

## E-MOBILITY SOLUTION

Battery Swapping Solution | EV Conversion Kit

Battery as a Service(BaaS)





# IoT LEV Battery

(LEV, Golf Cart, ATV, UTV)



**Automotive Battery Cell**  
Adopting the automotive-grade LiFePO4 battery cell to meet the rigorous demands of electric vehicle applications, including higher charge/discharge rates, temperature fluctuations, and the need for long-term reliability and performance.



**Multi-level Protection**  
Built-in Battery Management System (BMS) for real-time monitoring and protection and produced with prioritized materials with high inherent safety, implements multi-level protection (overcharge, over-discharge, etc.), and manages voltage, current, and temperature meticulously.



**Battery as a Service**  
The swappable feature offers a faster alternative to charging, potentially reducing range anxiety and extending vehicle uptime, particularly in applications like commercial ride and logistics. A Robust enclosure with strong, durable materials protects the battery from physical damage during swapping.



**Compatibility**  
You may have a desired range, power output under limited size and weight constraints for your LEV, and a unique communication protocol, output connector, and smart features like remote monitoring and control are also necessary for a successful commercial operation.

Voltage	73.6V	60.8V	64V	76.8V
Ah	52Ah	102Ah	156Ah	67Ah
Application	EWT-21	EWT-31 or EV Conversion Kit		

LEV-7252BM  
73.6V/52Ah



LEV-6010BM  
60.8V/102Ah



LEV-7267BS  
76.8V/67Ah



LEV-6015BS  
64V/156Ah



Battery Display



GENERAL SPECIFICATIONS		LEV-7252BM	LEV-6010BM	LEV-6015BS	LEV-7267BS
Nominal Energy		3.82 kWh	6.2 kWh	9.98 kWh	5.14 kWh
Electrical Performance	Nominal Voltage	73.6 V	60.8 V	64 V	76.8 V
	Nominal Capacity	52Ah	102 Ah	156Ah	67Ah
	Operating Voltage Range	64.4V - 83.95 V	53. 2V - 69.35 V	56 V - 73 V	67.2 V - 87.6 V
	Cycling Performance		>6000 Cycle @ 0.2C, 25°C, 70% EOL		
Operating Parameters	Maximum Charging Current(A)	40A	50A	120A	40A
	Maximum Discharging Current(A)	100A	100A	120A	120A
	Charging Cut-off Voltage(V)	83.95	69.35	73	87.6
	Discharge Cut-off Voltage(V)	64.4	53.2	56	67.2
	Recommended Charging Current(A)	26A	20A	30A	20A
	Recommended Discharging Current(A)	50A	50A	60A	50A
	Humidity	0-95%			
	Altitude	≤2000m			
	Charging Temperature	0°C-65°C			
	Discharging Temperature	-20°C-65°C			
	Storage Temperature	-20°C-45°C, SOC:20%-50%			
Physical Parameters	Cell Type	LiFePO4 Prismatic Cell			
	Cell Capacity	3.82 kWh	6.2 kWh	9.98 kWh	5.14 kWh
	Product Dimension(W*H*D, mm)	260*200*340mm	400*260*290mm	610*360*220mm	490*260*240mm
	Net Weight (Kg)	28kg	47.6kg	68kg	38.5kg
	Housing	Sheet Metal		Stainless Steel	
	Ingress Protection	IP53			
Communication	Connector	Customized	Customized	Anderson	Anderson
	Communication			4G, GPS	
	Communication Protocol			RS485	
	Display	/	/	BMS Display	BMS Display
Warranty	Warranty	3 Years	3 Years	3 Years	3 Years
	Design Performance Life	10 Years	10 Years	10 Years	10 Years
Application	Battery Display(High-precision)	/	Customizable with Different Cable Length		
	LEV Model	EWT-21	EWT-31 or EV Conversion Kit		
	Battery Swapping Type	BSC-06	BSC-06	LEV Battery Charger	

\* Product specifications are subject to change without further notice.





