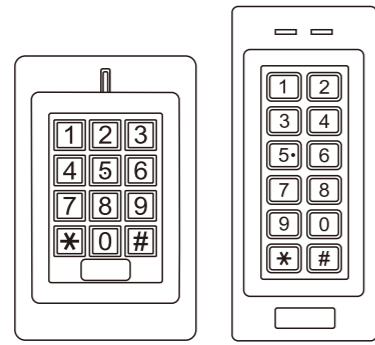


Waterproof Access Control/Reader



SK1-W SK4-W

INTRODUCTION

The SK1-W/SK4-W is a single-entry multi-function Access Control with integrated keypad and card reader. It is designed and manufactured to perform in a wide range of indoor, outdoor and harsh environments.

The SK1-W/SK4-W supports up to 1000 users in multiple access configurations (Card, PIN, or Card + PIN). The built-in card reader supports EM 125KHz frequency cards. The relay can operate in Pulse Mode (suitable for access control) or Toggle Mode (suitable for arming/disarming alarms, switching lights, machines...etc)

The SK1-W/SK4-W offers advanced programming features like: Facility code; Block enrollment; Wiegand 26 bits interface. These features make it an ideal choice for door access not only for small shops and domestic households but also for commercial and industrial applications such as factories, warehouses, laboratories, banks and prisons.

Features

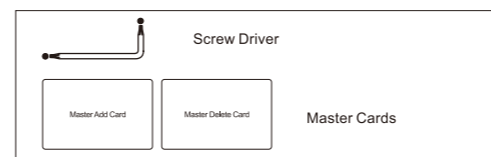
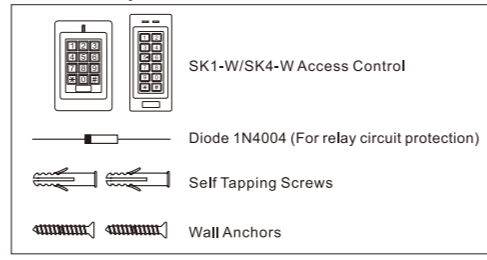
- > Waterproof, meets IP66
- > Vandal resistant metal enclosure
- > One programmable relay output
- > Standalone or pass-through operation
- > 1000 users (Card/PIN/Card + PIN)
- > Latch mode to hold door or gate open
- > Wiegand 26 bits input & output
- > Facility code programmable
- > Card block enrollment
- > Integrated alarm & buzzer output
- > Low power consumption (55mA)
- > Anti-tamper alarm
- > Backlit keypad
- > Multi-color LED status display
- > 12-28V AC/DC power input

Specifications

User Capacity	1000 Cards/PINs
Operating Voltage	12-28V AC/DC
Idle Current	35mA
Active Current	80mA
PIN length	4-6 digits

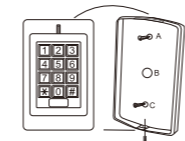
Proximity Card Reader	EM 125KHz Industry Standard Proximity Card 3-6cm
Wiring Connections	Electric Lock, Exit Button, DOTL, External Alarm, Wiegand (in/out)
Relay	One (NO, NC, COM) Adjustable Relay Output Time: 0-99 Seconds (5 seconds default) Adjustable Alarm Output Time: 1-3 minutes (1 minute default) Lock Output Load: 3 Amp Maximum Alarm Output Load: 3 Amp Maximum
Wiegand Interface	Wiegand 26 bits input/output
Environment	Meets IP66 Operating Temperature: -40°C ~ 60°C, or -40°F ~ 140°F Operating Humidity: 10% ~ 90% Non-Condensing
Physical	Zinc-Alloy Enclosure Surface Finish: Powder Coat Dimensions: L120×W76×H25mm (SK1-W) L130×W56×H23mm (SK4-W) Weight: 600g (SK1-W) / 500g (SK4-W) Shipping Weight: 700g (SK1-W) / 650g (SK4-W)

Carton Inventory



INSTALLATION

- Install**
- > Remove the back cover from the unit
 - > Drill 2 holes(A,C) on the wall for the screws and one hole for the cable
 - > Knock the supplied rubber bungs to the screw holes(A,C)
 - > Thread the cable through the cable hole(B)
 - > Attach the unit to the back cover.

