

1、 ECU Product Specification :

1.1. Standard Voltage : 12 VDC

1.2. Operation Voltage : 9.5 V 16 V

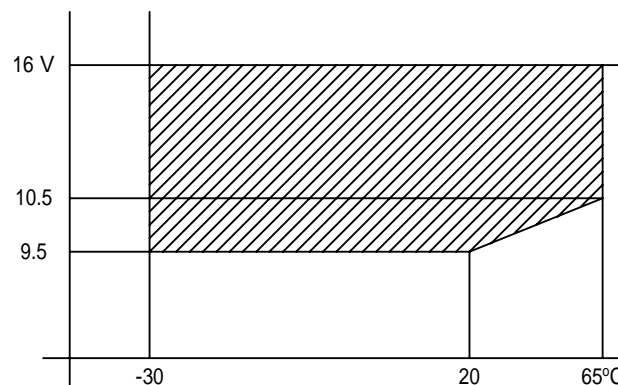
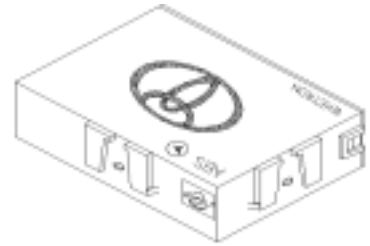
1.3. Operation Frequency : 315M Hz \pm 250K Hz

1.4. Stand-by Current : 6 mA (Max) / DC 12 V

1.5. Operation Temperature : -30 65

1.6. Storage Temperature : -40 85

1.7. ES TEST according to Criteria of the test items for TVSS Evaluation.



2、Transmitter Product Specification :

2.1. Standard Voltage : 6 VDC

2.2. Operation Voltage : 4.5 ~ 6.5 VDC

2.3. Operation Frequency : 315M Hz \pm 250K Hz

2.4. Stand-by Current : 0 mA

2.5. Operation Current : 8mA / 6V

2.6. Operation Temperature : -20 60

2.7. Storage Temperature : -40 85
(no include battery)

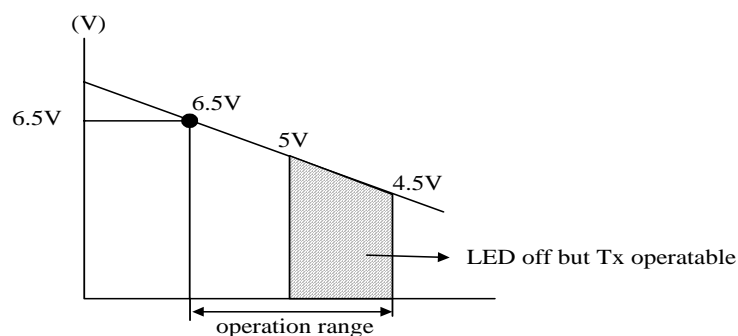
2.8. ES TEST according to Criteria of the test items for TVSS
Evaluation

2.9. Water-proof :
water temperature 18 , under the surface 15 cm for 30 minutes.

2.10. Pull force on key ring :
Durability under the pull force 10 Kg and available for 10
minutes.

2.11. Stamina of battery : Button pushed for one second per minute and
available for 10,000 times. (Battery :Panasonic CR2016*2)

2.12. LED OFF Voltage : Lower than 5 VDC.



3、 ECU Function Description :

3.1. Code Learning :

- A). On the DISARM status:
 - 1). Anyone of the four doors open, Key in cylinder
 - 2). IGN ON OFF 5 times within 10 sec.
 - 3). LED kept lightened
- B). Finished steps A), LED remains lighting, push any bottom in the first transmitter once within 16 sec, LED OFF, then push the same bottom in the first transmitter again ,LED flash once then kept lighten means code learning succeeded.
- C). To learn the second code you must repeat B) within 16 sec after the first code learning succeeded.
- D). Closed the door, IGN turn on or no signal of the transmitter within 16 sec then the LED turn OFF, it means leave the code learning mode.
- E). 4 sets of code are available in memory.

3.2. Security Status ARM :

- A). After IGN OFF, all doors / trunk / hood closed, pushed the LOCK button and then siren chirped once (0.15sec) flasher twinkled once, four doors locked simultaneously; system accessed ARM status and security LED twinkled slowly after 3 seconds.
- B). Setting Failure: Siren chirped long once (1.0sec) for ARM Failure, if doors at status of OPEN.
- C). IF door is closed and trunk/hood is not closed, the door lock is locked, however, system doesn't access ARM status with keeping security LED lighting
- D). After that, trunk/hood is closed, system accessed ARM status automatically and security LED twinkled slowly after 3 seconds.

