

COTEK

BP-□□□□ Series Switch-Mode 3 Stage Battery Charger User's Manual



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1. Important Safety Information



WARNING!

Before installing or using BP-□□□□ Battery Charger, you need to read following safety information carefully.

1-1. General Safety Precautions

- 1-1-1. Do not expose BP-□□□□ Battery Charger to water, mist, snow, or dust. To reduce the risk of fire, do not cover or obstruct the ventilation shaft.
Do not install BP-□□□□ Battery Charger in a zero-clearance Compartment. Overheating may occur.
- 1-1-2. To avoid the risk of fire and electronic shock, make sure that existing wiring is in good electrical condition and not undersize.
Do not operate BP-□□□□ Battery Charger with damaged or substandard wiring.
- 1-1-3. Do not charge non-rechargeable batteries.
- 1-1-4. Do not charge batteries in a non-ventilated enclosures.
- 1-1-5. Only the wire with IEC socket is allowed to plug to the battery charger.
- 1-1-6. If the power supply cord is damaged, it must be replaced by the manufacturer, the service agent, or a related qualified person in case of a hazard.

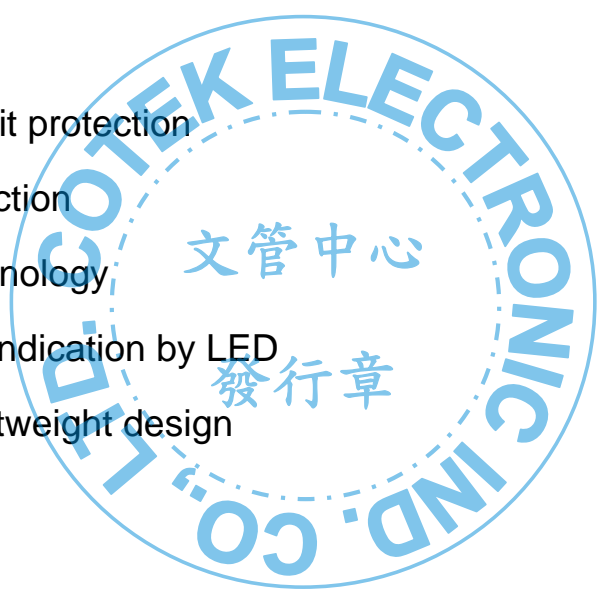
1-2. Battery Precautions

- 1-2-1.If battery acid contacts your skin or clothing, you shall wash it out with soap and water immediately. If battery acid contacts your eyes, you shall wash it out with cold running water for at 1 least 20 minutes and get medical attention immediately.
- 1-2-2.Never smoke or make a spark or flame in the vicinity of the battery or the engine.
- 1-2-3.Do not drop metals on the battery. The resulting spark or short-circuit on the battery or other electrical parts may cause an explosion.
- 1-2-4.Remove personal metal items such as rings, bracelets, necklaces, and watches when operating with lead-acid batteries. Doing so may cause short circuit and very high temperature, which can melt metal items and even burn you.

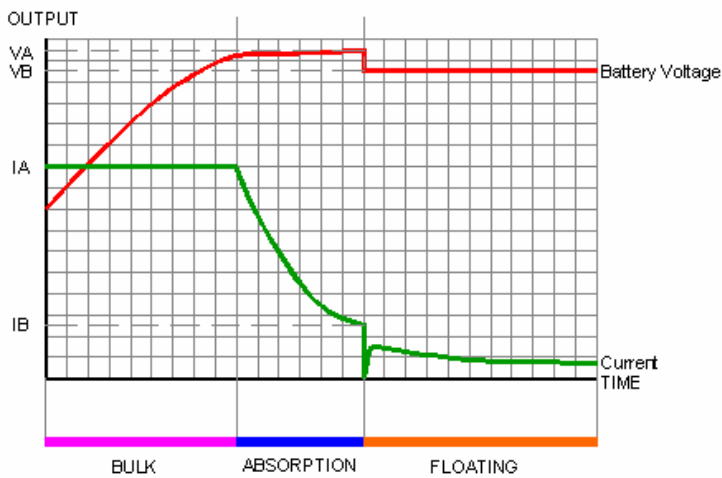


2. Features

- High-performance 3-stage charging effect
- 0.98 typical power factor
- Advanced 8 bit microprocessor control circuit
- Reverse polarity protected by fuse
- Ignition protection
- Output short circuit protection
- Over power protection
- Switch mode technology
- Statue of charge indication by LED
- Compact and lightweight design



