31ACYY36A 36V Lead Acid Battery charger Series

Features

- Universal input 100-240VAC
- Short Circuit Output Protected
- Approved to UKCA, CE
- LVD & EMC Class B Certified, RoHS & REACH compliant
- 36V Lead Acid 3 Stage Control (Fast/Normal/Float)
- OVP, OCP, OTP & Short Circuit
- LED Charge Indicators Included

Ideal Power's 31ACYY36A Range of 36V Lead Acid Battery Chargers Series are certified to UKCA, CE, RoHS, REACH & EN 62368-1 Standards and comply with the relevant Efficiency Regulations. These are primarily used in ITE, Audio & Video Industries and customised solutions are available upon request.

Models	31AC0136A	31AC0236A	31AC0336A	31AC0436A
Input Voltage	90V / 264V Auto Switch - 100-240Vac +/- 10%			
Input Frequency	47Hz ~ 63Hz / 50-60Hz +/- 5%			
Input Current	1.8~3.6A - 115Vac / 230Vac			
Output Max Current	1A	2A	3A	4A
Output Power	36W	72W	108W	144W
Output Voltage	41.1~43.8V DC			
Output Equalizer	29.2V +/- 0.2V (Can be order specific)			
Output Float	27.4V +/- 0.2V (Can by order specific)			
Isolation	Input isolate Chassis : 500M OHM			
Battery Application	Lead Acid Battery			
LED - Power	Red			
LED - Charging	Orange			
LED – Fully Charged	Green			
DC Cable	1.2M Mount clips			
Dimensions	180 x 88 x 47 (LxWxH) mm			
Weight	0.8 (Kgs)			
Specifications subject to change without notice.				

Applications

◎ Communication devices	◎ Power generators	◎ UPS	◎ Power Inverters
◎ Vacuums Pumps	◎ Sailing boats	◎ Fork-lift	◎ Ambulance
◎ Fire trucks	◎ Emergency vehicles	◎ Electrical car & bicycles	◎ Mobile command centres
◎ Household items	◎ Communication Equipment's	◎ Automobiles	

Environmental Data

	Minimum	Typical	Maximum	Units	Notes
Operating Temperature	0		45	ºC	
Storage Temperature	0		70	ºC	
Operating Humidity	20		90	ºC	
Storage Humidity	10		95	ºC	

EMC Emissions (2014/30/EU)

	Standard	Test Level	Criteria	Notes
Conducted	EN 55032	Pass	B	
Radiated	EN 55032	Pass	B	
Harmonic Current	EN 61000-3-2	Pass	A	
Voltage Flicker	EN61000-3-2	Pass		

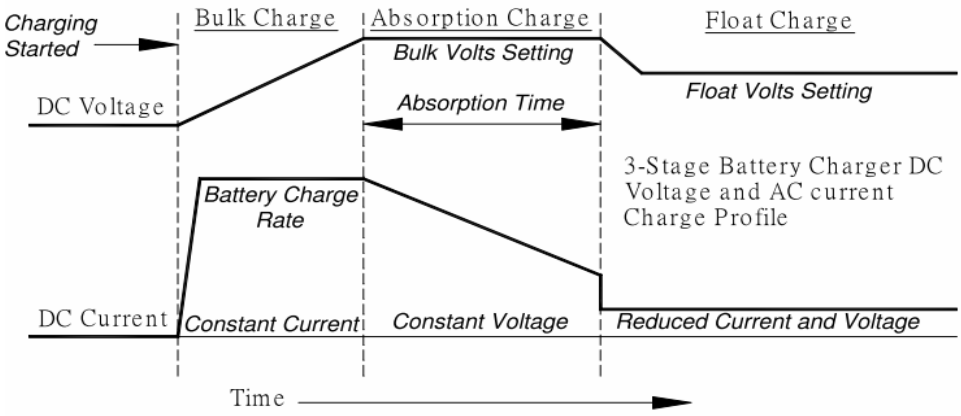
EMC Immunity (2014/30/EU)

