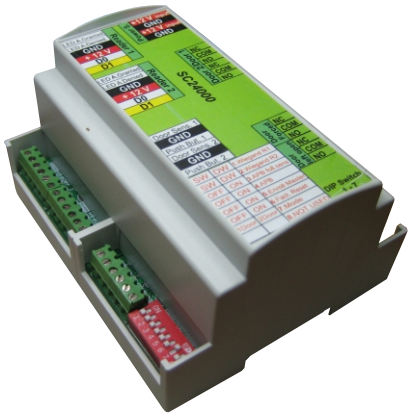


A two entrance proximity access control system for up to 4000 users.

Utilising shadow cards for easy user management and incorporating advanced features such as anti pass back door forced and door left open alarms.

The Shadow Prox controller connects to industry standard Wiegand 26 bit or 34 bit proximity readers which includes all the readers in the Videx Portal Plus range. The adding and deleting of users along with a number of other programmable options is carried out using proximity cards at one of the readers. Shadow cards are used to maintain the system enabling the deleting of users without the need for them to return their proximity card. These shadow cards can be assigned to a single user card or a group of user cards adding additional flexibility to the system. Additional cards are used for administration tasks such as adding and deleting users, changing relay times and resetting anti-pass back.

Readers can be configured as read in/read out using the anti pass back feature. Inputs for push to exit buttons and door contacts allow additional control of the dry contact lock release relay outputs each of which can be independently programmed to operate for a number of seconds or latch (Toggle mode). Two additional relays offer additional security. They will activate in the event of a forced door or door left open event.

FEATURES

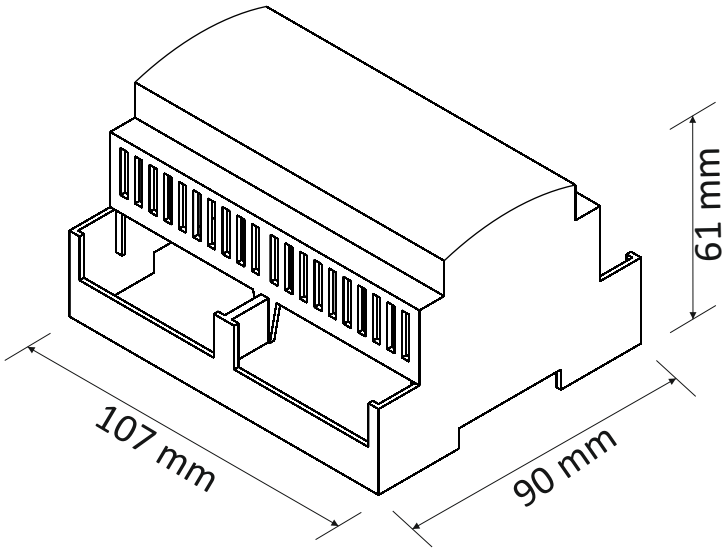
- Up to 4000 users
- 2 x Wiegand 26/34 bit inputs
- 2 x Dry contact relay outputs
- 2 x Door sensor inputs
- 2 x Push to exit button inputs
- Door forced alarm relay output
- Door left open alarm relay output
- Optional anti pass back facility
- Shadow card per user card or per group of user cards
- Two entrance mode and 1 entrance mode with in and out readers
- Lock out feature after 15 invalid attempts to gain entry
- Sequential card enrolment option

SPECIFICATION

Operating voltage:	12-15Vdc
Current (Not including readers/locks):	180mA max
Lock relay output (C, NO, NC):	250VAC/4A
Alarm relays (C, NO, NC):	250VAC/4A
Operating temperature range:	0°C to +50°C
Operating humidity range:	0 to 95%
Dimensions (WxLxH) mm:	90x107x61

