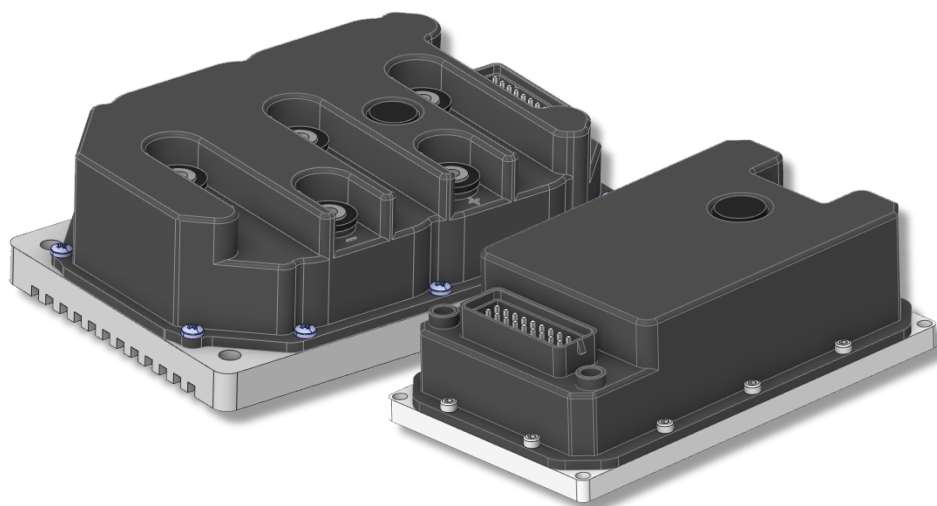


Electric Motorcycle Controller Manual

HD84600 ,HD84400



Features

- ◆ Field Oriented Control (FOC) for increased efficiency and smooth operation
- ◆ Apply to SPM/IPM motor with sensor or sensorless
- ◆ Motor sensor: HALL, SSI, Magnetic Encoder
- ◆ Isolated Drive Circuit eliminate the CMI and improve controller's reliability
- ◆ Torque Mode, Speed Mode, Flux Mode optional
- ◆ Input Signal : PWM, R/C signal, Analogue signal
- ◆ Communication Protocol: CAN, SIF, UART, RS485, Bluetooth
- ◆ Controller's parameters can be configurable by PC software & Mobile APP
- ◆ Support Analogue E-Brake Regen, Hill Start Assist, Auto Sensor Calibration, Error Code Alarm and Logging
- ◆ 3 Phases & Line Current Limiting, Motor & Controller Temp. Protection, Under/Over Voltage Protection, Motor Stall Protection, Signal Loss Protection
- ◆ IP Rate: IP67

Specifications

Items	Unit	HD84600	HD84400
Input Voltage Range	Volt	30~100	30~100
Rated Voltage	Volt	48/60/72/84/96*	48/60/72/84/96*
Max Input Current	Arms	250	150
Max Output Current	Amps	600	400
Max eRPM	eRPM	20,000	20,000
PWM Rate	KHz	8~40	8~40
Capacitor Capacity	uF	-	-
Rated Power	VA	5000	4000

continued

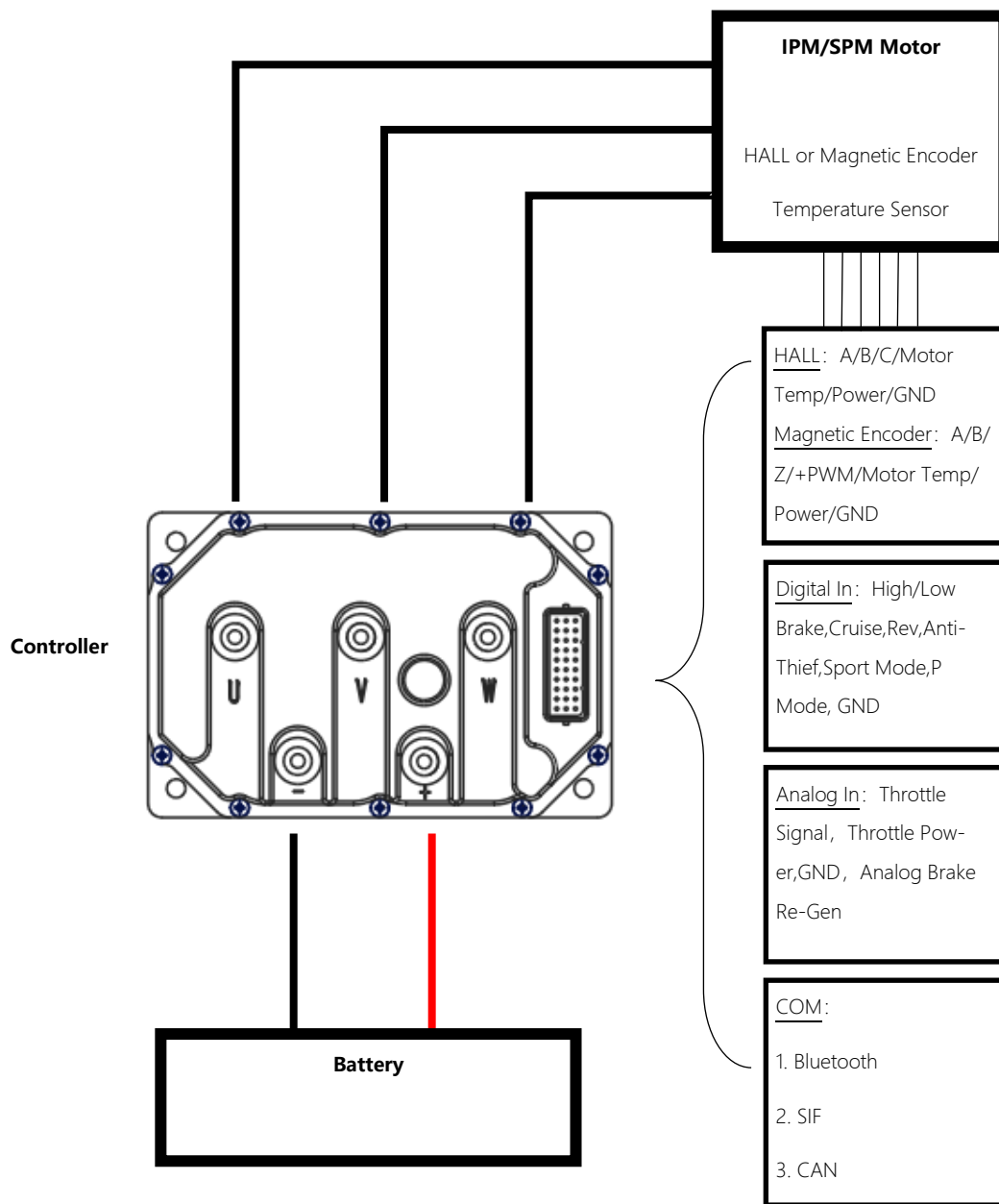
Items	Unit	HD84600	HD84400
Working Ambient Temp.	°C	-20~ 45	-20~ 45
Working Temp.	°C	-25~ 90	-25~90
Storage Temp.	°C	-20~70	-20~70
Cooling		Air	Air

