1. GENERAL INSTRUCTION

Thank you for choosing our product. This manual contains important safety and operation instructions. Please read this manual before use. THE WP-GI NEEDS TO BE INSTALLED BY A QUALIFIED TECHNICIAN.

1.1 Safety instruction

As dangerous voltages and high temperatures exist within the WP-GI, only qualified and authorized maintenance personnel are permitted to access and repair it. This manual contains information concerning the installation and operation of the WP-GI. All relevant parts of the manual should be read prior to commissioning the installation. Please follow the local regulations. Any operation against the safety requirement or against design, manufacturer and safety standards will endanger the safety of the operator and the manufacturer warranty.

1.2 General precautions

- Do not expose the WP-GI to dust, rain, snow, liquids or gases of any type. It is designed for indoor use only in a well ventilated area.
- Do not install the WP-GI in the presence of liquids or gases of any type. Their entry into the WP-GI may cause damage.
- To avoid fire and electric shock make sure all cables have the correct thickness and are connected well.
- Do not put any inflammable goods near the WP-GI.
- Never place the unit directly above batteries, gases from a battery will corrode and damage the WP-GI.

2. GENERAL DESCRIPTION

The WP-GI is a high efficiency galvanic isolation transformer with a soft start function integrated. The softstart prevents popping of circuit breakers when the transformer is energized at starting. It can be used as 230V/230V transformer, 110V to 130V, 220V to 240V and 230V to 110V. In every situation, the full power can be transferred and the metal cabinet of the WP-GI. This secondary connection will magnetize immediately. Usually this will result in tripping of the circuit breaker installed at the input side with high inrush current. The fuse F1 should be replaced.

2.1 Safety device

For the safety of the installer, the neutral is not connected. It is done in the following section in the connection compartment.

2.2 Corrosion prevention for boats and ships

The device is mainly designed to be used as a galvanic isolation transformer to break the ground loop which causes galvanic corrosion on metal hulls of boats and ships. The primary protection earth (PE) connection is terminated in the isolation transformer without making any electrical connection. The PE of the secondary side is connected to a shield inside the transformer and the metal cabinet of the WP-GI. This secondary PE connection is connected to the grounding system of the ship's fitting. This is a safe situation on board. However, this grounding loop to shore which causes the galvanic corrosion. A special connection can be made when the boat is on dry dock, connecting the primary PE to the secondary PE temporarily.

2.3 Protections

The equipment is being protected against basic failures through hardware protection directly making it a robust and reliable equipment.

Overload protection

In case a too high transformer temperature is detected, the WP-GI will switch off the input and the "PROTECT" led in the connection compartment will be lit. The WP-GI will automatically recover the AC output.

WARNING: After cooling down, the WP-GI will automatically recover the AC output.

High voltage protection

If the input voltage exceeds the 110% setting of the WP-GI, the WP-GI will be disconnected. The fuse F1 will be blown which disables the softstart function. The unit will not start up.

If the correct voltage is selected and connected where the fuses F1 are blown, the transformer will magnetize immediately. Usually this will result in tripping of the circuit breaker installed at the input side with high inrush current. The fuse F1 should be replaced.

2.4 Before installation

Before installation:

- input voltage
- output voltage
- connect secondary PE to secondary N according to regulations.

2.5 Installation

Installation and connection

WARNING: For the safety of the installer, cut off all power before installation.

The WP-GI must be mounted vertically. Keep the situation as small as possible. Leave proper ventilation space around the WP-GI to the wall, floor and other equipment.

WARNING: No size other AC source

WARNING: Always follow local regulations! The installer is responsible for correct installation of this device.

AC input cable 230V / 110V, 2.5mm² or 6mm²
AC output cable 230V / 110V, 2.5mm² or 6mm²
Select AC input voltage
Select AC output voltage

Material list

The unit is supplied with the following materials. Please confirm the version number on the unit as shown on the output caution:

- WP-GI
- User manual
- Cable jumper to connect N to secondary PE
- Cable jumper to connect primary PE to secondary PE

Location

Please install the WP-GI in a dry, clean and ventilated location. Operating temperature: -10°C to +40°C, storing temperature: -20°C to +40°C. Relative humidity: 0 to 95%, non-condensing.

Cooling: Forced air, temperature controlled.

General advice

Before connecting the equipment, verify the AC input voltage and required output voltage according to the Installation.

It is recommended to install an appropriate Ground Fault Circuit Interrupter (Residual Current Device) and Circuit Breaker at the AC input side (breaker). On the AC output side, a circuit breaker is recommended before each branch. It is not necessary to install a circuit breaker directly at the output of the WP-GI when appropriate cables have been used at input and output side.

The WP-GI should be used in parallel with a suitable central bolt or stud and bolts or studs at the bottom. See detail pattern.
2.7 Trouble Shooting

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>No input voltage</td>
<td>Incorrect connections or faulty output terminal</td>
<td>Check connections and electrical circuits.</td>
</tr>
<tr>
<td>Wire ends in terminals</td>
<td>No output voltage</td>
<td>Check connections and electrical circuits.</td>
</tr>
<tr>
<td>Over temperature</td>
<td>High ambient temperature</td>
<td>Check ventilation and cooling.</td>
</tr>
<tr>
<td>The PROTECT LED Burns</td>
<td>Checking of input and output terminals</td>
<td>Check check connections and electrical circuits.</td>
</tr>
<tr>
<td>Over load on output too high</td>
<td></td>
<td>Check load current and settings.</td>
</tr>
<tr>
<td>Shorts in terminals</td>
<td></td>
<td>Check all input and output connections.</td>
</tr>
</tbody>
</table>

2.8 Specification

- **Rated Frequency**: 50Hz / 60Hz, 50Hz / 60Hz
- **Rated Power**: 2000W, 2000W
- **Nominal Current**: 16A / 32A, 30A / 60A
- **Total Efficiency**: >95%
- **Insulation Class**: Class H 180°C
- **Temperature Rise Class**: Class F 100°C
- **Audible Noise**: <40.0 dB(A), <50 dB(A) with forced cooling
- **Voltage**: 110V/60Hz, 230V/50Hz
- **Frequency**: 50Hz / 60Hz
- **Protection**: 2P 63A, Overload protection
- **Quality**: CE + EMC (EMC directive) and the 2006/95/EC (Safety directive)

**Whisper Power B.V.**

Van Heekland 82, 9227 JB Drachten, The Netherlands

Tel: +31 (0)522-571 392, Fax: +31 (0)522-571 586

info@whisperpower.com, www.whisperpower.com