

Quick Start Guide

Introduction

The SSR-204 Mifare & EM card reader is designed to connect to SDC range controllers using an OSDP RS-485 multidrop network or using one-to-one legacy Wiegand wiring.

It is capable of reading ISO 14443-A frequency cards including Mifare/Desfire/Felica (13.56 MHz).

Indication of a successful card read is provided using the internal buzzer.

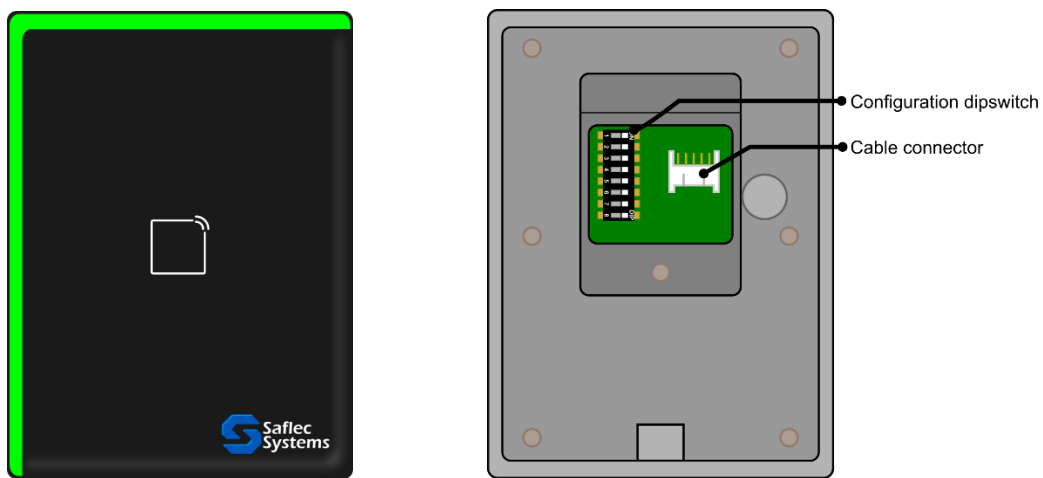


Figure 1
Reader front and back

Dipswitch settings

The dipswitches are located on the back of the reader and are numbered from left to right when viewed from the side.

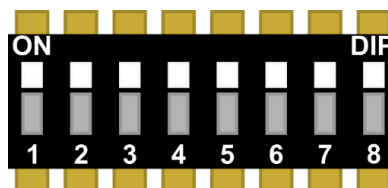


Figure 2
Dipswitches

The functions of the dipswitches are shown in the table below:

| Dipswitch | Function | OFF value | ON value | NOTES |
|-----------|----------|-----------|----------|------------------|
| 1 | Address | 0 | 1 | |
| 2 | Address | 0 | 2 | |
| 3 | Address | 0 | 4 | |
| 4 | Address | 0 | 8 | 1-4 are additive |
| 5 | Reserved | | | |
| 6 | Protocol | OSDP | Wiegand | |
| 7 | Protocol | 34 bit | 26 bit | (When #6 is ON) |
| 8 | Reserved | | | |

The connection cable

The connection is supplied with the reader which has predefined colours and clips into the connector on the back of the reader. Each of the colours have a purpose – please ensure that you wire them correctly. Not all cables need to be connected – depending on your purposes.

The colours and their functions are defined below:

| Colour | Function | NOTES |
|--------|--------------|---------|
| Orange | Red LED | WIEGAND |
| Brown | Green LED | WIEGAND |
| White | Data 1 | WIEGAND |
| Green | Data 0 | WIEGAND |
| Blue | RS-485 - (B) | OSDP |
| Yellow | RS-485 + (A) | OSDP |
| Red | +12 Vdc | Power |
| Black | GND | Power |
| Grey | Tamper | |
| Purple | Buzzer | WIEGAND |

Power connection

Connect the power supply to the reader by connecting +12Vdc to the **Red** wire and ground to the **Black** wire.

NOTE: For safety's sake leave the power supply off until the installation is complete.

OSDP Wiring

When connecting the device using OSDP in RS-485 multidrop configuration, follow the steps below:

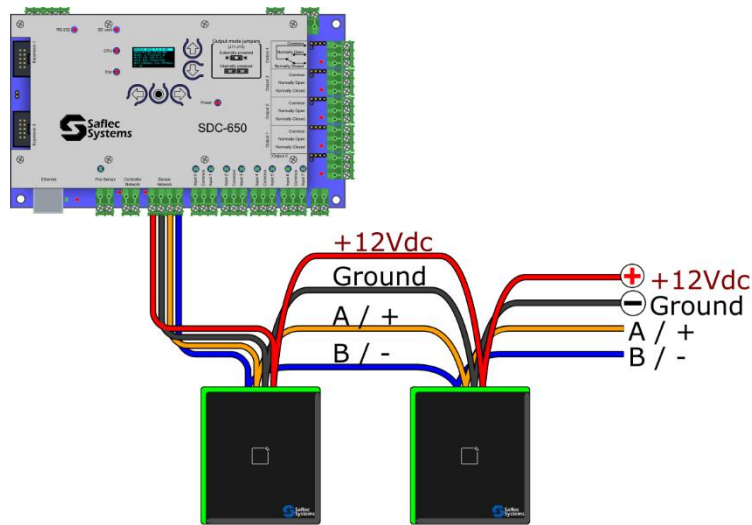


Figure 4

System layout showing readers connected using OSDP RS-485 multi-drop networking to SDC controller

Step 1: Set OSDP settings using the dipswitch

The 8-way dipswitch on the back of the unit is labelled 1 to 8. Set dipswitch 1 to 4 ON or OFF depending on the address that you would like for the unit. Each of these dipswitches are additive, so as an example if you turn on dipswitch 1 and 3, then the address will be $8+2 = 10$.

