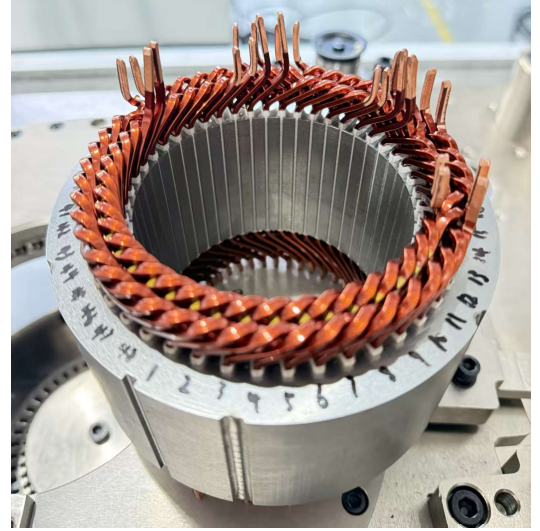


High Performace Mid-drive Motor Kit

1. PRODUCT OVERVIEW

The Tera Mid-drive motor kit is a high-grade electric drive solution designed for Heavy-duty electric motorcycles, dirt bikes, By integrating our self-developed Hairpin Winding Motor with a high-efficiency Field Oriented Control (FOC) controller, this kit delivers industry-leading power density, superior thermal management, and a seamless riding experience. There are two model avaiable ,one is 1500W for entry level ,another one is 5000W for professonial players.



2. KEY FEATURES

- **Extreme Power-to-Weight Ratio:**

Engineered for performance enthusiasts, delivering a peak power output in a lightweight package, significantly reducing weight for better vehicle handling.

- **Intelligent Flux Weakening:**

Advanced software algorithms that extend the motor's RPM range beyond its base speed, allowing for a significantly higher top speed without requiring a higher voltage battery.

- **Active Thermal Management:**

Integrated high-precision temperature sensors with intelligent thermal throttling to protect the motor and controller during extreme high-load operation.

- **Multi-Protocol Communication (One Wire/CAN-BUS/RS485):**

Equipped with professional-grade communication interfaces for seamless integration with modern BMS, displays, and vehicle control units (VCU).

- **Multi-Protections:**

Overvoltage protection; undervoltage protection; overcurrent protection; temperature protection; communication interruption protection; short circuit protection; Stall protection.

3. TECHNICAL SPECIFICATIONS

- **Mid-drive motors:**

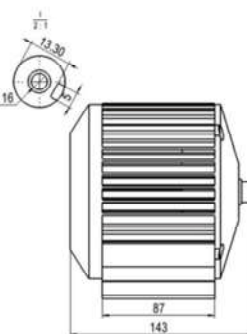
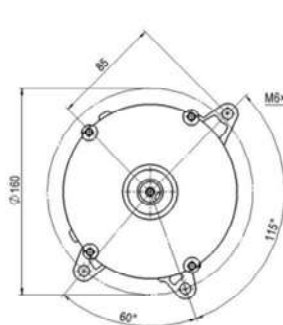
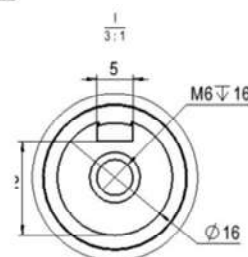
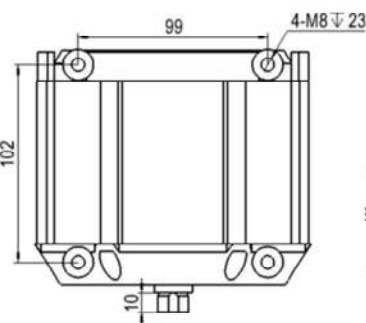
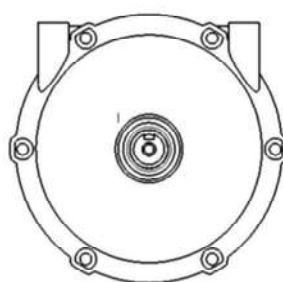
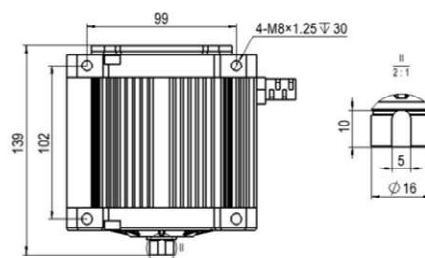
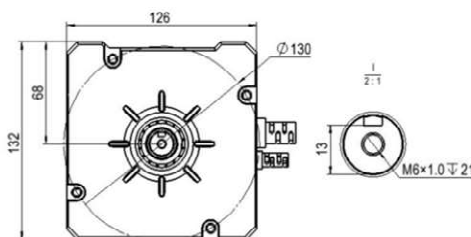
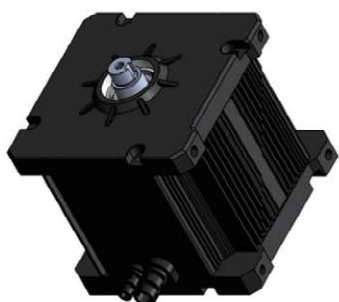
Parameter	1500W KIT	5000W KIT
Motor Model	120-060	138-065 HP
Motor Type	PMSM	PMSM
Rated Voltage	60V/72V	72V
Rated Power	1.5KW	5KW
Peak Power	3.2KW	10KW
Rated RPM	3000RPM	4400RPM
Maximum RPM	5000RPM	7000RPM
Maximum Efficiency	≥ 80%	≥ 95%
Winding Type	Normal	Hairpin Winding
Peak Torque(Axle)	30N.M	52N.M
Temperature Sensor	NTC-10K	KTY84-150
Position Sensor	Hall/Magnetic Encoder	Magnetic Encoder
Magnet Height	60H	60H
Magnet Model	H	SH
Magnet Pole Pairs	5 Pairs	5 Pairs
Cooling system	Air cooling	Air cooling
Reduction Ratio	None	2.8
IP Level	IP 65	IP67

