Santander

Cash Management - Receivables Products

BARCODE – COLLECTION

INDEX

Introduction

The barcode is a graphical representation of numeric characters.

This graphical representation is made by varying the width and spacing of the bars, also displayed as vertical parallel bars which, together, make up the information.

This set of signs, printed on documents, enables the capture of information through optical reading, so that they can be identified using a computerized system.

The barcode does not depend on the absolute size of the bars nor of the ratio between the standard height and width, but specifically on the ratios between the width of thick bars and thin, dark or lighter bars.

According to these ratios, several types of codes have been created, which are used by the Collection system of Santander Bank the standard interleaved 2 of 5.

Interleaved 2 of 5 Code:
- permits numeric representation.
- uses identifying characters from beginning to end.
- permits bi-directional reading.
- code of variable size, formed by the interleaved combination of every two characters.
- using its binary configuration, therefore, the code should contain an even number of characters.
- the narrow bars (E) are represented by the number 0 (zero).
- the wide bars (L) are represented by the number (1).
- form of coding: according to the combination of two narrow bars (E) and/or wide (L), the following configuration is obtained in ASCII:

Bars	Configuration
Beginning	3C
End	3E
EL	4E
LL	57
EE	6E
LE	77

In order to have one of the bar pairs above, first the numbers from 0 to 9 need to be substituted according to the following representation:

Number	Representation
0	00110
1	10001
2	01001
3	11000
4	00101
5	10100
6	01100
7	00011
8	10010
9	01010

Example: To represent the number 123, the number 0 needs to be added to the left, so that an even number of characters is obtained. Observing the representation above, the first bit of the number 0 should be joined to the first bit of number 1, forming the pair 01 which means a bar "E" and a bar "L", which has the confirmation in ASCII equal to 4E. This rationale should be followed for all the bits of each pair of numbers, and for all the numbers to be represented by this code. So, the coding of number 0123 will be:

```
BEGINNING 01  00  10  10  01  01  11  00  00  10  END
          EL  EE  LE  LE  EL  EL  LL  EE  EE  LE
   3C     4E  6E  77  77  4E  4E  57  6E  6E  77  3E
```

Specifications

1.) Number of copies equal to 2 (Two), where:
a.) Payer's copy
b.) Bank's copy

2.) Layout of the copies or parts:
a.) If under the forms of carbon copies, the first copy should be the bank copy, the receiving bank decides the layout of the other copies.
b.) Other cases, according to the criterion of the receiving bank.

3.) Thickness of the paper, minimum 50 g/m2.

4.) Dimensions:
a.) Bank copy: 3 3/4" to 4 1/8" X 170 to 210 mm.
b.) Cashier copy: limited to the dimensions of the Bank copy.
c.) Payer's copy: according to the criterion of the bank.

5.) Copy/print color:
a.) white background/blue print
b.) white background/black print

Completion instructions

1.) Bank copy:

a.) top left-hand corner: the name of the bank, which may contain your logo and on the right of the name of the bank, DV code/clearing number of the receiving bank, in bold.
N.B.: In the code number, character with 5mm and 1.2 mm lines or strands.

b.) top right-hand corner: there should be the numerical representation of the barcode content with dimensions from 3.5mm to 4 mm and lines or strands of 0.3mm, distributed into 5 (five) fields, as shown below, whereby, for each of the first 3 (three) fields, there is a check digit (module 10), between each field, a space equivalent to 2 (two) positions, permitting the insertion of data, in the case of rejection by the code reading:

1st field: composed of the bank code, currency code, permanent field "9", first four positions of the standard Santander beneficiary code and check digit of this field.
2nd field: composed of the first 3 remaining positions of the beneficiary Santander, our number (N/N) with the first 7 positions and check digit of this field.
3rd field: composed of the first 6 remaining positions of the N/N, 01 position referring to the IOF, 03 positions referring to the Type of Wallet Modality plus the check digit of this field.
4th field: check digit of the barcode (DAC)
5th field: composed of the first 4 positions of the due date factor (*) and the 10 last positions with the nominal amount of the document, with indication of zeros on the left and without editing (no semi-colon).
On dealing with a nil amount, the representation should be as 0000000000 (Ten zeros).

Note 1: Edit the first three fields with a dot, to be inserted between the 5th and 6th positions of each field.
Note 2: The data of numerical representation is not presented in the same order as the barcode, but according to the sequence described above.
Note 3: the check digits referring to fields 1, 2, 3 are not represented in the barcode.

