Installation & Wiring Guide

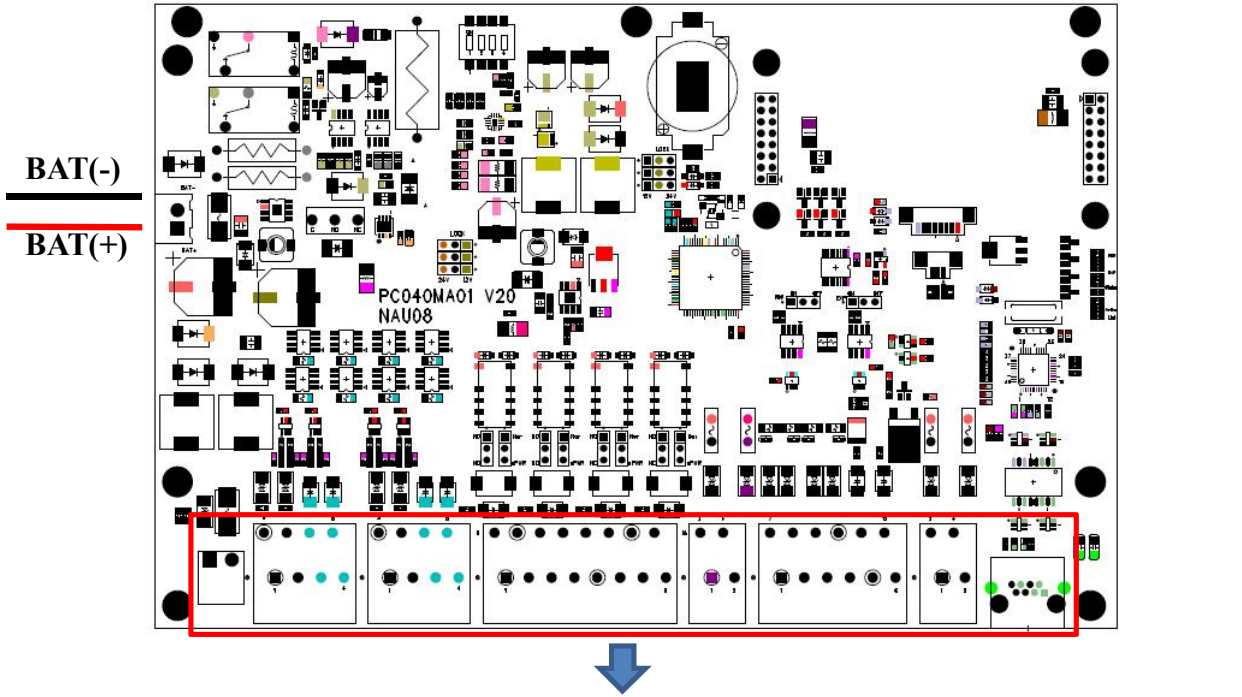
Four Door Access Controller

MCP-040 V2.0

Doc. Ver. : V2.0
2014.10.23
R&D Center
Union Community Co., Ltd.

1. Power Connector connection

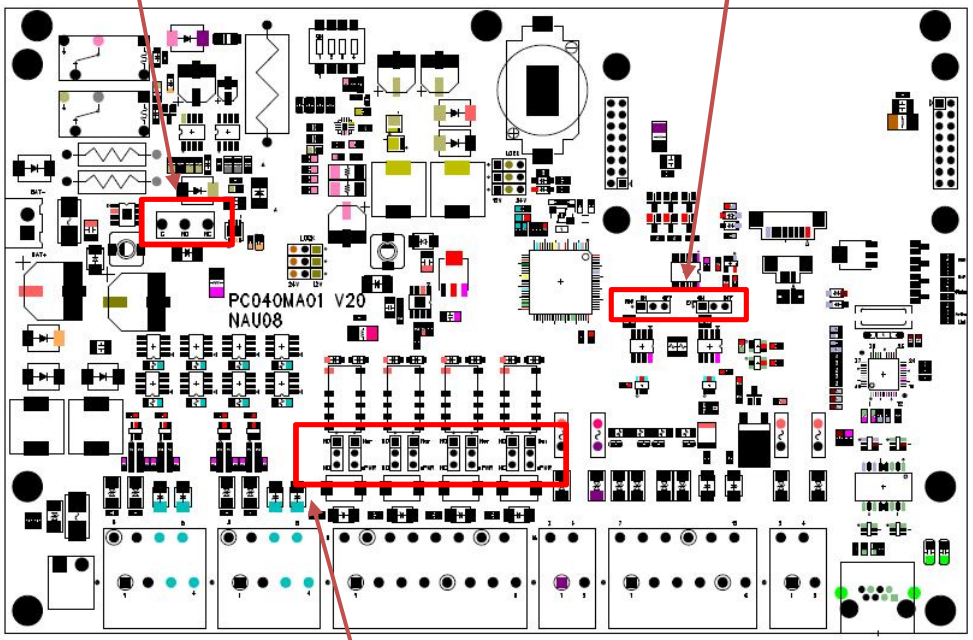
Backup Battery Interface



2. Main Board Feature

SW301
Battery Power On Switch

JP151/JP152 RS485 Termination Resistor Select Switch



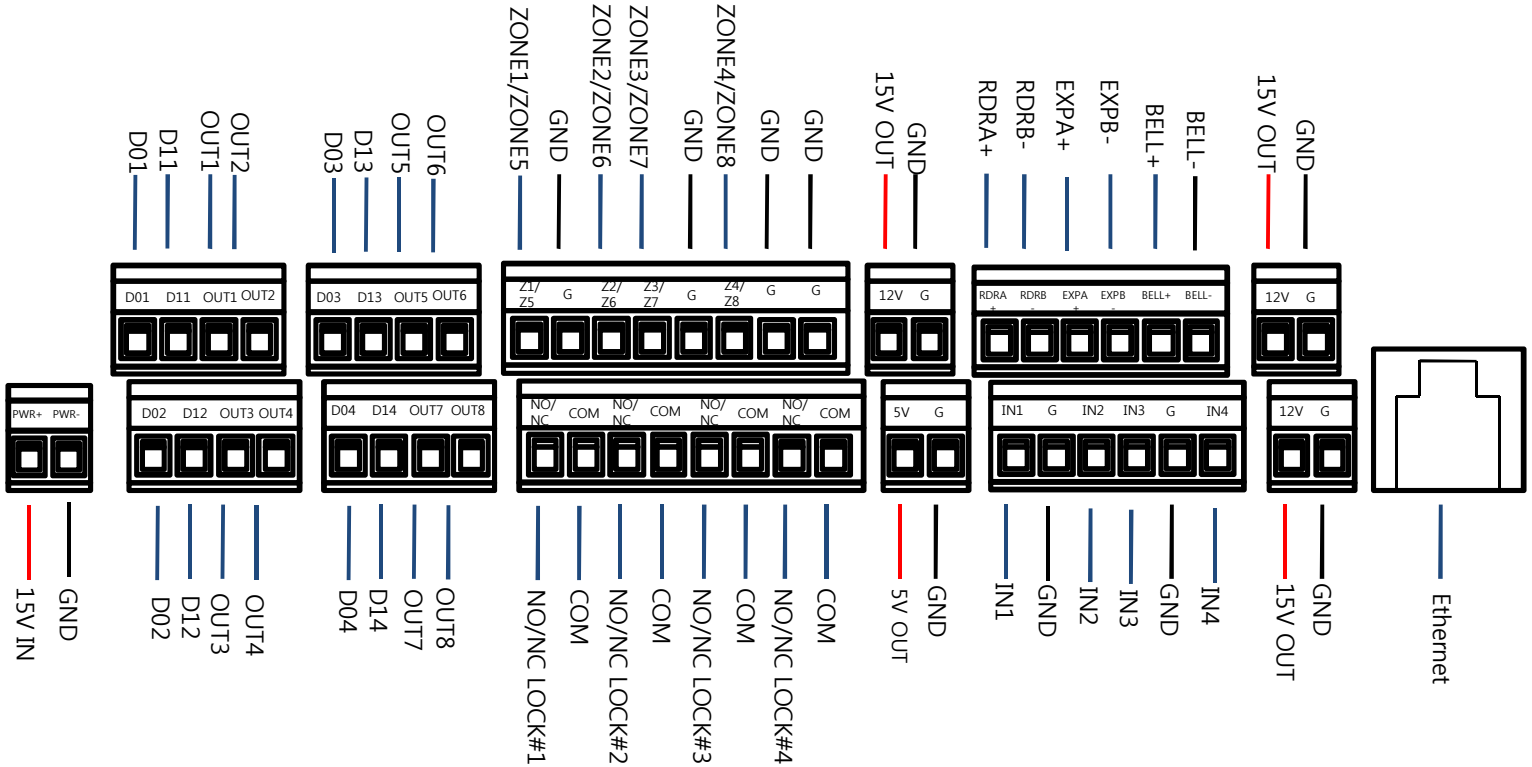
JP201~JP204
JP205~JP208
Lock Type Switch