2-1. Battery Charging Curve



IUoU Charging Characteristic

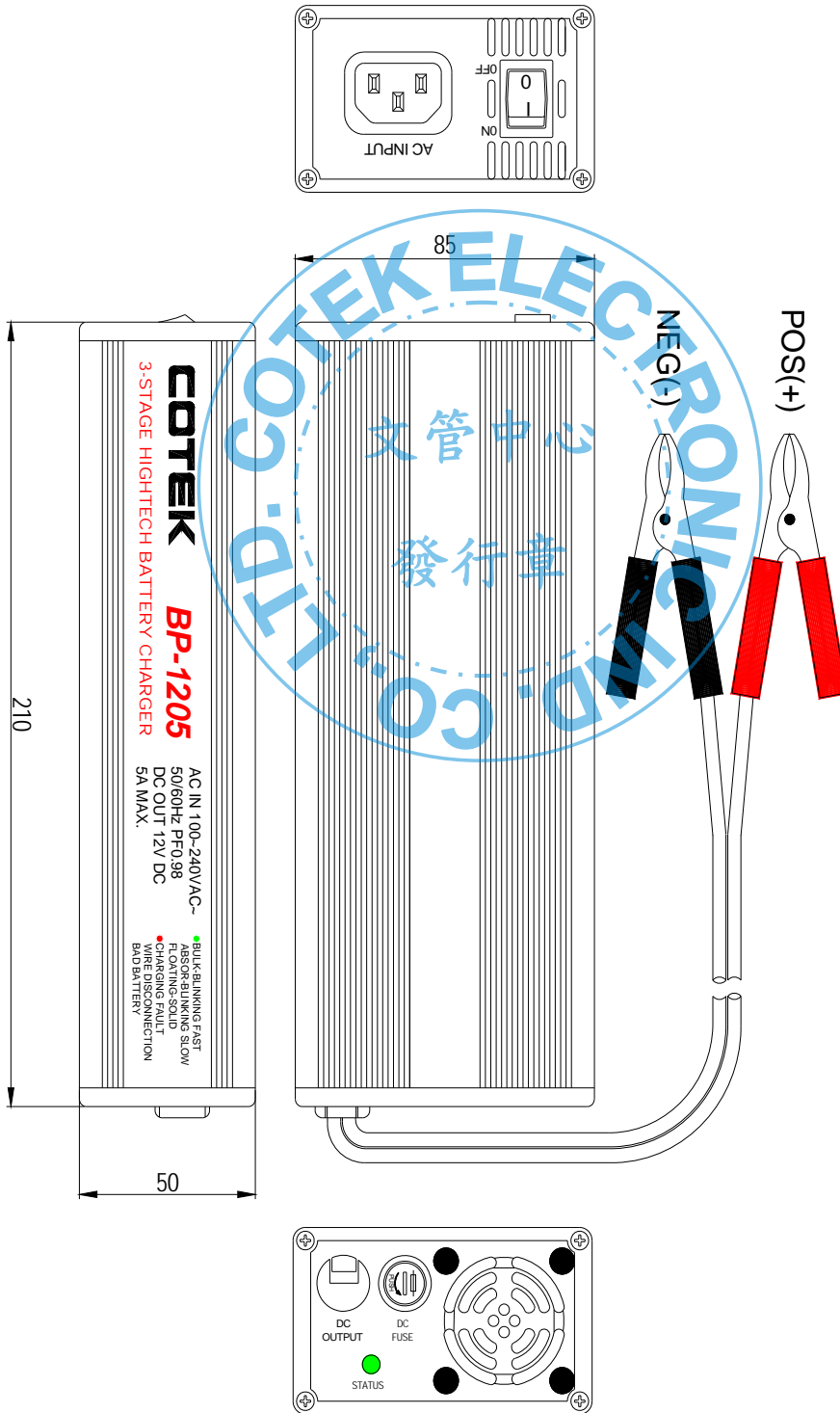
Model	12V / 5A	12V / 10A	24V / 5A	24V / 3A
VA	14.4V	14.4V	28.8V	28.8V
VB	13.6V	13.6V	27.2V	27.2V
IA	5A	10A	5A	2.5A
IB	0.75A	1.5A	0.75A	0.38A