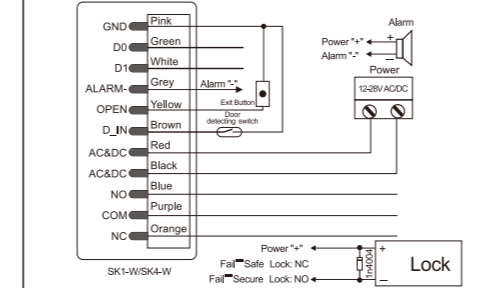


Wiring

Wire Colour	Function	Notes
Red	AC&DC	12-28V AC/DC Regulated Power Input
Black	AC&DC	12-28V AC/DC Regulated Power Input
Pink	GND	Negative Pole
Blue	NO	Normally Open Relay Output
Purple	COM	Common Connection for Relay Output
Orange	NC	Normally Closed Relay Output
Yellow	OPEN	Request to Exit Button
Advanced Input and Output Features		
Green	D0	Wiegand Input/Output Data 0
White	D1	Wiegand Input/Output Data 1
Grey	Alarm -	Alarm Negative
Brown	D_IN	Door Status Detecting

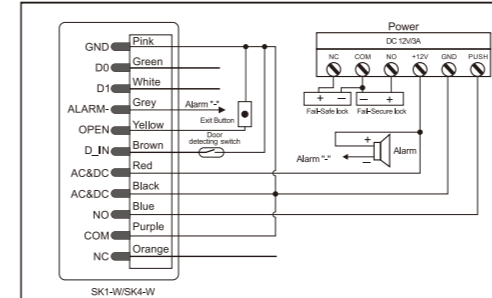
Connection Diagram

Common Power Supply:



Attention: Install a 1N4004 or equivalent diode is needed when use a common power supply, or the reader might be damaged. (1N4004 is included in the packing)

Access Control Power Supply:



To Reset to Factory Default

To reset to factory default, power off, press **[*]**, hold it and power on, release it until hear two beeps and the LED shines in orange, then read any two EM cards, the LED will turn in red, means reset to factory default setting successfully. Of the two EM cards read, the first one is Master Add Card, the second one is Master Delete Card.

Remarks: Reset to factory default, the user's information is still retained.

Anti-tamper

The SK1-W/SK4-W uses a LDR (light dependent resistor) as an Anti-tamper alarm. If the keypad is removed from the cover then the tamper alarm will operate.

STANDALONE OPERATION

1.1 User Settings

To enter the programming mode	[*] Master code [#] 666666 is the factory default master code
To exit from the programming mode	[*]
Note that to undertake the following programming the master user must be logged in	
To change the master code	[0] New code [#] New code [#] The master code is any 6 digits
Setting the working mode:	
Set valid card or PIN users	[3] [0] [#] Entry by either card or PIN (Factory Default)
Set valid card and PIN users	[3] [1] [#] Entry by card and PIN
Set valid card Only users	[3] [2] [#] Entry by card only
To set a user in either card or PIN mode (3 0 #) (Factory Default)	