● FOC Controllers:

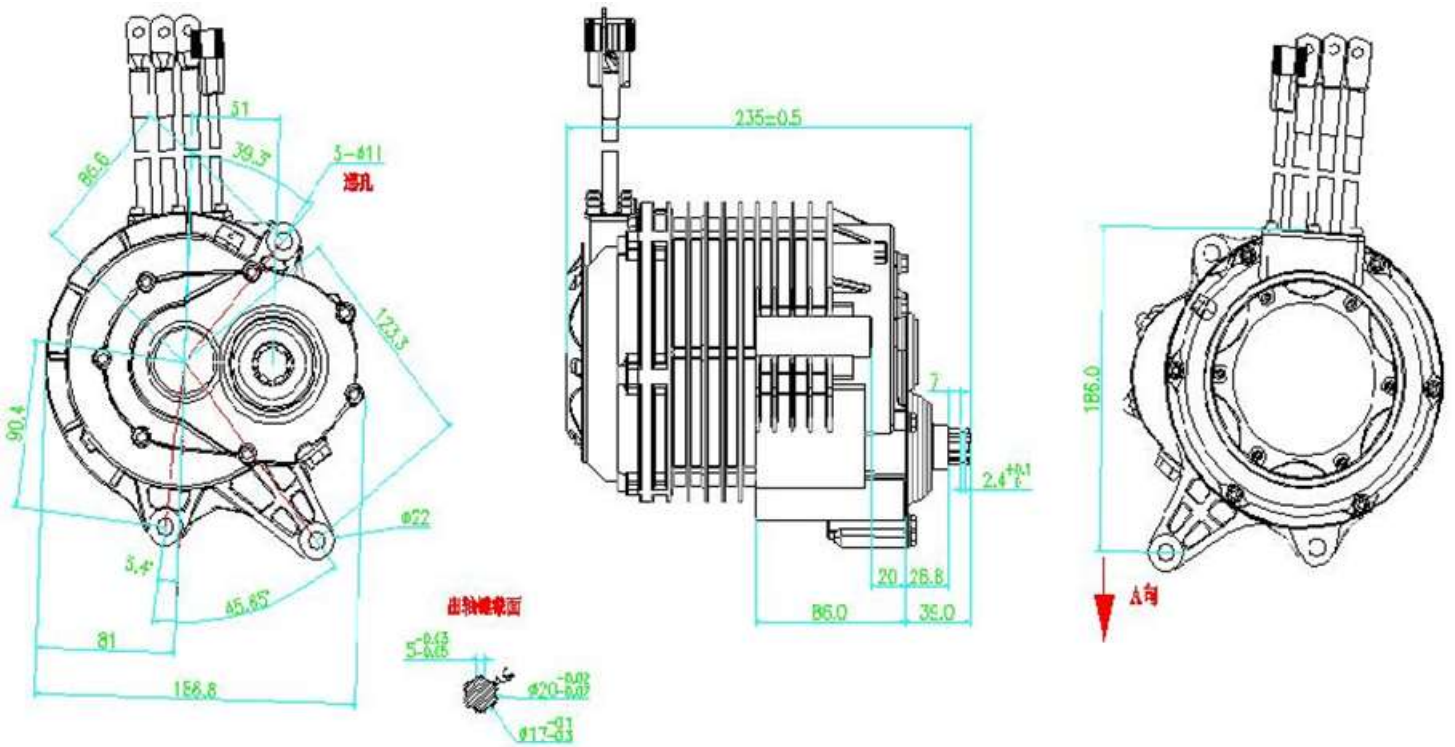
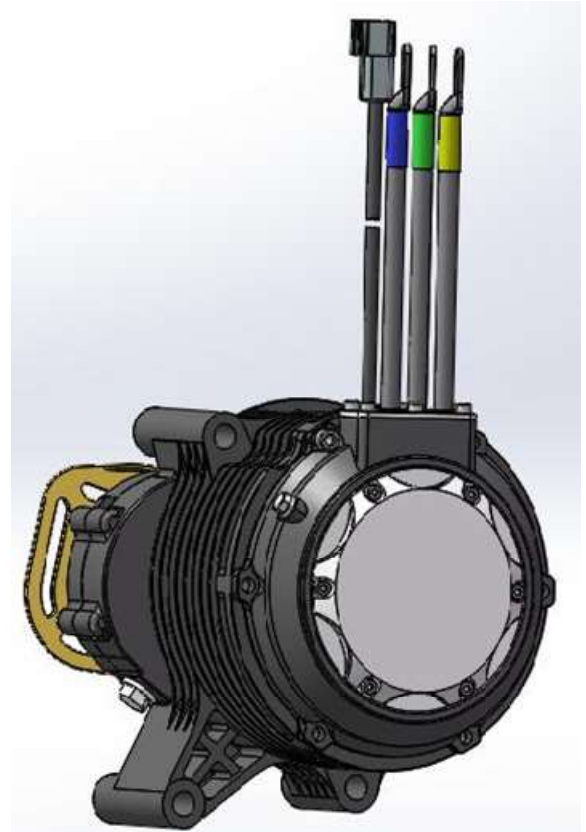
Parameter	1500W KIT	5000W KIT
Controller Model	PB72070-CX-12B	PB72150-CX-18B
Rated Voltage	60V/72V	72V
Rated Power	1.5KW	5KW
Peak DC Current	70A	150A
Peak Phase Current	240A	450A
Communication Mode	CAN/485/ONE WIRE	CAN/485/ONE WIRE
Operating Temperature	-30~55°C	-30~55°C