* Due date factor: Number of days between 10/07/1997 and the maturity date:
     E.g.: **1st**   12/06/2000 = 1156
            2nd 12/15/2000 = 1165
            3rd 12/30/2000 = 1180

*New base date: As of 22/02/2025, the maturity factor will return to "1000" and "1" must be added every day following this factor, as shown in the example:

DUE DATE	MATURITY FACTOR
22/02/2025	1000
23/02/2025	1001
24/02/2025	1002

Standard Santander beneficiary code: code supplied by the Bank.

c.) Printing table:
- presents a grid showing the fields according to the model attached (page 7)
- the size of each field (number of positions) may vary, as long as the same layout of the model and the minimum dimensions of the form are respected.

d.) in the lower part, below the printing grid on the bottom right-hand side: field destined for authentication on the bottom left-hand side: field destined for the compulsory indication of the barcode, which should be interleaved 2 of 5.

Note 4: "2 of 5" means that 5 bars define 1 character, where two of them are thick bars.

Note 5: "interleaved" means that the spaces between the bars also have a meaning, analogous to the bars.

Note 6: a minimum distance of 12 mm should be respected from the bottom of the voucher to the center of the barcode.
Below the barcode, identification of the bank copy with a maximum dimension of 2mm and lines with strands of 0.3mm

Note 7: Total length equal to 103 (one hundred and three) mm and total height equal to 13 (thirteen) mm.

e.) The **layout of the barcode** should have the following characteristics:

Position	Size	Picture	Content
01-03	3	9 (03)	Bank Identification = 033
04-04	1	9 (01)	Currency code = 9 (real)
05-05	1	9 (01)	Check Digit of the bar code (calculation below)
06-09	4	9 (04)	Due date factor
10-19	10	9 (08)V99	Nominal amount
20-20	1	9 (01)	Permanent field "9"
21-27	7	9 (07)	Standard Santander beneficiary code
28-40	13	9 (13)	Our Number
41-41	1	9 (01)	Permanent field "0"
42-44	3	9 (03)	Type of Wallet Modality 101-REGISTERED Fast Collection

Note: the calculation of the check digit of the barcode, in position "5" is module "11", from 2 to 9, using the digit 1 for the remaining 0, 10 or 1.
For the calculation, consider the positions from 1 to 4 and from 6 to 44, beginning from position 44 and jumping to position 5.

N.B.: If the registration file for the collection documents is 400 bytes (CNAB)
- Bank 353 – Use only 8 positions of Our Number, putting zeros in the first 05 digits.

Position	Size	Picture	Content
01-03	3	9 (03)	Bank Identification = 033
04-04	1	9 (01)	Currency code = 9 (real)
05-05	1	9 (01)	Check Digit of the barcode (calculation page 6)
06-09	4	9 (04)	Due date factor
10-19	10	9 (08)V99	Nominal amount
20-20	1	9 (01)	Permanent field "9"
21-27	7	9 (07)	Standard Santander beneficiary code
28-32	5	9 (05)	Permanent field "**00000**"

33-40	8	9 (08)	Our Number
41-41	1	9 (01)	Permanent field "0"
42-44	3	9 (03)	101-REGISTERED Fast Collection

CALCULATION OF THE CHECK DIGIT OF THE BARCODE:

Position	Size	Picture	Content	Example
01-03	3	9 (03)	Bank Identification = 033	**033**
04-04	1	9 (01)	Currency code 9 = real	**9**
05-05	1	9 (01)	Check Digit of the barcode	
06-09	4	9 (04)	Due date factor	**2046**
10-19	10	9 (08)V99	Nominal amount	**273,71**
20-20	1	9 (01)	Permanent field "9"	**9**
21-27	7	9 (07)	PSK (Customer Code) number	**0282033**
28-40	13	9 (13)	Our Number	**5666124578002**
41-41	01	9 (01)	Permanent field "0"	**0**
42-44	3	9 (03)	101-REGISTERED Fast Collection	**101**

N.B.: The Position 05-05 referring to the Check Digit of the Barcode is only to illustrate the positions inside the barcode. This does not enter in the calculation of the Check Digit.

