

EP.N-MINI 2 WIRING GUIDE

Version: 1.07

Last Updated: 23-06-2016



BEFORE YOU BEGIN

Technical Support

If you cannot find the answer to your question in this manual or in the Help files, we recommend you contact your system installer. Your installer is familiar with your system configuration and should be able to answer any of your questions.

Should you need additional information, please call our Technical Support Help desk, Monday to Friday 9:00 AM to 6:00 PM (GMT +8:00)

Method Details

Phone + 60 (3) - 8068 1929

Fax + 60 (3) - 8068 1922

Internet www.entrypass.net

Email support@entrypass.net



Considerations Prior to Installation

Preparing Your EntryPass Controllers

EntryPass controller contains numerous delicate electronic circuits and components which can become damaged as a result of electrostatic discharge (ESD). Thus, prior to installation, please follow the instruction below:

- Observe precautions while handling the circuit board assembly by using proper grounding straps and handling precautions at all
- Visually ensure no onboard parts is broken, damage or contains burn mark
- Do not turn on the power supply until you completed all wiring and external add on devices installations



CAUTION

Battery may explode if mistreated. Do not recharge, disassemble or dispose of in fire. To prevent a risk of explosion do not pry the battery out with a metal or conductive tool.

Instances of Non-Warranty

- Damage due to natural disaster, accident or human cause.
- Damage as a result of violating the conditions recommended in the user manual
- Damage due to improper installation
- Damage due to use of uncertified components
- Damage due to use exceeding the permitted parameters



N-MINI 2 Description



N-MINI 2 Reader

N-MINI 2

Active Network Integrated Reader Controller



N-MINI 2 DRB



N-MINI 2 Description

**Color LCD
Screen**

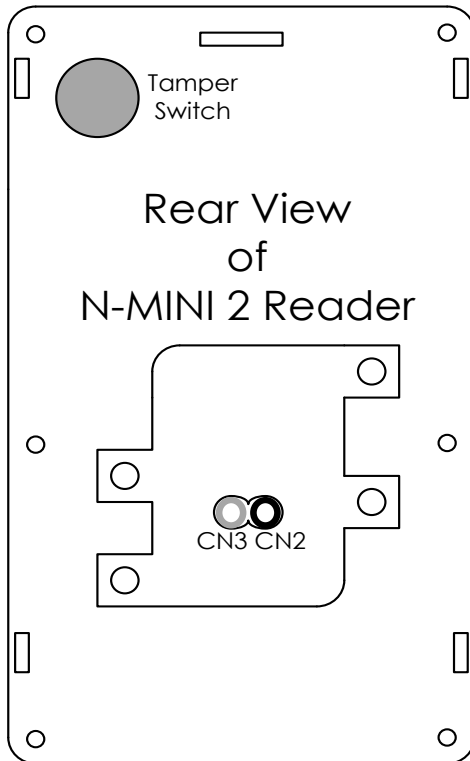


**Heartbeat/Indication
Tricolor LED**

**CapSense Touch Button
with Backlight**



N-MINI 2 Reader Color Description



CN3 Color Description (Gray Jacket)

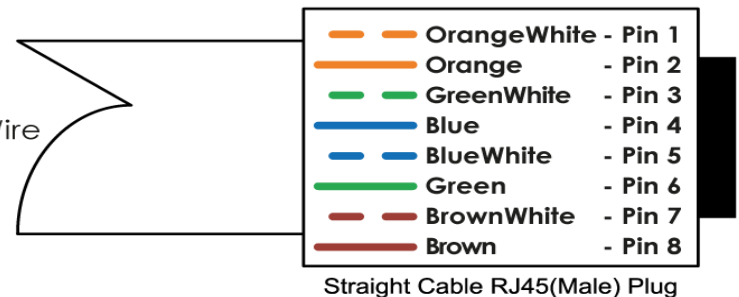
Red	: +12V
Orange	: +12V
Black	: GND
Brown	: GND
White	: RS485 C1+
Green	: RS485 C1-
Yellow	: RS485 C2+
Blue	: RS485 C2-

CN2 Color Description (Black Jacket)

Cat-5e cable

White Orange	: White Orange
Orange	: Orange
White Green	: White Green
Blue	: Blue
White Blue	: White Blue
Green	: Green
White Brown	: White Brown
Brown	: Brown

Connect to CN2 Wire

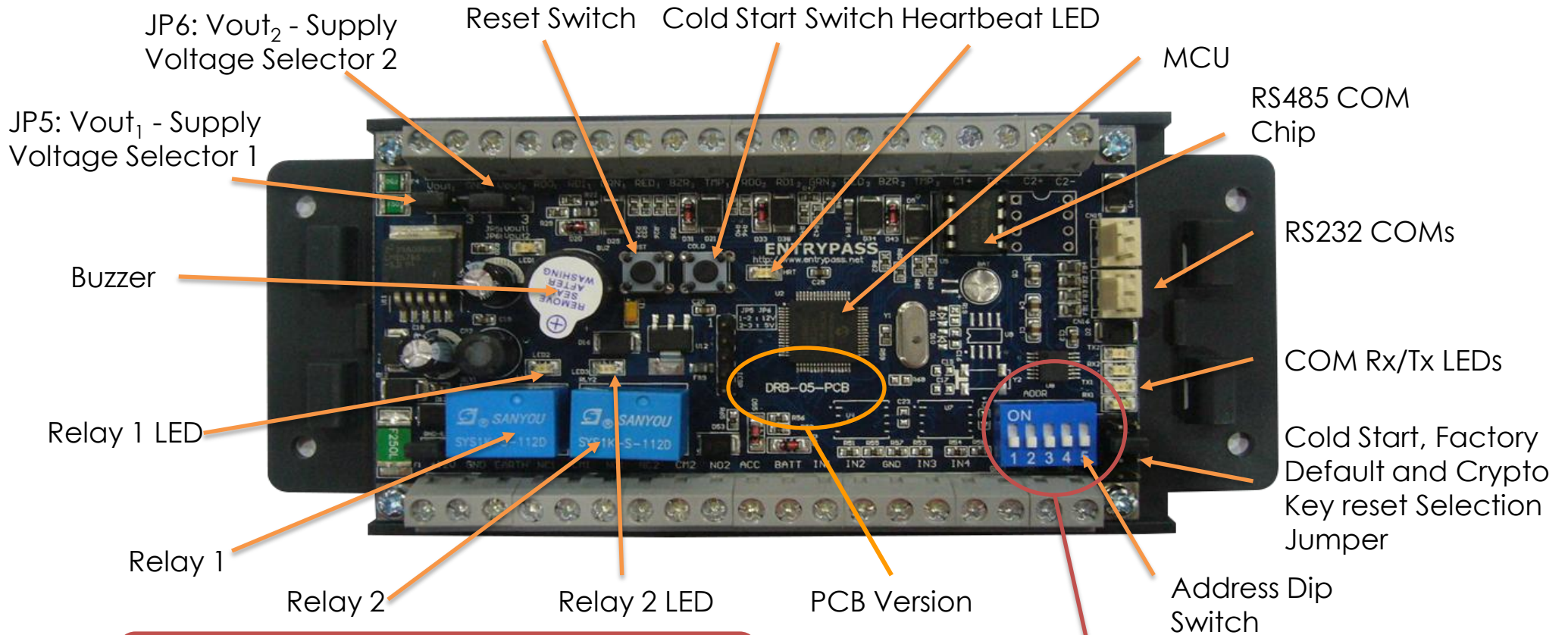


Recommended twist and solder to join on wire connection.

Cat-5e cable can pull from the rear of N-MINI 2 reader straight back to 10/100/1000 Mbps Ethernet switch



DRB Components Description



Supply Voltage Selector:

12V	5V	12V	5V
1	3	1	3
JP5 - V _{out1}		JP6 - V _{out2}	

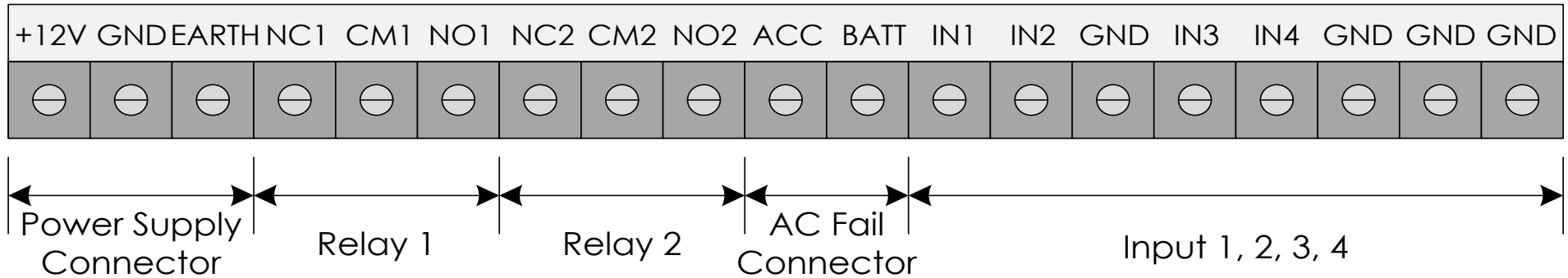
Put the jumper cap at JP5 1-2 to output 12VDC at V_{out1}
 Put the jumper cap at JP5 2-3 to output 5VDC at V_{out1}

Put the jumper cap at JP6 1-2 to output 12VDC at V_{out2}
 Put the jumper cap at JP6 2-3 to output 5VDC at V_{out2}

Dip Switch:



Legend Description (DRB)

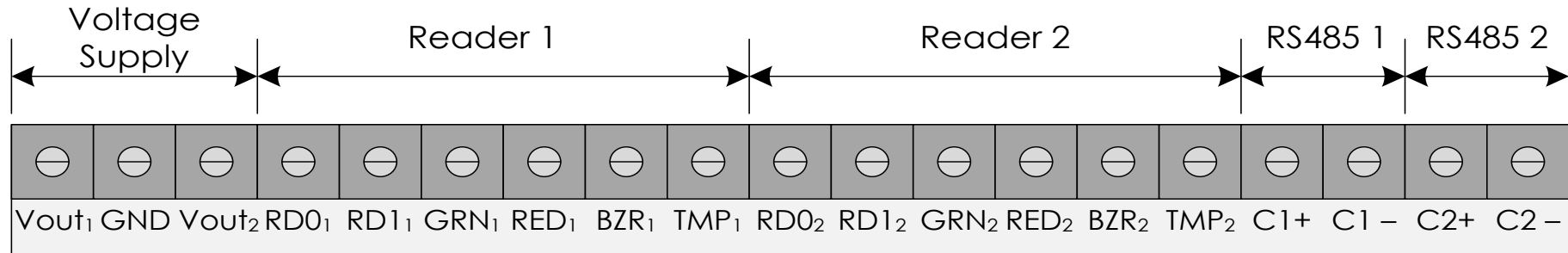


- +12V - Power Supply +12VDC
- GND - Power Supply Ground
- EARTH - Power Supply Earth
- NC1 - Relay 1 Normally Close
- CM1 - Relay 1 Common
- NO1 - Relay 1 Normally Open
- NC2 - Relay 2 Normally Close
- CM2 - Relay 2 Common
- NO2 - Relay 2 Normally Open
- ACC - AC Fail Monitoring
- BATT - Backup Battery Monitoring

- IN1 - Input 1
- IN2 - Input 2
- GND - Ground
- IN3 - Input 3
- IN4 - Input 4
- GND - Ground
- GND - Ground
- GND - Ground



Legend Description (DRB)

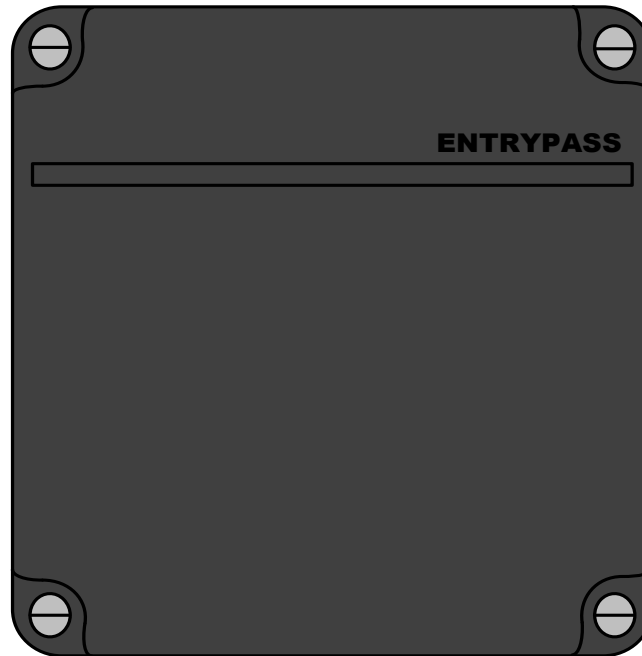


Vout1 - Voltage Supply 1
 GND - Voltage Supply Ground
 Vout2 - Voltage Supply 2
 RD01 - Reader 1 Data 0 Input
 RD11 - Reader 1 Data 1 Input
 GRN1 - Reader 1 Green LED
 RED1 - Reader 1 RED LED
 BZR1 - Reader 1 Buzzer
 TMP1 - Reader 1 Tamper