4. PRODUCT SIZE

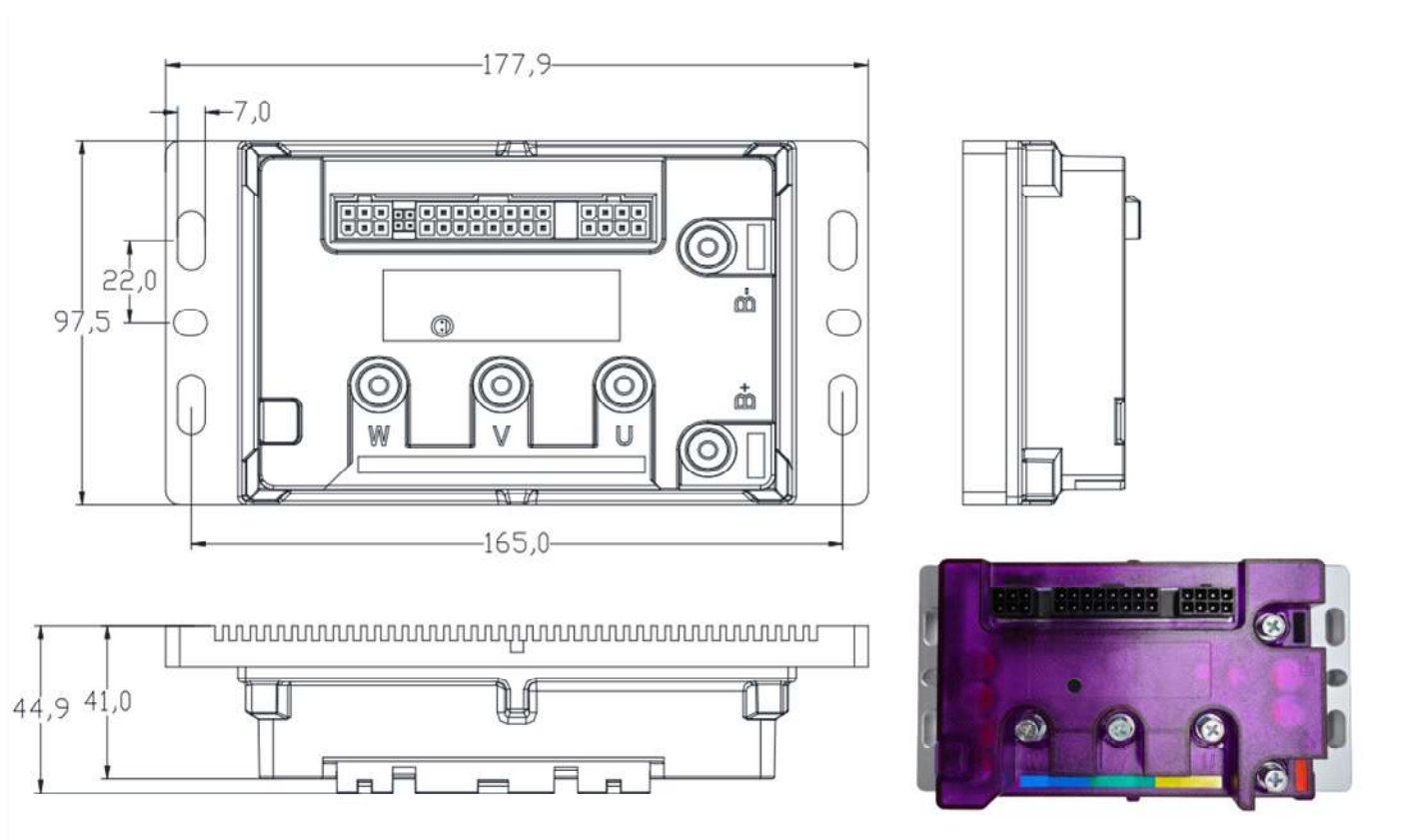
● 1500W Motors:



