
Installation & Wiring Guide

Four Door Access Controller

MCP-040 V2.0

Doc. Ver. : V2.0

2014.10.23

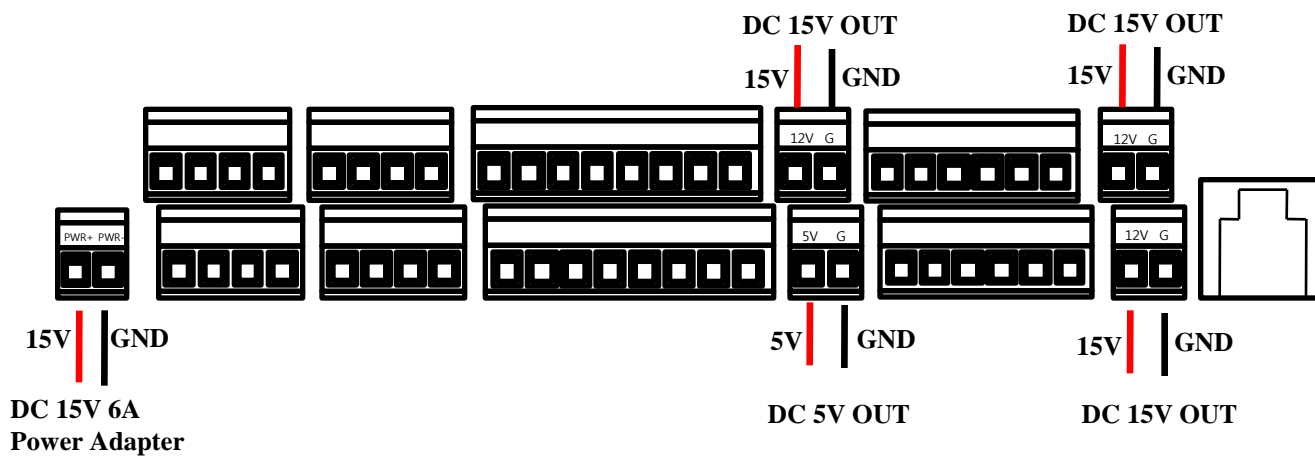
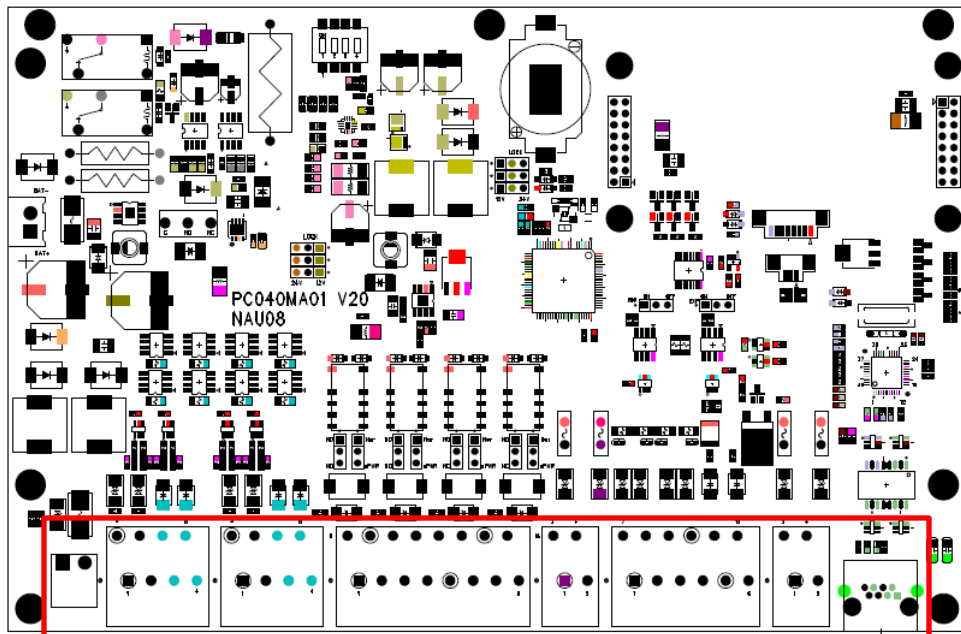
R&D Center

Union Community Co., Ltd.

1. Power Connector connection

Backup Battery
Interface

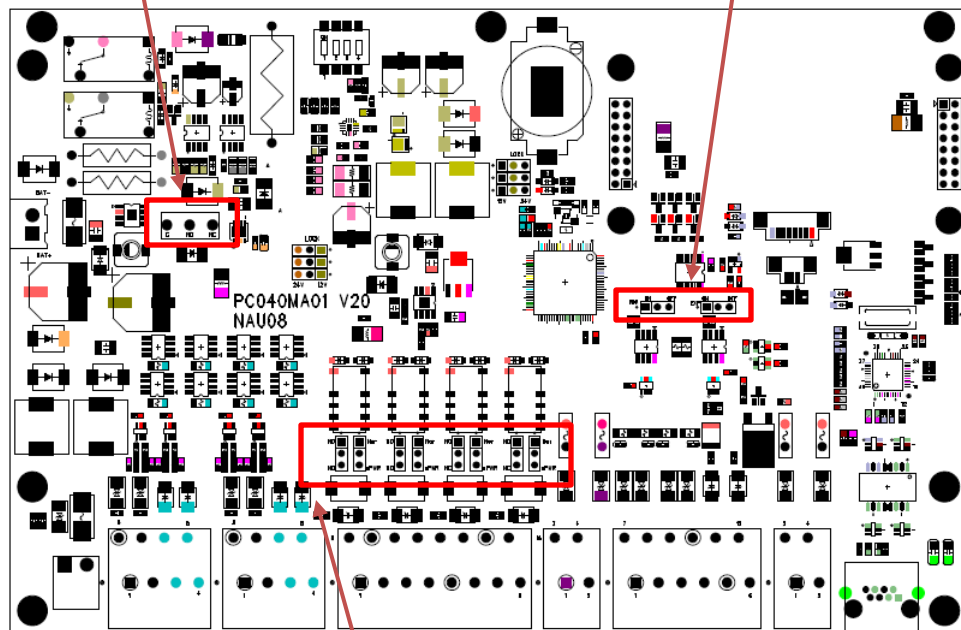
BAT(-)
BAT(+)



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]

