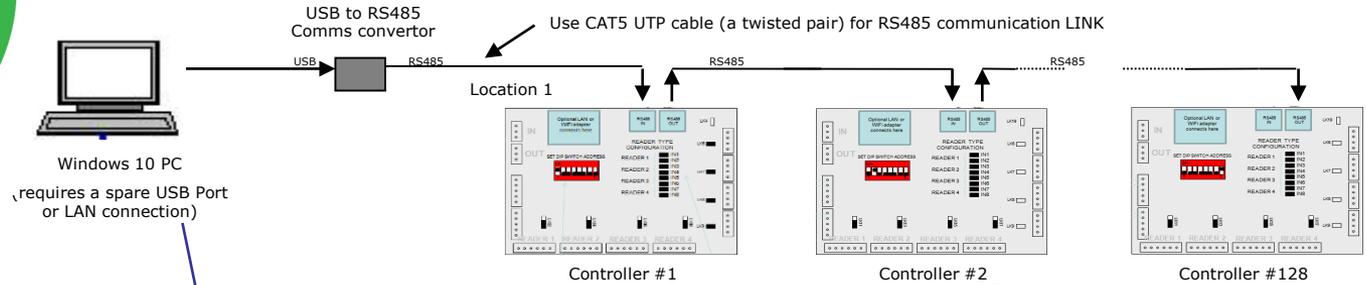


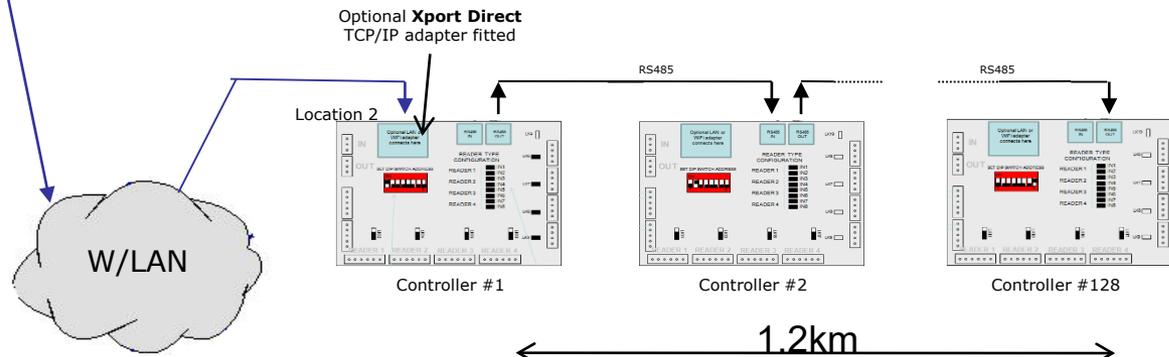
# CS Technologies Evolution System Connection Overview



## Direct Serial Communication



## TCP/IP Communication



Download Free Evolution Software

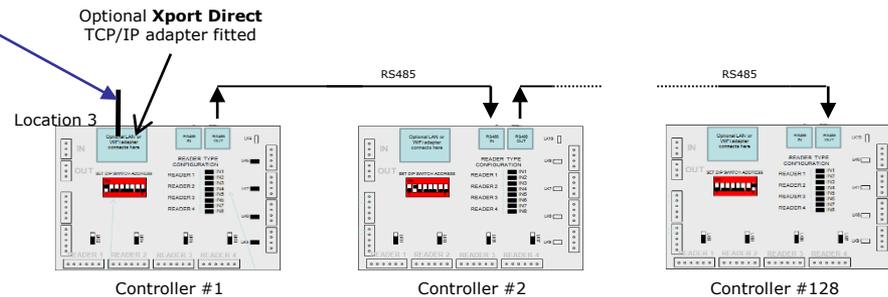
<http://www.cstech.biz/softwarelink.php>

In Evolution go to **Hardware/Locations**

- For **Direct Serial** connections a COM port is setup.
- For **TCP/IP** use Lantronix Device Installer to find the IP address

<https://www.lantronix.com/products/deviceinstaller/>

Assign the device a static IP address and then in Evolution enter the IP address for the location.

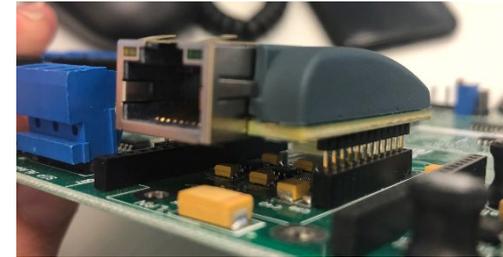


Additional guides can be found here:

<http://www.cstech.biz/downloads/Evolution/Install%20Guides/>

# XPort Direct LAN Connection

1. Turn the Power off the EVO2/4 Board.
2. Insert the Xport Direct TCP/IP adapter (RJ45 connector points out of the board).  
See image - ensure all pins line up and are fit correctly into the rail socket.
2. Connect your LAN cable to the Xport Direct adapter .
3. Power on the EVO2/4 controller.
4. Find the IP address



By default the **Xport Direct** is set to Auto DHCP.

