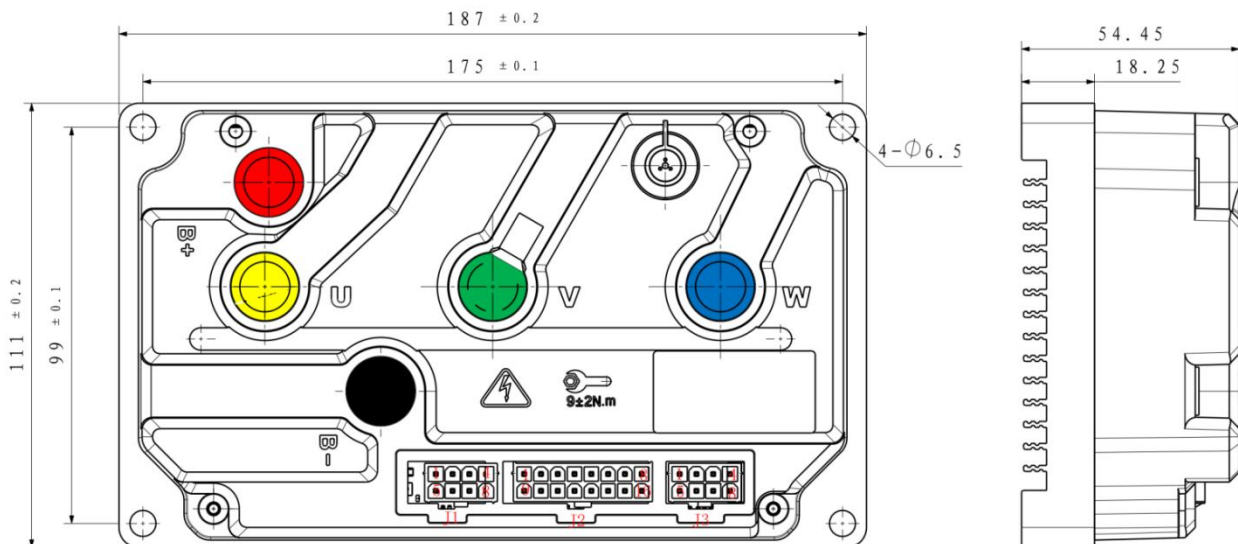




- IP66
- Input Voltage 36~88V
- Non-Isolated Type
- Built-in 6-Axis Sensor Optional
- Built-in Bluetooth Optional

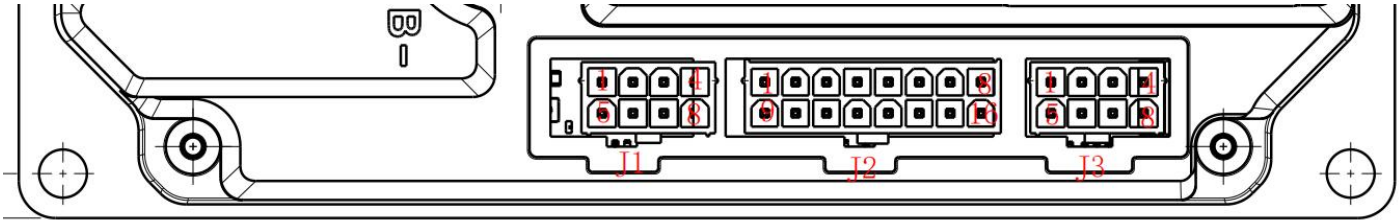
■ Dimensions & Installation Instructions



Mount Screws: M6

Terminal screws: M6 × 12 (tightening torque 8~10 N • m)

Wiring Definitions



Connector Model

Model	Description	Terminal Material	Pitch	Waterproof O-Ring	Mating Terminal	Mating Terminal
ZT2243-1	6 Straight Pins	Brass	4.2mm	ZTF40-00	ZT1012-12S	ZT3102
ZT2244-1	8 Straight Pins	Brass	4.2mm	ZTF40-01	ZT1012-12S	ZT3103
ZT2245-B1	16 Straight Pins	Brass	4.2mm	ZTF40-02	ZT1012-12S	ZT3103

Magnetic Encoder Version Wiring Definitions							
8PIN(J1)				6PIN Hall / 8PIN Magnetic Encoder (J3)			
1 CANL	2 CANH	3 IO8	4 5V	1 HALL+	2 TEMPM	3 GND	4 NC
5 KEY	6 IO6	7 AD3	8 GND	5 HALLA/ A	6 HALLB/ B	7 HALLC/ Z	8 PWM
16PIN(J2)							
1 IO9	2 485A/SIF	3 IO5	4 IO3	5 IO2	6 RXD	7 VSO	8 IO1
9 LSD1	10 485B	11 IO7	12 AD2	13 IO4	14 5V	15 GND	16 TX

- IO interface supports customization.
- IO1~IO7 and IO9 positions are function-configurable; IO voltage range 0~16V; IO6 defaults to active high, others active low.
- The default 1-Wire position is 16-16 (J2-16).
- A throttle that outputs 0V with the ground line disconnected is recommended for safety and throttle sensitivity.

