

# One-button start switch assembly specification document

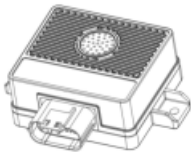



Document status	edition	V1.6
<input type="checkbox"/> rough draft <input checked="" type="checkbox"/> Official release <input type="checkbox"/> Modifying	author	Nicholas Teo
	date of issue	2024-6-12
	security classification	common
Reading personnel	Members of the project team	

1.Product name: PS-Agility

2. Model number:M1124M-3704010

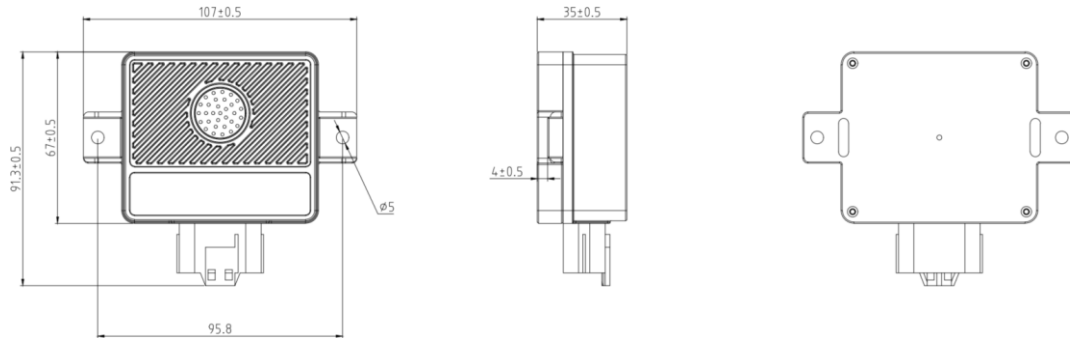
Category: Host / smart key / NFC induction antenna / one-button start button

2. List of complete machine of products

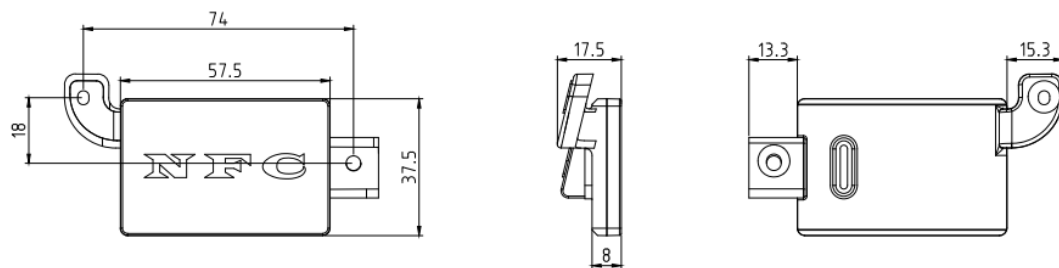
order number	name	quantity	graphic	remarks
1	control module	1		cabinet
2	NFC receiving antenna	1		receiving antenna Card swiping range is 3cm
3	Start the switch with one key	1		With backlight switch
4	NFC Key Card	2		Mini card: Magenta mother card Blue card
5	screw	2	M4*12	With nuts
6	instructions	1	/	/