It will automatically try to connect to the network and should be assigned an IP address by the network.

To finding the IP address of the Xport Direct Download, install the **Lantronix Device Installer** application on your PC.

<https://www.lantronix.com/products/deviceinstaller/>

Once installed run the software will find the XPort Direct (see image below).



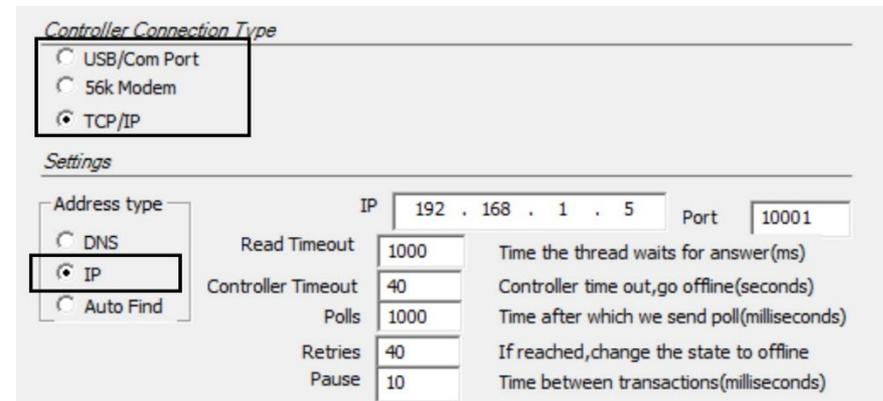
## 5. It is highly recommended that you 'assign' a static IP address to the Xport Direct.

- Click on the found XPort Direct and then press the '**Assign IP**' button on the screen.

-> You now know the IP address of the device and can add this into Evolution.

6. In the Evolution go to the **Hardware/Locations** and select connection type as **TCP/IP** and select the address type as **IP**.

Enter the IP address and Evolution will now attempt to connect to the device.



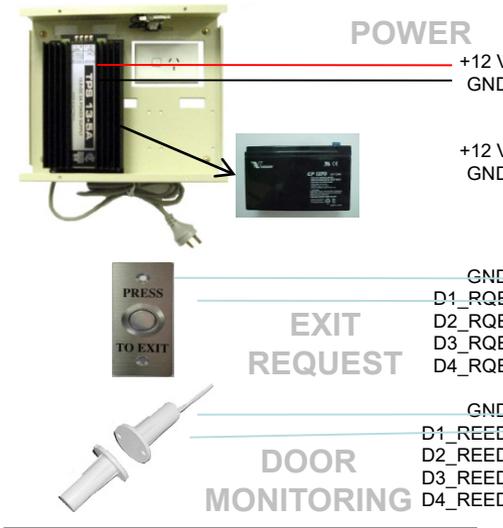
**Power Notes:**

- Recommended cabling – Figure 8
- Do not use plug pack power supplies.
- Recommend 13.8 Volt 2A power supply with battery backup. (Can power several controllers)
- Check all devices current usage.
- Typically: Board 400mA, Strike 200mA, Maglock 1000mA, Reader 20mA.
- There are two power terminals. Connect the power supply to the 'IN' terminal. The 'OUT' power terminal can be used as a power 'output'.



**Comms Cabling Notes:**

- Recommended cable type – CAT5
- Daisy Chain configuration
- Maximum distance is 1.2km from PC to last controller
- RJ45 connector. Use a 'straight through' network cable
- These connection are not for TCP/IP connection
- Pin 1 = A, Pin 2 = B, Pin 3+4 = GND
- If connecting to terminal connection – A connects to A, B connects to B and GND connects to GND on the next controller.
- LK19 is a termination link. It should be put on the last controller in the daisy chain.



