

AP-MWNPB-1700 Battery Charger

Datasheet



AP-MWNPB-1700 is a miniaturized, versatile and ultra-wide voltage compact charger. It utilizes an intelligent digital control design with automatic battery voltage detection technology to provide a user friendly and safe working condition.

The charging voltage range of each model in the series is wide enough to cover a variety of different battery voltages and battery chemistries and there is a built-in voltage detection charging mode which is suitable for lithium battery with BMS. Four types of pre-set 2 stages or 3 stages charging curves can be selected to suit the battery's characteristics. Also, the featured intelligent detection provides batteries a safe protection by proper battery voltage, correct connection as well as correct polarity. The charger passes ITE IEC/EN/UL62368-1 and household appliances EN60335-1/-2-29 dual safety.

AP-MWNPB-1700 can pair with AP-MWSBP-001 Smart Charging Programmer for digital configuration, such as adjusting charging voltage, charging current and charging cycle time, to prolong battery lifetime. In addition, the CAN Bus communication protocol allows remote controlling and monitoring for the status of the charger. It is truly an intelligent, safe and reliable universal charger with outstanding cost performance.

Alpha Power Systems

Unit 18, 30 Heathcote Road
Moorebank NSW 2170

T (02) 9602 8331

F (02) 9602 9180

E admin@alphapower.com.au

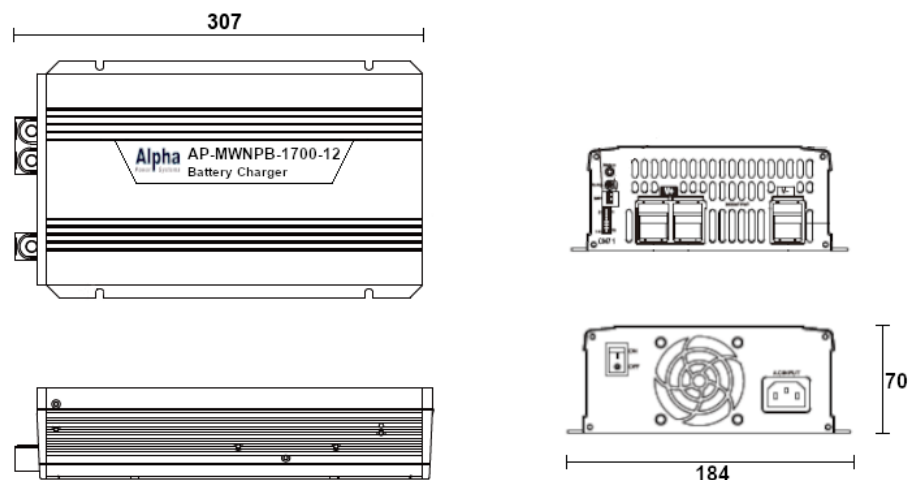
W www.alphapower.com.au

Key features include:

- Intelligent, compact, safe and user friendly
- Auto ranging with ultra-wide charging voltage
- Built-in CAN Bus protocol for controlling and monitoring
- 2 stages or 3 stages charging curves
- Suitable for lead-acid and li-ion batteries
- Protection: Short circuit, Over-voltage, Under-voltage, Over-temperature, Reverse polarity
- Temperature compensation function
- Wide operating temperature
- Thermal controlled DC fan for noise reduction
- Remote On-Off control
- Can pair with Smart Charging Programmer AP-MWSBP-001 (optional)
- Carry handle accessory available (optional)
- Comply with 62368-1, 60335-1/-2-29 dual certification

Applications include:

- AGV
- E-bike, E-scooter, Camping car, Specialty vehicles
- Robotic lawn mower
- Washing robot
- Recreation craft, Personal yacht, Workboat
- Surveillance system
- Telecommunication base station
- Radio system backup solution
- Equipment or instructions with back-up battery

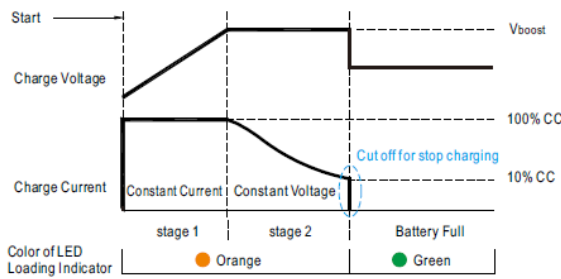
Dimensions:

