RICHMOND ROLLING SOLUTIONS

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GTR057
Hard-Wire Keypad

Compatible with the following Richmond motors.		
Sliding / Cantilever Motors		
GTR156 & GTR212 ✓	GTR061 & GTR207 ✓	GTR510 ✓
Swing Motors		
GTR099 ✓	GTR058 ✓	GTR062 & GTR078 ✓
GTR500 & GTR501 ✓	GTR502 & GTR503 ✓	
* Compatible with a large range of other manufacturers gate/garage openers *		

Technical Specs:

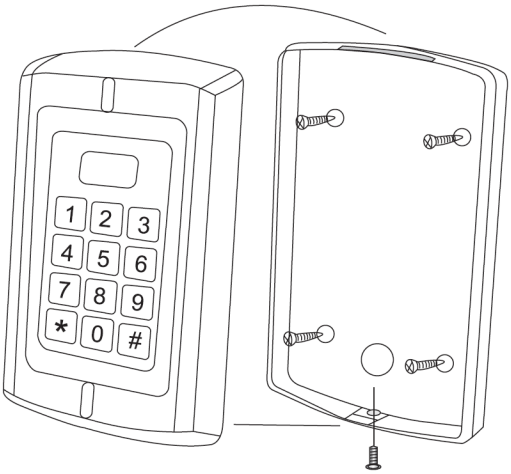
- **Power Supply: 12-24vDC / 12-18vAC**
- **Connection Cable: 13-core – 500mm length**
  - **4-core minimum for basic operation.**
- **Current draw: 25mA (standby) 60mA (active)**
- **Relay output: NO (normally open)**
  - **Adjustable Timer: 1-99 seconds**
- **Users: Up to 1200 (Zone 1 x 1100 / Zone 2 x 100)**
- **PIN Length: 4-6 digits**
- **Card Type: EM Card (125KHz)**
  - **Read distance: 3-6cm**
- **Operating temperature: -10°C to 50°C**
- **Material: Zinc Alloy – Electroplated**
- **IP65 rating. Suitable for outdoor use.**
- **Dimensions: 128mm(L) x 82mm(W) x 28mm(D)**
  - **Weight 650g**
- **Connection Cables: 500mm x 13-core**
  - **4-core minimum for basic operation.**
- **Additional Connections: Electric Lock / Exit Button / DOTL / External Alarm**
- **Lock Output Load: Max 2A**
- **Alarm Output Load: Max 20A**
  - **Adjustable: 0-3 minutes**
- **GTR095 Weatherproof Cover available (Sold separately)**

Box Contents:

- **1 x Digital Keypad**
- **1 x User Manual**
- **1 x Mini Screwdriver**
- **4 x Rubber Grommets**
- **4 x Self-Tapping Screws**

Quick Start User Guide

Installation



1. Remove the back cover from the keypad using the supplied screwdriver.
2. Drill four holes on the wall for the screws and 1 hole for the cable.
3. Fix the back cover firmly on the wall with 4 flat head screws.
4. Thread the cable through the cable hole.
5. Attach the keypad to the back.

Wiring

Red wire connects to positive power on your opener.
Black connects to negative power or GDN on your opener.
White wire connects to COM or Push-Button terminal.
Blue wire connects to NO / OSC or Push-Button terminal.

Quick Reference PIN Programming

*Enter programming before setting or changing a PIN
*Set a USER ID and then create a PIN for that user.

This allows different users to be added or removed as needed.
If necessary, record the users (and their PIN) for easy reference.

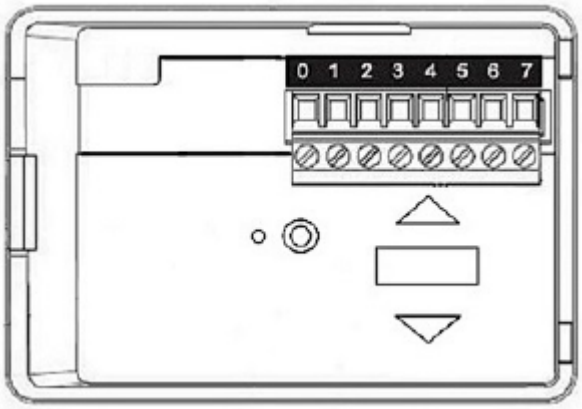
To enter programming mode	✱ *master code* **#** 888888 is the default factory master code
To change the master code	**0** *new code* **#** *new code* **#** The new code can be any 6 digits.
To exit programming mode	✱ x 2
Note: The functions below can be set AFTER you have entered into programming mode.	
To add a PIN user The PIN is any 4-6 digits between 0000-999999 *Note: PIN 1234 is not available for security reasons.	For Zone 1: **1** *user ID number* **#** *PIN* **#** The ID number is any number between 1-1100 *No zero required before USER ID eg: User #10 is entered as 10 (not 0010)
To OPEN/CLOSE your gate/garage using a PIN	Enter the PIN then press **#**
To delete a PIN user	**2** *user ID number* **#**

Connecting the GTR057 to a non-Richmond Opener

Below is an example of how the GTR057 Hard-Wired Keypad will wire into a non-Richmond opener.

1. To power the Hard-Wired Keypad, you will need a 12-24-volt DC or 12-18-volt AC power supply.
   In the example below, this is sourced via Terminals 0 and 1
2. To operate the gate/garage opener, the Hard-Wired Keypad will need to connect into the PC board.
   Most residential openers will have an input for an external push button.
   In the example below, terminals 2 & 5 are used for the push button. This will be the input for your Hard-Wired Keypad.

