NFC USER MANUAL

VERSION   1.0
RELEASE DATE   Jul,5th,2023

CATALOG

1 Product Overview

1.1 Product Introduction

In LPCD mode, the near field communication module can wake up the NFC device on the vehicle side when the NFC card or mobile phone is near, and then enter the standard Polling mode. When a matching card is detected, the polling mode is activated. LIN informs VKM and CAN informs BCM to open or close the door.

1.2 Technical Specification

Product specifications are as follows：

Table:1-1 Product specification parameter

Product name	NFC Reader Module			
Product Features	Model	C234	Dimension	85×19×6mm
	Material	PC+ABS	Weight	<80g
	Power Supply	DC 6～16V	Waterproof class	IP6K8
Processor	32bit 120MHz			
Storage	RAM	32KB	ROM	512KB
External Interface	1 LIN、1 KL30、1 GND			
Consumption	Detecting Period(30ms)：<0.45mA			
Ambient	Operating Temperature	-40～85℃	Storage Temperature	-55～90℃
Communication Mode	ISO/IEC 14443A/B/MIFIARE			
Digital Key Protocol	ICCE			
Operating Frequency	13.56MHz			

2 Hardware Introduction

2.1 Appearance Introduction

The dimensions of the NFC body are about 85 x 19 x 6mm, and the front and rear shells are affixed with double-sided tape. The sides are LIN, ground, and power interfaces, as shown in Figure2-1.
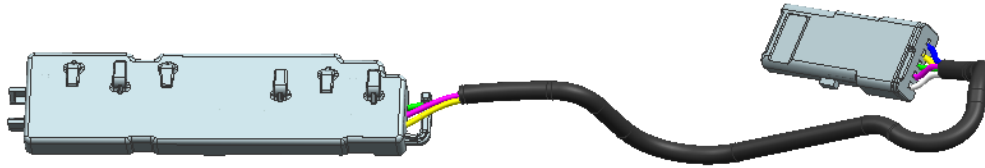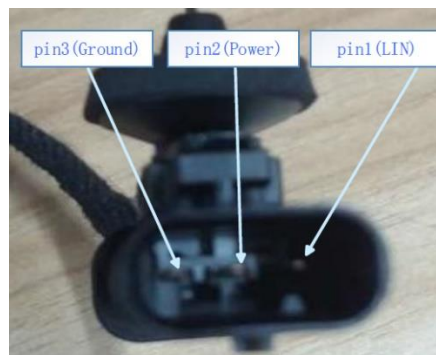
Figure 2-1　C234 Appearance

2.1.1 Interface

Figure 2-2　Interface

Interface definition：

Tale2-1: Interface Definition

SN	Name	Description
1	LIN	LIN signal
2	Power	Supply power KL30.
3	GND	GND

2.2　Assembly Introduction

The C234 is placed inside the door handle and do not require extra fixing. Figure 2-3 show the installation positions.。

Figure 2-3　Place in Door Handle

3 Operation Instruction

The NFC valid card is placed near the NFC module, and the NFC module transmits information to the ECU with SE at the end of the car through LIN, and unlocks the car after the NFC card is certified.

3.1　Setup-Up

Before the module can start normally, it is necessary to prepare a power supply, a valid NFC card, a wire harness, and a LIN communication tool. In addition to connecting the NFC reader module, the wiring harness also needs to connect to the LIN communication tool. After the power supply is powered on, if the current is about 20mA, the NFC module is started. Figure 3-1 shows the following。
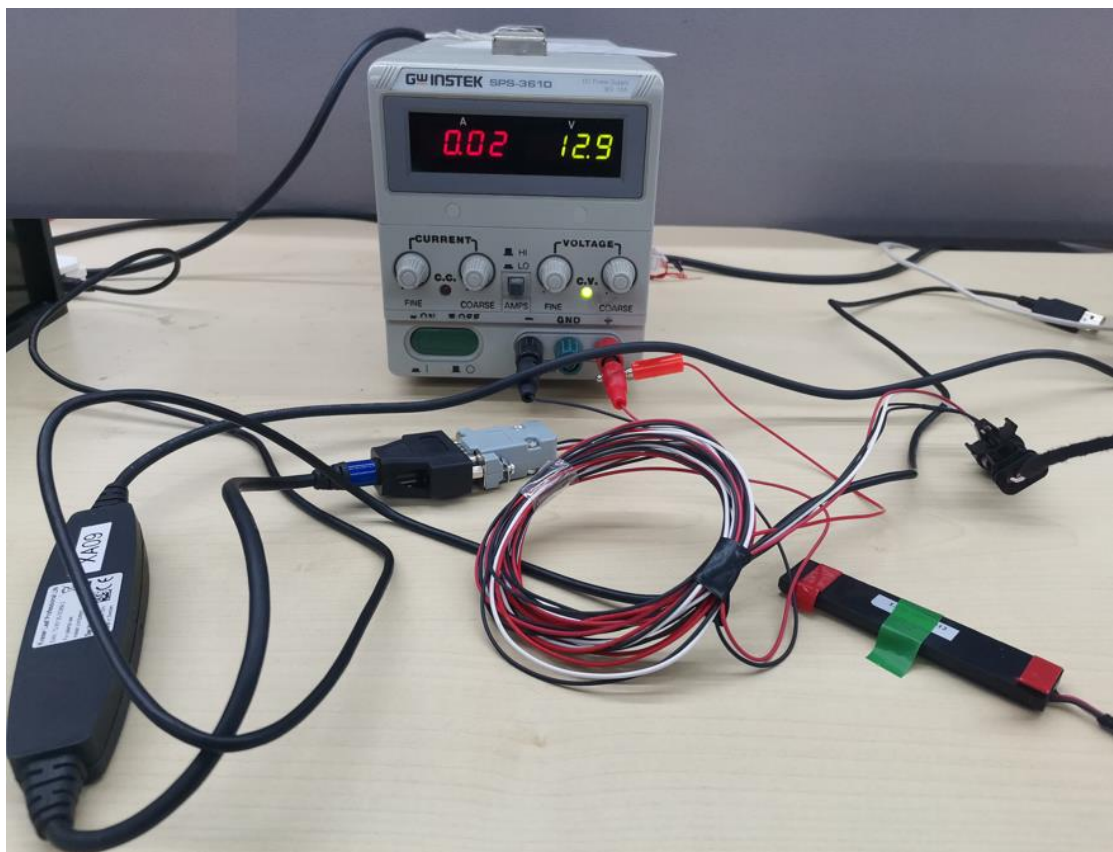

