







# **MOTOR CONTROL UNIT - 2W**









## **ABOUT THE PRODUCT**

The Shakti EV Controller is a robust and efficient solution designed to enhance the performance of electric twowheelers. Engineered with advanced features, this controller ensures optimal motor performance and safety. Its natural cooling system and IP67 ingress protection rating makes it highly durable and suitable for diverse environments. The Shakti EV Controller comes with CAN communication compatibility and provides reliable and efficient control, meeting the needs of a sustainable future.

### **KEY FEATURES**

- 1. Parking and drive modes functionality.
- Multiple speed modes: Three standard and a sport mode. 6.
- 3. Vector control with speed sensor integration.
- 4. High Brake Mode.

- 5. Side stand safety protection.
- Throttle control functionality.
- 7. Forward and reverse mode control.
- 8. Regenerative braking control.

#### **PROTECTIONS**

- 1. Short circuit protection. 3. Controller over temperature. 5. DC Bus under voltage.
- 2. Motor over temperature. 4. DC Bus over voltage.
- 6. Throttle signal error.
- 7. Hall Sensor signal error.

#### **APPLICATION**

Designed for electric 2-wheelers.

## **SPECIFICATION TABLE**

PARAMETERS	SHAKTI EV CONTROLLER		
	86-02	86-10	86-04
INPUT(DC)			
Voltage	40V-71V	62V-84V	63V-84V
Max Input Current	50A		100 A
Maximum Power	3000 W	3600 W	8400 W
OUTPUT(AC)			
Nominal AC Voltage range	0-42 VAC	0-50 VAC	0-60 VAC
Frequency	0-400 Hz 0-500 H		0-500 Hz
Power Factor Range	0.8 - 1		
Connection Phases	3 phase only		
EFFICIENCY			
Max Efficiency	> 90%		
COMMUNICATION			
Communication Protocols	CAN		
GENERAL DATA			
Cooling Method	Natural Cooling		
Ambient Humidity	0-90%		
Position Feedback	Hall Sensor		
Mounting	Horizontal (tentative)		
Noise (dbA)	< 20 dBA		
Operating Temperature Range	-20°C to 60°C		
IP Rating	IP 67		
Dimensions (L*W*H)	200mm x 125	mm x 65mm	190mm x 111mm x 72mm
Net Weight	1K	G	1.3 Kg
Standard Warranty	1 year		