RD02 - Reader 2 Data 0 Input (Reserved)
 RD12 - Reader 2 Data 1 Input (Reserved)
 GRN2 - Reader 2 Green LED (Reserved)
 RED2 - Reader 2 RED LED (Reserved)
 BZR2 - Reader 2 Buzzer (Reserved)
 TMP2 - Reader 2 Tamper (Reserved)
 C1+ - RS485 COM1 (+) Connection
 C1- - RS485 COM1 (-) Connection
 C2+ - RS485 COM2 (+) Connection (Reserved)
 C2- - RS485 COM2 (-) Connection (Reserved)



Power Supply Unit Specification



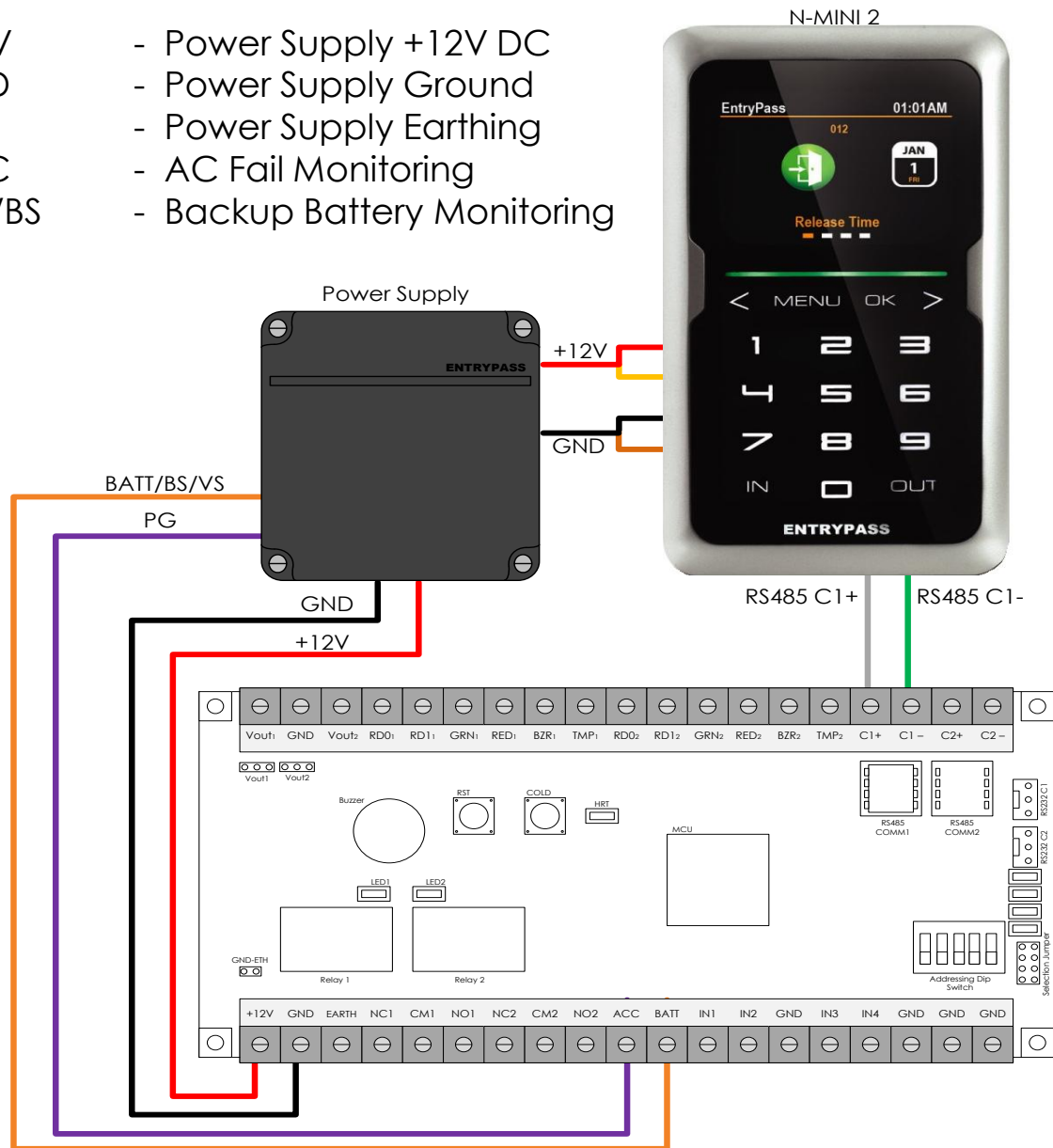
Power Supply Unit Specification:

- Switching Power Supply
- 12V DC
- 3 Amp (MINimum)



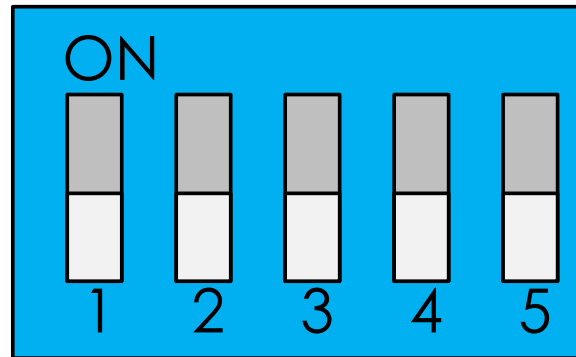
Connecting the N-MINI 2 Reader to DRB

- +12V - Power Supply +12V DC
- GND - Power Supply Ground
- ETH - Power Supply Earthing
- ACC - AC Fail Monitoring
- BAT/BS - Backup Battery Monitoring



BAT/BS (Backup Battery Monitoring) point will monitor the backup battery voltage which will supply power to the board when AC power is cut off
The minimum voltage for cutoff while using backup battery is 10V

Connecting the N-MINI 2 Reader and DRB – Dip Switch Addressing



Addr: 1 2 4 8 16

Note: Please identify the PCB version of DRB board for correct Dip Switch Orientation (refer page 6)

The dipswitch is used for setting the unit address of the DRB to match the RDK
Each switch is represent by an address, the sum of the switch address will be the controller address

The number in RED color is the address of each individual switch of the dip switch
Example: To obtain Address 11, 1 + 2 + 8 = 11, So just switch on switch 1, 2, 4

Note: Factory Default Unit Address of NMINI2 Reader is 000
To configure the unit address of NMINI2, please go to:
System > System Setting > Unit Address



Dip Switch Addressing Table

Unit Address	Switch 1	Switch 2	Switch 3	Switch 4	Switch 5
000	OFF	OFF	OFF	OFF	OFF
001	ON	OFF	OFF	OFF	OFF
002	OFF	ON	OFF	OFF	OFF
003	ON	ON	OFF	OFF	OFF
004	OFF	OFF	ON	OFF	OFF
005	ON	OFF	ON	OFF	OFF
006	OFF	ON	ON	OFF	OFF
007	ON	ON	ON	OFF	OFF
008	OFF	OFF	OFF	ON	OFF
009	ON	OFF	OFF	ON	OFF
010	OFF	ON	OFF	ON	OFF
011	ON	ON	OFF	ON	OFF
012	OFF	OFF	ON	ON	OFF
013	ON	OFF	ON	ON	OFF
014	OFF	ON	ON	ON	OFF
015	ON	ON	ON	ON	OFF

Binary to Decimal Addressing Table



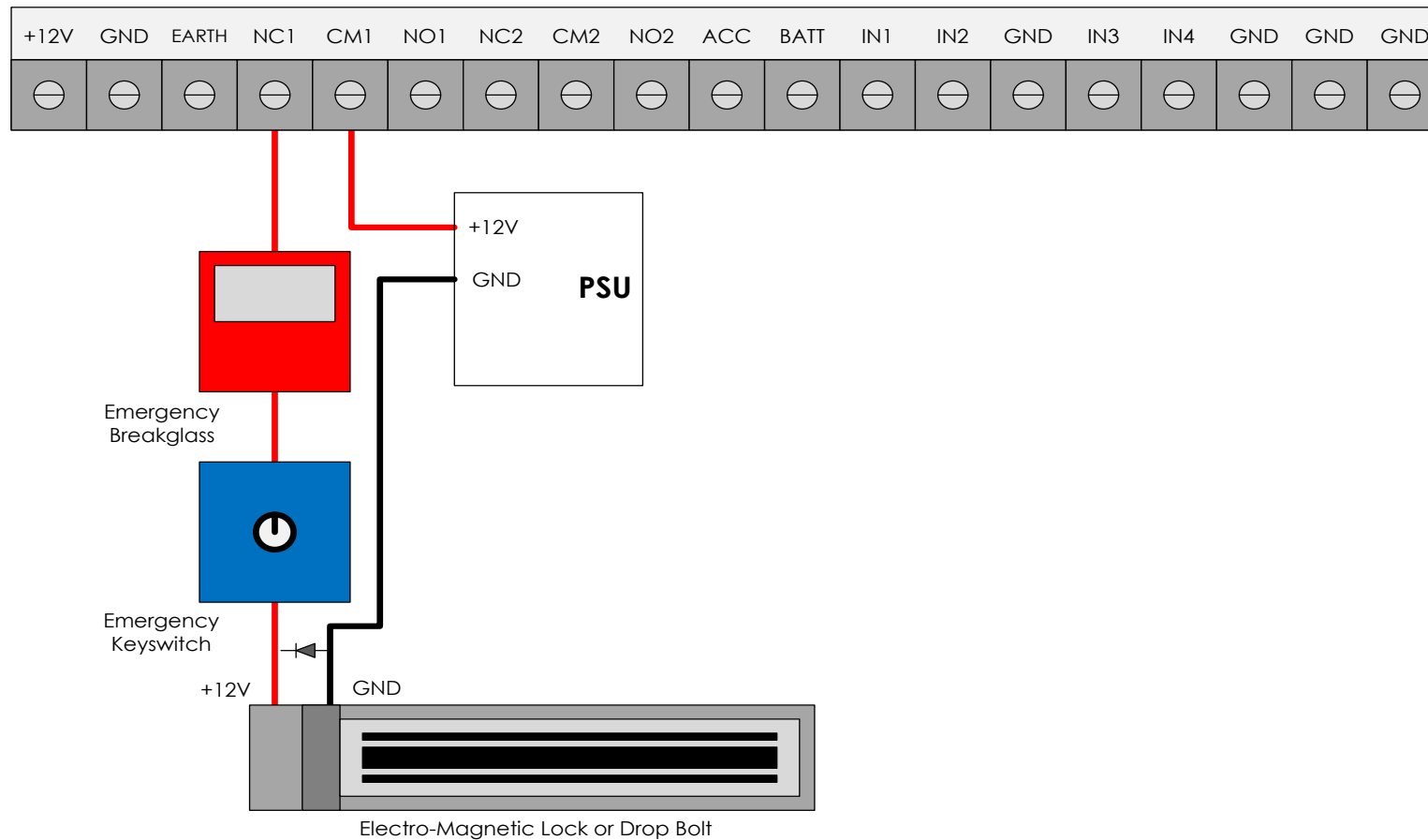
Dip Switch Addressing Table

Unit Address	Switch 1	Switch 2	Switch 3	Switch 4	Switch 5
016	OFF	OFF	OFF	OFF	ON
017	ON	OFF	OFF	OFF	ON
018	OFF	ON	OFF	OFF	ON
019	ON	ON	OFF	OFF	ON
020	OFF	OFF	ON	OFF	ON
021	ON	OFF	ON	OFF	ON
022	OFF	ON	ON	OFF	ON
023	ON	ON	ON	OFF	ON
024	OFF	OFF	OFF	ON	ON
025	ON	OFF	OFF	ON	ON
026	OFF	ON	OFF	ON	ON
027	ON	ON	OFF	ON	ON
028	OFF	OFF	ON	ON	ON
029	ON	OFF	ON	ON	ON
030	OFF	ON	ON	ON	ON
031	ON	ON	ON	ON	ON