For the below example, the GTR131 Smart Wi-Fi Opener would be wired as follows:



Gate/Garage Automated Opener Terminals		
Terminal	Function	Description
0	Ground	24volt DC Negative
1	24vDC+	24volt DC Positive
2	O/S/C or Open	Dry Contact (Open/Stop/Close)
3	Stop	Dry Contact (Stop)
4	Close	Dry Contact (Close)
5	COM	Dry Contact Common Terminal
6		Not used
7		Not used

Connection

GTR057 Red into Terminal 1 (24vDC+)

GTR057 Black into Terminal 0 (24vDC-)

GTR057 White into Terminal 5 (COM)

GTR057 Blue into Terminal 2 (O/S/C)

Wire Colours and Function		
Wire Colour	**Function**	**Description**
Red	AC & DC Positive	12-24v DC Positive / 12-18v AC
Black	AC & DC Negative	12-24v DC Negative / 12-18v AC
Blue	NO1	Normally Open 1
White	COM1	Common 1
Green	NC1	Normally Closed 1
Blue & Black	NO2	Normally Open 2
White & Black	COM2	Common 2
Green & Black	NC2	Normally Closed 2
Grey & Black	GND	Negative Pole
Grey	ALARM	Alarm Negative
Yellow	OPEN1	Request to Exit Button – Zone 1
Yellow & Black	OPEN2	Request to Exit Button – Zone 2
Brown	D-IN	Door Status Detecting

Functions Status – Lights and Sounds				
Function Status	**Red Light**	**Green Light**	**Blue Light**	**Sound Alert**
Power Turned ON	Solid Light			Long Beep
Standby Mode	Flashes Slowly			
Press Keypad				Short Beep
Successful PIN Entry		Solid Light		Short Beep
Unsuccessful PIN Entry				3 Short Beeps
Enter Programming Mode	Solid Light	Flashes Once		Long Beep
In Programming Mode	Solid Light			
Function Change Successful			Solid Light	
Exit Programming Mode	Flashes Slowly			Long Beep

Reset to Factory Default

To reset the keypad to factory default.

- Remove power for 10 seconds.
- Press and hold ✱ and reconnect power.
- Hold ✱ until you hear three beeps (two short, one long).
- This means you have successfully reset to the factory default.

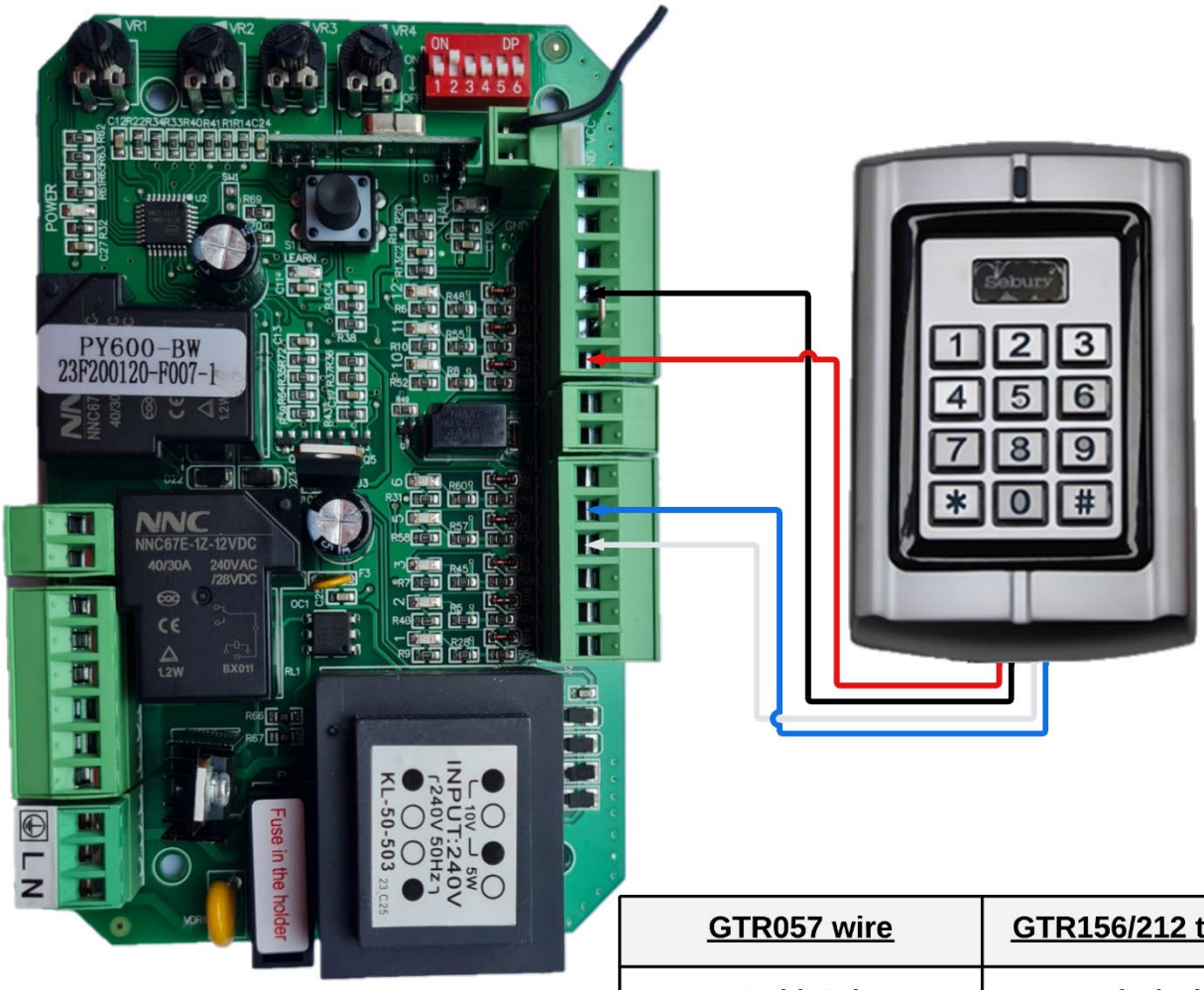
*Please Note: If you reset to factory default, the user ID's are still retained.