To add a PIN user	[1] User ID number [#] [PIN] [#] The ID number is any number between 1-1000. The PIN is any 4-6 digits with the exception of 1234 which is reserved. Users can be added continuously without exiting from programming mode as follows: [1] User ID no [1] [#] [PIN] [#] User ID no [2] [#] [PIN] [#]
To delete a PIN user	[2] User ID number [#] Users can be deleted continuously without exiting programming mode
To change the PIN of a PIN user (This step must be done out of programming mode)	[*] ID number [#] Old PIN [#] New PIN [#] New PIN [#]
To add a card user (Method 1) (This is the fastest way to add cards using ID number auto generation.)	[1] Read card [#] Cards can be added continuously without exiting programming mode
To add a card user (Method 2) (This is the alternative way to add cards using User ID Allocation. In this method a User ID is allocated to a card. Only one user ID can be allocated to a single card.)	[1] ID number [#] Card [#]
To delete a card user by card (Note users can be deleted continuously without exiting programming mode)	[2] Read Card [#]
To delete a card user by user ID (This option can be used when a user has lost their card)	[2] User ID [#]
To set a card and PIN user in card and PIN mode (3 1 #)	Add the card as a card user Press [*] to exit from the programming mode Then allocate the card a PIN as follows: [*] Read card [#] 1234 [#] [PIN] [#]
To Add a card and PIN user (The PIN is any 4-6 digits between 0000-999999 with the exception of 1234 which is reserved.)	

SK1-W/SK4-W-Simplified Instruction	
Function Description	Operation
Enter the Programming Mode	[*] (Master Code) [#] (666666 is the factory default master code)
Change the Master Code	[0] (New Master Code) [#] (Repeat New Master Code) [#] (code: 6 digits)
Add Card User	[1] (Read Card) [#]
Add PIN User	[1] (User ID) [#] (PIN) [#] The ID number is any number between 1-1000. The PIN is any 4-6 digits between 0000-999999
Delete User	[2] (Read Card) [#] [2] (User ID) [#]
Exit from the Programming Mode	[*]
How to be granted access	
Card User	Read Card
PIN User	Enter (PIN) [#]

To change a PIN in card and PIN mode (Method 1) Note that this is done outside programming mode so the user can undertake this themselves	[*] Read Card [#] Old PIN [#] New PIN [#] New PIN [#]
To change a PIN in card and PIN mode (Method 2) Note that this is done outside programming mode so the user can undertake this themselves	[*] ID number [#] Old PIN [#] New PIN [#] New PIN [#]
To delete a Card and PIN user just delete the card	[2] User ID [#]

To set a card user in card mode **[3 2 #]**

To add and delete a card user
The operating is the same as adding and deleting a card user in **[3 0 #]**

To delete All users

To delete All users
Note that this is a dangerous option so use with care

To unlock the door

For a PIN user	Enter the PIN then press [*]
For a card user	Read card
For a card and PIN user	Read card then enter [PIN] [#]

1.2 Master Cards Using

Using Master Cards to add and delete card users	
Add a User Card	1. (Read Master Add Card) 2. (Read User Card) Repeat Step 2 for additional user cards 3. (Read Master Add Card)
Delete a User Card	1. (Read Master Delete Card) 2. (Read User Card) Repeat Step 2 for additional user cards 3. (Read Master Delete Card)

1.3 Relay Setting (Pulse mode, Toggle mode)

Pulse mode (factory default)	[4] 1-99 [#] The door relay time is between 1-99 seconds, the factory default setting is 5 seconds.
Toggle mode (Latch mode)	[4] 0 [#]

1.4 Door Detecting, Alarm, Sound and Light Settings

Door Open Detection Door Open Too Long (DOTL) warning. When used with an optional magnetic contact or built-in magnetic contact of the lock, if the door is opened normally, but not closed after 1 minute, the inside buzzer will beep automatically to remind people to close the door and continue for 1 minute before switching off automatically.	
Door Forced Open warning. When used with an optional magnetic contact or built-in magnetic contact of the lock, if the door is opened by force, or if the door is opened after 60 seconds of the electro-mechanical lock not closed properly, the inside buzzer and alarm output will both operate. The Alarm Output time is adjustable between 1-3 minutes with the factory default setting 1 minute.	
To disable door open detection	[6] 0 [#] (Factory default)
To enable door open detection	[6] 1 [#]

If there are 10 invalid cards or 10 incorrect PIN numbers in a 10 minute period either the keypad will lockout for 10 minutes or the alarm will operate, depending on the option selected below.