■ **Technical Specifications**

Model	DEMCC2400/2401	DEMCC2410/2411	DEMCC2420/2421
Rated Input Voltage (DC-V)	36~72		
Rated Input Current (DC-A)	70	80	95
Rated Output Current (AC-PEAK@30min)	100	115	135
Input Voltage Range (DC-V)	36~88		
Maximum Input Current (DC-A, 10s)	150	200	300
Maximum Output Current (AC-A@3s)	410	510	660
Operating Ambient Temperature (°C)	-20~+65		
Motor Type	PMSM / SynRM / Induction Motor		
Motor Control Method	FOC/MTPA/SVPWM/FluWeakening		
Motor Sensor Type	SinCos / ABZ(+PWM) / HALL ABC (select one of three)		
Efficiency	97%		
Protection	OverCurrent / OverVoltage / OverTemperature / Stall		
Dimensions (mm)	187*111*55		
Weight (kg)	<1.2		
Communication	CAN2.0 / 1-Wire / 485		
Cooling Method	Forced Air Cooling		
Protection Rating	IP66		

■ Pin Descriptions

Pin	Name	Type	Operating Range	Description
J1-1	CANL	Communication	Withstand voltage 40V	CANL
J1-2	CANH	Communication	Withstand voltage 40V	CANH
J1-3	IO8	Digital Input	0~16V	Low brake / kickstand
J1-4	5V	Power Output	5V 0.05A	Throttle+/accelerator 5V
J1-5	KEY	Power Wake-up Input	25~88V	Key switch / key power
J1-6	IO6	Digital Input	0~16V	High brake, active high
J1-7	AD3	Analog Input	0~5V	Accelerator/throttle signal input
J1-8	GND	Ground	-	Throttle GND
J2-1	IO9	Digital Input	0~16V	Function configurable
J2-2	485A	Communication	0~5V	485A
	SIF	Communication	0~5V	1-Wire instrument
J2-3	IO5	Digital Input	0~16V	Low speed
J2-4	IO3	Digital Input	0~16V	High speed
J2-5	IO2	Digital Input	0~16V	Kickstand
J2-6	RXD	TTL serial receive	Active low <0.3V Active high >3V Input impedance 49K	RXD
J2-7	VSO	Output	-	Wheel rotation signal
J2-8	IO1	Digital Input	0~16V	D gear / tilt switch / anti-theft
J2-9	LSD1	LSD Output	0~60V 0.5A	Low-side driver; optional external relay control
J2-10	485B	Communication	-	485 communication
J2-11	IO7	Digital Input	0~16V	Kickstand
J2-12	AD2	Analog Input	0~5V	Function configurable
J2-13	IO4	Digital Input	0~16V	P gear
J2-14	5V	Power Output	5V 30mA	External power supply
J2-15	GND	Ground	-	Connected to terminal -
J2-16	TX	Communication	0~5V	TX
J3-1	HALL+	Power Output	5V 0.1A	Encoder power supply (magnetic encoder version)
J3-2	TEMPM	Analog Input	Resistive load only	Motor temperature port (magnetic encoder version)
J3-3	GND	Ground	-	Encoder GND (magnetic encoder version)

J3-4	NC	NC	-	Not connected (magnetic encoder version)
J3-5	HALLA	Signal Input	0~5V	Hall A
	A	Signal Input	0~5V	Mag-Enc A
J3-6	HALLB	Signal Input	0~5V	Hall B
	B	Signal Input	0~5V	Mag-Enc B
J3-7	HALLC	Signal Input	0~5V	Hall C
	Z	Signal Input	0~5V	Mag-Enc Z
J3-8	PWM	Signal Input	0~5V	PWM signal (magnetic encoder version)

■ Product Features

- Mainstream ARM is used as the main control chip.
- High-power MOSFETs with high current rating, low internal resistance and fast switching speed are used as the power devices.
- An advanced vector control algorithm provides precise control of motor torque and speed.
- Energy regenerative control extends vehicle driving range and meets the needs of different customers.
- Optional anti-rollback function on slopes improves driving safety.
- Built-in 6-axis gyroscope enables wheelie control.
- Built-in Bluetooth enables commissioning and upgrades via mobile phone.
- Software can be customized to meet the different requirements of individual customers.

■ Important Notes

- Always tighten the terminal screws to the required torque.
- The vehicle must be equipped with reliable short-circuit protection such as circuit breakers and fuses.