Switch Setting I [Lock Type Selection]
JP201 : NO [Normal Open Relay Contact]
NC [Normal Close Relay Contact]
JP202 : NO [Normal Open Relay Contact]
NC [Normal Close Relay Contact]
JP203 : NO [Normal Open Relay Contact]
NC [Normal Close Relay Contact]
JP204 : NO [Normal Open Relay Contact]
NC [Normal Close Relay Contact]

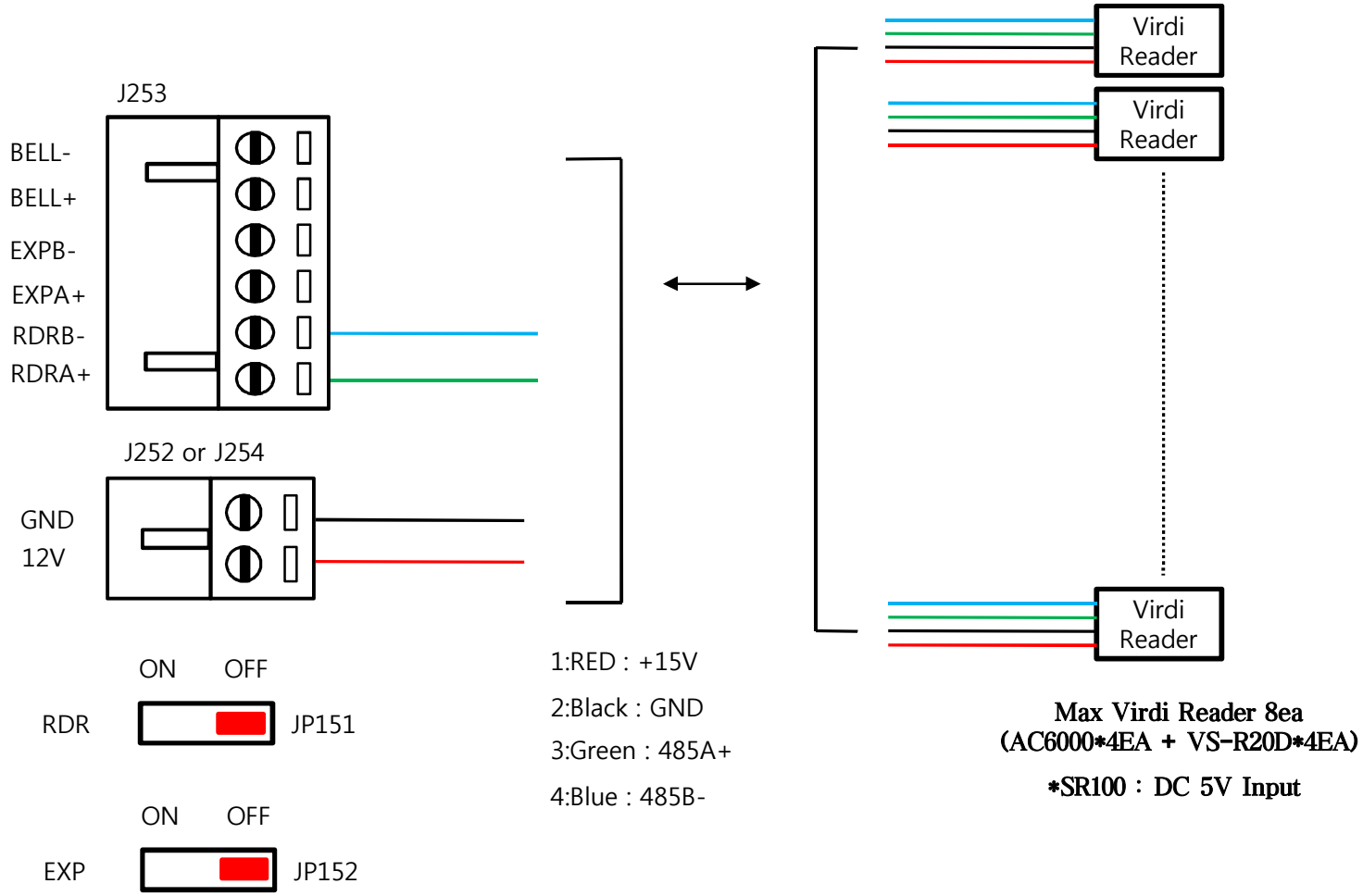
Switch Setting II [Lock Type Selection]
JP205 : Lock Power Contact / Lock No Power Contact
JP206 : Lock Power Contact / Lock No Power Contact
JP207 : Lock Power Contact / Lock No Power Contact
JP208 : Lock Power Contact / Lock No Power Contact

Switch Setting III [RS485 T_Resistor Selection]
JP151 : ON [120ohm termination resistor]
OFF [Open the termination resistor]
JP152 : ON [120ohm termination resistor]
OFF [Open the termination resistor]

