

## TECHNOTE: 07/2020

# Subject: MRZ Encoding Configuration (3 Lines)

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PRODUCT/AREA: Encoding

## 1. Introduction

This document aims to describe how to use MRZ functionality of cardPresso and it is valid from CP latest version, available for download in our [website](#).

The software supports generation of MRZ for TD1 (Official travel documents) and TD3 (Passport booklets) cards.

## 2. Module Encoding MRZ

### a. Method “encode”

This method allows to create a MRZ code based on provided information.

```
QString encode(QVariantMap _data, QString _encodeType = "TD3");
```

Returns a string containing the MRZ code based on **\_data** information and on **\_encodeType**. Encode type can be defined as “TD1” or “TD3”. The default type is “TD3”. In case of invalid input data or invalid encode type, it is returned a NULL string.

The following tables shows the required parameters to build the MRZ code.

### i. TD1 Format

Table 1 - Required parameters to build MRZ TD1 format

Name	Description
<i>firstName</i>	Surname
<i>lastName</i>	Given names
<i>documentNumber</i>	Document number. Max of 9 characters.
<i>documentCode</i>	Document code. It is composed by two characters. The first shall be A, C or I and it's used to designate the type of document. E.g.: IP for passport cards, ID or I< for nationally issued ID cards.
<i>birthDate</i>	Date of birth (ISO 8601 format “YYYY-MM-DD”).

<b>country</b>	<b>Issuing country or organization (ISO 3166-1 alpha-3 code with modifications)</b>
<i>nationality</i>	Nationality (ISO 3166-1 alpha-3 code with modifications)
<i>expirationDate</i>	Expiration date of passport (ISO 8601 format "YYYY-MM-DD")

This table show the optional parameters.

Table 2 - Optional parameters to build MRZ TD1 format

Name	Description
<i>sex</i>	Sex (M for male, F or female)
<i>optinalDataLine1</i>	For optional use. Max of 15 characters.
<i>optinalDataLine2</i>	For optional use. Max of 11 characters.

Where is an example of how this function can be used.

```
var data = {
  firstName : "Maria",
  lastName : "MusterFrau",
  documentNumber : "X0001001",
  birthDate : "1981-12-31",
  country : "AUT",
  nationality : "AUT",
  sex : "F",
  documentCode : "ID",
  expirationDate : "2019-12-31",
  optinalDataLine1 : ""
};

var mrzText = encoding.mrz.encode(data, "TD1");
```

## i. TD3 Format

Table 3 - Required parameters to build MRZ TD3 format

Name	Description
<i>firstName</i>	Surname
<i>lastName</i>	Given names
<i>passportNumber</i>	Passport number
<i>birthDate</i>	Date of birth (ISO 8601 format "YYYY-MM-DD")
<i>country</i>	Issuing country or organization (ISO 3166-1 alpha-3 code with modifications)
<i>nationality</i>	Nationality (ISO 3166-1 alpha-3 code with modifications)
<i>docExpirationDate</i>	Expiration date of passport (ISO 8601 format "YYYY-MM-DD")

This table show the optional parameters.

Table 4 - Optional parameters to build MRZ TD3 format

Name	Description
<i>sex</i>	Sex (M, F for male or female)
<i>type</i>	Type (for countries that distinguish between different types of passports)
<i>personalNumber</i>	Personal number (may be used by the issuing country as it desires)

Where is an example of how this function can be used.

```
var data = {  firstName : "Davide Filipe",
              lastName : "Ferreira Guimaraes",
              passportNumber : "123456789",
              birthDate : "1990-01-01",
              country : "PRT",
              nationality : "PRT",
              sex : "M",
              expirationDate : "2000-01-01"
};

var mrzText = encoding.mrz.encode(data, "TD3");
```

For further questions or doubts, please do not hesitate to contact us, through our email [support@cardpresso.com](mailto:support@cardpresso.com).

