

MC3336 Series Low Volt AC Controller Instruction



Description

MC3336 series controller is an AC motor driver for low volt electric vehicle which is designed by Zhuhai Inpower Electric Co.,Ltd. Because of adopting world class calculation for AC motor rotating speed control, it can get an accurate value of torque output on a widely range of motor rotating speed .

Compared with the DC driving system, the AC system has a wider range of motor speed output which will make the vehicle speed large increase generally. AC motor has no carbon brush, full enclosed and maintenance free which characteristics make the AC

motor more reliable than DC. AC system has better efficiency and more flexible energy regeneration controlling which can improve the travelling distance obviously.

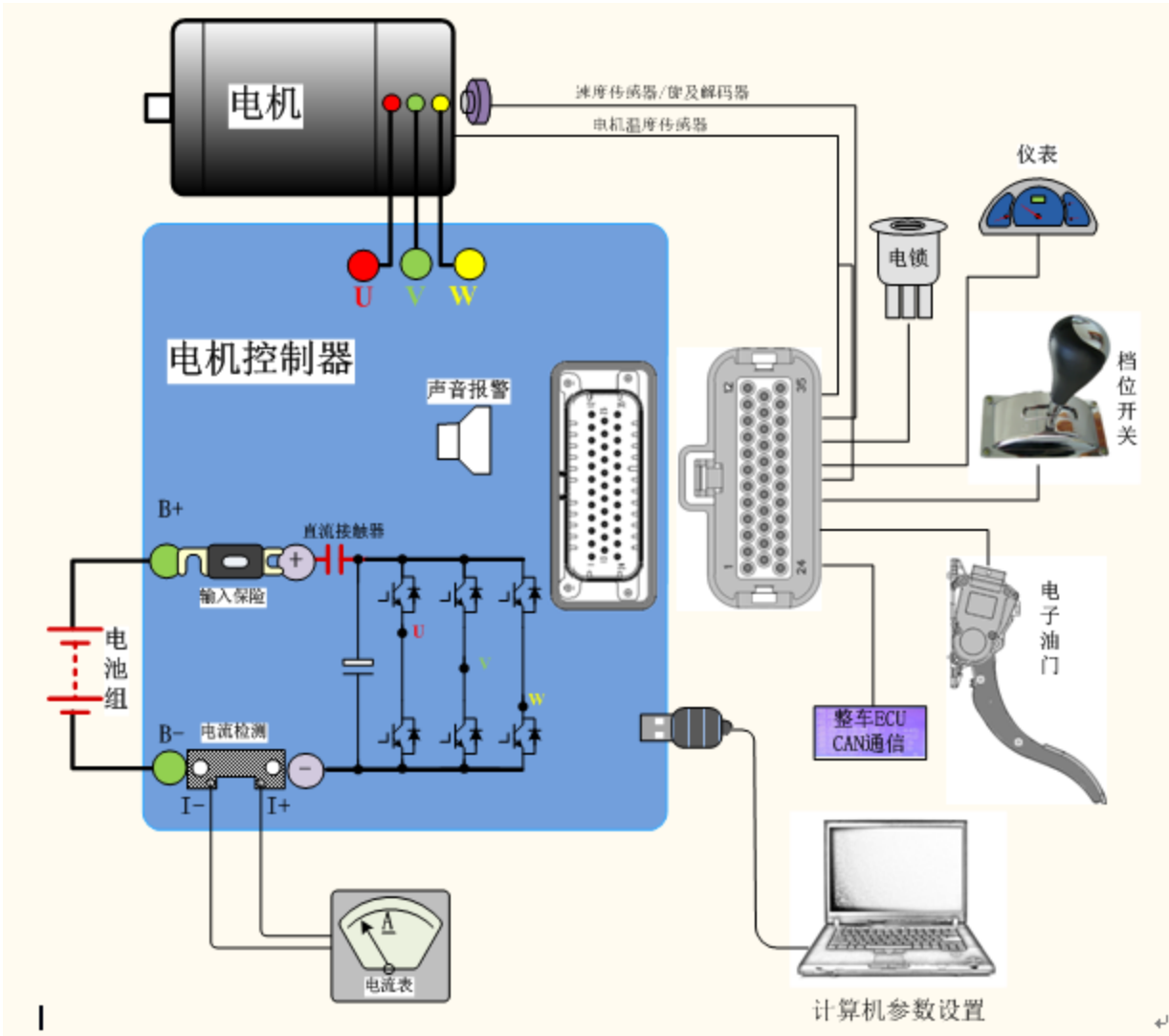
MC3336 series low volt AC controller are designed for widely applications in golf cars, sightseeing vehicles, hunting buggies, electric vehicles, heavy-duty trucks, electric yachts and other kinds of utility vehicles.