2-2. Electrical Characteristics

Specification	Technical Data	
Model No	BP-1205	BP-1210
Input Voltage	100-240VAC / 50~60Hz	
Input Current	0.95A Max.	1.9A Max.
Power Factor	PF: 0.98	
Output Voltage	14.4V DC	
Output Current	5A Max.	10A Max.
Output Power	75W Max.	150W Max.
Safety Cert.	CE , TUV	
EMC	FCC Class B; CISPR22:1997,Class B; ANSIC63.4-1992 EN55022:1998+A1:2000,Class B; EN55024:1998+A1:2001 EN61000-3-2:2000,Class A; EN61000-3-3:1995+A1:2001	
Dimensions	210 (L) x 85 (W) x 50 (H) mm / 8.26 (L) x 3.34 (W) x 1.96 (H) Inch	
Weight	1 kgs. / 2.2 Lbs.	

Specification	Technical Data	
Model No	BP-2403	BP-2405
Input Voltage	100-240VAC / 50~60Hz	
Input Current	0.95A Max.	1.9A Max.
Power Factor	PF: 0.98	
Output Voltage	28.8V DC	
Output Current	2.5A Max.	5A Max.
Output Power	75W Max.	150W Max.
Safety Cert.	CE , TUV	
EMC	FCC Class B; CISPR22:1997,Class B; ANSIC63.4-1992 EN55022:1998+A1:2000,Class B; EN55024:1998+A1:2001 EN61000-3-2:2000,Class A; EN61000-3-3:1995+A1:2001	
Dimensions	210 (L) x 85 (W) x 50 (H) mm / 8.26 (L) x 3.34 (W) x 1.96 (H) Inch	
Weight	1 kgs. / 2.2 Lbs.	

2-3. Mechanical Drawing

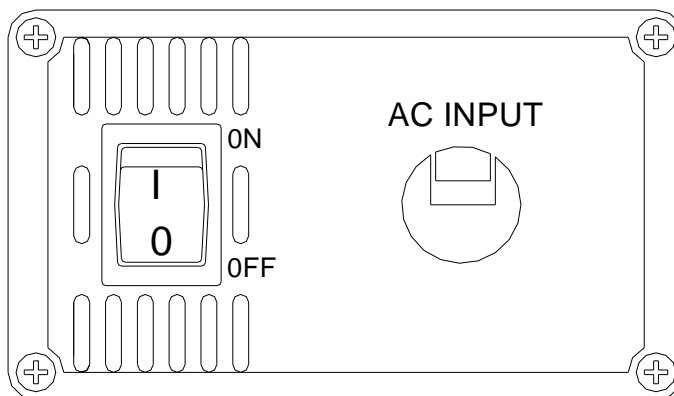
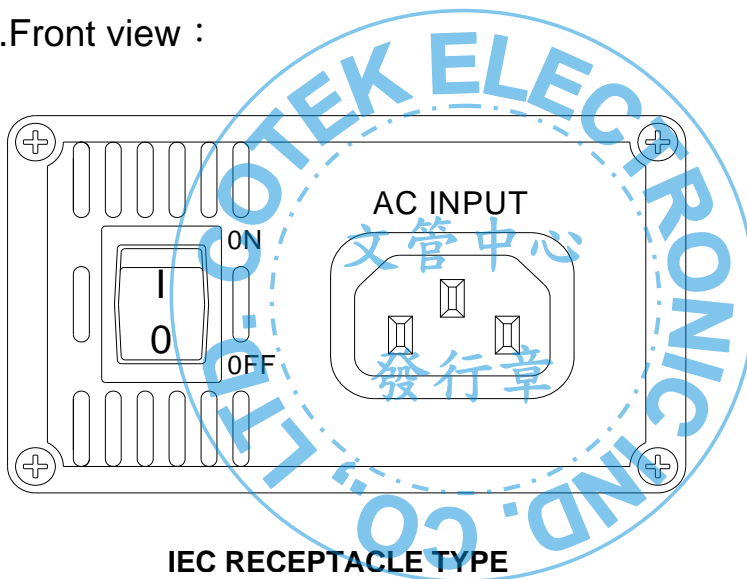


3. Instructions

BP-□□□□ series are high frequency switch-mode 3-stage battery chargers equipped with micro-controller and PFC circuit to manage battery intelligently and to provide highly reliable operations. Before using BP-□□□□, read all instructions and precautions marking on this manual.