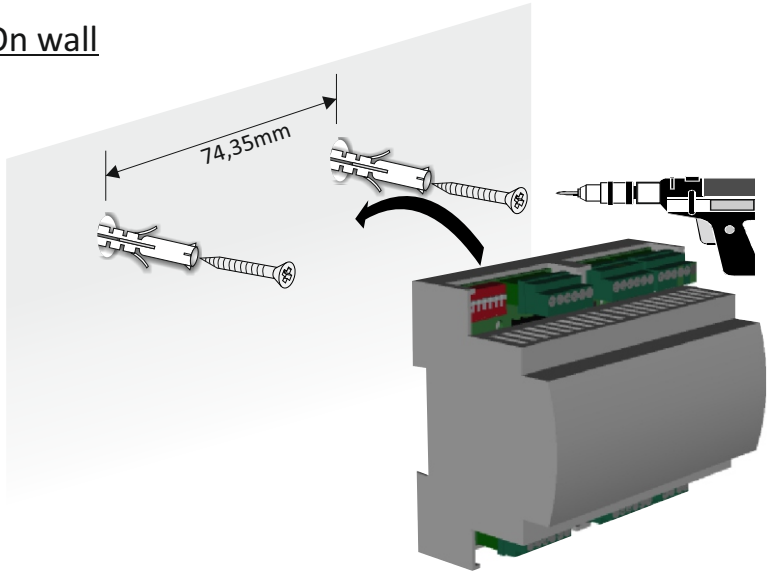
VIDEX®

DIMENSIONS

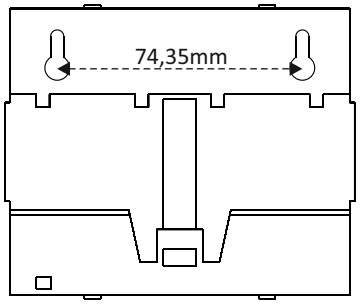


MOUNTING

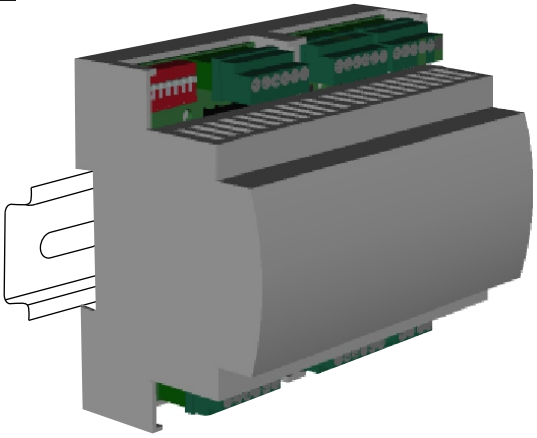
On wall



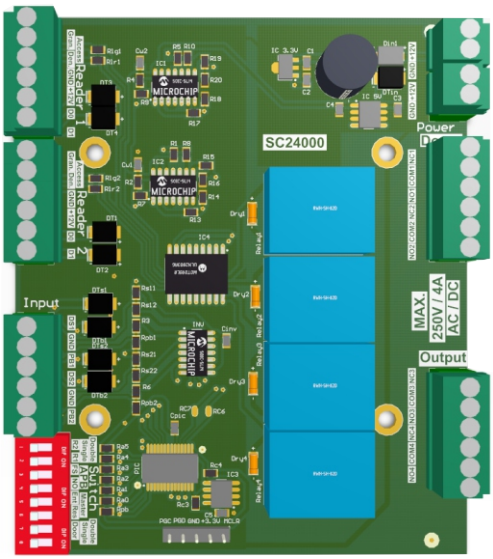
Rear view



On DIN Rail



TERMINAL BLOCK DESCRIPTION



Reader 1

led's	Led Green - Led Red -
power supply	GND 12 VDC
wiegand	Data0 Data1

Reader 2

led's	Led Green - Led Red -
power supply	GND 12 VDC
wiegand	Data0 Data1

Door Sensors Exit Buttons

(NC)	Door Sensor 1
	GND
(NO)	Push Button 1
(NC)	Door Sensor 2
	GND
(NO)	Push Button 2

Power Supply

12 VDC
GND
12 VDC
GND

Door 1 Relay

NC
COM
NO

Door 2 Relay

NC
COM
NO

Alarm Outputs

Door Left Open Alarm

NC
COM
NO

Forced Door Alarm

NC
COM
NO

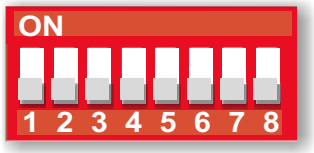
NOTE: If Door Sensors are not being used, the terminal blocks Door Sensor1 and Door Sensor 2 should be shorted with GND. By factory default, the controller will be delivered with shorted Door sensors.

NOTE: Do not connect different Wiegand type of readers. Both readers should be either Wiegand 26bit or Wiegand 34bit.

