| **Title:** | DS-K1100 Series Card Readers Connect to DS-K2600 Series Access Controllers by RS-485 | **Version:** | v1.0 | **Date:** | 6/21/2017 |
|---|---|---|---|---|---|
| **Product:** | Access Control Device | **Page:** | 1 of 4 | | |

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# DS-K1100 Series Card Readers Connect to DS-K2600 Series Access Controllers by RS-485

## Preparation

Connect card reader to access controller is mainly applied to swiping card to open the door for entrring or exiting. The models of card reader and access controller in this guide are as below:

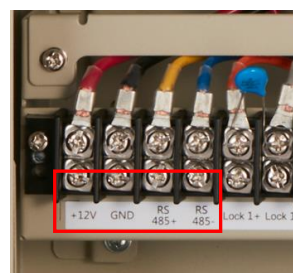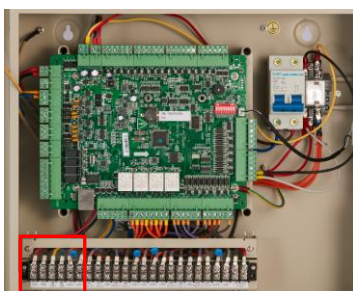| Card Reader | Access Controller |
|---|---|
| DS-K1101M/MK, DS-K1102M/MK, DS-K1103M/MK, DS-K1104M/MK, DS-K1107M/MK, DS-K1108M/MK | DS-K2601, DS-K2602, DS-K2604 |
| DS-K1102E/EK, DS-K1107E/EK, DS-K1108E/EK | |

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## Notice

1. Please cut off power supply before wiring;
2. DS-K1100 Series Card Readers support private RS485 protocol; the details about RS-485 about of card reader are as below:



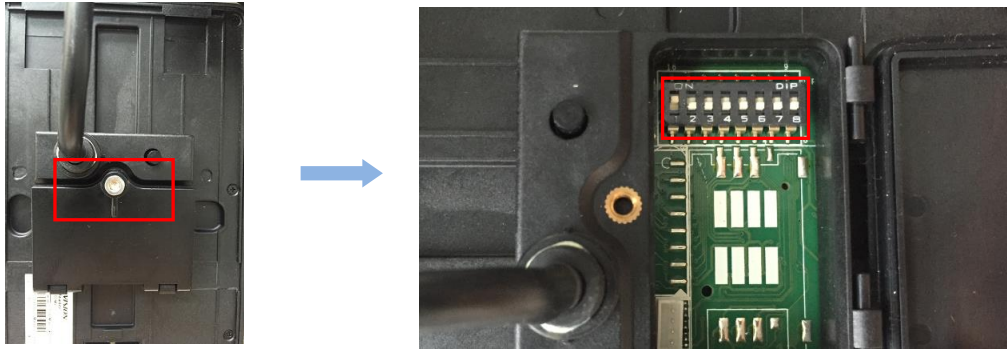| Color | Description |
|---|---|
| Red | Power (DC +12V) |
| Black | GND |
| Yellow | RS-485+ |
| Blue | RS-485- |
| Green | W0 (available for Wiegand Protocol) |
| White | W1 (available for Wiegand Protocol) |
| Purple | Beep Control (available for Wiegand Protocol) |
| Brown | Blue/Green LED Control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

3. Correspondingly, there are RS485 interfaces in DS-K2600 series access controllers; you can find RS-485 interface at the same position in DS-K2601/02/04 access controllers, as pictures show:

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4. Please check the rear panel of card reader and unscrew it, you could find DIP switch module;

The No. of DIP switch from left to right is 1~8:



Description of DIP Switch:

