COMISIÓN
BRAILLE
ESPAÑOLA

TECHNICAL DOCUMENT B 17
OF THE
SPANISH BRAILLE COMMISSION

BRAILLE SIGNAGE
ON LIFT BUTTON PANELS

October 2020
(Version 1)

Contents

Braille signage
on lift button panels

1. Introduction

Braille labelling of products, goods and services facilitates access to information and therefore the autonomy of visually impaired persons.

Lifts are a constant presence in the daily lives of many people, forming part of both residential buildings and offices, shops and various public and private establishments. The inclusion of braille in lift push-button panels is essential so that blind and seriously visually impaired people can, for example, precisely identify a floor number or the alarm button in the event of an emergency, or keep the doors open if necessary.

This technical document by the Spanish Braille Commission (CBE), which is the ONCE body with the greatest experience and knowledge in Spain in setting standards for the use and development of the Braille system, therefore seeks to provide some general guidelines and indications for including signs written in Braille on lift button panels to make them useable for Braille readers and users.

2. General guidelines

1. The braille characters included on lift buttons must be sized appropriately to be understood by braille readers using their sense of touch. This appropriate size is based on the standard dimensions of the fingertips, and therefore any increase or reduction in size beyond the permitted range may compromise their legibility. The sizes considered to be suitable may be consulted at: *Technical Document B 1 of the Spanish Braille Commission: Dimensional parameters in braille.*

2. Braille characters are read by visually impaired people through touch, which involves positioning the fingertips with which the text is read over the braille text and applying a little pressure on it. Accordingly, the braille text should not be placed on the button to be pressed – in order to avoid unintentional and/or incorrect pushes – but next to the button, as can be seen in the following image.

Figure 1. Person exploring a lift button panel

Braille signage on lift button panels (Version 1)

CBE - ONCE

3. The dots from which the braille characters are formed must be separated by at least 6 mm from the nearest button. For button panels with protruding buttons, this separation allows the finger of the braille reader to recognise all the dots that make up each character, as otherwise they would not be able to perceive those situated at a shorter distance, while for tactile button panels it allows the different braille characters to be read until the location of the desired button is found.

Figure 2. Detail of the minimum distance between the button and the braille text
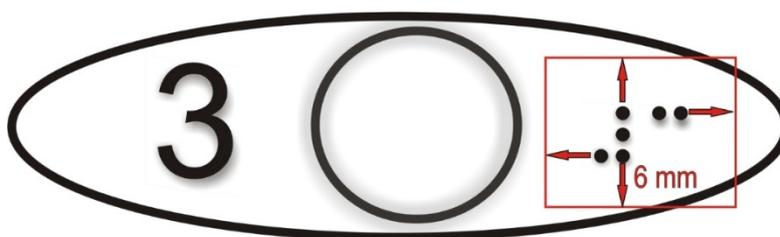
4. The writing of the braille signs to be included for the representation of letters and numbers must be as set out in *Technical Document B 2 of the Spanish Braille Commission: basic signography* (in Spanish), which includes the official signs for writing Spanish and other co-official languages of the Spanish State. In order to guarantee their legibility, braille signs must be included by scrupulously complying with the above standard, in their correct order, in the relevant language and taking care to place the texts in the appropriate direction for reading (usually the same direction as texts in visual characters) with respect to both their production and placement if they are not integrated into the same part on which the equivalent text in visual characters appears.

   If it is necessary to know which signs are used in other countries and in other languages, the publication *World Braille Usage* contains references to the different braille authorities and basic sign sets for all the languages to which the use of braille has been applied.

5. To indicate that a letter is a capital letter, in braille it is necessary to prefix a specific character to the lower case letter concerned. As the space in the button panels is often limited and the size of the braille characters cannot be reduced beyond the margin allowed by the standards referred to for texts in braille in *Technical Document B 1*, it is recommended that lower case letters should always be used. Readability is not affected for users and thus the space taken up by the capitalisation character is saved.

3. Braille identification of floor numbers and other text elements

3.1. Call button identification

This button is usually located outside the lift car next to the lift access door on each floor, and therefore it is not on the button panel inside the lift. For its identification in braille, a two-character abbreviation is recommended:

LL	⠿
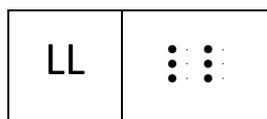
If it is the only button next to the lift door, and only in this case, the text written in braille may figure on the same button that includes the visual information as it is the only one with which the braille user can interact, thereby eliminating the risk of unintentionally pressing the wrong option.

However, if there are also other buttons accompanied by braille text, then all the buttons, including the call button, will have braille text outside the button, as recommended in general guideland 2.

3.2. Floor number identification

As indicated in Chapter 6 of the *Technical Document B 2 of the Spanish Braille Commission: basic signography* (in Spanish), to write numbers in braille the first ten letters of the braille alphabet are used preceded by a number sign prefix.

This braille number sign is:

⠼

The ten digits are therefore formed as follows:

a	⠁	→	1	⠼⠁
b	⠃	→	2	⠼⠃
c	⠉	→	3	⠼⠉
d	⠙	→	4	⠼⠙
e	⠑	→	5	⠼⠑
f	⠋	→	6	⠼⠋
g	⠛	→	7	⠼⠛

h	⠓	→	8	⠼⠓
i	⠊	→	9	⠼⠊
j	⠚	→	0	⠼⠚

If it is necessary to write a floor number containing two digits, the number sign will be written only before the first digit.

