

OPERATION MANUAL

● Caution

- (1) Before using the battery charger - please read all instructions and cautionary markings.
- (2) Use the battery charger in a well ventilated area – for indoor use only.
- (3) To avoid the risk of injury, charge only lead-acid or gel cell type rechargeable batteries.
- (4) Beware of correct polarity.
- (5) Slight heat on the exterior while charging.
- (6) Avoid exposure to heat
- (7) Please remove the plug from AC power outlet after charging

● Instruction of charging procedure

- (1) Connect correct polarized clips to battery terminals.
- (2) Connect to mains and switch on. Then charging starts – Red (2A) / Orange (3A~12A) LED light.
- (3) At green light keep charging for a couple of hours for complete charging.
- (4) When charging finished (Green LED), disconnect from mains and remove clips from battery.
- (5) Charging can continue in "Float stage" without harming the battery.

● LED Indication

2A Charger

RED : Charging

GREEN : Full charged

3A ~ 12A Charger

LED1 : RED → Power on

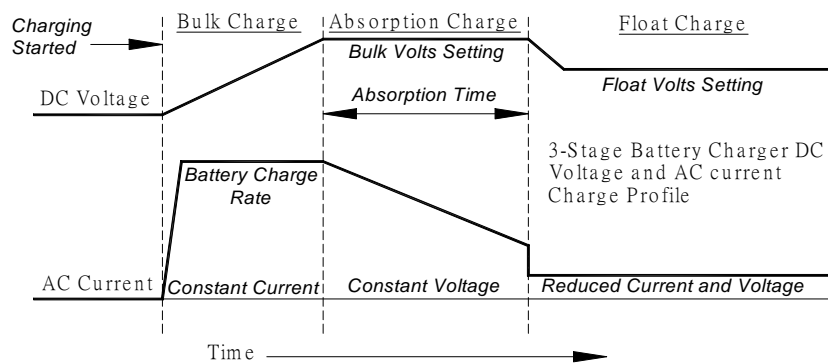
LED2 : ORANGE → Charging

GREEN → Full charged

● FAN Control (3A ~ 12A only)

- 1) Fan on fast speed (Bulk/ Absorption Charge)
- 2) Fan on slow speed (Float Charge)

● Charging Curve



● Case Drawing



2A Charger



3A ~ 12A Charger

● **Specification_12V System**

MODEL	PM-0212F	PM-0312F	PM-0412F	PM-0512F	PM-0612F	PM-0712F	PM-0812F	PM-1012F	PM-1212F
Input Voltage (Vac)	100~240	100 / 220 ± 10% Auto Switch							
Input Frequency	50 / 60Hz								
Output Current	2A	3A	4A	5A	6A	7A	8A	10A	12A
Output Equalizer Voltage	14.6 Vdc ± 0.2 V								
Output Float Voltage	13.7 Vdc ± 0.2 V								
Battery Application	Lead Acid Battery								
Dimensions (LxWxH)mm	120x61.6x37.4	186 mm × 88 mm × 47.5 mm							
Weight	0.5 kgs	0.8 Kgs							

● **Specification_24V System**

MODEL	PM-0224F	PM-0324F	PM-0424F	PM-0524F	PM-0624F	PM-0724F
Input Voltage	100~240Vac	100V / 220Vac ± 10% Auto Switch				
Input Frequency	50 / 60Hz					
Output Current	2A	3A	4A	5A	6A	7A
Output Equalizer Voltage	29.2 Vdc ± 0.2 V					
Output Float Voltage	27.4 Vdc ± 0.2 V					
Battery Application	Lead Acid Battery					
Dimensions (L x W x H) mm	120 × 61.6 × 37.4	186 × 88 × 47.5				
Weight	0.5 kgs	0.8 Kgs				

● **Troubleshooting**

Problem and Symptoms	Possible Reason	Solution
If power LED indicator is off and no output voltage, when charger plug in socket.	1. No AC input 2. Charger malfunction	1. Check AC power source. 2. Notify service center
If commercial power is normal. But charging indicate LED (Equalizer) is off when charging.	1. The polarity connection maybe reversed. 2. The output connection maybe short or open. 3. Output DC fuse loose (for 3A~12A) 4. Charger malfunction	1. Check output cable 2. Check output cable 3. Check output DC fuse (for 3A~12A) 4. Notify service center
If commercial power is normal. But charging indicate LED (Equalizer) is light for a long time.	1. Battery malfunction 2. Charger malfunction	1. The battery can not charge normally, please stop charging and have battery replaced. 2. Notify service center
If the charging Indicator from off turns to on (fully charged) immediately.	1. Battery fully charged. 2. Battery malfunction.	It means the battery is not fully charged and it may be defective. Please have battery replaced.