Invert from right to the left in the vertical

1	X	2	=	2	
0	X	3	=	0	
1	X	4	=	4	
0	X	5	=	0	
2	X	6	=	12	
0	X	7	=	0	
0	X	8	=	0	
8	X	9	=	72	
7	X	2	=	14	
5	X	3	=	15	
4	X	4	=	16	
2	X	5	=	10	
1	X	6	=	6	0 - if cnab 400 is used
6	X	7	=	42	0 - if cnab 400 is used
6	X	8	=	48	0 - if cnab 400 is used
6	X	9	=	54	0 - if cnab 400 is used
5	X	2	=	10	0 - if cnab 400 is used
3	X	3	=	9	
3	X	4	=	12	
0	X	5	=	0	
2	X	6	=	12	
8	X	7	=	56	
2	X	8	=	16	
0	X	9	=	0	
9	X	2	=	18	
1	X	3	=	3	
7	X	4	=	28	
3	X	5	=	15	

7	X	6	=	42									
2	X	7	=	14									
0	X	8	=	0									
0	X	9	=	0									
0	X	2	=	0									
0	X	3	=	0									
0	X	4	=	0									
6	X	5	=	30									
4	X	6	=	24									
0	X	7	=	0									
2	X	8	=	16									
9	X	9	=	81									
3	X	2	=	6									
3	X	3	=	9									
0	X	4	=	0									
Total				696	X	10	=	6960		/	11	=	632

Remainder = 8,   so   Check Digit = 8

SET UP

Use module 11 – weight from 2 to 9 – to calculate this Check Digit.
Multiply from the right to the left, from 2 to 9, until the end of the number, restarting at 2 if necessary. Add the results obtained, multiply this total by 10 (ten) and divide it by 11(eleven). The remainder of this division will be the check digit (Check Digit).
If the remainder is equal to 0 (zero), 1 (one) or 10 (ten) the digit will be =1 (one)

Definition of the layout of the laser-issued collection document with a barcode

In compliance with the provisions of the determinations edited by FEBRABAN, the following items deserve special attention:

1.) In the top part of the **Bank copy** of the **Collection** document product the bank code should be printed in the left-hand corner, including the check digit, according to the model attached, separating it with a hyphen (-) **033-7**.

2.) On the right of the bank code the new and differentiated numerical representation of the content of the barcode will be printed, which will be used for input in the impossibility of capture through optical reading. The base of the fields, stated next, will be the configuration of the registration printed in the form of a barcode. For such, it is important to observe the registration presented as an example, because it will be used in our simulation.

MODEL OF THE COLLECTION DOCUMENT:

Santander 033-7

RECIBO DO PAGADOR

Obrigatory Beneficiaty data:
Name, CPF/CNPJ and Address.

Local de Pagamento
PAGÁVEL PREFERENCIALMENTE NO SANTANDER

Vencimento
10/09/2022

Beneficiário
EXEMPLO – 99.999.999/0001-99
RUA JORGE DE AGUIAR, 99 - JARDIM MIRIAM - 04419-100, SAO PAULO - SP

Agência/Cód. do Beneficiário
1417 / 51

Data do Documento	No. do Documento	Espécie Doc	Aceite	Data de Processamento	Nosso Número
18/07/2022	**67TRFD5SA**	**DM**	**NAO ACEITO**	**18/07/2022**	**564356789211**

Uso do Banco	Carteira	Espécie Moeda	Quantidade	(x) Valor	(=) Valor do Documento
	RAPIDA C/REG	**REAL**		**0,00**	**3,00**

Pagador: ANTONIO SILVA 89.735.041/0001-30
RUA AMADOR BUENO 474
04752-901 - SAO PAULO - SP
Beneficiário Final PEDRO SILVA - 193.357.130-66

Código de Baixa

Mensagem:
TESTE01

Rápida c/ Reg. Ou Eletronica c/ Reg.

Branch / Beneficiary indentification
Numer suppllied by the bank.

Autenticação Mecânica

Payer's Copy

Corte na linha Pontilhada

Santander 033-7

Obrigatory Beneficiaty data:
Name, CPF/CNPJ and Address.