	Standard	Test Level	Criteria	Notes
EMS	EN 55035	Pass	A	
ESD	IEC 61000-4-2	Pass	B	Contact: +/- 4KV; Air: +/- 8KV
RS	IEC 61000-4-3	Pass	A	Frequency: 80-1000MHz; Field Strength: 3V/M ' 80% AM
EFT	IEC 61000-4-4	Pass	B	1.0KV on input AC power ports
Surges	IEC 61000-4-5	Pass	B	Line to Line: +/- 1KV (peak); Line to F.G: +/- 2KV (peak)
Conducted	IEC 61000-4-6	Pass	A	150KHz to 80MHz 3Vms
PFMF	IEC 61000-4-8	Pass	A	50hZ, 60Hz, 1A/m
Dips and Interruptions	IEC 61000-4-11	Pass	Complies	0%, 70%, 0% of UT

Safety Approvals

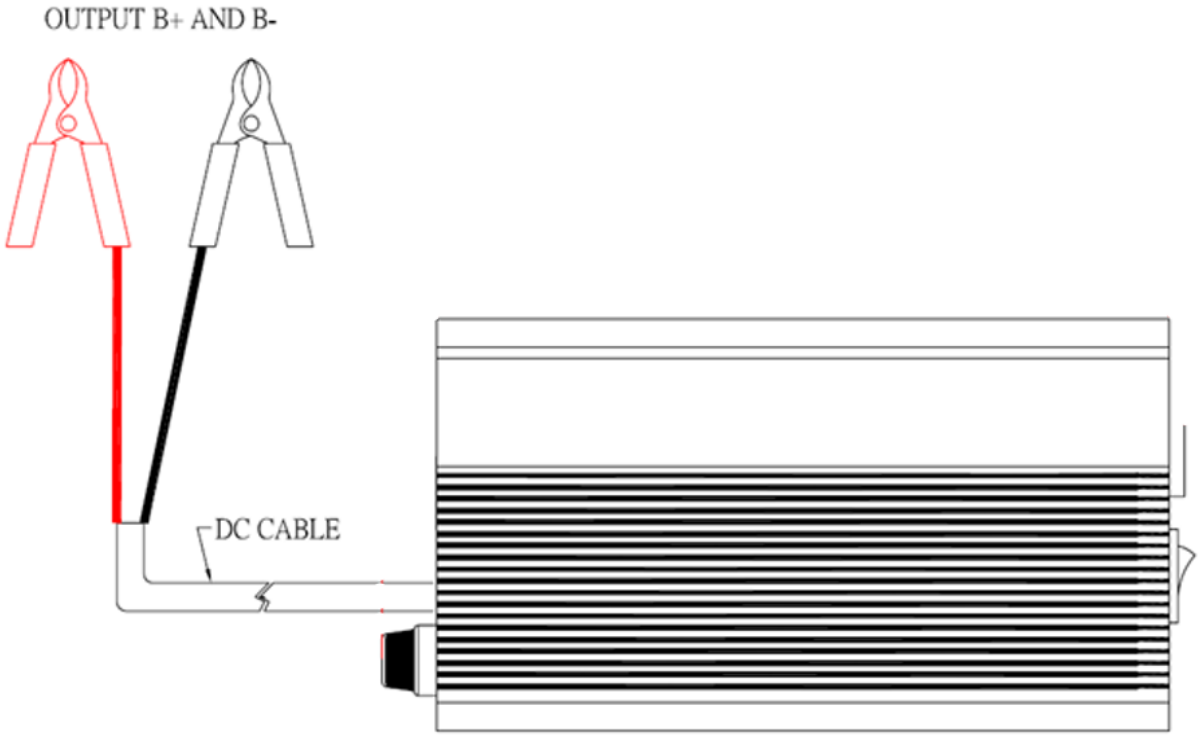
	Safety standard
CE	EMC Directive 2014/30/EU, LVD Directive 2014/35/EU, RoHS Directive RoHS (EU) 2015/863

Three Steps of Charging & Charge Curve



Step 1	Bulk charge – bring batteries to 75% capacity fast. During this stage charging occurs at full power, which means maximum current, until the battery voltage reached the set limit.
Step 2:	Absorption Charge, boost – slow the current flow, adjusting for maximum efficiency and gently topping off batteries. During absorption charging the current decreases as the battery approached full charge.
Step 3	Trickle Charge – for longer period, maintains fully charged batteries without harmful effects of overcharging and cooking. Trickle charge is intended to keep the battery in a fully charged state and compensates for self-discharge. When the current reaches setting point the battery switches to a maintenance charge at a constant voltage. Should the battery be in use and the charge current Subsequently exceed setting point the charger will automatically return to the beginning of the three-step charge characteristic.

Case Drawing



Case Drawing (continued)