### 3、Product size diagram

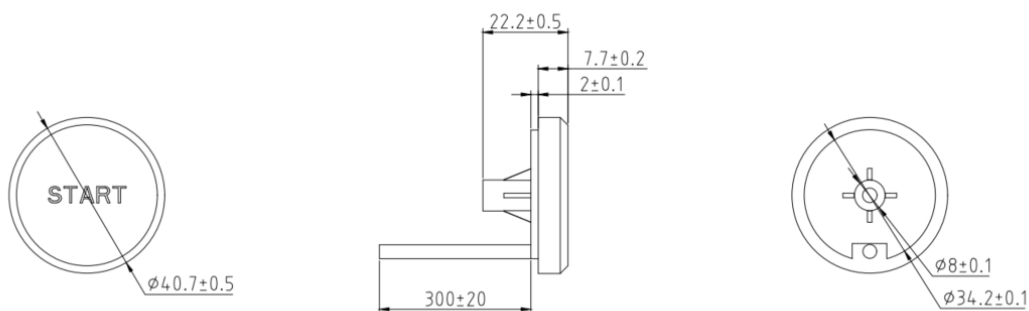
#### 1) control module



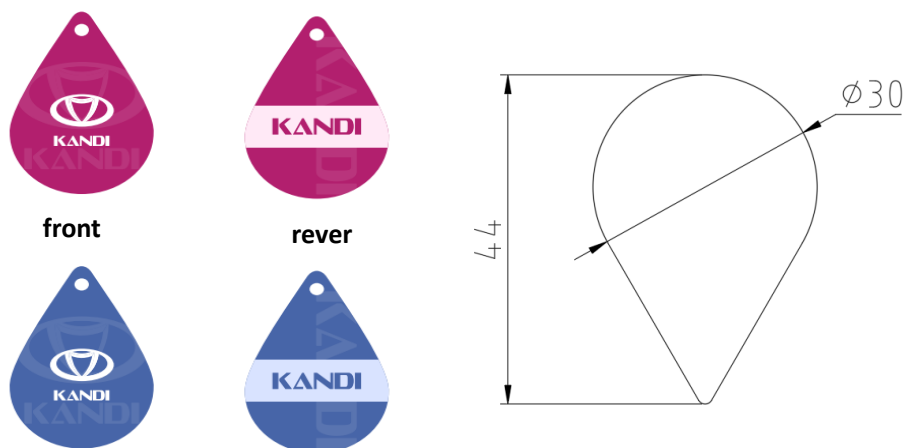
#### 2) product size accessories one NFC receiving antenna



#### 3) the product size accessories a start switch

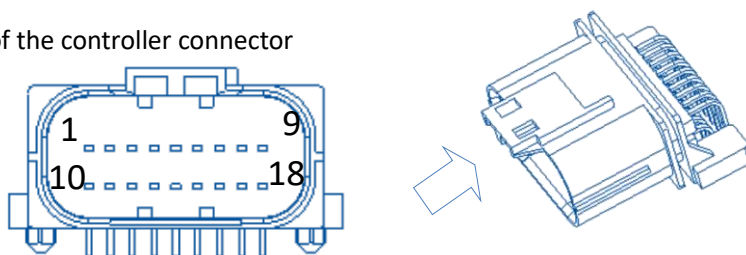


#### 4) NFC card



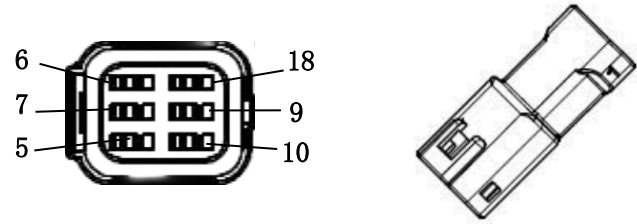
#### 4、Connection plug-in definition

##### 5.1 Definition of the controller connector



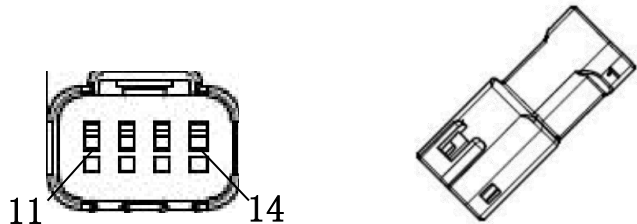
Main connector model number:		MX23A18NF1
pin foot position	definition	remarks
1	power input	12V
2	\	
3	12V+ output	5A
4	12V 200mA	
5	6V NFC	
6	NFC PDOWN	
7	NFC IRQ	
8	The RS232 power supply switch	obligate
9	NFC RS232_TX	
10	GND	
11	Start power with one key	
12	Start the indicator light with	
13	Start the breathing light with	
14	Key detection	
15	CAN_H	
16	CAN_L	
17	GND	
18	NFC RS232_RX	

