



**Features:**

- ON/OFF Switch. ◀
- I/P Voltage range: Selectable AC 90-165V(110V) or AC 190-265V(230V) ◀
- Battery Status Indicators: Red displays fault, Green LED displays power ON, white LED (dual color LED) shows red displays under charging and green displays float charge). ◀
- Short Circuit Protection: Charger O/P cut-off automatically when overload ◀
- Intelligent Temperature Compensation: Adjust charging voltage to compensate for battery temperature, providing an accurate charge in any climate. ◀
- Overcharge Protection: Constant voltage & constant current output avoid overcharging. ◀

**20A**

MAX. CHARGING

**12V**

DC OUTPUT

**3s AUTO.**

**2**

YEAR LIMITED WARRANTY



AC Output Receptacles (optional)

A*1ea	B*1ea	E*1ea	D*1ea	F*1ea	U*1ea
USA	AUSTRALIA	U.K	GERMAN	FRANCE	UNIVERSAL PLUG

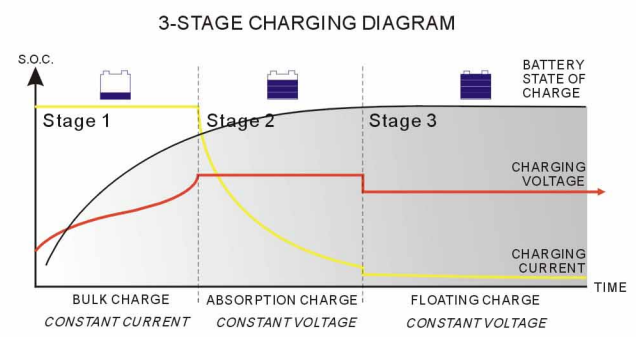


**Specification:**

Model		ENC1220			
Output	DC Voltage	12V	Input	AC voltage range	90-165V or 190-265V 50/60Hz
	Restrict Voltage	14.5V ± 0.2V		Fuse	AC Fuse
	Floating Voltage	13.8V ± 0.2V	DC Fuse		25A
	Max. Wattage	280W	Efficiency at max. power	110V: >83% ; 230V: >87%	
	Max output charging current (continuous)	20A		Dimensions	195*102*55.5mm
USB(selectable)	5V 500mA				
Protection	Battery Reverse	O/P Cut-off, Auto-Recover		Auto 3-Stage Battery Charge Constant current Constant Voltage Floating Charge AUTOMATIC USB 5V 500mA (selectable) Universal Protection Circuit Battery Reverse Short Circuit Overload Over Temp Compact Design	
	Short Circuit	O/P Cut-off, Auto-Recover			
	Over load	O/P Current-Limited			
	Temperature	Inner Temp. More than 80°C, auto. shut off			
Temperature Compensation (selectable)	-3~ 3.5mV/cell. °C ± 1-8% (-24mV/°C ± 1-8%)				
Remarks	All values are based on the standard ambient temperature 25°C and pressure 0.1 Mpa				
AC Cables	Length: 1.5m Plug: selectable				

**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.



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.	12V: 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

**Temperature Sensor**

The temperature sensor (accessory, CU50) is used to optimal charging over wide ambient temperature range. Stick the temperature sensor in a position on the battery which is not effected by other cooling or heating source. Plug in the temperature sensor before switch on the charger to activate the temperature control function, never plug in the charger during charging. Note: Please reference to picture 2.

**Battery Charger Installation and Collection.**