# LEV Battery Charger

(LEV, Golf Cart, ATV, UTV)

Power	2000W	3300W
60V	60V/30A	60V/40A
72V	72V/25A	72V/40A



**IP67 Ingress Protection Rating**  
The charger adopts a fully enclosed potting thermal conductive silicone process, with a protection level of up to IP67. The waterproof, shockproof, acid mist-proof, dust-proof and reinforced isolation design enable it to operate safely under harsh conditions with good heat dissipation performance to lengthen service life.



**Active Power Factor Correction**  
Active Power Factor Correction can significantly improve the performance and efficiency of chargers by enhancing power factor, reducing harmonic distortion, and ensuring a more stable and reliable power supply. The soft switching technology with small switching loss of power devices brings high overall efficiency (>93%).



**Smart Off Protection**  
The charger is designed with a smart off function to protect the product when the product's internal temperature exceeds 80°C, output short circuit, battery reverse connection, and unstable grid with voltage lower than 90V or higher than 264V.



**Communication**  
Equipped with a computer interface, the charging mode can be adjusted on site, suitable for charging various batteries such as lead-acid and lithium batteries to achieve the best match. It also comes with a CAN communication interface and communicate with the BMS with a CAN bus in real time.



GENERAL SPECIFICATIONS		LEV-2060BC	LEV-2072BC	LEV-3360BC	LEV-3372BC
Rated Power		2000W		3300W	
Voltage & Current		60V/30A	72V/25A	60V/40A	72V/40A
Input	Rated Voltage	220Vac			
	Input Voltage Range	90～264Vac			
	Frequency Range	40～70Hz			
Output	Output Power	2000W		3300W	
	Output Type	Constant Current (CC) / Constant Voltage (CV)			
	Constant Voltage(CV)	87.6Vdc, 1A	87.6Vdc, 1A	87.6Vdc, 1A	
	Constant Current(CC)	85.2Vdc, 25A	85.2Vdc, 25A	85.2Vdc, 25A	
	Ripple Voltage Coefficient	5%	5%	5%	
Communication	CAN Communication	Optional			
	Baud Rate	125Kbps / 250Kbps / 500Kbps			
	LED Status Indicators	Yes			
Protection	Input & Output Protection	Input Over-Voltage Protection, Input Under-Voltage Protection, Output Over-Voltage Protection, Output Starting Voltage, Output Over-Current Protection, Over Temperature Protection, Short Circuit Protection, Reverse Polarity Protection, Ground Protection, Power Failure Protection			
Feature	Active Power Factor Correction(APFC)	Yes			
	Power Factor	≥ 0.98			
	Power Efficiency	≥ 93%			
	Noise	≤ 45dB			
	Heat Dissipation Mode	Forced Air Cooling			
	Ingress Protection	IP67			
Physical Parameters	AC Cable Length	1.5m			
	DC Cable Length	1.2m			
	Plug & Connector	Customizable			
	Housing Material	Aluminum			
	Product Dimension(L*W*H, mm)	282*168*90mm		294*210*111mm	
	Net Weight (Kg)	4.5kg		6.8kg	
	Humidity	5%-95%			
	Working Temperature	-40℃ - 60℃			
	Storage Temperature	-55℃ - 100℃			
Application	LEV, Golf Cart, ATV, UTV				

\* Product specifications are subject to change without further notice.



\* Color Customizable



Stay Safe with Robust Design

Robust design with reinforced suspension and structural integrity, significantly reduce maintenance costs and increase the bike's overall longevity, improve the safety of the bike in the event of a crash, suitable for commercial ride and delivery business in developing countries.



Powerful Mid-drive Motor

Powerful 3.8KW(Peak 5KW) permanent magnet synchronous mid-drive motor with maximum torque of 30Nm@ 7000 rpm, 80km/h top speed, higher efficiency in power transmission and more even weight distribution, more efficient, especially on hilly terrain or varying gradients.



Run Further with Longer Lifespan

Enjoy a longer range with 100km for a single charge/swap, long lifespan with more cycle with automotive-grade LiFePO4 battery cell to meet the rigorous demands of higher charge/discharge rates, temperature fluctuations, and the need for long-term reliability and performance.



