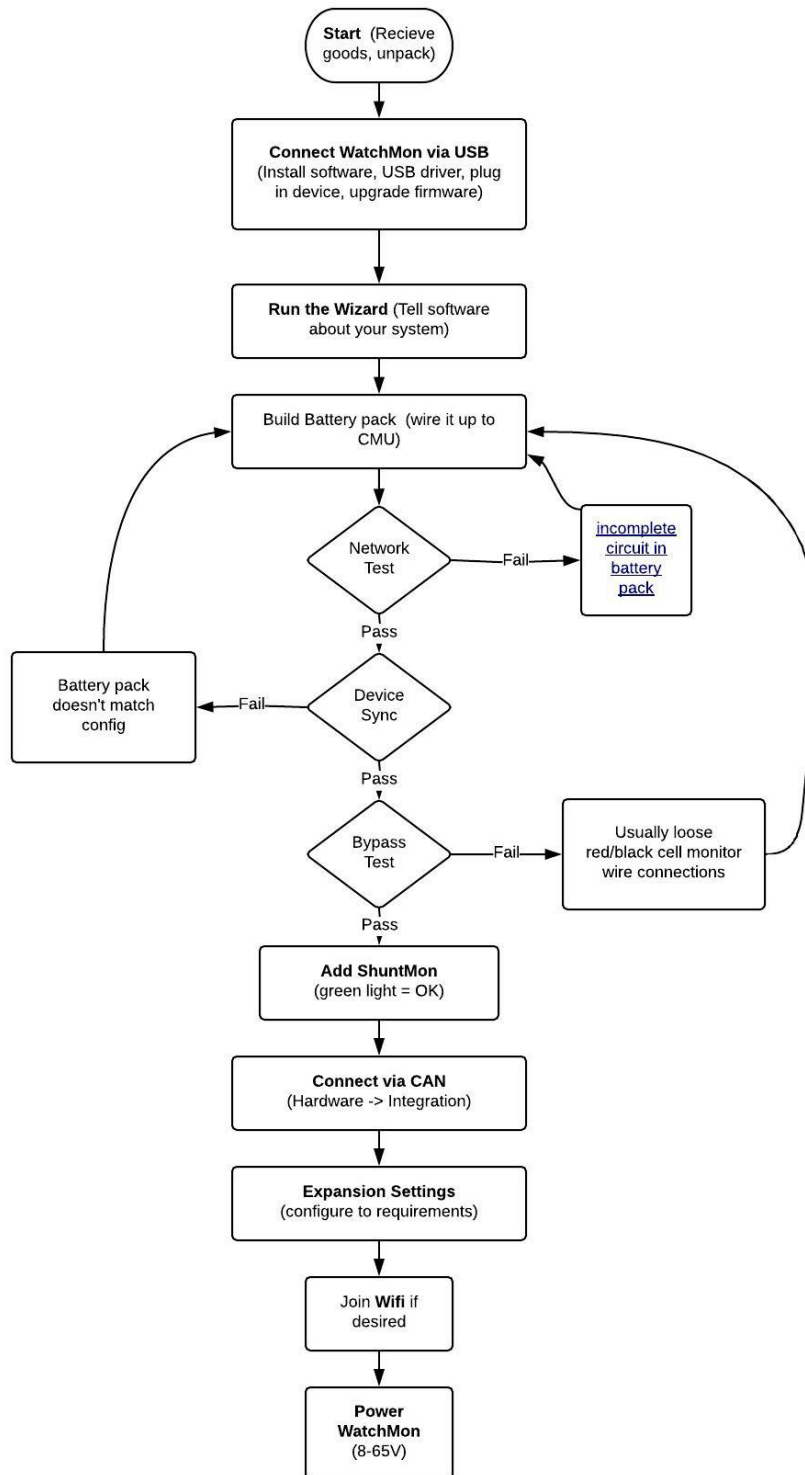


# SETUP: Simplified Watchmon4 Starting Guide

NOTE: This is for a first-time approach to setting up your system.