Binary to Decimal Addressing Table



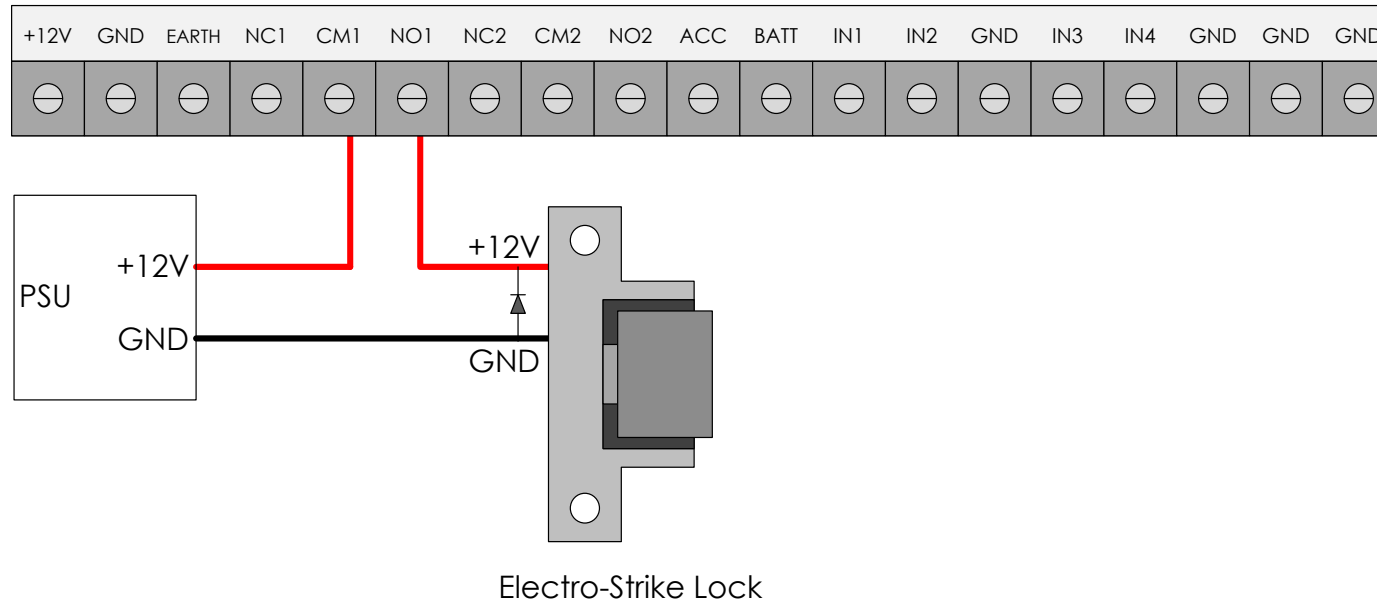
Connecting the Lock (NC), Breakglass and Keyswitch



Diode(1N4002) must be installed at the locking devices in order to protect against back EMF. It is advisable to connect EM lock COM to +12V of PSU (Power Supply Unit)



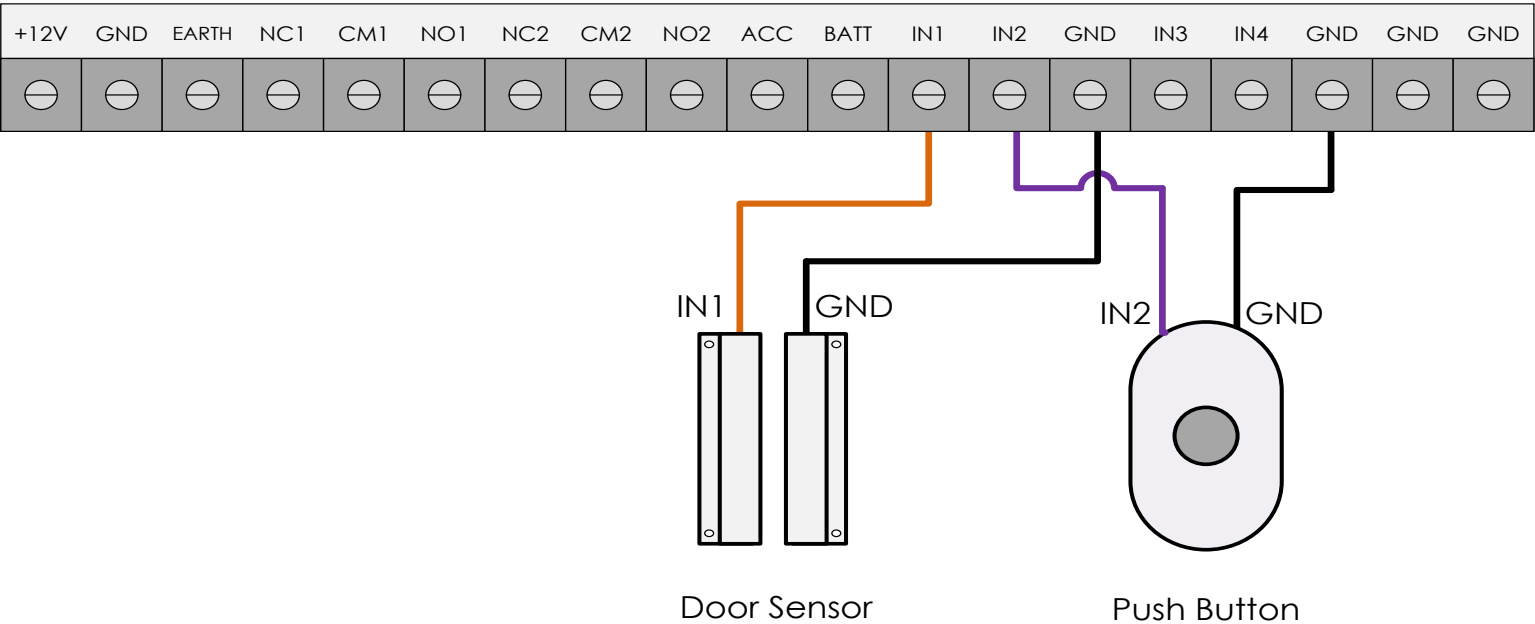
Connecting the Striker Lock or Drop Bolt (NO)



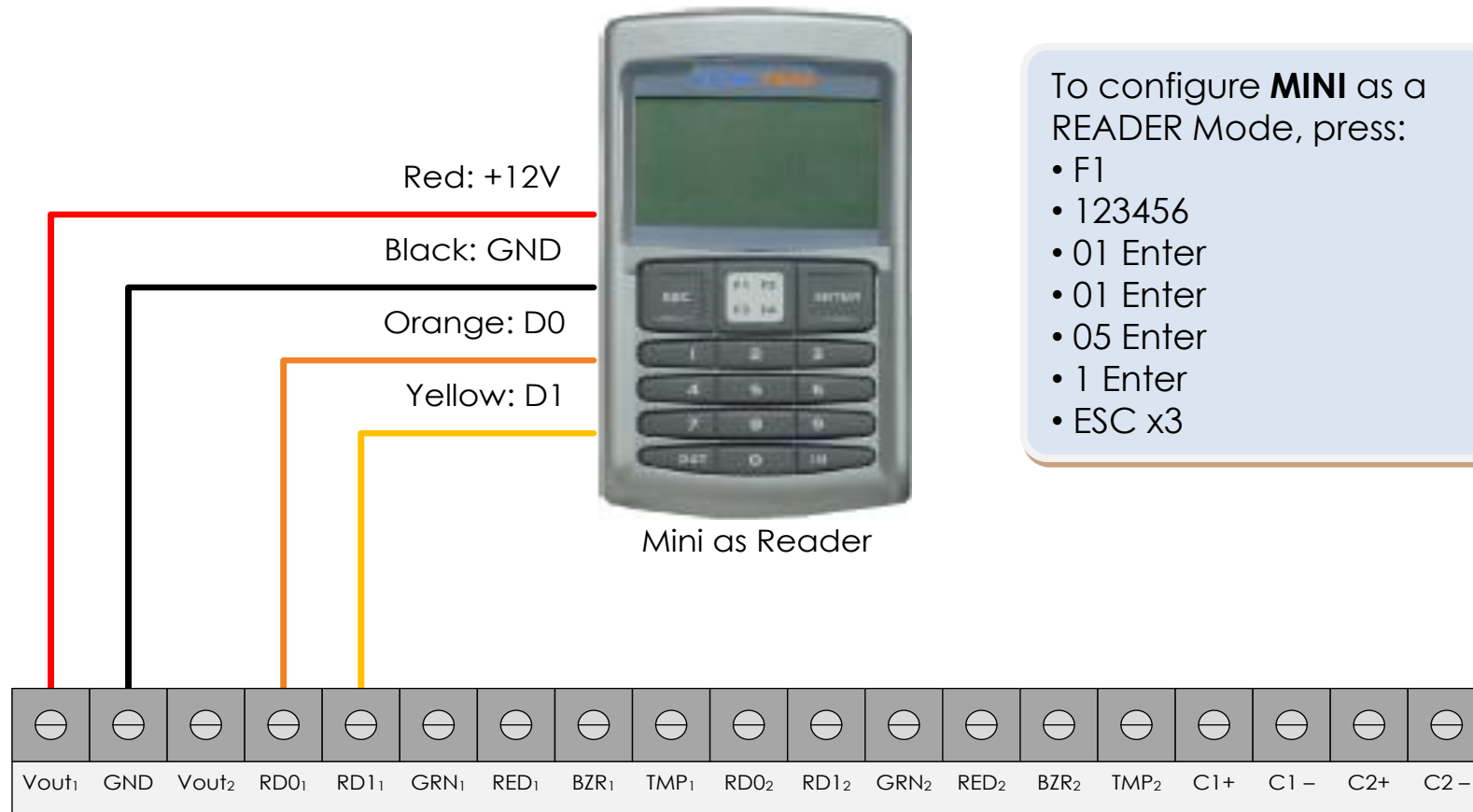
Diode(1N4002) must be installed at the locking devices in order to protect against back EMF



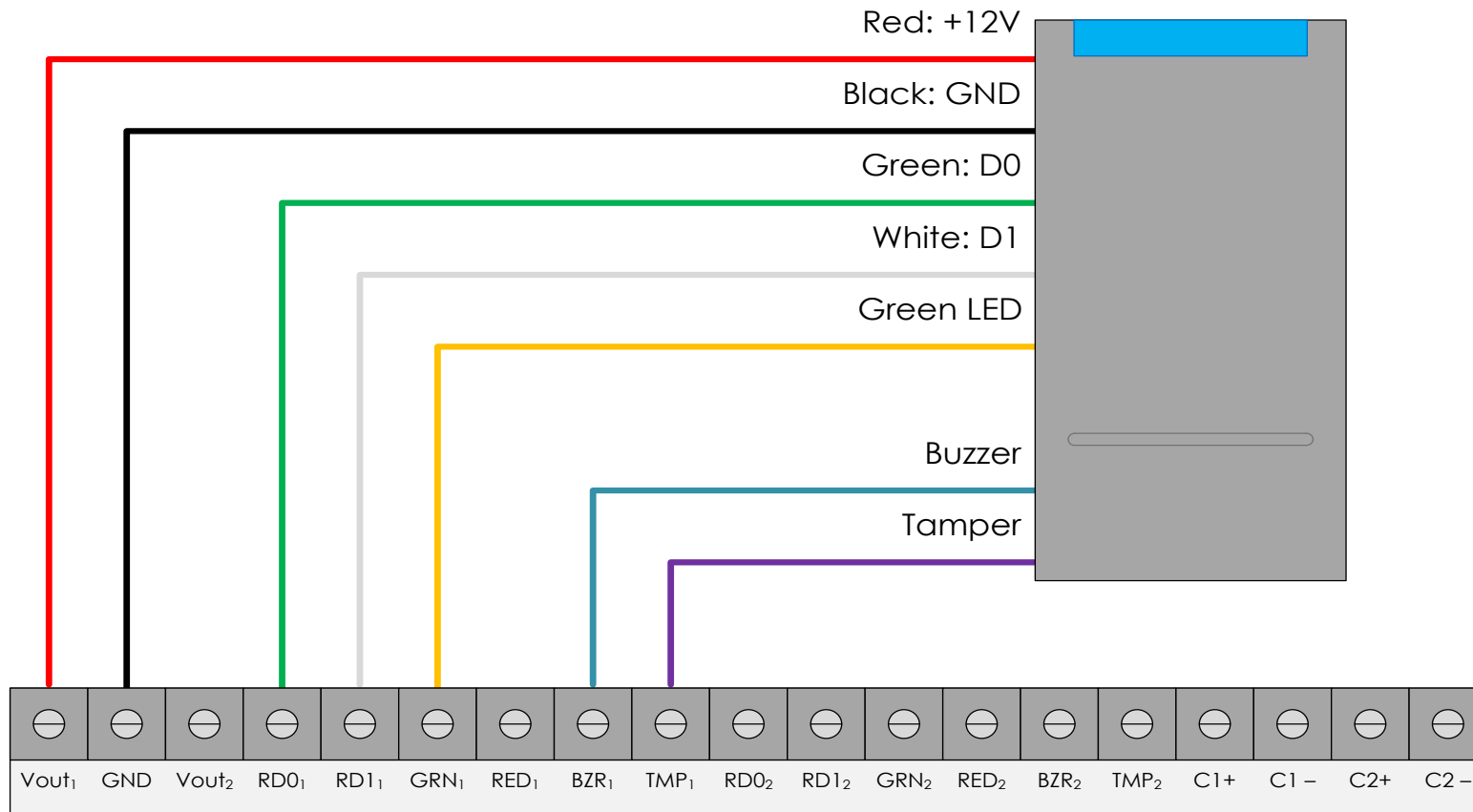
Connecting the Door Sensor and Push Button



