**USER GUIDE** 

## **SHORE POWER SYSTEM**



PRELIMINARY

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## 1. INTRODUCTION

The boat builder/ workshop is always responsible for taking all necessary safety precautions when installing a Shore Power System. Make sure that the installation is in accordance with the IP level on your system.



Charger, Switch in Central

Hot Water, Switch in Central

## 2. THE CENTRAL

#### NOTE

3.

The distance between the shore plug and 230V central can at maximum be 3m. We offer different cable length up to 3m. Check your system for shore plug cable length before you drill holes/ make recess for the central and shore plug. Install the 230VAC Central in a suitable location. You may use the enclosed template for marking the recess hole.

# The 230V central shall NOT be installed in following positions:

- upside-down or angled
- close to 12V DC distribution panels
- open on a side wall
- close to heaters or warm objects
- close to waste water
- or mounted in such a way that the central is easily exposed for physical damage with danger as hazard





## SHORE MAINS PLUGG

#### NOTE

Make sure there is sufficient space in the rear for the cable and enough room for the fastening nuts The Shore Plug should be mounted in such a way that it is protected against rain, splash and mechanical damage, and so that the connector lead can be connected without difficulty.

If the surface is uneven the attached gasket may be to thin to create a waterproof connection. If so, use a extra gasket or foam as Sikaflex marinegrade to seal the joint.



#### 3.1 Recessing the SHORE MAINS PLUG

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Be careful when drilling/ cutting the hole, so that mounted components, cables etc. are not damaged The gasket may be used as a template for cutting the hole for the shore plug.

Place the gasket carefully where you want to mount the mains plug. Use a pencil and draw a picture of the gasket.

Make the hole for recessing the shore mains plug.

The SHORE MAIN plug shall be mounted so that the cover is hinged horizontal.

The plug must not be fitted with the cover hinge pointing downwards.

#### 3.2 Drainage

The Shore plug must be fitted with the hinges straight upwards this so that the drain hole leans downwards. This for allowing condensation and e.g water to be drained away.

#### 3.3 Earth connection.

The earth connection (yellow-green-multi core cable with ringshapedcable shoe) MUST be connected to a good earth point on the DC Negative of the boat. Paint, underseal etc. MUST be removed from the contact point of the earth 230 VAC connection. A toothed washer shoud be used both under the screw head and between the cable shoe and the earthing 0  $\wedge \wedge$ point.





Eart Wire outlet from Central

## 4. THE 230VAC SOCKETS

The 230VAC sockets must be placed in accordance with the harmonized standards for the market the boat is going to be sold /used in.

#### 4.1 Types of Sockets

The standard Shore Power Sockets comes in IP class 40 and 44. Please check your supplied sockets and make sure that they are as ordered and suit your aria of use. Please contact local autorities if you are unsure about your local IP requirements.



For the Scandinavian marked, the Sockets of IP class 40 is intended for use in dry areas as saloon and cabins. Please note that if you have a boat with sun roof, the cabin can not be clasified as dry.

The Sockets marked IP 44 are 'splash proof' and can be usen in the engineroom, kitchen area, and can be used in bath room if its protected against direct water jet from shower.



4.2 Mounting of Sockets for hided interconnecting cables

#### NOTE

Be careful when drilling/ cutting the hole, so that mounted components, cables etc. are not damaged

#### NOTE

Make sure there is minimum 5cm space behind the Socket for models with cable mounted with direction straight back.

#### 4.3 Sockets in Bath Rooms

The standard shore sockets comes in IP class 40 and 44. Please check your supplied sockets and make sure that they are as ordered.

Recess the hole for the socket carfully. Please make sure that the space behing the socket is sufficient for the cable

Avoid bending the cable to much. Minimum clerance to Socket back is 5cm.



Before mounting Sockets in Bathroom make sure that you have your Local regulations available. For installations in boats for the Norwegian market you shall mount the socket 60cm or more away from the shower cabinet, if you want to mount the socket lower than 170cm from the floor.

WARNING



The 230VAC sockets must be mounted so that its protected against water from the shower.