3-1. Front Panel Operation :

3-1-1. Front view :



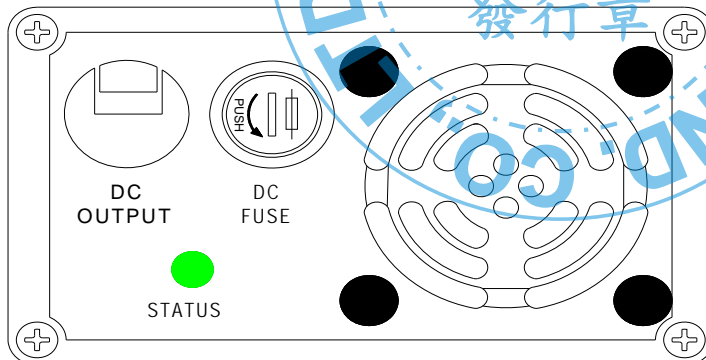
3-1-2.ON / OFF switch :

Power ON / OFF switch, leave the status OFF during installation.

3-1-3.LED Status

Charging Status	LED Indication
Fast Charge	Fast Green Blink
Slow Charge	Slow Green Blink
Floating Charge	Solid Green
Charging Failure	Red Blink
Bad Battery or Wire Disconnection	Red Blink

3-2. Rear Panel Operation :



3-2-1.Ventilation Shaft :

Be sure to keep it a distance (at least one inch) from surrounding things.

3-2-2.DC Output Terminals :

Connect it to 12V/24V batteries.

【+】 indicates positive, 【-】 indicates negative. Reverse polarity connection will blow the internal fuse and may damage BP-□□□□ permanently.

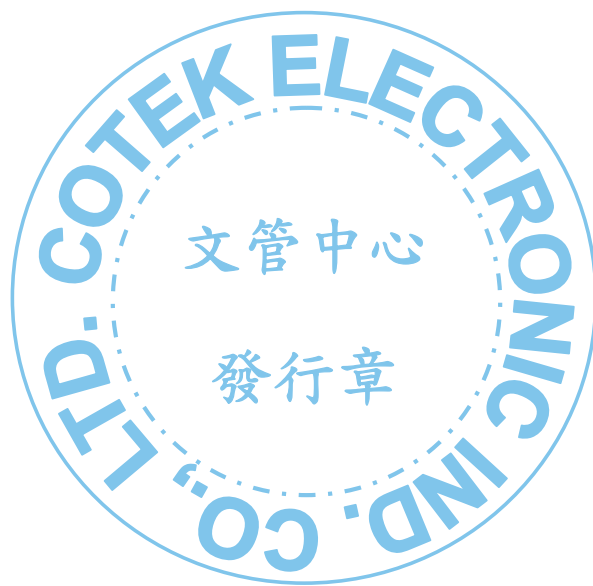
3-3. Troubleshooting :

Problems and Symptoms	Possible Cause	Solutions
"Red" LED blink	Battery is disconnected	Check the battery connection.
	Polarity reverse	Place proper polarity.
	DC fuse broken	Check DC fuse. If broken, replace the same rating fuse.
LED light off	No AC power delivering	Check DC output fuse
	Thermal shutdown	Check input power connection. Make sure the ventilation shaft is not obstructed. Improve ventilation. Lower the temperature Surrounding it.

3-4. Battery Type Selections :

Sealed lead acid and open lead acid batteries are as follows :

Model No.	Battery Capacity (Min.)	Battery Capacity (Max.)
BP-1205	12V / 15Ah	12V / 50Ah
BP-1210	12V / 30Ah	12V / 100Ah
BP-2403	24V / 7.5Ah	24V / 25Ah
BP-2405	24V / 15Ah	24V / 50Ah



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