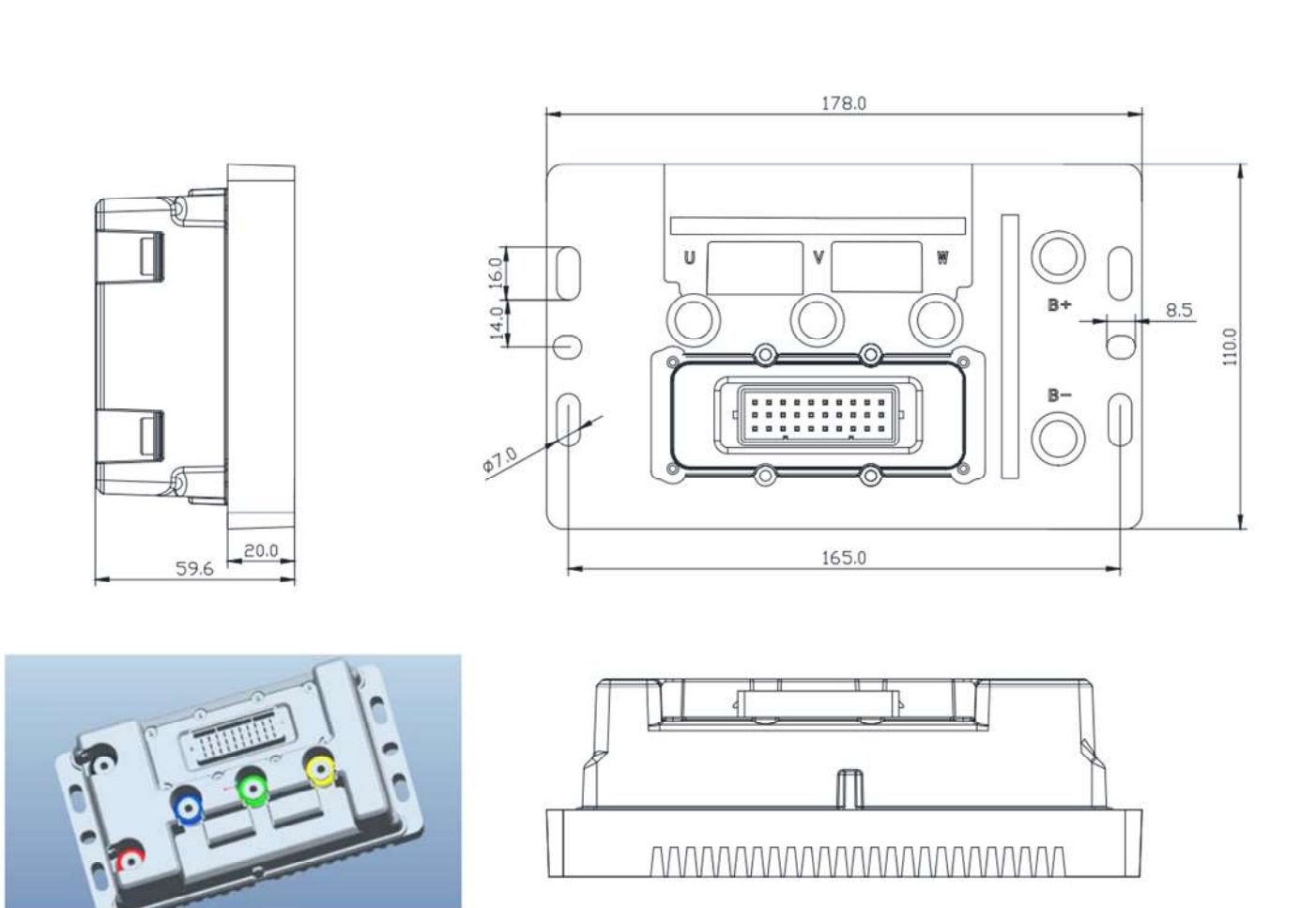
● 5000W Motor:



- 1500W Controller:



- 5000W Controller:



5. The Whole Bundle with Accessories



Complete Electric Conversion Kit Bundle

Streamline your electric vehicle build with our “all-in-one EV conversion kit”. Engineered for full compatibility with PMSM mid-drive motors, this comprehensive bundle delivers everything you need straight out of the box — no additional sourcing, no compatibility guesswork, no wiring headaches.

What's Included:

- PMSM Motor
- FOC Controller
- Pre-assembled High-Current BUS Cables
- Multi-function LCD Display Panel
- Throttle with Multi-switch

Why Choose Our Kit?

