EP.NE4800 WIRING GUIDE

Version: 1.01

Last Updated: 11-04-2017

Notes:

NE4800 is the network enabled lift controller.

NE4800 work together with a POB board and a WIE.485 board can cater up to 32 floors.
It can connect up to 16 POB boards which can cater maximum 512 floors.

NE4800 can connect up to 4 WIE.485 and each WIE.485 can connect 2 readers (Reader Type: Standard Wiegand).

It also support multi bit custom Wiegand format (Wiegand Group) for each reader.
4 key switch can be connected to POB board.

See http://www.entrypass.net/ for updates, revisions, and download the latest installation manual

Platform1 version 3 support 6 and 10 digits format.
For existing site, P1 will detect its card database to determine 6 or 10 digits; For new site, user can change the digits as long as the card database is empty.

Please refer to separate EntryPass Platform1 User Manual for detail operation help. The Official EntryPass Platform1 User Manual can be downloaded from our website under “Download” section.

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:

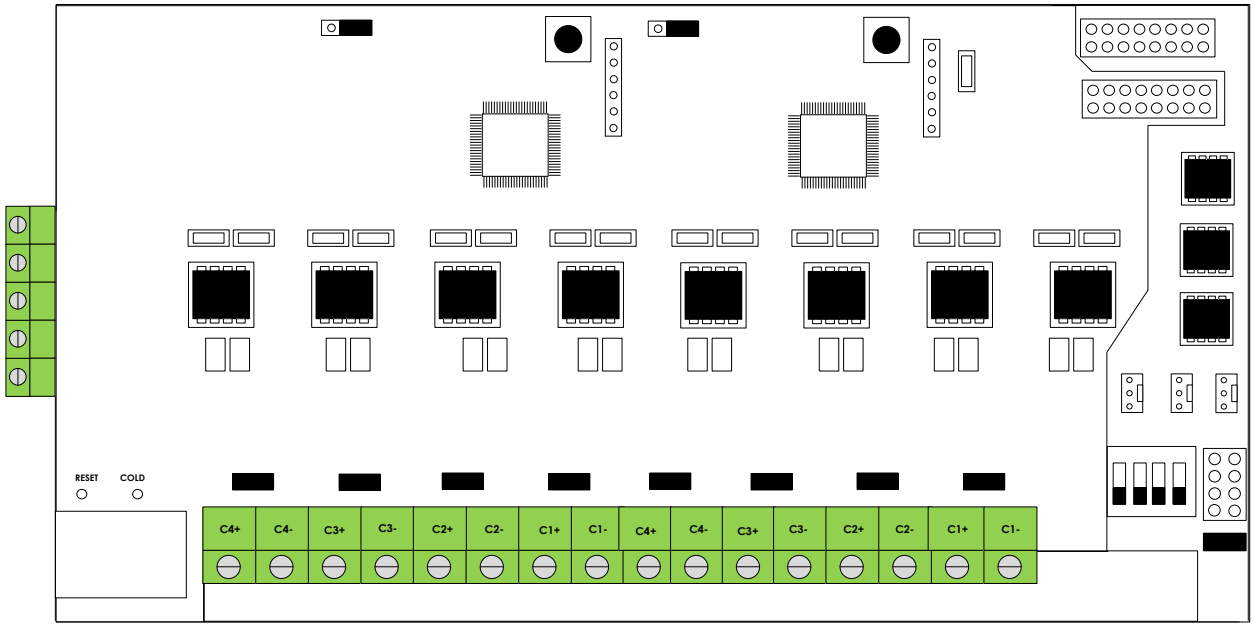
- Observe precautions while handling the circuit board assembly by using proper grounding straps and handling precautions at all
- Visually ensure no onboard parts is broken, damage or contains burn mark
- Do not turn on the power supply until you completed all wiring and external add on devices installations

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.