03399.00003 05105.643562 78921.101016 2 91040000000300

Local de Pagamento
PAGÁVEL PREFERENCIALMENTE NO SANTANDER

Vencimento
10/09/2022

Beneficiário
EXEMPLO – 99.999.999/0001-99
RUA JORGE DE AGUIAR, 99 - JARDIM MIRIAM - 04419-100, SAO PAULO - SP

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1417 / 51

Data do Documento	No. do Documento	Espécie Doc.	Aceite	Data de Processamento	Nosso Número
18/07/2022	**67TRFD5SA**	**DM**	**NAO ACEITO**	**18/07/2022**	**564356789211**

Uso do Banco	Carteira	Espécie Moeda	Quantidade	(x) Valor	(=) Valor do Documento
	RAPIDA C/REG	**REAL**	**0,00**	**0,00**	**3,00**

Instruções

Pague utilizando o QR Code abaixo:

(-) Descontos/Abatimentos
0,00

(+) Mora/Multa
0,00

(=) Valor Cobrado
3,00

Obrigatory Beneficiaty data:
Name, CPF/CNPJ and Address.

Pagador: ANTONIO SILVA 89.735.041/0001-30
RUA AMADOR BUENO 474
04752-901 - SAO PAULO - SP
Beneficiário Final PEDRO SILVA - 193.357.130-66

Final Beneficiary, if necessary.
Obrigatory Name, e numer of documento
(CPF for CNPJ)

Código de Baixa

Autenticação Mecânica

Only for Boleto SX.

MODEL OF THE PROPOSAL DOCUMENT:

Mensagem fixa:
BOLETO DE PROPOSTA
ESTE BOLETO SE REFERE A UMA PROPOSTA JÁ FEITA A VOCÊ E O SEU PAGAMENTO NÃO É OBRIGATÓRIO.
Deixar de pagá-lo não dará causa a protesto, a cobrança judicial ou extrajudicial, nem a inserção de seu nome em cadastro de restrição ao crédito.
Pagar até a data de vencimento significa aceitar a proposta.
Informações adicionais sobre a proposta e sobre o respectivo contrato poderão ser solicitadas a qualquer momento ao beneficiário, por meio de seus canais de atendimento.

PROPOSAL DOCUMENT

THIS DOCUMENT REFERRED TO A PROPOSAL ALREADY MADE TO YOU AND YOUR PAYMENT IS NOT REQUIRED.
Failure to pay it shall not cause the protest, the judicial or extrajudicial collection, or the inclusion of your name in restricting credit record.
Pay until the due date means accepting the proposal.
Additional information about the proposal and the relevant contract may be requested at any time to the beneficiary, through its service channels.

Applicability of the Santander logo:

The Santander logo must be applied in the upper left corner as shown in the picture, in the following formats:

Color: Black and White:

 Santander   Santander

IDENTIFICATION FIELD:

FIRST GROUP

Use Module 10 to calculate the Check Digit of the field

Position	Size	Picture	Content
01-03	3	9 (03)	Bank = 033
04-04	1	9 (01)	Currency code = 9 (real)
			Currency code = 8 (other currencies)
05-05	1	9 (01)	Fixed "9"
06-09	4	9 (04)	Standard Santander Beneficiary Code (Informed by the Bank)
10-10	1	9 (01)	Check digit of the first group

Module 10 - CALCULATION:

Multiply, from the right to the left, by 2 and 1, respectively, until the end of the number.
Add the results obtained. Divide the total result by ten.
If the remainder is = 0, the digit will be = 0, if it is different, then subtract the divider by the remainder, i.e. subtract 10 from the remainder.
N.B.: When the result of the multiplication is > 9, add up both digits.
E.g.: 9 x 2 = 18, so 1+ 8 = 9

Example: 033 9 9 0282

```
0 3 3 9 9 0 2 8 2
x x x x x x x x x
2 1 2 1 2 1 2 1 2
```

Invert from the right to the left in the vertical.

2	X	2	=	4
8	X	1	=	8
2	X	2	=	4
0	X	1	=	0
9	**X**	**2**	**=**	**9**
9	X	1	=	9
3	X	2	=	6
3	X	1	=	3
0	X	2	=	0
Total				43 / 10 = 4 Remainder = 3

Result = 10 remainder ----> 10 - 3 = 7

Partial IPTE: 033990282.**7**

IDENTIFICATION FIELD:

SECOND GROUP

Use Module 10 to calculate the Check Digit of the field (page 11)

Position	Size	Picture	Content
11-13	3	9 (03)	Remainder of the standard Santander beneficiary code
14-20	7	9 (07)	First 7 fields of the N/N (our Number)
21-21	1	9 (01)	Check digit of the second group

E.g.: 033 5666124

```
0 3 3 5 6 6 6 1 2 4
x x x x x x x x x x
1 2 1 2 1 2 1 2 1 2
```

Invert from the right to the left in the vertical.