Output 1 (door left open alarm)
- ON if any door is left open for the time set in: "Set door left open Alarm"
- OFF when door is closed

Output 2 (forced door alarm)
- ON if any door is opened by force
- OFF when the door is closed

DIP SWITCH SETTINGS



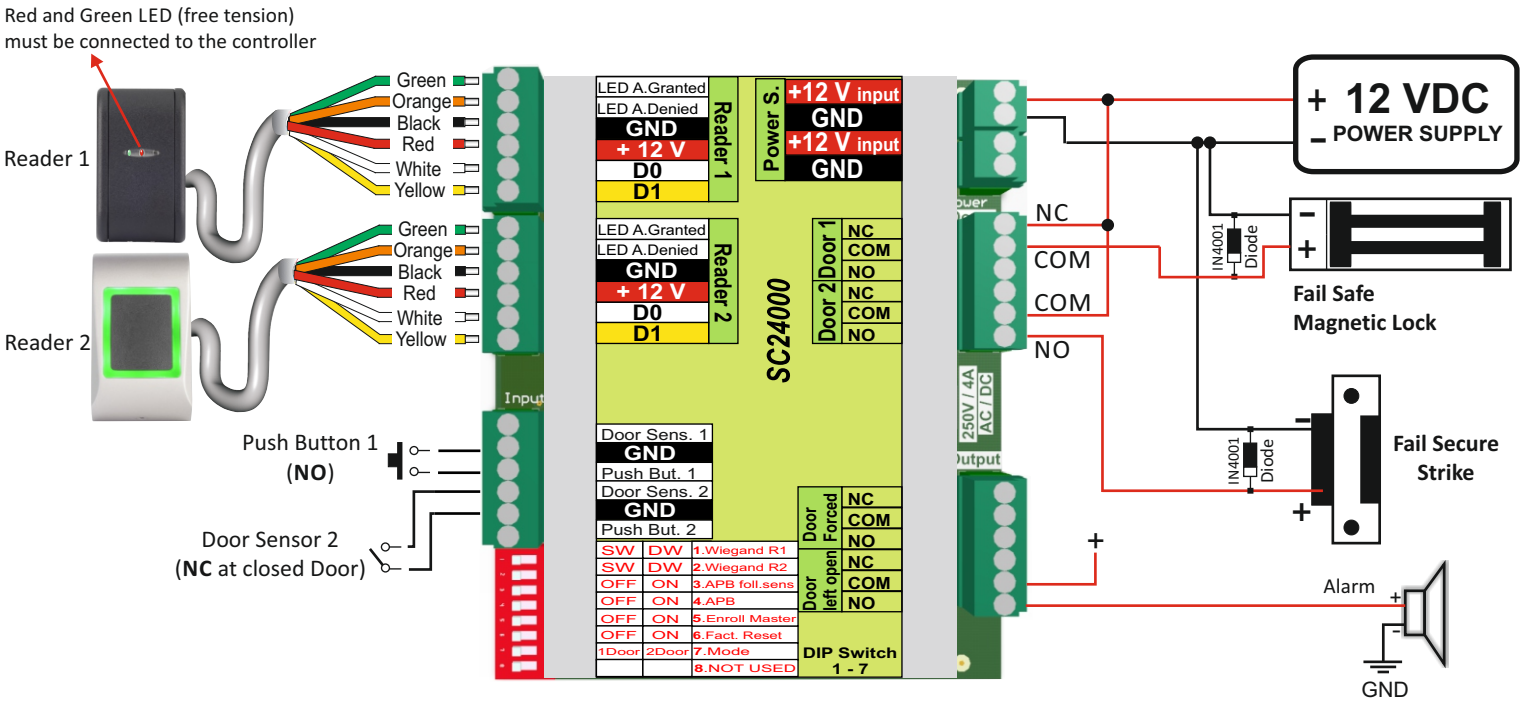
	1	2	3	4	5	6	7	8
ON	Double Wiegand on Reader 1	Double Wiegand on Reader 2	APB follow sensor ON	Anti Pass Back option ON	Enroll Master Card ON	Factory Reset ON	2 DOOR Mode	Not used
OFF	Single Wiegand on Reader 1	Single Wiegand on Reader 2	APB follow sensor OFF	Anti Pass Back option OFF	Enroll Master Card OFF	Factory Reset OFF	1 DOOR Mode	Not used

NOTE: Double wiegand is used for double security(Card + PIN Code). When LCSP-EM/MF is connected and LCSP-EM/MF is set in double security mode, put the dipswitch 1 or 2 to position ON.

