

## Automatic 3 Stage Battery Charger

Lead Acid Battery Charger

### ENC series-ENC1220(12V20A)



#### Features: ■

- 3 stage (IUoU) switching model lead acid battery charger ◀
- Battery can be connected to charger indefinitely ◀
- Power ON/OFF switch ◀
- AC Input Voltage Range Selectable : 90~165V / 190~265V ◀
- Protections : short circuit, overload, over-temperature, reverse polarity (fuse) ◀
- Temperature Sensor: optional ◀
- Simple operations and maintenance ◀
- Silent cooling fan operation ◀
- LED indicates for bulk, absorption, float, charge status fault and power ON/OFF ◀

#### ■ Specification:

Model		ENC1220			
Output	DC Voltage	12V	Input	AC voltage range	190-265V 50/60Hz
	Restrict Voltage	14.5V±0.2V		Fuse	AC
	Floating Voltage	13.8V±0.2V	DC		25A
	Max.Power	280W	Efficiency at max. power		230V:>87%
	Max Charging Current (continuous)	20A		Size	23.5*102*55.5mm
Protection	Reverse Polarity	O/P cut-off, auto-reset		Auto 3-Stage Battery Charger → Constant current Constant voltage Floating Charge	
	Short Circuit	O/P cut-off, auto-reset		DO OUTPUT SHORTCIRCUIT → AUTOMATIC	
	Overload	O/P current-limited		Universal Protection Circuit → Reverse Polarity Short-circuit Overload Over-temp.	
	Over-temp.	Inner temp. ≥80°C, auto.shut off		Compact Design.	
	OVP (output over voltage protection)	Yes			
	Battery Low Voltage Protection	Yes			
Included Accessories	Cable Length:1.5m, Plug type selectable & spare fuse				
Optional Accessories	temperature sensor				
Remarks	Specification prior to change without notice				

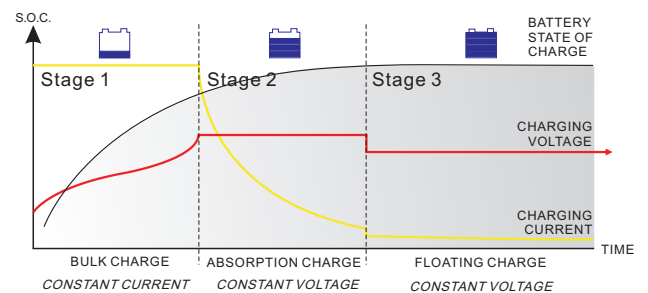
#### Plug Type (optional)



#### ■ Normal 3-Stage (IUoU)Charging Operation

The 3 stage IUoU charge algorithm ensures fast, complete and at same time gentle charging of the lead acid battery.

3-STAGE CHARGING DIAGRAM



#### ■ Temperature Sensor ( Optional)

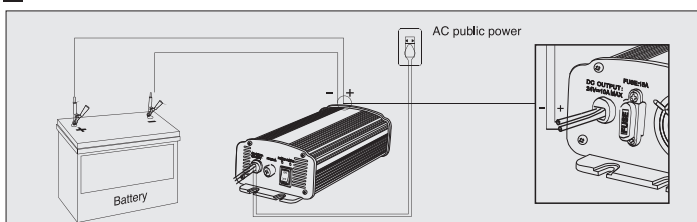
When an external temperature sensor(optional accessory ) is installed, the controller will adjust the bulk and float charge voltage according to the temperature of the battery battery. The regualtion setpoint is 25°C.The controller adjusts the bulk and float setpoints - 0.03V/°C.

Only the factory provided temperature sensor can be used. If no temp.sensor is installed, the controller will set the temperature of the battery at 25°C.

Plug in the temp.sensor before switch on the charger to activate the temperature control function, neave plug in the charger during the charging.

Stick the temperature sensor in a position on the battery and ensure it is not effected by other cooling or heating source.

#### ■ Installation



State	Name	Explanation	Specification
Stage 1	The Constant Current Charging.	Normally the battery is charged at constant maximum current until it rises to absorption voltage level. The charging voltage changes with the battery voltage.	Full Load Charge
Stage 2	The Constant Voltage Charging	When the battery voltage rises to the absorption voltage level, the charging switches to constant voltage charging and battery is over 85% full. The battery is kept at this high voltage while the current reduces gradually to set value at which the charger automatically switches to float stage.	14.5V±0.2V
Stage 3	The Floating Voltage Charging	In this stage, the battery is full and only takes in the amount of current necessary for maintaining the capacity.	≤2A

Note: If you need charge for GEL battery, please let us know before place order we can adjust the charge voltage.