4	X	2	=	8
2	X	1	=	2
1	X	2	=	2
6	X	1	=	6
6	X	2	=	3
6	X	1	=	6
5	X	2	=	1
3	X	1	=	3
3	X	2	=	6
0	X	1	=	0
Total			37 / 10 = 3	Remainder = 7

Result = 10 remainder ----> 10 - 7 = 3
Partial IPTE: 033990282.**7** 0335666124.**3**

IDENTIFICATION FIELD:
THIRD GROUP

Use Module 10 to calculate the DV of the field (page 11)

Position	Size	Picture	Content
22-27	6	9 (06)	Remainder of Our Number
28-28	1	9 (01)	IOF – only for Insurers (If 7% inform 7, limited to 9%)
			For other clients use 0 (zero)
29-31	3	9 (03)	Type of Wallet Modality
			101-REGISTERED Fast Collection
32-32	1	9 (01)	Check digit number of the third group

E.g.: 578000 0 101

```
5 7 8 0 0 0 0 1 0 1
x x x x x x x x x x
1 2 1 2 1 2 1 2 1 2
```

Invert from the right to the left in the vertical.

1	X	2	=	2
0	X	1	=	0
1	X	2	=	2
0	X	1	=	0
2	X	2	=	4
0	X	1	=	0
0	X	2	=	0
8	X	1	=	8
7	X	2	=	5
5	X	1	=	5

Total   26 / 10 = 2   Remainder = 6

Result = 10 remainder ----> 10 - 6 = 4

Partial IPTE: 033990282.**7** 0335666124.**3** 5780020101.4

FOURTH GROUP

Composed of only the **Check Digit of the barcode**.
For the calculation, use the values referring to the Barcode fields (page 6).
The result will be the fourth group of the IPTE identification field.

Position	Size	Picture	Content
33-33	1	9 (01)	Barcode Check Digit

According to the example calculated (page 7) Check Digit = 8

Partial IPTE: 033990282.**7** 0335666124.**3** 5780020101.**4 8**

IDENTIFICATION FIELD:

FIFTH GROUP

Composed of 04 positions of the due date factor and 10 positions of the nominal amount of the collection document. This field does not have a check digit.
If the total amount is equal to zero, the representation should be 0000000000 (Ten zeros).

Position	Size	Picture	Content
34-37	4	9 (04)	Due date factor
38-48	10	9 (10)	Value of the Collection document

E.g.: 2046 0000027371

COMPLETE IPTE: 033990282.**7** 0335666124.**3** 5780020101.**4 8** 20460000027371

Due Date

In compliance with Circular 3.598 and 3.656, the due date field should be composed with a valid due date. The literal "Contra Apresentação" and "À Vista" cannot be used.

Our Number

Our Number has 13 numeric characters.
Composition of Our Number: NNNNNNNNNNNNN D where:

Beneficiaries who register 400 positions with the CNAB, should note that 8 positions are allowed for registering Our Number, in which case they must be complemented with zeros on the left

2. Payer's copy

In compliance with **Law 12.039**, the **"Payer's Copy"**, necessarily, must present the following information:

- **Name of Beneficiary;**
- **Address of Beneficiary;**
- **CPF / CNPJ the Beneficiary;**

Note: The arrangement of the data above is at the discretion of the issuer of the copy (see example in page 09).

For emissions in the "**booklet**" format, the "**law 12,039**" should be respected through the provision of information, described above, on the back cover of the booklet or generation of a flysheet / record which will contain additional information on the Beneficiary.

The copy with sending via post must submit a **due date** and **date of posting** on the outside of the correspondence Collection.

Tests

Tests

We make available on Santander Internet Banking in the option Cobrança e Recebimentos > Teste de Arquivo > Testar boleto all the information necessary to prepare and test the generated slips.

After issuing, the company should supply some collection documents for analysis.

Based on the collection documents supplied, Banco Santander will carry out tests, and if an error is found, the Bank will inform the customer of the irregularities found in order to correct them.

The testing phase will be considered as concluded when all of the irregularities have been corrected. The customer and the Bank will formalize this stage and the date of the implementation.

Any doubts, which may not be clear in this manual, may be clarified with the Call Center, on the following telephone numbers: