AR-837-P

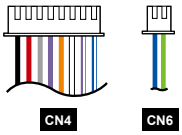
Contents

AR-837-P DESFire Encoder

1 Products



2 Terminal Cables



3 DESFire Launch Card



4 Tools



Screws



Water proof Strip

Features

- Standalone offline Mifare DESFire encryption encoder, the card number can be quickly set by keypad.
- Support self-implementation of standard Mifare DESFire card encryption control, not controlled by others
- Security control mechanism, every time only the authorization card can start the encryption encoder
- New card number can be chosen with auto increment mode or fixed UID mode
- The card number can be memorized after shutdown, and the card can be programmed again next time

Specification

- Frequency : 13.56MHz
- Communication Interface : RS485(9600, N, 8, 1)
- Power Consumption : <5W
- Power Supply : 9-24VDC
- Housing Material : ABS
- Dimension(mm) : 128(H)X147(W)X60(D)
- Net Weight (g) : approx. 470
- Operating Temperature : -20℃ ~ +70℃

Installation

A-1.Surface Mounted

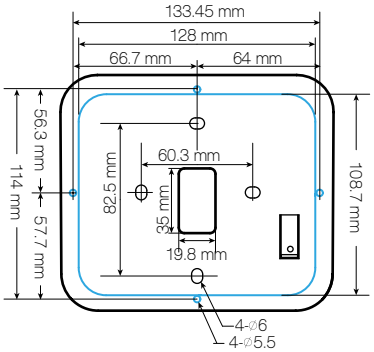
A-2.Embedded



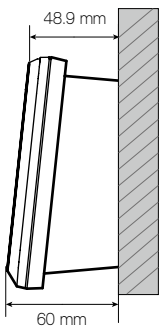
B.



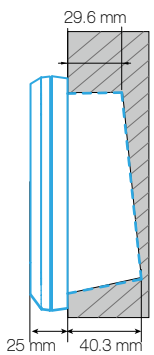
- A-1.Surface Mounted: Use a screwdriver to screw the mounting plate to the wall. A-2.Embedded: To dig a hole for 837-E:85mmx113mm / 837-EF:128mmx109mm; and then, use a screwdriver to screw the mounting plate to the wall.
- Pull cable ends through the access hole in the mounting plate.
- Attach AR-837-E or AR-837-EF to the mounting plate and install screws (supplied) into the holes at the bottom with the allen key.
- Apply power. LED (green) will light up with one beep.



• Surface mounting hole(Front View)
• Flush mounting hole(Front View)



• Surface mounting hole (Side view)



(Digging depth)

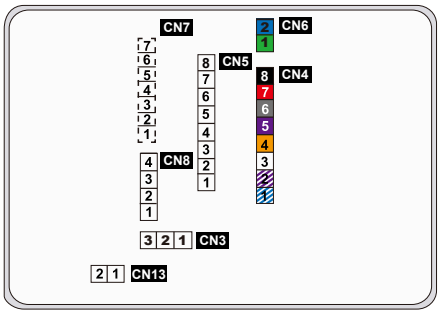
• Flush mounting hole (Side view)

DESFire Encoder

Notice

1.Tubing: The communication wires and power line should NOT be bound in the same conduit or tubing.
2.Wire selection: Use AWG 22-24 Shielded Twist Pair to avoid star wiring, CAT 5 cable for TCP/IP connection
3.Power supply: Don't equip reader and lock with the same power supply. The power for reader may be unstable when the lock is activating, that may cause a malfunction in the reader.
The standard installation: Door relay and lock use the same power supply, and reader should use another independent power supply.

Connector Table (1)



Cable: CN4

Wire Application	Wire	Color	Description
Lock Relay	1	Blue White	(N.O.)DC24V1Amp
	2	Purple White	(N.C.)DC24V1Amp
Lock Relay COM	3	White	(COM)DC24V1Amp
Door Sensor	4	Orange	Negative Trigger Input
Exit Switch	5	Purple	Negative Trigger Input
Alarm Relay	6	Gray	N.O./N.C. Optional (by jumper)
Power	7	Thick Red	DC 12V
	8	Thick Black	DC 0V

Cable: CN6

Wire Application	Wire	Color	Description
RS-485 for Lift Controller	1	Thick Green	RS-485(B-)
	2	Thick Blue	RS-485(A+)

Setting & Operation

Program and encrypt DESFire cards by DESFire Encoder 837PD and DESFire Launch Card

Prepare all related devices :


DESFire Encoder

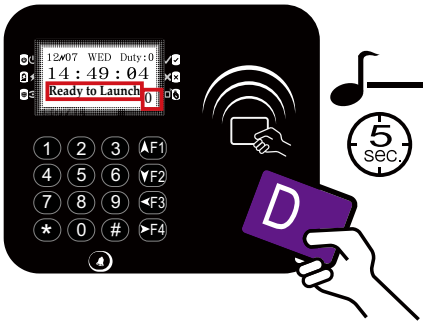


DESFire Launch Card


Blank cards

- STEP 1：Please restart AR-837-P before operate, the LCD screen will show **"Wait Key Card"**.





- STEP 2：Swipe DESFire Launch card on the right reading area to activate the encoder's programming mode. After sounding a long beep, the LCD screen show "**Ready to Launch**" with the sequential quantity number "0".

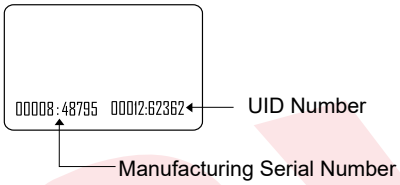
- STEP 3：Firstly Press ✱, then enter the 10-digit card number, and then press **#** to finish (total is 12 keys)

✱ + 0 0 0 0 8 4 8 7 9 5 + #

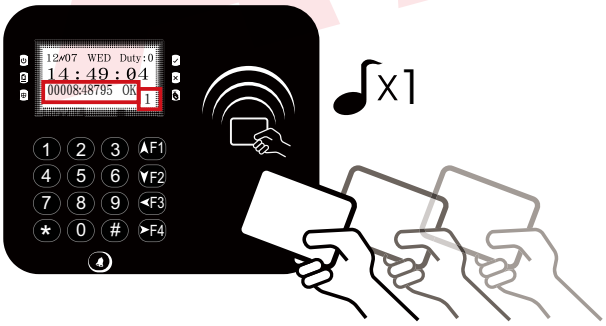
Enter 10 digital lowest sequential number



Tag Information



- STEP 4：Swipe the first card to AR-837-PD; if the encoder sounds one beep and the sequential number increase from 0 to 1, it means the first card has been successfully programed; next swipe the batch of cards one by one, the sequential number displayed on LCD screen will automatically increase, till finish all cards.



Set up DESFire Key for Encoder AR-837-PD by software 323D Master

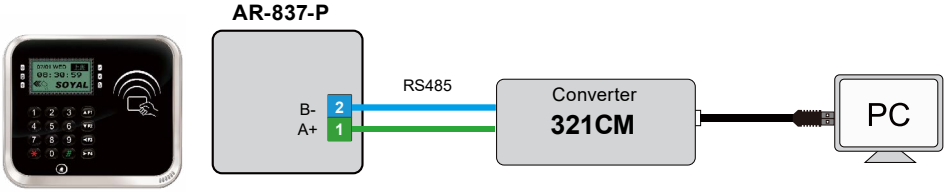
Prepare all related devices :


DESFire Encoder


Converter AR-321CM

323DMaster
Software "323D Master"

- STEP 1：Connect Encoder AR-837-P to computer via USB Converter



• STEP 2：Execute Software “323D Master” and follow the below operation to set up:

❶ Select COM Port Number

❷ Select Access key **01** (It is fixed to select 01 when use SOYAL DESFire Encoder AR-837-DP to program DESFire Card)

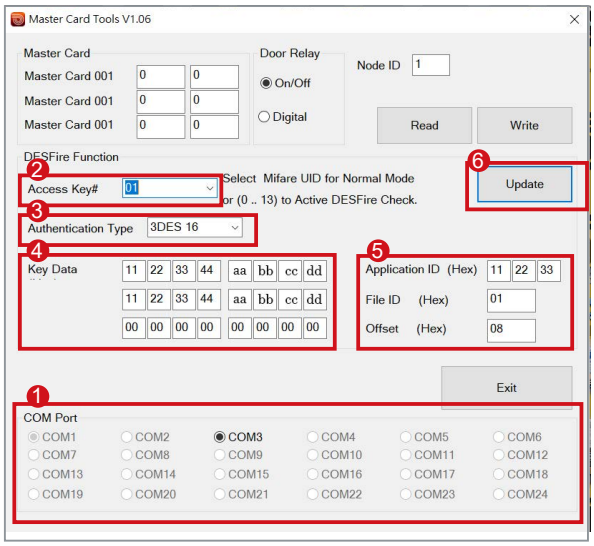
❸ Select Authentication Type **3DES 16**

❹ Enter Key Data in **Hex format** (Note: The clients can set Key data by themselves and please remember it after set).

❺ Enter Application ID **11 22 33 (fixed value)**;
File ID **01** that should be same as Access key;
Enter Offset **08 (fixed value)**

❻ Click “Update” to write the setting to DESFire Encoder.

※**Note:** After the setting is completed, please make sure to restart the controller, then the setting wiil be effective.



Set up DESFire Key for Controller and WG Reader by software 323D Master (We use LCD Controller 837E as demo)

Prepare all related devices :

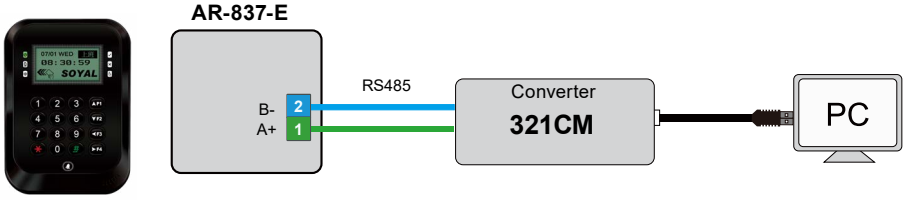
※Notes:
After encryption, could not read unencrypted card such as transportation card example: Easy Card


Controller
(AR-837-E as example)


Converter AR-321CM

323DMaster
Software “323D Master”

• STEP 1：Connect Encoder AR-837-P to computer via USB Converter



• STEP 2：Execute Software “323D Master” and follow the below operation to set up:

❶ Select COM Port Number

❷ Select Access key **01** (The setting should be same as Part1: DESFire Encoder AR-837-PD)

❸ Select Authentication Type **3DES 16**

❹ Enter Key Data in **Hex format**. (The setting should be same as Part1: DESFire Encoder AR-837-PD)

❺ Enter Application ID **11 22 33 (fixed value)**;
File ID **01** that should be same as Access key;
Enter Offset **08 (fixed value)**.

❻ Click “Update” to write the setting to controller.

※**Note:** After the setting is completed, please make sure to restart the controller, then the setting wiil be effective.