- ✓ Plug-and-play design reduces installation time significantly
- ✓ All components pre-tested for cross-compatibility
- ✓ Ideal for both beginner builders and experienced EV engineers
- ✓ Trusted by customers across North America, Europe, and Southeast Asia

Perfect for DIY electric motorcycle conversions, e-bike upgrades, moped electrification, and light electric vehicle projects worldwide. Compatible with 60V / 72V battery systems.

6. Applications

- Electric Dirt Bikes:



- Electric Motorcycle:



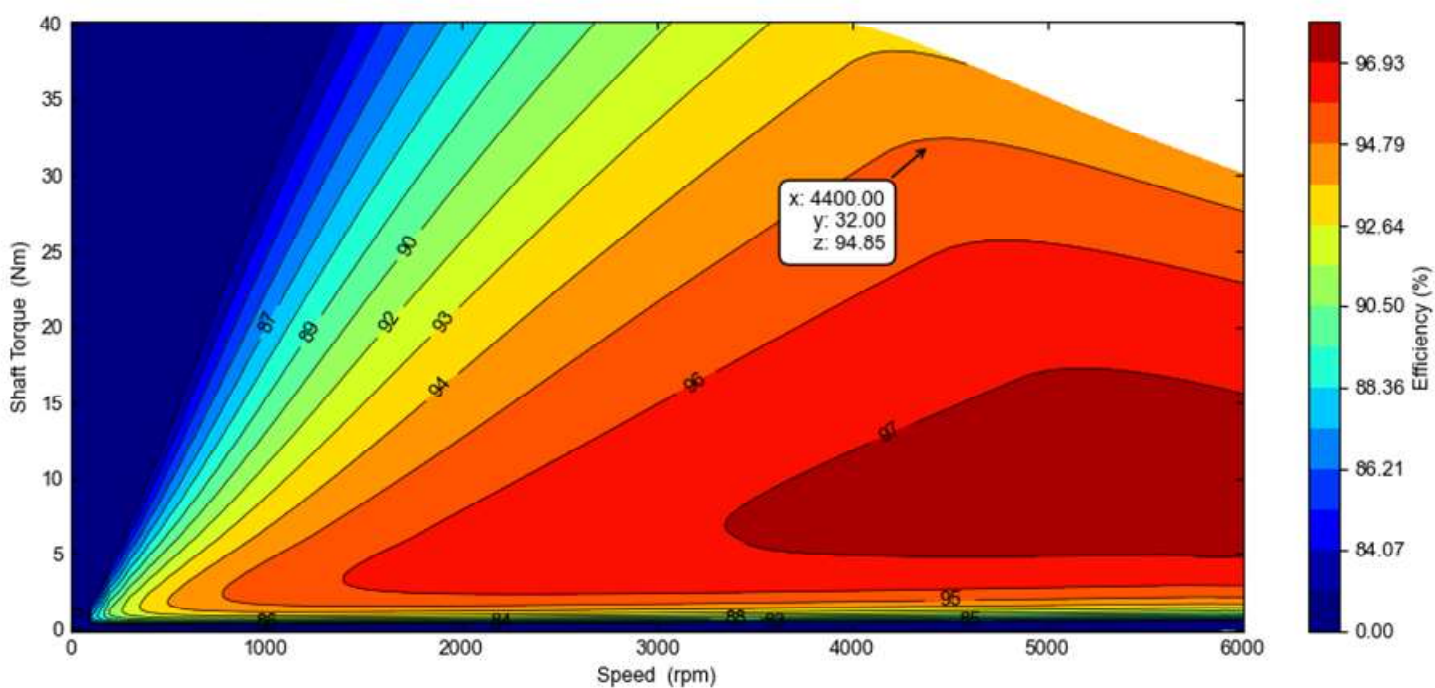
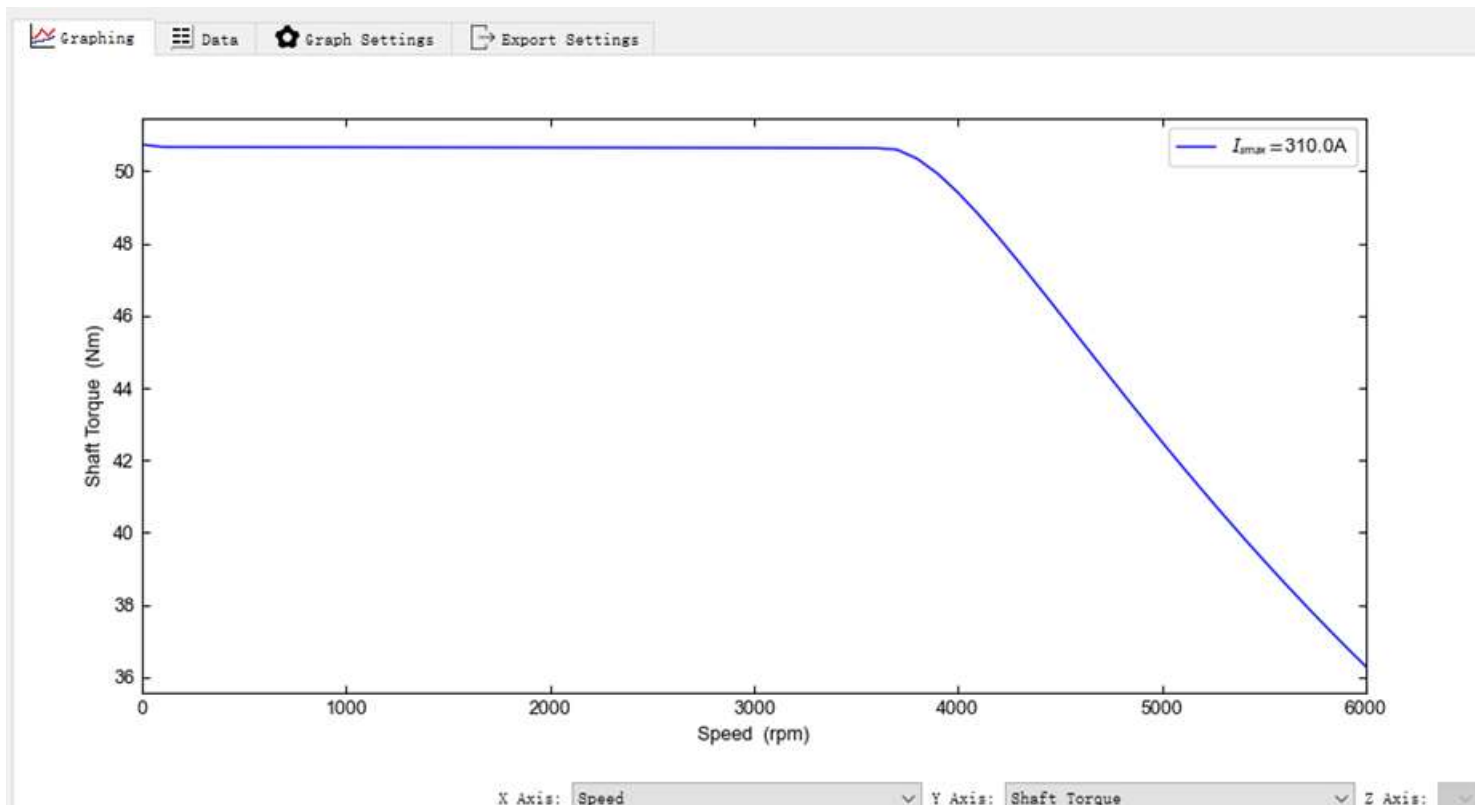
- Convert Traditional Motorcycle to Electric One / DIY