3. Connection of Wires to terminal blocks

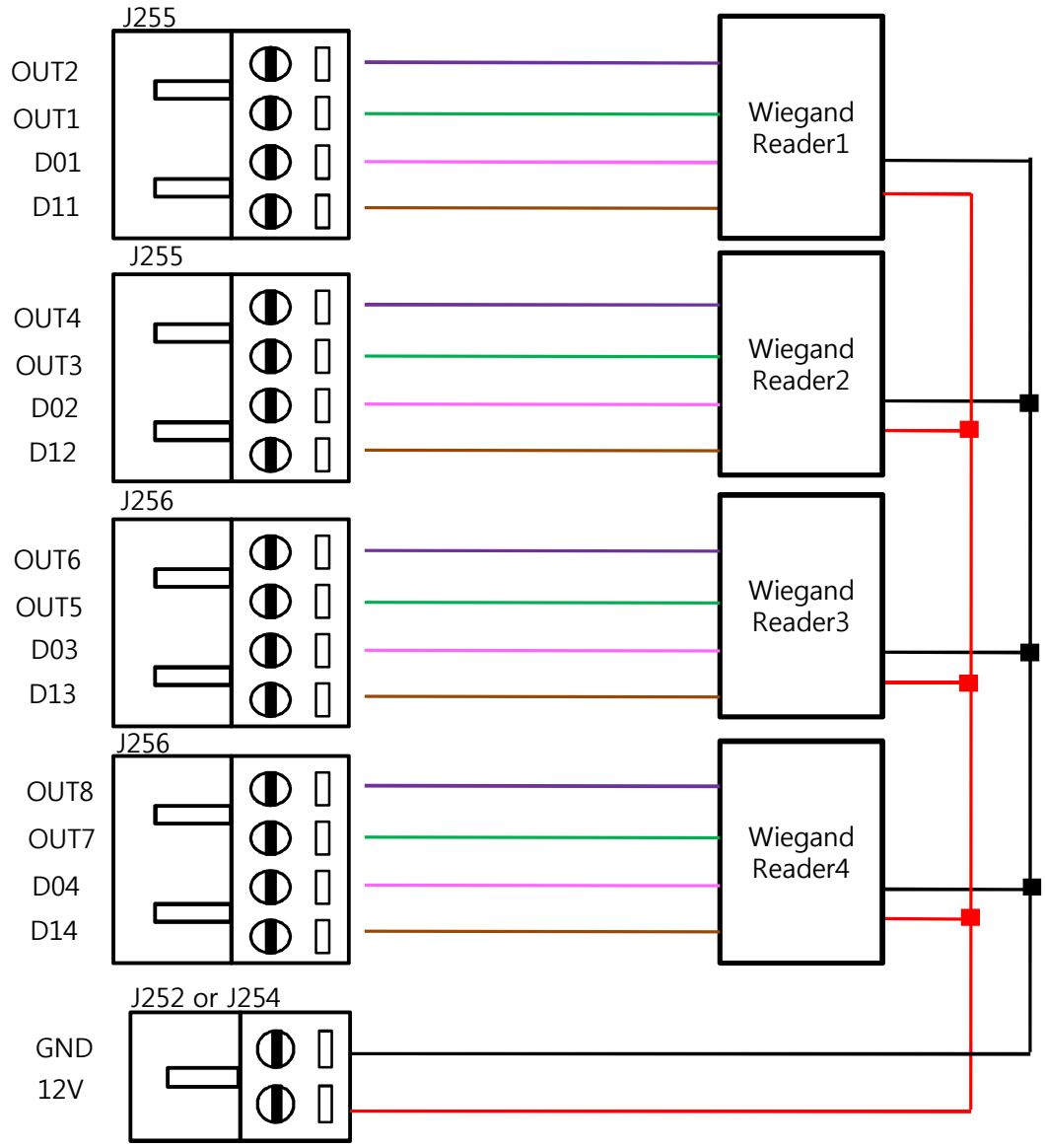


4. Connecting Virdi Reader



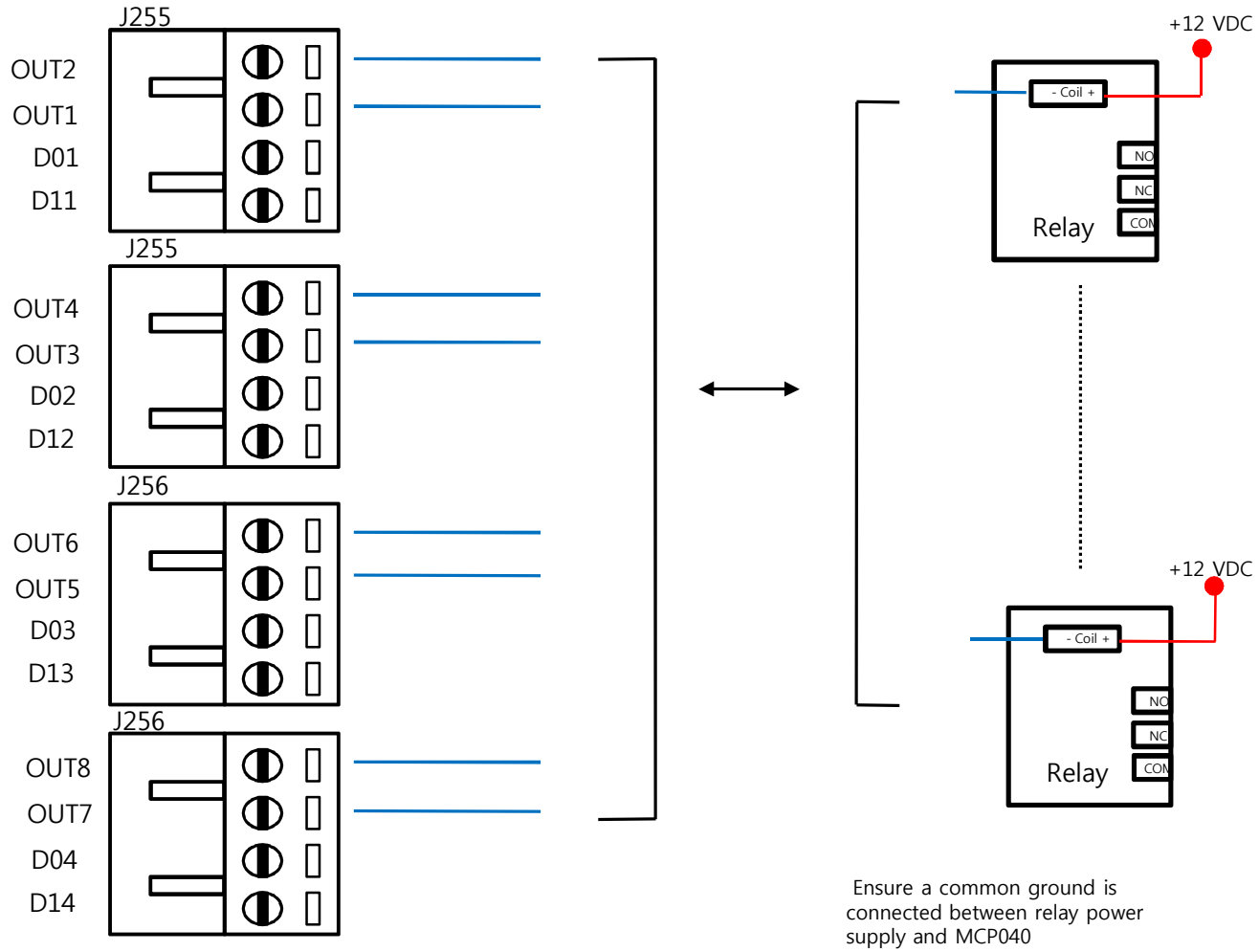
RS-485 Termination Resistor Select S/W : SW151

5. Connecting Wiegand Reader



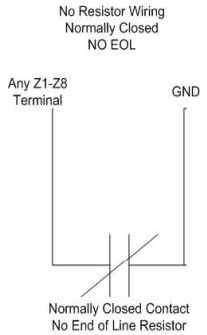
1:RED : +15V
2:Black : GND
3:Brown : Wiegand IN1
4:Pink : Wiegand IN0
5:Green : Buzzer or LED
6:Violet : Buzzer or LED

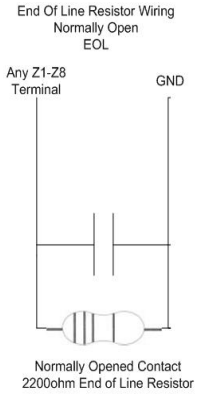
6. Connecting PGM(Open Collector)

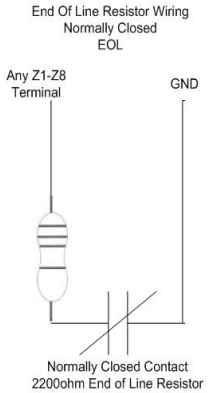


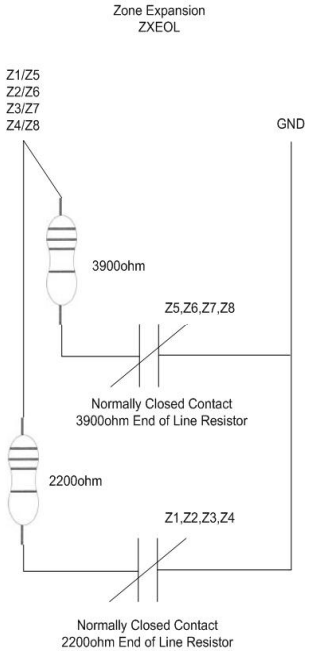
Ensure a common ground is connected between relay power supply and MCP040

