reformateado para uso interno, debido a datos erróneos o fallas en el esquema de seguridad se rechaza el mensaje como sigue:

1. Cambia la primera posición del Message type a un valor de 9 (por ejemplo, un mensaje 0200 lo cambia por un 9200 y un mensaje 0420 lo cambia por un mensaje 9420).
2. La razón del rechazo se indica en el campo de STATUS dentro del Header en el mensaje externo. Si el mensaje fue rechazado debido al esquema de seguridad, al campo de STATUS se le coloca un valor entre 196 y 199. Si el mensaje fue rechazado debido a datos erróneos, en el campo de STATUS se indica el número de BIT del elemento de datos que causo el rechazo (por ejemplo, si los datos del Track 2 en P-35 no pueden ser analizados, el campo de STATUS presenta el valor 035).
3. Regresa el mensaje externo al EMISOR que originó el mensaje.

Las acciones anteriores aplican a cualquier mensaje que no pueda ser procesado y no simplemente a aquéllos que requieren una respuesta. Si el Switch recibe un mensaje incorrecto o no reconocido el cual **No** es posible procesarlo, el mensaje es contestado cambiando la 1ª posición del mensaje con un valor de 9 e indicando en el campo estatus del header el campo incorrecto, ejemplo:

- 0200 → **9**200
- 0220 → **9**220
- 0420 → **9**420

- **En este ejemplo se indica que el campo 35 (Track2) es incorrecto**

  Header SWITCH A – Solicitud : ISO0250**000**77**0200**

  Header SWITCH B – Respuesta : ISO0250**035**77**9200**