To Delete all Users

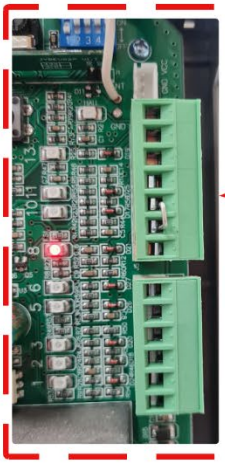
Delete all users (Zone 1)

- Enter programming mode.
- Enter the following sequence: 2 – 0000 - #

GTR156 or GTR212 slide motor connection



GTR057 wire	GTR156/212 terminal
Red (DC+)	Terminal 9 (+15V)
Black (DC-)	Terminal 11 (GND)
White (COM1)	Terminal 5 (COM)
Blue (NO1)	Terminal 6 (O/S/C)

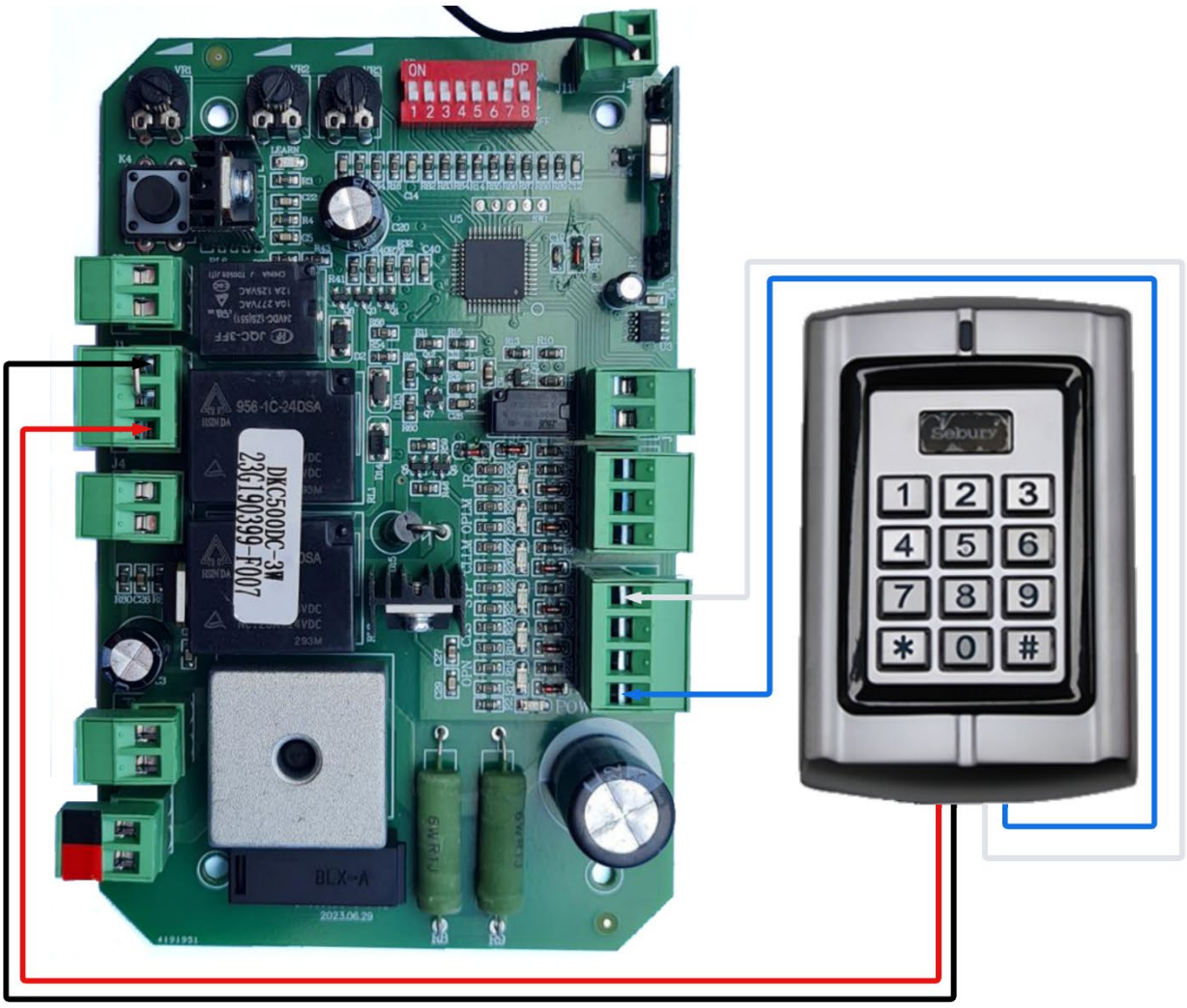


Previous PC Board Version

