HIKVISION

DS-K1106 Series Card Reader

Installation Manual

User Manual

COPYRIGHT ©2015 Hangzhou Hikvision Digital Technology Co., Ltd.

ALL RIGHTS RESERVED.

About this Manual

This Manual is applicable to Card Reader

Series	Models	Description
DS-K1101 Series	DS-K1101M	MIFARE card reader (without keypad)
	DS-K1101MK	MIFARE card reader (with a keypad)
	DS-K1101C	CPU card reader (without keypad)
	DS-K1101CK	CPU card reader (with a keypad)
DS-K1102 Series	DS-K1102M	MIFARE card reader (without keypad)
	DS-K1102MK	MIFARE card reader (with a keypad)
	DS-K1102C	CPU card reader (without keypad)
	DS-K1102CK	CPU card reader (with a keypad)
	DS-K1102E	EM card reader (without keypad)
	DS-K1102 EK	EM card reader (with a keypad)
	DS-K1102 EM	Dual-band card reader(without keypad)
	DS-K1102 EMK	Dual-band card reader(with a keypad)
DS-K1103 Series	DS-K1103M	MIFARE card reader (without keypad)
	DS-K1103MK	MIFARE card reader (with a keypad)
	DS-K1103C	CPU card reader (without keypad)
	DS-K1103CK	CPU card reader (with a keypad)
DS-K1104 Series	DS-K1104M	MIFARE card reader (without keypad)
	DS-K1104MK	MIFARE card reader (with a keypad)
	DS-K1104C	CPU card reader (without keypad)

Series	Models	Description
DS-K11046 Series	DS-K1104CK	CPU card reader (with a keypad)
	DS-K1106M	MIFARE card reader（without keypad）
	DS-K1106C	CPU card reader (without keypad)
	DS-K1106S	ID card reader (without keypad)

The Manual includes instructions for using and managing the product. Pictures, charts, images and all other information hereinafter are for description and explanation only. The information contained in the Manual is subject to change, without notice, due to firmware updates or other reasons. Please find the latest version in the company website (http://overseas.hikvision.com/en/).

Please use this user manual under the guidance of professionals.

Trademarks Acknowledgement

and other Hikvision's trademarks and logos are the properties of Hikvision in various jurisdictions. Other trademarks and logos mentioned below are the properties of their respective owners.

Legal Disclaimer

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, THE PRODUCT DESCRIBED, WITH ITS HARDWARE, SOFTWARE AND FIRMWARE, IS PROVIDED "AS IS", WITH ALL FAULTS AND ERRORS, AND HIKVISION MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY, SATISFACTORY QUALITY, FITNESS FOR A PARTICULAR PURPOSE, AND NON-INFRINGEMENT OF THIRD PARTY. IN NO EVENT WILL HIKVISION, ITS DIRECTORS, OFFICERS, EMPLOYEES, OR AGENTS BE LIABLE TO YOU FOR ANY SPECIAL, CONSEQUENTIAL, INCIDENTAL, OR INDIRECT DAMAGES, INCLUDING, AMONG OTHERS, DAMAGES FOR LOSS OF BUSINESS PROFITS, BUSINESS INTERRUPTION, OR LOSS OF DATA OR DOCUMENTATION, IN CONNECTION WITH THE USE OF THIS PRODUCT, EVEN IF HIKVISION HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

REGARDING TO THE PRODUCT WITH INTERNET ACCESS, THE USE OF

0101011060112

Content

Chapter 1   Preventive and Cautionary Tips

To guarantee the card reader works properly, please read and obey the notes below.

- If the card reader is powered by the controller, the power supply distance is recommended to be no longer than 100m. If the distance is longer than 100m, you are advised to power the card reader by external 12V (range: -%10 ~ +%10) DC power supply, which is nonswitched and linear.
- To guarantee the communication between the controller and the card reader, you must use RVVP cable above 0.5 to connect them.
- If the card reader is installed outside or in environment easy to permeable, it is advisable to install a waterproof shield.
- If you need to install several card readers, the distance among them must over 30cm.
- To reduce the noise in long distance transmission, the shield of cable should connect to the GND of both controller and card reader terminal.