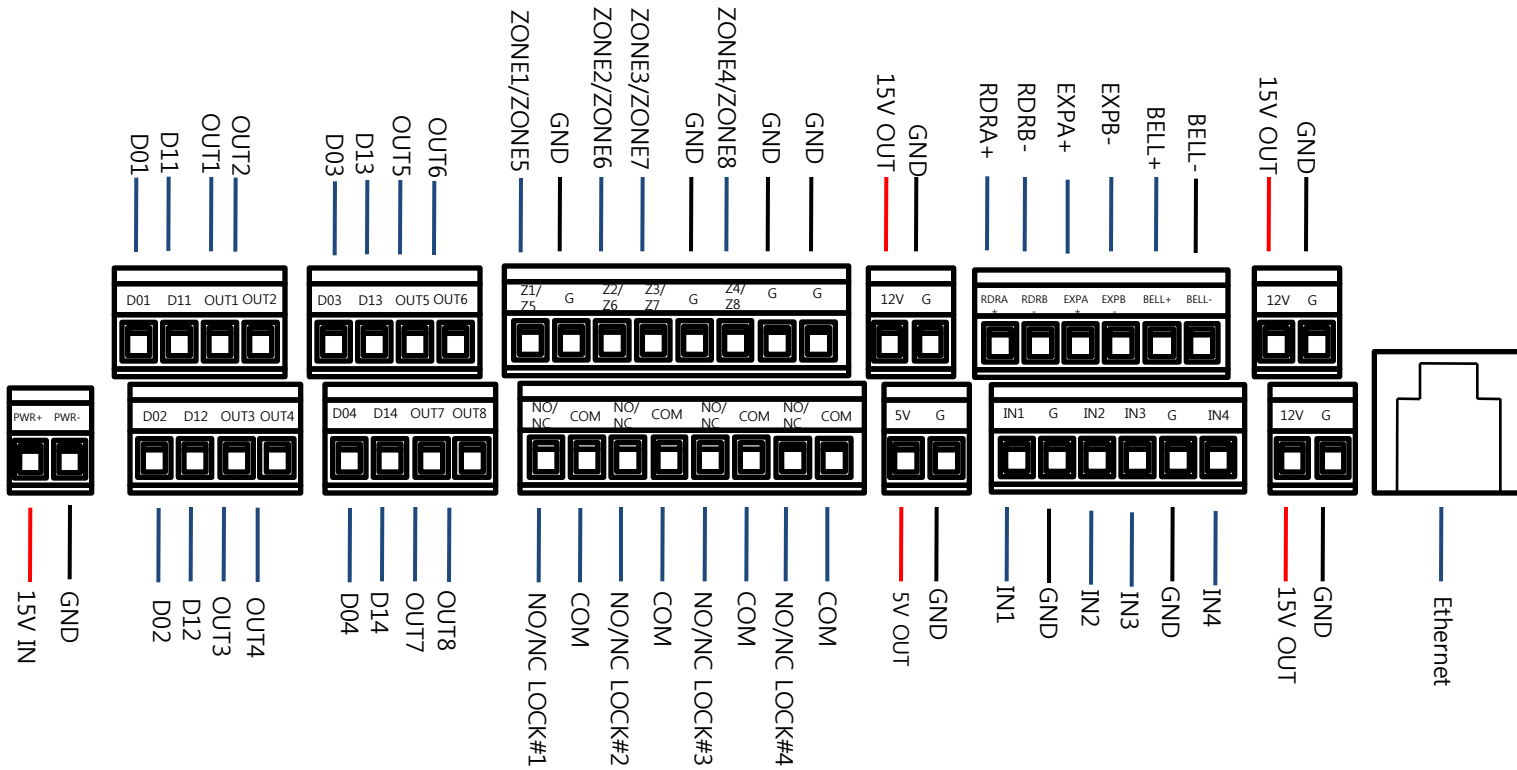
Switch Setting II [Lock Type Selection]

- 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

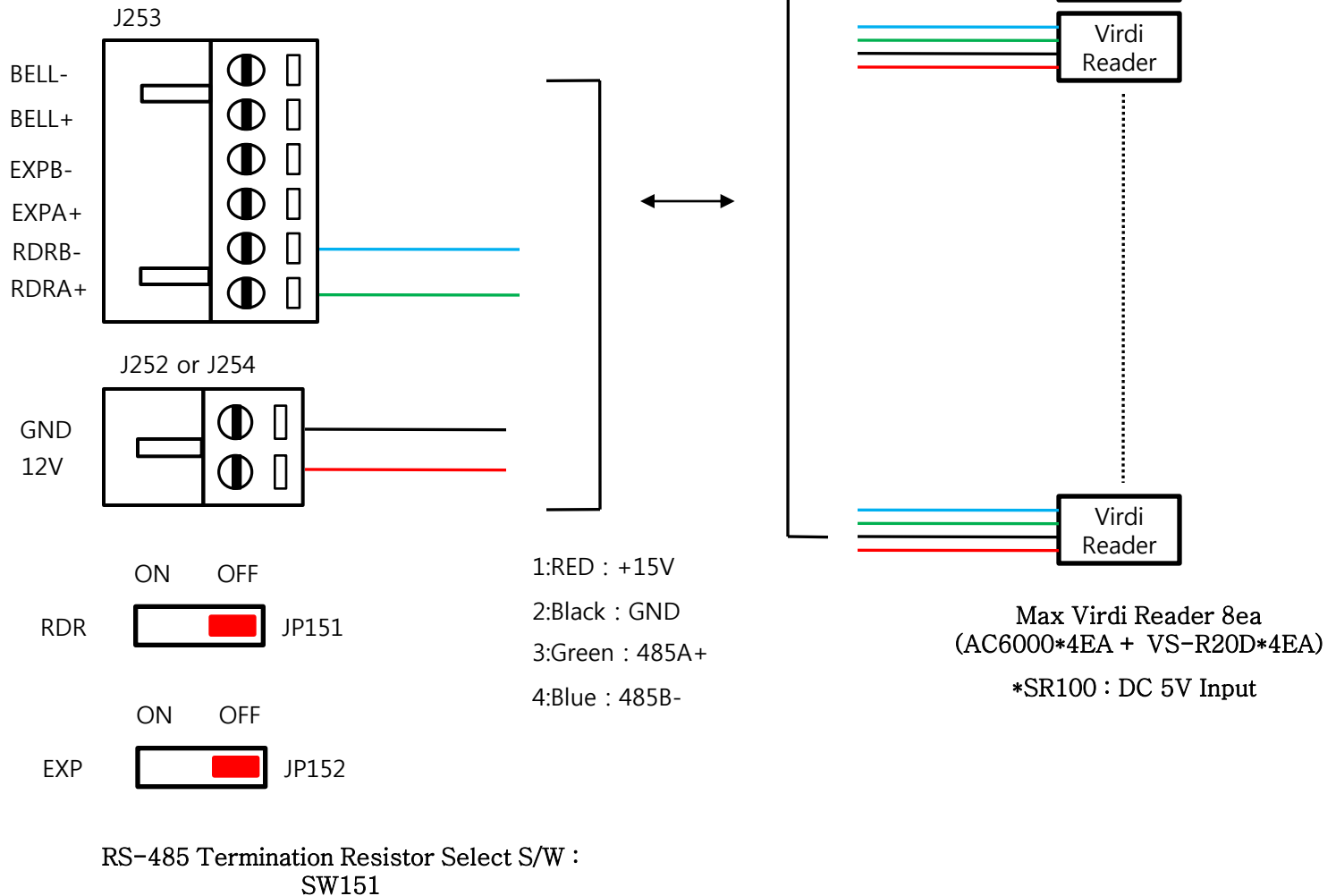
Switch Setting III [RS485 T_Resistor Selection]

- JP151 : ON [120ohm termination resistor]
OFF [Open the termination resistor]
- JP152 : ON [120ohm termination resistor]
OFF [Open the termination resistor]