## 1. Check all items ordered are present

Typical starter kit contains:

- 1 x WatchMon
- 1 x USB A-B 1.5m extension cable
- 1 x CellMon with cable and pluggable connector
  
- Cell monitors and cables as per order
- 1 x Expansion board 3 - optional, provides extra inputs and outputs Expansion Output Functions
- 1 x ShuntMon 500A current SoC% shunt sensor ( incl. cable) - optional, provides State of Charge
- 1 x screwdriver
- 1 x sticker

## 2. Install WatchMon Toolkit Software.

**NOTE:** Software runs in a Windows environment

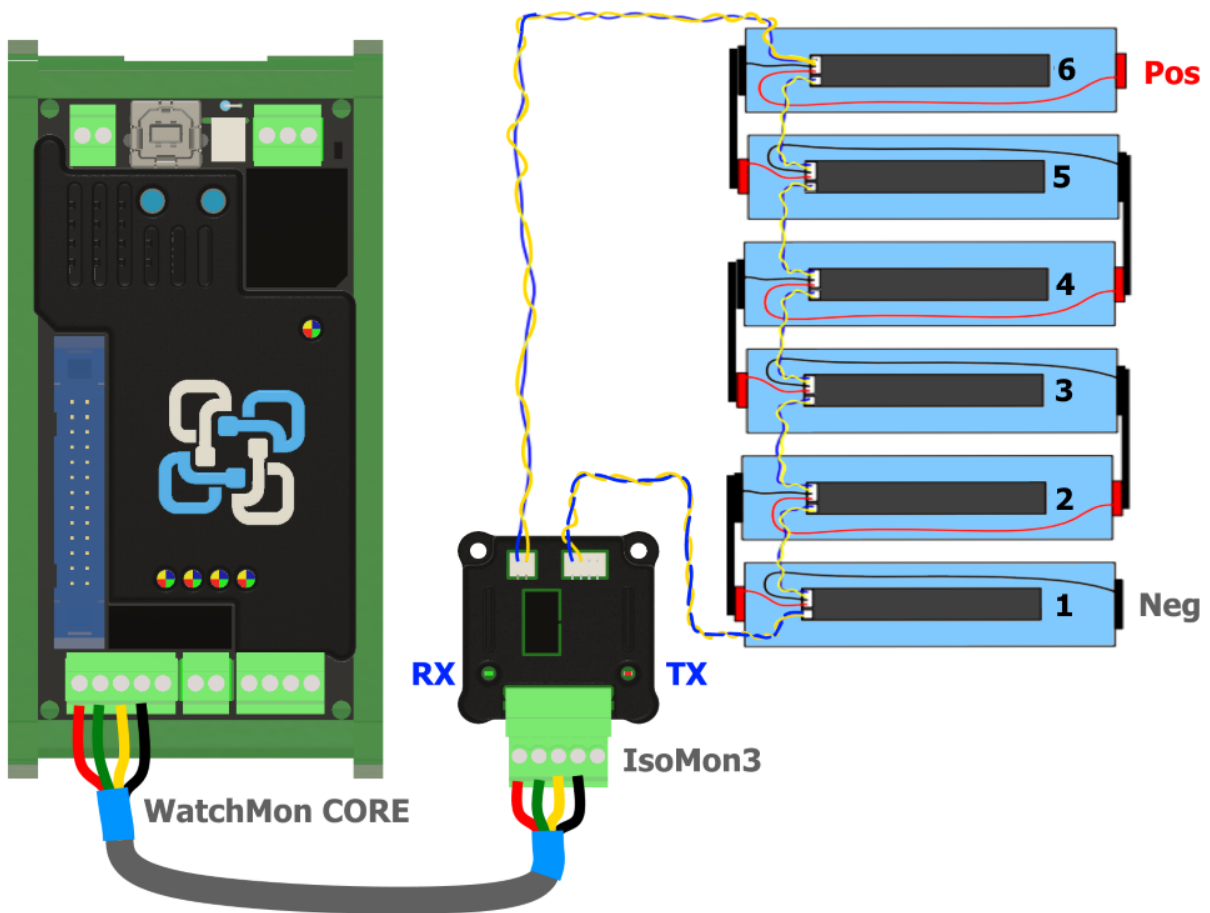
3. Install the USB driver.