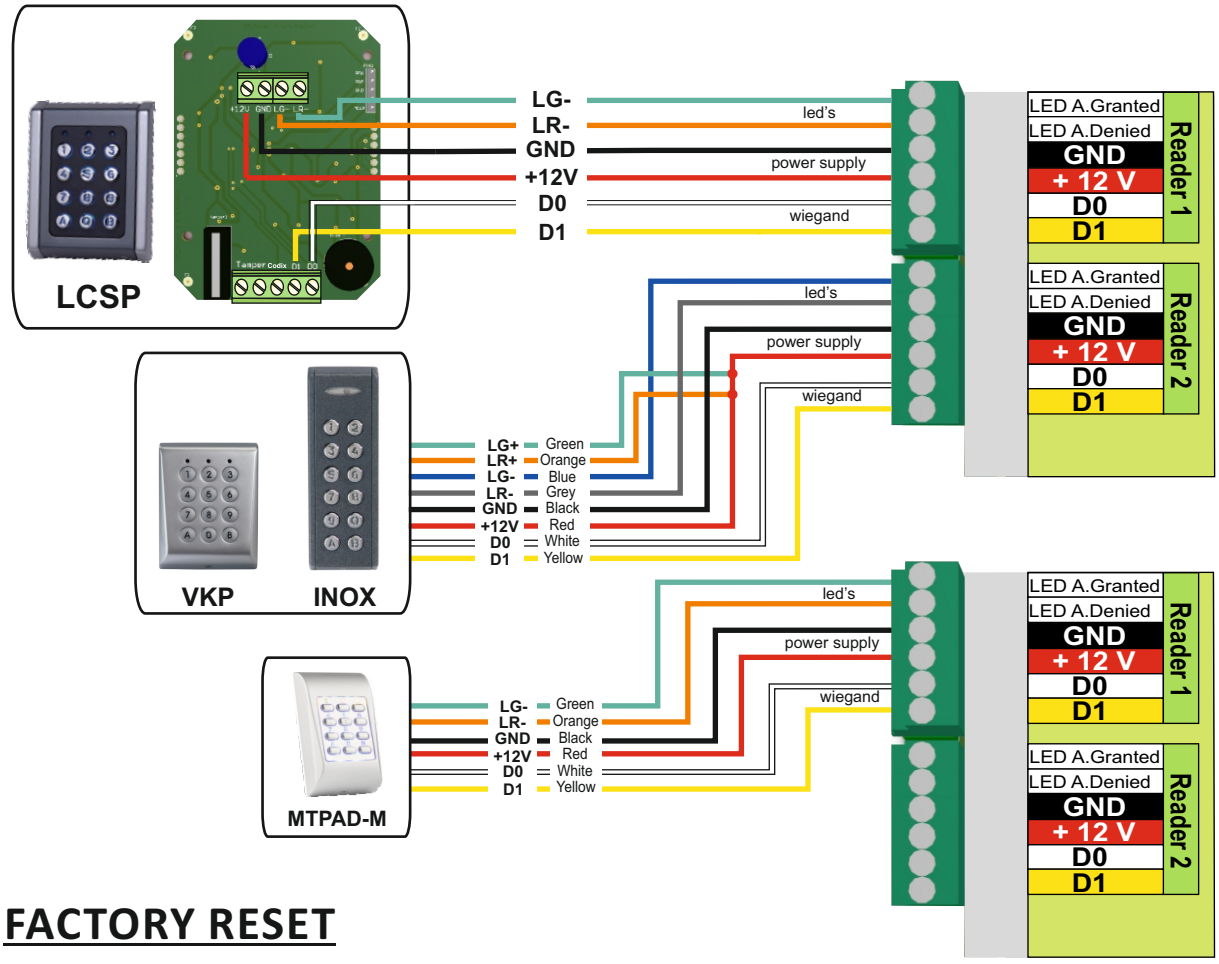
NOTE: If Door sensors are not used, dipswitch No.3 should stay OFF.

NOTE: In 1 Door Mode, both readers are assigned to Door1. User Card can be programmed to trigger both relays, which gives the option for the second door relay to be used as alarm.

