**Dolphin**
**charger**

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EN

# TECHNICAL MANUAL

Dolphin premium
Dolphin pro

**Dolphin**
**premium**

## Battery charger

**premium 12V60A**
399050 - PF.15053

**premium 24V30A**
399060 – PF.18105

## SAFETY PRECAUTIONS

**TO PREVENT ANY RISK OF ELECTRIC SHOCK OR FIRE, READ THIS MANUAL CAREFULLY BEFORE INSTALLING THE EQUIPMENT.**

## SAFETY PRECAUTIONS

EN

▸ All electrical connections to and from the charger must remain accessible at all times.

▸ This system should not be exposed to water or dust.

In the event of any problems or misunderstandings, please contact your dealer.

This equipment is not designed for use by people (including children) with diminished physical, sensorial or mental capacities, or people without experience or knowledge of such equipment, unless they have received prior instruction in the use of the equipment from a person responsible for their safety or are under the supervision of such a person. Ensure that children are supervised in order to prevent them playing with the device.

This equipment contains components that may cause electric arcs or sparks, when connecting cables, for example. To prevent any risk of fire or explosion, do not install this equipment close to flammable materials, liquids or gases.

## Installation precautions

To prevent any risk of irreversible damage to the equipment, ensure that you comply scrupulously with the following recommendations.

- Do not install this device near a heat source.
- It should not be installed in an airtight or badly ventilated area.
- All ventilation ducts must be unobstructed.
- Leave at least 10 cms / three inches clearance around the device for proper ventilation.
- Mount in a vertical position, to create natural ventilation for the charger. Note that the wiring connections are at the bottom of the charger.

- It is strictly forbidden to tamper with the system casing in any way.
- This device is not a toy and must be kept out of the reach of children.

## Connection precautions.

To prevent any risk of electric shock or irreversible damage to the equipment, you should comply strictly with the following recommendations.

- The installation to which this device is connected must comply with the standards currently enforced in the country of use..
- This device is designed to be connected to 220-240V 50Hz or 110-120V 60Hz single phase circuits. 115V / 230V selection is automatic.
- In order to protect the occupants, the input point must be attached to a differential circuit breaker. Please refer to the specific characteristics of the circuit breaker.
- For security reasons, the system's PE terminal must strictly be connected to the installation's Earth (green/yellow wire in the cable section). Please consult the wiring diagram.
- To prevent overheating, ensure the correct connection and size of cables.
- The input cable must not exceed 3 meters (10 feet) and the output cable 1.5 meters (5 feet).
- All cable connections and connectors must be maintained in good condition. Once the connection of the AC cable has been completed,

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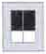
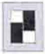
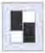
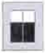
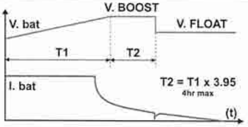
- The mains and battery connections must be disconnected before any work is carried out in order to avoid transfer of energy
- Fuses must be replaced by fuses that have the same characteristics and performance levels.

| | | | |
|---|---|---|---|
| | 12V60A | | 24V30A |
| Charging curve 1<br>Lead open |  | Battery type: Lead open | |
| | | V.boost = 14,2V<br>V.float = 13,2V | = 28,4V<br>= 26,4V |
| Charging curve 2<br>GEL |  | Battery type: GEL, AGM, Spiral | |
| | | V.boost = 14,2V<br>V.float = 13,7V | = 28,4<br>= 27,4 |
| Charging curve 3<br>Lead Calcium |  | Battery type: Lead Calcium | |
| | | V.boost = 14,8V<br>V.float = 13,7V | = 29,6<br>= 27,4 |
| Charging curve 4<br>Power Supply<br>or LiFeSo4 |  | Battery type: Power supply or LiFeSo4 | |
| | | V.boost = 14,2V<br>V.float = 14,2V | = 28,4<br>= 28,4 |
| Voltage precision | +/- 2% | | |
| Ripple | < 1% pp (BW < 20 MHz) | | |
| Max current | 60A | | 30A |
| Fuse | 3xF25A 32V<br>Automotive | | 3xF15A 32V<br>Automotive |
| Protections | Against output overload, output short circuit, excessive internal temperature, excessive battery temperature, output overvoltage, battery reverse polarity (fuse) | | |

|  | 12V60A | 24V30A |
|---|---|---|
| INPUT |  |  |
| Voltage | 115V - 230V (+/- 15%) |  |
| Frequency | 50Hz - 60Hz (+/- 10%) |  |
| Cos phi | 0,9 typ |  |
| Efficiency | 80% typ |  |
| Mains consumption | 10A | 5A |
| Fuse | T16A 250V 5x20mm |  |
| OUTPUT |  |  |
| Nb of outputs | 3 isolated outputs |  |
| Nb charging curves | 4 possible charging curves.<br>Selection by external dip-switch |  |
| Curves types | IUUo |  |
| Charging profile |  |  |

| GENERAL |  |
|---|---|
| Display | Front LED or remote<br>TOUCH View (option) |
| Operating temp | -10°C à +50°C |
| Storage temp | -20°C à +70°C |
| Humidity | 10% à 90% (without condensation) |
| Ventilation | Forced fan cooling |
| External com | CANbus |
| EMC | EN61000-6-3 et EN61000-6-1 |
| Security | EN60335-2-29 (2002) |
| Housing | White aluminium – wall mounted |
| Mounting | 3 x 4mm screws |
| Dimensions | 284 x 240 x 115mm |
| Weight | 3,1 kg |
| Main acces | 3 points, 20A 230V, 4mm2 max<br>Réf. : 770.813/G11-000 (WINSTA - WAGO) |
| BAT acces | 4 points, 60A, 35mm2 max |
| TOUCH acces | RJ11, 4 points |
| CAN acces | Micro-Fit, 6 points |
| UART acces | RJ12, 6 points |