Specifications and Technical Parameters

| Technical Parameter | | | | |
|------------------------|---------------------------------|--|-------------|---------------------------|
| Specifications | | MC3336-7250 | MC3336-9650 | MC3336-A850 |
| | | 72V | 96V | 110V(for lithium battery) |
| Electrical performance | Input volt range (DC/V) | 60~90 | 80~120 | 80~125 |
| | Max. Output current (AC/A) | 500 | 500 | 500 |
| | Rated output current (AC/A) | 120 | 120 | 120 |
| | Controller starting volt (DC/V) | 50 | 50 | 55 |
| | Max. Output power (KW) | 36 | 50 | 55 |
| Operating temperature | | -30 ℃----- 55 ℃ | | |
| Protection Grade | | IP65 | | |
| INS. Class | | Between Input Circuit or Output Circuit and Main Case:DC 1000V,Leakage Current: 0.05mA,Insulation Resistance:20M Ω | | |
| Ambient Temperature | | -40 ℃-----70 ℃ | | |

| | |
|---------------------------------|---|
| Efficiency | 98% |
| Cooling | Air-cooling |
| Shock and Vibration | GB/T2423 |
| The Control Method of The Motor | The Vector Control Algorithm with Speed Sensor |
| Communication protocol | CAN |
| Weight | 5.7KG |
| Cooling requirement | The Controller Must be Installed in The Place of Good Ventilation ,or Forced Cooling Must be Added. |