WIRING



Wiring Kepads LCSP, VKP, INOX, MTPAD-M



FACTORY RESET

1. Turn OFF the power Supply
2. Put dip switch no.6 in to the ON position
3. Turn ON the power supply -
4. Put dip switch no.6 in to the OFF position -

	3 LED Illumination	*Halo Illumination*
3. Turn ON the power supply -	Green LED - ON, Red LED - BLINKS *Wait until Red LED switches off*	Green LED - BLINKS *Wait until Green LED turns solid*
4. Put dip switch no.6 in to the OFF position -	Green LED - OFF, RED LED - BLINKS *Wait until Red LED switches off*	Red and Amber LED - BLINK *Wait until Amber LED turns solid*

PROGRAMMING

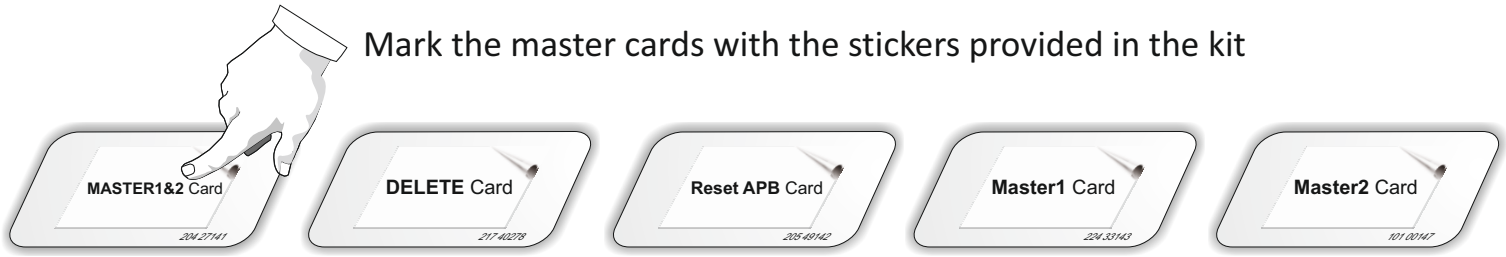
IMPORTANT:
Connect Proximity Reader(Wiegand26 or Wiegand34) to **READER 1** Input, including its free tension LED's.The Reader's Free tension LED's are used for visual indication during the programming process.

Enrolling Master cards

1. Turn OFF the power supply
2. Put dip switch no.5 in to the ON position
3. Turn ON the power supply - Red LED - ON
4. On **Reader1**, present the master cards in this order: **Master1&2, Delete, Reset APB, Master1, Master2**

Systems can work without all master cards inserted (ex. Only Master, Delete and APB can be active).
Minimum number of master cards required is two (Master1&2 and Delete)

5. Put dip switch no.5 in to the OFF position (SC24000 will return to operational mode)



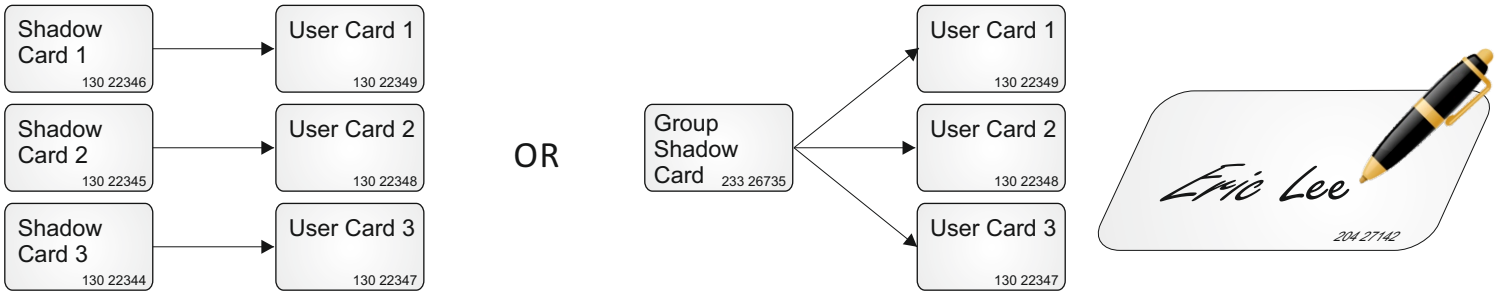
NOTE: Changing Master and Delete Card follows the same procedure. Old Master/Delete Cards are deleted automatically.