7. Connecting Zone

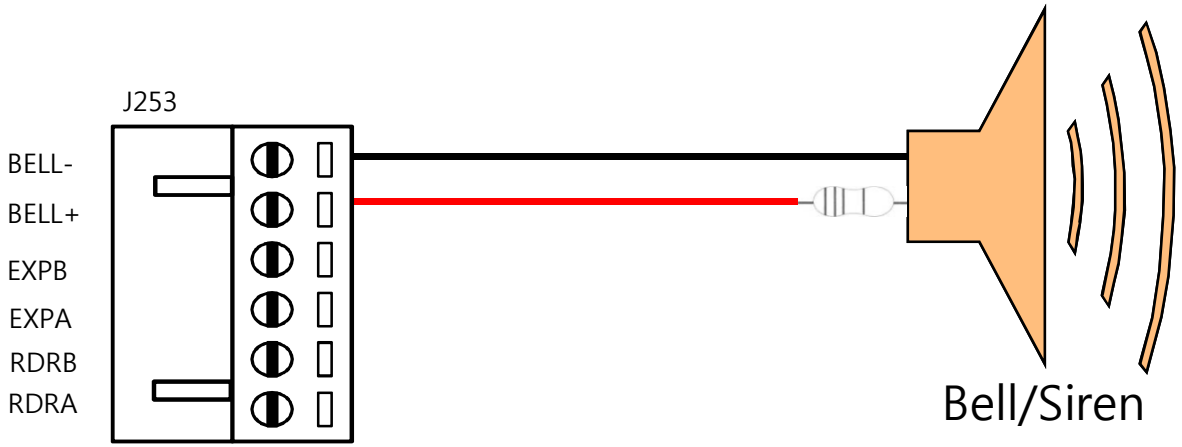






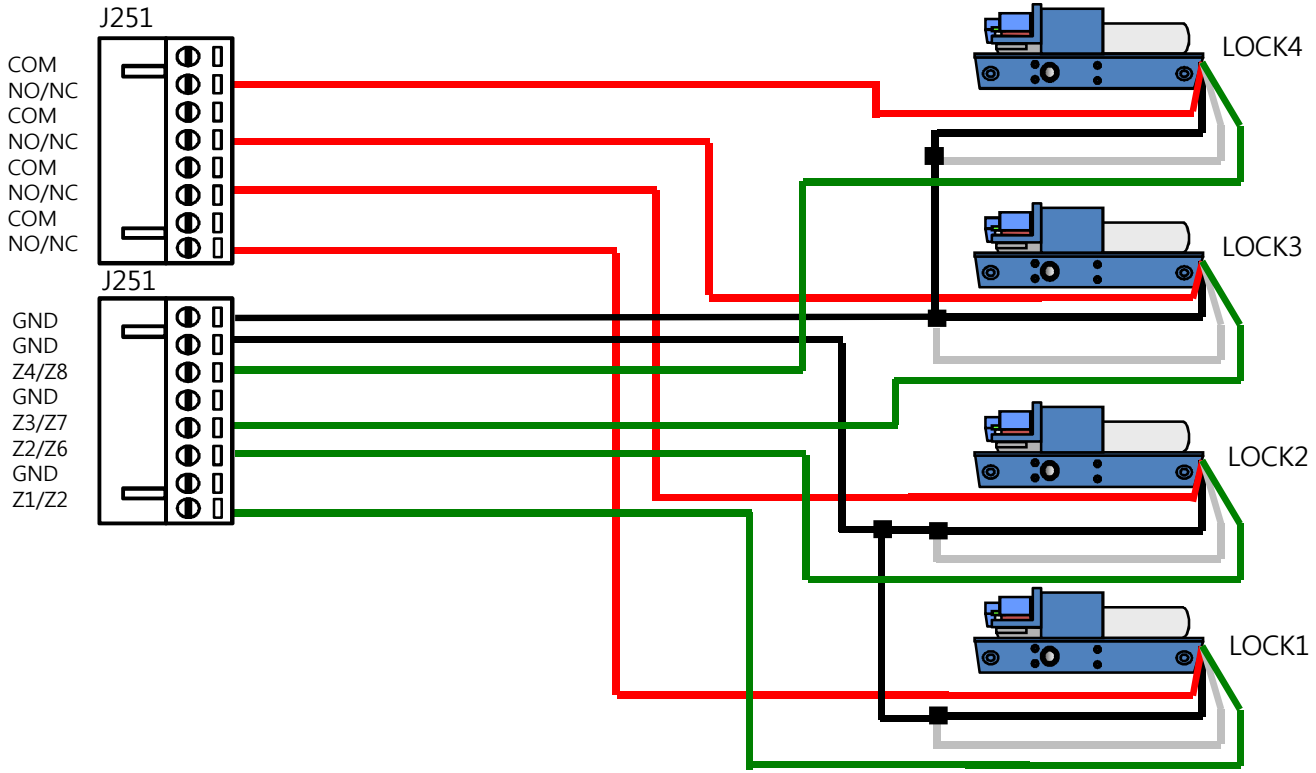


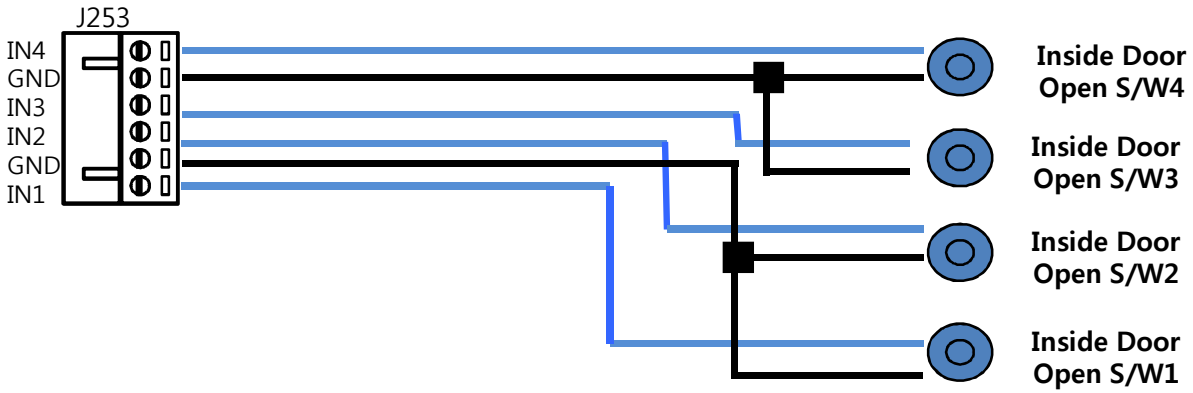
8. Connecting BELL/Siren



Bell Supervision Resistor 2200Ω 5%

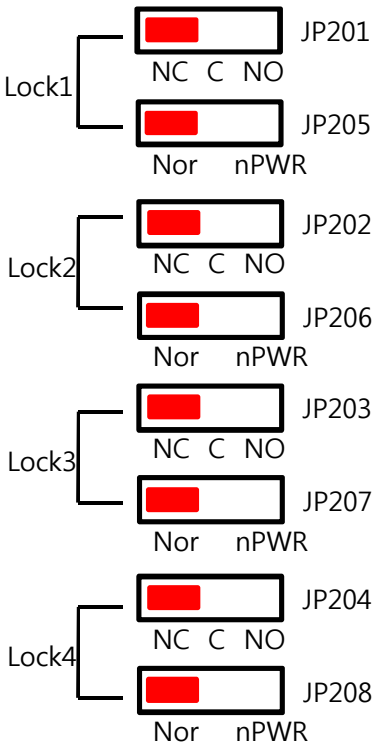
9. Connecting Dead-Bolt Type Door Lock (Fail Safe)