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

| No. | Description | DIP Switch Status |
|---|---|---|
| 1~4 | Address of RS485 | 1: 1<br>0: 0 |
| 5 | Read card No. or file in card(Reserved) | 1: read card No;<br>0: read file in card. |
| 6 | Wiegand protocol or RS-485 protocol | 1: Wiegand protocol<br>0: RS-485 protocol. |
| 7 | Wiegand Protocol<br>(available when No. 6 is 1) | 1: Wiegand protocol of 26-bit;<br>0: Wiegand protocol of 34-bit. |
| 8 | Matched Resistance(Reserved)<br>(available for RS-485 protocol) | 1: Enable;<br>0: Disable. |

## Step 1: DIP Switch

Please set the DIP switch firstly before connecting the card reader, more details about the binary value of the card reader by setting DIP Switch to correspond with the door, please check the table below:
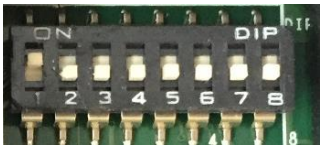


| DIP Switch Status | Door | Reader |
|---|---|---|
| 1000 0000 | Door 1 | Entrance Reader 1 |
| 0100 0000 | | Eixt Reader 2 |
| 1100 0000 | Door 2 | Entrance Reader 3 |
| 0010 0000 | | Eixt Reader 4 |
| 1010 0000 | Door 3 | Entrance Reader 5 |
| 0110 0000 | | Eixt Reader 6 |
| 1110 0000 | Door 4 | Entrance Reader 7 |
| 0001 0000 | | Eixt Reader 8 |

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For example, if you want to swipe card to open the first door, no matter your access controller is DS-K2601, DS-K2602 or DS-K2604, the binary value of the entrance card reader should be 1000 0000 and the binary value of the exit card reader should be 0100 0000.
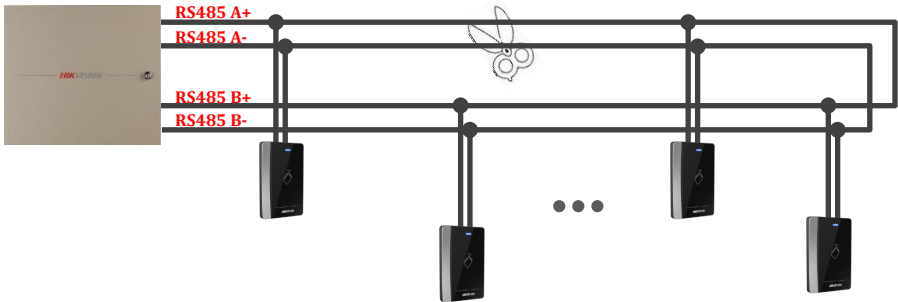
## Step 2: RS-485 Wiring

Please connect card reader to access controller as following picture:
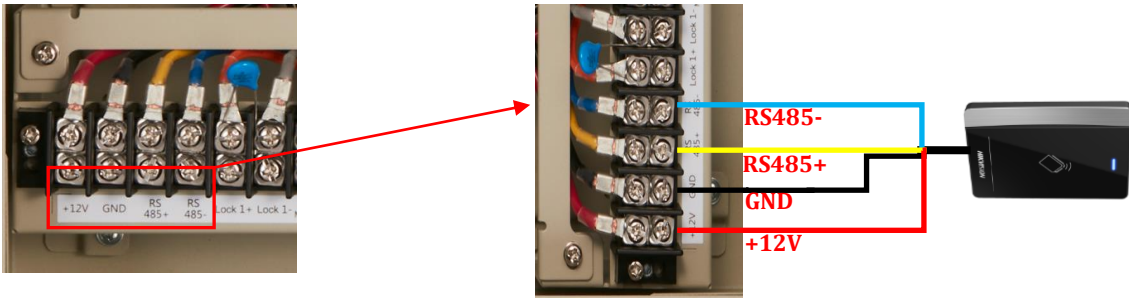


**Note**

1. Actually you can find RS485 A/B/C/D interfaces in access controller; we extend RS485 A interface to the wiring distribution for easier cable connection and we use RS485B interface for backup, the cable connection as following picture:



2. About wiring materials, we suggest customer choose RVVP cable.

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