Enrol a User

		3 LED Illumination	Halo Illumination
1. Present Master Card	-	Green LED - ON, Red LED - ON	Amber LED - OFF
2. Present Shadow Card	-	Green LED - ON, Red LED - OFF	Green LED - ON
3. Present User Card (or multiple User cards)	-	Green LED - Blinks twice on each card	Green LED - Blinks twice on each card
4. Present Master Card 3 times	-	Green LED - OFF, Red LED - OFF	Amber LED - ON

Note: If the user is enrolled using **MASTER1** card, the same user will have access only on **DOOR1.**
If the user is enrolled using **MASTER2** card, the same user will have access only on **DOOR2**.
If the user is enrolled using **MASTER1&2** card, the same user will have access on **DOOR1** and **DOOR2**.

NOTE: Shadow cards can be issued for 1 user or for a group of users. In both cases, write the name of the user on the shadow card and keep all of the shadow cards in a safe place.
NOTE: If more than one user is associated to the same shadow card, deleting using that shadow card will result in deletion of all the Users associated with that shadow card.
NOTE: If a shadow card needs to be changed, just enroll the same User with a different Shadow card.



Enrol Sequential Block of Cards

Enroll a Block of 100 sequential cards assigned to Door1:

Note: There is no sequence of numbering on Mifare cards

Note: Before enrolling blocks of cards, make sure that the numbers are in sequence and that the sequence is smaller than 100.

	3 LED Illumination	*Halo Illumination*
1. Present Master1 Card	- Green LED - ON, Red LED - ON	Amber LED - OFF
2. Present Shadow Card	- Green LED - ON, Red LED - OFF	Green LED - ON
3. Present the beginning card of the block 3 times	- Green LED - Blinks twice	Green LED - Blink, Amber LED - Blink
4. Present the ending card of the block 3 times	- Green LED - Blinks twice	Green LED - ON
5. Present Master1 Card	- Green LED - OFF, Red LED - OFF	Amber LED - ON

Delete a User with its shadow card

1. Present Delete Card	- Green LED - ON, Red LED - ON	Amber LED - OFF
2. Present Shadow Card (or multiple shadow cards)	- Green LED - Blinks twice, Red LED - ON	Red LED - Blinks twice
3. Present Delete Card	- Green LED - OFF, Red LED - OFF	Amber LED - ON

Note: By deleting using a shadow card, all the Users associated with that shadow card will be deleted.

Delete a User with user card

1. Present Delete Card	- Green LED - ON, Red LED - ON	Amber LED - OFF
2. Present User Card (or multiple user cards)	- Green LED - Blinks twice, Red LED - ON	Red LED - Blinks twice
3. Present Delete Card	- Green LED - OFF, Red LED - OFF	Amber LED - ON

Delete ALL Users

1. Present Delete Card	- Green LED - ON, Red LED - ON	Amber LED - OFF
2. Present Master 1&2 Card 3 times	- Green LED - ON, Red LED - ON, Amber LED Blinks once	Red LED - ON
3. Present Delete Card	- Green LED - OFF, Red LED blinks (7 secs)	Amber LED - ON, Red LED blinks (7 secs)

Delete ALL Users assigned to DOOR1

1. Present Delete Card	- Green LED - ON, Red LED - ON	Amber LED - OFF
2. Present Master 1 Card 2 times	- Green LED - ON, red LED - ON, Amber LED Blinks once	
3. Present Master 1 Card 1 time	- Green LED - OFF, Red LED - ON	Red LED - ON
4. Present Delete Card	- Green LED - OFF, Red LED - OFF	Amber LED - ON

Delete ALL Users assigned to DOOR2

1. Present Delete Card	- Green LED - ON, Red LED - ON	Amber LED - OFF
2. Present Master 2 Card 2 times	- Green LED - ON, red LED - ON, Amber LED Blinks once	
3. Present Master 2 Card 1 time	- Green LED - OFF, Red LED - ON	Red LED - ON
4. Present Delete Card	- Green LED - OFF, Red LED - OFF	Amber LED - ON