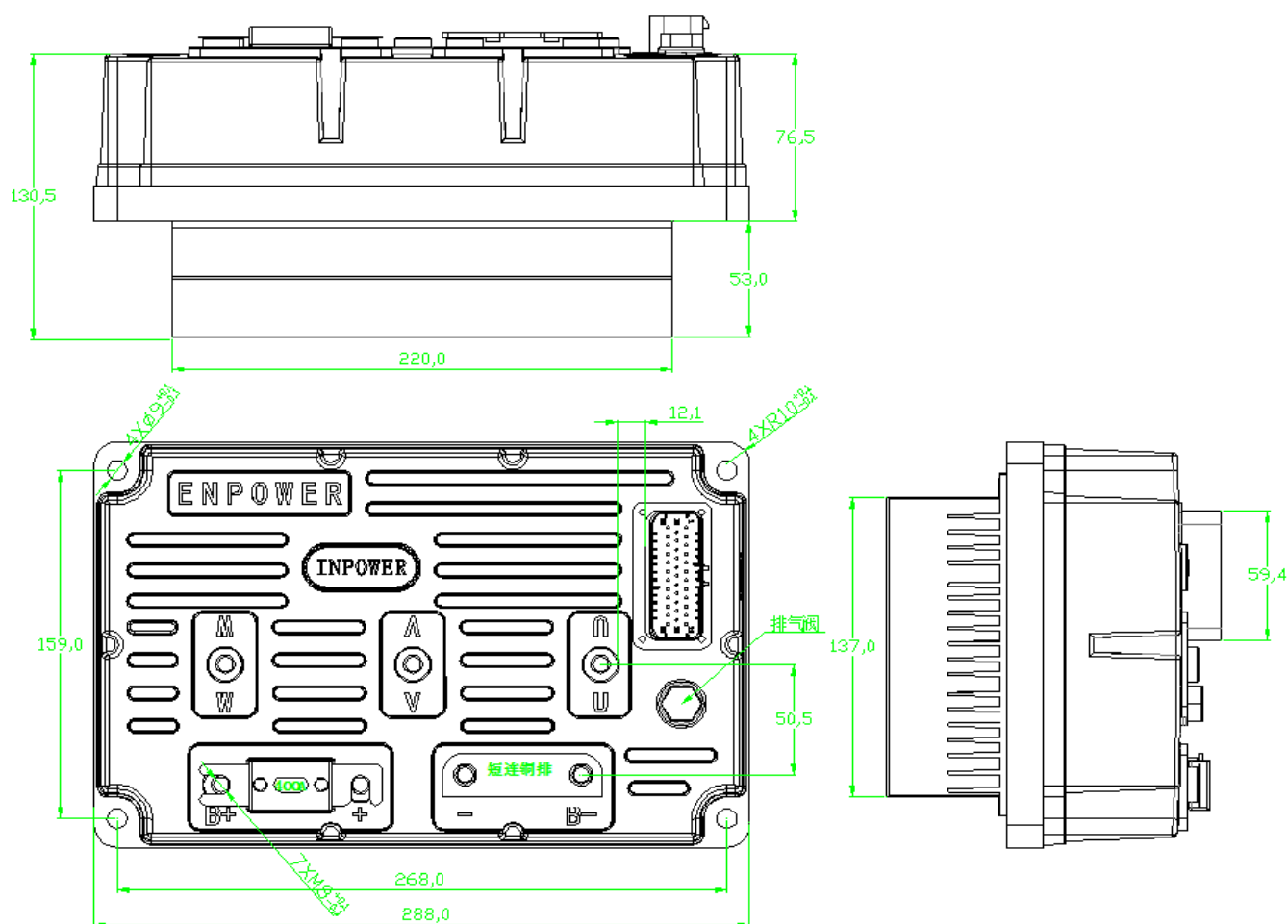
Power Wiring of AC Motor Controller



Application Example:

| | | |
|--------------------------------------|--------|------------|
| Voltage | 72V | 96V |
| the weight of the car with full load | 1.2T | 1.5T |
| Tyre Radius | 0.25m | 0.36m |
| Gear Ratio | 8.0:1 | 6.0:1 |
| Max Speed | 75km/h | 80-100km/h |
| The output current with Max Speed | 115A | 120A |
| Normal Speed | 55km/h | 60-80km/h |
| The output current with Normal Speed | 60A | 80A |
| Climbing Ability(loaded) | 25% | 25% |
| 0~50km/h Accelerate | 9s | 9s |

Installation size(mm):



Fault List and Trouble Shooting:

| Fault Code | sound | Possible causes |
|------------|-----------------|--|
| 0 | No sound | No fault at present or controller doesn't work |
| 1 | continual beep | There is signal output when push the pedal and turn on the KSI ; Pedal connection badly, wrong or signal mismatching with controller |
| 2 | 1 long 2 short | Ignition failed (restart) |
| 3 | 1 long 3 short | Over current (motor wire connection short circuit, loosened or encoder signal wrong) |
| 4 | 1 long 4 short | Controller overheat(stop and cooling) |
| 5 | 1 long 5 short | Relay doesn't work or unconnected on B+(check volt between B+ and B- which should be battery volt) |
| 6 | 1 long 6 short | Current detectors fault (return to depot repair) |
| 7 | 1 long 7 short | encoder fault(check whether signal output ok) |
| 8 | 1 long 8 short | BMS fault (which is just for lithium Battery system) |
| 9 | 1 long 9 short | Low volt(Check the battery voltage) |
| 10 | 1 long 10 short | Over volt(Check the battery voltage) t |
| 11 | 1 long 11 short | Motor overheat (stop for cooling or check the thermistor) |
| 13 | 1 long 13 short | Pedal fault |