



Lithium Start Battery

Pin Lithium Khởi Động Ô Tô Xe Máy

- * The only split port lithium battery which fits with automotive electrical circuitry
- * LFP cells which are most safe chemistry and content no lead or other harmful metal
- * Full discharge without damages to battery. Overdischarged battery can be simply recovered by connecting to a common charger or a jumpstart battery.
- * Overcurrent and short circuit protection. Over current tripped battery can be simply recovered by disconnecting load
- * Service life can reach 2000 cycles or 8-10 years
- * Performance is constant over the whole service life, leaving no disturbance to users
- * Faulty battery can be repaired by replacing parts to avoid discarding the whole battery



MOTORCYCLE BATTERY	BP106	BP110	BP115	BPS106	BPS110	BPS115
Rate voltage	12.8V	12.8V	12.8V	11.1V	11.1V	11.1V
Rate cranking ampere	50A	80A	120A	60A	90A	140A
Max charging voltage	15.2V	15.2V	15.2V	14.2V	14.2V	14.2V
Max charging ampere	12A	12A	18A	8A	8A	12A
C/10 Capacity	2.5Ah	5Ah	7.5Ah	8Ah	12Ah	24Ah
Dimension L x W x H (mm)	112	112	150	112	112	150
	x 70	x 70	x 87	x 70	x 70	x 87
Weight	x 88	x 106	x 93	x 88	x 106	x 93
	0.6kg	1.1kg	1.6kg	0.7kg	0.9kg	1.8kg

AUTOMOBILE BATTERY	BP120X	BP140	BP160	BP204	BP208	BP212
Rate voltage	12.8V	12.8V	12.8V	25.6V	25.6V	25.6V
Rate cranking ampere	160A	320A	480A	160A	320A	480A
Max charging voltage	15.2V	15.2V	15.2V	30.2V	30.2V	30.2V
Max charging ampere	30A	45A	60A	60A	45A	60A
C/10 Capacity	8Ah/20F	16Ah	24Ah	8Ah	16Ah	24Ah
Dimension L x W x H (mm)	150	165	200	200	230	260
	x 87	x 126	x 166	x 166	x 138	x 167
Weight	x 130	x 175	x 170	x 170	x 208	x 210
	2.3kg	3.6kg	5.2kg	4.2kg	7.0kg	10kg

DUAL PURPOSE BATTERY	BPS140	BPS160	BPS160	BPS160	BPS212	BPS212
Rate voltage	12.8V	12.8V	12.8V	12.8V	25.6V	25.6V
Rate cranking ampere	320A	480A	480A	480A	480A	480A
Max charging voltage	15.2V	15.2V	15.2V	15.2V	30.2V	30.2V
Max charging ampere	45A	60A	60A	60A	60A	60A
C/10 Capacity	44Ah	66Ah	88Ah	132Ah	66Ah	110Ah
Discharge time at 100W	4h30m	6h45m	9h30m	15h00m	13h30m	24h45m
Dimension L x W x H (mm)	230	260	295	365	365	520
	x 138	x 167	x 200	x 215	x 215	x 220
Weight	x 210	x 210	x 225	x 225	x 230	x 225
	6.5kg	10kg	14kg	20kg	20kg	30kg

INSTRUCTION OF OPERATION AND INSTALLATION

LITHIUM START BATTERY

1. Check installation conditions

- * Identify charging voltage of vehicle from operation manual, or measure it by a multi-meter when engine is running at medium speed. Charging voltage between 13.8 - 15.0V is enough for charging battery (27.6 - 30.0V for 25.6V system)

Engine displacement	Cranking ampere	Starter power	Engine displacement	Cranking ampere	Starter power
50-110cc	30A	400W	1300-2500cc	250A	3200W
125-150cc	40A	500W	2700-4000cc	350A	4500W
175-300cc	65A	800W	4500-10000cc	24V-300A	6500W
400-800cc	100A	1200W	11-20L	24V-450A	8000W
900-1200cc	150A	2000W	20-40L	24V-800A	15000W
			40-60L	2 x 24V-600A	2 x 10000W

- * Identify cranking ampere or starter motor power from operation manual, or measure it by clamp ammeter when cranking the engine. Estimation of starter ampere and power in the following table:
- * For special vehicle such as motorhomes, RV, fishing vessels, we should identify the consumption power and time of the equipment which runs during the rest time of engine

2. Select battery

- * Select battery to meet requirement of cranking ampere or starter motor power
- * Select one size larger for vehicle with idling stop function, and vehicle with power consumption during engine rest (such as smart key or anti-theft system)
- * Ensure vehicle charging ampere is not higher than max charging ampere of battery
- * For specialty vehicle or fishing vessels, etc,... select dual purpose battery with enough capacity to power equipment during engine rest time

3. Installation of battery

- * Ensure battery is fully charged before installation. A well charged voltage of battery is between 13.2-13.4V for LFP battery and 12.2-12.4V for LNMC battery
- * Install and secure battery in battery compartment. Use suitable spacer damper if battery size is much smaller than installation space
- * Identify proper polarity of power wire. Connect positive wire and cover it before connecting negative wire
- * Start the engine and measure it cranking ampere. Ensure average cranking ampere is within tolerance of rated value
- * Run the engine and measure charging voltage. Ensure charging voltage is within tolerance of rated value
- * Shutdown engine and measure consumption amp[ere of auxiliary equipment to ensure it is within tolerance of value

4. Battery will shutdown charging port when it is fully charged and will switch on charging port when battery is discharged. This overcharge protection does not affect to the continuity of discharge because discharge port and charge port are independent. We recommend to check the overcharge shutdown function every 6 months to avoid failure in overcharge protection the battery which is very harmful to lithium battery

5. Battery will shutdown discharge port when it is discharged to minimum allowable voltage to protect it from full death. Overdischarge battery can be recovered by common charging (connecting to a charger, or to allow running engine to charge it as the charge port is still ready for charging regardless of discharge port status

6. Battery will shutdown discharge port when it is in overcurrent of short circuit. In this case, we should disconnect load (disconnect negative wire), solve the problem and reconnect load. Battery will be recovered by itself