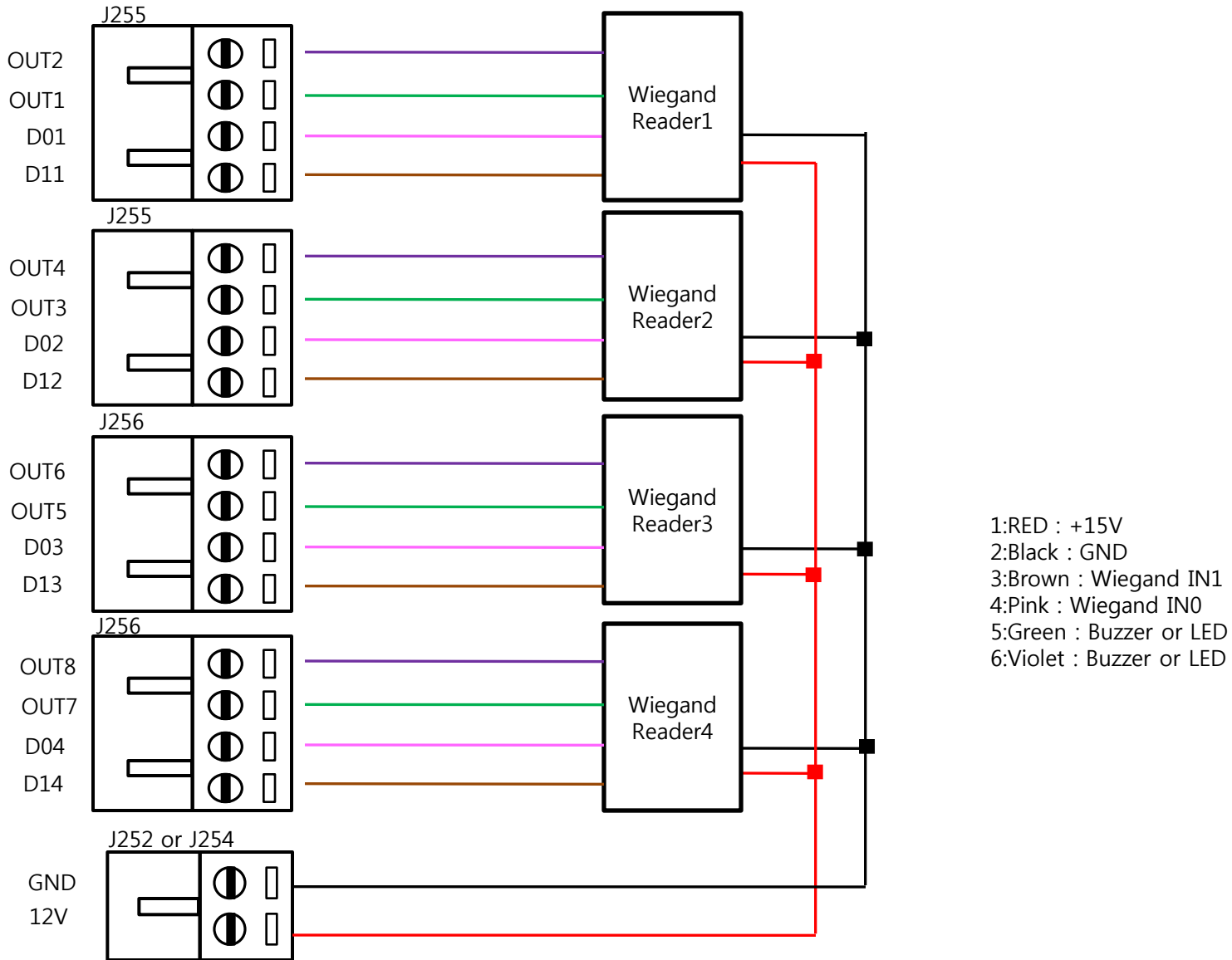
3. Connection of Wires to terminal blocks



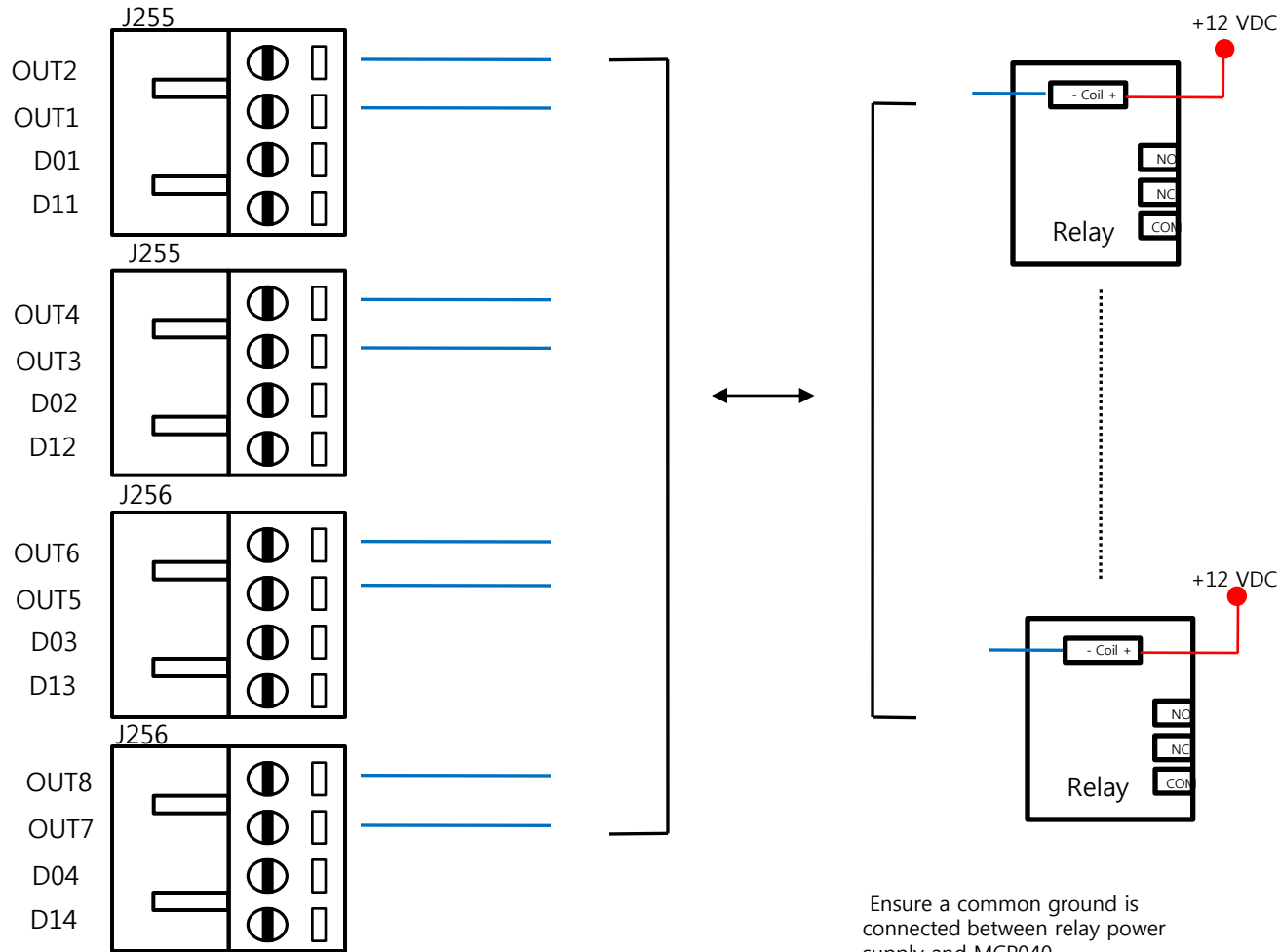
4. Connecting Virdi Reader



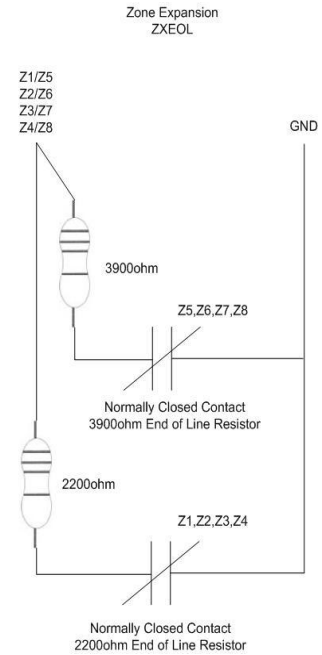
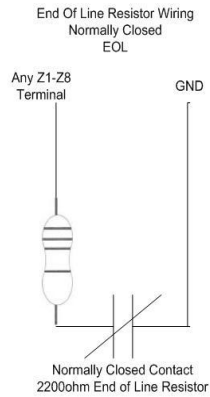
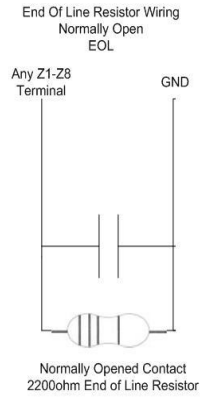
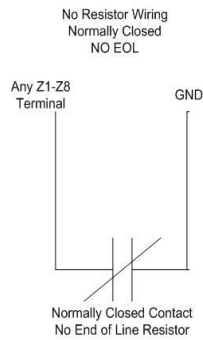
5. Connecting Wiegand Reader