4. Plug in the WatchMon via USB cable (**batteries, SoC sensor, power, etc. should not be plugged in at this point**).

5. Connect to the WatchMon.

6. Run the Wizard Setup.

7. Wire up your batteries to CellMon (**LongMons, BlockMons and LeafMons get their power from the battery it is monitoring so when wiring up should light up green for a few seconds.**)



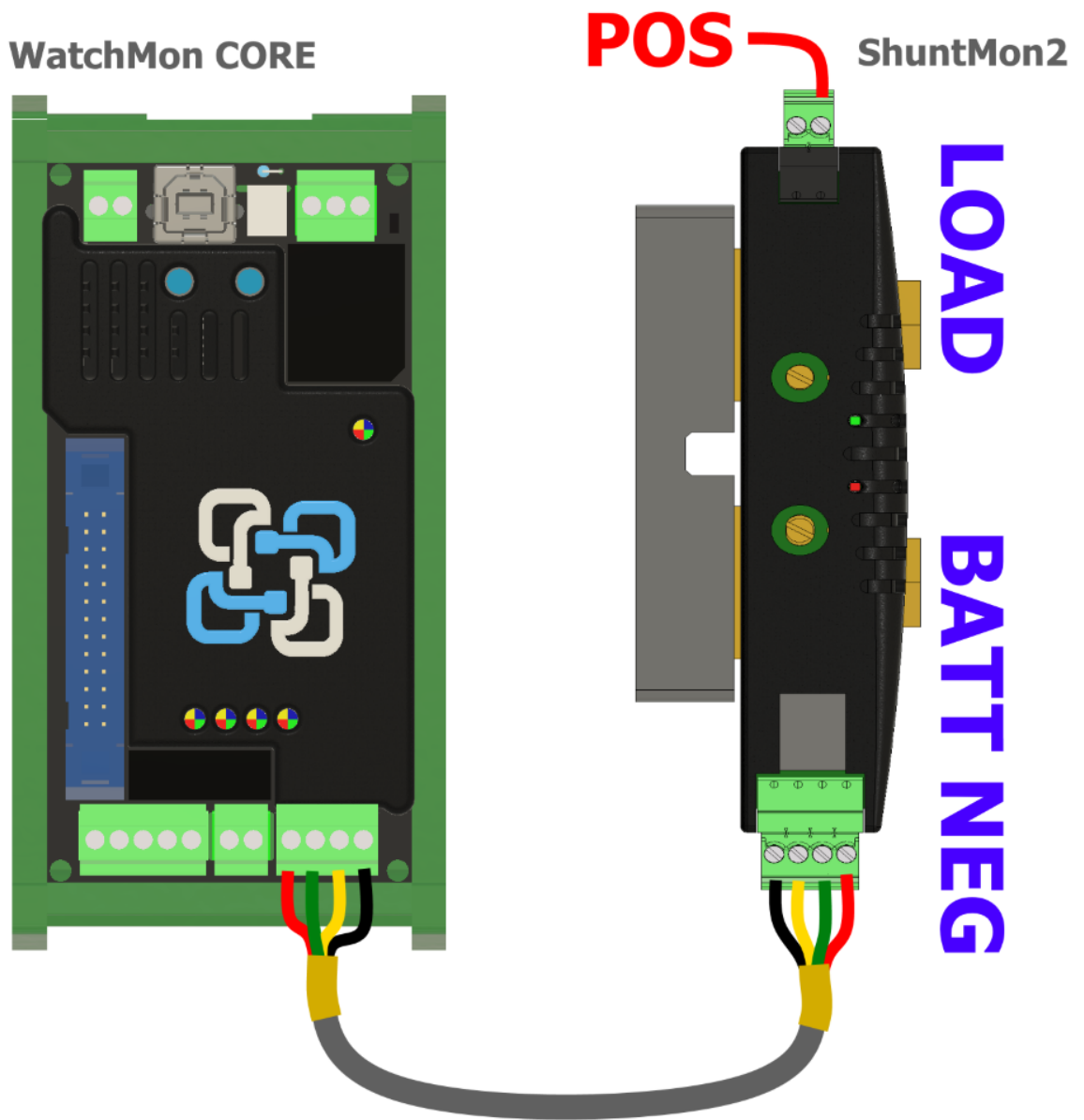
8. Plug in CellMon to the WatchMon and test the network for continuity. If issues arise, track down the problem in the network.