Connecting the Reader – MINI as Reader



Connecting the Reader – 3rd Party Reader

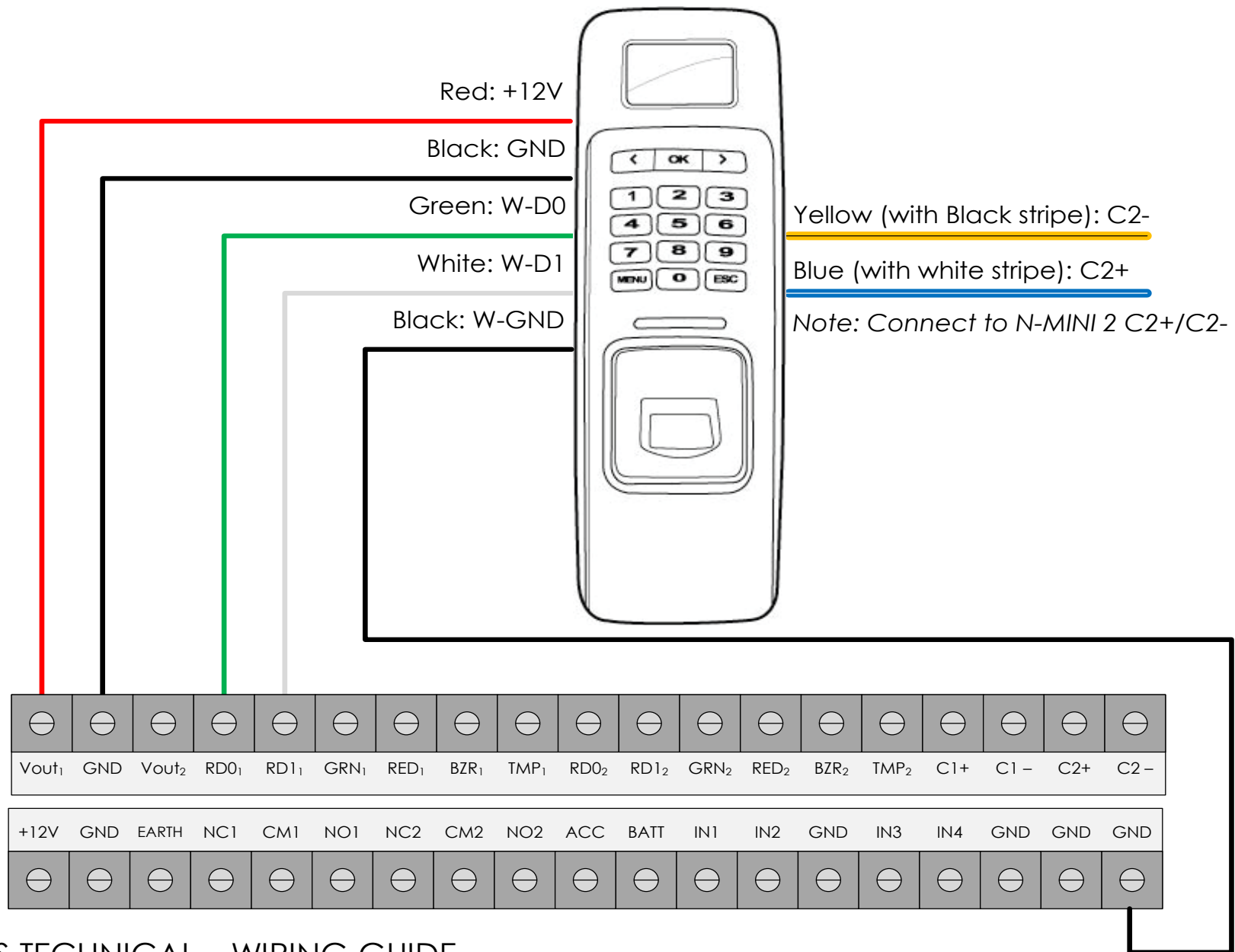


Put the jumper cap at JP5 1-2 to output 12VDC at Vout₁
Put the jumper cap at JP5 2-3 to output 5VDC at Vout₁

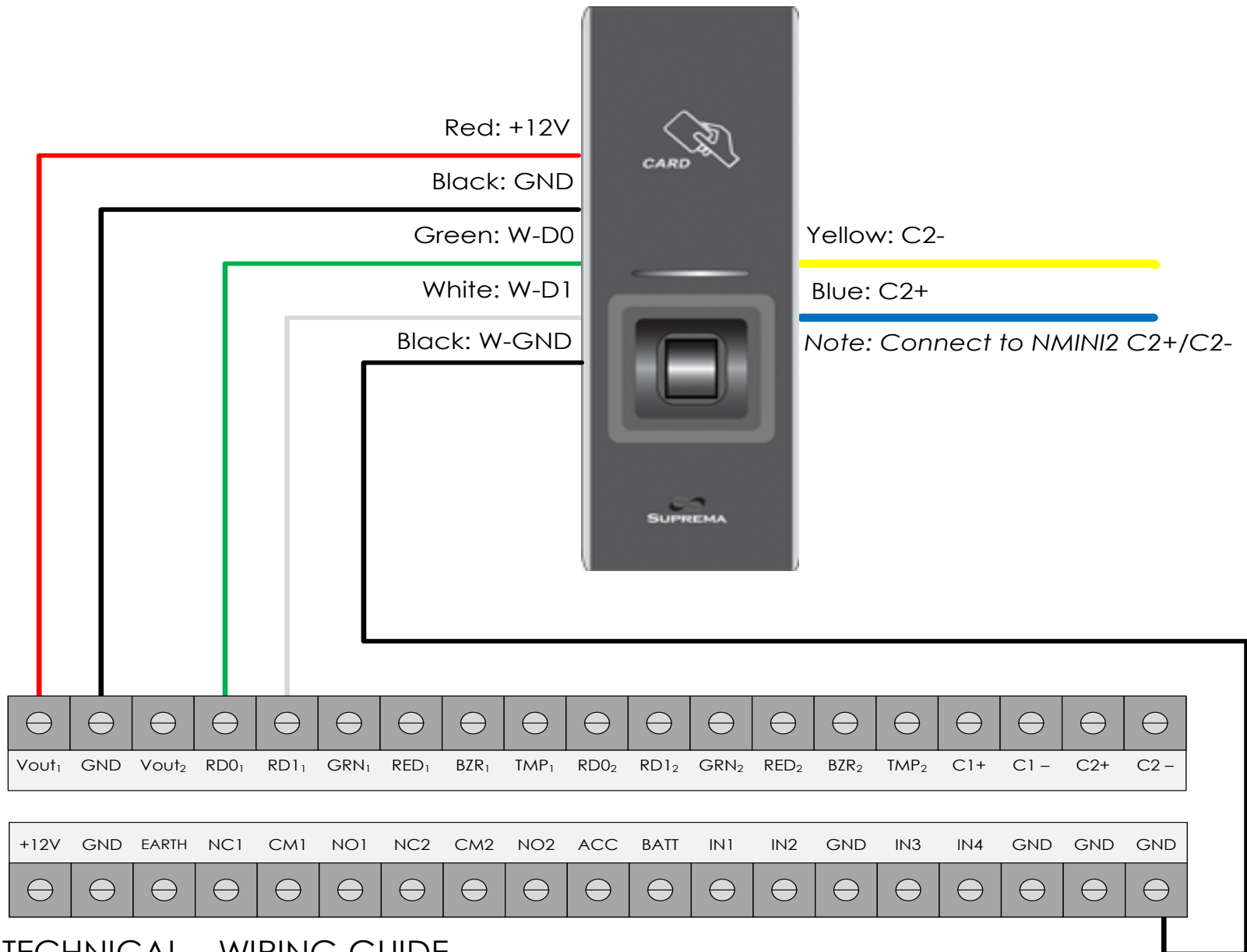
Put the jumper cap at JP6 1-2 to output 12VDC at Vout₂
Put the jumper cap at JP6 2-3 to output 5VDC at Vout₂



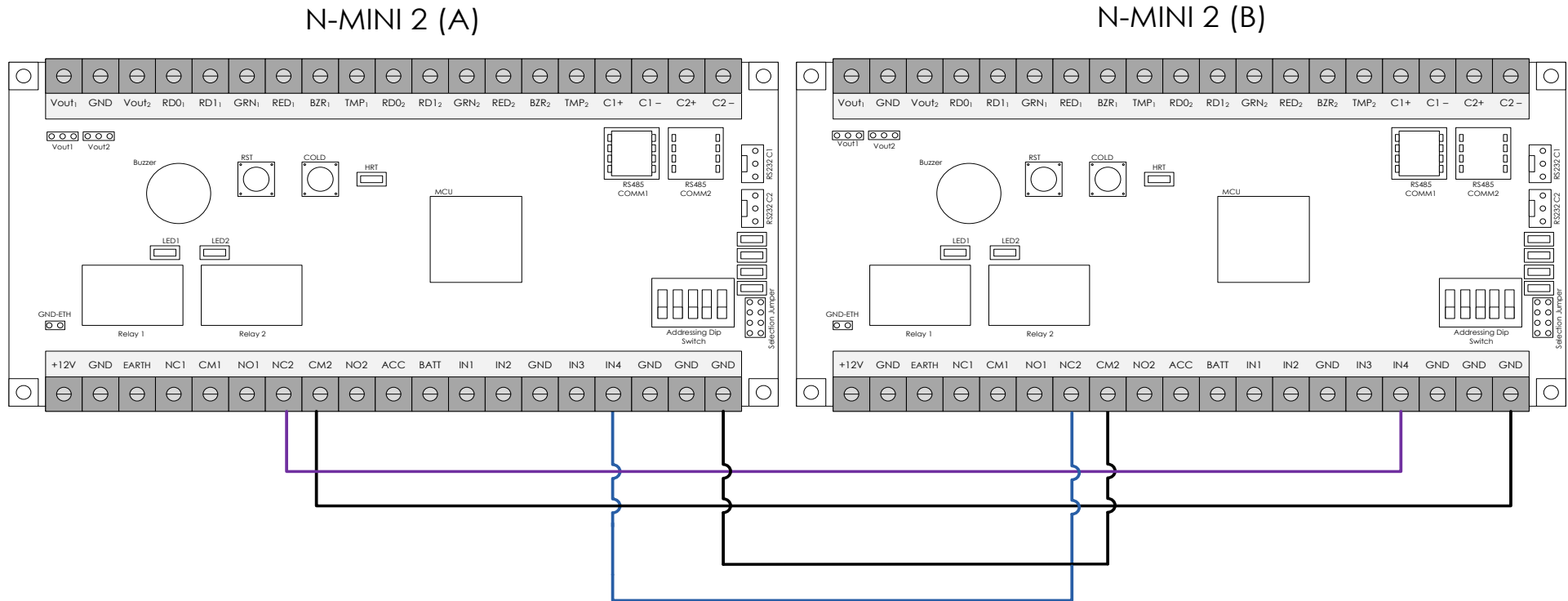
Connecting the Reader – Suprema Biometric Devices (BioLite Net)



Connecting the Reader – Suprema Biometric Devices (BioEntry Plus)



