

Multistandard Proximity Encoder. Instructionn.



Multistandard Proximity Encoder

1. Description

The proximity encoder is a device with which data is read and written using Mifare, ISO 15693 and iCLASS® cards. iCLASS® in under the ISO 15693 standard encrypting information using a secure algorithm that belongs to the company HID®.

In all cases, cards have the user information that will or no access locks, safes and wall readers, depending on the locking plan.

The editor will always be communicating with the PC where the software is running via USB. This means that the encoder is a computer peripheral and can not work independently.

The editor can only write and read information written by the software TS1000/InHova. That is, it can not be read or written information of other applications.

Furthermore, if a MIFARE or iCLASS® card is written partly by other applications, the areas of the card where this information is can not be overwritten by TS1000/InHova and vice versa

In the cases where ISO 15693 cards are used, special attention is required as they can be overwritten by other applications or vice versa.



Fig. 1-1. Multistandard Proximity Encoder

2. Encoder Components

The encoder includes:

1. The encoder itself
2. An USB A Male/B for communication between P.C. and encoder
3. Instructions Sheet

3. Cards and other formats

This editor can work not only with cards, but also with other formats such as key chains, tags, bracelets or watches. Due to the wide variety that exists in the market, TESA does not homologated all formats, but this does not mean they can not be used. In these cases in which different formats are used, you need to contact TESA so that we can guarantee proper operation

Regarding to the cards, they have to be under ISO 7810 standard (Identification cards - Physical Characteristics) witch corresponds to their physical dimensions, which are:

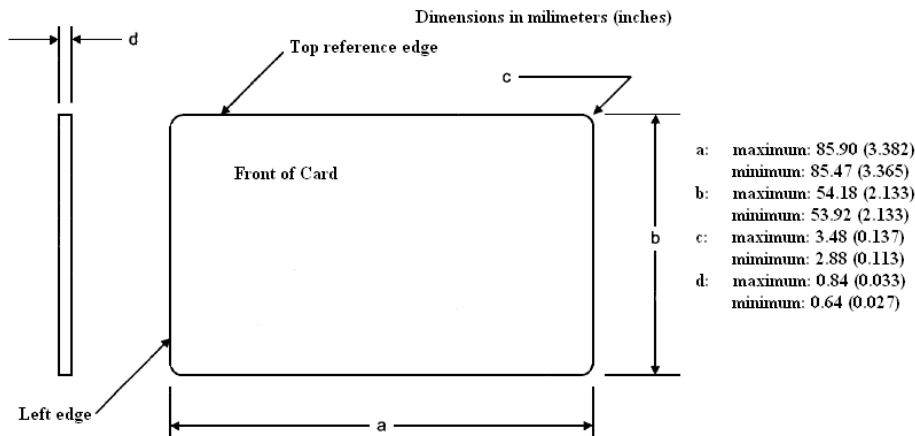


Fig. 3-1. Card Dimensions

In any case, the chips used must be the following.

3.1. Mifare

Mifare 1K: MF1 IC S50. Eeprom: 1Kbyte divided in 16 sectors

Mifare 4K: MF1 ICS70. Eeprom: 4Kbytes divided in 32 sectors

Mifare Ultralight: MF0IC U1X. Eeprom: 512 bits.

3.2. ISO 15693

LRI512 by STMicroelectronics. Eeprom: 512 bits

SRF 55V02P by Infineon. Eeprom: 2Kbits

SRF 55V10P by Infineon: Eeprom: 10Kbits

Inlay RI-I02-112B by Texas.Instruments. Eeprom: 2048 bits

Inlay RI-I03-112A by Texas Instruments. Eeprom: 2K bits.