For example, the number 12 in braille will be written as:

⠼⠁⠃

3.3. Ground floor identification

The information that identifies the access and exit floor of a building is usually marked in visual characters such as **0 (zero)**, **PB** or **"Planta Baja"** (ground floor).

The braille representation of each of them is as follows:

- **0 (zero) as floor number**. In braille it will be written following the same rule as for the other floor numbers (see *3.2. Floor number identification*). That is:

0	⠼⠚

- **Abbreviation "PB"**. In braille, both letters should be written in lower case, as reflected in *Chapter 3. Spanish Braille Alphabet* in *Technical Document B 2 of the Spanish Braille Commission: basic signography* (in Spanish). That is:

PB	⠏⠃

- **"Planta baja" or "Bajo".** In these cases it is advisable to use the braille text indicated in the previous point for the abbreviation "PB".

3.4. Basement identification

If it is necessary to write a negative floor number, e.g. for a basement, the number will be preceded by the braille sign ⠤, which indicates that a number is negative.

The following table indicates how floors -1, -2 and -3 would be written, by way of example.

-1	⠀⠀⠀⠿
-2	⠀⠀⠿
-3	⠀⠀⠿

If the basements ("sótanos") are identified on the button panel using the letter "S" before the corresponding number, it will be written in braille following the original text but using lowercase "s", as recommended in General Guideline 5. The following table indicates how floors S1, S2 and S3 would be written, by way of example.

S1	⠀⠀⠀
S2	⠀⠀⠀
S3	⠀⠀⠀

4. Braille identification of graphic items

As there are no specific braille signs to represent certain graphic items commonly used on lift button panels (bell, up arrow, down arrow, etc.), it is necessary to explain textually what these mean. The textual representation in braille of this relevant graphic information is conditioned by the space available on the button panel and by the specific size of the braille letters as indicated in *Technical Document B 1 of the Spanish Braille Commission: dimensional parameters in braille*.

As a guideline, the space required to write 10 braille characters is shown below:
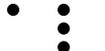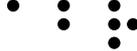
⠿⠿⠿⠿⠿⠿⠿⠿⠿⠿

◄———— 64 mm ————►

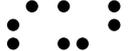The most common symbols that appear on the button panels and the length of the braille text that would need to be included on them to describe what they represent is set out in the following table.

Visual image	Meaning in Spanish	Meaning in Spanish written in braille (lower case)		Length in mm
🔔	alarma (*alarm*)			36,5
◄ ■ ►	abrir puertas (*open doors*)			81,5

Visual image	Meaning in Spanish	Meaning in Spanish written in braille (lower case)	Length in mm
▶ ■ ◀	cerrar puertas (*close doors*)	⠉⠑⠗⠗⠁⠗ ⠏⠥⠑⠗⠞⠁⠎	88
☎	teléfono (*telephone*)	⠞⠑⠇⠿⠋⠕⠝⠕	49,5
⬆	sube (*up*)	⠎⠥⠃⠑	24
⬇	baja (*down*)	⠃⠁⠚⠁	24

As there is usually insufficient space in the button panels to include some of these braille texts, abbreviations that blind people will be able to identify without difficulty may be used. The recommended 3 and 4 braille character abbreviations for each of these meanings, which would occupy approximately 17 and 24 mm, respectively, are set out in the following table.

Visual image	Meaning in Spanish	4-character abbreviation in Spanish (24 mm)		3-character abbreviation in Spanish (17 mm)	
🔔	alarma (*alarm*)	⠁⠇⠁⠗	alar	⠁⠇⠁	ala
◀ ■ ▶	abrir puertas (*open doors*)	⠁⠃⠗⠄	abr.	⠁⠃⠗	abr
▶ ■ ◀	cerrar puertas (*close doors*)	⠉⠑⠗⠄	cer.	⠉⠑⠗	cer
☎	teléfono (*telephone*)	⠞⠑⠇⠄	tel.	⠞⠑⠇	tel
⬆	sube (*up*)	⠎⠥⠃⠑	sube	⠎⠥⠃	sub
⬇	baja (*down*)	⠃⠁⠚⠁	baja	⠃⠁⠚	baj

5. Other resources that provide access to the information included in lift button panels

Some lifts incorporate visual information indicating the facilities that can be found on a given floor. For example, in a hotel information may be found in the button panel concerning the floors on which the restaurant, gym or swimming pool access are located. Another example is usually found in museums, where information is provided about the section located on each floor.

Sometimes the visual information is not even written but rather consists of an image of the facilities or sections to be found on that floor. For example, in certain hotels a drawing of cutlery might indicate the location of the restaurant or a steaming cup the location of the cafeteria, etc.

As has been noted above, button panels do not usually have space to contain this information written in braille and therefore in these cases three complementary options are recommended for visually impaired people:

1. Having brochures in printed braille containing this information available to users who need it.

2. Including somewhere, e.g. in the button panel itself, a QR code containing such information which can be accessed by the visually impaired person using new technology devices. This resource is also valid for other users, not only the visually impaired. To facilitate the location of the QR codes, it is advisable to follow the indications given in the *technical documents on tactile markings for the correct location of QR codes* (in Spanish).

3. Sticking a plate or plastic sticker next to the button panel with the braille text of the information included on the button panel concerning the facilities on each floor.

6. Contact details

In the event of uncertainty, to corroborate that the text to be included in braille is appropriate or in the event of having to include texts or abbreviations other than those discussed in this technical document, the Spanish Braille Commission should be consulted at the following e-mail address: etiquetabraille@once.es.