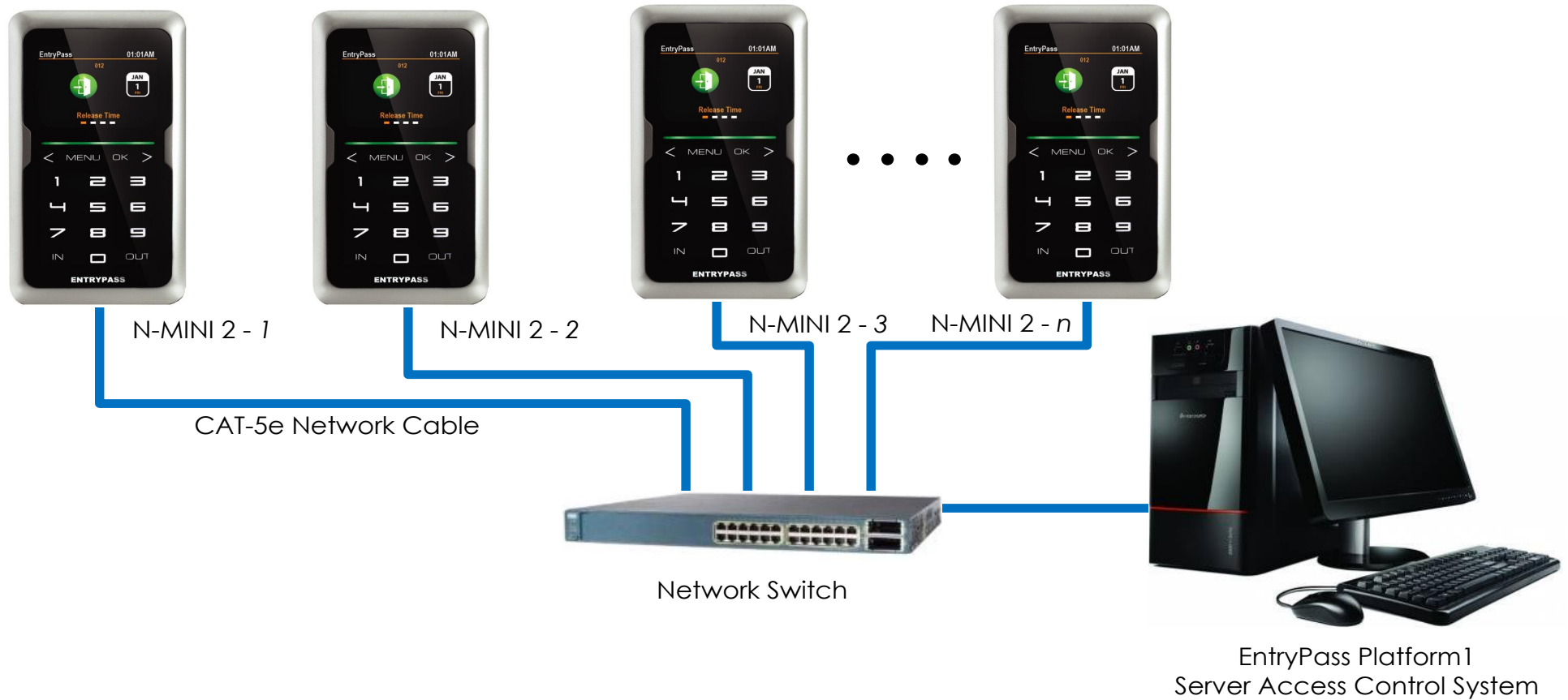
Connecting to Another Controller for Cross-Board Interlock



Please configure the input type of specific point to Interlock using Platform1 Server
Cross-board interlock only support up to two N-MINI 2



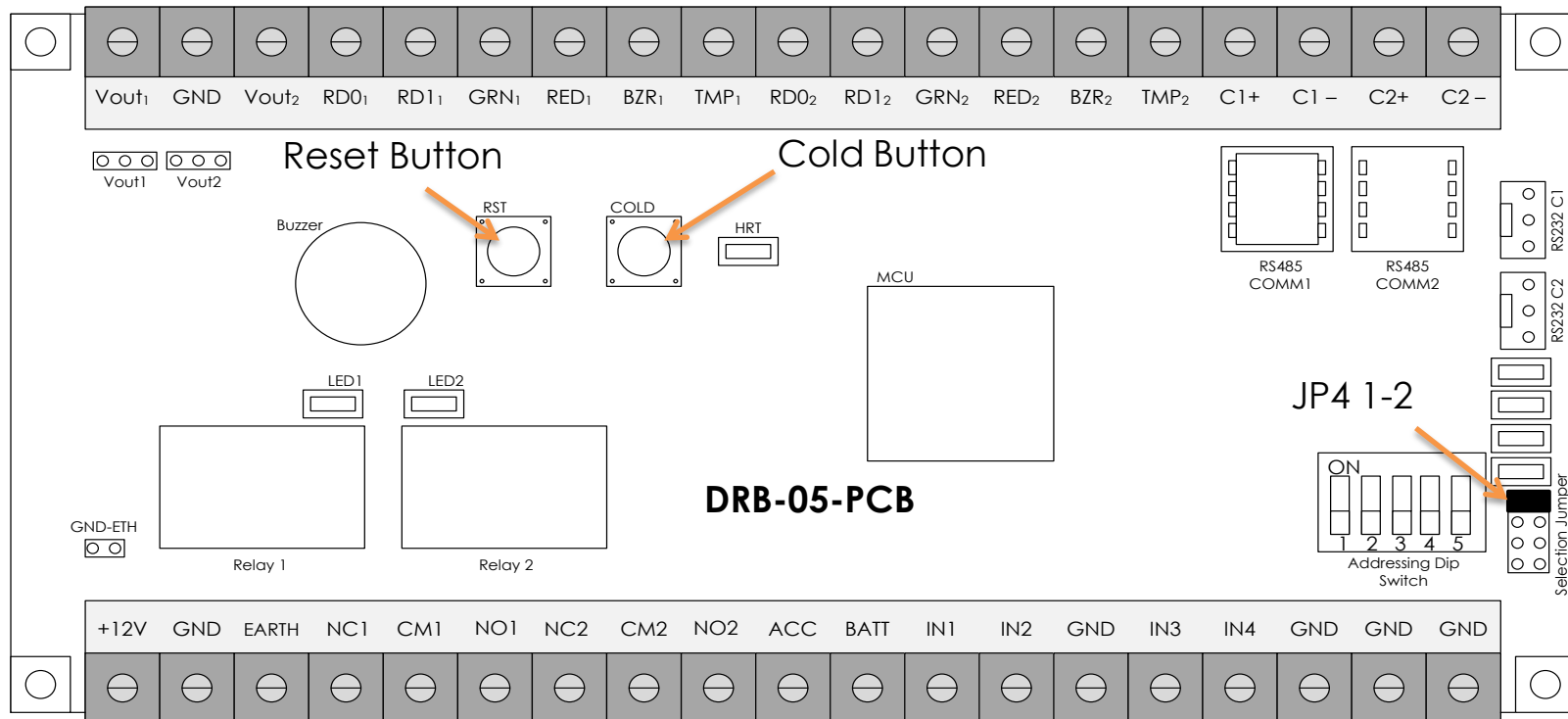
Connecting to the PC via Network



Factory default IP address for network controller is 192.168.1.100



Performing Cold Start



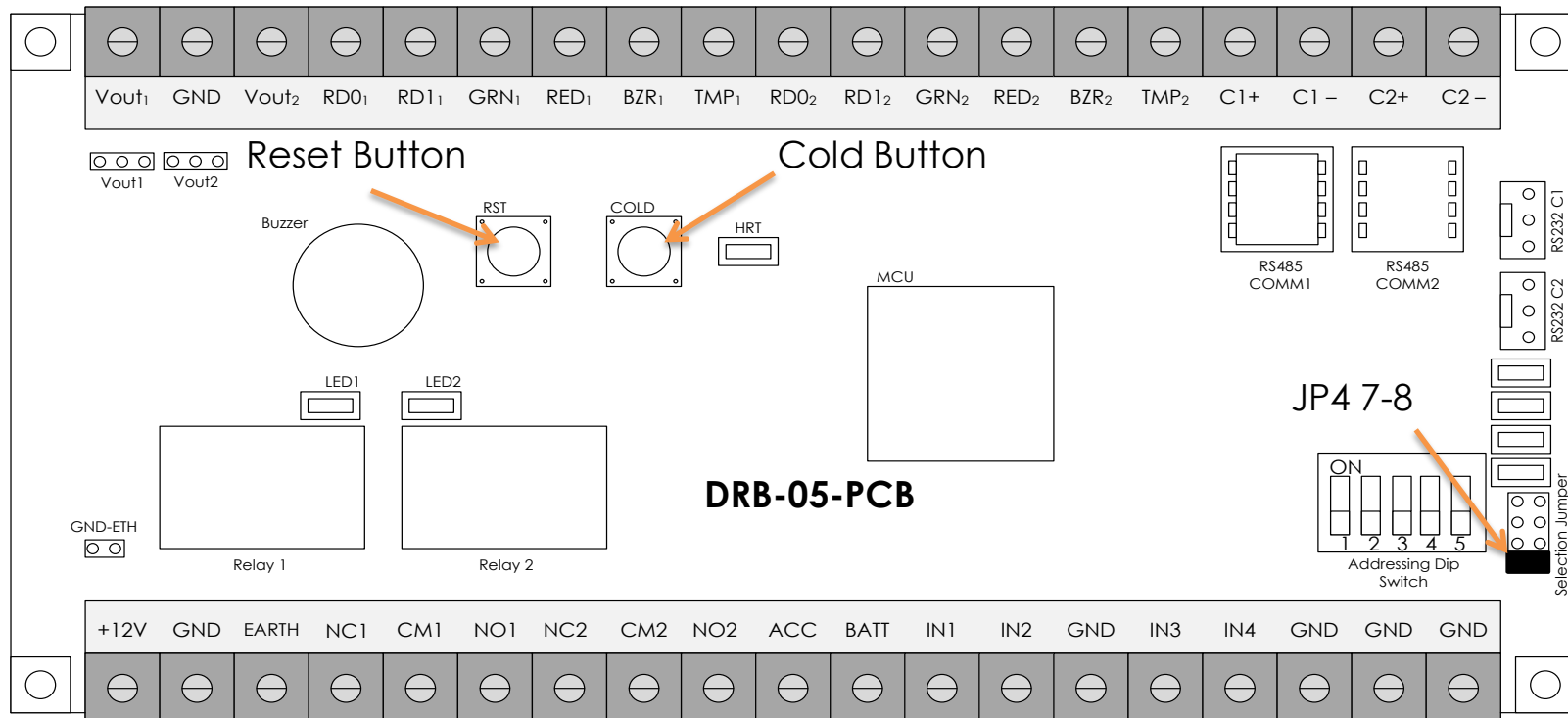
Steps of performing cold start:

1. Please ensure that the jumper is inserted on JP4 1-2
2. Press and Hold COLD switch
3. Press RESET Switch and Release RESET switch
4. Release COLD switches when a beeping sound heard
5. Please remove the jumper cap after perform cold start

N-MINI 2 RDK will also perform COLD START after cold start the DRB
Note: Cold Start will not reset the network parameter to default value