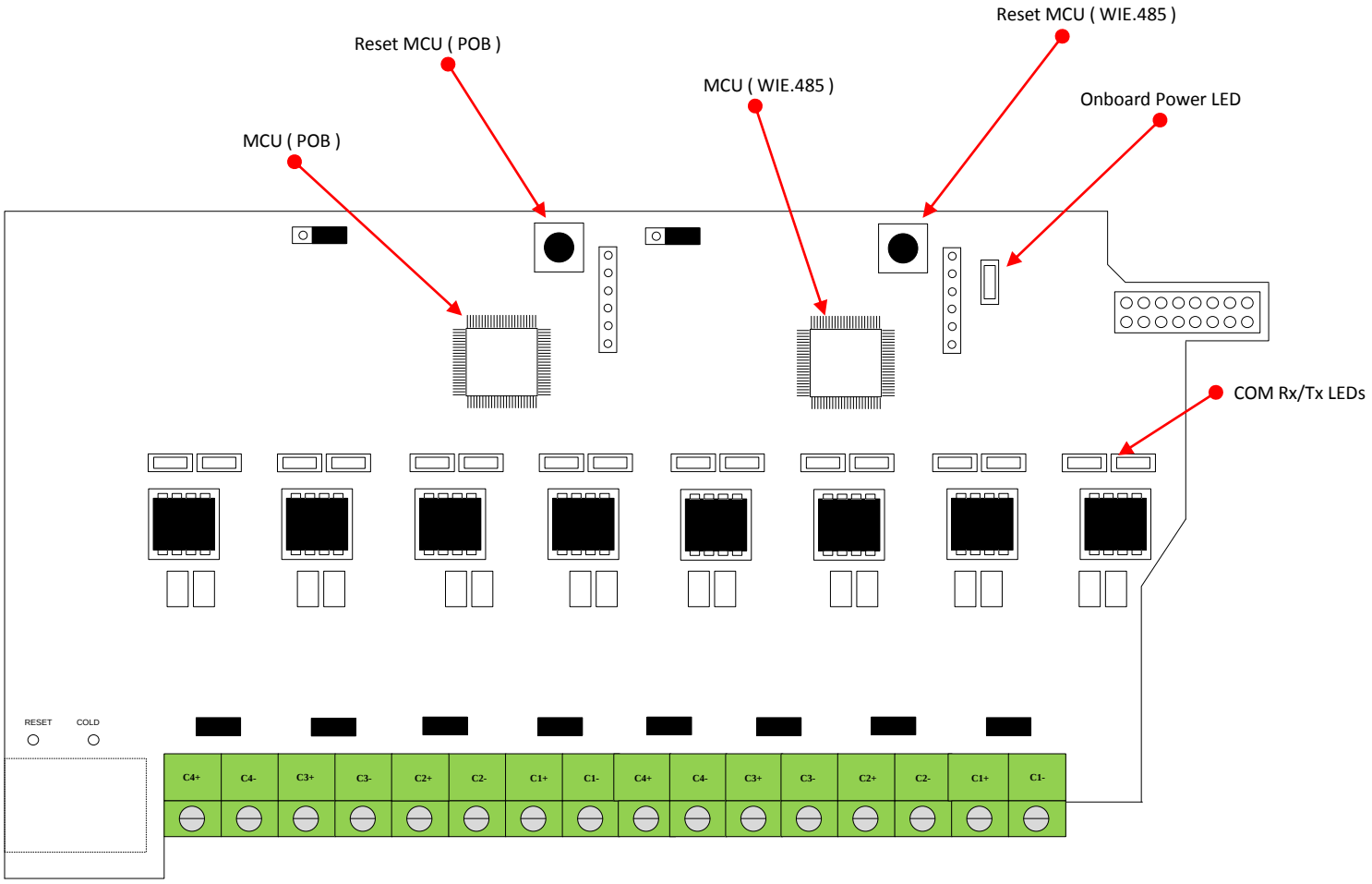
Instances of Non-Warranty

- 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

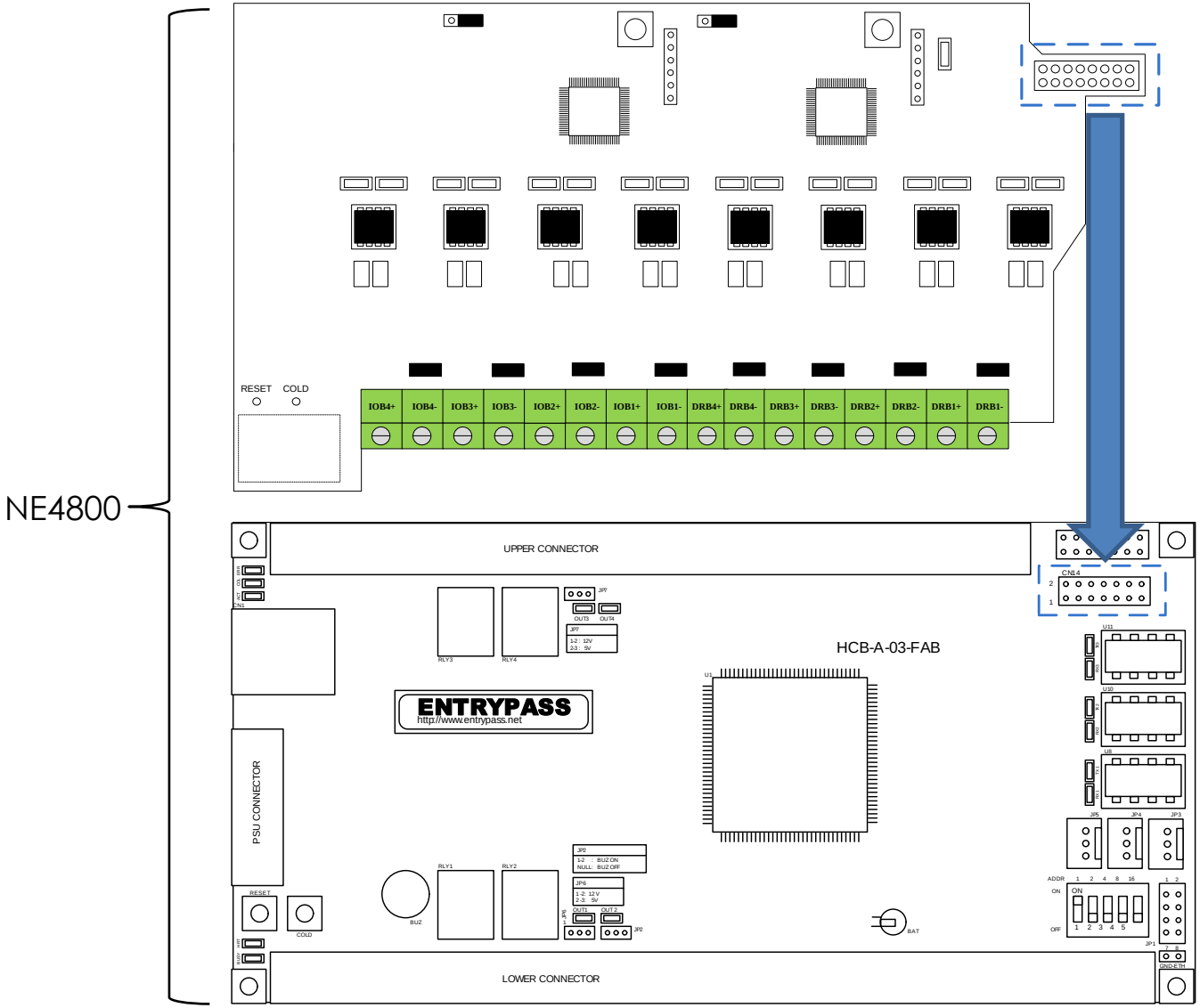
NE4800 (HCB with ComGateway board)



ComGateway Component Description



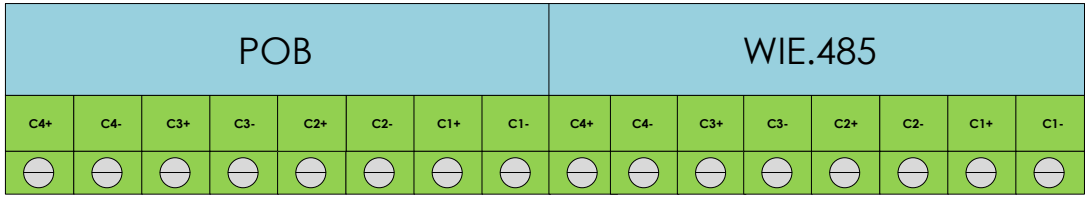
Connecting the ComGateway board to NE4800



ComGateway Board
(On Top)

HCB Controller
(On Bottom)

ComGateway Output Connector



POB Connector

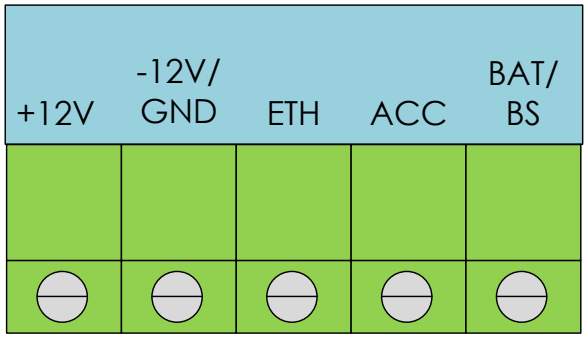
C4+ - POB 4 RS485 (+) Connection
C4- - POB 4 RS485 (-) Connection
C3+ - POB 3 RS485 (+) Connection
C3- - POB 3 RS485 (-) Connection
C2+ - POB 2 RS485 (+) Connection
C2- - POB 2 RS485 (-) Connection
C1+ - POB 1 RS485 (+) Connection
C1- - POB 1 RS485 (-) Connection

WIE.485 Connector

C4+ - WIE.485 4 RS485 (+) Connection
C4- - WIE.485 4 RS485 (-) Connection
C3+ - WIE.485 3 RS485 (+) Connection
C3- - WIE.485 3 RS485 (-) Connection
C2+ - WIE.485 2 RS485 (+) Connection
C2- - WIE.485 2 RS485 (-) Connection
C1+ - WIE.485 1 RS485 (+) Connection
C1- - WIE.485 1 RS485 (-) Connection

Each POB RS485 connection can support Max. 4 unit POB controller

Legend Description

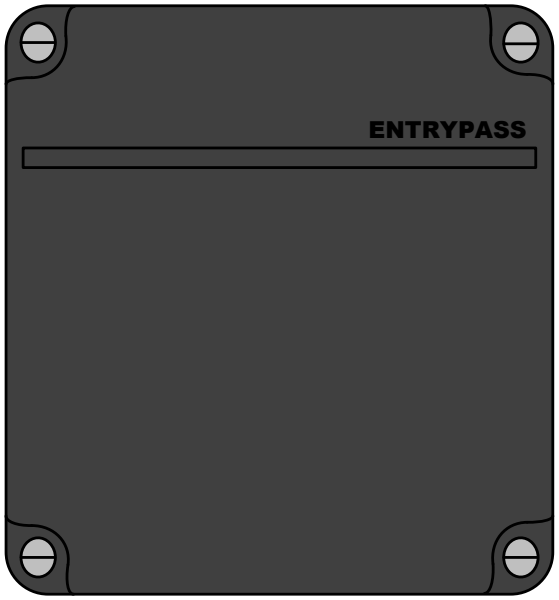


Power Supply Connector

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

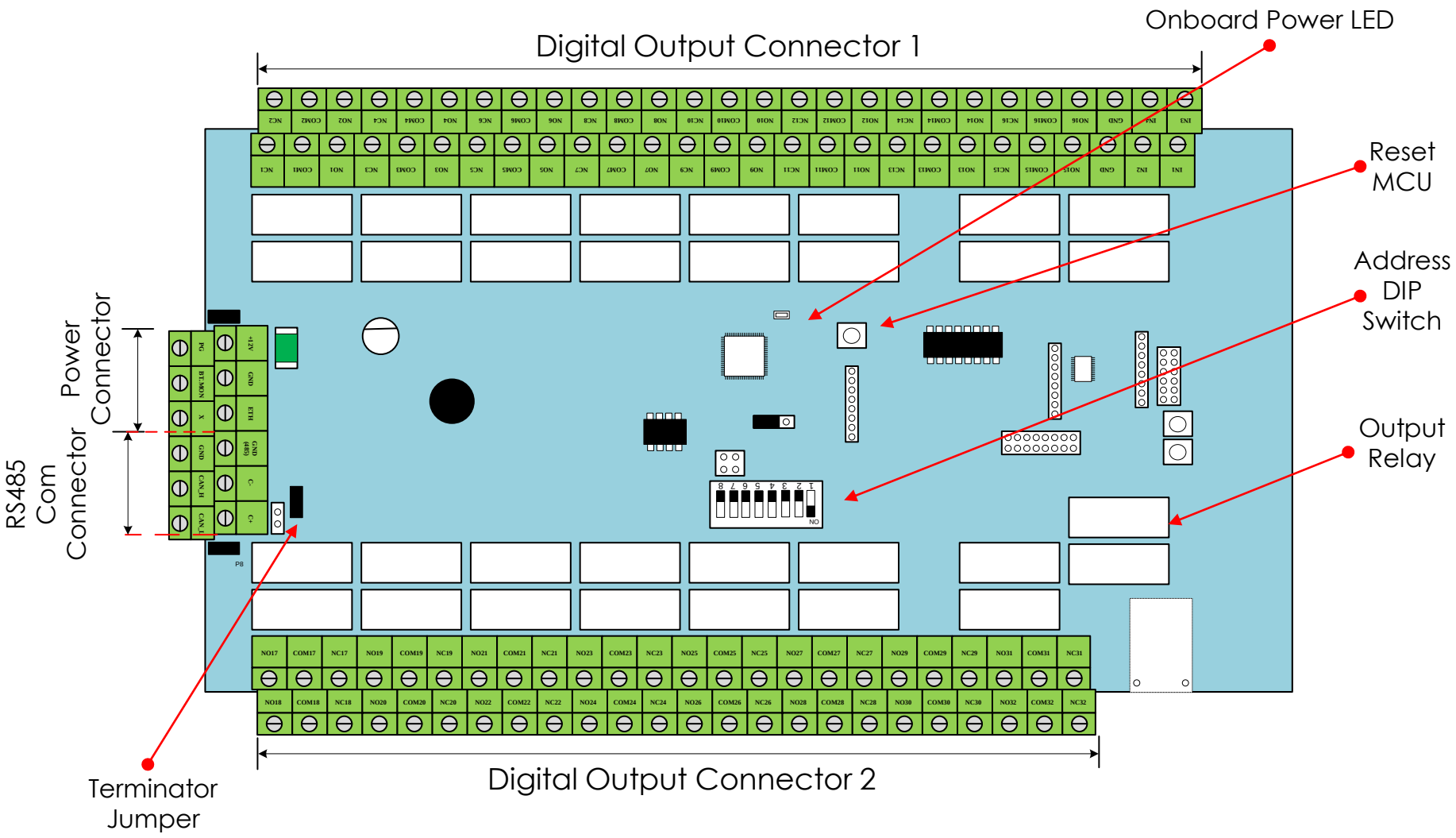
BAT/BS (Backup Battery Monitoring) point will monitor the backup battery voltage which will supply power to the board when AC power is cut off
The minimum voltage for cutoff while using backup battery is 10V