Product Specifications

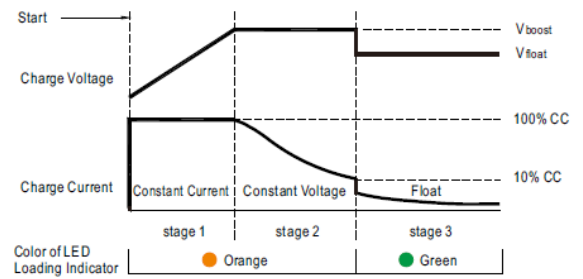
Model	AP-MWNPB-1700-12	AP-MWNPB-1700-24	AP-MWNPB-1700-48
Output			
Nominal Voltage	12V	24V	48V
Default Boost Charge Voltage	14.4V	28.8V	57.6V
Default Float Charge Voltage	13.8V	27.6V	55.2V
Max Output Current	85A	50A	25A
Max Output Power	1428W	1680W	1680W
Battery Type	Lead-acid Flood, Gel, AGM and Li-ion		
Input			
Input Voltage Range	90Vac – 264Vac		
Input Frequency Range	47Hz – 63Hz		
Power Factor	>0.98 @115Vac full load , >0.95 @230Vac full load		
Efficiency	92%	93%	94%
Input Current	14.8A @115Vac , 9.3A @230Vac		
Inrush Current	1.5mA peak @240Vac		
Function			
Charging Stage	Selectable 2 charging stages or 3 charging stages		
Adjustable Charging Parameters	Selectable 4 built-in charging curves. Programmable constant current, taper current, constant voltage and float voltage		
CAN Bus Communication	CAN Bus 2.0		
Indicator	Charger OK signal, Battery Full signal		
Remote Control	On or Off Remote Control		
Protection	Short circuit, Over-voltage, Under-voltage, Over-temperature, Reverse polarity		
Temperature Compensation	By external NTC		
Fan Speed Control	Depends on internal temperature		
Environment			
Working Temperature	-30°C to +70°C		
Working Humidity	20% – 95% RH non-condensing		
Storage	-40°C to +85°C , 10% – 95% RH non-condensing		
Physical and Standards			
Dimension	L307mm x W184mm x H70mm		
Weight	2.96kg		
Standards	CB IEC62368-1, IEC60335-1/2-29, Dekra BS EN/EN62368-1, BS EN/EN60335-1/2-29, UL62368-1, EAC TP TC 004		

Selectable 2 Stage or 3 Stage Charging Curves

Ⓒ 2 stage charging curve



Ⓒ Default 3 stage charging curve

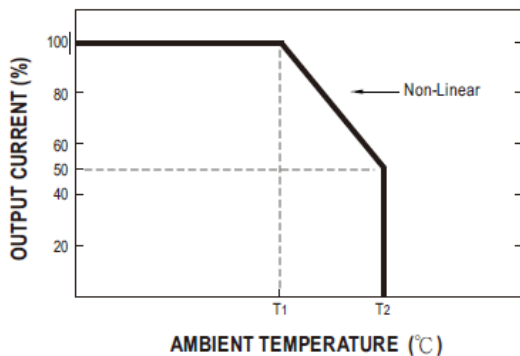
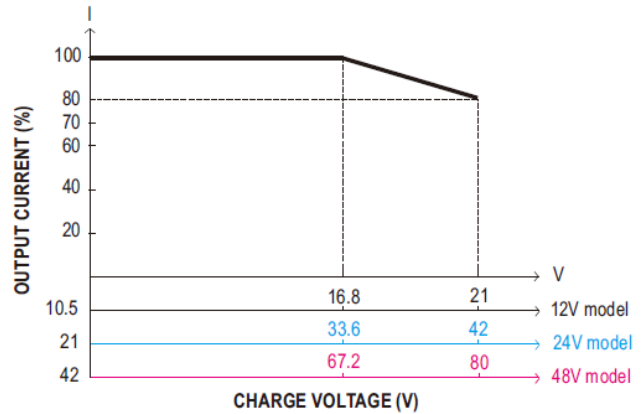
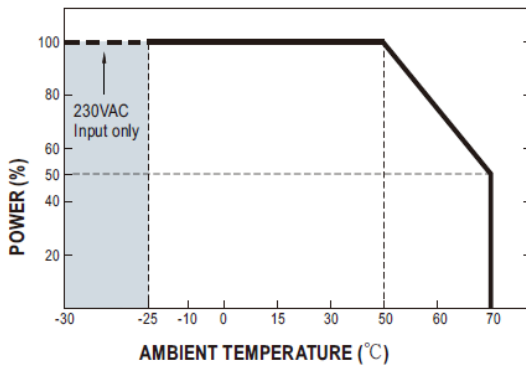


2 Stage Charging Curve

3 Stage Charging Curve

Model	2 Stage Charging Curve			3 Stage Charging Curve		
	AP-MWNPB-1700-12	AP-MWNPB-1700-24	AP-MWNPB-1700-48	AP-MWNPB-1700-12	AP-MWNPB-1700-24	AP-MWNPB-1700-48
Constant Current	85A	50A	25A	85A	50A	25A
Default Boost Voltage	14.4V	28.8V	57.6V	14.4V	28.8V	57.6V
Default Float Voltage	--	--	--	13.8V	27.6V	55.2V

De-rate Curve



T₁(Typ.): Maximum ambient temperature of 100% output current.
 T₂(Typ.): T₁+5°C.