Performing Factory Default



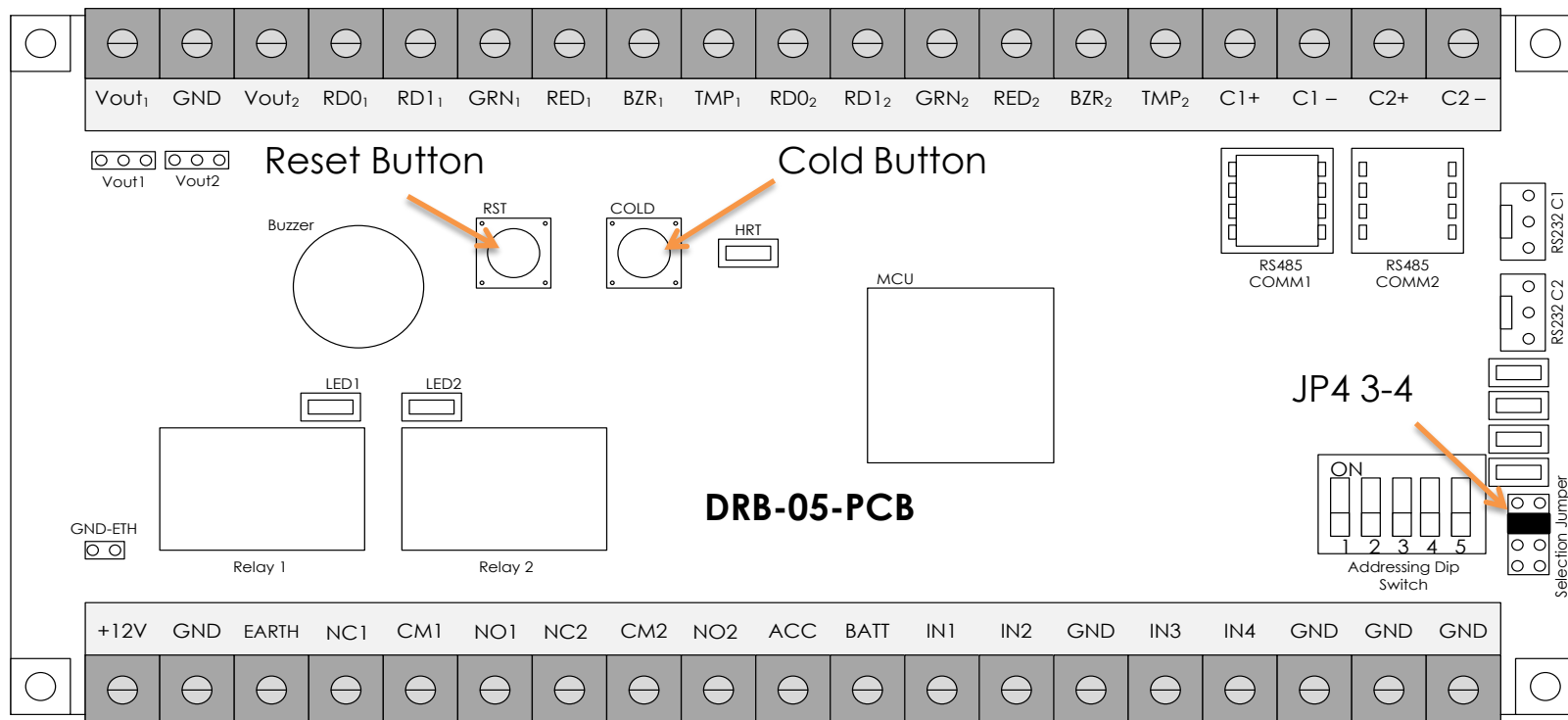
Steps of performing Factory Default:

1. Please ensure that the jumper is inserted on JP4 7-8
2. Press and Hold COLD switch
3. Press RESET Switch and Release RESET switch
4. Release COLD switches when a beeping sound heard
5. Please remove the jumper cap after perform factory default

N-MINI 2 RDK network parameter will reset to default after factory default the DRB.
Default IP: 192.168.1.100, Server IP: 192.168.1.254, Port: 2020



Performing Communication Crypto Key Reset

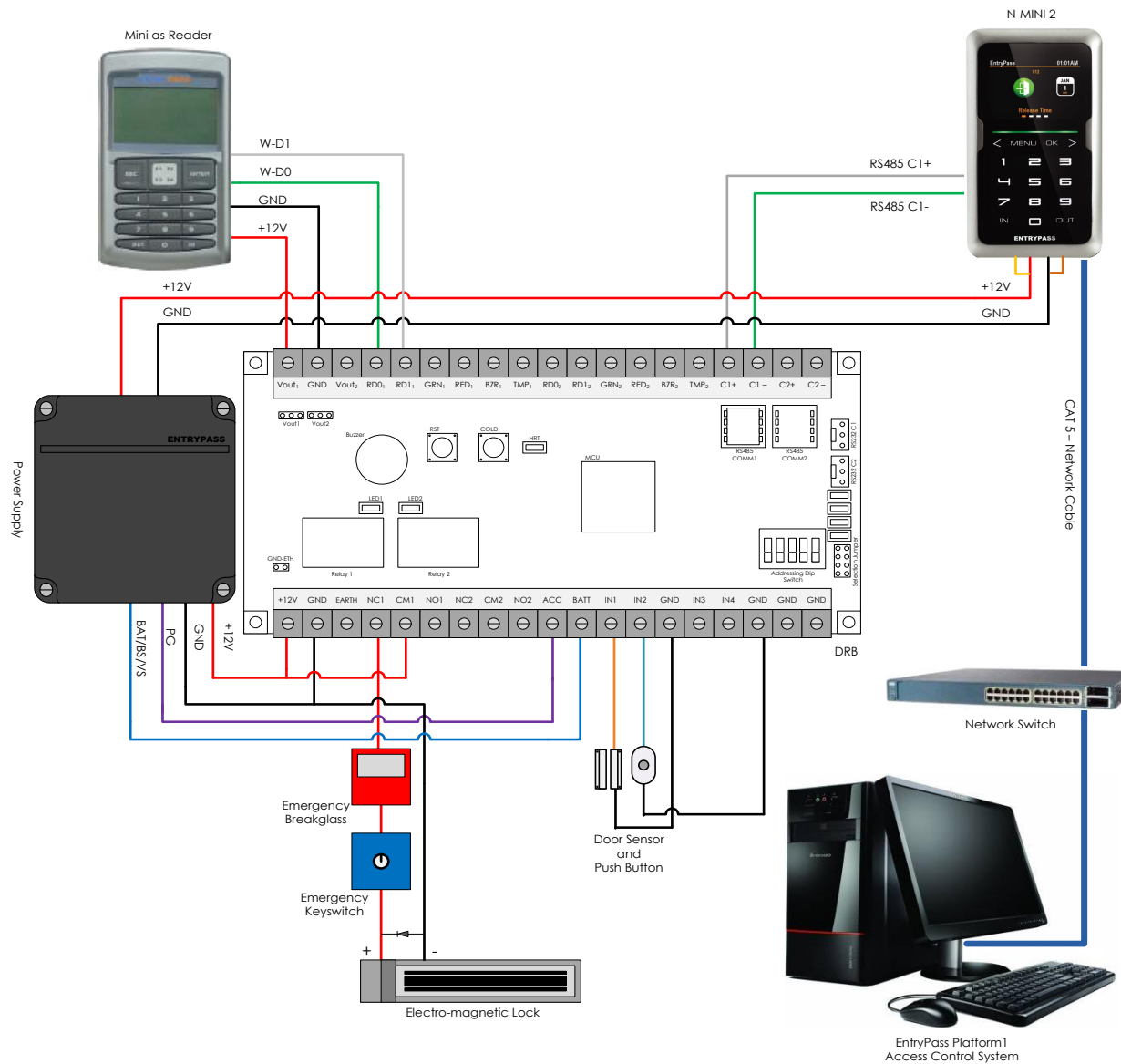


Steps of performing Crypto Key Reset:

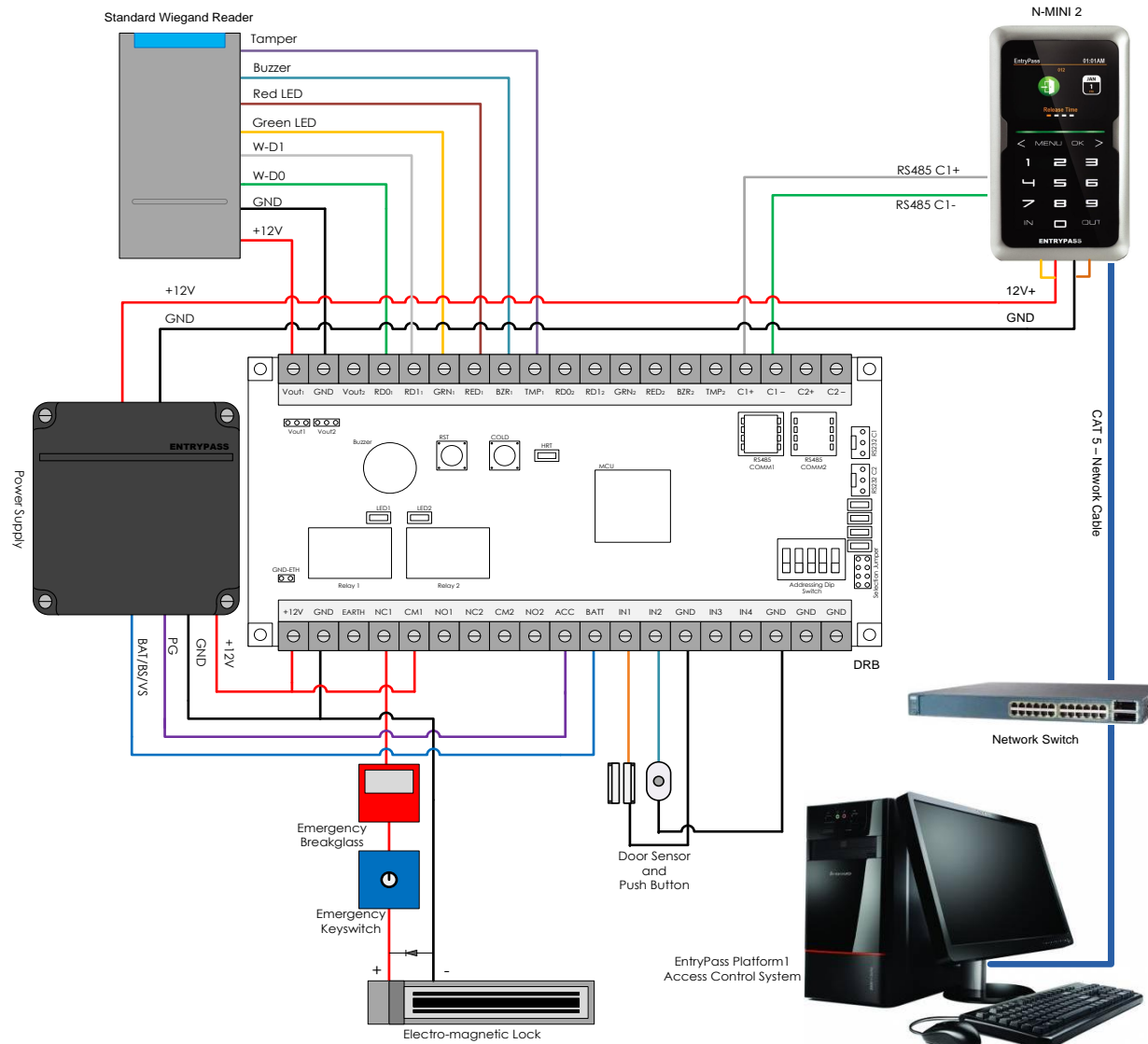
1. Please ensure that the jumper is inserted on JP4 3-4
2. Press RESET Switch and Release RESET switch
3. Please remove the jumper after performing Crypto Key reset



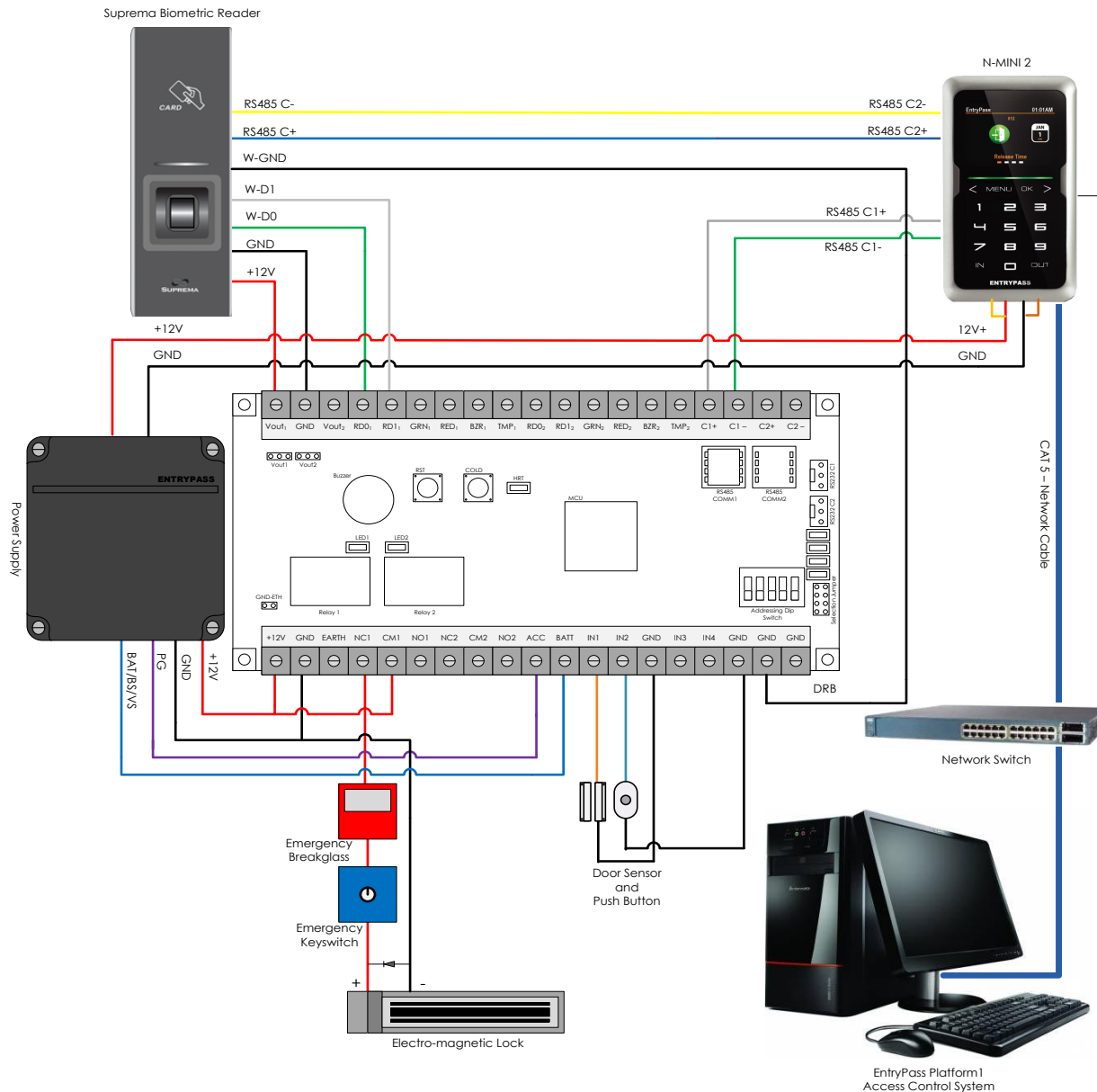
Complete Overview (MINI as Exit Reader)