13 Terminal on Right-Hand Side

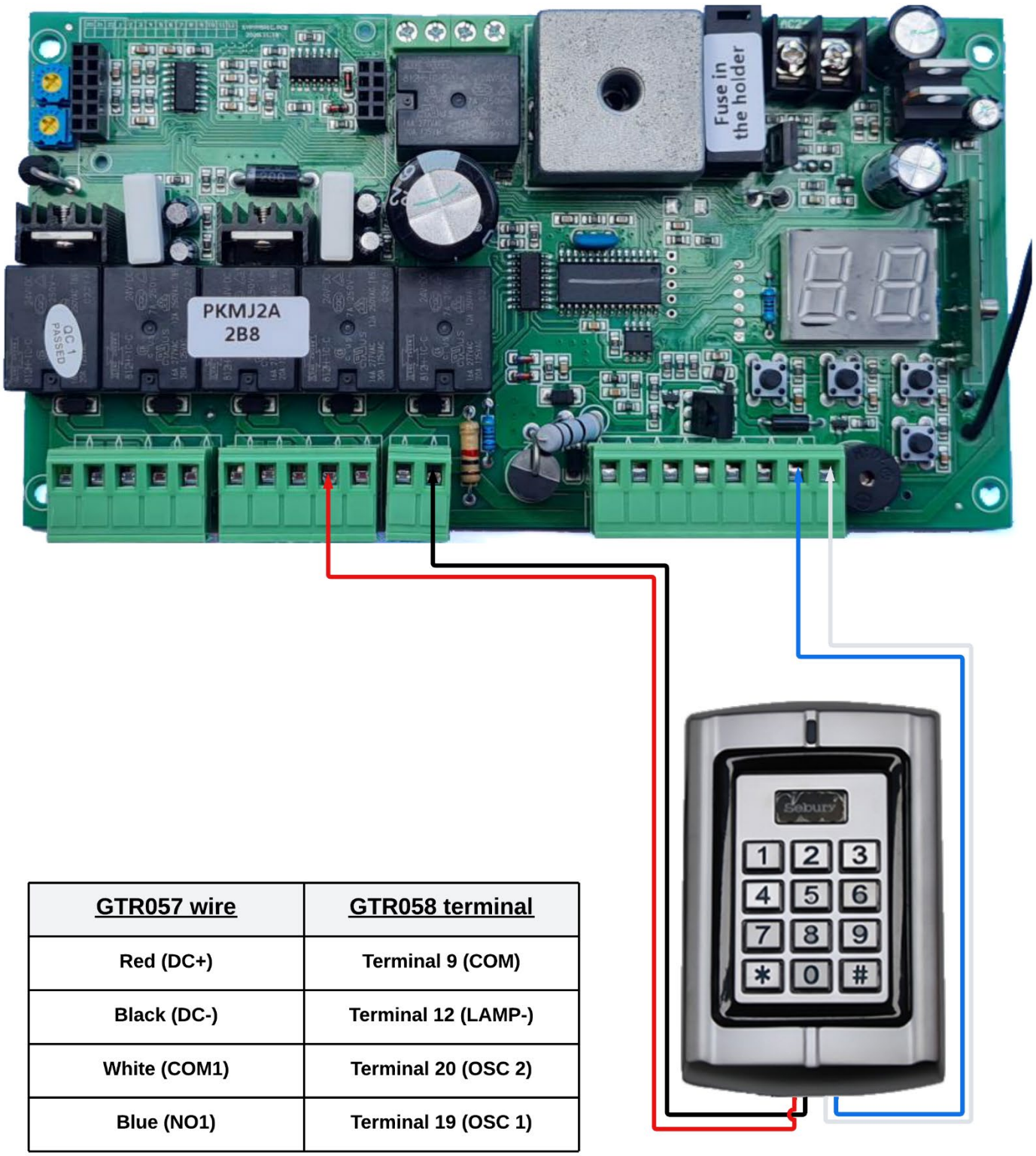
GTR057 terminal	GTR156/212 terminal
DC 9-24V +	Terminal 7 (+15v)
DC 9-24V -	Terminal 9 (GND)
COM	Terminal 5 (COM)
N/O	Terminal 6 (O/S/C)

GTR061 or GTR207 slide motor connection



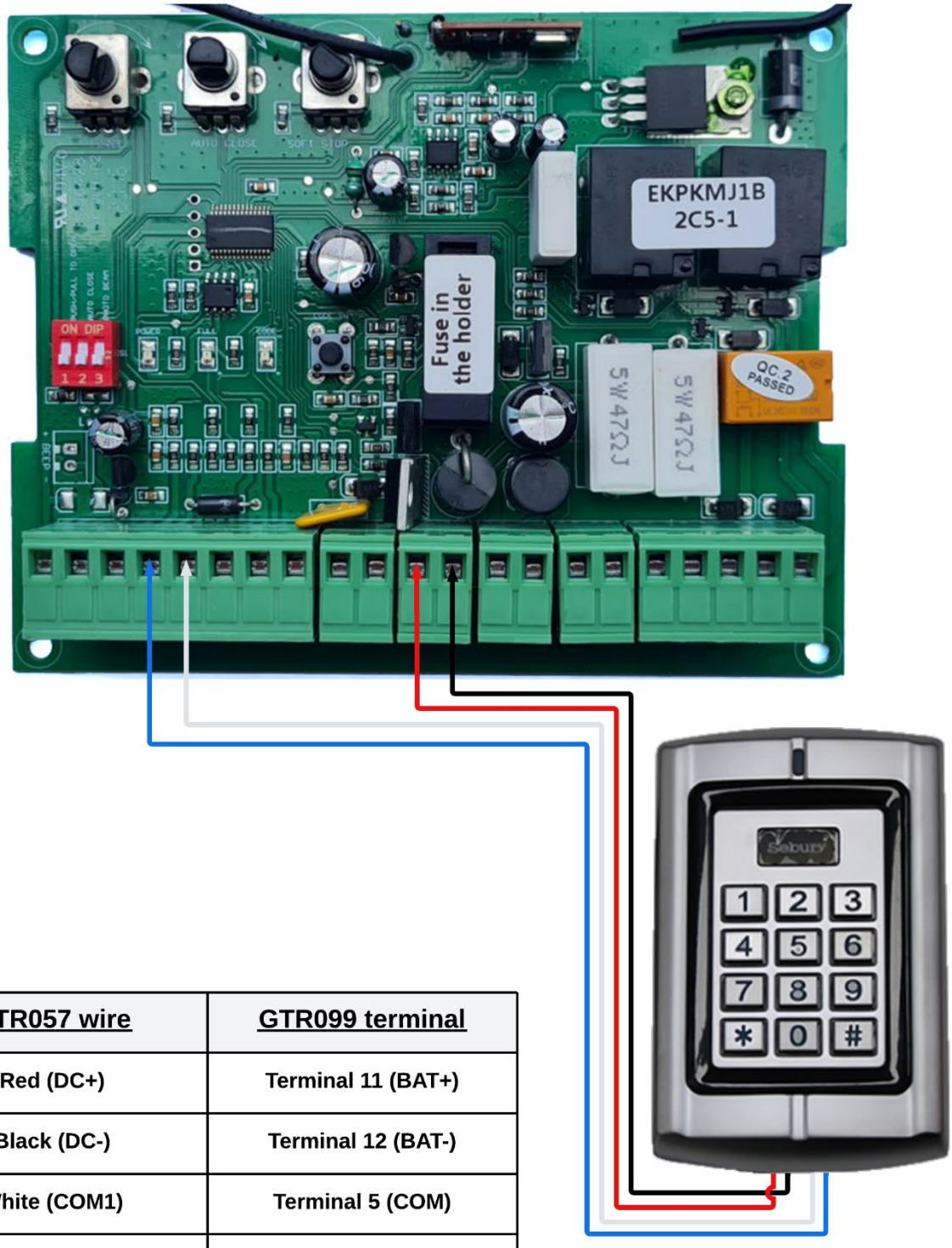
GTR057 wire	GTR061/207 terminal
Red (DC+)	Terminal 7 (24vDC)
Black (DC-)	Terminal 5 (GND)
White (COM1)	Terminal COM (COM)
Blue (NO1)	Terminal OPN (O/S/C)