3.2.1. ISO 15693

Cards compatible for the implementation of SKIDATA (not supplied by TESA)

Key Card Basic Infineon SRF55V02P

Karte V10P-HC KSW (Infineon 10K)

KARTE Tag- IT TI

EM 4233 SD V2

3.4. i-Class® by HID under ISO 15693 Standard

HID iCLASS® Prox Card 16K2. (2Kbytes with 2 application areas)

HID iCLASS® Prox Card **2K2** (256 bytes with 2 application areas)
HID iCLASS® Prox Card **16K16** (2K bytes with 16 application areas)

Note: The encoder works with either technology depending on which one is configured in the software

4. Dimensions and Weight

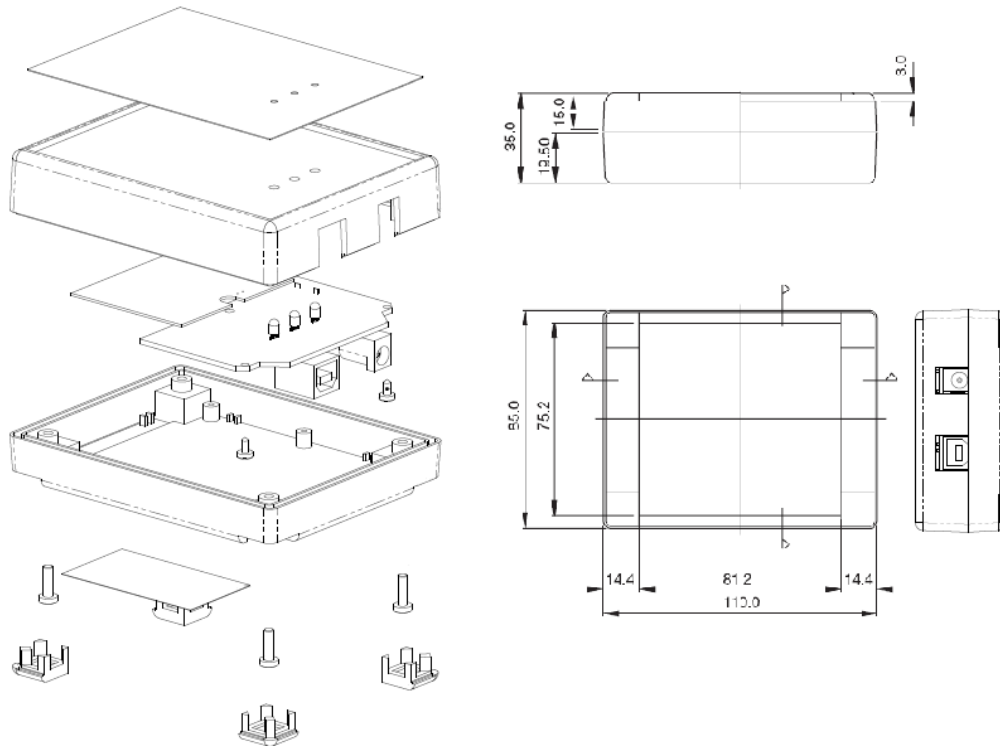


Fig. 4-1. Encoder Dimensions

Dimensions: 110 mm length x 85 mm de Width x 35 mm de Height
Weight: 120 grams approximately

5. Connections

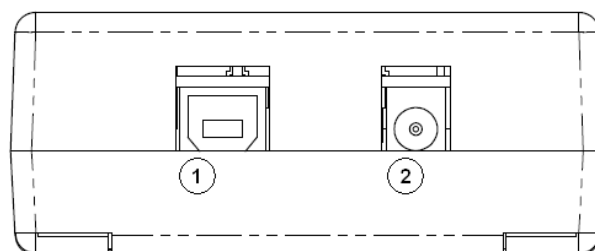


Fig. 5-1. Connections for Power Supply and USB communication

1. Type B Female USB connector for communication between encoder and software

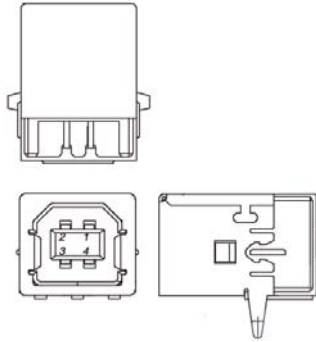


Fig. 5-2. Female Type B USB connector

2. Female connector for Power Supply. The connector located in the middle are designed to fix firmly the male connector of the Power supply. Use this only in the USB port of the PC is not able to power the unit

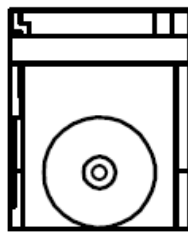


Fig.5-3. Female Connector

6. Power Supply

The encoder works at 9 Volts / 500 mA if powered by an external power supply (not supplied) or by connection through a USB connector to the PC.