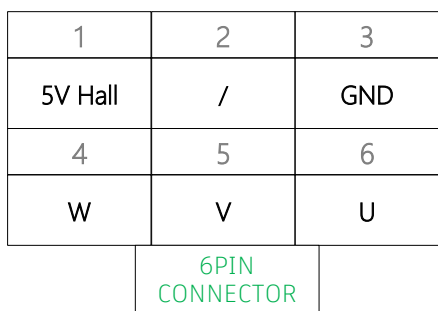
7. Performance & Other Data for Reference

● 138 Hairpin Winding Motor Performance (5000W Motor):

The motor works at peak torque in wild range of speed . See the performance curve and mapping as below



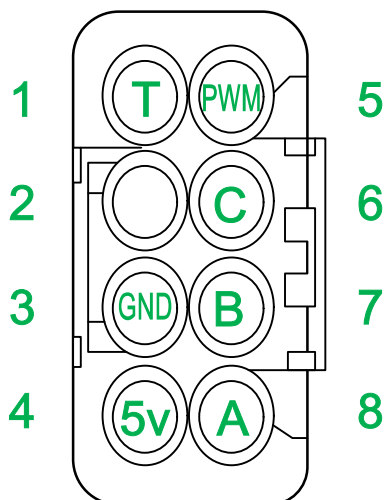
- Functional Wiring Defination for 1500W Motor:



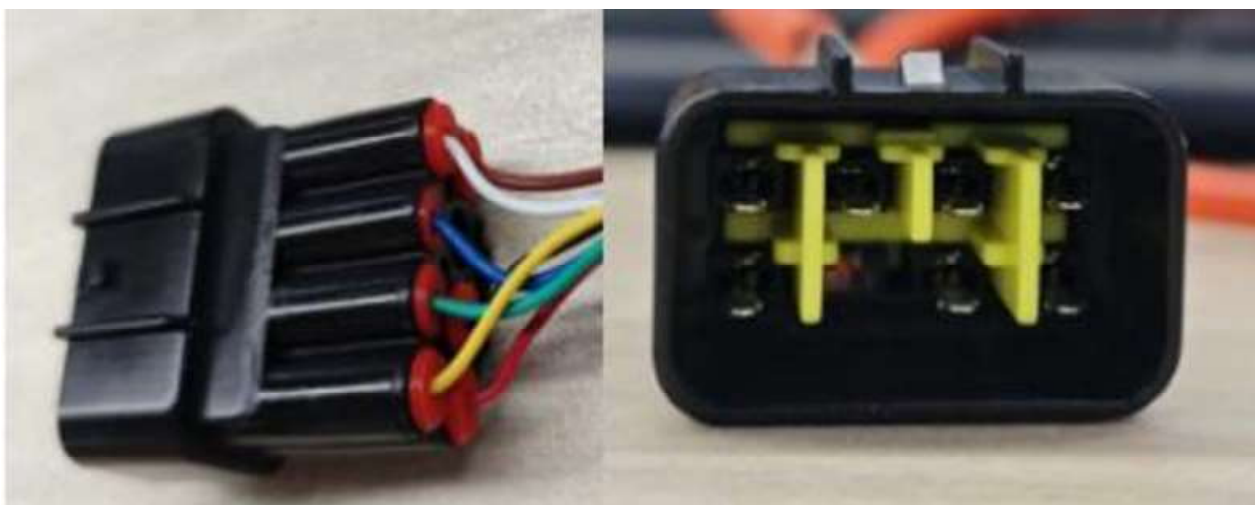
No.	Def.	Description	Colour
1	5V	Hall 5V	Red
2	/	/	/
3	GND	Ground	Black
4	W	Hall W	Blue
5	V	Hall V	Green
6	U	Hall U	Yellow

- Functional Wiring Defination for 5000W Motor:

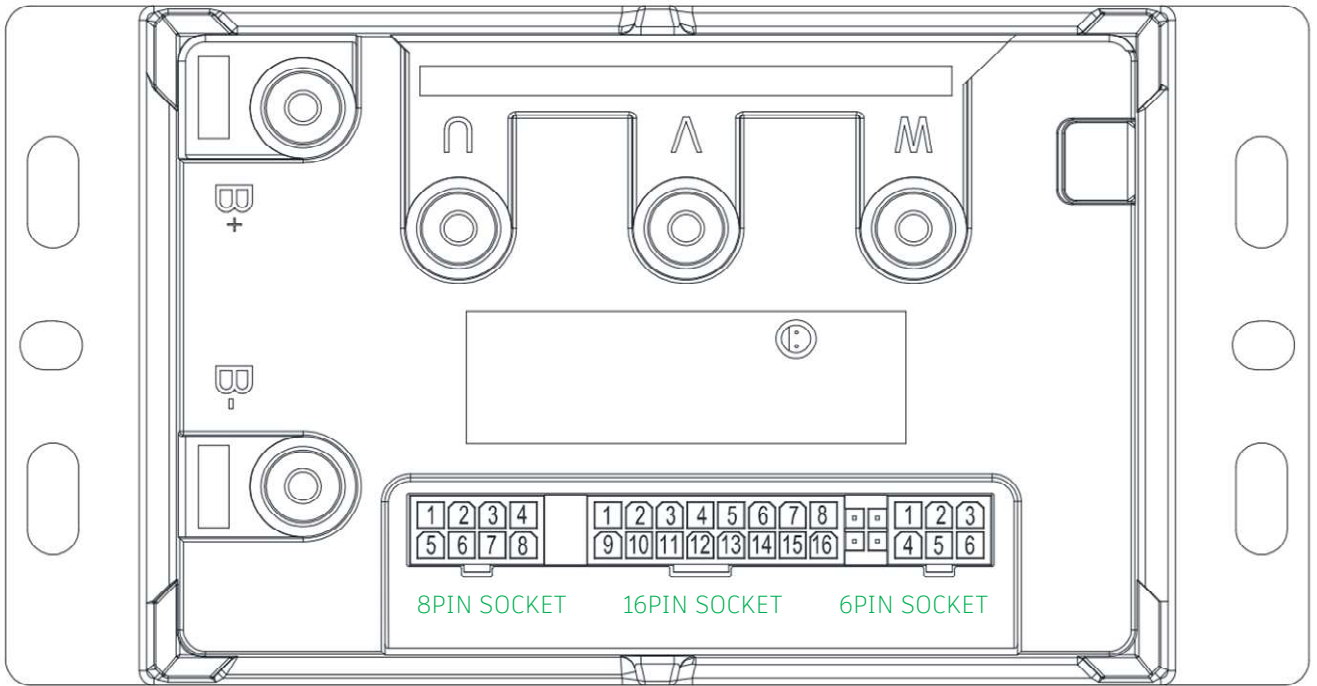
Housing Model:DJ7061Y-2.3-21 8pin waterproof



No.	Def.	Description	Colour
1	T	Temperature	Brown
2	/	/	/
3	GND	Ground	Black
4	5V	Hall 5V	Red
5	PWM	Magnetic PWM	White
6	C	Phase C	Blue
7	B	Phase B	Green
8	A	Phase A	Yellow



- Functional Wiring Definition for 1500W Controller:



1	2	3	4
Bluetooth Receive	Bluetooth Send	SOC	Throttle 5V
5	6	7	8
Power Switch	High Brake	Throttle Signal	GND