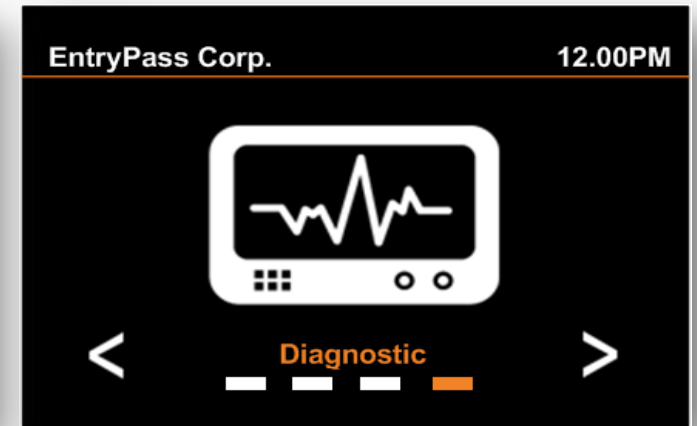
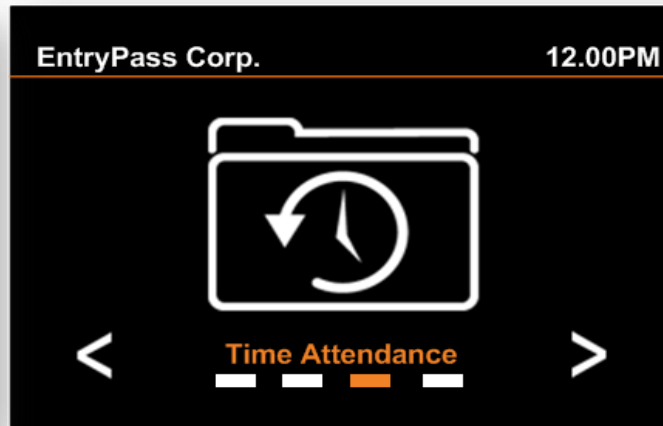
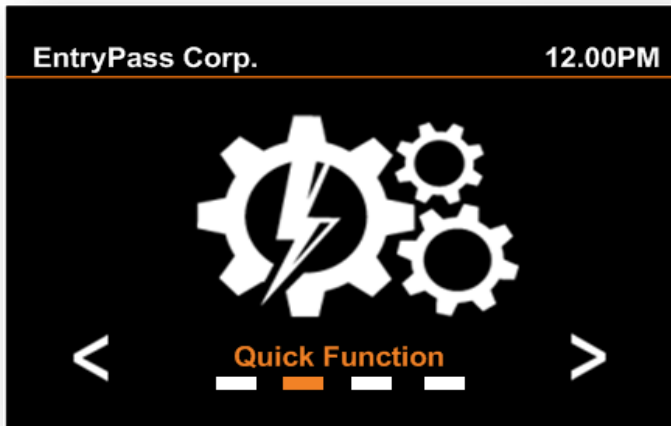
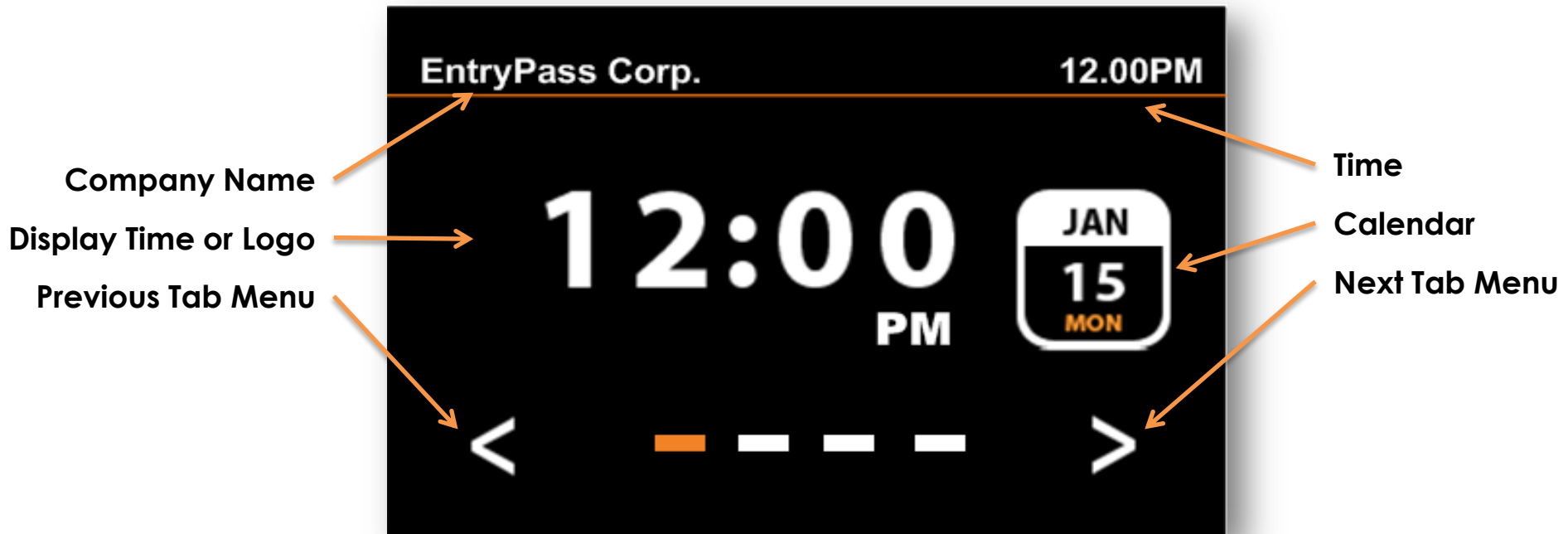
Complete Overview (3rd Party Exit Reader)



Complete Overview (Suprema Exit Reader)



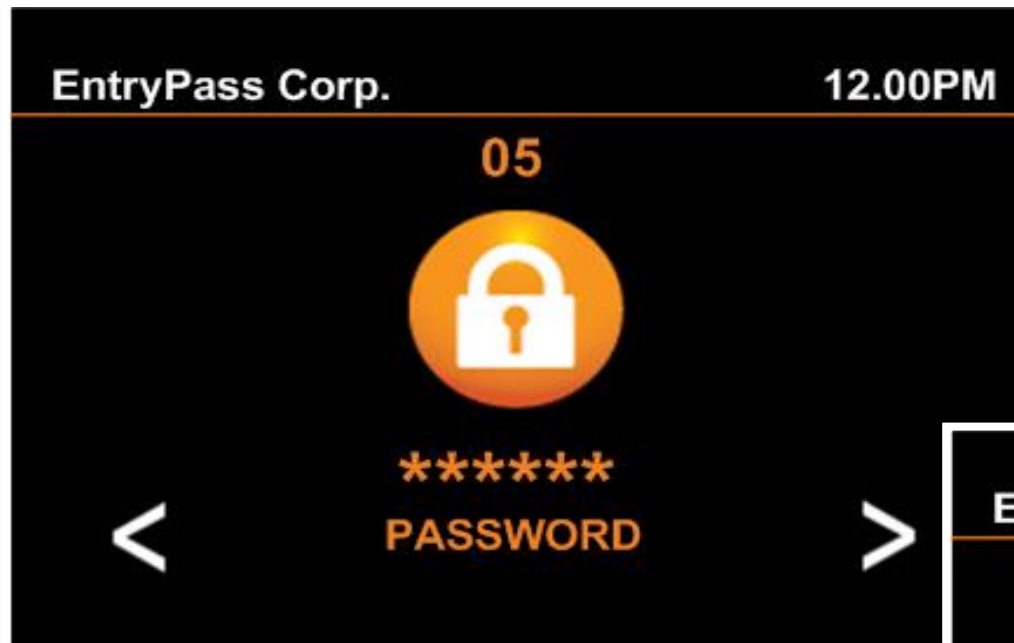
N-MINI 2 User Interface



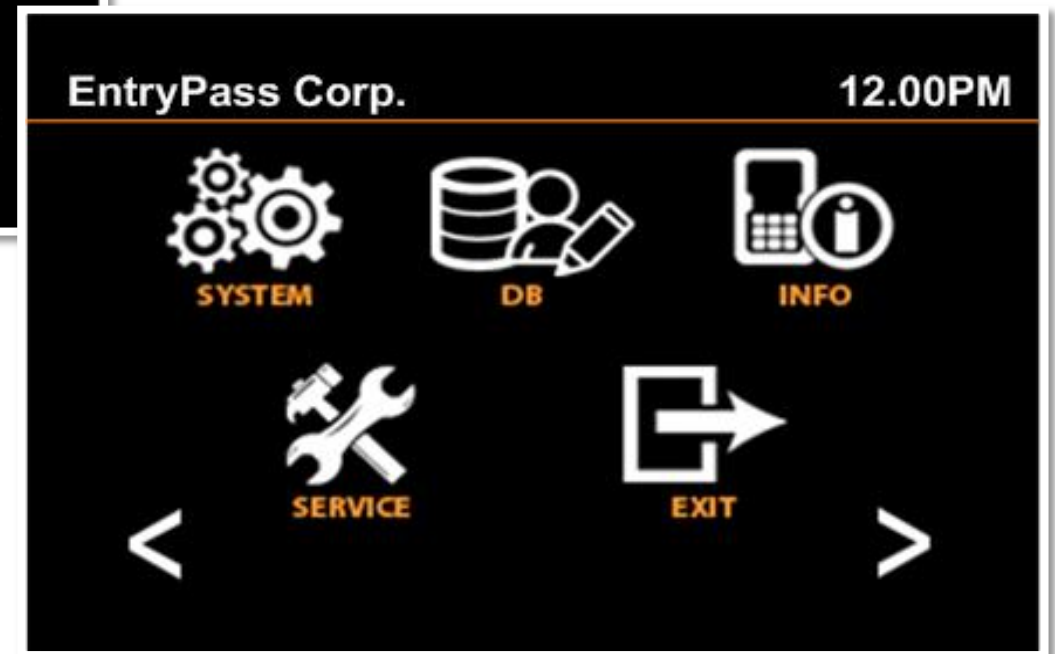
Use the “<” or “>” key to access any Tab Menu (Quick Function, Time Attendance, Diagnostic) and press “OK” to access the Tab Menu