The following table is a helpful quick lookup to assist in setting the correct address for your unit.

| Dipswitch number | | | | Address |
|------------------|-----|-----|-----|---------|
| 4 | 3 | 2 | 1 | |
| OFF | OFF | OFF | ON | 1 |
| OFF | OFF | ON | OFF | 2 |
| OFF | OFF | ON | ON | 3 |
| OFF | ON | OFF | OFF | 4 |
| OFF | ON | OFF | ON | 5 |
| OFF | ON | ON | OFF | 6 |
| OFF | ON | ON | ON | 7 |
| ON | OFF | OFF | OFF | 8 |
| ON | OFF | OFF | ON | 9 |
| ON | OFF | ON | OFF | 10 |
| ON | OFF | ON | ON | 11 |
| ON | ON | OFF | OFF | 12 |
| ON | ON | OFF | ON | 13 |
| ON | ON | ON | OFF | 14 |
| ON | ON | ON | ON | 15 |

NOTE: Ensure that #6 is also turned off to set the OSDP protocol on RS-485.

Step 2: Connect the RS-485

As shown previously the connection cable has predefined colours. To connect the unit on RS-485 you need to connect the A (+) of the network to the **Yellow** wire and the B (-) to the **Blue** wire.

Other units can be multi-dropped in the same way as per Figure 4.

Wiegand Wiring

When connecting the device using Wiegand, follow the steps below:

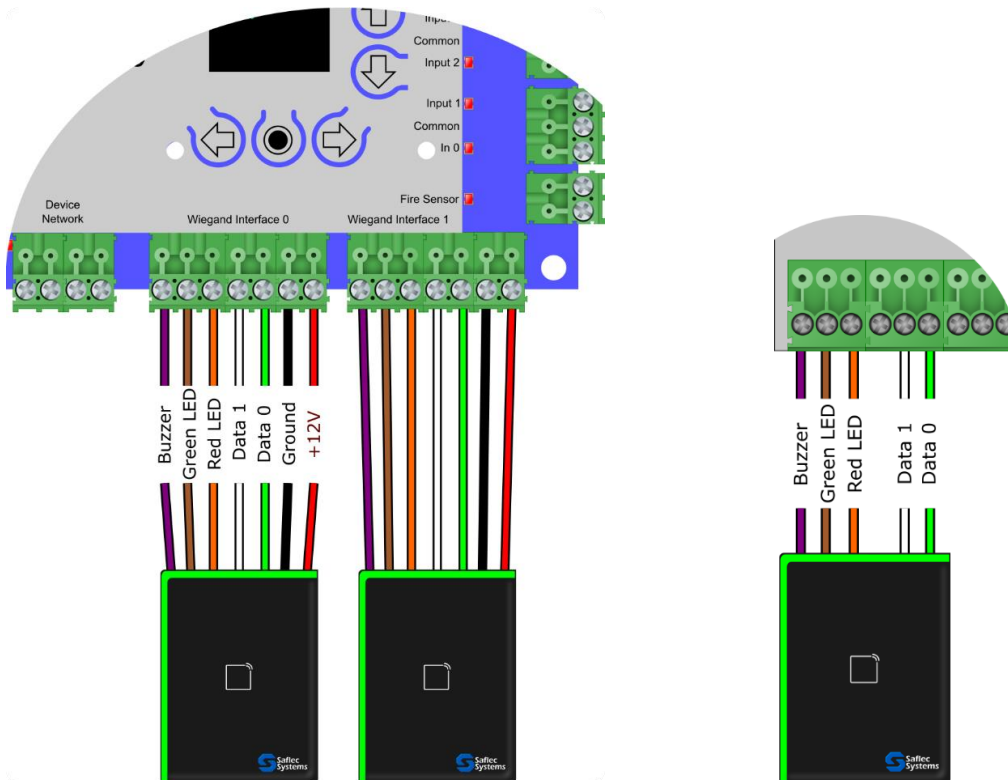


Figure 5

System layout showing readers connected using Wiegand connection to SDC controller and SSI board.

The diagram above shows Wiegand connections to an SDC-620 controller and to an SSI Wiegand interface board.

Step 1: Connect the Wiegand lines

Please refer to the connection cable table that shows which colours to use to connect to which Wiegand line. Not all connections are necessary, but at a minimum the Data 0 and Data 1 must be connected.

NOTE: Please confirm the Data 0 and 1 connections as if they are swapped the data received from the reader will be scrambled.

Step 2: Configure the device to use Wiegand protocol

Set Dipswitch #6 to the ON position to enable Wiegand.

For 34 (32 bit + parity) card numbers set Dipswitch #7 to the OFF position, otherwise set it ON for 26 bit (24 + parity).

NOTE: By default the SACS system supports 32 bit, so you should be able to leave Dipswitch #7 in the OFF position.