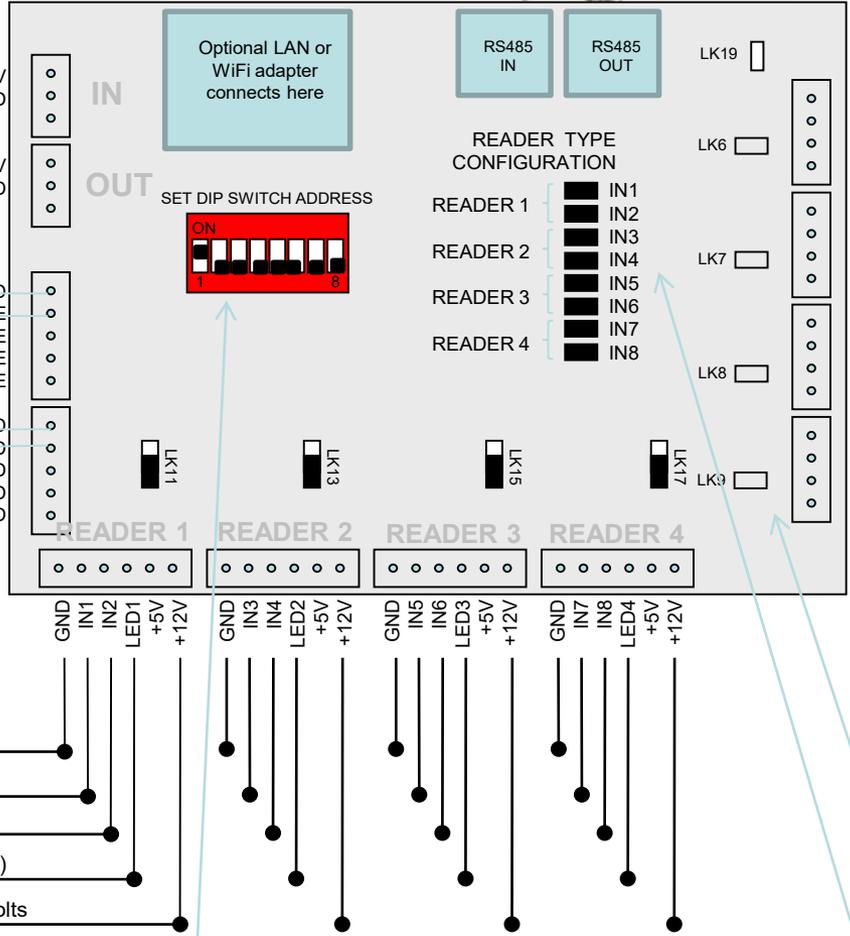
**Exit Request Button and Door Monitoring inputs**

- Must be a dry contact (no voltage)
- Connect one wire to Ground and the other wire to the specific input.



**Reader Cabling notes:**

- Maximum 100 meters from controller
- Recommended cable type – 6 core shielded
- Do not wire 2 readers into the 1 reader port



**Set Board address ID**

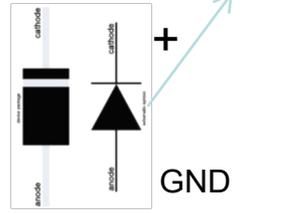
- Set the ID in binary (1 to 128)
- Each controller must have a unique ID
- It does not matter what the number order is as long as no two controllers have the same number.

**Relay Cabling Notes:**

- Recommended cable type – Figure 8
- Must fit a diode at the lock
- NC = Normally Closed Circuit (To Common)
- NO = Normally Open Circuit (To Common)
- Relays can be reversed (energised) by software for fail safe operation.
- Put LK6-9 on to put +12 volts on each relay common pin.

**Configure the board for the number of readers:**

- 1 Reader Only: Put links IN1,2 – ON, IN3-8 – OFF
- 2 Readers Only: Put links IN1-4 – ON, IN5-8 – OFF
- 3 Readers Only: Put links IN1-6 – ON, IN7-8 – OFF
- 4 Readers Only: Put links IN1-8 – ON



**Relay Cabling Notes:**

- Recommended cable type – Figure 8
- Must fit a diode at the lock
- NC = Normally Closed Circuit (To Common)
- NO = Normally Open Circuit (To Common)
- Relays can be reversed (energised) by software for fail safe operation.
- Put LK6-9 on to put +12 volts on each relay common pin.

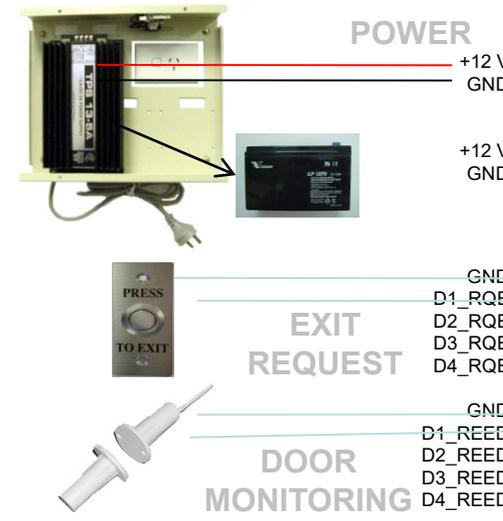
**Power Notes:**

- Recommended cabling – Figure 8
- Do not use plug pack power supplies.
- Recommend 13.8 Volt 2A power supply with battery backup. (Can power several controllers)
- Check all devices current usage.
- Typically: Board 400mA, Strike 200mA, Maglock 1000mA, Reader 20mA.
- There are two power terminals. Connect the power supply to the 'IN' terminal. The 'OUT' power terminal can be used as a power 'output'.