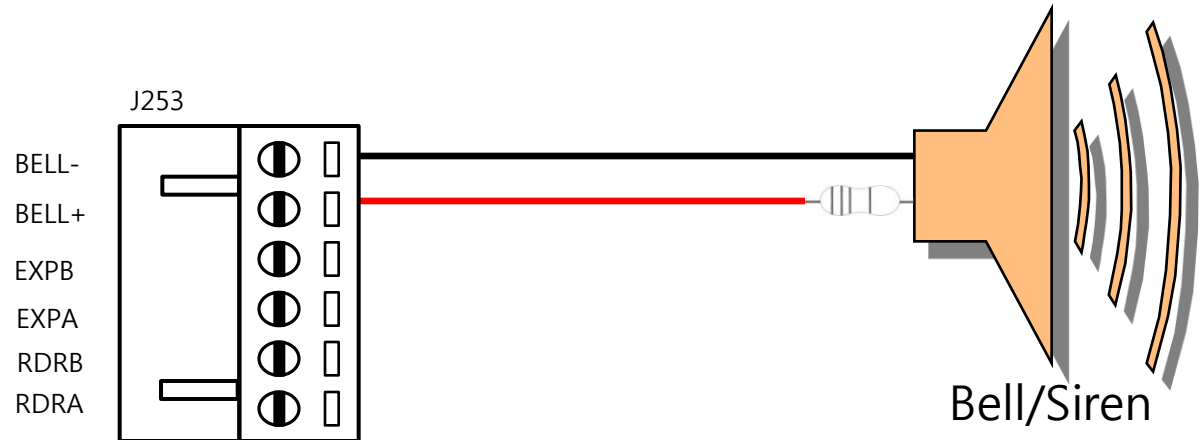
6. Connecting PGM(Open Collector)