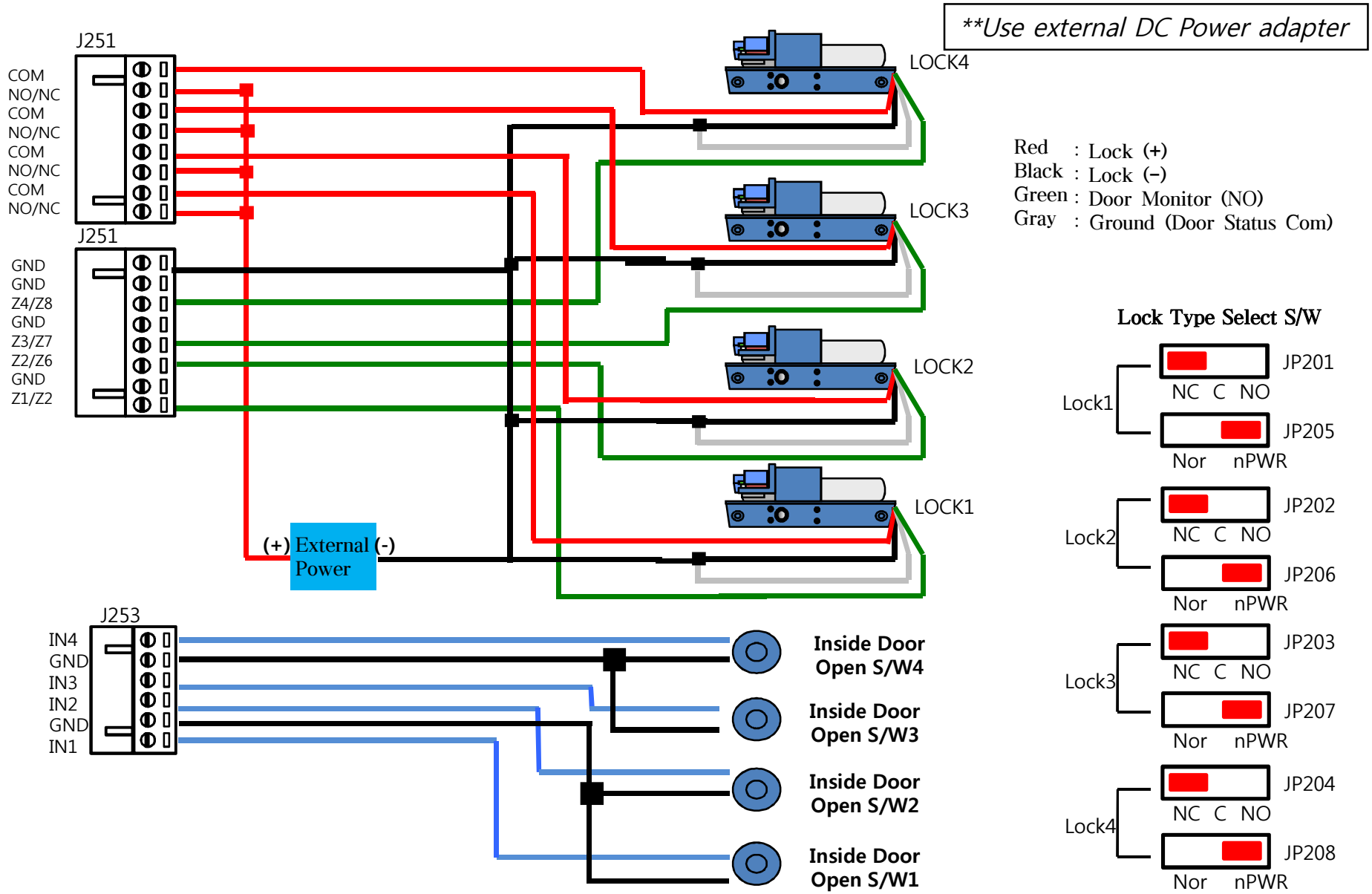


Red : Lock (+)
Black : Lock (-)
Green : Door Monitor (NO)
Gray : Ground (Door Status Com)