3.3. Security Status DISARM :

UNLOCK button pushed, doors unlocked and flasher twinkled two times and siren chirped two times and interior light ON for 30 seconds. System accessed the DISARM status. If system triggered before, flasher twinkled three times and siren chirped three times. Then security LED twinkled speedily.

3.4. SEARCHING :

Under ARM status, pushed LOCK button once. Siren chirped once (1.5sec) and flasher twinkled for (15secs).

3.5. Mute setting :

- A). Pushed UNLOCK and PANIC once at the same time, sound of ARM /DISARM/SEARCHING disable
- B). Within 3 sec. pushing UNLOCK and PANIC twice, Siren will chirp once, sound of LOCK and UNLOCK will be enable

3、 ECU Function Description :

3.6. PANIC :

Pushed PANIC button for over 1.5secs and system accessed PANIC status.

Siren chirped 30 sec. and flasher twinkled for 30 sec. continuously.

To exit PANIC status, pushed PANIC or UNLOCK button once. Siren chirp and flasher twinkle terminated immediately.

3.7. Security Activating : (N=3,6,9, alternatives for user's choice)

A). Under ARM status, alarm activated for N cycles if IGN ON or door/ trunk/ hood opened and remained Open status.

(1 circle = Siren chirped 30 sec. and flasher twinkled 30 sec. then suspend 15 sec.).

1). Within 3 cycles, system activated and doors closed status , doors locked automatically.

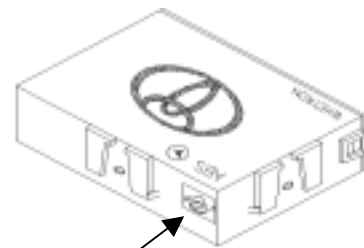
2). After 3 cycles , doors still on open status , doors locked automatically.

B). Occasional strike or vibration, system alarmed by two stages:

1). Under ARM status, slight strike or vibration caused siren chirped once (0.15sec).

If strike or vibration repeated three times within 10secs, siren chirped for 30 sec. and flasher twinkled for 30 sec.

2). Under ARM status, violent strike or vibrated caused siren chirped for 30 sec. and flasher twinkled for 30 sec.



Strike Sensitivity Adjust

3.8. Engine CUT :

Alarm activating, ST CUT RELAY will be operated to terminate the engine start

3.9. Alarm Suspend :

A). On activation of siren and flasher, pushed LOCK button to suspend activation.
System accessed to ARM status after 3 sec.

B). On activation of siren and flasher, pushed UNLOCK button to terminate operation.
System accessed to DISARM status.

3.10. DISARM by key :

Under ARM status and TX lost, IGN ON / OFF for over 10 times within 15 sec. System accessed to DISARM status without TX. .Siren and flasher terminated.

3、 ECU Function Description :

3.11. RE-ARMING :

Pushed UNLOCK button on TX but without IGN ON/KEY IN/ Door /Hood/ Trunk opened within 30 sec. System accessed ARM status automatically with siren chirped once and flasher twinkled once, and doors locked.

3.12. Automatic Arming : (Selectable; initial is “OFF”)

30 seconds after IGN OFF and KEY OUT, system accessed ARM status automatically. If door, trunk or hood opened within 30 seconds, system delayed another 30sec. to ARM after door, trunk, hood closed. (doors don't lock)

3.13. Auto-Lock over the speed 20 km/H :

Under Door closed, IGN ON status, doors closed and over-speed 20km/hr. Then doors locked automatically. When IGN OFF , doors unlocked automatically.

3.14. Interior Lights ON :

- A). Pushed UNLOCK button on TX, doors unlocked and interior lights ON for 30sec.;
- B). Within the 30 sec. of interior light ON status, interior light will be OFF immediately when IGN ON. (Selectable)
- C). Under DISARM status, door opened and interior light ON. After 30 sec. , interior light OFF. (Selectable)

3.15. LED indicators :

- A). LED twinkled slowly under ARM status.
- B). LED twinkled speedily after vibrated or system activated. LED stopped after IGN ON.
- C). LED stopped twinkle on accessing DISARM status if system not being activated.
- D). After 3 sec accessed intrusion sensor status, LED will light continuously for 3 sec.
- E). If hood or trunk opened when pushing LOCK button, LED kept lightened. After hood or trunk closed, system accessed ARM status automatically and security LED twinkled slowly after 3 seconds.
- F). In case of the vehicle with the immobilizer system, there is an indicator only for the immobilizer. So, the indication of A)~D) is not available.

