

1. The workflow of PKE systems in Project SC5XX

When the user walks to the front of the machine with the E-key, and presses the power on button of the machine, the machine enters the power-on mode (when the machine is turned off, all circuit modules on the machine are in a power-off state, including the PKE base station (receiver module)). At the same time, the receiver module which powered by the controller of the machine also enters the power-on initialization mode. After initialization completed, Machine will send an ID identification command to receiver module. Then receiver module sends a signal to wake up the E-key, and then the E-key sends back the ID to receiver module. After the receiver module received the ID, it will send the ID to the controller of the machine with serial communication RS485. If it is a legal ID, the machine will enter the corresponding application scenario based on the ID read. If it is an illegal ID, the machine will automatically change to the password enter state. The entire operation should be completed within 1~1.5 second.

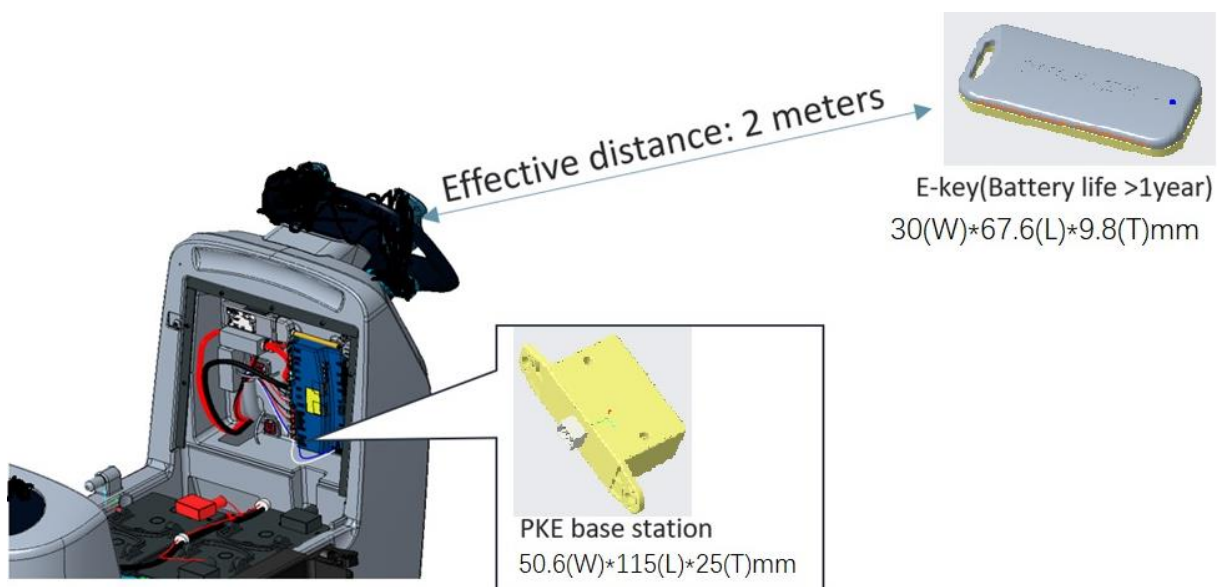
2. E-key pairing

The pairing mode must be initiated by the controller on the machine with serial interface RS485, then the controller will control the PKE base station (receiver module) to register the E-Key for the machine, and the ID data will be stored in the controller.

The user can configure the user permission (general user or administrator) in the controller for each E-key (ID).

3. Application Scenario

When multiple machines are working on the same site, the E- key and the PKE receiver module cannot interfere with each other. Each machine can be registered with a maximum of 16 keys. If a user carries multiple keys which have been registered for this machine at the same time, it cannot affect the identification (at least one of the keys can be identified).



4. Specification

- 1) Battery life of E-key: more than 1 year with battery 3V CR2025.
- 2) Effective distance: 2 meters
- 3) E-Key
 - Size: 30(W)*67.6(L)*9.8(T)mm
 - Plastic housing
 - A LED indicator on the E-Key
 - A waterproof hidden button (should press the button with a needle) for E-Key register.
 - Protection class: IP67
- 4) PKE base station (Receiver module)
 - Size: 50.6(W)*115(L)*25(T)mm
 - Protection class: IPX4
- 5) Communication interface
 - Serial communication between PKE base station (receiver module) and controller: RS485.
- 6) Connector definition (controller to PKE base station)
 - 6 pins connector: Pin1-VCC_in (10V~36V or 12V), Pin2-485A, Pin3-485B, Pin4-GND, Pin5-COM, Pin6-Key_out

Remark: Pin5 and Pin6 are output signal of the relay on the PKE base station.

5. Communication protocol

Communication will be provided by NILFISK.

- The End -

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

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.

Warning: changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment

The devices has been evaluated to meet general RF exposure requirement, the device can be used in portable exposure condition without restriction