Power Supply Unit Specification

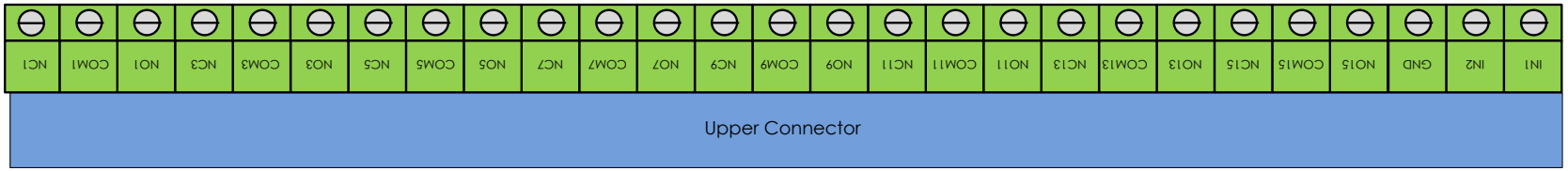


Power Supply Unit Specification:
- Switching Power Supply
- 12V DC
- 3 Amp (Minimum)

POB (Passive Output Board) Component Description



POB Digital Output Connector 1 (Upper)

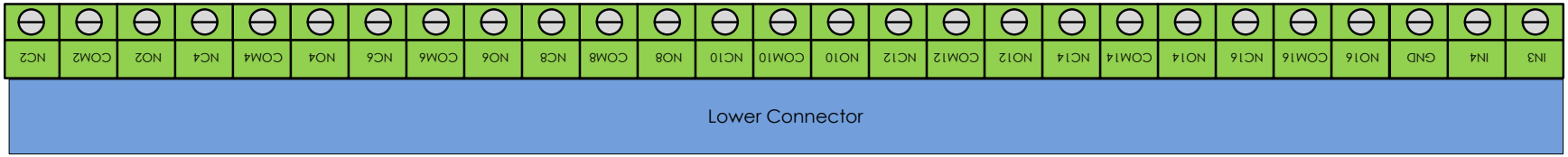


Upper Connector

NC1 - Relay 1 Normally Close Connection
COM1 - Relay 1 Common Input
NO1 - Relay 1 Normally Open Connection
NC3 - Relay 3 Normally Close Connection
COM3 - Relay 3 Common Input
NO3 - Relay 3 Normally Open Connection
NC5 - Relay 5 Normally Close Connection
COM5 - Relay 5 Common Input
NO5 - Relay 5 Normally Open Connection
NC7 - Relay 7 Normally Close Connection
COM7 - Relay 7 Common Input
NO7 - Relay 7 Normally Open Connection

NC9 - Relay 9 Normally Close Connection
COM9 - Relay 9 Common Input
NO9 - Relay 9 Normally Open Connection
NC11 - Relay 11 Normally Close Connection
COM11 - Relay 11 Common Input
NO11 - Relay 11 Normally Open Connection
NC13 - Relay 13 Normally Close Connection
COM13 - Relay 13 Common Input
NO13 - Relay 13 Normally Open Connection
NC15 - Relay 15 Normally Close Connection
COM15 - Relay 15 Common Input
NO15 - Relay 15 Normally Open Connection
GND - Inputs Ground
IN2 - Input 2
IN1 - Input 1

POB Digital Output Connector 1 (Lower)

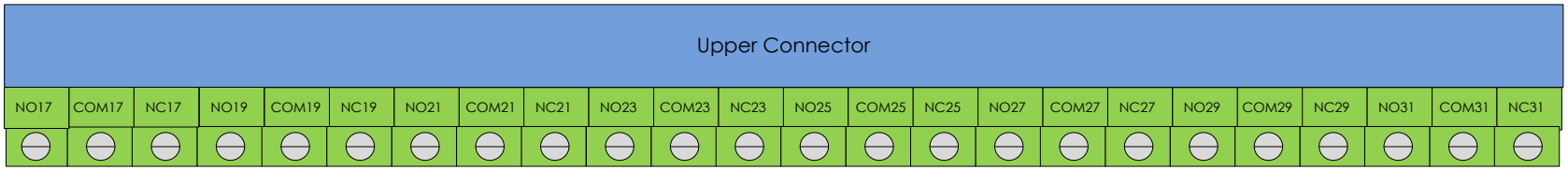


Lower Connector

NC2 - Relay 2 Normally Close Connection
COM2 - Relay 2 Common Input
NO2 - Relay 2 Normally Open Connection
NC4 - Relay 4 Normally Close Connection
COM4 - Relay 4 Common Input
NO4 - Relay 4 Normally Open Connection
NC6 - Relay 6 Normally Close Connection
COM6 - Relay 6 Common Input
NO6 - Relay 6 Normally Open
NC8 - Relay 8 Normally Close Connection
COM8 - Relay 8 Common Input
NO8 - Relay 8 Normally Open Connection

NC10 - Relay 10 Normally Close Connection
COM10 - Relay 10 Common Input
NO10 - Relay 10 Normally Open Connection
NC12 - Relay 12 Normally Close Connection
COM12 - Relay 12 Common Input
NO12 - Relay 12 Normally Open Connection
NC14 - Relay 14 Normally Close Connection
COM14 - Relay 14 Common Input
NO14 - Relay 14 Normally Open Connection
NC16 - Relay 16 Normally Close Connection
COM16 - Relay 16 Common Input
NO16 - Relay 16 Normally Open Connection
GND - Inputs Ground
IN4 - Input 4
IN3 - Input 3

POB Digital Output Connector 2 (Upper)

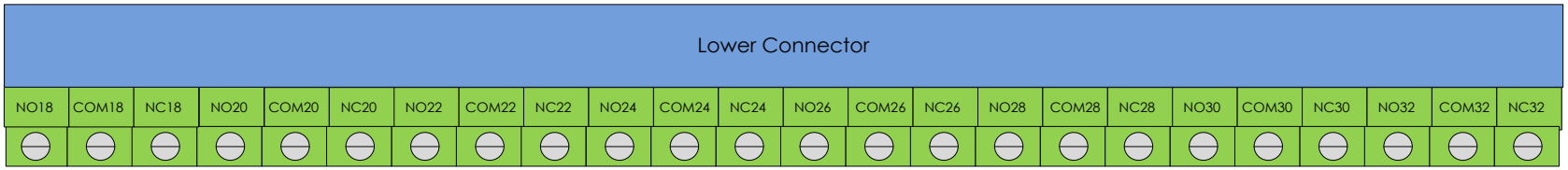


Upper Connector

NO17 - Relay 17 Normally Open Connection
COM17 - Relay 17 Common Input
NC17 - Relay 17 Normally Close Connection
NO19 - Relay 19 Normally Open Connection
COM19 - Relay 19 Common Input
NC19 - Relay 19 Normally Close Connection
NO21 - Relay 21 Normally Open Connection
COM21 - Relay 21 Common Input
NC21 - Relay 21 Normally Close Connection
NO23 - Relay 23 Normally Open Connection
COM23 - Relay 23 Common Input
NC23 - Relay 23 Normally Close Connection

NO25 - Relay 25 Normally Open Connection
COM25 - Relay 25 Common Input
NC25 - Relay 25 Normally Close Connection
NO27 - Relay 27 Normally Open Connection
COM27 - Relay 27 Common Input
NC27 - Relay 27 Normally Close Connection
NO29 - Relay 29 Normally Open Connection
COM29 - Relay 29 Common Input
NC29 - Relay 29 Normally Close Connection
NO31 - Relay 31 Normally Open Connection
COM31 - Relay 31 Common Input
NC31 - Relay 31 Normally Close Connection

POB Digital Output Connector 2 (Lower)



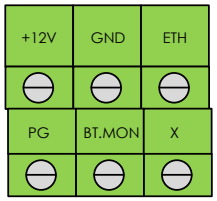
Lower Connector

NO18 - Relay 18 Normally Open Connection
COM18 - Relay 18 Common Input
NC18 - Relay 18 Normally Close Connection
NO20 - Relay 20 Normally Open Connection
COM20 - Relay 20 Common Input
NC20 - Relay 20 Normally Close Connection
NO22 - Relay 22 Normally Open Connection
COM22 - Relay 22 Common Input
NC22 - Relay 22 Normally Close Connection
NO24 - Relay 24 Normally Open Connection
COM24 - Relay 24 Common Input
NC24 - Relay 24 Normally Close Connection

NO26 - Relay 26 Normally Open Connection
COM26 - Relay 26 Common Input
NC26 - Relay 26 Normally Close Connection
NO28 - Relay 28 Normally Open Connection
COM28 - Relay 28 Common Input
NC28 - Relay 28 Normally Close Connection
NO30 - Relay 30 Normally Open Connection
COM30 - Relay 30 Common Input
NC30 - Relay 30 Normally Close Connection
NO32 - Relay 32 Normally Open Connection
COM32 - Relay 32 Common Input
NC32 - Relay 32 Normally Close Connection