Chapter 2   Introduction

DS-K1106 series card reader is a kind of high-performance product, with a 32 bit high-speed processor. It communicates with access controller via either RS-485 protocol or Wiegand protocol. And a build-in tamper-proof module helps to protect card reader from malicious damage. As to the physical appearance, the PC+ABS material makes water proof and dust proof possible in poor environment.
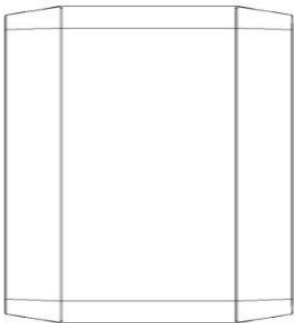
2.1 Front View

Figure 2-1 DS-K1106M/DS-K1106C/DS-K1106S

2.2 Rear View
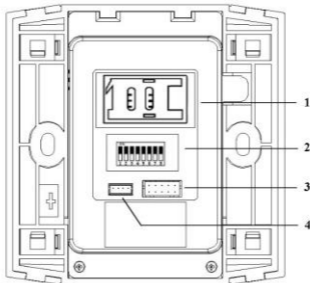
Figure 2-2 Rear View of DS-K1106 Series

No.	Name
1	PSAM Card Slot (available for CPU card reader)
2	DIP Switch
3	Cable Interface of RS-485, Power, LED Control, etc.
4	Serial Port

Chapter 3   Installation

3.1 Installing PSAM Card

NOTE PSAM card slot is only available for CPU card reader.

Insert the PSAM card into the slot according to the direction shown below.

Figure 3-1 PSAM Card Slot

3.2 Introduction for DIP Switch

The DIP switch module is shown below. The No. of DIP switch from left to right is 1 ~ 8.
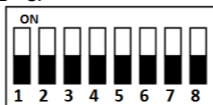
Figure 3-2 DIP Switch Module

Table 3-1 Description of DIP Switch

Icon	Description
	Represent 1 in binary mode
	Represent 0 in binary mode

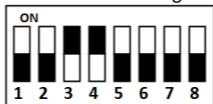For example, binary value of the following status is: 0000 1100.

Figure 3-3 DIP Switch Module

Table 3-2 Description of DIP Switch

No.	Description	DIP Switch Status
1 ~ 4	Address of RS-485	1: 1

No.	Description	DIP Switch Status
		0: 0
5	Read card No. or file in card. (Only available for CPU card reader.)	1: read card No; 0: read file in card.
6	Wiegand protocol or RS-485 protocol.	1: Wiegand protocol; 0: RS-485 protocol.
7	Wiegand Protocol (available when No. 6 is 1)	1: Wiegand protocol of 26-bit; 0: Wiegand protocol of 34-bit.
8	Matched Resistance (available for RS-485 protocol)	1: Enable; 0: Disable.

3.3 Definition of Cable

The description of 10 cables is shown below.

Table 3-3 Description of Cable

Color	Description
Yellow	RS-485+
Brown	Blue LED Control (available for Wiegand Protocol)
Blue	RS-485-
Purple	Beep Control (available for Wiegand Protocol)
Gray	Case Sensor (available for Wiegand Protocol)
Green	Wiegand W0 (available for Wiegand Protocol)
White	Wiegand W1 (available for Wiegand Protocol)
Black	GND
Orange	Red LED Control (available for Wiegand Protocol)
Red	PWR (DC +12V)

3.4 Wiring Cables

Purpose:

Wire the cables between controller and card reader, thus to establish the communication between them.

Steps for RS-485 communication mode:

1. Set the DIP switch of No. 6 as 0.
2. Set the DIP switch of No. 1 ~ 5 for RS-485 address and reading card mode. For details, please refer to *3.2 Introduction for DIP Switch*.
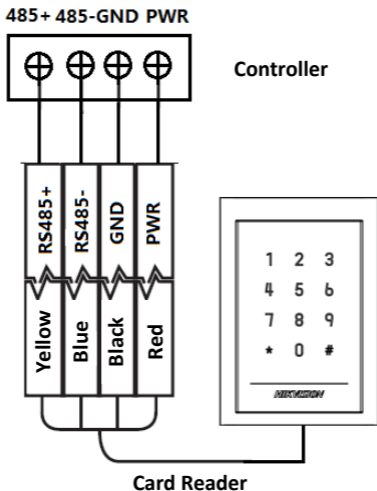3. Wire the cable between controller and card reader as shown below.