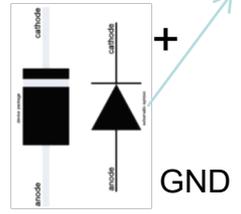
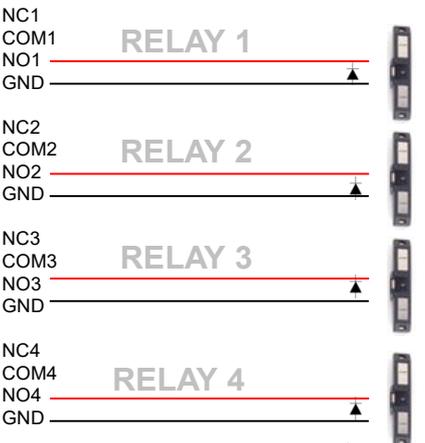
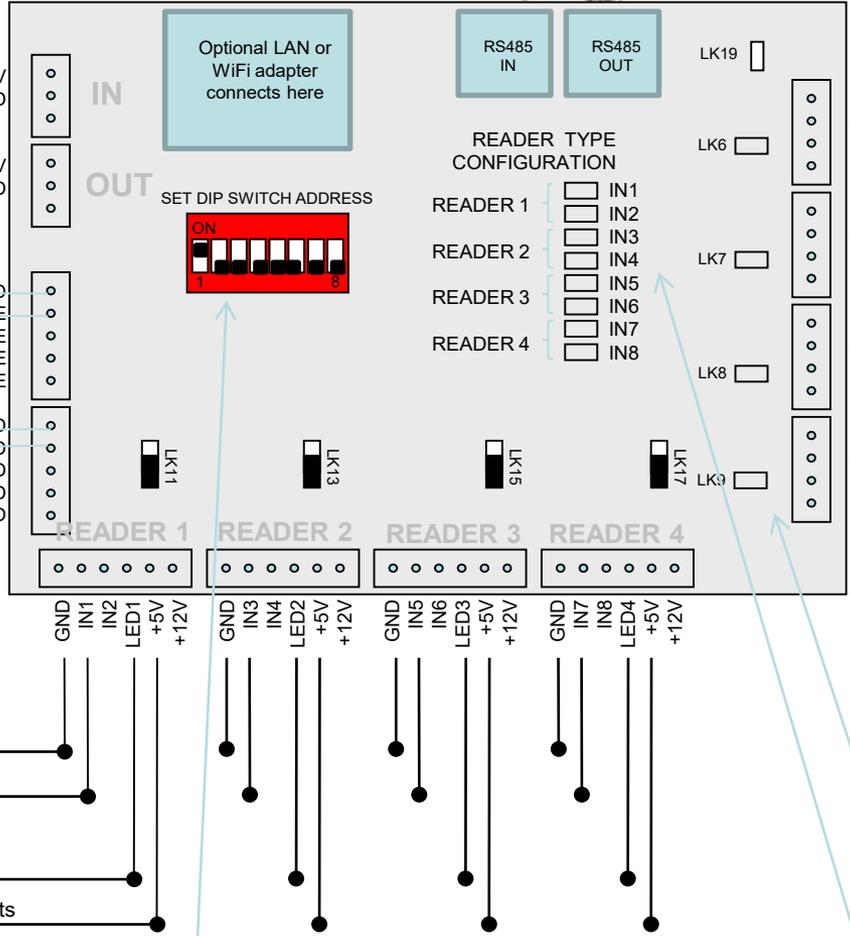
**Comms Cabling Notes:**

- Recommended cable type – CAT5
- Daisy Chain configuration
- Maximum distance is 1.2km from PC to last controller
- RJ45 connector. Use a 'straight through' network cable
- These connection are not for TCP/IP connection
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- If connecting to terminal connection – A connects to A, B connects to B and GND connects to GND on the next controller.
- LK19 is a termination link. It should be put on the last controller in the daisy chain.



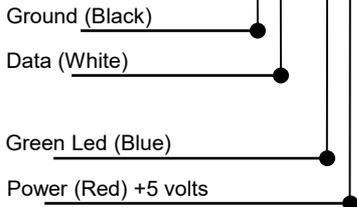
**Exit Request Button and Door Monitoring inputs**

- Must be a dry contact (no voltage)
- Connect one wire to Ground and the other wire to the specific input.



