

SMPS Battery Charger (CVCC)  
1 Station/12V/12A/5A



SMPS Battery Charger (CVCC)  
3 Station/12V/12A/5A



SMPS Battery Charger (CVCC)  
5 Station/12V/12A/5A



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SMPS Battery Charger

Power Solutions

Ensuring Seamless Growth



## SMPS Battery Charger

### Constant Voltage Constant Current Type

A Battery Charger is a device used to put energy into a secondary cell or rechargeable battery by forcing an electric current through it. The charging protocol depends on the size and type of the battery being charged.

SMPS Battery Charger (CVCC type) is an electronic power supply that incorporates a switching regulator to convert electrical power efficiently. In SMPS switching is done at very high frequency of several KHz using Pulse Width Modulation technique which is reliable, efficient, noiseless and compact.

#### Working Principle:

The design is based on the fly back topology. High switching frequency makes the components sizes to decrease and hence reduction in the size. The efficiency of the unit is greater than 75%. The input voltage is applied to the transformer primary which is switched at high frequency using opto-isolators. The output of the transformer is rectified using proper rectifier diodes. The output is further smoothed with the use of smoothing inductors to reduce the ripple to the desire level.

The Battery Chargers provide both constant voltage (CV) charging below the rated current and constant current (CC) charging if the battery tries to draw more than the rated current. In CV mode, the output voltage is well regulated against line and load variations. The input voltage range is 160 V to 270 V which is a wide range of effective working of the charger with higher variation in input voltage.

# SMPS Battery Charger

## FEATURES:

- Due to the wide input range of 160 V to 280 V, the charger is suitable to work in regions with high voltage fluctuations.
- Due to compact structure and user friendly functions, carrying and installation of the charger is easy.
- Batteries ranging from 35 AH to 120 AH can be charged.
- Rugged design of the charger that makes it able to work in harsh environmental conditions.
- Military grade components are used in designing the charger for prolonged life and better tolerance.
- SMF and non SMF both type of batteries can be charged.

## USERS:

- Paramilitary Forces (CRPF, ITBP, CISF, BSF, BRO, DGAR etc.)
- State Govt. Police Wireless and Radio/Telecommunication Deptt.
- State Govt. Fire Services
- State Govt. Road Transport Services
- Indian Railways (Electrical and S&T)
- Battery Manufacturing Industries
- Process Industries

## APPLICATIONS:

- Signal & Telecom/Infocom Power Supply
- Railway utilities
- Substation Batteries
- DG set Batteries
- Process Industries
- Power Generating Plants
- All types of battery operated material handling equipments like Fork-lift Trucks, Platform Trucks, Pallets, Triggers and Stackers etc.

## TECHNICAL SPECIFICATIONS:

Rating	12V/5Amp.	12V/12Amp.	12V/5Amp.	12V/12Amp.	12V/5Amp.	12V/12Amp.
No. of Station	5	5	3	3	1	1
Battery Charging Capacity	7 AH to 40 AH	35 AH to 120 AH	7 AH to 40 AH	35 AH to 120 AH	7 AH to 40 AH	35 AH to 120 AH
Current Setting (Max.)	0.5 A to 5 A	3.5 A to 12 A	0.5 A to 5 A	3.5 A to 12 A	0.5 A to 5 A	3.5 A to 12 A
Technology	SMPS Type					
Charging Mode	Automatic					
Charging Cut Off Voltage:	14.5V+/-0.2V					
Input voltage range	160 to 270 Volts.					
Protections	(a) Reverse polarity protection. (b) Short circuit protection. (c) Over current protection. (d) AC Surge protection at Input with MOV (e) Soft start and soft stop feature without inrush current. (f) Over Voltage protection at 280V at input and automatic recovery at 270 V when the voltage is reduced from 280V. (g) Not to charge battery in case one or more cells are internally short / battery voltage < 10.5V					
Output Voltage	As per battery condition					
Operation	Continuous Duty					
Efficiency	>75% for SMPS at 230V.					
Ripple	< 100mV peak to peak at full load					
Display per station display.	Digital Volt/Amp meter selectable or continuous display					
LED Indication	(a) Charging Status (b) Charged condition status and (c) Reverse polarity					
Cabinet	CRCA sheet Min 1.2mm thick					
Terminals	Suitable capacity( Red and Black pair per station )					
Charging Cable	Flexible Copper Cable, Red for (+) ve terminal and Black/Blue for (-) ve terminal per station					
Cable Size	6 Sq. mm for 12 A & 2.5 Sq. mm for 5 A					
Cable Length	1.5 m					

\*In the interest of continuous product improvement, all specifications are subject to change without notice.

RS Power Systems Pvt. Ltd.