9. Synchronize the Cell monitors using Device Sync. This checks that the battery pack matches your setup and downloads the limits and knowledge of the entire pack to the cell monitors.

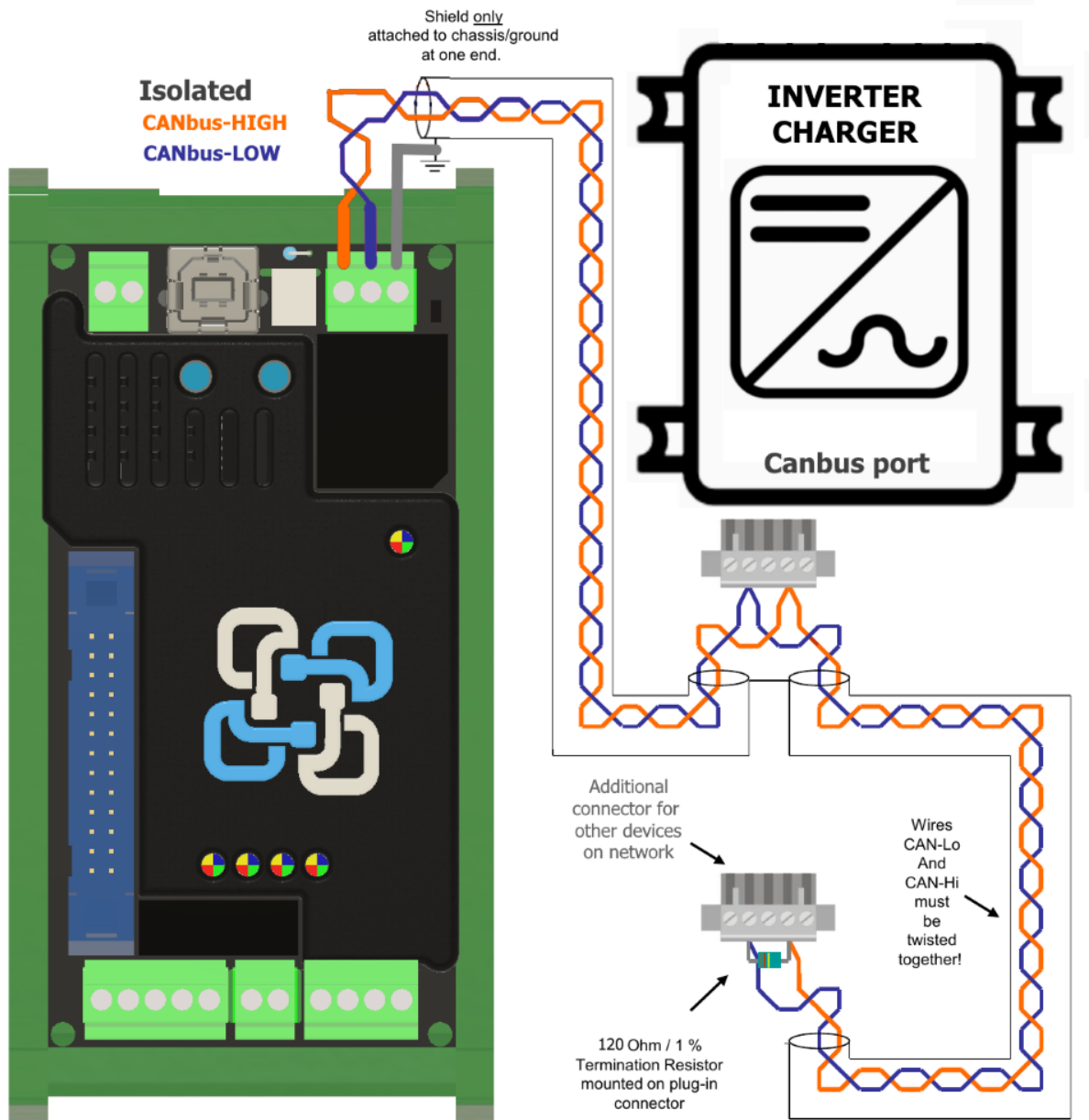
**NOTE:** This step needs to be done after every change to the system setup to ensure the cell monitors know their place and targets.

