

1.1 General Definition of Fob

Smart key system represents a new concept of access control and immobilizer systems applied to vehicles. The user has a Smart Key Fob (hereinafter referred to as Fob) that can be recognized by the vehicle. Users can lock/unlock and start the vehicle without manipulating the mechanical key only by possessing the fob. Additionally, the vehicle can be locked/unlocked by the RKE function.

1.2 Classification

Classification	Description
Product name	SMART KEY-FOB
Model name	KEY ASSY-SMART FOB_3E01
Operating temperature	-10 °C ~ 60 °C
Rated Power supply	3Vdc (Battery)
EMI Classification	Class B
Operating Frequency	Tx:433.92Mhz, Rx:125kHz
Effective rated power	3mW (433.92Mhz)
Manufacturer	YURA CORPORATION

1.3 Operation modes

Mode	Description
IMMO	Immobilizer transponder When the key is operating as an immobilizer transponder, the communication is done via a "contactless interface" depending on a magnetic coupling with the START/STOP button on the dashboard.
RKE	Remote keyless entry The key as a remote control unit to initiate actions on the vehicle such as lock, unlock door latches or testing the lights. The amount of telegrams are sent on the RF channel for each button activated which depends on a user action (a button pressing)
PKE	Passive keyless entry For passive key operation no user action on the key side is required. The trigger signal is delivered by the vehicle via an LF 125 kHz data telegram. When the key receives a valid LF message, it responds with RF telegrams.

1.4 Button functions

No.	Button	Function
1	Door Lock	Activates door lock actuator of the vehicle By pressing the lock button of the Fob, the RKE Lock Request is transmitted. Timeout (TOlock) Stops transmission even if the button is still pressed after transmission.
2	Door Unlock	Releasing door lock actuator of the vehicle By pressing the unlock button of the Fob, the RKE Unlock Request is transmitted. Timeout (TOunlock) Stops transmission even if the button is still pressed after transmission.
3	Light Test	Testing the exterior lights before driving. By pressing the light test button of the Fob, the RKE PANIC Request is transmitted. timeout (TOpanic) Stops transmission even if the button is still pressed after transmission. To avoid unintended operation, keeping this button pressed for a while (1-2sec) to activate the function.

1.5 Spare key operation

When the fob doesn't work or the vehicle battery ran out, follow the process as

- ① Detach the emergency key from the case while pressing the release button.
- ② Release the door lock actuator by operating the mechanical spare key.
- ③ To store the emergency key back inside the smart key, insert it into the key hole on the case and push it in until it clicks into place.

1.6 Battery maintenance

When the fob doesn't work due to battery ran out, follow the process as

- ① Detach the emergency key from the case first
- ② Separate the case.
- ③ Remove the battery in use.
- ④ Insert a new battery and reassemble the case.

FCC/ISED NOTICE

[FCC]

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.

Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

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

This transmitter must not be collocated or operating in conjunction with any other antenna or transmitter unless authorized to do so by the FCC

[ISED]

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

1. L'appareil ne doit pas produire de brouillage;
2. L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

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

This transmitter must not be collocated or operating in conjunction with any other antenna or transmitter unless authorized to do so by the ISED

Cet appareil est conforme aux limites d'exposition aux rayonnements de l'ISDE pour un environnement non contrôlé.

L'émetteur ne doit pas être colocalisé ni fonctionner conjointement avec à autre antenne ou autre émetteur, à moins d'y être autorisé par l'ISDE.