8PIN SOCKET

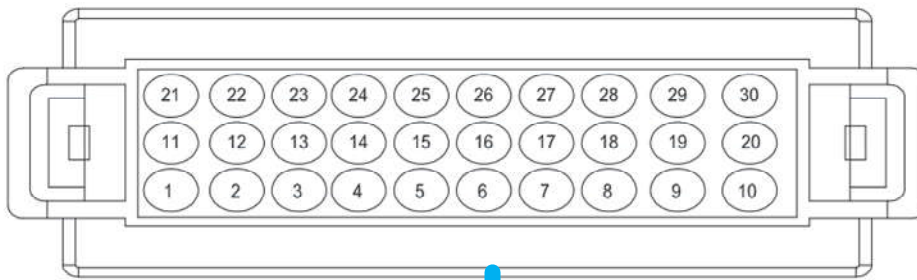
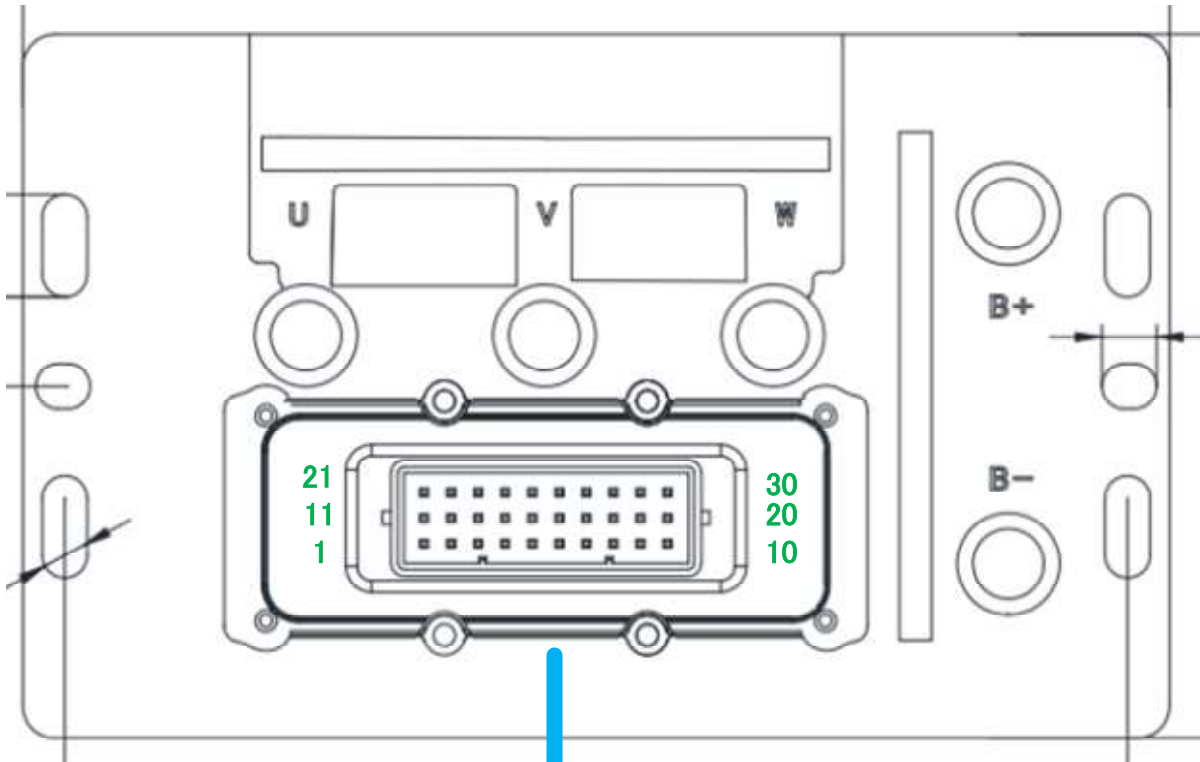
1	2	3
5V Hall	/	GND
4	5	6
Hall_W	Hall_V	Hall_U

6PIN SOCKET

1	2	3	4	5	6	7	8
P Button	One Wire	Low Speed	High Speed	Reverse /Cruise	485B	Wheel Signal	Anti-theft Signal
9	10	11	12	13	14	15	16
/	Voltage Selection	GND	Limit Speed Alarm	Protocol Selection	Bluetooth 5V	GND	485A

16PIN SOCKET

- Functional Wiring Definition for 5000W Controller:



21	22	23	24	25	26	27	28	29	30
Phase A	Hall+	PWM	RX	Voltage Selection	Direction 1	One Wire	CAN_L	485B	Anti-theft Signal
11	12	13	14	15	16	17	18	19	20
Phase B	Temperature	Throttle Signal	TX	High Speed	Low Speed	Charge	CAN_H	485A	B+
1	2	3	4	5	6	7	8	9	10
Phase C	Hall-	Power + (shared)	Throttle -	Parking	Wheel Signal	Low Brake	High Brake	Cruise	Power Switch