7. LEDs

The encoder has in its front site three LEDs: Red, Green and Orange

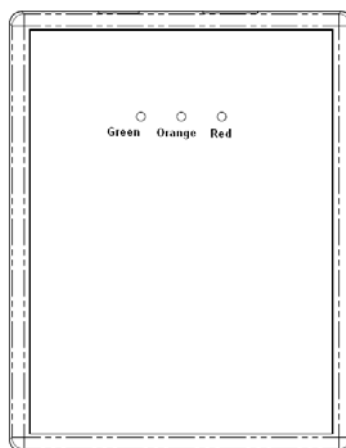


Fig. 7-1. LEDs

The LEDs indicate the following:

1. All three LED lighting for a second and then fixed Red Light: the encoder is switched on
2. Red light blinking: The encoder is waiting for a card to be read or written
3. Orange LED: it does not apply for encoders. It is always switched off
4. Green LED blinking: It is writing or reading


8. Communication Software- Encoder

Communications between the PC and encoder are done through a cable Male Serie A connector (connected to PC) and a Serie B male connector connected to the encoder.



Fig. 8-1 USB Cable

The length of cable supplied is 180 mm. If any other cable not supplied by TESA is used make sure that the maximum length is not more 5 meters. Otherwise, it is not ensured stable communication.

In any case, the cable used must have the USB icon  on both connectors to ensure quality. It also indicates the direction of how to plug it

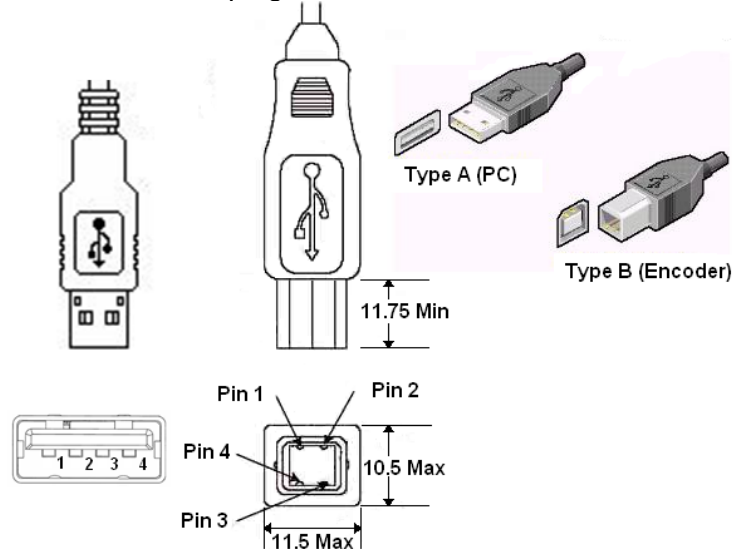


Fig. 8-2. Specifications

USB connectors have 4-pin signal conductors surrounded by a shield. In series A connectors Pins are located on the same layer, while the B series are in two parallel layers, two in each.

PIN	Signal	Description
1	VCC	+5V
2	D-	Data -
3	D+	Data +
4	GND	Tierra

Table 8-1

The software controls the device and establishes communications between them.

The installation drivers are supplied with the installation CD for the Management software TS1000/INHOVA.

9. Climatic Conditions and Maintenance

Operation Temperature and Humidity: 5°C~50°C and 90% RH

Storage Temperature and Humidity: -20°C~70°C and 95 RH

No maintenance is necessary

What it is important is to make sure that no card but the one used is near the encoder while reading or writing because if more than one is detected there will be a reading/writing error.

Please, as far as possible, try not to have metallic devices near the encoder as they inhibit the field needed to detect cards

10. Guarantee

If there is any indication that the encoder has been manipulated, **VOIDS GUARANTEE.**

If the Encoder fails, please contact your supplier or distributor for details on how to proceed for reparation.