Reset All APB statuses

1. Present Reset APB card on any reader

Set Door1 Open Time

		3 LED Illumination	*Halo Illumination*
1. Present Master 1 Card 3 times	-	Green LED - OFF, Red LED - ON	Red LED - ON
2. Present Delete Card	-	Green LED - Blinks twice, Red LED - ON	Red LED - Blinks twice
Present the card X times for X seconds (Door open Time)			
3. Present Master 1 Card	-	Green LED - OFF, Red LED - OFF	Amber LED - ON

Set Door1 in Toggle (ON/OFF) Mode

1. Present Master 1 Card 3 times	-	Green LED - OFF, Red LED - ON	Red LED - ON
2. Present Master 1 Card	-	Green LED - OFF, Red LED - OFF	Amber LED - ON

Set Door2 Open Time

1. Present Master 2 Card 3 times	-	Green LED - OFF, Red LED - ON	Red LED - ON
2. Present Delete Card	-	Green LED - Blinks twice, Red LED - ON	Red LED - Blinks twice
Present the card X times for X seconds (Door open Time)			
3. Present Master 2 Card	-	Green LED - OFF, Red LED - OFF	Amber LED - ON

Set Door2 in Toggle (ON/OFF) Mode

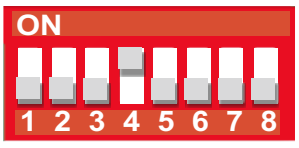
1. Present Master 2 Card 3 times	-	Green LED - OFF, Red LED - ON	Red LED - ON
2. Present Master 2 Card	-	Green LED - OFF, Red LED - OFF	Amber LED - ON

Set door left open Alarm

To set **30 seconds** for door left open time:

1. Present Master1&2 Card 3 times	-	Green LED - OFF, Red LED - ON	Red LED - ON
2. Present Delete Card 3 times	-	Green LED - Blinks twice, Red LED - ON	Red LED - Blinks twice
(3 x 10 sec. = 30 sec.)			
3. Present Master1&2 Card	-	Green LED - OFF, Red LED - OFF	Amber LED - ON
To disable the alarm:			
Present Master1&2 Card 3 times	-	Red LED - ON	Red LED - ON
Present Master1&2 Card	-	Red LED - OFF	Amber LED - ON

Anti Pass Back



DipSwitch No.4 - ON

To enable the Anti Pass Back option simply put dip switch No.4 in to the ON position.

If Door sensors are not being used at the installation, keep dip switch No.3 in the OFF position. In this case, the APB Status shall be determined by a card being presented regardless of wether the door is opened or not.

If Door sensors are used, then dip switch No.3 should be in the ON position. In this case, the APB status is determined by the door status (was the door open or not).

EXAMPLES

Example 1:

Create a 1 Door installation with 1 Reader. Enroll 2 users to open the door.

DIP switch settings: ***all OFF***

1. Present Master1 Card
2. Present Shadow Card
3. Present User Card 1
4. Present User Card 2
4. Present Master1 Card

Example 2:

Create a 1 Door installation with IN and OUT Readers. Enroll User1 with access to Door1 in Anti Pass Back Mode and additional User2 that will not have access to Door1, but will be able to turn the lights in the office ON/OFF with relay 2.

DIP switch settings:
No.4-ON, all others OFF

1. Present Master1 Card
2. Present Shadow Card 1
3. Present User Card 1
4. Present Master1 Card

User1 with Access to Door1

Relay connection:
Door relay1 - Door Lock; Door Relay 2 - Lights Main Switch

1. Present Master2 Card
2. Present Shadow Card 2
3. Present User Card 2
4. Present Master2 Card

User2 able to activate Door Relay2 (Lights), but not Door Relay 1.

1. Present Master 2 Card 3 times
2. Present Master 2 Card

Door relay 2 to work in ON/OFF Mode

Example 3:

Create a 2 Door installation. Enroll User 1 to open only DOOR1 and User 2 to open DOOR2 and User3 to open Door1 and Door2.