10. Testing Cell monitors balancing resistors with Bypass Tester. This checks the system under stress and the balancing function. If Sync passes but this fails then it is usually a loose cable or connection, look to see connections tight, not rusty and cables in good repair.

11. Connect the Shuntmon2 to the WatchMon.



12. Connect the Inverter charger via Integration settings.

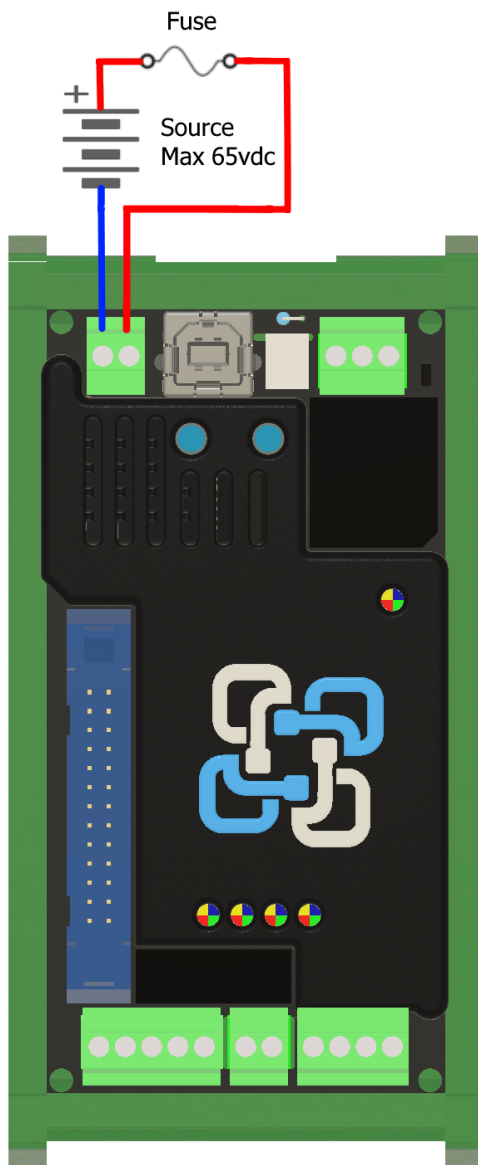


### 13. Powering the WatchMon

Note that for battery packs 8-65V you can use your pack to supply the WatchMon. Outside of this range use a 12V battery.

For High Voltage Battery Pack Systems Best to Adopt a Fully Isolated DC-DC to Provide a Supply Voltage of either 12v or 24v Depending on Application.

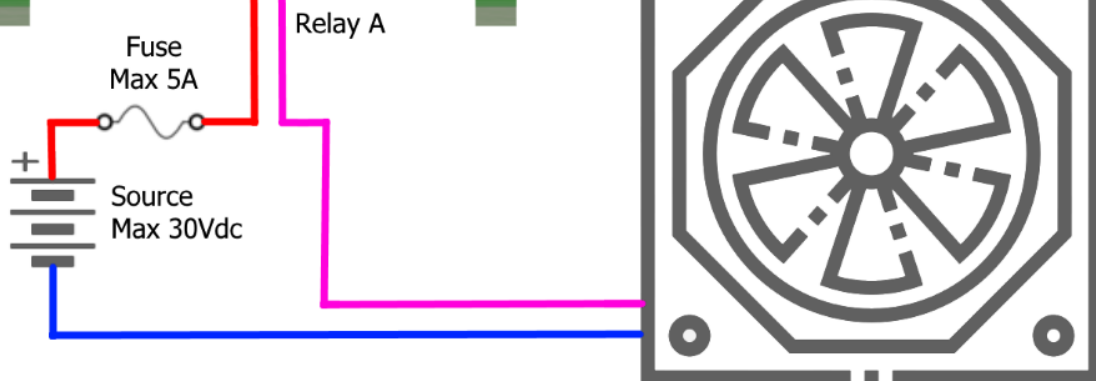
- Built-in 8v to 65v DC-DC supply (non-isolated)
- Consumes ~1.7W with WiFi enabled (typical 48v battery budget 1Ah / day)



14. Connecting Peripherals via Expansion settings this includes fans, heaters, buzzers, circuit breakers, contactors etc.