GTR058 double swing connection



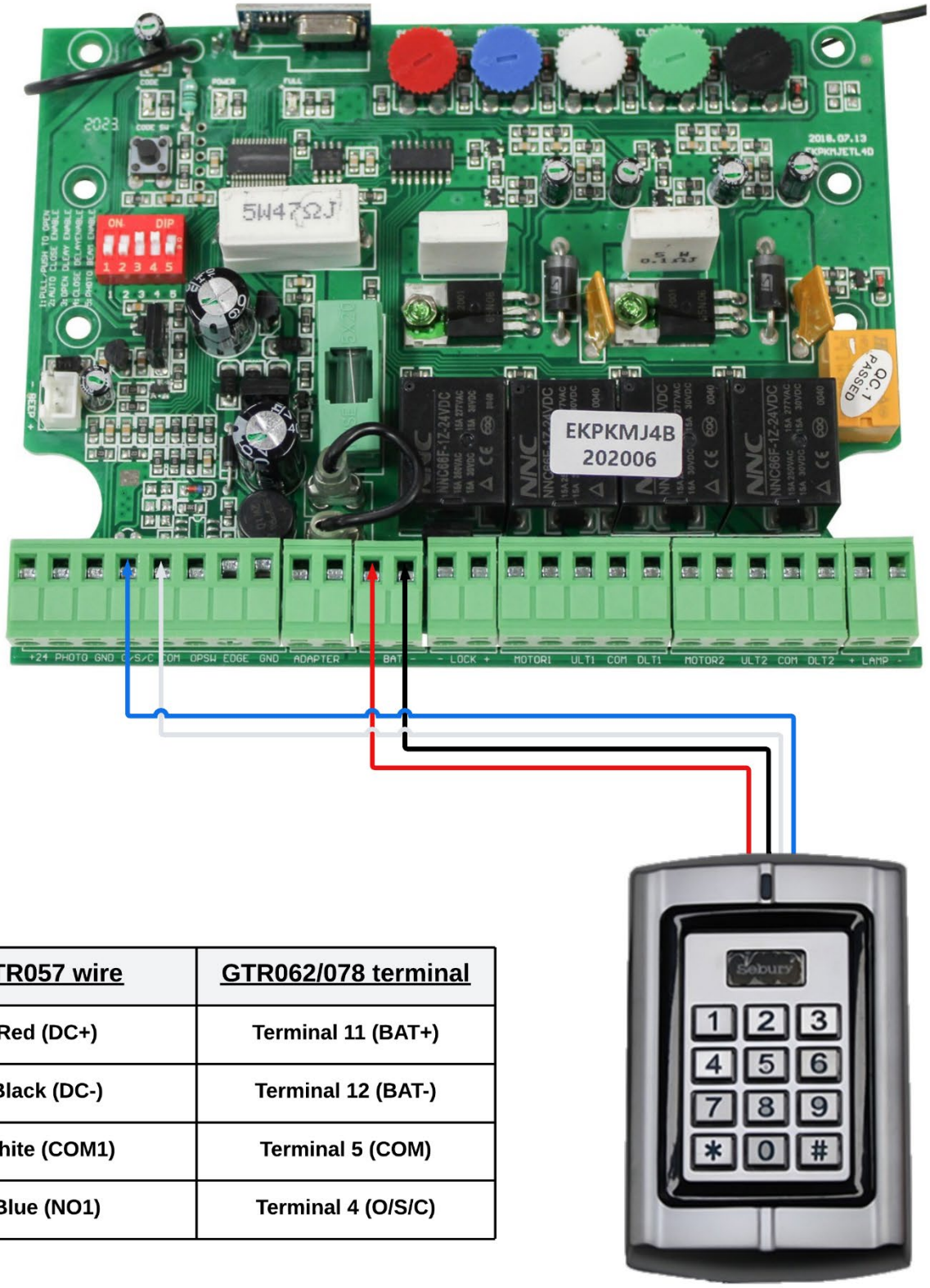
GTR057 wire	GTR058 terminal
Red (DC+)	Terminal 9 (COM)
Black (DC-)	Terminal 12 (LAMP-)
White (COM1)	Terminal 20 (OSC 2)
Blue (NO1)	Terminal 19 (OSC 1)