3.16. Transmitter disabled Condition :

When IGN ON or KEY IN status, ARM, DISARM, SEARCHING and Remote Trunk Opening will be disable.

3.17. Status and Alarm Memory :

- A). Under arming status , power OFF then ON, Activation
- B). During the cycle of alarming, power OFF then ON, system is on alarming status
- C). Under “Disarming “ status, power OFF then ON, system restored “Disarming status.

3、 ECU Function Description :

3.18. Selectable function ON/OFF :

- A). Initial mode Key in cylinder, IGN OFF , Door close then Door close /open two cycle within 10 sec. then IGN OFF/ON three cycle ,in result LED remain lighted.
- B). Push the LOCK in transmitter and switch the setting item in sequence. LED flashed one to eight times to indicate different function:
- C). Siren sounded once represented selected function effected; siren sounded twice represented selected function terminated.
- D). After function selected, to open then close door once and function will be switched from ON to OFF or from OFF to ON. Siren will sound as above mentioned.
 - 1). Flashing 1 time represented Automatic ARM;(initial is "OFF")
 - 2). Flashing 2 times represented Auto-locking on 20km/hr speed and Auto-unlock on IGN OFF(initial is "ON")
 - 3). Flashing 3 times represented the function of interior lamp delay; (initial is "ON")
 - 4). Flashing 4 times represented security activating select N=6(initial is "OFF")
 - 5). Flashing 5 times represented security activating select N=9(initial is "OFF")
 - 6). Flashing 6 times represented automatic arming trigger delayed time select after T=15 (initial is "OFF")
 - 7). Flashing 7 times represented automatic arming trigger delayed time select after T=30 (initial is "OFF")
 - 8). Flashing 8 times represented Auto-closed power window(initial is "OFF")
- Push the LOCK and UNLOCK once simultaneously
- 9). Flashing 9 times represented setting failure indication if hood/trunk not closed. (initial is "OFF")
- E). Exit function mode:
IGN ON or all doors didn't close or open within 30 seconds or LOCK on transmitter not Pushed within 30 seconds, then LED OFF and exit function SELECT mode

3.19. Auto-closed Power Window :

- A). After push LOCK ON transmitter within 3 sec push LOCK button again, system accessed the "Auto-closed Power Window".
- B). After release LOCK button on Transmitter within 3 sec push LOCK button again, system will function again "Auto-closed Power Window"

3.20. Intrusion Sensor OFF :

System accessed ARM status and transmitted ENCODER signal to INTRUSION Sensor C/U, detection activated after 5 seconds.
Under detection, motion in chamber triggered system to transmit DECORDER signal And system activated.

3.21. Smart Entry function :

After detect handle SW signal, TVSS C/U will transmit encoder signal to SMART ENTRY C/U which will transmit a remote detecting signal, if exist matching transmitter, which will transmit UNLOCK signal to TVSS C/U.

3、 ECU Function Description :

3.22. Remote Trunk Opening :

IGN ON/KEY IN, trunk will not be opened via transmitter;

Pushed UNLOCK button on transmitter, door unlocked; keeping pushing UNLOCK button for over 1.5secs, trunk opened.

If under ARM and trunk opened status, system accessed ARM status automatically after trunk closed for 30secs.

Remark : If IGN ON, KEY IN or doors opened, system will not accessed ARM status.

4、 Transmitter Function Description :

4.1. LOCK Button :

Pushed LOCK button, all doors locked and system accessed ARM status with flasher twinkled once and siren chirped once.

4.2. UNLOCK Button :

(A). Pushed UNLOCK button, all doors unlocked and system accessed DISARM status with flasher twinkled two times and siren chirp two times.

(B). Kept pushing UNLOCK button for over 1.5 seconds, trunk opened.

4.3. PANIC Button :

Pushed PANIC button over 1.5 seconds, system accessed " PANIC" function.

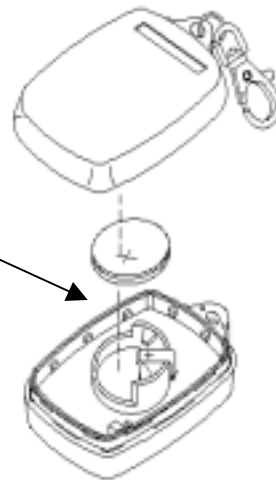
4.4. Battery Protection :

Kept pushing any button for over 20-30secs, transmitter stopped signal transmission automatically to avoid unnecessary consumption of electricity.