## Controlling a FAN from WatchMonCORE Onboard Relay

- Mechanical relay Max 30Vdc 5A
- Labelled as Relay A
- User-defined function

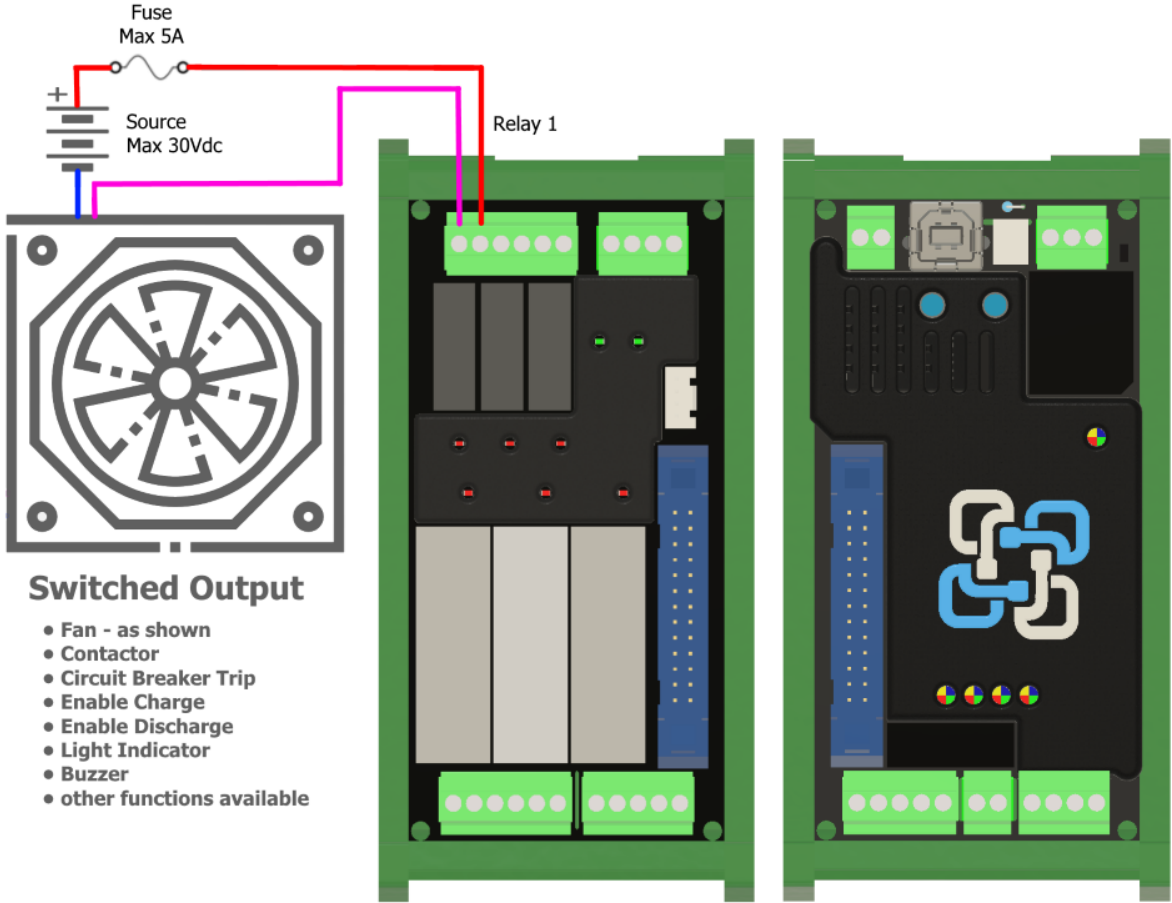


### Switched Output

- Fan - as shown
- Contactor
- Circuit Breaker Trip
- Enable Charge
- Enable Discharge
- Light Indicator
- Buzzer
- other functions available