Battery as a Service

The swappable design allows you to exchange depleted batteries for fully charged ones within 1 minute. Lower upfront costs and no more sitting idle while vehicles charge. Battery swapping lower the threshold, minimizes downtime, helping drivers stay on the road and generate more income.

GENERAL SPECIFICATIONS		EWT-21
Engine	Engine Type	Permanent Magnet Synchronous Motor
	Rated Power	72V/3800W(Maximum 5000W)
	Maximum Torque	30 Nm @ 7000 rpm
	Maximum Speed	6000rpm, 80km/h
	Primary Transmission Ratio	17:33
	Cooling Mode	Natural Air Cooling
	Gear Oil Grade	Gear Oil (SAE 85W/90)
	Gear Oil Capacity	0.35L
Suspension & Braking System	Front Suspension Stroke	110mm
	Rear Suspension Stroke	60mm
	Front Braking System	Disc Brake (Double - Piston Pliers)
	Rear Braking System	Disc Brake (Single - Piston Pliers)
	Front/Rear Brake Disc Diameter	240mm / 220mm
	Minimum Thickness of Brake Disc	3mm (Front & Rear)
Tire	Tire Size	Front Tire: 110/80-17; Rear Tire: 120/80-17
	Front/Rear Tire Pressure	225 kPa / 235 kPa
	Chain Specification	428H
	No. of Teeth of Small / Large Sprocket	13 / 51
Physical Parameters	Product Dimension(L*W*H, mm)	2070*810*1100mm
	Minimum Ground Clearance	170mm
	Seat Cushion Height	780mm
	Weight(kg)	130kg
	Maximum Load Mass(kg)	150kg
	Frame Material	Carbon Steel
	Head Pipe Angle	25°
Accessories	Battery	Model No.: LEV-7252BM, 73.6V/52Ah
	Charger	Model: LEV-2072BC, 72V/25A Chagrer
	Battery Swapping Cabinet	Model: BSC-06/BSC-09

\* Product specifications are subject to change without further notice.



\* Color Customizable



**Anti-rollover with CV Joint Assembly**  
CV Joint Assembly is high-performance, smooth handling, and efficient power delivery compared with Rear Axle Assembly, particularly in environments requiring sharp turns or rough terrain, the steel balls and tripod pins absorb road vibrations to improve ride smoothness, ideal for commercial rides.



**Well-made Mold with Fine Finish**  
Decent design produced with well-made mold, there are few welding points for the tricycle, the detailed interfaces are polished and painted, the tricycle can be assembled by screws easily, and the chassis is clean to prevent it from being knocked off by uneven road surfaces.



**Powerful Mid-drive Motor**  
Powerful 4KW permanent magnet synchronous mid-drive motor with 65km/h top speed, higher efficiency in power transmission and more even weight distribution, more efficient, especially on hilly terrain or varying gradients.



**Battery as a Service**  
The swappable design allows you to exchange depleted batteries for fully charged ones within 1 minute. Lower upfront costs and no more sitting idle while vehicles charge. Battery swapping lower the threshold, minimizes downtime, helping drivers stay on the road and generate more income.

GENERAL SPECIFICATIONS		EWT-31
Engine & Controller	Engine Type	Permanent Magnet Synchronous Motor
	Rated Power	3000W
	Maximum Speed	65km/h
	Nominal Voltage	60V/72V
	Controller	36 Tubes
Tire	Tire Size	400-12 (Front & Rear)
	Tire Pressure	235 kPa (Front & Rear)
Assembly & Performance	Assembly	CV Joint Assembly
	Braking System	Hand/Foot Disc Brake
	Steering	Multi Functional Handle Style
	Front Fork	Hydraulic Spring Type
	Rear Axle	140 Iron Wheel Hub
	Maximum Climbing Gradient	27°
	Minimum Turning Radius	4M
	Braking Distance	8M
Physical Parameters	Product Dimension(L*W*H, mm)	3000*1250*1750mm
	Passengers	6 + 1
	Minimum Ground Clearance	170mm
	Seat Cushion Height	780mm
	Weight(kg)	350kg
	Maximum Load Mass(kg)	530kg
	Frame Material	Carbon Steel
	Wheelbase	2280mm
	Rear Wheelbase	950mm
Accessories	Battery	Model No.: LEV-6010BM, 60.8V/100Ah
	Charger	Model: LEV-3360BC, 60V/40A Chagrer
	Battery Swapping Cabinet	Model: BSC-06/BSC-09