POB Power and Communication Connector

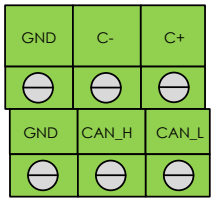
Power Supply Connection



Power Supply Connection

+12V	-	Power Supply Positive 12V DC
GND	-	Power Supply Ground
ETH	-	Power Supply Earthing
PG	-	AC Fail Monitoring
BT.MON	-	Backup Battery Monitoring

RS485 Com Connection

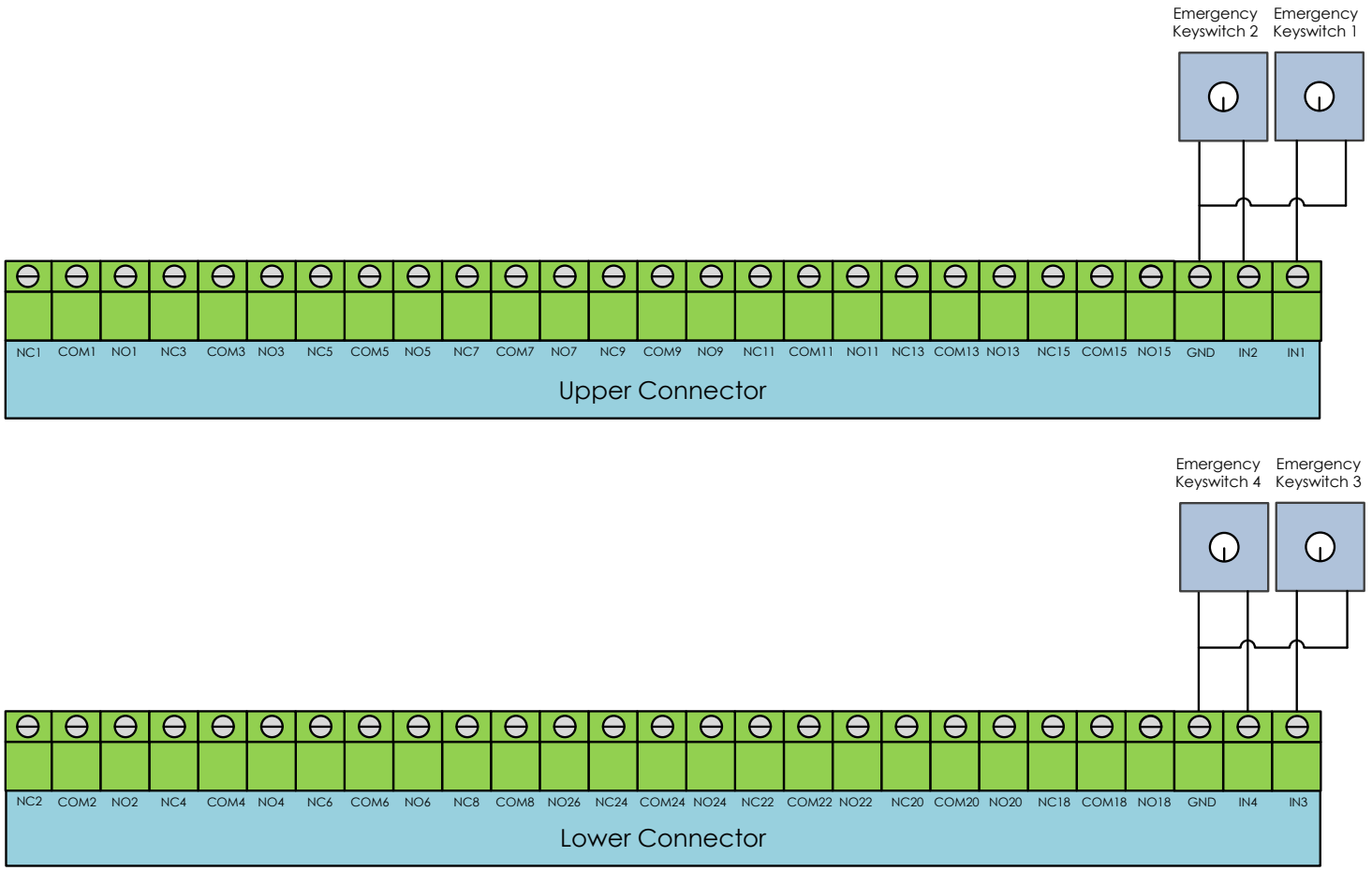


RS485 Com Connection

GND (485)	-	RS485 Ground
C-	-	RS485 Com (-) Connection
C+	-	RS485 Com (+) Connection
GND	-	(Not Applicable)
CAN_H	-	(Not Applicable)
CAN_L	-	(Not Applicable)

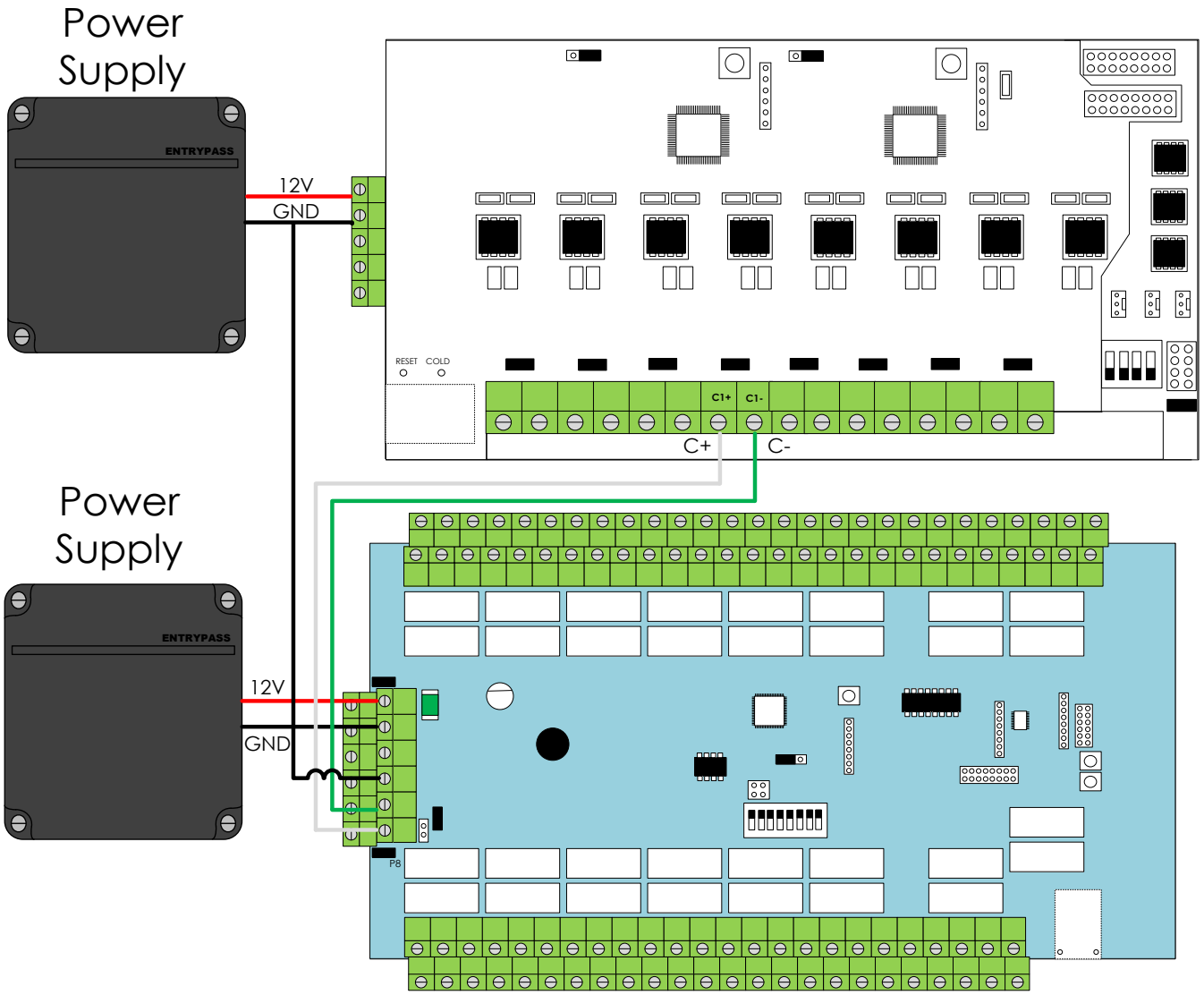
BT.MON (Backup Battery Monitoring) point will monitor the backup battery voltage which will supply power to the board when AC power is cut off
The minimum voltage for cutoff while using backup battery is 10V

