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BCM

User manual

Version: V 1.0

Time of revision: 2022/12/08

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1 System Overview

The body controller is a component that controls the opening and closing of the vehicle's wipers, door locks, washing, rearview mirrors, indoor lights, outdoor lights and other functions through a switch (LIN communication can also be hardwired), and also has the functions of starting and stopping the vehicle. In terms of communication, it takes into account the functions of CAN communication, LIN protocol, low-frequency communication and receiving RF signals.

The BCM belongs to the body controller. When the RF signal sent by KEY FOB is received by the BCM, the BCM detects and analyzes whether it meets the decryption requirements, and executes the command sent by KEY FOB when it meets the requirements.

When the PE switch is pressed, the BCM receives the PE input and sends the low-frequency signal, and the KEY FOB receives the low-frequency signal and sends the RF signal. The BCM receives the low-frequency signal, detects and analyzes whether it meets the decryption requirements, and executes the instructions sent by the KEY FOB when it meets the requirements.

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2 System Parameters

2.1 Operating voltage

Rated voltage: 12VDC

Operating voltage: 9VDC~16VDC

2.2 Temperature Range

Operating temperature: -40℃ to +85℃

Storage temperature: -40℃ to +90℃

2.3 Static Current

Static current $\leq 6\text{mA}$ (常温)

2.4 LF Parameters

Number	project	parameter
1	Carrier frequency	125KHz $\pm$ 5KHz
2	Data encoding mode	Manchester Encoding with 50% Duty Cycle
3	Mode of modulation	FSK

2.5 UHF Parameters

序号 Number	项目 project	参数 parameter
1	Carrier frequency	433.92MHz for EU 315MHz for US
2	Data encoding mode	Manchester Encoding with 50% Duty Cycle
3	Mode of modulation	FSK

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3 System Functions

System	Functions		Product specifications
			HF3758/12
LAMPS System	POSITION_LAMP		√
	License_LAMP		√
	Low BEAM _LAMP		√
	High BEAM _LAMP	High BEAM_LAM	√
		FLASH _LAMP	√
		AUTO High BEAM_LAMP	√
	AUTO_LAMP		√
	Front Fog _LAMP		√
	Rear Fog _LAMP		√
	DRL_LAMP		×
	Turn _LAMP	Turn _LAMP	√
		Chang lights	√
		One LAMP Damage	√
		Hazard Light	√
		Collision Alarm	√
		Emergency Brake alarm	√
		Tailgate opening prompt	√
	Danger warning lights		√
	brake light		√
	Reverse light		√
	backlight		√
	Room light		√
	Tailgate light		√
	Luggage light		√
	Atmosphere light		√
	Foot pedal light		√
	Kick sensor log light		√
	Lock LED		√
WIPE System	Front low wiper		√
	Front High wiper		√
	Auto Wiper		√
	Front Washer		√
	Rear WIPER		√
	Rear Washer		√

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System	Functions		Product specifications
			HF3758/12
POWER	C130s Relay		√
	C130s Light		√
	ACC Relay		√
	IGN Relay		√
	Front LARMP POWER		√
	REAR LARMP POWER		√
	Tail light POWER		√
	5V POWER		√
LOCK System	Central Lock		√
	Central Unlock		√
	RKE Lock		√
	RKE Unlock		√
	Speed Lock		√
	Shutdown Unlock		√
	Secondary locking		√
	Collision unlock		√
	Tailgate unlock		√
	Luggage unlock		√
	Child lock		×
	Lock thermal protecion		√
Burglar system	Burglar Alarm		√
	Vehic Anti-theft		√
TPMS	TPMS signal recepcion		√
	LOW- pressure Alarm		√
	High- pressure Alarm		√
	Leakage Alarm		√
	HIGH TEMP Alarm		√
	Low Voltage Alarm		√
	Sensor loss Alarm		√
	Tire Pressure Learning		√
PEPS system	CRV		√
	Power backup		√
	Key authentication		√
	System Alarm	NO KEY ALARM	√
		NOT in" off" mode Alarm	×
		Illagal keys	√
		Low Voltage Alarm	√

