Series Wound / Permanent Magnet DC brushed

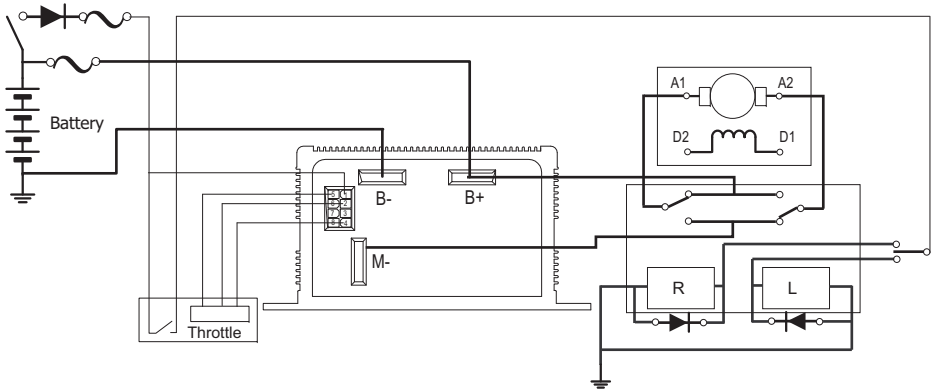
Motor Controller

User Manual

Item:_____

SN:_____

System wiring diagram



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NOTE !

- Strongly recommend double check the main circuit and control wring connection before turn the battery supply on.
- The controller cabinet requires well heat dissipation so that work normally. Mounted on a 340X230X8mm aluminium plate would be essential.
- Using universal meter to test the terminal resistance between M- to B- , If the resistance < 100 Ω， we can infer the controller have been damaged.
- When power on, step on the electric throttle pedal slowly, the voltage between terminal P2 to B- will vary from 0~5V increasingly.

Power supply

This controller using power battery as source. Please select the matching specification motor accordingly. This type of controller can not be connect to the AC motor system.

Maintenance

This controller is detachable parts, please don't unpack it to repair. You can send it back to us for repairing.

Heat dissipation

The controller is power equipment, and will emit heat when working. Generally, we assembly the controller , contactor ,fuse etc on a aluminium plate. This construction will be more reliable and advantageous for heat emit.

Keep the space of air around the controller circulating. If the space is not enough, recommending mounting a cooling fan to force cooling.

Install tool

Wrench, 1#,2# cross screwdriver,2# Straight Screwdriver, picker pliers, universal meter, heat conducting silicon.

There is no any parts can be repaired by user, please don't open this controller by yourself.If you open it yourself, there will not warranty any more.

Due to the inner resistance of the lead acid battery is very low, any type of short circuit is very dangerious.

For better using this controller, please check the outer circuit carefully as follow:

1. cut off the power suply first , parallel connection a 10-51Ω/25W resistor between B+ and B-, this resistor discharge for the capacitor.
2. wipe off the dust and impurity on the surface, so that in favour of the cooling.
3. Using the wrench to screw the each cable connection.
4. Check the each key switch and contactor.
5. when the controller on working condition, its surface temperature is very high, do not touch or will burn you.

Fuse selection

You should select the corresponding current value fuse accordingly. This controller main circuit is suggested to choose the 200~250A Fork bolt fuse. The controller circuit is suggested to the 10A fuse.

Freewheeling diode selection

The control winding of the converse contactor parallel connection with a freewheeling diode , when the working voltage is 96V, rated working current is 801A, the freewheeling diode is suggested to select the 1N5408.

Technical Data

Rated voltage (V): 96Volts

Protect voltage (V): 45Volts

2 minutes current (A): 300A

5 minutes current (A): 205A

100 A voltage drop(V) : 100A

Working temperature range: -60° C~+60° C

Working frequency: 15kHz

100 A Max EFF%: ≥99%

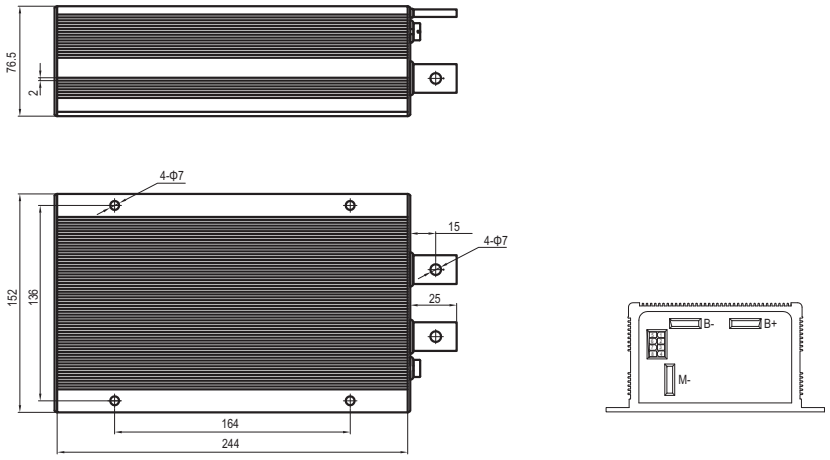
IP class: IP56

Dielectric Voltage withstand:1500V 1 min no flash and breakdown

Matching motor type: PM/Series wound brushed motor

Throttle pedal: Hall / Resistor type.

Outline Dimension



Control Wiring Description

8 pin connector

P1: Vcc battery input voltage from the start key

P5: Hall pedal power supply

P2:Hall or resistor pedal signal input

P3: resistor pedal low terminal

P4:GND

P6,P7,P8: Void

Hall type pedal wiring connection

If you choose the hall type pedal, There are 5 input wires, two of them is connected to a micro switch, two wires are power supply, and the last wire is hall signal input.

P 1 is to the “+“ of the battery

P5 is to the hall pedal “+“

P2 is signal input

P4 is to the hall pedal GND

This controller require the hall signal input is 0~4.0V, this controller start work on 1.0V , and run at full on 3.8 V, when on 6.5V the controller will be shut down. When not step-on the pedal, but the voltage on P2 exceed 1.3V, the controller will not work.

Hall type pedal wiring connection

If you select the resistor type pedal, the input resistor range is 1.0~5kΩ,when the input resistor on 4.5kΩ, the controller run at full. When the input resistor on 6.5 kΩ,the controller will be shut down.