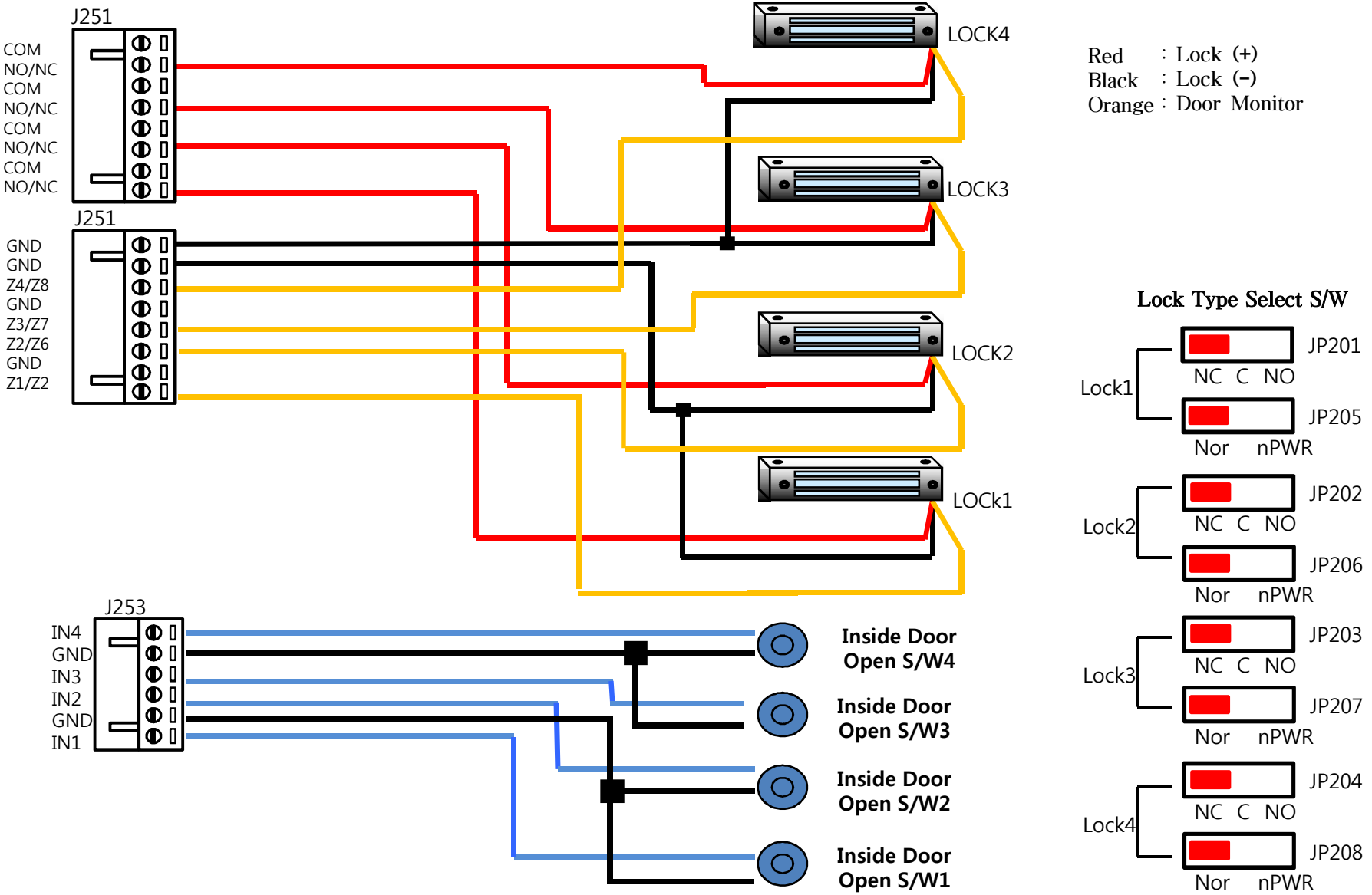
Lock Type Select S/W



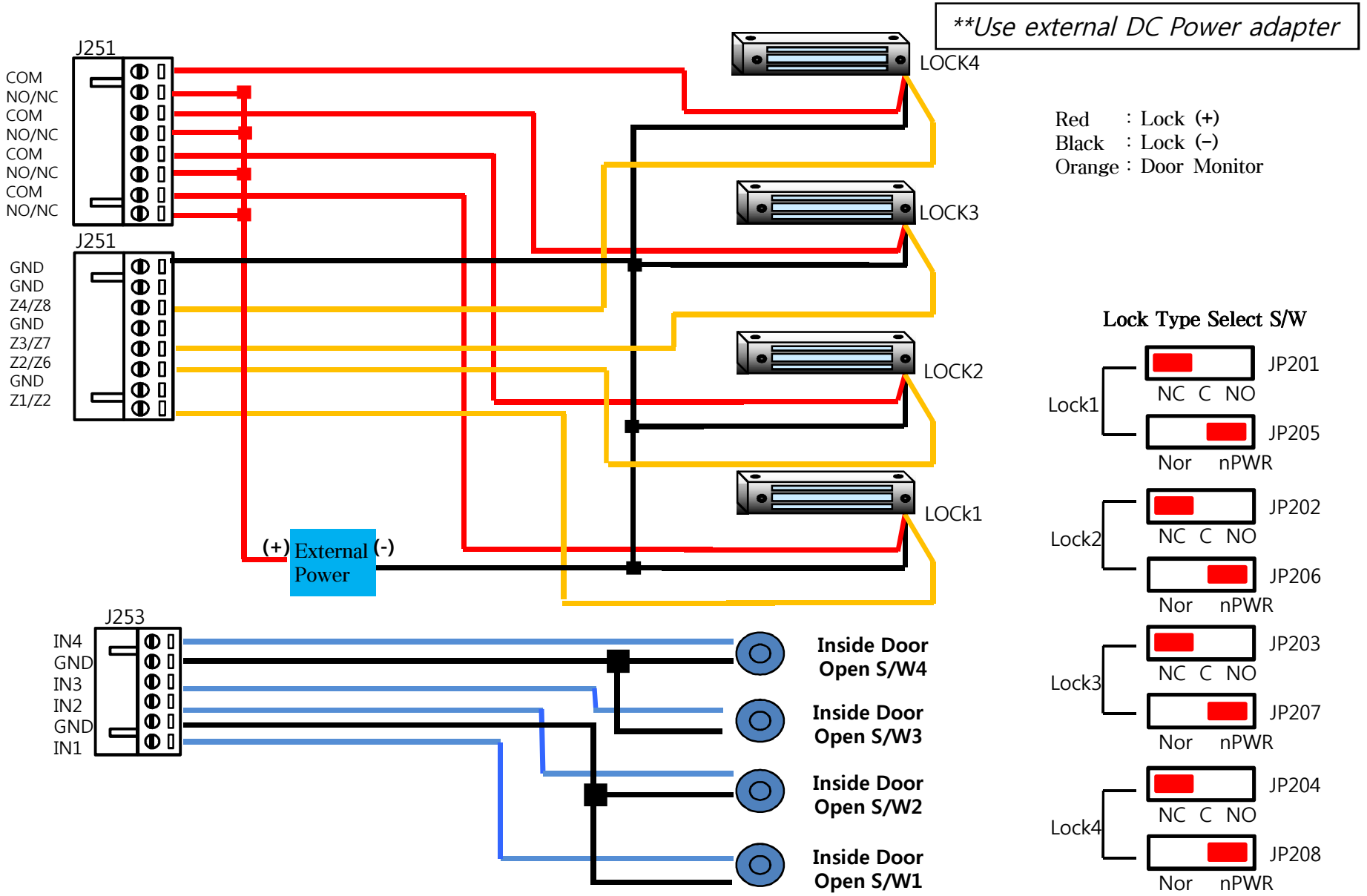
10. Connecting Dead-Bolt Type Door Lock (Fail Safe)



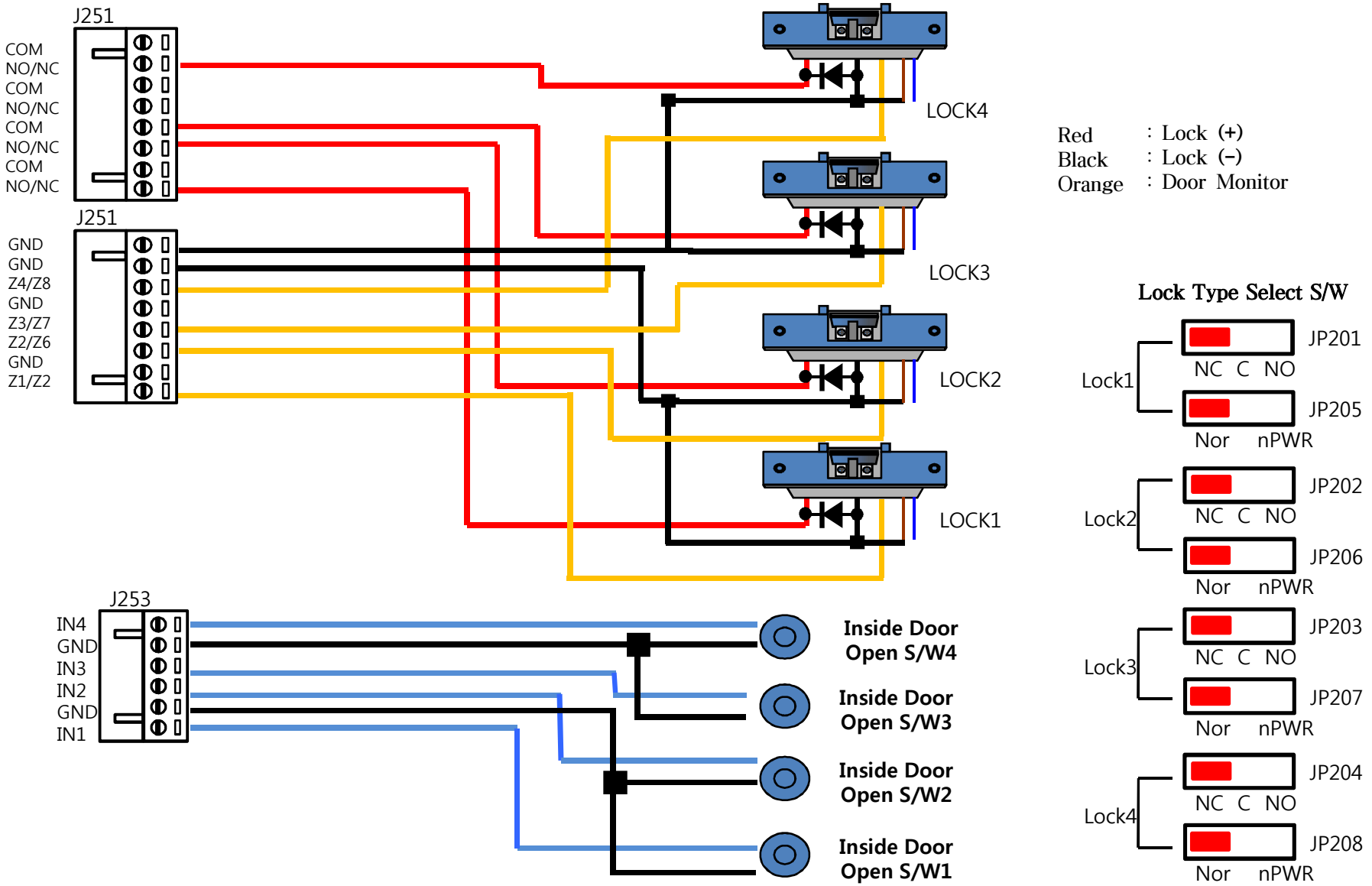
11. Connecting EM Type Door Lock (Fail Safe)