**Relay Cabling Notes:**

- Recommended cable type – Figure 8
- Must fit a diode at the lock
- NC = Normally Closed Circuit (To Common)
- NO = Normally Open Circuit (To Common)
- Relays can be reversed (energised) by software for fail safe operation.
- Put LK6-9 on to put +12 volts on each relay common pin.



**SILKEY**

**Reader Cabling notes:**

- Maximum 100 meters from controller
- Recommended cable type CAT5 (non shielded cable)
- Do not wire 2 readers into the 1 reader port

**Set Board address ID**

- Set the ID in binary (1 to 128)
- Each controller must have a unique ID
- It does not matter what the number order is as long as no two controllers have the same number.

**Configure the board for the number of readers:**

- 1 Reader Only: Put links IN1-8 = OFF
- 2 Readers Only: Put links IN1-8 = OFF
- 3 Readers Only: Put links IN1-8 = OFF
- 4 Readers Only: Put links IN1-8 = OFF

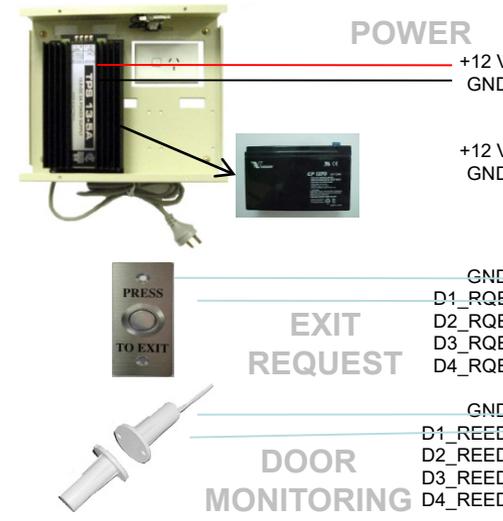
**Power Notes:**

- Recommended cabling – Figure 8
- Do not use plug pack power supplies.
- Recommend 13.8 Volt 2A power supply with battery backup. (Can power several controllers)
- Check all devices current usage.
- Typically: Board 400mA, Strike 200mA, Maglock 1000mA, Reader 20mA.
- There are two power terminals. Connect the power supply to the 'IN' terminal. The 'OUT' power terminal can be used as a power 'output'.



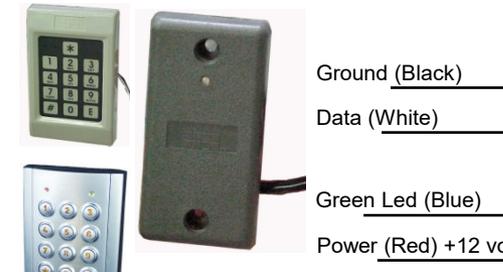
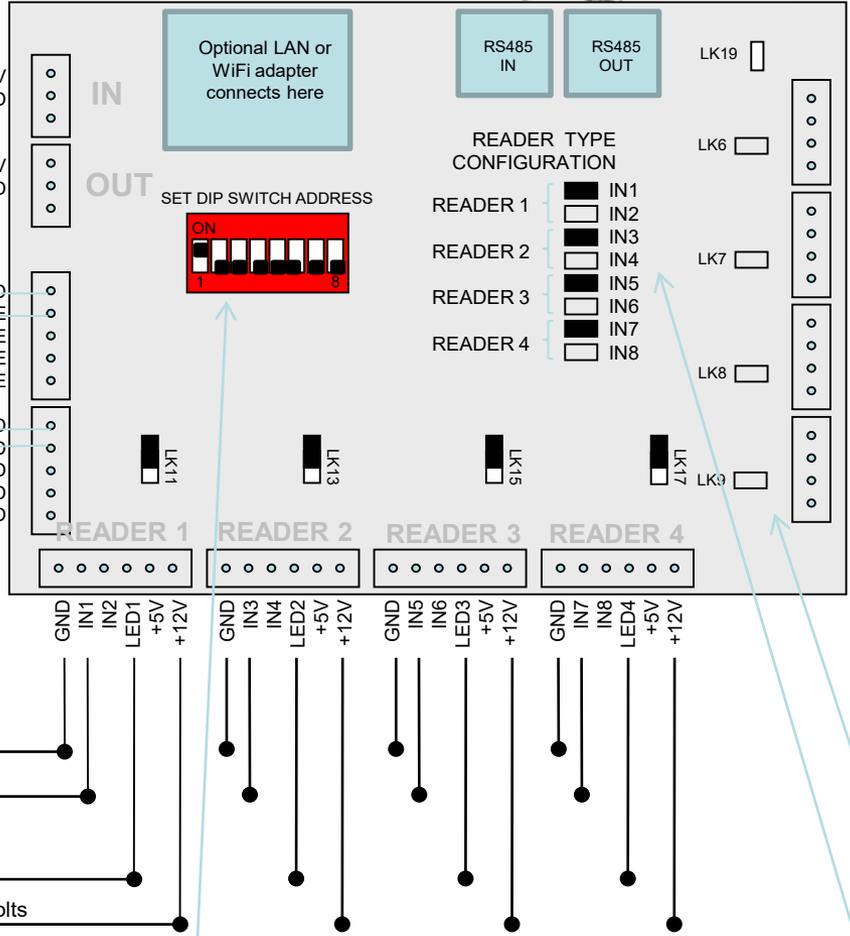
**Comms Cabling Notes:**