5.2 Definition of the NFC antenna connector



Main connector model number:		JST06RT
pin foot position	definition	remarks
5	NFC 6V Power supply	
7	NFC IRQ Interrupt the input	
6	NFC PDOWN Power drop reset	
10	GND	
9	NFC TX	NFC antenna
18	NFC RX	

5.3 Definition of one-button start switch connector



Main connector model number:		JST04TR
pin foot position	definition	remarks
11	Start power with one key	
12	pilot lamp	
13	breathing light	
14	Key detection	

4. Product technical parameters:

order number	essential parameter	explain

1	working voltage	DC 7V ~16V
2	working current	25mA
3	Standby current	<3mA
4	operating temperature range	-30℃~+80℃
5	Storage temperature range	-40℃~+85℃
6	way to install	screw fixing
7	CAN	The CAN communication module

## 5. Product function brief introduction:

order number	work pattern	explain	Function number
1	NFC swing	① Brush the card in the designated area, and start the	FS01/FS03

	card	switch breathing light on.  ② Use the administrator (master card) card to enter the card learning mode.	
2	One key start	① Start switch After the breathing light is on, press the switch to start the vehicle, and the button indicator light is always on.  ② After the vehicle starts, press the switch to close the vehicle.	FS02
3	CAN communication (Reserved )	The upper and down power is controlled by connecting with the reference bus.	FS04, FS05

## Vi. Product function Description:

### 1. Press the button to start after NFC authorization

[Function No.]

FS01

[precondition]

Power supply gear is in OFF gear (i. e. foot 4 does not output 12V)

[Trigger conditions]

At least one NFC key card was detected in the swipe area and moved close to the swipe area for about 1 second.

[movement]

Turn on the blue breathing light after swiping the card

After pressing the switch, the module sends an external ACC status message

Power on the vehicle, the start switch green indicator light is always on

## **2. Close the button**

[Function No.]

FS02

[precondition]

The power supply gear is in the ACC gear

Module detects vehicle speed of 2 km/h (vehicle speed resolved by CAN message)

[Trigger conditions]

Press the switch button



[movement]

The module disconnects the ACC signal

The Module stops issuing the ACC status message

Power on the vehicle, and the start switch indicator light is off

### **3.NFC card learning**

[Function No.]

FS03

#### **3.1 Master card learning**

Under the power state, the encrypted NFC card is placed in the swiping area, and the switch is pressed for 6 times continuously within 10s to trigger the reverse learning card mechanism (mother card learning mode). The green indicator light changes from unbright to always bright, representing the success of the learning card.

#### **3.2 Subcard learning**

[precondition]

1 mother card and 1 encrypted empty card

The vehicle is in an OFF state

[Trigger conditions]

At least one master card was detected in the swipe area and remove the master card when the blue breathing light is on [movement]

Enter card mode

Press the switch for 3 seconds within 15 seconds, and the blue breathing light is always on. Put the encrypted empty card in the 10S. If the card is successful, start the switch green indicator light to flash 2 times. There are only five subcards at the same time.

[remarks]

- 1) If no card or second card is detected within 10 seconds after successfully triggering the card mode, exit the card mode.
- 2) If the module is damaged, the module must be replaced first, and then use a new card to match the card once the card matches the module, it can only be matched with the current module invalid card without feedback
- 3) Child mother cards are encryption cards, child mother card has the function of up and down power.
- 4) The mother card is unique. After the mother card is lost and the mother card is lost, the original mother card fails.
- 5) Non-manufacturer encryption cards are invalid cards.

## FCC Statement

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

## FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment .

Note : This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates,uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.