# TECHNICAL SPECIFICATIONS

NOT-PREMIUM900W-02

| Mode | LED | Status |
|---|---|---|
| Absorption | Steady yellow | The batteries are charging. Time required to complete Absorption mode varies depending on the initial status of the batteries, but is limited to 6 hours. |
| Equalisation | Yellow blinking | The batteries are coming to the end of the charging cycle. Time required to complete Equalization mode, depending on the initial status of the batteries, varies from 30 minutes to 4 hours. |
| End of Equalisation | Green blinking | The batteries are almost charged. Floating mode will begin in less than 30 minutes. |
| Floating | Green | The batteries are completely charged. |
| Internal Temperature fault | Red fixed | The charger is on Standby for a period of between 30 seconds and 10 minutes. Once the fault has been solved, the device will start up again automatically. |
| Output voltage fault | Red blinking | The charger is on Standby for a period of 30 seconds. Once the fault has been solved, the device will start up again automatically. |
| Battery fuse fault | Red Flashing | The fuse should be replaced. |

# CONNECTIONS

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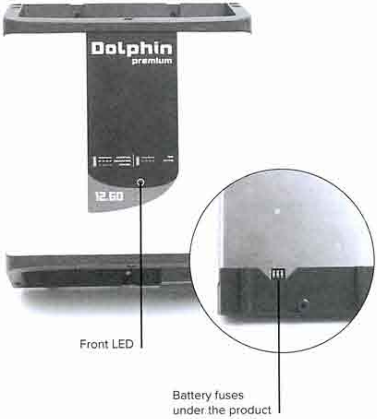
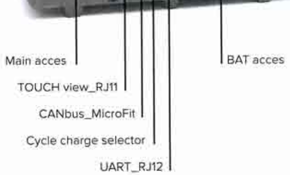
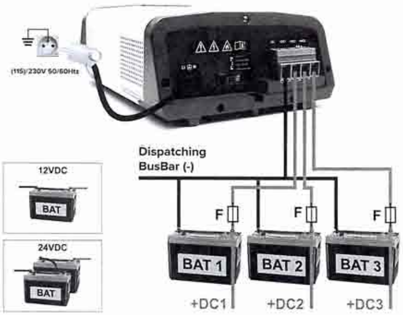




# CONNECTIONS

NOT-PREMIUM900W-02

## Wiring diagram



## Assembling the shore power connector

**Step 1**
Remove approx 3 cm of the outer sheath
Remove approx 8 mm of the inner wires' sheaths
Tinplate the bare copper ends

**Step 2**
Remove the security cap using an utility knife

**Step 3**
Pull the conductor through the pre latched strain relief housing

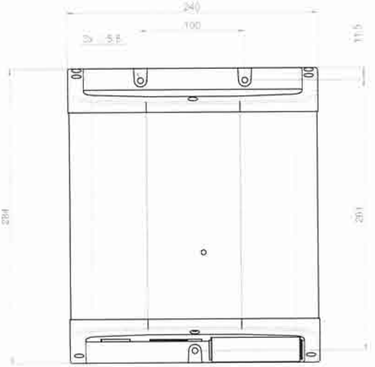
**Step 4**
Open the clamp with a screwdriver and insert the first cable up to the stop. Repeat this step for all three cables

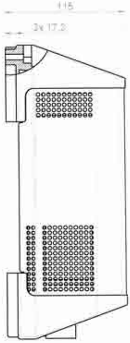
**Step 5**
Latch the connector on to the strain relief housing

**Step 6**
Snap together the upper and lower parts of the strain relief housing and tighten it using the screw

# DIMENSIONS

NOT-PREMIUM900W-02





Check that the mounting screws used are compatible with the type of mounting wall (resin, wood, metal, etc.). The charger should be positioned against the wall and mounted firmly.

## Warranty

**TO PREVENT ANY RISK OF INCORRECT USE OF THE DEVICE, CAREFULLY READ THE LIST OF POTENTIAL EVENTS OR FAULTS NOT COVERED BY THE PRODUCT WARRANTY**

- This device is not protected against battery polarity reversals. Risk of irreversible damage to the equipment.

- Should the device be dropped or fall this could cause irreversible distortion of the housing as well as a "crash" of internal fans and certain electronic components.

- Modifications to the housing (additional holes in particular) could result in the scattering of swarf or metal filings onto the circuit board and, consequently, in malfunctions or irreversible damage to the equipment.

- Interference with or modifications to the circuit board could result in operating modes not originally anticipated, and consequently, in malfunctions or irreversible damage to the equipment.

- Powering the device from an unsuitable energy source (as a general rule, mains supply voltage that is too high).

- Accidental original mains supply surge or lightning strike generally causing irreversible damage to the equipment.

- Replacement of fuses with fuses with different characteristics that could cause irreversible damage to the equipment.

- Obvious connection errors causing irreversible damage to the equipment.

- Water spray or running water inside the device that could result in irreversible electronic malfunctions.

### Precautions for scrapping

This device contains electronic components and materials that must be recycled at the end of the product's usable life, for environmental reasons.

At the end of their usable lives all devices must therefore be returned either to the local distributor or entrusted to a specialist electronic equipment recycling company.

### EC compliance

This device complies with the applicable European standards and has an EC mark. Its certificate of compliance is available on request.