- Recommended cable type – CAT5
- Daisy Chain configuration
- Maximum distance is 1.2km from PC to last controller
- RJ45 connector. Use a 'straight through' network cable
- These connection are not for TCP/IP connection
- Pin 1 = A, Pin 2 = B, Pin 3+4 = GND
- If connecting to terminal connection – A connects to A, B connects to B and GND connects to GND on the next controller.
- LK19 is a termination link. It should be put on the last controller in the daisy chain.



**Exit Request Button and Door Monitoring inputs**

- Must be a dry contact (no voltage)
- Connect one wire to Ground and the other wire to the specific input.



**Reader Cabling notes:**

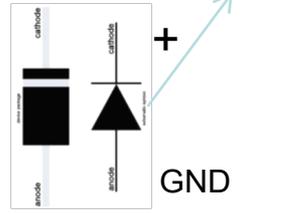
- Maximum 500 meters from controller
- Recommended cable type – 4 core shielded or non shielded
- Do not wire 2 readers into the 1 reader port

**Set Board address ID**

- Set the ID in binary (1 to 128)
- Each controller must have a unique ID
- It does not matter what the number order is as long as no two controllers have the same number.

**Relay Cabling Notes:**

- Recommended cable type – Figure 8
- Must fit a diode at the lock
- NC = Normally Closed Circuit (To Common)
- NO = Normally Open Circuit (To Common)
- Relays can be reversed (energised) by software for fail safe operation.
- Put LK6-9 on to put +12 volts on each relay common pin.



**Configure the board for the number of readers:**

- 1 Reader Only: Put links IN1 – ON, IN2-8 – OFF
- 2 Readers Only: Put links IN1,3 – ON, IN2,4-8 – OFF
- 3 Readers Only: Put links IN1,3,5 – ON, IN2,4,6-8 – OFF
- 4 Readers Only: Put links IN1,3,5,7 – ON, IN2,4,6,8 – OFF

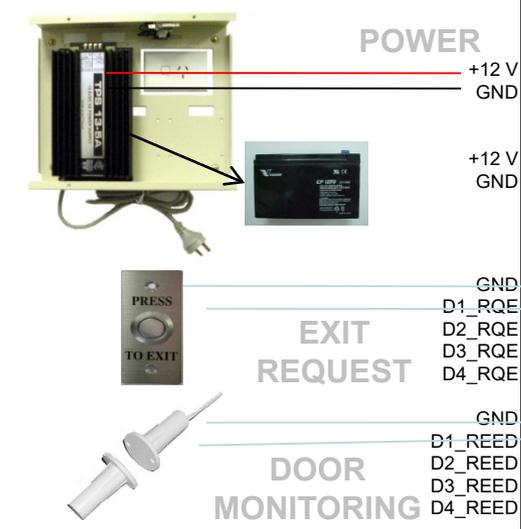
**Power Notes:**

- Recommended cabling – Figure 8
- Do not use plug pack power supplies.
- Recommend 13.8 Volt 2A power supply with battery backup. (Can power several controllers)
- Check all devices current usage.
- Typically: Board 400mA, Strike 200mA, Maglock 1000mA, Reader 20mA.
- There are two power terminals. Connect the power supply to the 'IN' terminal. The 'OUT' power terminal can be used as a power 'output'.