Normal status: No keypad lockout or alarm (factory default)	[7] 0 [#]
Keypad lockout	[7] 1 [#]
Alarm output	[7] 2 [#]
Alarm output time	
To set the alarm output time (1-3 minutes)	[9] 1-3 [#] Factory default is 1 minute

To remove the alarm **[Read valid card/PIN] or [Master Code] **[*]****

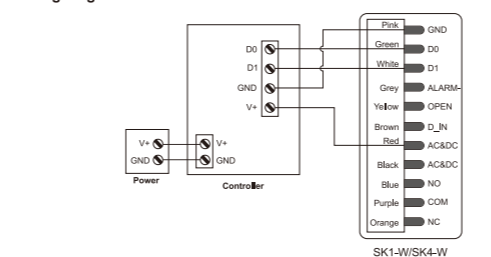
Sound and Light Indication

Operation Status	Red LED	Green LED	Yellow LED	Buzzer
Power on	Bright	--	--	Short Ring
Stand by	Bright	--	--	--
Press Keypad	--	--	--	Short Ring
Operation successful	--	Bright	--	Short Ring
Operation failed	--	--	--	3 Short Ring
Enter into programming mode	Bright	--	--	Short Ring
In the programming mode	--	--	Bright	--
Exit from the programming mode	Bright	--	--	Short Ring
Open the door	--	Bright	--	Short Ring
Alarm	Bright	--	--	Alarm

WIEGAND MODE

Pass-through Mode (SK1-W/SK4-W Operates as a Wiegand Output Reader)
In this mode the SK1-W/SK4-W supports a Wiegand 26bits output so the Wiegand data lines can be connected to any controller which supports a Wiegand 26 bit input, and then the SK1-W/SK4-W will operate as a slave reader.

Wiring Diagram



Transmission Format

- Keypad Transmission:**
- When SK1-W/SK4-W facility code is 0 (Factory default is 0) The Reader will transmit the PIN data when it receives the last key (#) press after PIN code.
Format: PIN Code (any 4-6 digits between 0000-999999)
Example:
PIN code: 123456
Press 123456 #, then the output format will be: 00123456
 - When SK1-W/SK4-W facility code is between 1-255 The reader will transmit the facility code and PIN data when it receives the last key (#) after PIN code.

Example:

PIN code: 3456
Facility code: 5
Press 3456 #, then the output format will be: 00503456

SET DEVICE ID

Programming Step	Keystroke Combination
1. Enter Program Mode	[*] (Master Code) [#]
2. Set Device ID	[8] (0-255) [#] (Factory default is 0)
3. Exit	[*]

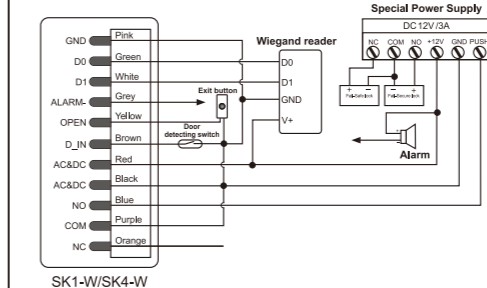
Proximity Card Transmission:

The Reader will transmit the card data when it reads the Card.
Format: Card Number
(Note: no matter the card is valid or invalid, the data will be transmitted)

Controller Mode

(SK1-W/SK4-W Operates as a Controller)
SK1-W/SK4-W supports a Wiegand 26 bits input, so an external Wiegand device with a 26 bits output can be connected to the Wiegand input terminals on the SK1-W/SK4-W. Either an ID card reader (125 KHz) or an IC card reader (13.56MHz) can be connected to the SK1-W/SK4-W. Cards are required to be added at the external reader, except where an external EM card Reader is used, in this case cards can be added at either reader or controller.

Wiring Diagram



SK1-W/SK4-W

Notes