

Battery Charger

User Manual

Model Name

PM 0824 / PM 0848

PM 1024 / PM 1048

PM 1212 / PM 1424

PM 2512 / PM 2524

PM 3024 / PM 3512

PM 5012 / PM 5024

PM 10012

**Read these installation and operating instructions through
before connecting and using the battery charger.**

● **Information for using the installation instructions**

Warning! Safety warning : Failure to observe this warning may result in damage to equipment.

Caution! Safety warning : Failure to observe this warning may result in damage to equipment and improper functioning of the battery charger.

● **General safety and installation information**

Warning! The following fundamental safety measures must be observed when using electrical equipment to avoid the danger of : • Electric Shocks • Fire • Injury

● **About the unit itself**

- The battery charger must only be used for the purpose specified by the manufacturer.
- Do not operate the battery charger if the housing or cable was damaged!
- The battery charger must be positioned and secured in such a way that it cannot fall over or fall down! The connector cable from the battery charger must be plugged into earth outlet only.
- The battery charger must be kept in safe place out of the reach of children!
- The battery charger must not be operated in a damp or wet environment!
- Ensure good ventilation. - A qualified person who is familiar with the risks involved and the relevant regulations must only carry out servicing and repair!

● **Caution, by installation on boats !**

- Warning installation of electrical units on a boat can lead to corrosion of the boat. Therefore, please let a (boat-) electrician carry out the installation of the charger.

● **About the cables**

- If cables have to be inserted through metal walls or other sharp edged Materials, use a cable duct or cable bushed ! - Secure cables properly !
- Do not lay cables loose or with sharp bends on electrically conductive materials (metal) !
- Do not pull the cables ! - Lay cable in such a way that no one can trip over them !
- Do not lay AC INPUT main cable and DC OUTPUT cable together in the same cable duct !
- The specified minimum cable cross-section must be complied with !
- Lay cables in such a way that they are not exposed to the risk of damage !

● **Intended use**

The use of a high efficiency primary switching controller makes the installation friendly battery

charger very small, light and powerful. Together with the mechanical strength, the pole errors and short circuit protection ensure high operation safety. Because of these features, the units are ideal for mobile uses in motor homes, on motor or sailing yachts or in ambulances and emergency rescue vehicles with a battery capacity of 100Ah : PM 0824/ PM 0848/ PM1024 or 150Ah : PM 1212/ PM 1424 or 300Ah : PM 2512/PM 2524 or 600Ah: PM 5012/PM 5024 or 600Ah above: PM 10012

● **Feature**

- Small, light and robust in design and manufacture.
- Pole error and short circuit protection.
- Rectifier function. As mains unit, suitable for parallel operation.
- Easy installation by brackets on the housing.
- LED charge display.
- 3-stage charger characteristic for rapid and complete battery charging.
- Optimum charge characteristics through temperature sensor (Option Function).

● **Installation and putting into operation**

- ⊙ The battery charger must be installed in a location which is protected from exposure to damp. Ensure that the location is well ventilated and that the surface on which it is mounted is level and sufficiently strong. The air intake on the base of the battery charger and the air outlet on the rear must always be unobstructed.
- ⊙ Before connecting or disconnecting the DC cable, set the mains switch to "off" and unplug from the mains.

PM 1212 /PM 0824 /PM 1024 : Glass fuse 3AT 250V ; PM 2512 / PM 1424 : Glass fuse 4AT 250V
PM 0848 /PM 1048 : Glass fuse 6AT 250V ; PM 5012 / PM 2524 /PM3024 : Glass fuse 8AT 250V
PM 5024 / PM 10012 : Glass fuse 8AT 250V

Mains cable (220V)

Minimum wire cross-section in millimeter for connecting the charger, only use cables with the specified wire cross-sections.

- These are shown in the following diagram. - Make sure that the lugs are securely fitted.
- Fit the ends of the cables to be connected to the battery charger with lugs
(Fork aperture : 6mm) Crimp the lugs on to the cable end with crimping pliers.
- Connect the cable to the unit via the two terminals on the front panel.

Despite the pole error protection, always make sure that the cables are properly poled.

Rectifier function

The battery charger can be used main unit provided the maximum current consumption of the con-

sumers does not exceed the current rating of the charger. It was recommended always to connect up the battery. The consumers should be connected direct to the battery. This applies in particular to consumers with high peak currents. (e.g. high start-up current in the case of Compressors)

Maximum current consumption of consumers when used as a mains unit

PM 0824/ PM 0848 → 8 Amp PM 1024/ PM 1048 → 10 Amp PM 1424 → 14 Amp

PM 1212 → 12 Amp PM 2512/ PM 2524 → 25 Amp PM 3024 → 30 Amp

PM 3512 → 35 Amp PM 5012/ PM 5024 → 50 Amp PM 10012 → 100 Amp

Charging

The temperature-controlled 2-phase charger characteristic guarantees rapid, complete and at the same time gentle charging of the battery. In the first phase, battery is charged with constant current until gassing voltage is reached. When charging with compensated charge characteristic, the temperature-dependent gassing voltage is taken into account, providing optimized full-charging and over voltage protection. The green LED on the front of the charger remains lit up during charging until the charging end voltage is reached. In the second, battery is kept at constant voltage and the charging current gradually fails to a low value. Battery is practically at rest and only takes the current necessary for maintaining capacity.

Caution!

Battery with a cell closure must not be charged, as there is otherwise the danger of explosion through the occurrence of electrolytic gas. Nickel-cadmium batteries and non-chargeable batteries must not be charged with the charger. The casing of these types of batteries can burst explosively.

Charge Curve