# Controlling a FAN from WatchMonCORE Expansion Board-E3 using a Relay

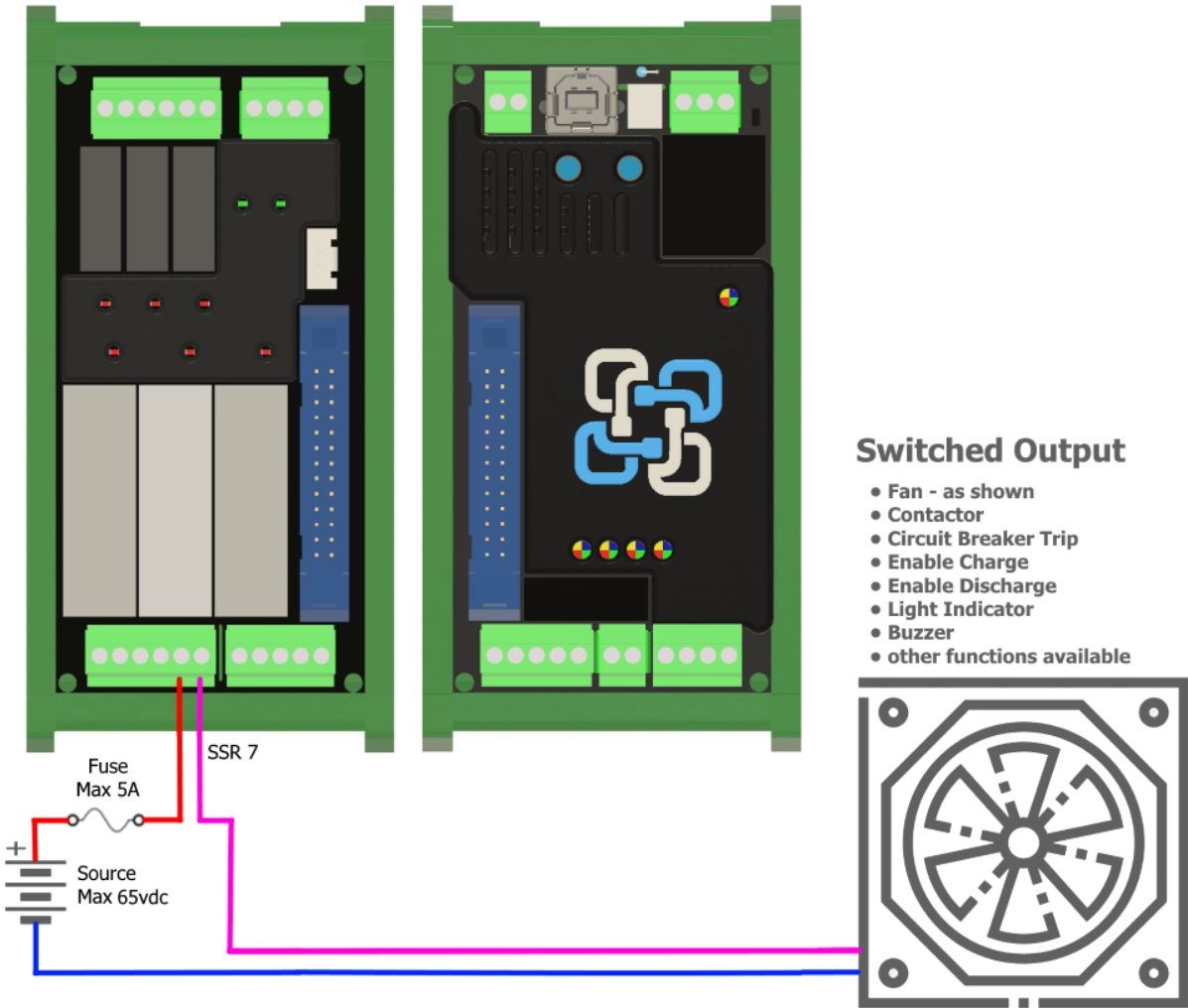
- Up to 3 Mechanical relay Max 30Vdc 5A
- Labelled as Relay 1, 2, and 3
- User-defined function



