

Automatic Battery Charger for Lead Acid and LiFePo4 batteries

Intelligent battery charger and maintainer



SPECIFICATION

Model:	ABC1230
Input voltage:	220V-240Vac 50Hz
Input current:	2.3Aac
Output voltage:	12V
Battery type:	WET / AGM / LiFePO4
Output current:	3A / 15A / 30A
Charging process:	7 stages
Certification:	NA
Standards:	IEC60335, EN55014

Features:

1. Newest switch mode technology, high efficiency (88% type);
2. MCU controlled ,7-stage charging (Pulse, Soft start, Bulk, Absorption, Analysis, Recondition, Float), fully automatic charging;
3. Charging rate is selectable(3A/15A/30A), suit for 12V 10AH--500AH battery capacity;
4. Battery type is selectable, suit for GEL, Flooded, AGM, Sealed, VRLA and LiFePO4 batteries.
5. Lower start charging voltage(>2V),recover the deep discharged and weak battery.
6. Seven stage charging process, automatic recondition the battery, recover the capacity for old battery.
7. Output reverse polarity protection, short circuit protection, spark free contact.
8. Plus battery maintainer, never overcharging the battery.
9. Low back current drain from battery, when AC power is disconnected.(<1mA)
10. ECO mode can reduce input power consumption (<1.5W);

Charging rate is recommend for battery capacity

Charging rate	Battery capacity range
3A	10 - 40AH
15A	41 -100AH
30A	101 - 500AH

1. Input electrical parameters:

Parameters	Condition	Min.	Type	Max.	Unit
Input voltage range		190	220-240	264	Vac
Input frequency range		47	50 / 60	63	HZ
Unload input power	230Vac input,output without battery after 20 seconds		1.0	1.2	Watts
Rating input current	230Vac input,13V 30A output		2.6	2.8	Aac

2. LED indication

WET = green:	GEL WET or Flooded battery type is selected
AGM = green:	AGM, VRLA and maintenance free battery type is selected
LiFePO4 = green:	LiFePO4 battery type is selected

30A LiFePO4 Full

15A AGM 80%

3A WET 20%

Button Button Fault

20% = ON :	Desulphation charging and soft start charging
80% = ON :	Bulk stage charging, absorption charging
FULL= Flash :	Analysis stage and recondition charging
FULL= ON :	Float charging
Fault = ON :	Output clips shorted or battery reverse polarity connected
Fault = Flash :	Battery is fault,charging timer out
FULL=ON, Fault = Flash :	Battery voltage is over 16.5V.

LED display panel

3. Output electrical parameters:

3-1. Desulphation charging:

Parameters	Condition	Min.	Type	Max.	Unit
Desulphation charging activity condition	Battery voltage is above	2.0	2.4	2.8	Vdc
Desulphation charging method		Pulse charging			
Desulphation charging pulse frequency		48	50.0	52	Hz
Desulphation average current	Charging current 3A rate is selected	0.4	0.6	0.8	Adc
	Charging current 15A rate is selected	2.6	3.0	3.4	Adc
	Charging current 30A rate is selected	5.5	6.0	6.5	Adc
Desulphation charging transits to soft start charging	When battery voltage is over	8.6	9.0	9.4	Vdc
Desulphation charging time limited	Stop charging if battery voltage cannot reach 9V	5.5	6.0	6.5	Hours

3-2. Soft start charging:

Parameters	Condition	Min.	Type	Max.	Unit
Soft start charging activity condition	Battery voltage is above	8.6	9.0	9.4	Vdc
Soft start charging output current	Charging current 3A rate is selected	0.5	0.7	0.9	Adc
	Charging current 15A rate is selected	3.2	3.7	4.2	Adc
	Charging current 30A rate is selected	7.0	7.5	8.0	Adc
Soft start charging transits to bulk charging	When battery voltage is over	10.2	10.5	10.8	Vdc
Soft start charging time limited	Stop charging if battery voltage cannot reach 10.5V	1.5	2.0	2.5	Hours

3-3. Bulk charging:

Parameters	Condition	Min.	Type	Max.	Unit
Bulk charging activity condition	Battery voltage is above	10.2	10.5	10.8	Vdc
Bulk charging output current	Charging current 3A rate is selected	2.7	3.0	3.3	Adc
	Charging current 15A rate is selected	14.0	15.0	16.0	Adc
	Charging current 30A rate is selected	27.6	30.0	32.0	Adc
Bulk charging time limited	Stop charging if battery voltage cannot reach 14V	19	20	21	Hours

3-4. Absorption charging:

Parameters	Condition	Min.	Type	Max.	Unit
Absorption charging output voltage	WET battery type is selected	14.2	14.4	14.6	Vdc
	AGM battery type is selected	14.6	14.8	15.0	Vdc
	LiFePO4 battery type is selected	14.4	14.6	14.8	Vdc
Absorption charging transits to analysis stage	When absorption charging current is less than (3A rating)	0.2	0.4	0.6	Adc
	When absorption charging current is less than (15A rating)	1.5	1.8	2.2	Adc
	When absorption charging current is less than (30A rating)	3.2	3.7	4.2	Adc
Absorption charging time limited	Transits to float charging when timer-out	5.5	6.0	6.5	Hours

3-5. Analysis stage:

Parameters	Condition	Min.	Type	Max.	Unit
Analysis stage time control	Stop charging	110	120	130	Sec.
Analysis stage transits to recondition charging	Battery voltage is below	12.9	13.0	13.2	Vdc
Analysis stage transits to float charging	Battery voltage is above	12.9	13.0	13.2	Vdc

3-6. Recondition charging:

Parameters	Condition	Min.	Type	Max.	Unit
Recondition charging output voltage	WET battery type is selected	14.5	14.7	14.9	Vdc
	AGM battery type is selected	14.8	15.0	15.2	Vdc
	LiFePO4 battery type is selected	13.6	13.8	14.0	Vdc
Reconditon charging output current (Max.)	Charging current 3A rate is selected	0.4	0.6	0.8	Adc
	Charging current 15A rate is selected	2.5	3.0	3.5	Adc
	Charging current 30A rate is selected	5.5	6.0	6.5	Adc
Reconditon charging transits to float charging	Recondition charging time limited	0.9	1.0	1.1	Hours

3-7. Float charging:

Parameters	Condition	Min.	Type	Max.	Unit
Float charging output voltage	WET battery type is selected	13.3	13.5	13.7	Vdc
	AGM battery type is selected	13.6	13.8	14.0	Vdc
	LiFePO4 battery type is selected	13.6	13.8	14.0	Vdc
Float charging output current (Max.)	Charging current 3A rate is selected	2.7	3.0	3.3	Adc
	Charging current 15A rate is selected	14.0	15.0	16.0	Adc
	Charging current 30A rate is selected	27.6	30.0	32.0	Adc
Float charging transits to bulk charging	Battery voltage is below	12.2	12.5	12.8	Vdc

4. Others:

Output opened circuit voltage when disconnected to the battery :	0.5V MAX.
AC power is disconnected,flow back current from battery	0.5mA MAX.
Hi-pot Isolation (Input—Output)	3000Vac 50Hz 5mA no broken
Operation temperature range:	0 - 40°C
Storage temperature range:	-10 - 60°C
Protection:	Reverse polarity and shorted circuit protection, Inner over temperature protection, spark free
Enclosure dimension (L*W*H):	220*115*63 mm
Input Cord:	VDE H03VVH2-F 3X0.75mm ² , external length 5FT
Output cord :	UL1015 10AWG external length 5FT with professional battery clip
Gross weight:	1.450 Kg
Warranty.	1 years

5. Accessory:

1. User manual