7. Connecting Zone

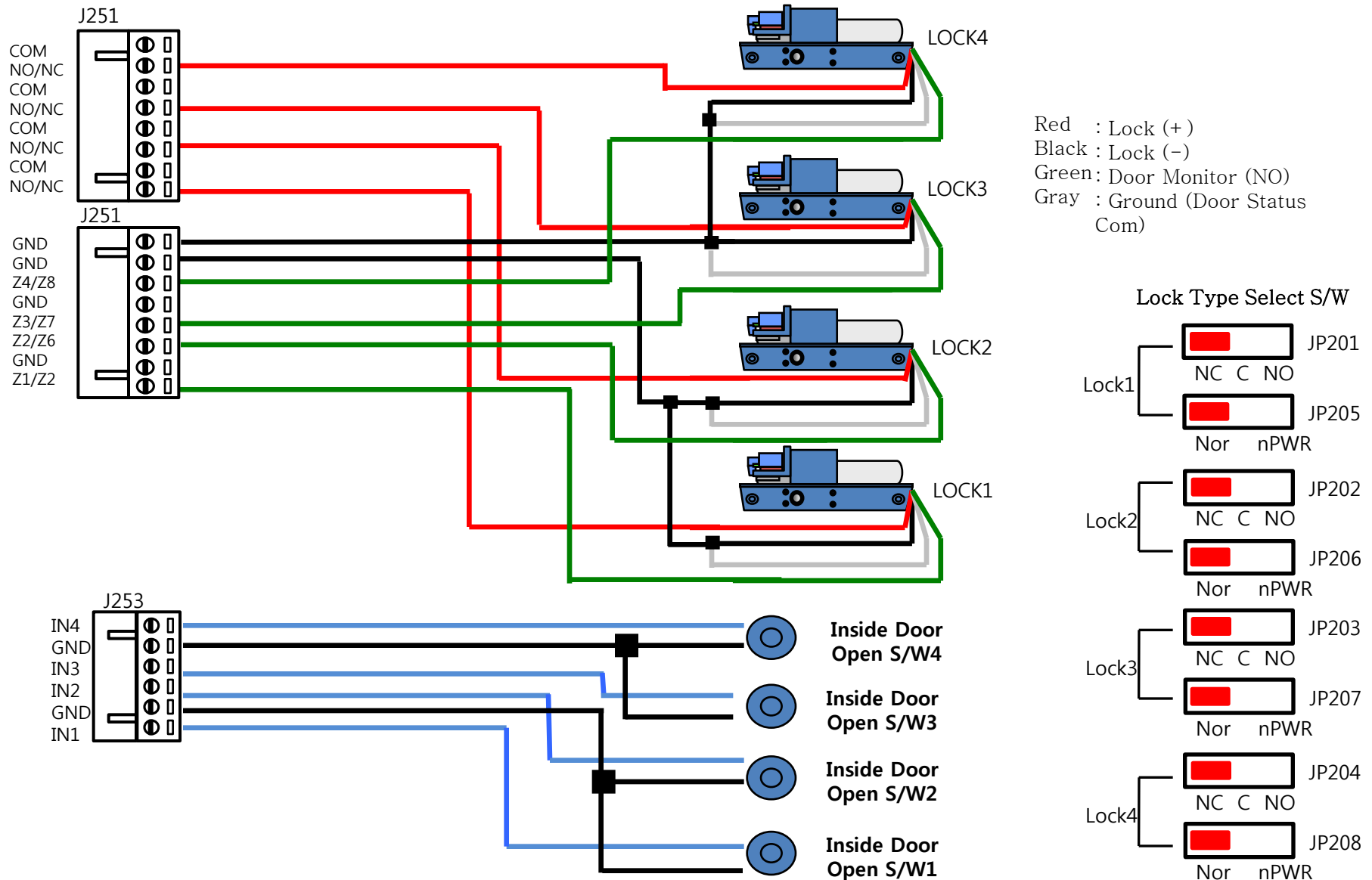


8. Connecting BELL/Siren



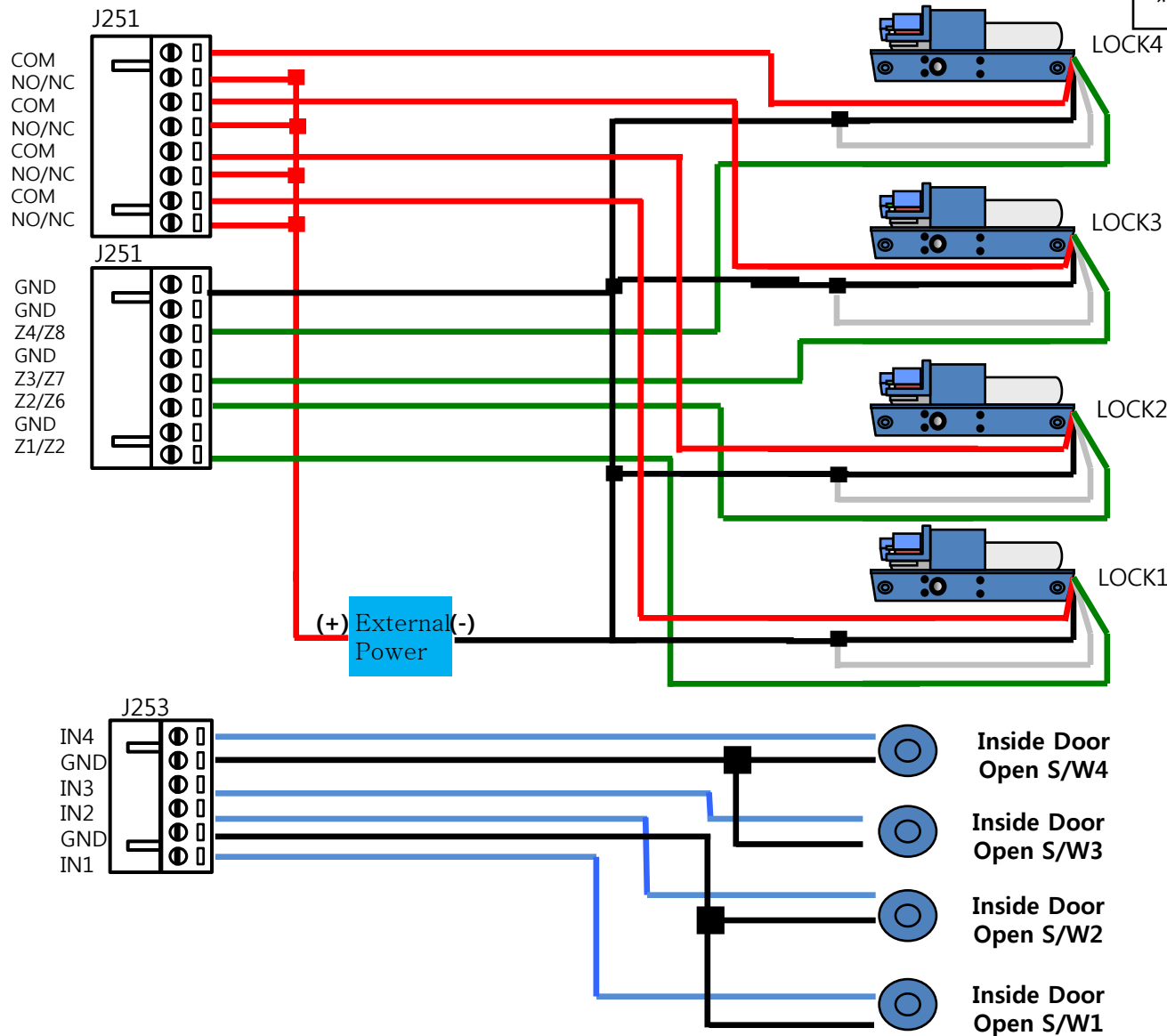
Bell Supervision Resistor 2200Ω 5%

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



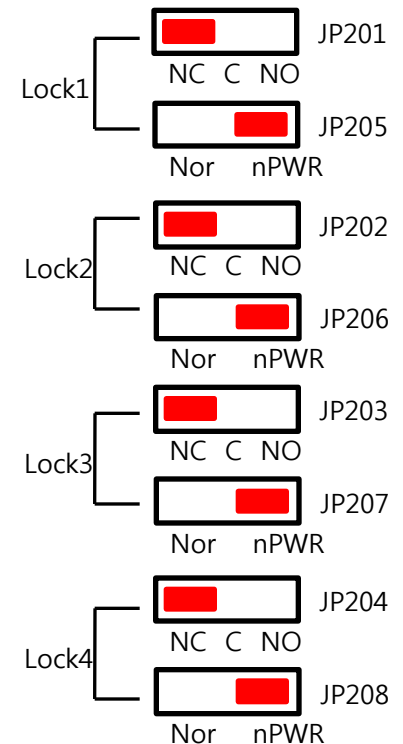
10. Connecting Dead-Bolt Type Door Lock (Fail Safe)

****Use external DC Power adapter**

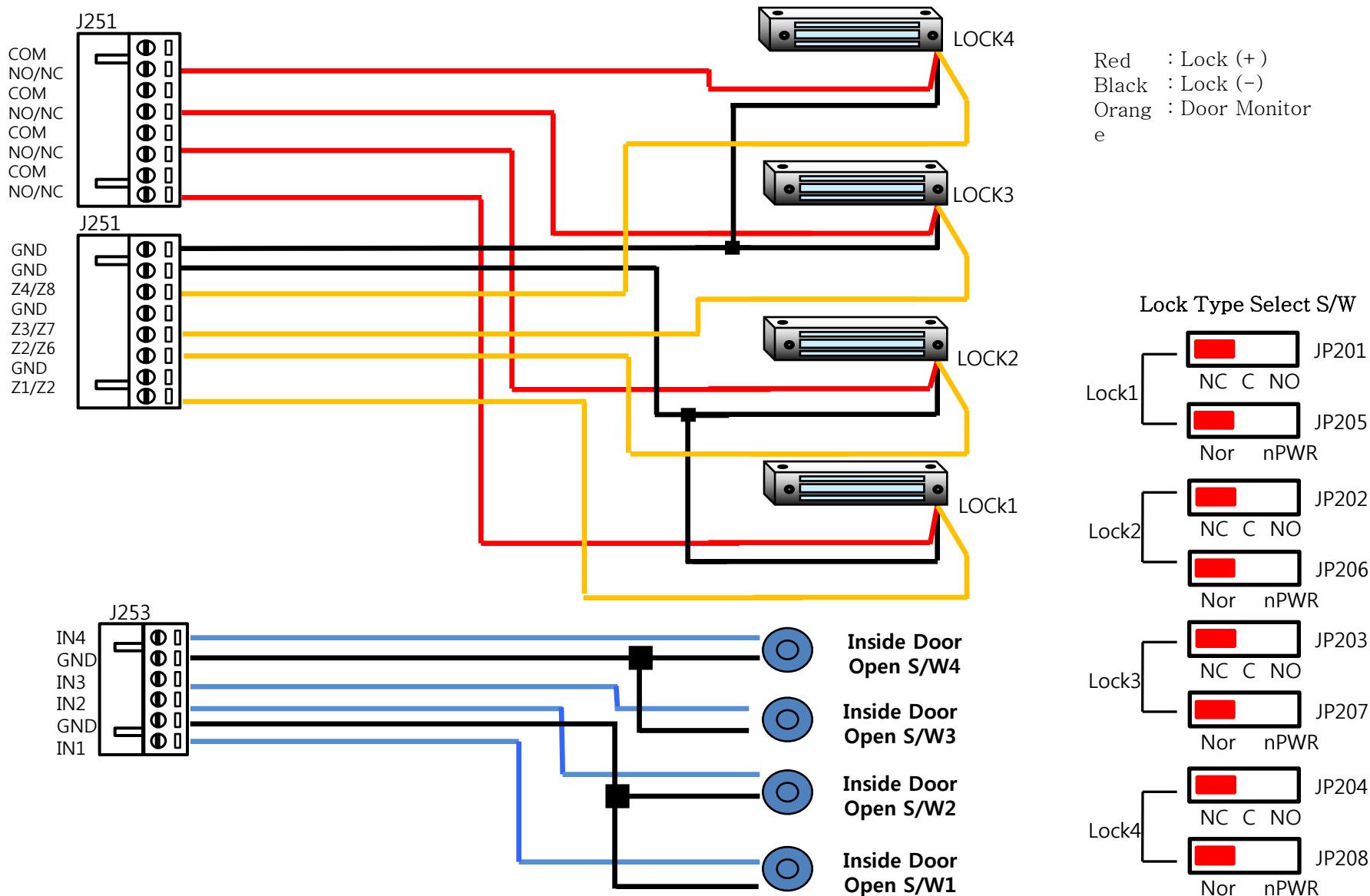


Red : Lock (+)
 Black : Lock (-)
 Green : Door Monitor (NO)
 Gray : Ground (Door Status Com)