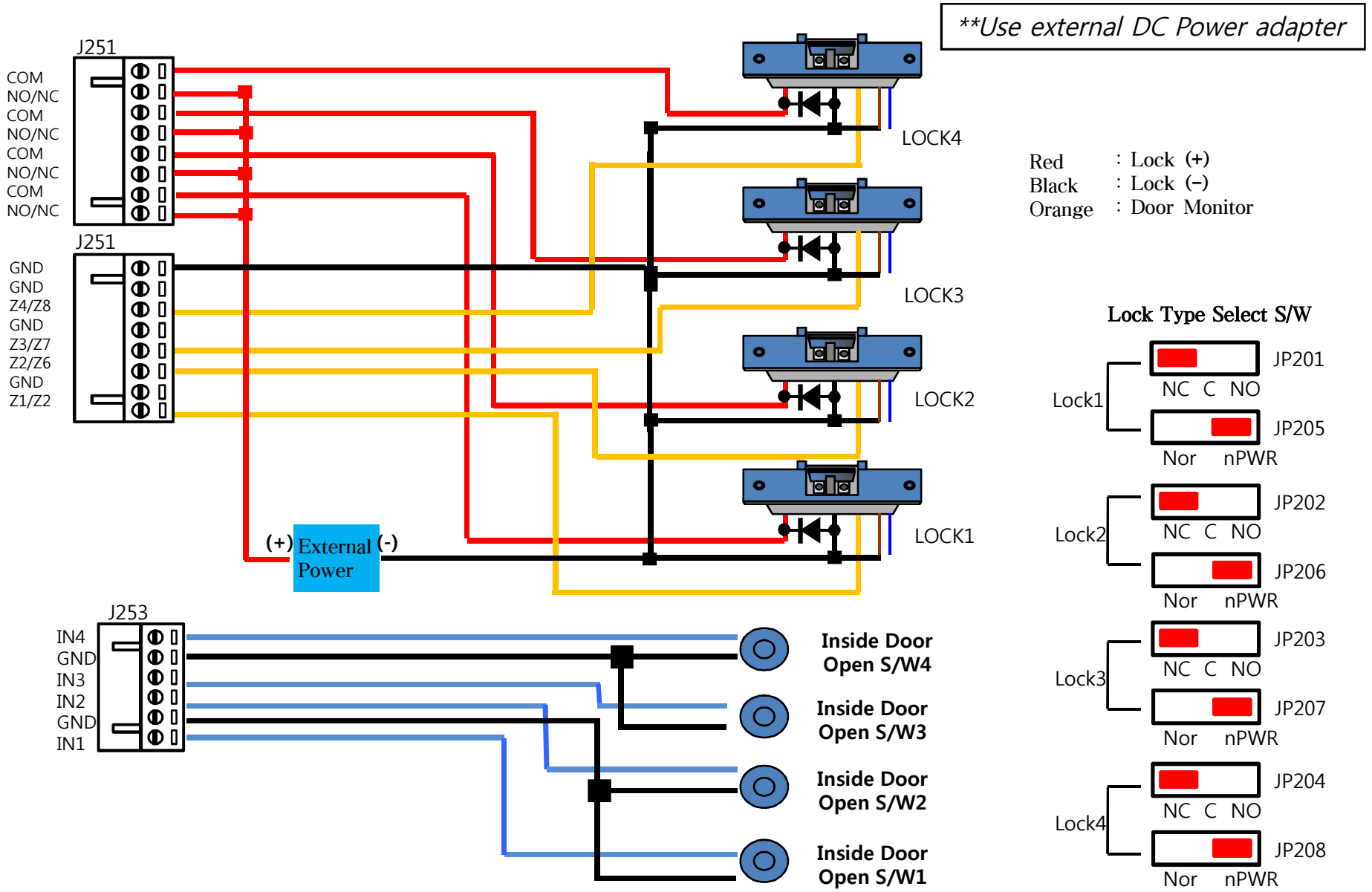
12. Connecting EM Type Door Lock (Fail Safe)



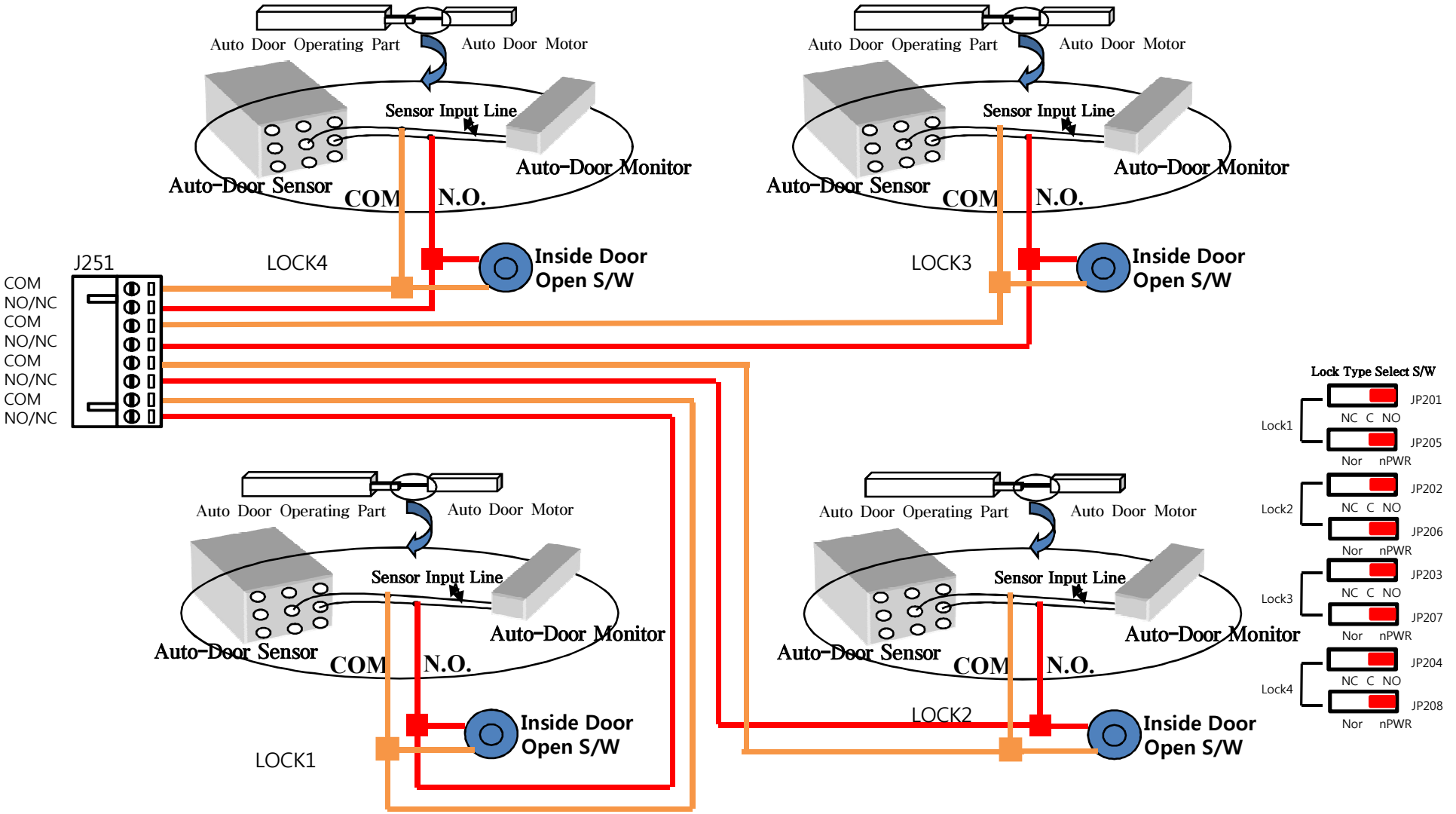
13. Connecting Strike Type Door Lock (Fail Safe)