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\* Color Customizable



**Complete Safety Protection**  
Fire-fighting device, water immersion device, temperature sensor, smoke sensor, temperature control device, surge protector, leakage protection device, etc. All PCB boards in the cabinet are coated with conformal coating for longer lifespan.



**User Friendly**  
The built-in Android Industrial Computer with 10.1-inch touch screen brings operator with an user-friendly interface to manage the battery swapping cabinet and monitor the status, each slot is customized with bigger battery space and a bottom roller for easy battery swapping.



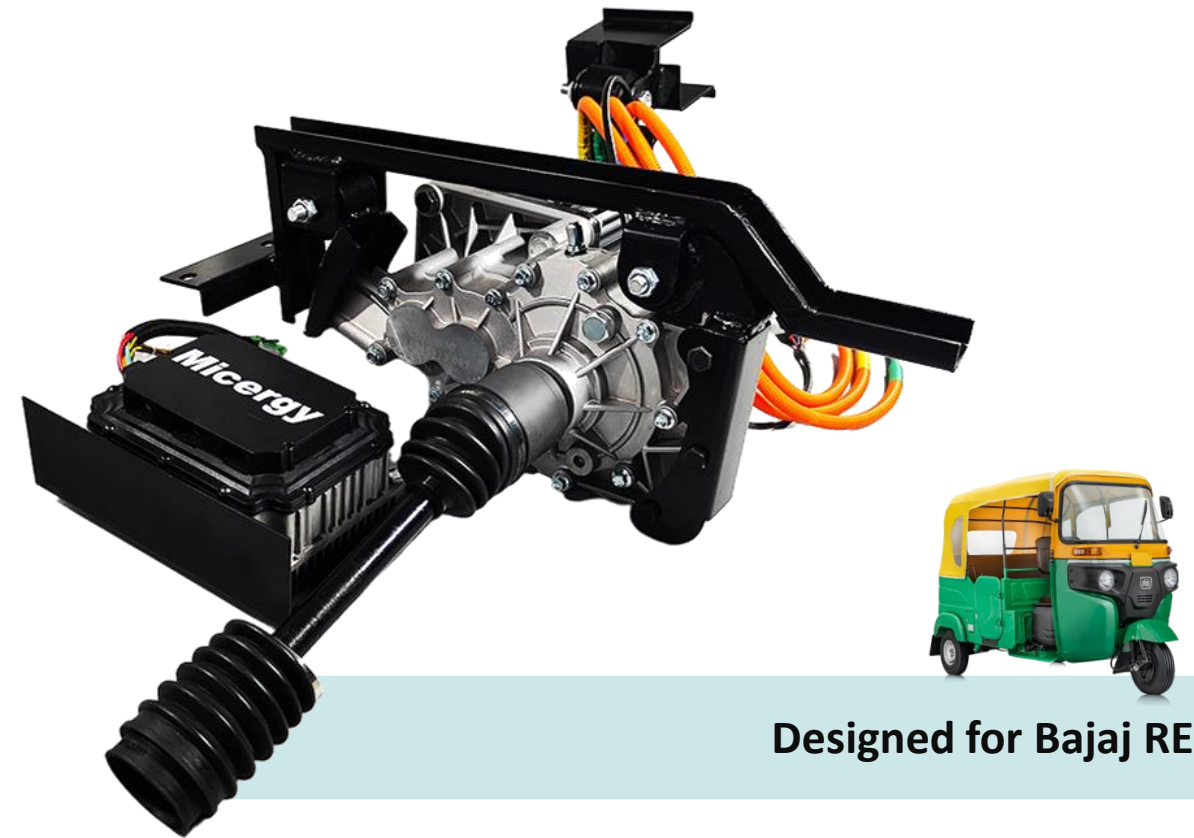
**Smart Charging**  
Real-time monitoring of the battery's internal voltage, temperature, and other status information, the problematic battery slot will be locked in time if there is a charging warning, and the warning message will be pushed to the backend to facilitate maintenance by operation and maintenance personnel.