*: If 96V is required, please specific note as place order

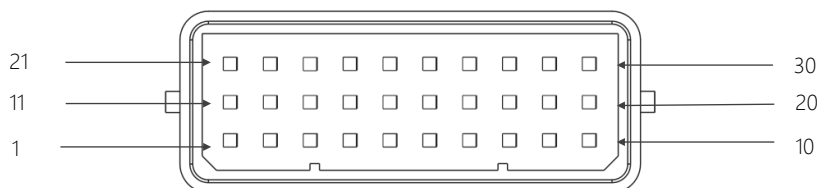
Mechanical Parameters

Items	HD84600	HD84400
Housing Material	ABS+PC	ABS+PC
IP Rate	IP67	IP67
Size	198 x 128 x 63mm	163 x 93 x 50mm
Weight	1.85Kg	1.3Kg

Wiring Diagram



Terminal's Function Definition

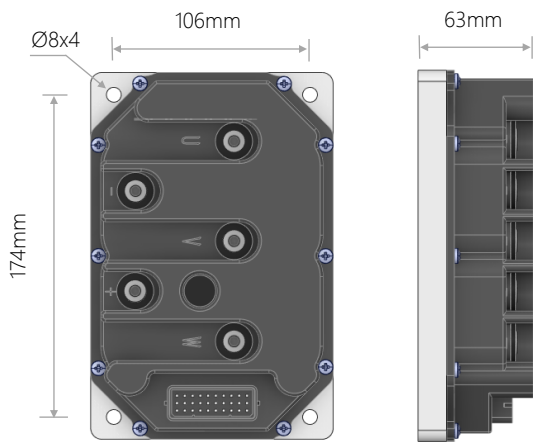


P.N.	Definition	Voltage	P.N.	Definition	Voltage
1	Key	B+	16	Cruise (high)	0/12V
2	Brake(High)	0/12v	17	Brake (Analoge)	0-5V
3	GND	0	18	GND	0V
4	Battery+	B+	19	Throttle (GND)	0V
5	Kickstand Switch	0-B+	20	Bluetooth+5V	5V
6	Charging Signal	0/5V	21	RX (Bluetooth)	0/3.3V
7	Speed Limit		22	HALL C (Z)	0/5V
8	GND	0V	23	HALL B (B)	0/5V
9	Single Interface Frame		24	HALL A (A)	0/5V
10	GND	0V	25	Motor Temp. (KTY)	0-3.3V
11	TX (Bluetooth)	0/3.3V	26	P Gear	0/12V
12	Brake (Low)	0/12V	27	Sport Mode	0/12V
13	Magnetic Encoder- PWM (in)	0-5V	28	Reverse	0/12V
14	HALL GND	0V	29	Throttle Signal	0-5V
15	HALL +5V	5V	30	Throttle+5V	5V

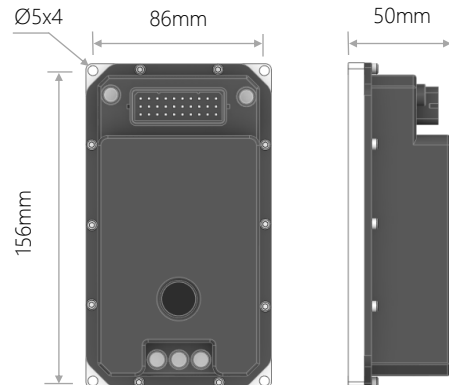
Software

- ◆ Fsetting For PC: Configuration controller parameters, Firmware updating, Real-time operation status display
- ◆ Fsetting APP for Android: Download at www.HiFeiDynamics.com
- ◆ Fsetting APP for iOS (under developing)

Installation Dimension



HD84600



HD84400

Typical Applications

- ◆ Electric Motorcycle
- ◆ Electric Tricycle
- ◆ Electric Tour Vehicle
- ◆ Golf Cart
- ◆ Electric Boat

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