Connecting the Keyswitch to POB controller

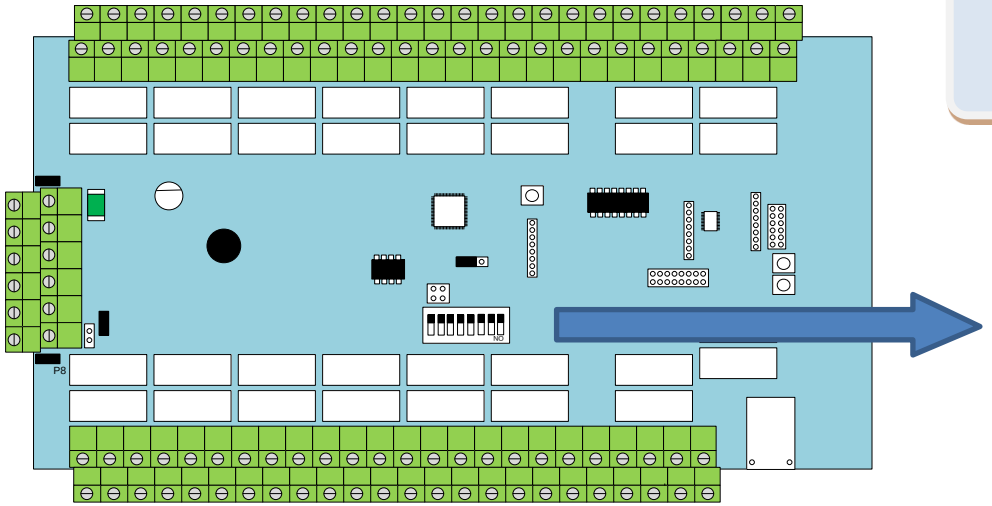


Keyswitch can only be connected IN1 , IN2 , IN3 and IN4 to GND

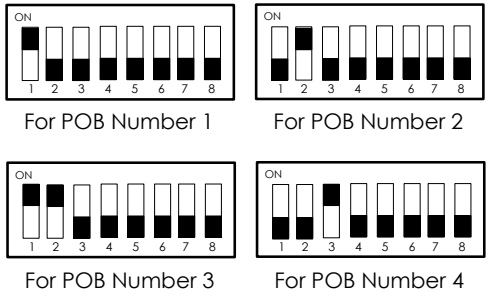
Connecting Power Supply to NE4800 and POB controller



POB Unit Address Dip Switch



If more than 1 POB controller is connected , the DIP switch must be configure according to the pattern show below. The default DIP switch configuration of the POB controller is 1 (ON)



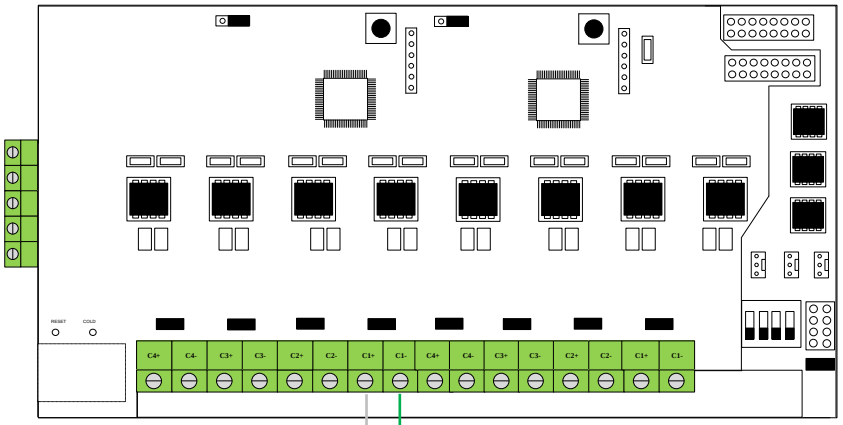
Connecting NE4800 and POB – DIP Switch Addressing

Unit Address	Switch 1	Switch 2	Switch 3	Switch 4	Switch 5	Switch 6	Switch 7	Switch 8
001	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
002	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
003	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
004	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF

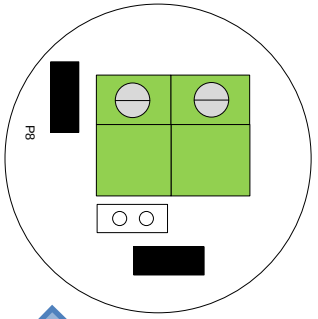
DIP Switch Addressing Table

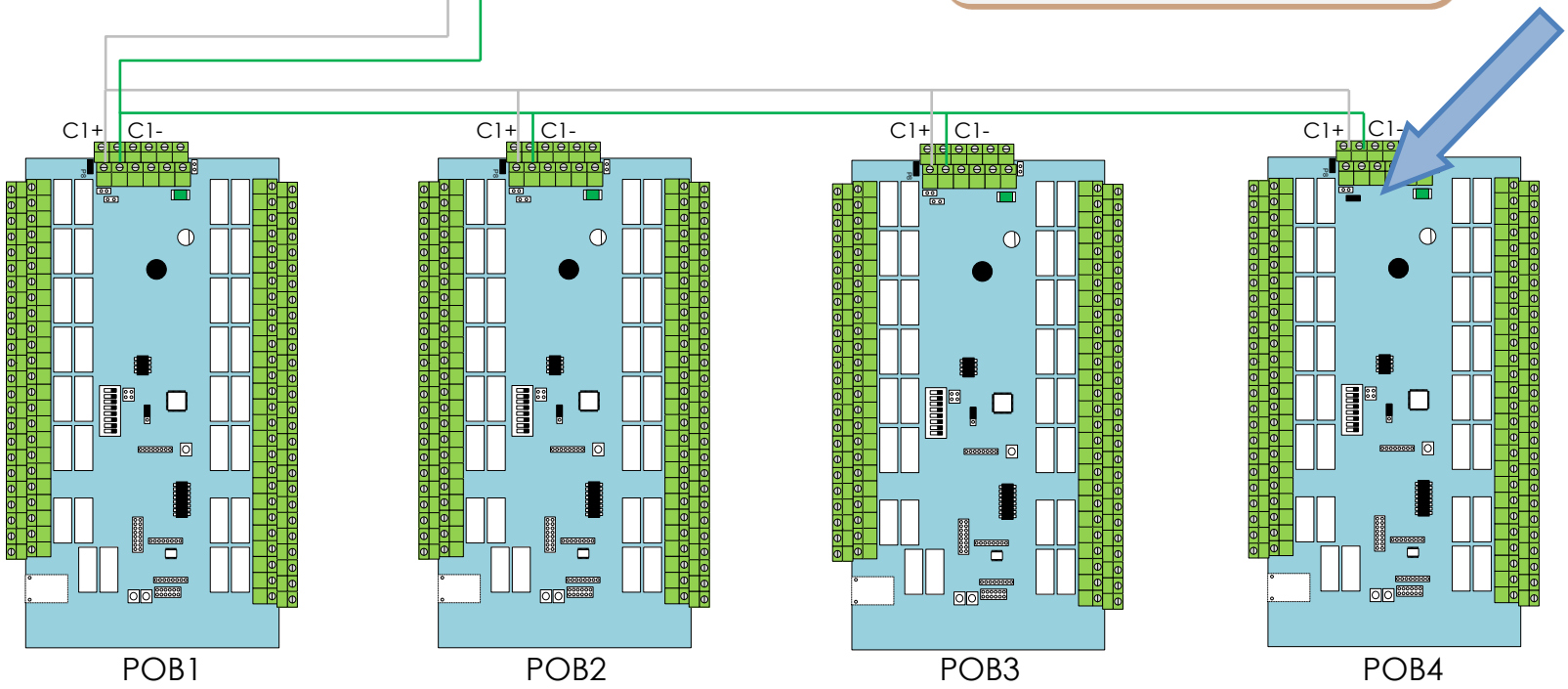
Each switch is represent by an address, the sum of the switch address will be the controller address
The number in ( ) is the address of each individual switch of the dip switch
Example: To obtain Address 11, 1 + 2 + 8 = 11, So just switch on switch 1, 2, 4