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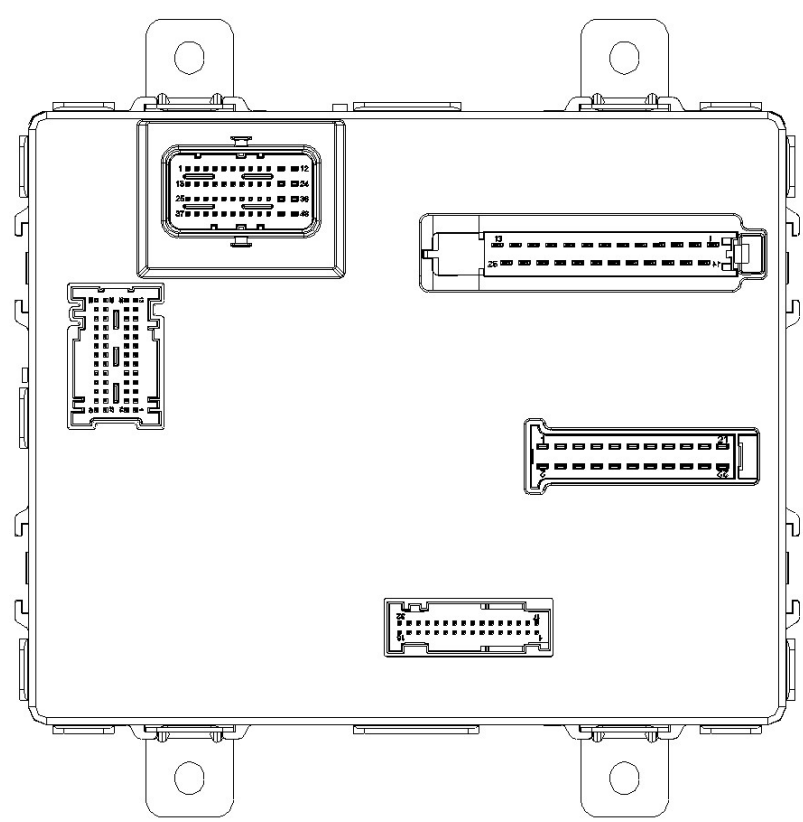
System	Functions		Product specifications
			HF3758/12
PEPS	System Alarm	Brake ALARM	√
		Gear P/N	√
		NO KEY ALARM	√
	PE lock		×
	PE Unlock		√
Mirror system	Manual Fold		√
	Manual UnFold		√
	AUTO Fold		√
	AUTO UnFold		√
	MIRROR lens ADJ		√
	MIRROR lens Memmory		√
	Reverse automic ADJ		√
	Defrost		√
other	Horn		√
	Energy manage		√
	LV Charge		√
	Overvoltage protection		√
	Sleep wake-up		√
	Remote-controlled car search		√
	Window contro		√
	The door is open and alarm		√
	Wash mode		√
	Alcohol locks		√
	CPD		√
	Welcome to the light		√
	Come home with me		√
	Animation feature		√
Remote control	Remote start		√
	Remote unlocking		√
	Remote tailgate control		√
	Remote window lifting		√
	Remote Whistle		√
	Remote lighting control		√
LF-function	Key monitoring		√
	IMMO function		√
RF-function	Remote control function		√
	TPMS function		√

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System	Functions	Product specifications
		HF3758/12
COMM	CAN	✓
	LIN1	✓
	LIN2	✓
	LIN3	✓
	LIN4	✓
	LIN5	✓
	BootLoader	✓
	Diagnosis	✓

4 Appearance

The appearance size is as follows:



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FCC Statement

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 Federal Communications Commission (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.

Changes or modifications to this equipment 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. Privacy of communications may not be ensured when using this device.

IC Statement

This device complies with Industry Canada licence-exempt RSS standard(s): Operation is subject to the following Two conditions:(1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie 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, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.