DIP switch settings:
No.7-ON, all others OFF

1. Present Master1 Card
2. Present Shadow Card 1
3. Present User Card 1
4. Present Master1 Card

User1 with Access to Door1

Relay connection:
Door relay1 - Door Lock; Door Relay 2 - Door Lock

1. Present Master2 Card
2. Present Shadow Card 2
3. Present User Card 2
4. Present Master2 Card

User2 with Access to Door2

1. Present Master1&2 Card
2. Present Shadow Card 3
3. Present User Card 3
4. Present Master1&2 Card

User3 with Access to Door1 and Door2

PROGRAMMING WITH KEYPAD(LCSP, VKP, INOX,MTPAD-M)

The programming using a Keypad is the **same** as programming with a proximity reader.
Please refer to programming on **pages 4 to 7**, just replace the word "**Card**" with "**PIN Code**"

Keypad settings

Set the keypad to be compatible with SC24000 Standalone Controller

Press **B+000000** to enter the menu
Press **6**
Press **1**
Press **A** to exit the menu

This will set the Keypad in "Wiegand26 bit Normal", "4 Digits PIN Code" and "Card or PIN Code" mode(LCSP).
For other settings (like changing PIN Code length), please refer to the keypad's manual.

PROGRAMMING IN DOUBLE SECURITY MODE(LCSP)

Double Security Mode is possible only with double technology readers (proximity + keypad, LCSP)
Programming is the same, just replace the word ‘Card’ with ‘Card + PIN code’.

1. If an LCSP is connected to Reader1 Input put dip switch 1 in the ON position
   If an LCSP is connected to Reader2 Input put dip switch2 in the ON position

2. Set the keypad to double security mode

   Press **B+000000** to enter the menu
   Press **6**
   Press **4**
   Press **5**
   Press **3**
   Press **A** to exit the menu

   This will set the Keypad in “Wiegand26 bit Double”, “4 Digits PIN Code” and “Card and PIN Code” mode.

TROUBLESHOOTING

Reader fails to read card(s) / PIN
1. Check the correct voltage is present on the input terminals of the controller and reader(s) - 12V dc.
2. Check Wiegand connections D0 & D1 are ok and not crossed. Whilst the reader is connected D0 and D1 should both measure approx 4Vdc. The terminals on the reader (D0 & D10) with no connection to the controller should sit at 5V dc.

Red / Green reader LED not functioning
1. Continuity test LG and LR connections between controller and reader.

Lock release not operating when the programmed card is presented
1. Check that the relay on the controller is energising when either a valid card or PIN code is presented to a reader (LED green) or a push to exit terminal is activated.
2. Check the correct voltage is present on the input terminals of the controller 12V dc.
3. Check continuity throughout the lock circuit and measure across the lock terminals to check wether 12V dc is present at the correct time.

Cards work on 1 reader but not the other
1. Check the card / PIN in question is programmed to operate both doors.
2. Check anti-pass back settings (dip switch 4).

Relay operates but does not return back to its previous state
1. Check the relay operating mode is not set to latch.

Both readers fail to operate relay 1 in “1 door” mode
1. Check dip switch 7 is set OFF.

Anti-pass back fails to operate
1. Check anti-pass back is enabled by setting dip switch 4 to the ON position.
2. If using door contacts ensure they are normally closed sensors and that dip switch 3 is set to ON.
3. If no door sensors are being used ensure dip switch 3 is set to OFF and both door sensor terminals are shorted to GND.

Enrolling blocks of up to 100 cards fails
1. Ensure the block of cards to be enrolled are in sequence and that the sequence does not exceed 100.

SYSTEM PARTS

Controller	
SC24000	2 Entrance controller (up to 4000 users)
Readers	
MTPXS-M	Silver surface Wiegand proximity reader (92mm x 51mm x 25mm) - IP65
MTPADS-M	Silver surface Wiegand coded access Keypad (92mm x 51mm x 25mm) - IP65
LCSP-73C	Grey/chrome surface combined Wiegand proximity and coded access keypad (120mm x 90mm x 40mm) - IP65
MINI-MF-W26	Mifare Wiegand surface reader (Classic, Ultralight & Desfire - 13.56MHz) (90mm x 51mm x 17mm) - IP67
Touch to exit buttons	
MTTS-EXIT	Silver surface mount touch to exit switch 12/24 AC or DC (92mm x 51mm x 25mm) - IP66
Cards / Card Packs	
PBX-2	Proximity card
PBX-2/10PK	10 Pack of proximity cards
PBX-2/20PK	20 Pack of proximity cards
PBX-2/40PK	40 pack of proximity cards
Power Supply	
SP29	13.8v DC Boxed Power supply (2 Amp)

MTPXS-M

MTPADS-M

MINI-MF-W26

MTTS-EXIT

LCSP-73C

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