Lock Type Select S/W

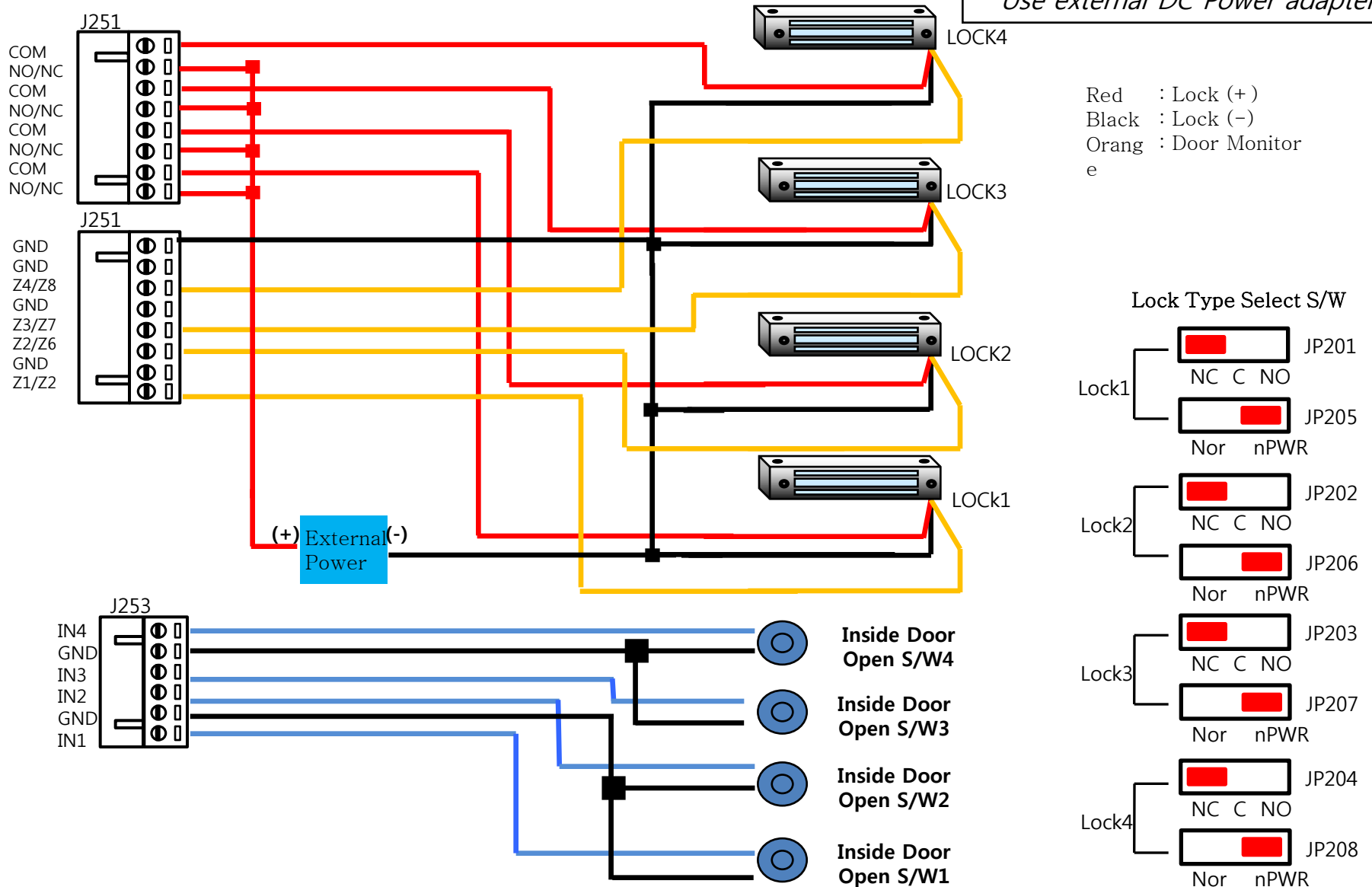


11. Connecting EM Type Door Lock (Fail Safe)

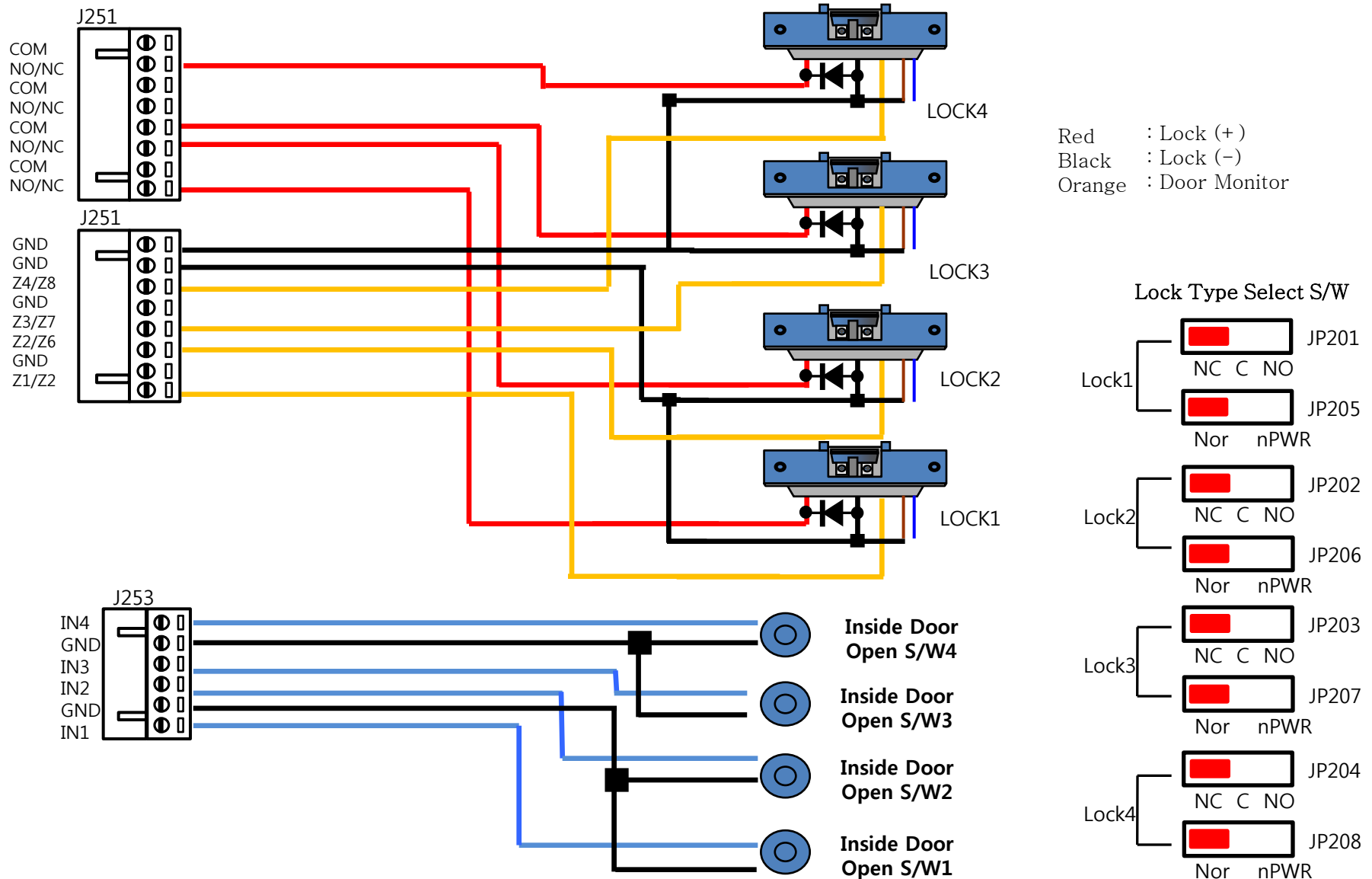


12. Connecting EM Type Door Lock (Fail Safe)

****Use external DC Power adapter**

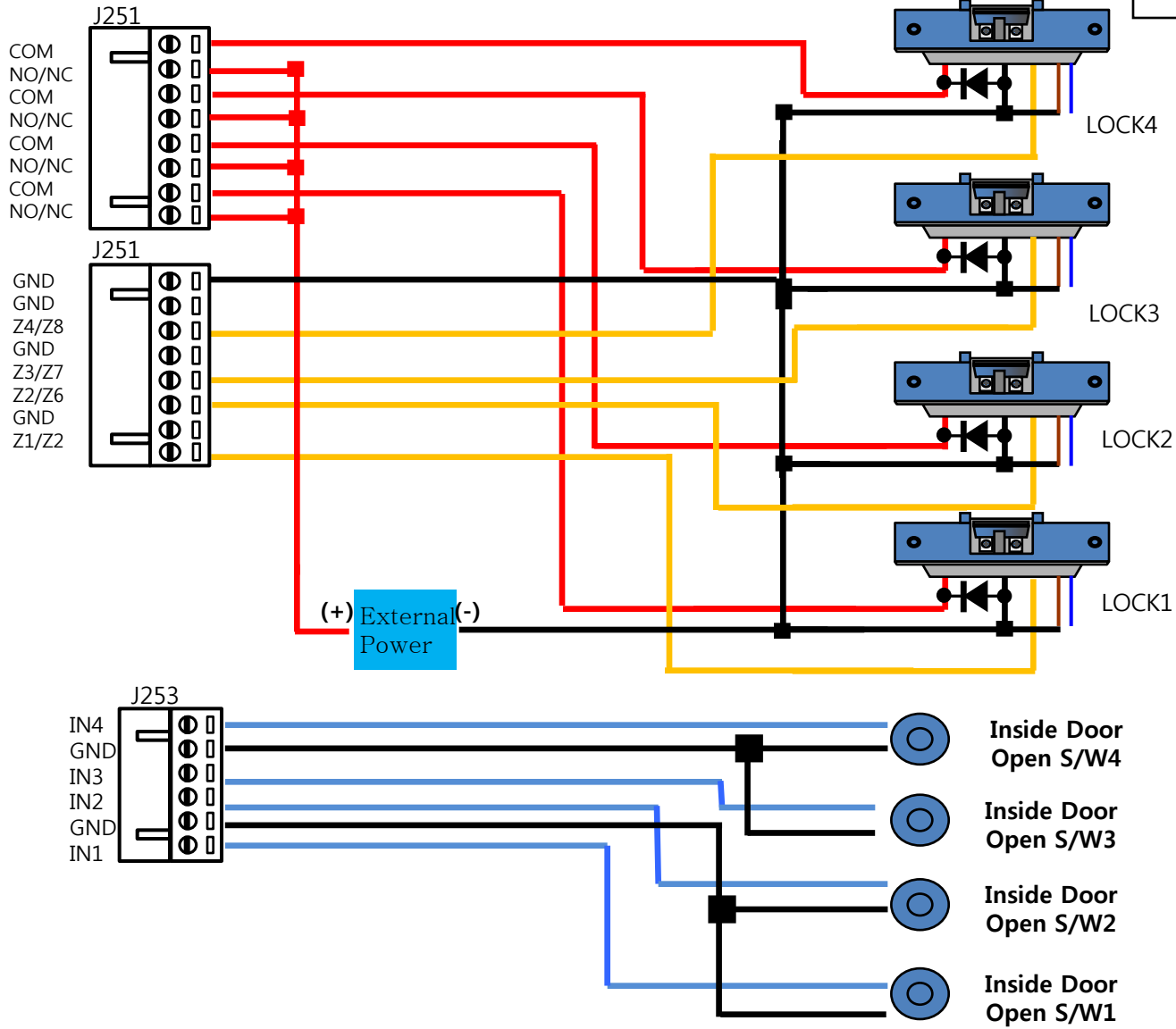


13. Connecting Strike Type Door Lock (Fail Safe)