Connecting POB to NE4800 controller

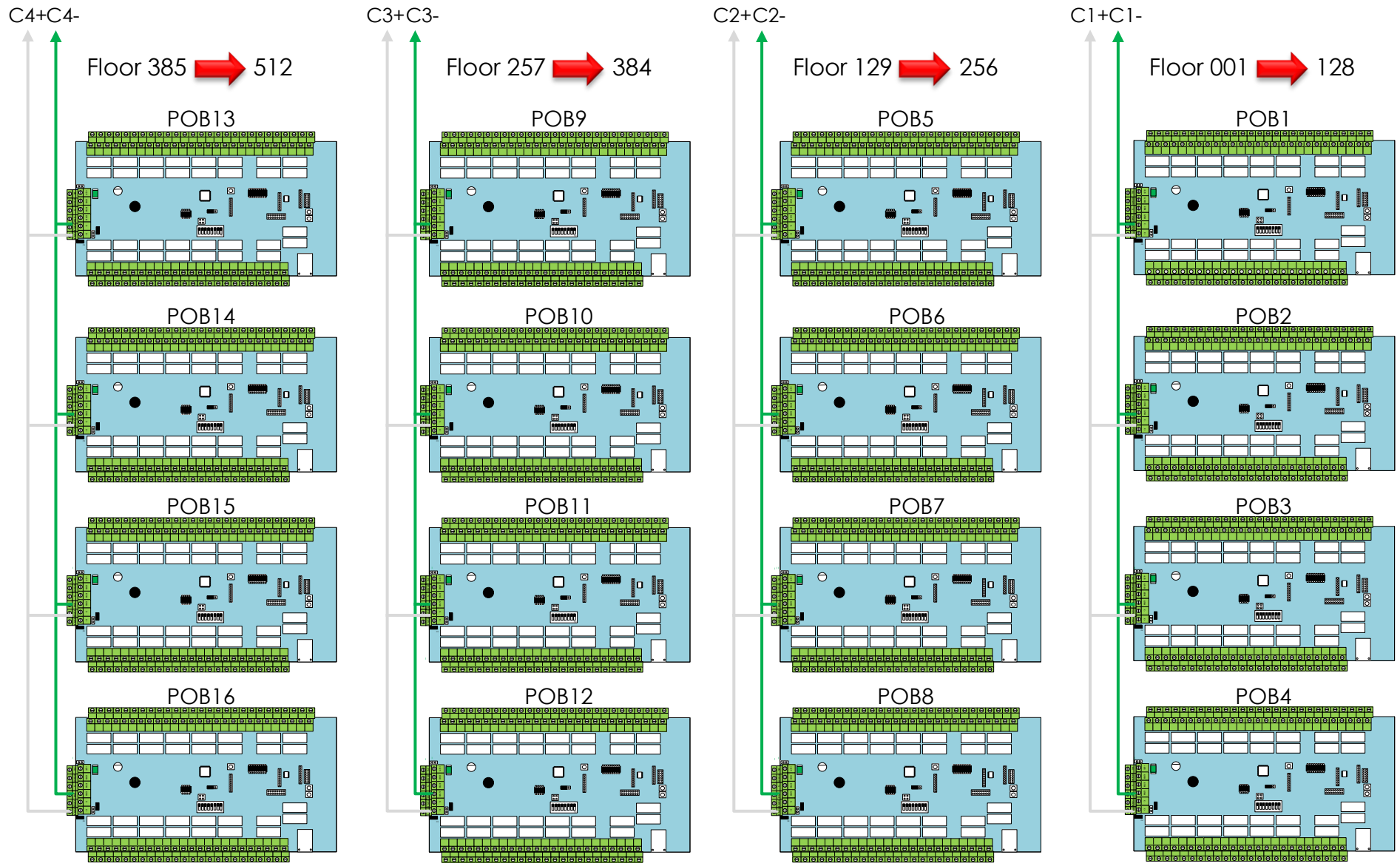


Note:
Each COM line can support only 4 POB controller. Loop C1+/- starting from POB1 if more than 1 POB controller is connected. Is advisable to connect a jumper at JP3 as terminator on last POB controller. Remove the jumper for the rest of POB.

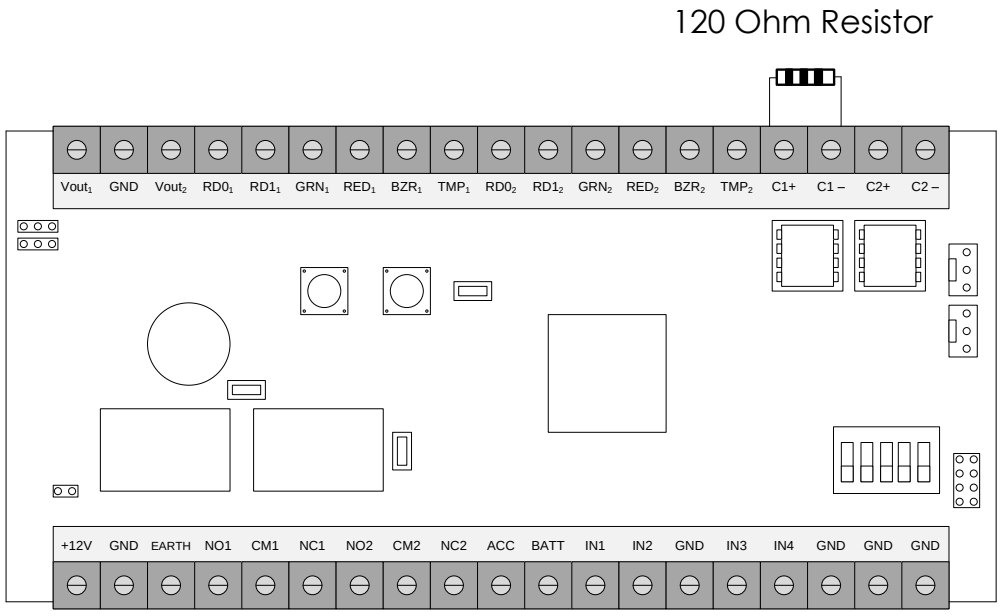




Connecting 16 units POB controller (512 Floors)