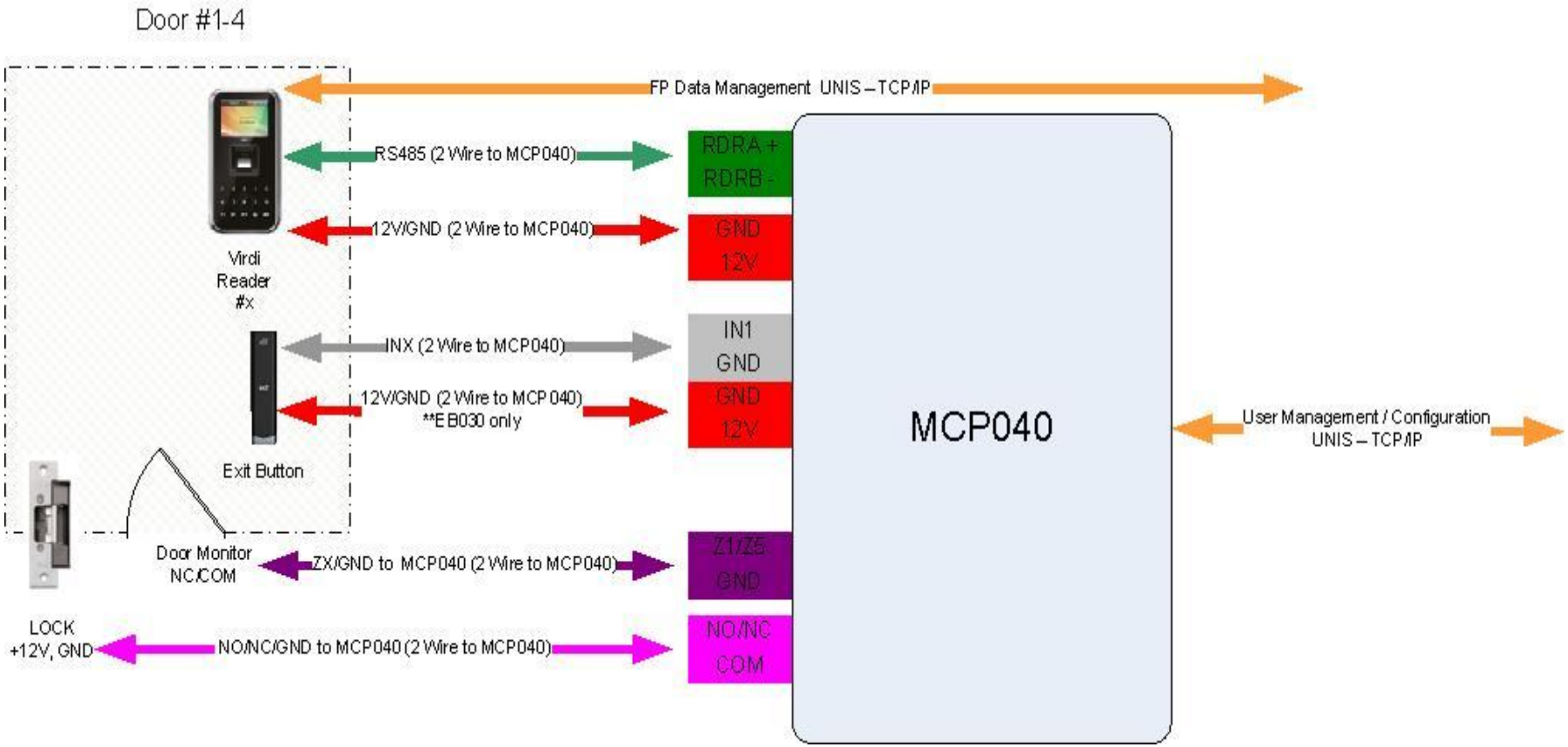
14. Connecting Strike Type Door Lock (Fail Safe)



15. Connecting Auto-Door (Contact Control)



16. Wiring Guide System Overview



18. Wiring/Cable Recommendations

1. RS485 (RDR+, RDR-)

22AWG – 2 Pair Twisted, Mylar screened
Home run, maximum distance 1000m

2. Ethernet

Standard CAT5 cable
Note: Cross over cable is required for direct connection to PC

3. Lock Monitoring , IN1-4, OUT1-8, ZN1-8

22AWG~24AWG – 2 Pair Twisted, Mylar screened

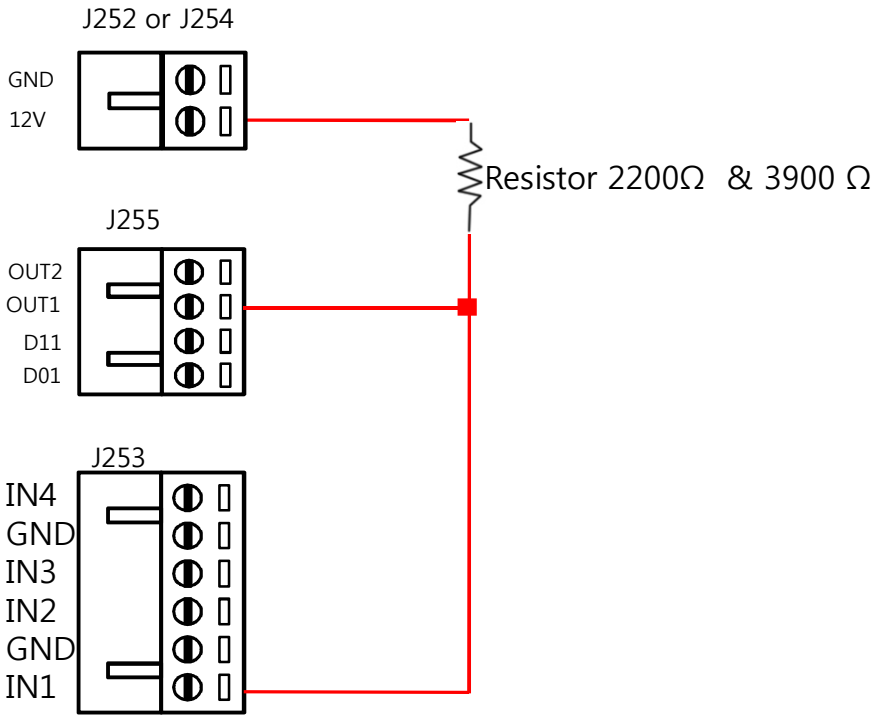
4. +12Vdc Supply to Readers, Locks, etc

22AWG – 2 Pair Twisted, Mylar screened
-15Vdc @ 300ma, 22AWG = 250meters , voltage at device ~ 11.03Vdc
-15Vdc @ 1000ma, 22AWG = 75meters , voltage at device ~ 11.03Vdc

NOTE: If distance is to be exceeded then an external power supply
should be used for powering the device. Voltage at the reader and locks should be higher than 11Vdc.

Please visit http://www.calculator.net/voltage-drop-calculator.html for calculating approximate distance with current and voltage requirements for your device.

17. Factory Reset



1) Power down the MCP040.
2) Connect a wire between 12V+Resistor+OUT1+IN1 (J252/J255/J253).
3) Power up the MCP040.
4) After about one second remove the piece of wire.
5) All parameters and users will now be at factory reset state.