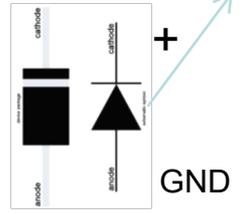
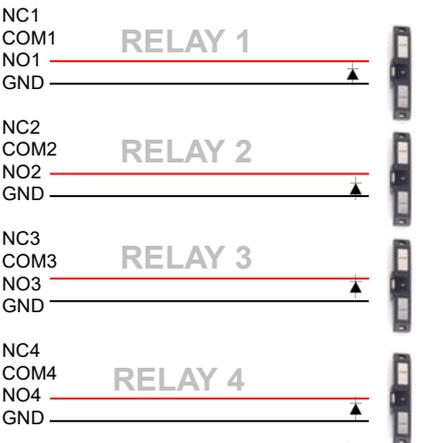
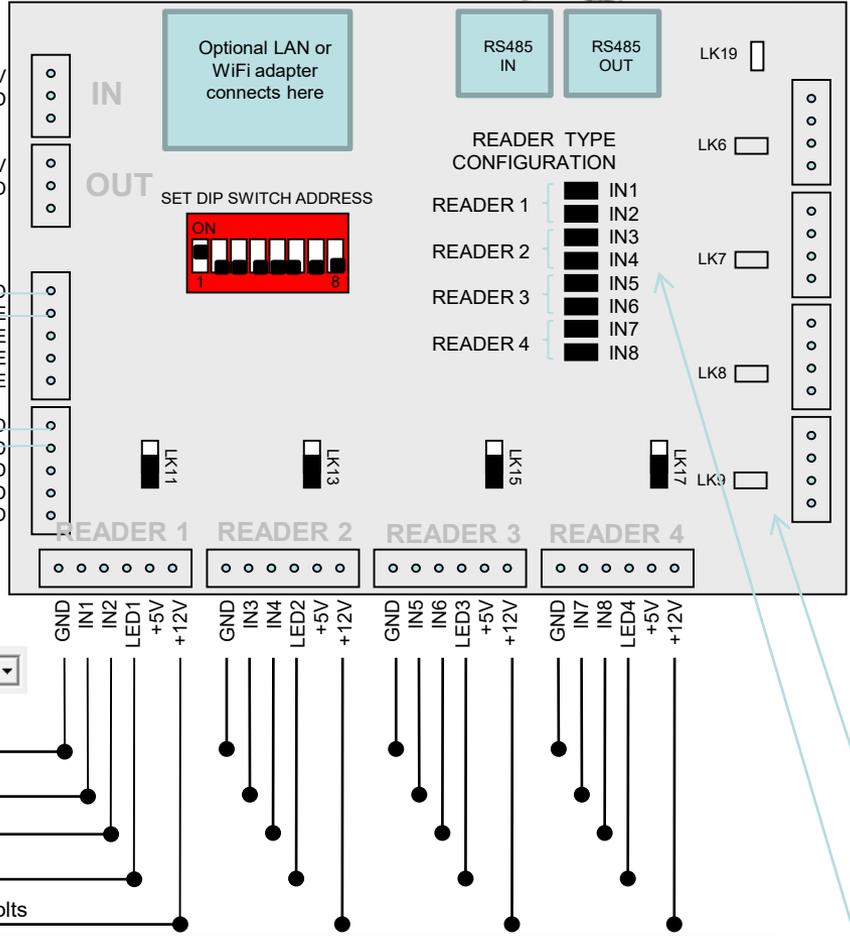
**Comms Cabling Notes:**

- Recommended cable type – CAT5
- Daisy Chain configuration
- Maximum distance is 1.2km from PC to last controller
- RJ45 connector. Use a 'straight through' network cable
- These connection are not for TCP/IP connection
- Pin 1 = A, Pin 2 = B, Pin 3+4 = GND
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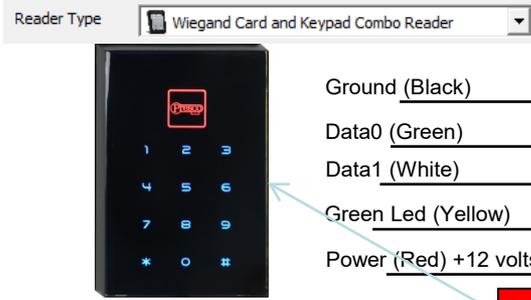
**Exit Request Button and Door Monitoring inputs**

- Must be a dry contact (no voltage)
- Connect one wire to Ground and the other wire to the specific input.



**Relay Cabling Notes:**

- Recommended cable type – Figure 8
- Must fit a diode at the lock
- NC = Normally Closed Circuit (To Common)
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- Relays can be reversed (energised) by software for fail safe operation.
- Put LK6-9 on to put +12 volts on each relay common pin.



**PRESCO PTKR**

**Reader Cabling notes:**

- Maximum 100 meters from controller
- Recommended cable type – 6 core shielded
- Do not wire 2 readers into the 1 reader port

**Reader Configuration – MUST Set PTKR for 4 bit Wiegand Burst mode (with \* and # keys enabled):-**

1. Remove power from the PTKR keypad.
2. Connect the Orange wire to 0V.
3. Reapply power.
4. Once the Presco logo LED starts to double flash green you are in program mode.
5. Press \* 032 101 #
6. Press \* 999 # to exit program mode.
7. Disconnect Orange wire.