4.5. LED dimmed then off when power consumption to low voltage of battery.

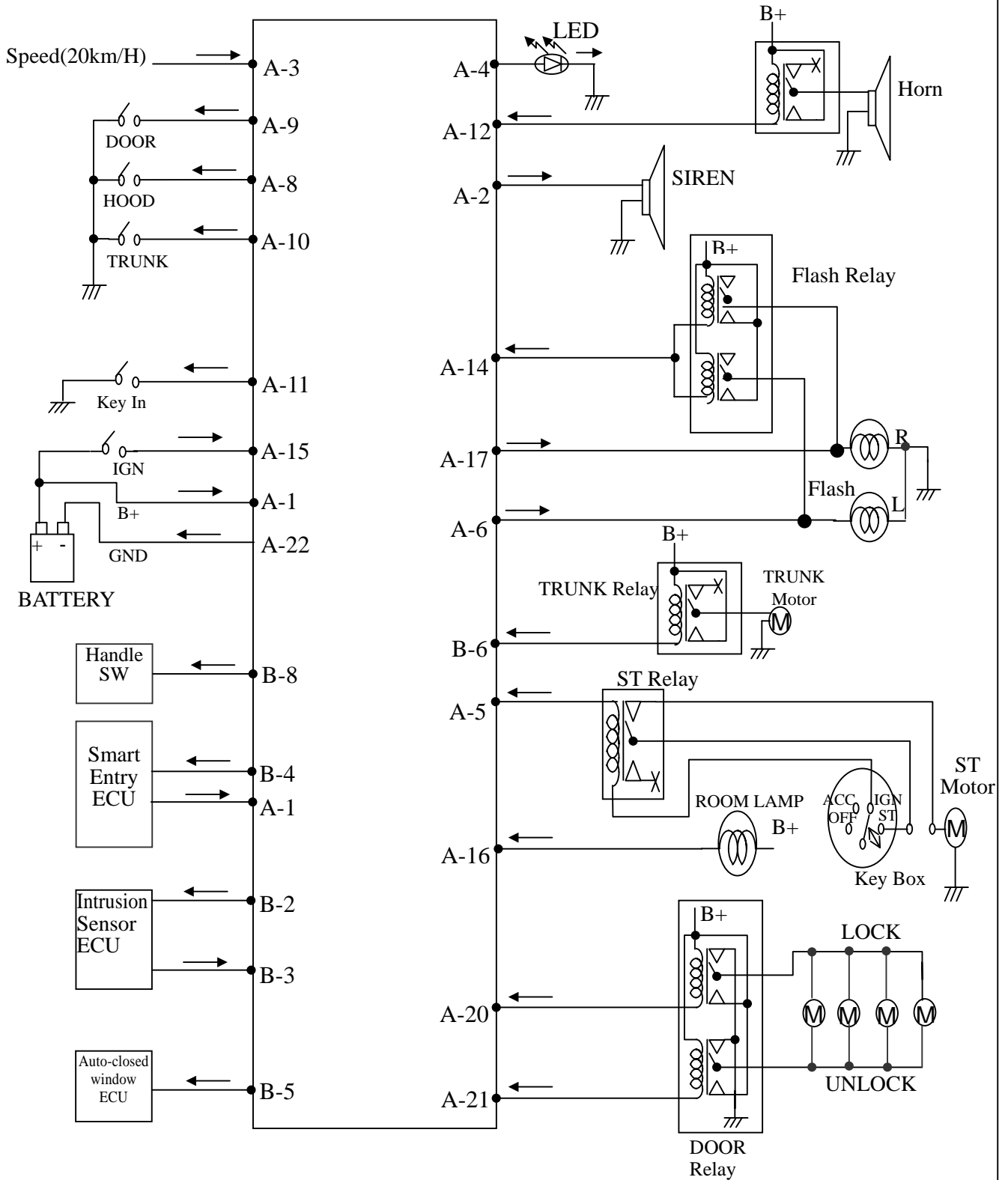


CR2016 x2



5、 System Schematic :

5.1. System Schematic :



FEDERAL COMMUNICATIONS COMMISSION

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. This equipment generates, uses and can radiated 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.

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