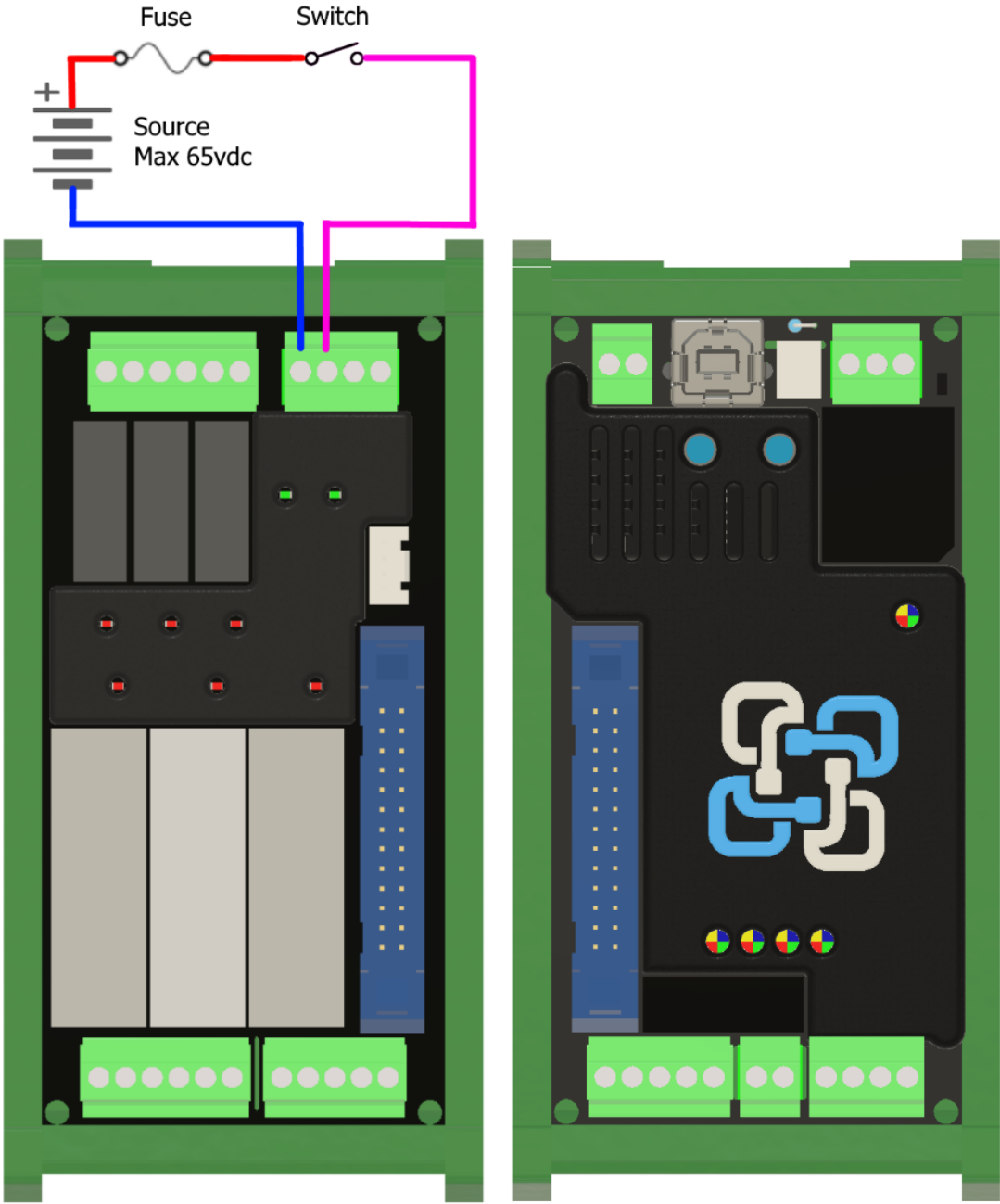


# Controlling a FAN from WatchMonCORE Expansion Board-E3 using a Solid State Relay SSR

- Up to 3 Solid State Relay SSR 3 to 65Vdc 5A (1 way disconnect)
- Labelled as SSR 5, 6, and 7
- User-defined function(s)



# Sensing Switch Signal from WatchMonCORE Expansion Board-E3 using a Opto-Isolated Input



15. Switch to WiFi if needed.