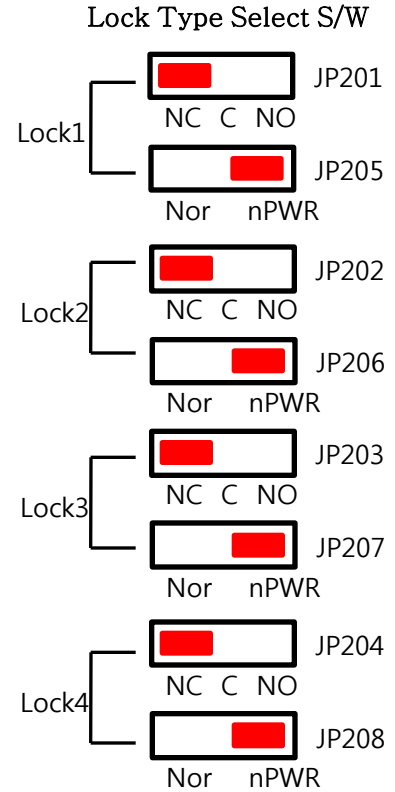


14. Connecting Strike Type Door Lock (Fail Safe)

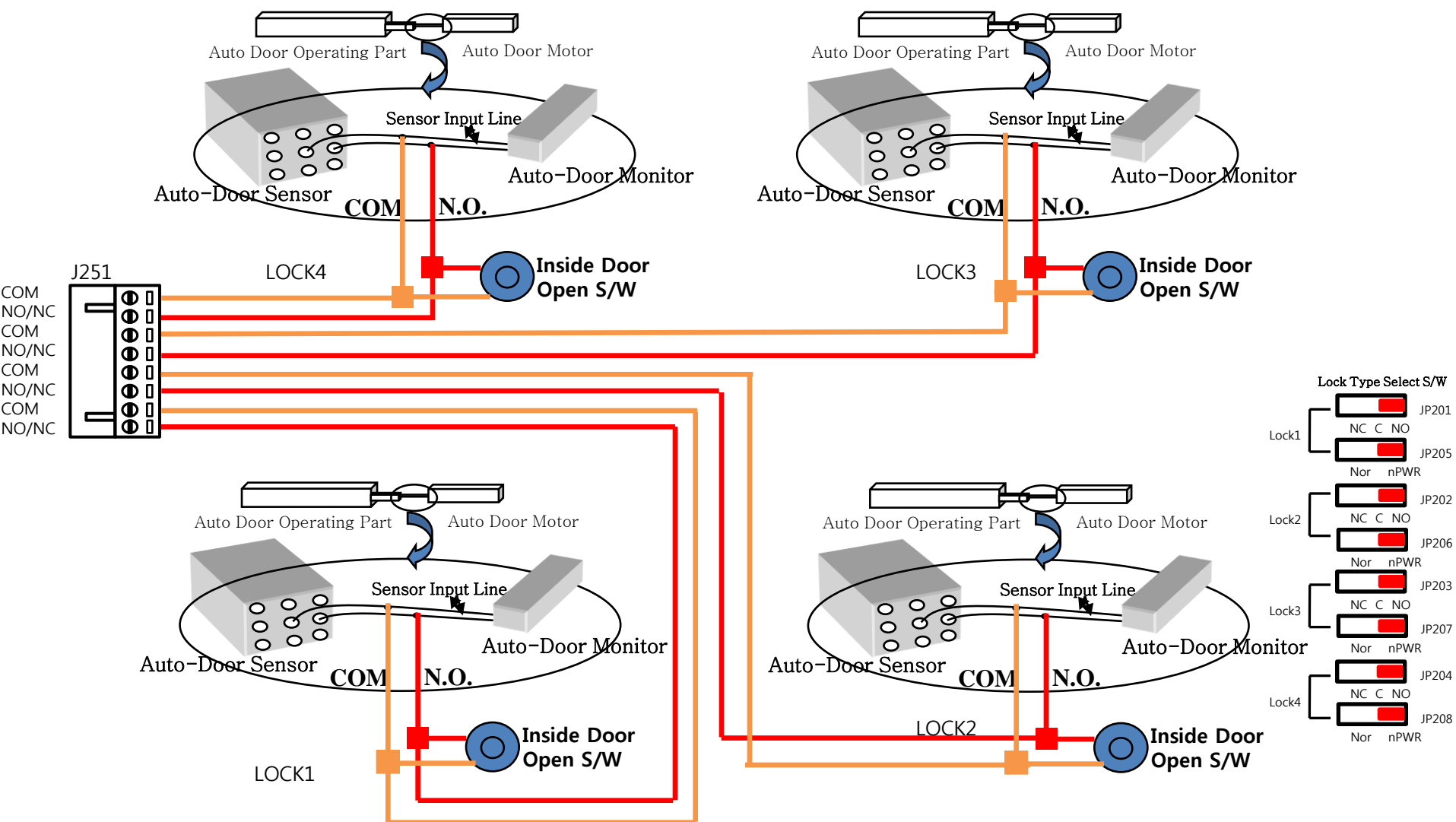
****Use external DC Power adapter**



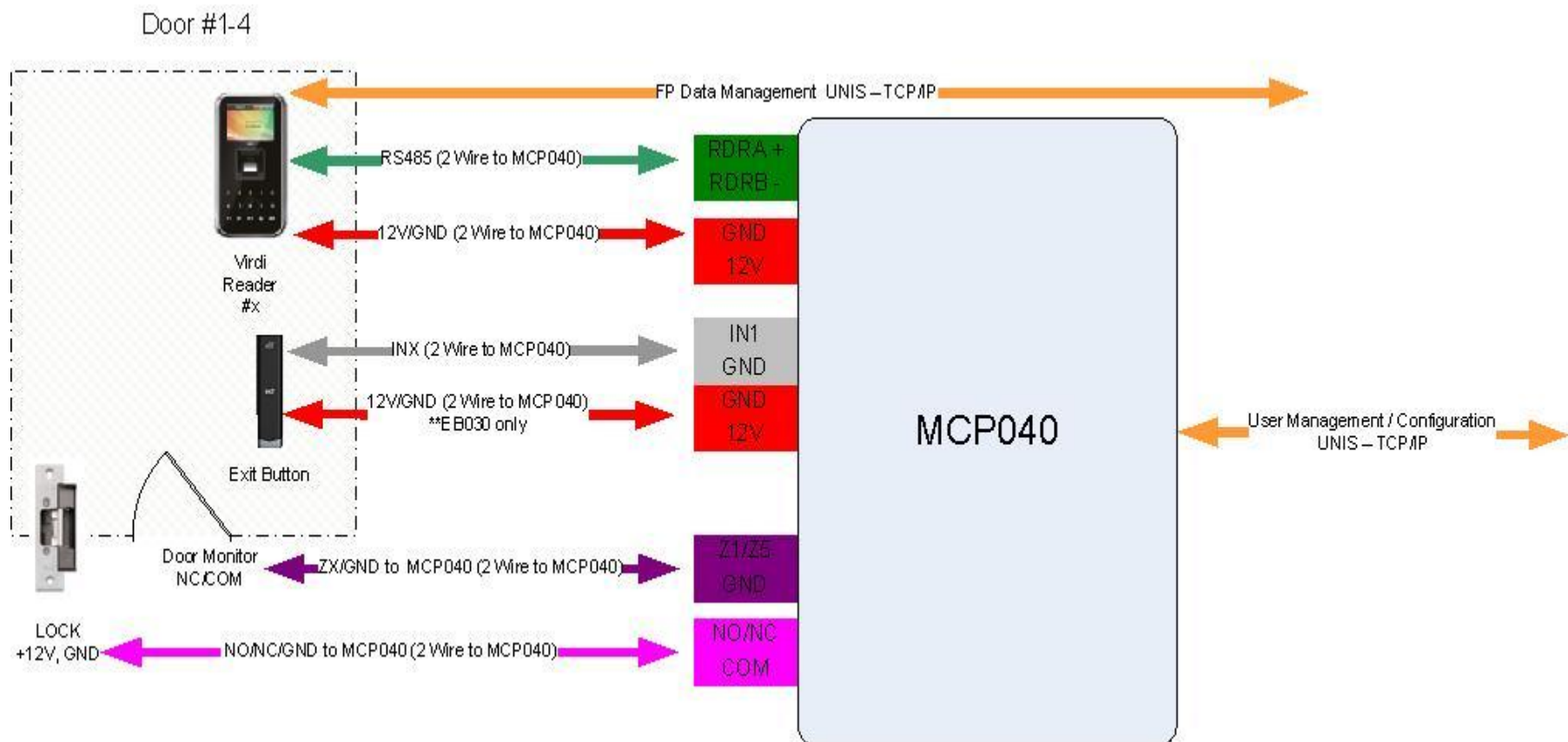
Red : Lock (+)
 Black : Lock (-)
 Orange : Door Monitor



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