N-MINI 2 User Interface



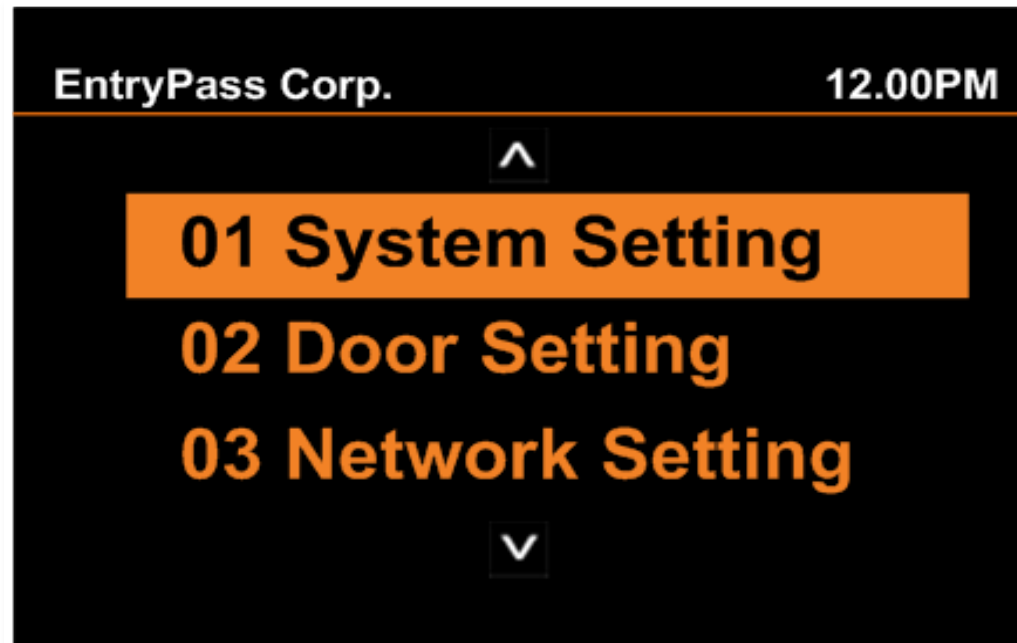
Press "Menu" to access Main Menu
Default Password: 123456



Use the "<" or ">" key to choose the Menu Items and
press "OK" to select



N-MINI 2 User Interface



Use the “<” or “>” key to perform Up and Down , press “OK” to select, press “Menu” to back/exit



N-MINI 2 Tricolor LED Indication



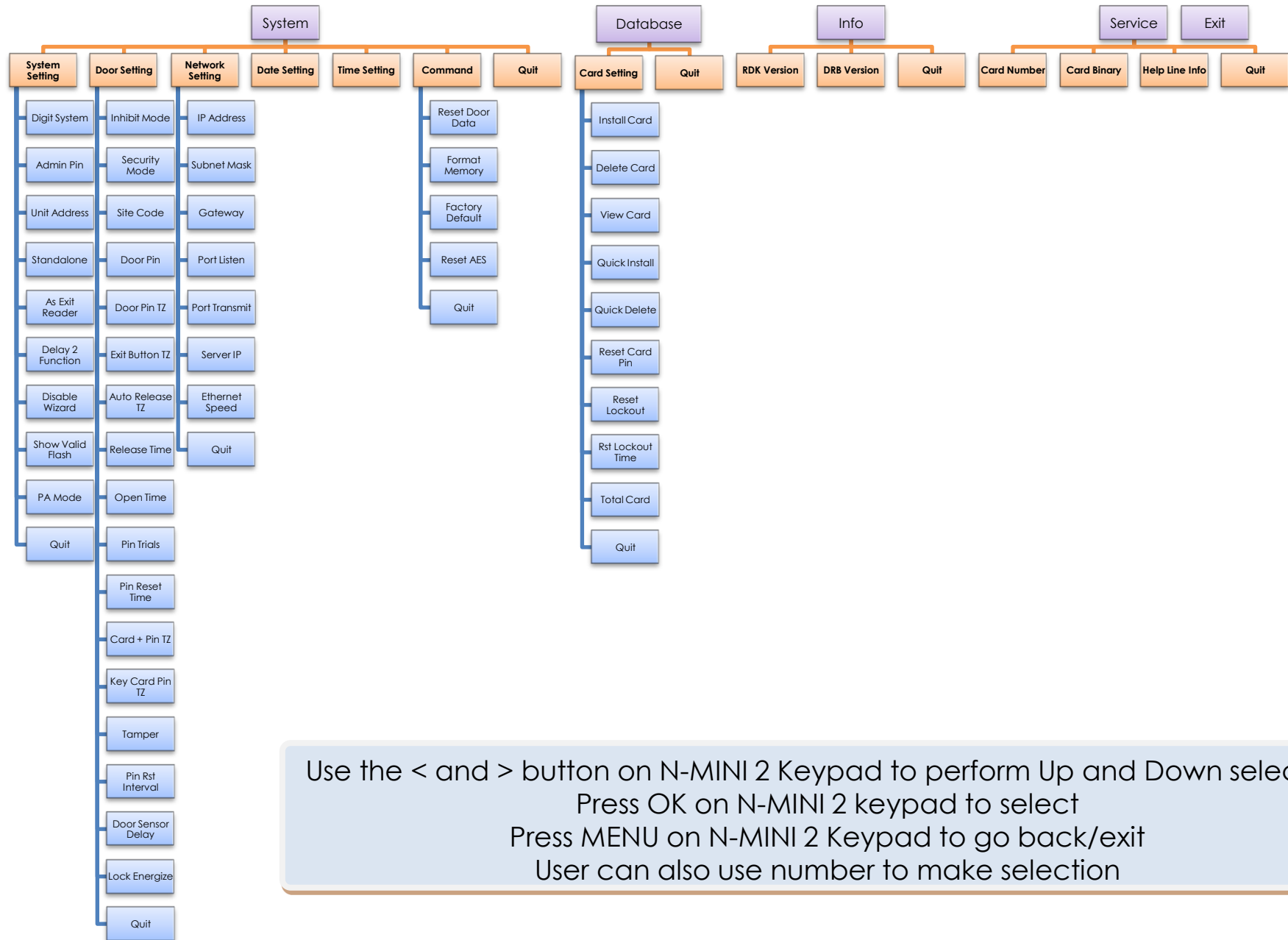
Tricolor LED Indicator

LED Color	LED Behavior	Status
Blue	Blinking	Idle/Sleep Mode
Green	Static	Valid Action (e.g.: Valid Card Entry)
Red	Static	Invalid Action (e.g.: Door Force Open)
Red	Blinking	System Error (e.g.: No Physical Network Conn.)

Please check the system error in Diagnostic Page if the unit's RED LED blinking



N-MINI 2 Main Menu Structure Map

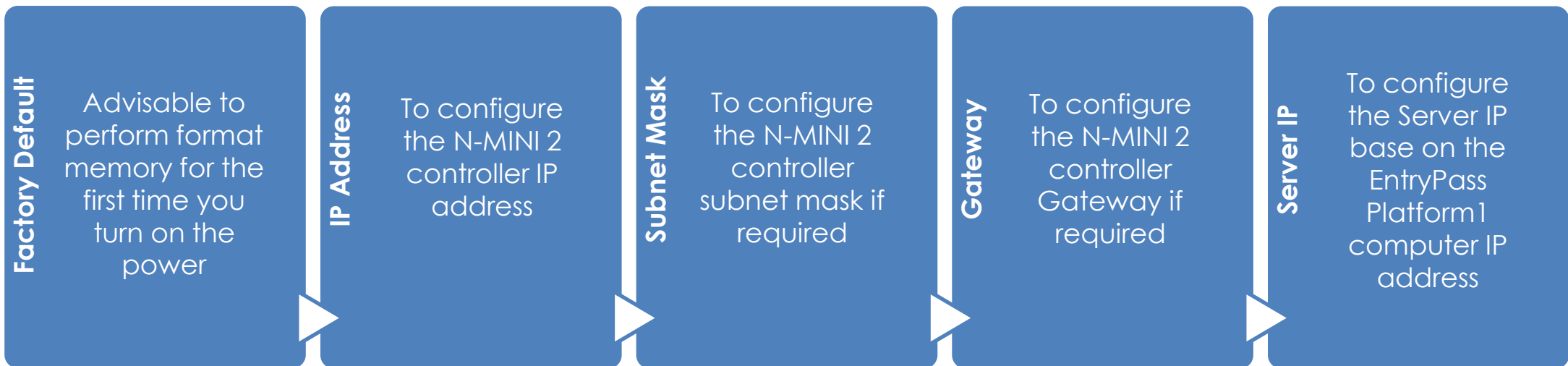


Use the < and > button on N-MINI 2 Keypad to perform Up and Down selection
 Press OK on N-MINI 2 keypad to select
 Press MENU on N-MINI 2 Keypad to go back/exit
 User can also use number to make selection



Before Connecting to the EntryPass Platform1 Access Control System

Before you begin to connect to the EntryPass Platform1 Access Control System, please make sure all the wiring connection is correct. On the N-MINI 2 RDK, please make sure the following setting has been done:



N-MINI 2 Programming Mode

To enter programming mode, press:

- MENU
- 123456 (default admin pin)

Admin Pin

- Enter programming mode
- System Icon OK
- 01 OK
- 02 OK
- Key in new admin pin (6 digits)
- Key in new pin again (6 digits)
- MENU X3

Format Memory

- Enter programming mode
- System Icon OK
- 06 OK
- 02 OK
- 1
- 1
- During formatting, long beep sound will be heard
- MENU X3

Factory Default

- Enter programming mode
- System Icon OK
- 06 OK
- 03 OK
- 1 OK
- 1 OK
- During performing factory default, long beep sound will be heard

IP Address

- Enter programming mode
- System Icon OK
- 03 OK
- 01 OK
- Key in the new IP address
- MENU X3



N-MINI 2 Programming Mode

Subnet Mask

- Enter programming mode
- System Icon OK
- 03 OK
- 02 OK
- Key in the new Subnet Mask
- MENU X3

Gateway

- Enter programming mode
- System Icon OK
- 03 OK
- 03 OK
- Key in the new Gateway
- MENU X3

Server IP

- Enter programming mode
- System Icon OK
- 03 OK
- 06 OK
- Key in the new Server IP
- MENU X3

Door Pin 1

- Enter programming mode
- System Icon OK
- 02 OK
- 04 OK
- 01 OK
- Key in the new door pin (6 digits)
- Menu
- 05 OK
- 01 OK
- 001
- MENU X4

Door Pin 2

- Enter programming mode
- System Icon OK
- 02 OK
- 04 OK
- 02 OK
- Key in the new door pin (6 digits)
- Menu
- 05 OK
- 02 OK
- 001
- MENU X4



N-MINI 2 Programming Mode

Door Pin 3

- Enter programming mode
- System Icon OK
- 02 OK
- 04 OK
- 03 OK
- Key in the new door pin (6 digits)
- Menu
- 05 OK
- 03 OK
- 001
- MENU X4

Open Time

- Enter programming mode
- System Icon OK
- 02 OK
- 09 OK
- Key in the new open time (00-99)
- MENU X3

Release Time

- Enter programming mode
- System Icon OK
- 02 OK
- 08 OK
- Key in the new release time (00-99)
- MENU X3

Install Card

- Enter programming mode
- DB Icon OK
- 01 OK
- 01 OK
- Key in the card number (10 digits)
- MENU X3

Delete Card

- Enter programming mode
- DB Icon OK
- 01 OK
- 02 OK
- Key in the card number (10 digits)
- MENU X3



N-MINI 2 Programming Mode

Quick Install

- Enter programming mode
- DB Icon OK
- 01 OK
- 04 OK
- Flash all the cards to be installed (card by card)
- MENU X4

Quick Delete

- Enter programming mode
- DB Icon OK
- 01 OK
- 05 OK
- Flash all the cards to be deleted (card by card)
- MENU X4

RDK Version

- Enter programming mode
- Info Icon OK
- 01 OK
- MENU X3

DRB Version

- Enter programming mode
- Info Icon OK
- 02 OK
- MENU X3



Cabling Information

Communication	Data Signal	Max Distance	Description
NMINI2 to PC or Network Switch	Network	100m (300 ft)	24 AWG, 4 Pairs (Cat 5e)
NMINI2 to DRB	RS485	800m (2400 ft)	22 AWG, 2 Pairs, Shielded & Twisted Pair
DRB to Reader	Wiegand	30m (100 ft)	22 AWG, 2 Pairs, Shielded & Twisted Pair
NMINI2 to Power Supply	Power	30m (100 ft)	18 AWG, 1 Pair
DRB to Electro-Magnetic Lock	Power	30m (100 ft)	18 AWG, 1 Pair
DRB to Push Button	Contact	30m (100 ft)	22 AWG, 1 Pair
DRB to Door Sensor	Contact	30m (100 ft)	22 AWG, 1 Pair
DRB to Other Controller for Cross-Board Interlock	Contact	100m (300 ft)	22 AWG, 1 Pair