Figure 3-1Power On Setup

3.2　Swipe Care

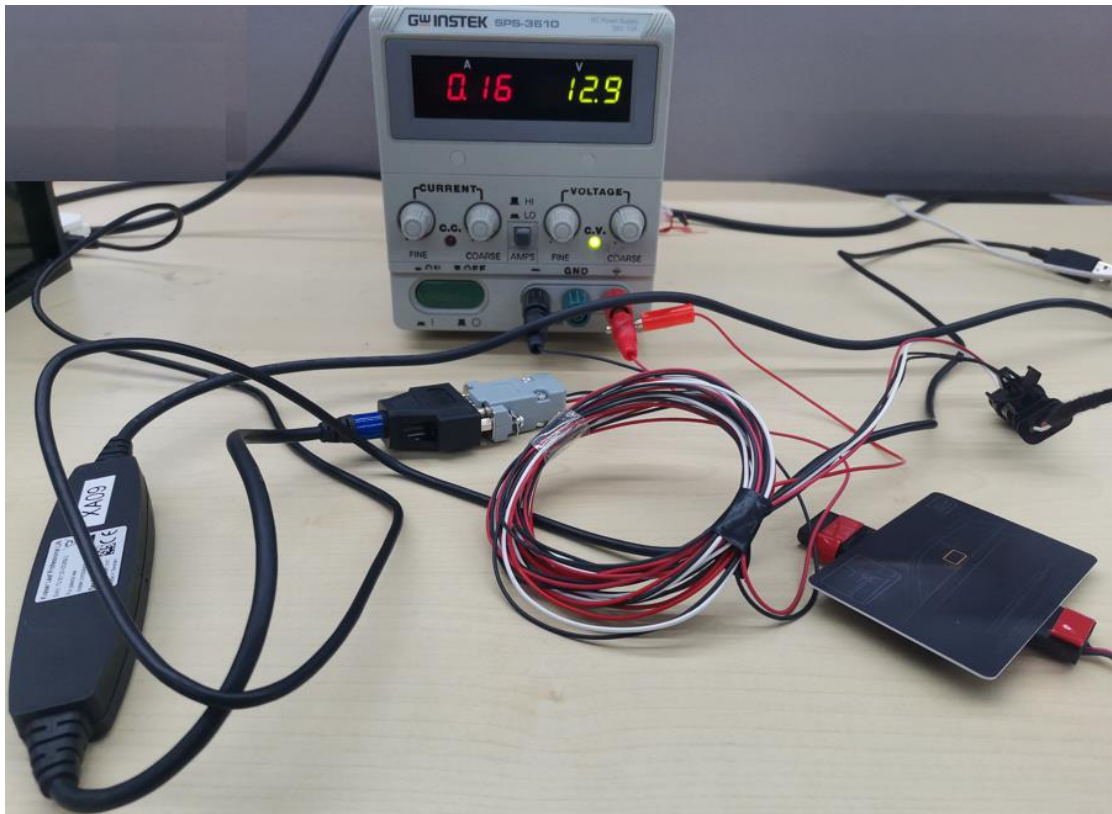Place a valid NFC card close to the NFC module, as shown in Figure 3-2

Figure 3-2 NFC Polling

3.3 Query Version

3.3.1 LIN Communication

Connect the DB9 port of Kvaser Lin on the wiring harness, connect the USB port of Kvaser Lin on the PC, and power on the device. The port shown in Figure 3-3 is identified in the device manager on the PC

Figure 3-3 Ports on the Kavser Lin device

Click "Connect Device" in the LIN FLASH tool. "LIN Hardware Init OK" is displayed in Figure 3-4, indicating that the Kvaser Lin device is normal.

Figure 3-4 Kavser Lin Normal

3.3.2 Query Version

Click "App Version Number" in the LIN FLASH tool, and the message "62 f1 95 02 06 01 04 14 00." is displayed in Figure 3-5. Indicates that the version information of F195 is read.

Figure 3-5 Query Version Normal

4 FCC ID

Table 3-1 FCCID

Model	FCC ID
C234	2BBZ4NFCC234

5 Product Informaiton

DIAS Automotive Electronic Systems Co.,Ltd.
Product：NFC Reader Module
Model：C234

Please take attention that changes or modification 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.