485+ 485-GND PWR

Controller

RS485+ | RS485- | GND | PWR

Yellow | Blue | Black | Red

1 2 3
4 5 6
7 8 9
* 0 #

HIKVISION

Card Reader

Figure 3-4 Wiring for RS-485 Communication Mode

Steps for Wiegand communication mode:

1. Set the DIP switch of No. 6 as 1.
2. Set the DIP switch of No. 5 and 7 for reading card mode and Wiegand protocol. For details, please refer to *3.2 Introduction for DIP Switch*.
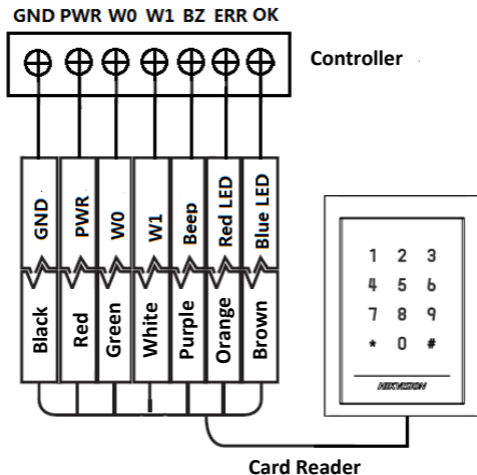3. Wiring the cable between controller and card reader as shown below.

GND PWR W0 W1 BZ ERR OK

Controller

GND | PWR | W0 | W1 | Beep | Red LED | Blue LED

Black | Red | Green | White | Purple | Orange | Brown

1 2 3
4 5 6
7 8 9
* 0 #

HIKVISION

Card Reader

Figure 3-5 Wiring for Wiegand Communication Mode

## 3.5 Installing Card Reader

Before you start:

Set the DIP switch. For details, refer to *3.2 Introduction for DIP Switch*.

Installation for DS-K1101/ 02/ 03/ 04 series card reader

Steps:

1. Fix the gang box on the wall or other place.

2. Connect the cables between controller and card reader. For details, refer to 3.4 Wiring Cables.

3. Push the card reader to match the fixed gang box.

4. Fasten the screw to keep the components together.

5. Fix the side cover onto the card reader, press the cover to make it tightly fit the reader.
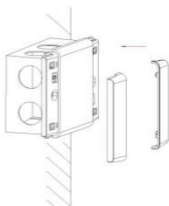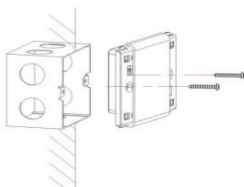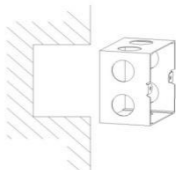
Chapter 4   Sound Prompt and Indicator

After the card reader is powered on, LED status indicator will turn blue and blink for 1 time. Then it will turn red and blink for 3 times. At last the buzzer will send out a beep sound indicating the

starting up process is completed.

During using the card reader, it will send out different sounds prompt and the LED indicator on it have different statuses. You can refer to tables below for detailed information.

Table 4-1 Description of Prompt Sound

Sound Prompt	Description
One beep	RS-485 protocol: Pressing keys prompt; Swiping card prompt; Time out prompt for pressing keys or swiping card. Wiegand protocol: Pressing keys prompt; Swiping card prompt.
Two rapid beeps	The operation of pressing keys or swiping card is valid.
Three slow beeps	The operation of pressing keys or swiping card is invalid.
Rapidly continuous beeps	Alarm of tamper-proof.
Slowly continuous beeps	The card reader is unencrypted.

Table 4-2 Description of LED Indicator

LED Indicator Status	Description
Green and blinking	Card reader is working normally.
Solid green	The operation of pressing keys or swiping card is valid.
Solid red	The operation of pressing keys or swiping card is invalid.
Red and blinking	For RS-485 protocol: Registering failed or card reader is offline. Failed to get key files of PSAM card; Failed to detect the PSAM card.

LED Indicator Status	Description
Red and Keeping rapidly blinking	Available for reading file mode of CPU card: PSAM is not inserted or undetected.

First Choice for Security Professionals