**M-Cloud Platform**  
Micergy’s comprehensive platform designed for efficient battery swapping operation of electric 2&3 wheelers, the Web Page Management Platform and Mobile App(Andriod & iOS) are available, which support 4G and Wi-Fi communication, RS485 and CAN communication protocol.

GENERAL SPECIFICATIONS		BSC-06
Electrical Parameters	Rated Voltage	220V
	Battery Voltage	48V/60V/72V
	Maximum Power per Slot	1800W
	Charging Efficiency	93%
	Meter	Smart Meter
Android Industrial Computer	Screen	10.1", Processor: RK3288/4 Core
	Memory	2G, EMMC: 8G, 2-Way RS485
	Resolution	1920*1080
	Communication	4G, WiFi
Physical Parameters	Slot Quantity	6
	Product Dimension(H*W*D, mm)	1567*962*600
	Slot Dimension(W*H*D, mm)	300*350*410
	Body Material	Galvanized Sheet & Cold Rolled Steel
	Body Material Thickness	1.2mm-1.5mm
	Net Weight	160kg
Swapping	Ingress Protection	IP54
	Platform & App	Micergy M-Cloud
Other Feature	Cabinet Support	Universal Wheels, Steer Wheels, Foot cups, Corner Guards
	Speaker	8Ω 5W
	Camera	Customizable
	Canopy	Customizable
	Slot Status Indicator	RGB Light
	Anti-theft	Anti-theft Door Lock, Built-in Door

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Designed for Bajaj RE

**Go Electric with Lower Cost**

With no need to get rid of the current petrol-powered tricycles, by fully utilizing the original components of Bajaj RE and only replacing the Internal Combustion Engine with an electric kit, saving huge cost on material and logistics, say goodbye to the rising petrol bill and maintenance costs by 45%–50%.

**Easy Retrofit—No Welding**

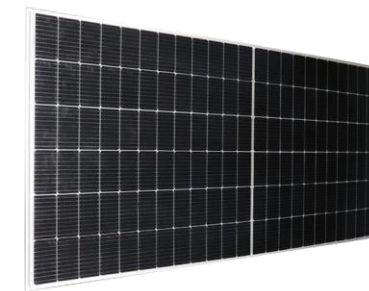
Specially designed for Bajaj RE seamless conversion, there's no need for welding or drilling, just screw the electric kit with the fixture to the existing hole on the Bajaj RE chassis, preserving the original chassis integrity. This means faster, safer fitment and easier servicing.

**Anti-rollover with CV Joint Assembly**

CV Joint Assembly is high-performance, smooth handling, and efficient power delivery compared with Rear Axle Assembly, particularly in environments requiring sharp turns or rough terrain, the steel balls and tripod pins absorb road vibrations to improve ride smoothness, ideal for commercial rides.

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## Solar Panel

Module Type	P type Mono-crystalline
Maximum Power (Pmax)	550Wp
Maximum Power Voltage (Vmp)	41.96 V
Maximum Power Current (Imp)	13.11 A

## Solar Battery

Battery Type	LiFePO4 Blade Cell
Nominal Energy	30.72 kWh
Rated Voltage	51.2 V
Rated Capacity	600 Ah

## Solar Inverter

Inverter Type	IP65 Hybrid Inverter
Rated Output Power	12000 W
Maximum PV Input Power	19000 W
MPPT Range	90V – 425V

## Solar Cable

Cable Size	4 mm <sup>2</sup>
Cable Size	6 mm <sup>2</sup>

The solar-powered battery swapping station can be configured as per the site conditions, including the daily leasing battery quantity, grid availability, and solar irradiation level etc., for detailed solution, please contact your Micergy sales manager