GTR099 single swing connection



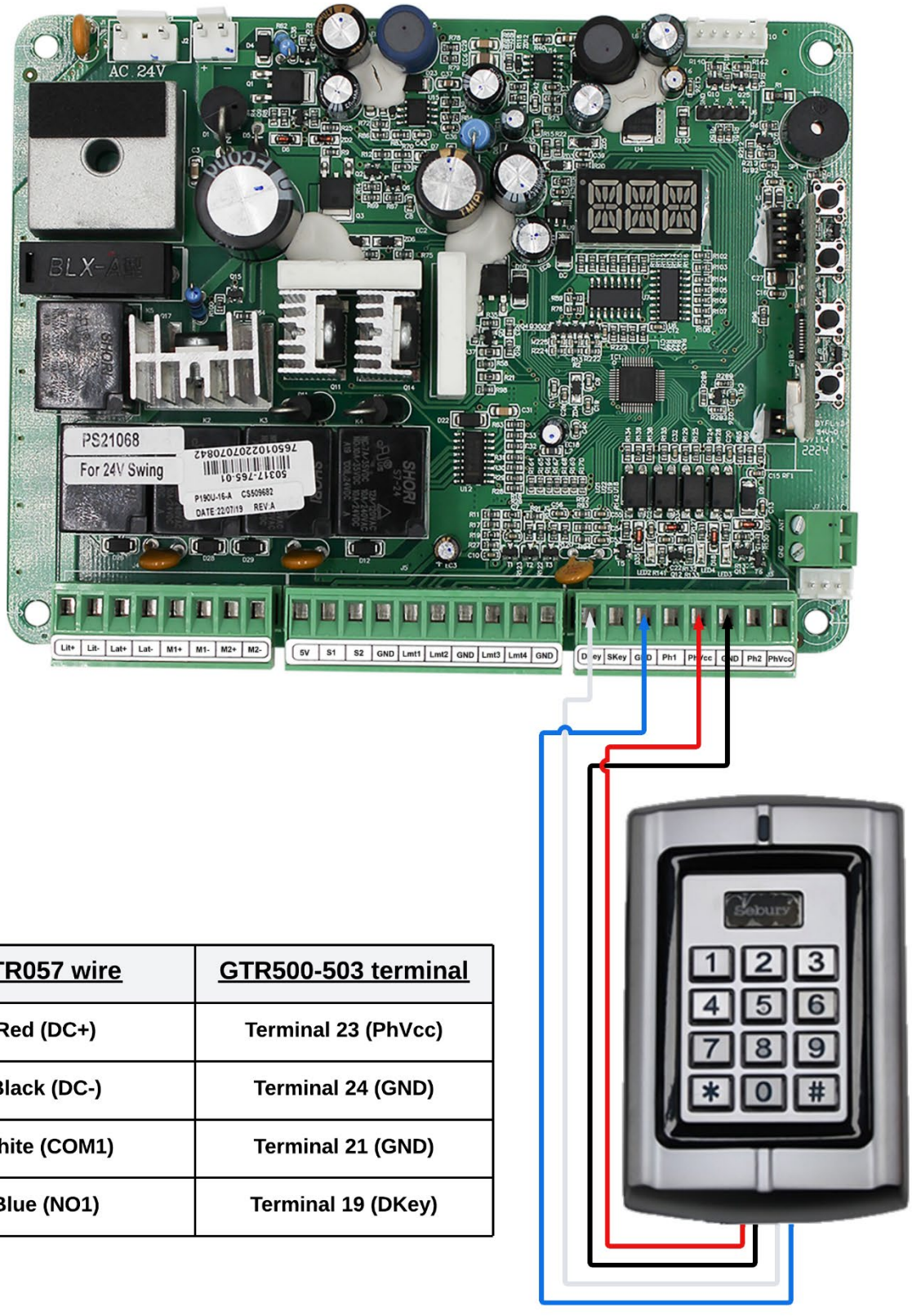
GTR057 wire	GTR099 terminal
Red (DC+)	Terminal 11 (BAT+)
Black (DC-)	Terminal 12 (BAT-)
White (COM1)	Terminal 5 (COM)
Blue (NO1)	Terminal 4 (O/S/C)