**Configure the board for the number of readers:**

- 1 Reader Only: Put links IN1,2 – ON, IN3-8 – OFF
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- 3 Readers Only: Put links IN1-6 – ON, IN7-8 – OFF
- 4 Readers Only: Put links IN1-8 – ON

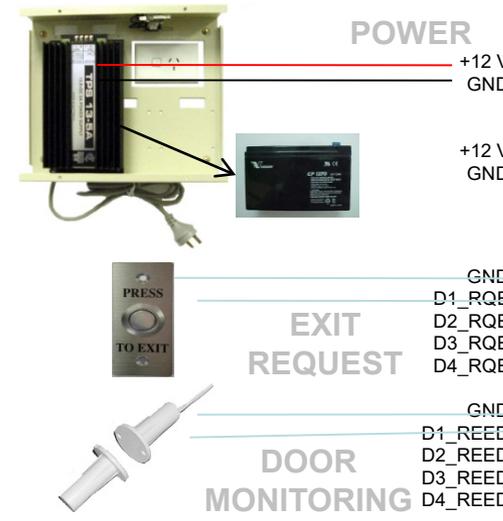
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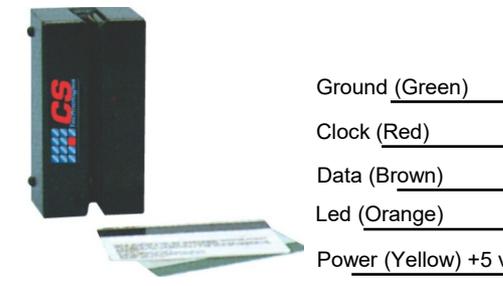
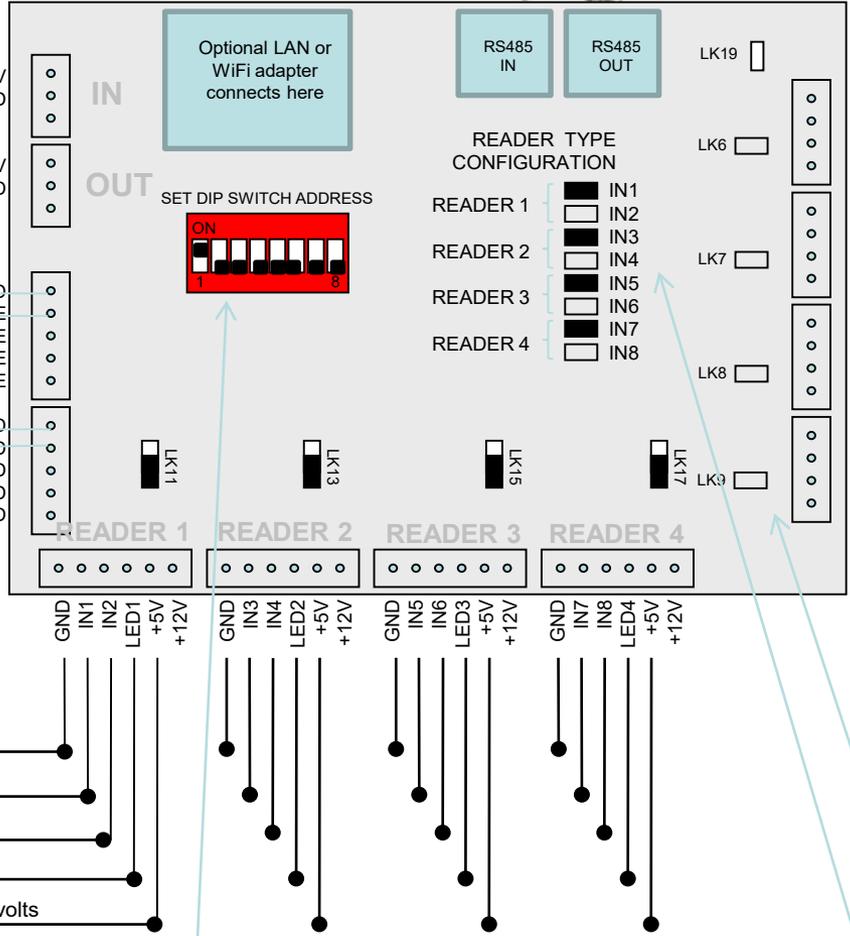
**Comms Cabling Notes:**

- Recommended cable type – CAT5
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- These connection are not for TCP/IP connection
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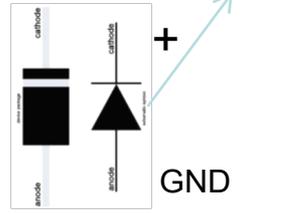
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**Set Board address ID**

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**Relay Cabling Notes:**

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**Configure the board for the number of readers:**

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- 2 Readers Only: Put links IN1,3 – ON, IN2,4-8 – OFF
- 3 Readers Only: Put links IN1,3,5 – ON, IN2,4,6-8 – OFF
- 4 Readers Only: Put links IN1,3,5,7 – ON, IN2,4,6,8 - OFF