## **5.THE INTERCONNECTING CABLES**

#### NOTE

Be careful when drilling/ cutting the hole, so that mounted components, cables etc. are not damaged



If the interconnecting cable must pass a wall etc, be careful when drilling holes to pass through the Plug-In cable.

When passing the Main Shore plug to the central, and from the central and to the sockets, charger, water heater, and to other users. take extraordinary care that the interconnecting cables are, and will not be, exposed for damages. If the cable has to pass through holes,

etc, with sharpe edges, the interconnecting cable must be insulated against mechanical damage. It is strongly recommend a rubber bushing and seal the hole This must be performed in a way that secure the insulation to last and not to brake.

There is also supplied a cable protection coat for extra protection against mechanical damage when use in hash environments.



# 5.1 Making holes for cables

A Ø25mm hole saw is a particularly suitable tool for this task. Make sure that the tool does not damage fitted

components, brake lines, electrical cables etc.

To seal the holes and to protect against mecanical damage use e.g a rubber bushing to seal the hole. Make sure the rubber bushing is fitted properly.

Interconnecting cables should slope downwards from the passing through point into the cabin compartment (1) so that



water or humidity does not run along the cable into the cabin.

If passing through dirty arias clean the surfaces carefully with a suitable grease solvent, for instance Acrysol. Do not use acetone, trichlorethylene, Breakclean or similar products as PVC and plastic may be damaged. 5.2 Plug-In connectors and interconnection leads.



## 6. BATTERY CHARGER

When use of a charger not supplied from N.W.M, nor equipped with N.W.M.'s special safe plug in connectors, connection the battery charger via a standard shore Power socket as shown from the manufacturers wiring diagram.

Connect the battery charger in accordance with the diagram attached with the charger.

All other connections will be treated as illegal. In such case the system safety and system warranty in not valid.

#### 6.1 Mounting of battery charger

#### NOTE

Avoid charging batteries in a closed area, as there is a potential danger of explosion.

READ battery charger User Guid before mounting.

Connection to the battery must always be made with the enclosed fuse. Mount the battery charger in accordance with the attached battery chargers user guide.

Make sure the battery charger is not placed too close to hot parts such as engine or engine exhaust pipes.

For connections from the Battery Charger to the Battery, always read the Battery Chargers User Manual Carefully

For Retronic Chargers, see specific Battery Charger Mounting Instruction.



## 7. Elektronical Waste (WEEE)

The use of WEEE symbol indicates that this product can NOT be treated as ordinary household waste.

To protect the environment make sure that this product is not delivered through a ordinary bin

#### Waste Electrical and Electronic Equipment (WEEE) Symbol



If you are unsure, please contact your local authorities for guidance regarding special waste and recirculation of this type of product. **Technical Spesifications** 

<u>Central /(Standard):</u> 16A Dual Fused 30mA RCB 2 16A Switch ON/OFF circuits Standard text: Hot Water-Charger Other text on request Number of circuits, functions etc. on request WE CUSTOMIZE ALL ON REQUEST

<u>Cables:</u> 1,5mm2 and 2,5mm2 With or without extra protections Standard: 1-2-3-4-5-7 m length Other on request

<u>Sockets:</u> Standard Scandinavian model Standard IP 40 and 44 Others on request Single, Dual and Combined 12/230 All types on request All country models on request

<u>Main Inlet Plug/ Cable</u> Stainless Steel Waterproof IP67 16A/ 2,5mm2, Yellow-Marinegrade 25m with interface cable to Scandinavian output feed.

Thank you for using Nord West Marine as SHORE POWER SYSTEM



Claims may not be made for damage resulting from:

- ✓ Normal wear and tear
- ✓ Faulty installation
- ✓ Lack of maintenance and faulty or irresponsible use
- ✓ The use of non-original connectors/leads or use together with non-original parts
- ✓ Modification or repairs of the product, or attempts thereon, carried out by others than N.W.M. without written authorization by N.W.M to carry out such modification, or repair conditions after delivery beyond the control of N.W.M.