GTR062 or GTR078 solar swing connection



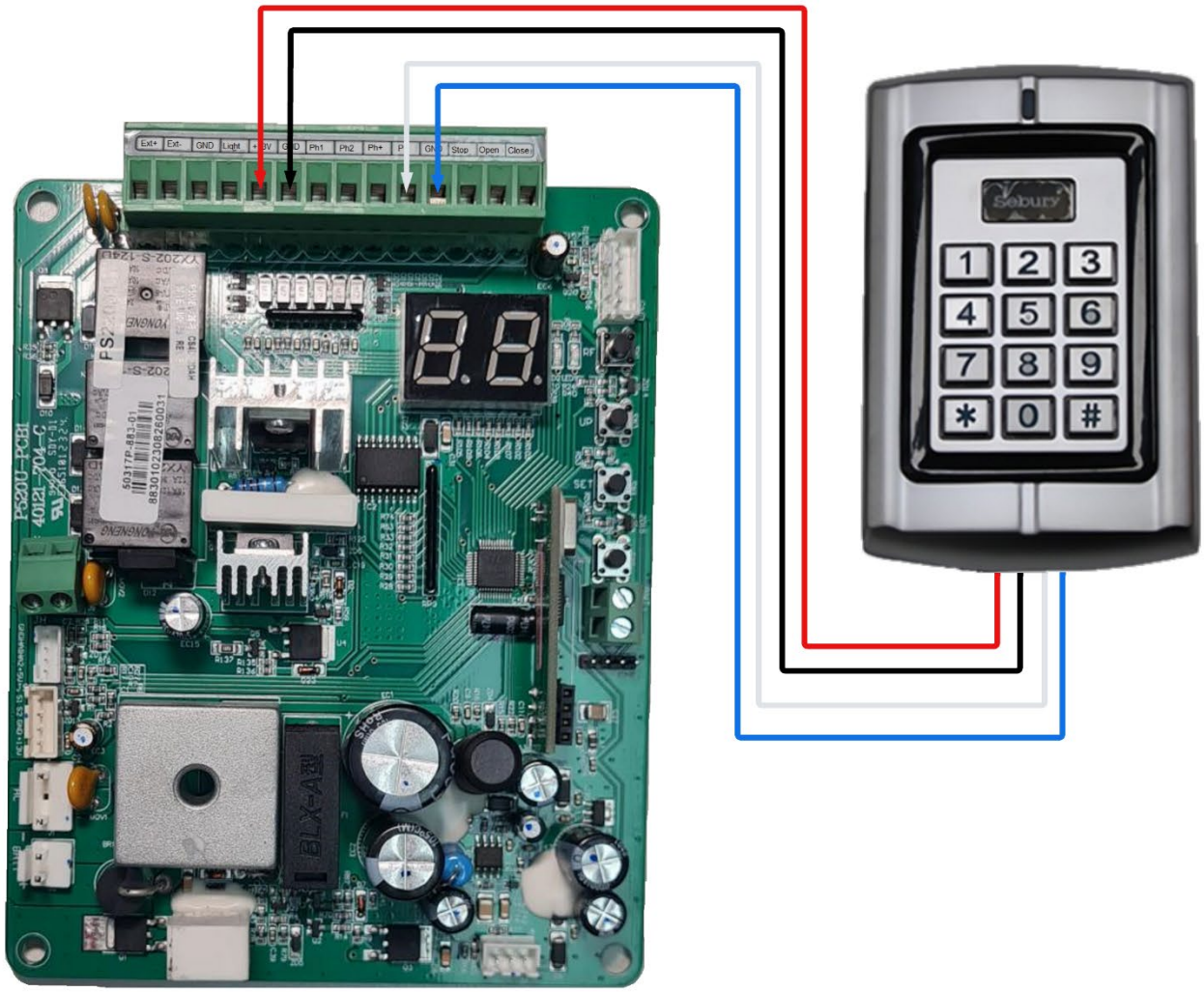
GTR057 wire	GTR062/078 terminal
Red (DC+)	Terminal 11 (BAT+)
Black (DC-)	Terminal 12 (BAT-)
White (COM1)	Terminal 5 (COM)
Blue (NO1)	Terminal 4 (O/S/C)

GTR500 to GTR503 swing and articulated connection



GTR057 wire	GTR500-503 terminal
Red (DC+)	Terminal 23 (PhVcc)
Black (DC-)	Terminal 24 (GND)
White (COM1)	Terminal 21 (GND)
Blue (NO1)	Terminal 19 (DKey)

GTR510 slide motor connection



GTR098 terminal	GTR510 terminal
Red (DC+)	Terminal 5 (+13V)
Black (DC-)	Terminal 6 (GND)
White (COM1)	Terminal 11 (GND)
Blue (NO1)	Terminal 10 (PB)

Additional Functions

Dual Zone Operation

The GTR057 is a dual relay keypad that can operate two systems individually.
Zone 1 can be set up to support up to 1100 users with individual PIN or CARD access.
Zone 2 can be set up to support up to 100 users with individual PIN or CARD access.

This allows two devices to be operated via a single keypad. It also

Both Zones operate via individual relays and individual wiring.

Relay Operation (Pulse mode and Toggle mode)

The two on board relays can operate in either Pulse Mode (suitable for access control)
or Toggle Mode (suitable for arming/disarming alarms, switching lights, machines…etc)
Pulse Mode – Authorised PIN or CARD entry will operate the relay for the pre-set relay pulse time.
Toggle Mode – Authorised PIN or CARD will change the relay state, and will not switch back until a PIN or CARD input is detected again.

Doorbell Function

Zone 2 can be used to operate a doorbell when there is no need to operate a second door/gate.
Keypad wiring COM2 and NO2 will connect to an external doorbell.
Press and hold # on the keypad to activate, the relay will trigger the doorbell until it is released.

Reset to Factory Default

To reset the keypad to factory default.

- Remove power for 10 seconds.
- Press and hold ✱ and reconnect power.
- Hold ✱ until you hear three beeps (two short, one long).
- This means you have successfully reset to the factory default.

*Please Note: If you reset to factory default, the user ID's are still retained.

To Delete all Users

Delete all users (Zone 1)

- Enter programming mode.
- Enter the following sequence: 2 – 0000 - #

Anti-Tamper Alarm

The GTR057 uses a LDR (light dependent resistor) as an anti-tamper alarm.
If the keypad is removed from the backing plate then an alarm will sound.

Anti-Duress

When the same card is used in Zone 1 and Zone 2, this card will be an anti-duress card.
Please note, you cannot set an anti-duress PIN.
When under coercion or threat, use this card. Both doors are opened. In the meantime, the external alarm alarms.
You can set a max of 100 anti-duress cards (The users of Zone 2).