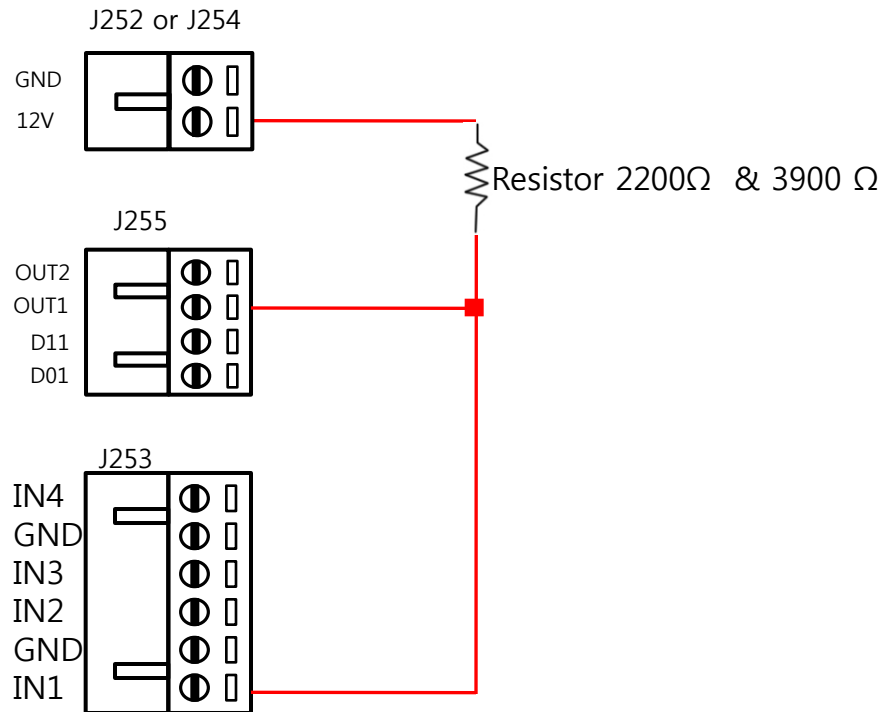
4. + 12Vdc Supply to Readers, Locks, etc

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) Set DIPSWITCH#1 to ON position (UP) (on V2.01 and higher)
- 4) Power up the MCP040.
- 5) After about one second remove the piece of wire.
- 6) All parameters and users will now be at factory reset state.