

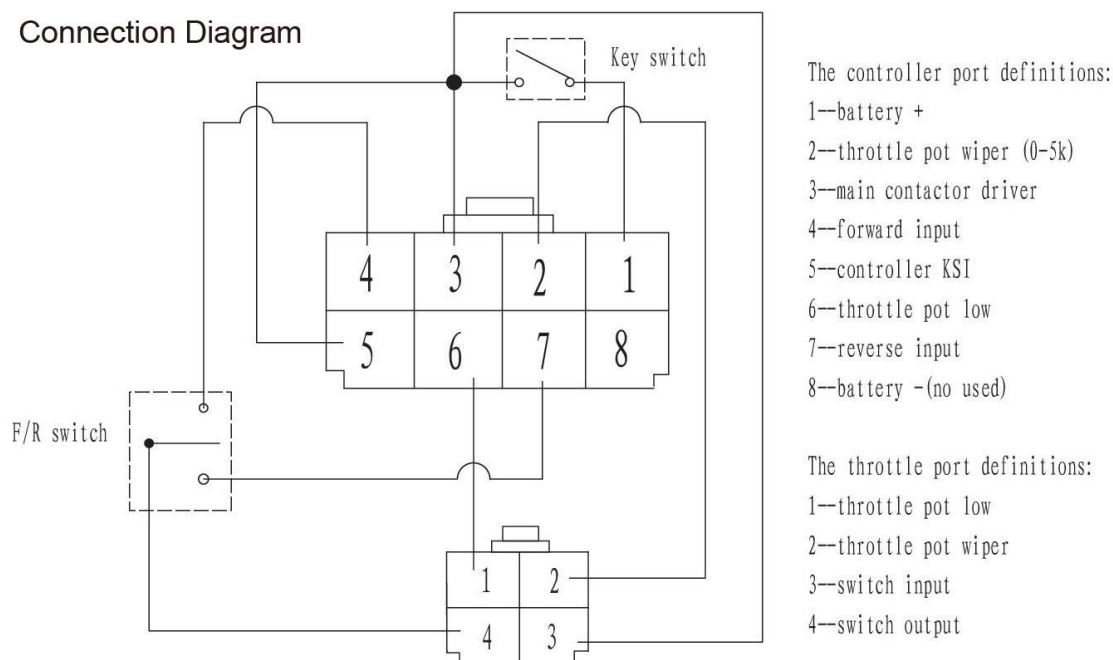
## Installation Instruction

### Permanent Magnetic Motor Controller Assemblage

24V - 36V - 48V - 60V - 72V - 80V

1. Checking the controller assemblage, battery system and motor:
  - a) The whole assemblage status
  - b) Installation kit & mating connectors
  - c) Battery charging status
  - d) Motor status (turning manually 2-3 rounds)
  - e) The cables' length and insulation conditions
2. Preparing the mating connectors (please identify the wire number corresponding to the connectors on assemblage and throttle, as shown in the diagram):

Connection Diagram



- a) Throttle connector:
  - i. If there is a throttle switch before the key switch, link the No. 3 wire to the throttle switch output; If not, link the No.3 wire to the key switch output
  - ii. Link the No.4 wire to the Forward / Reverse switch “Power In” terminal (possibly marked as “B+” or “Input”, please verify your F / R switch codification)
  - iii. Link the No.1 wire to the assemblage mating connector No.6 wire
  - iv. Link the No.2 wire to the assemblage mating connector No.2 wire
- b) Assemblage connector:
  - i. Link the No.1 wire to key switch input terminal
  - ii. Link the No.2 wire to the throttle mating connector No.2 wire
  - iii. Link the No.3 wire to the key switch output terminal
  - iv. Link the No.4 wire to F / R switch Forward output terminal

- v. Link the No.5 wire to the key switch output terminal
  - vi. Link the No.6 wire to the No.1 wire of throttle mating connector
  - vii. Link the No.7 wire to F / R switch Reversing output terminal
  - viii. The No.8 wire could be linked to "0V" (B-), or be spared
  - c) Try to connect and disconnect the connectors, making sure the all terminals are well contacted.
3. Mounting the assemblage and throttle on board. If there is an earth line, connect it to the assemblage aluminum plate.
  4. Connecting all cables of battery and motor to the assemblage.
    - a) Do not supply power to assemblage till confirming there is no "B+" and "B-" connection reversed. The reversed power poles' connection could cause an immediate system damage.
    - b) Keep the F / R switch at neutral position, and the throttle at low end without output. Keep the vehicle braked.
    - c) There are labels on the assemblage, indicating the connecting position, "B+", "B-", "D1" and "D2".
      - i. "D1" and "D2" for motor stud terminals.
      - ii. "B+" and "B-" for battery positive and negative poles.
  5. Deliver power to the assemblage. Normally there should be a "click" sound of main contactor at the moment of power arriving.
  6. Turn on the key switch, and keep the throttle at low end without output. Moving the F / R switch handle (or pushing the Forward / Switch buttons), check if the F / R contactor works by hearing the "click" sounds.
  7. Release the vehicle brakes, put the F / R switch at "forward" position, step down a little the foot pedal (throttle) to start the motor. If the motor works, stop the motor, and try the same to reverse the motor.
  8. Increasing slowly the motor speed till its max limit, run the vehicle for 5 minutes. Stop the vehicle, turn off the power, check the motor situation (if there is any overheating) and the assemblage (overheating or over-current).
  9. By identifying there is no abnormal noise or smell, the system is installed correctly.