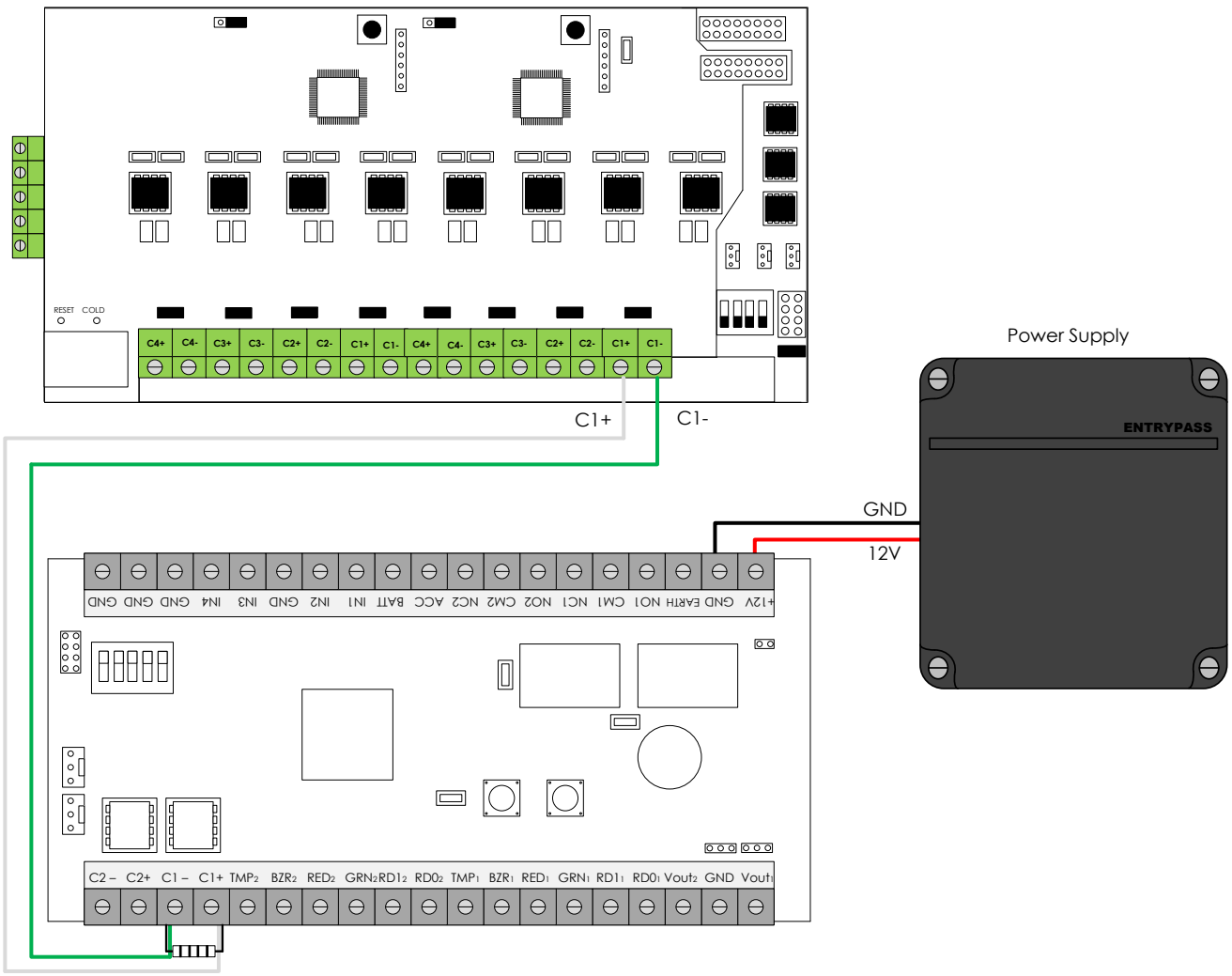


WIE.485

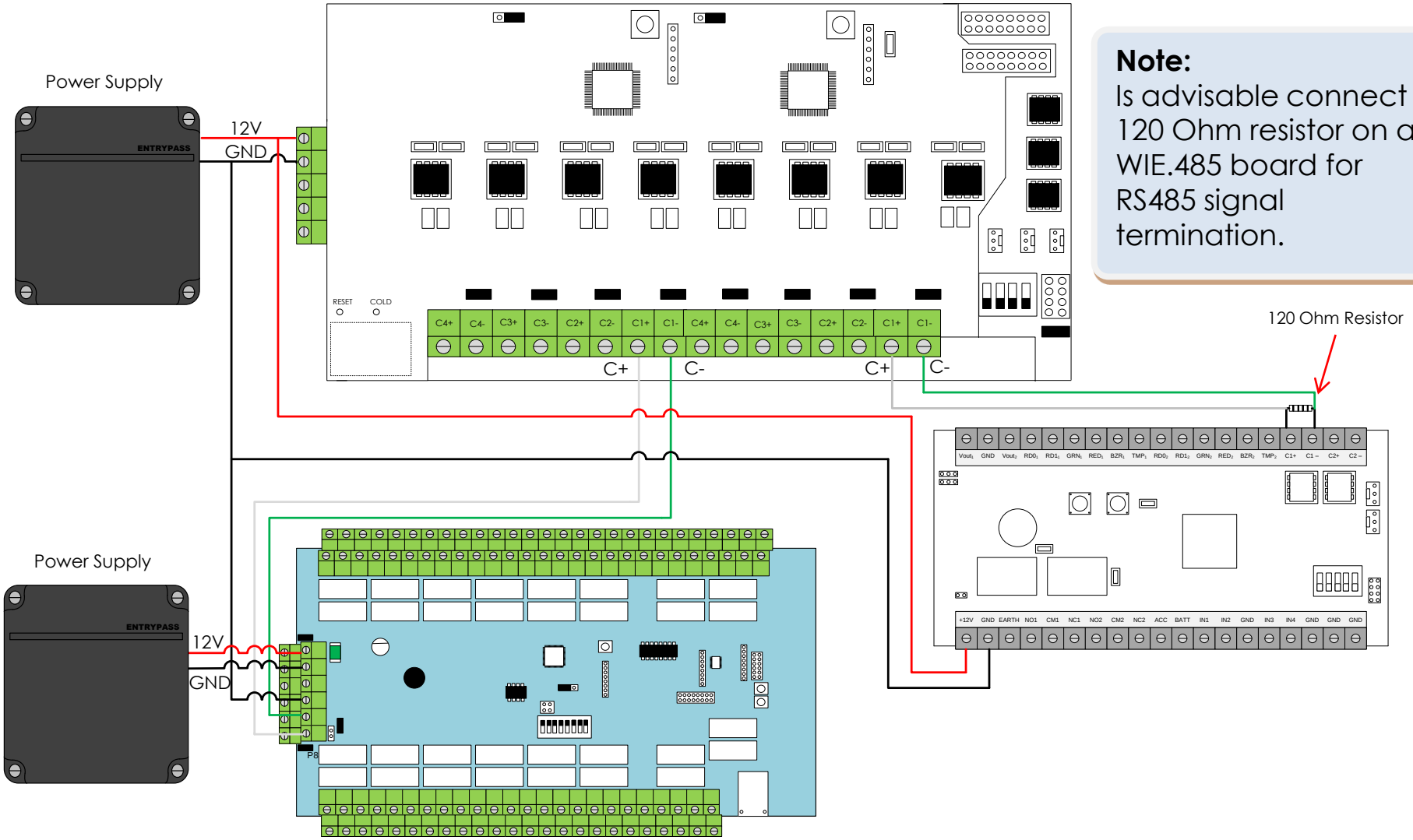


Note:
Is advisable connect 120 Ohm resistor on all WIE.485 board for RS485 signal termination.

Connecting the WIE.485 to NE4800 controller

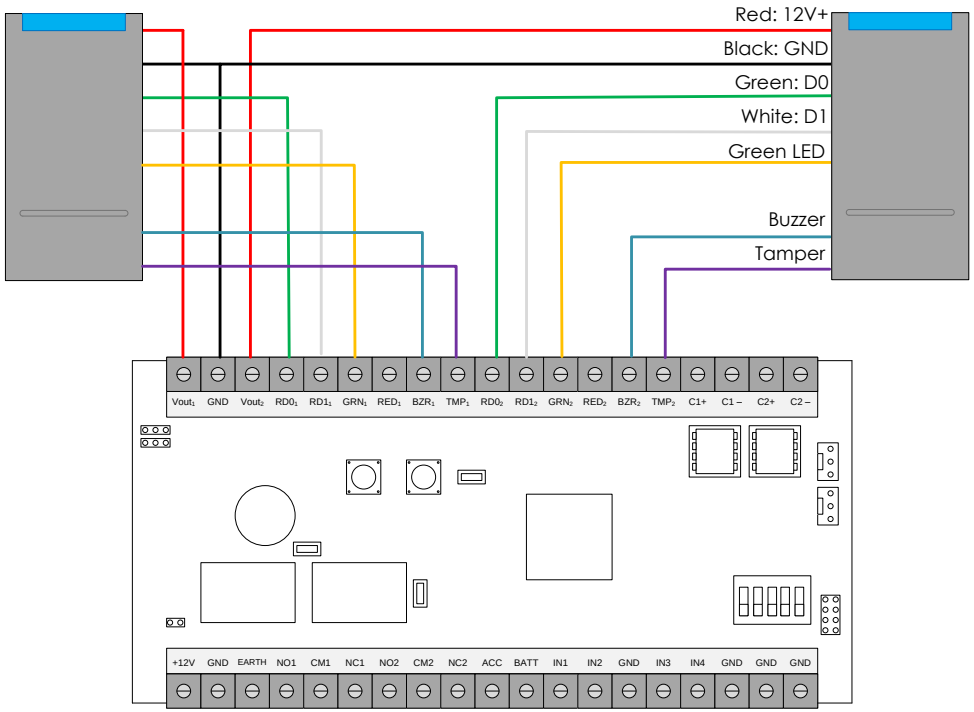


Connecting WIE.485 and POB to NE4800 controller



Note:
Is advisable connect 120 Ohm resistor on all WIE.485 board for RS485 signal termination.

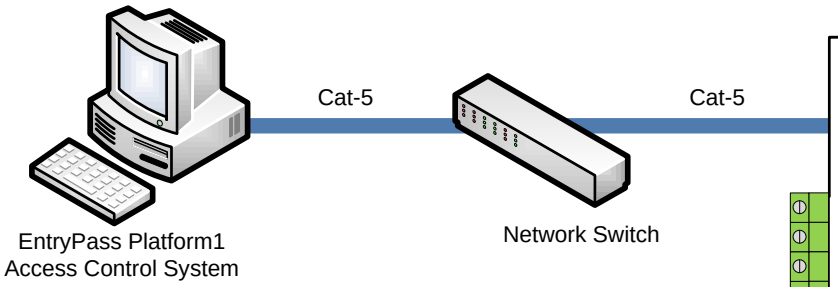
Connecting the Reader to WIE.485

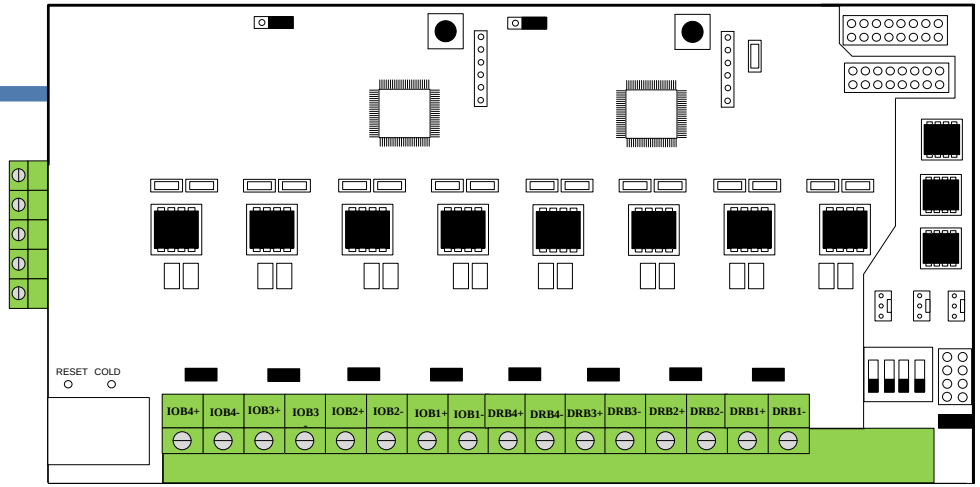


Put the jumper cap at JP5 1-2 to output 12VDC at $Vout_1$
Put the jumper cap at JP5 2-3 to output 5VDC at $Vout_1$

Put the jumper cap at JP6 1-2 to output 12VDC at $Vout_2$
Put the jumper cap at JP6 2-3 to output 5VDC at $Vout_2$

Connecting to the PC using TCP/IP mode





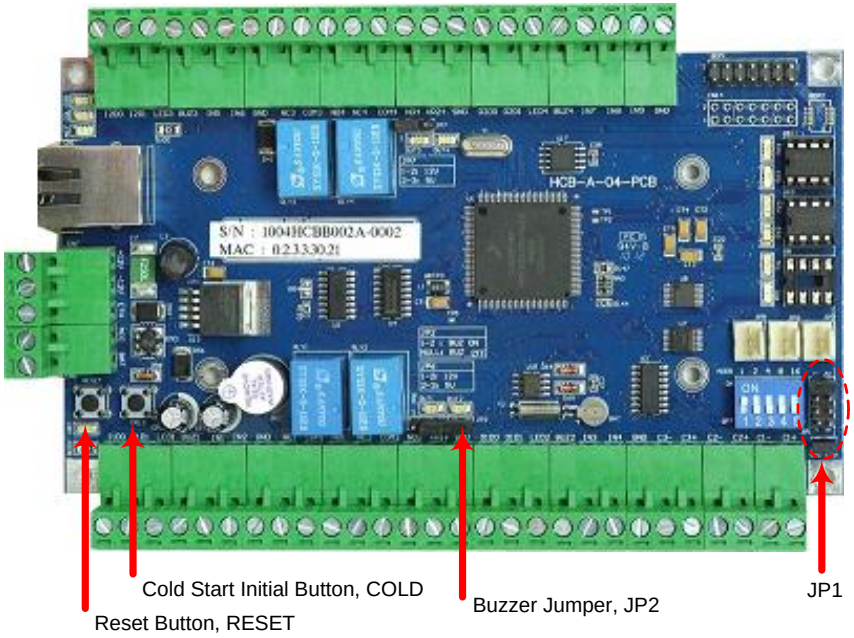
Default NE4800 controller network setting:

1) IP address: 192.168.1.100
2) Subnet Mask: 255.255.255.0
3) Gateway: 0.0.0.0
4) Server IP address: 192.168.1.254

To change the network setting, simply logon to the web server.