GTR057 Detailed Programming Guide

User Settings

To enter programming mode	✱ *master code* # 888888 is the default factory master code
To exit programming mode	✱
Note: All the steps below must be done after entering the keypad into programming mode	
To change the master code	0 New Code # New code

Setting the working mode: PIN, Card or PIN & Card	
Authorise Activation via PIN or CARD	3 1 2 #, Zone 1 3 2 2 #, Zone 2 Entry is by either Card or PIN (Factory default setting)
Authorise Activation via PIN AND CARD	3 1 1 #, Zone 1 3 2 1 #, Zone 2 Entry is by Card and PIN together
Please Note: When adding users, if the Card or PIN user has been enrolled already, you cannot add it again on the same zone, or the device will give a bleep as error. Same PIN for both Zone 1 and Zone 2 is not valid, if so, the PIN will be only valid for Zone 1.	
Factory default setting: Card or PIN mode	
To set user for Zone 1 (3 1 2 #)	

Adding Individual Users

To add a PIN user The PIN is any 4-6 digits between 0000-999999 *Note: PIN 1234 is not available for security reasons.	For Zone 1: **1** *user ID number* **#** *PIN* **#** The ID number is any number between 1-1100 *No zero required before USER ID eg: User #10 is entered as 10 (not 0010)
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 (Note: This step must be done out of programming mode)	✱ *user ID number* **#** *old PIN* **#** *new PIN* **#** *new PIN* **#**
To add a card user (Method 1) This is an easy way to enter cards with auto-generated ID numbers. The ID number will start from 1 if no user has been programmed.	**1** *read card* **#** Cards can be added continuously without exiting programming mode.
To add a card user (Method 2)	**1** *user ID number* **#** *Card* **#** The ID number can be any number between 1-1100
To add a series of cards users (Block Enrolment). The card numbers must be consecutive (This operation is only for Zone 1)	5 User ID number # 8 digits Card number # Card quantity # Card quantity is between 1-1100 of the 8 digits card number, it is the last 8 digits on the card (Maximum 1100 cards can be enrolled at a stretch within 1 minute).
To delete card users by cards Note: Users can be deleted continuously without exiting programming mode	2 Read Card # The device can automatically identify the card of Zone 1 or Zone 2
To delete card users by user ID This can be used if a user has lost their card	2 User ID #
To delete card users by card number	9 Input 8 digits card number # Cards can be deleted continuously without exiting from programming mode.
To set user for Zone 2 (3 2 2 #)	
To set PIN user for Zone 2 is the same as Zone 1, only the ID number is 1101 – 1200 for Zone 2. To set Card user for Zone 2 is the same as Zone 1, with the exception of adding card users with auto-generated ID numbers (Method 1) as below.	
To add card users (Method 1) Auto-generated ID numbers	5 Read Card # Card can be added continuously

Setting User Access

Card and Pin Mode	
To set user for Zone 1 (3 1 1 #)	
To add a card and PIN user (The PIN is any 4-6 digits between 0000-999999 except for 1234 which is reserved)	Add the card user Press ✱ to exit from the programming mode then allocate the card a PIN as follows: ✱ Read card 1234# PIN# PIN#
To change a PIN in card and PIN mode (Method 1) Note: this is done outside of programming mode so a 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: This is done outside of programming mode so a user can undertake this themselves.	✱ User ID number# Old PIN# New PIN# New PIN#
To delete a Card and PIN user just delete the card	2 Read card # or 2 User ID #
To set users for Zone 2 (3 2 1 #) the operation is the same as Zone 1	
Card only Mode (in this mode, users can only be valid by card)	
To set Card user only	3 1 0 # , Zone 1 3 2 0 # , Zone 2 With this setting entry is by Card only
To delete ALL users	
Note: This is a dangerous option, so use with care	Delete al users of Zone 1: 2 0000 # Delete all users of Zone 2: 9 0000 #
To unlock the door (or change the relay state)	
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 the PIN

Pulse Mode (Factory Default)

Pulse mode – Door relay time setting	For Zone 1: 4 1 1-99 # For Zone 2: 4 2 1-99 # The door relay time is between 1-99 seconds, the factory default setting is 5 seconds

Toggle Mode (Factory Default)

Toggle mode	For Zone 1: 4 1 0 # For Zone 2: 4 2 2 #

Door Detection, Alarm, Acoustic Signal, Doorbell 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 and optional magnetic contact or built-in magnetic contact of the lock, if the door is forced open, or if the door is opened after 120 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 default being 1 minute.	
To disable door open detection (Factory default setting)	6 0 #
To enable door open detection	For Zone 1: 6 1 # For Zone 2: 6 2 # You can enable the door open detection of only one Zone.
Keypad lockout and alarm output options 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	7 0 # (Factory default setting)
Keypad Lockout	
Alarm output	7 2 # (Alarm output time: 1 minute)
Adjust alarm output time	
To set the alarm output time (1 ~ 3 minutes) Factory default is 1 minute)	8 1~3 #
Keypad Tone The keypad tone can be set to on or off. When on, the device will give the voice when the keys are pressed; when off, the device will be silent.	
Enable the keypad tone	8 6 # (Factory default setting)
Disable the keypad tone	8 7 #
Change Zone 2 to Doorbell When there is no need to operate a second door, Zone 2 can be set to operate the doorbell. The wiring is connecting the doorbell to COM2 and NO2. Press #, the keypad will send the signal to the doorbell.	
Zone 2	8 8 # (Factory default)
Doorbell	8 9 #
Remove the alarm	
To remove the door forced open warning	Read valid card or Master code #
To remove the door open too long warning	Close the door or Read valid card or Master code #