The distance from NE4800 controller to network switch should not more than 100 meter

Performing Cold Start

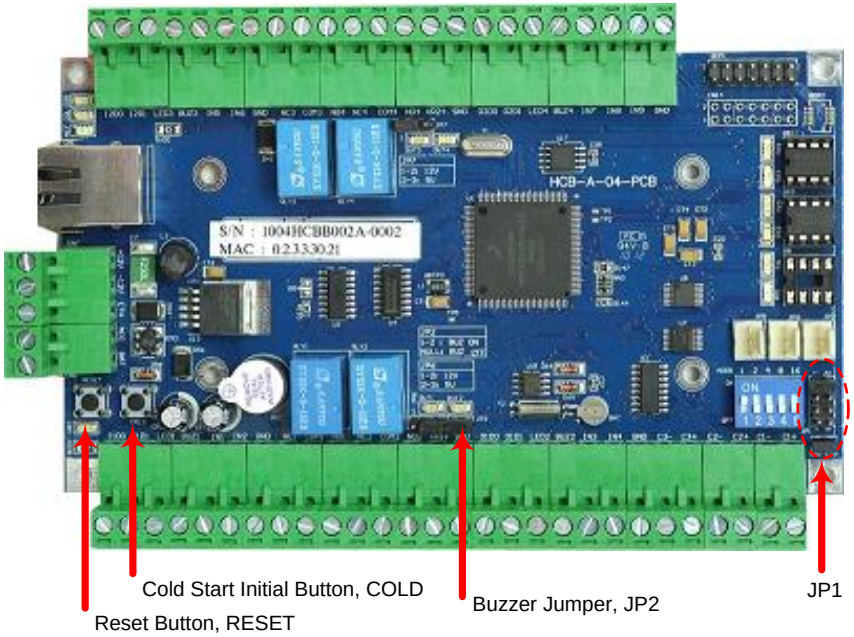


Steps of performing cold start:

1. Please ensure that the jumper is inserted on JP1 1-2
2. Press and Hold COLD switch
3. Press RESET Switch and Release RESET switch
4. Release COLD switches when a long beeping sound heard

Advisable to perform cold start for the first time you turn on the power
The buzzer will only beep if jumper is placed on JP2 1-2

Performing Factory Default



Make Sure the Jumper Cap is placed on JP1 (1-2) after factory default

Steps of performing Factory Default:

1. Please ensure that the jumper is inserted on JP1 7-8
2. Press and Hold COLD switch
3. Press RESET Switch and Release RESET switch
4. Release COLD switches when a long beeping sound heard

Factory Default will change the IP Address back to 192.168.1.100, Server IP to 192.168.1.254 and Port to 2020
For the network controller support AES Encryption feature, factory default will disable the AES feature
The buzzer will only beep if jumper is placed on JP2 1-2

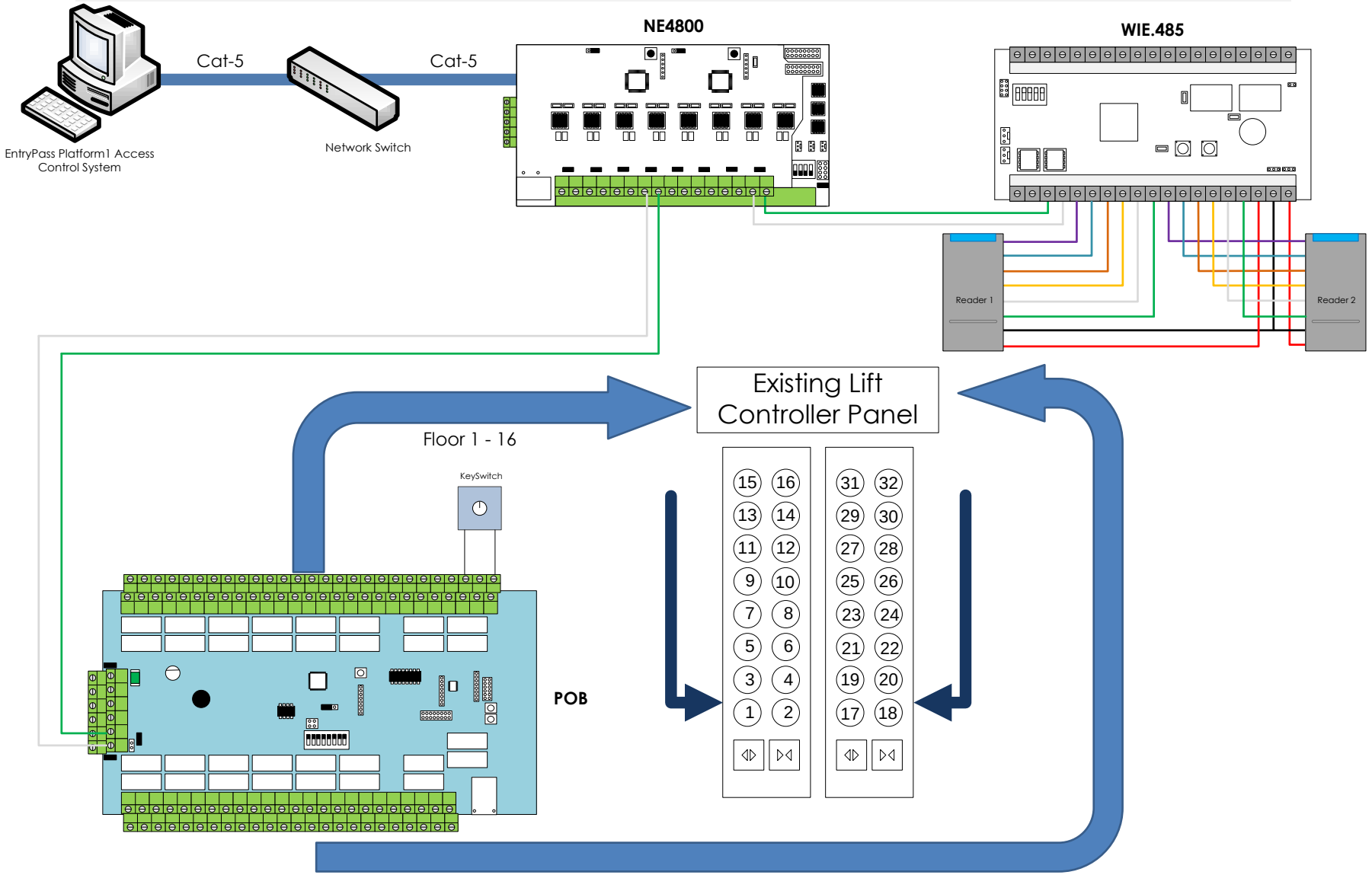
Performing AES Hard Reset

Steps of performing AES Hard Reset:

1. Please ensure that the jumper is inserted on JP1 3-4
2. Press RESET Switch and Release RESET switch

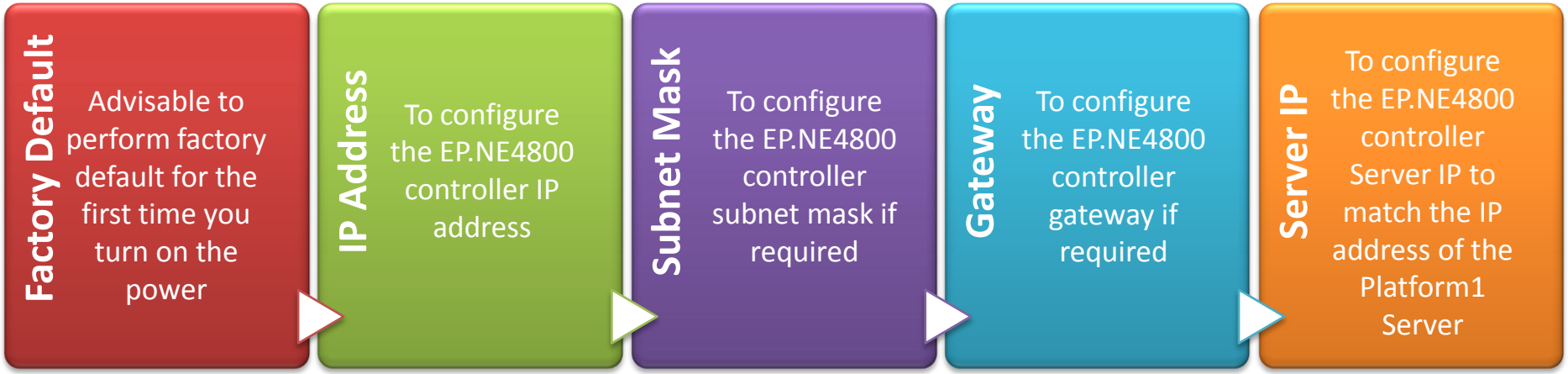
AES setting in the controller will be reset
If the controller is connected with AES enabled Platfrom1, Platfrom1 will sync and update AES setting with the controller

Lift Application System Overview



Connecting to 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 NE4800, please make sure the following setting has been done:



Cabling Information

Communication	Data Signal	Max Distance	Description
NE4800 to PC or Switch	Network	100m (300 ft)	24 AWG, 4 Pairs (Cat 5e)
NE4800 to WIE.485	RS485	1000m (3000 ft)	22 AWG, 2 Pairs, Shielded & Twisted Pair
WIE.485 to Reader	Wiegand	30m (100 ft)	22 AWG, 2 Pairs, Shielded & Twisted Pair
NE4800 to POB	RS485	1000m (3000 ft)	22 AWG, 2 Pairs, Shielded & Twisted Pair
POB to Keyswitch	Contact	30m (100 ft)	22 AWG, 1 Pair