

PURE SINE WAVE
DC TO AC POWER INVERTER

15S-12A / 15S-24A

15S-12E / 15S-24E

30S-12A / 30S-24A

30S-12E / 30S-24E

Instruction manual

Read these instructions before connecting and using the switch-mode rectifiers. Failure in observing this warning may result in injury to persons and damage to equipment.

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

- Do not connect the output voltage to other power sources.
- The switch-mode rectifiers may only be used for the purpose specified by the manufacturer!
- When working on the switch-mode rectifiers always disconnect it from the mains!
- A release of the protective device means that danger is still given from parts, which remain under voltage during repairing works!
- Do not operate the switch-mode rectifiers, if housing or cables are damaged!
- Do not expose the inverter to direct sunlight in order to avoid additional heating.
- The switch-mode rectifiers must be positioned and fixed in such a way that it cannot fall over or fall down!
- The switch-mode rectifiers must be kept in a safe place out of the reach of children!
- The switch-mode rectifiers may not be operated in a damp or wet environment!
- Air intake and outlets may not be blocked.
- Ensure good ventilation!

Caution by installation on boats!

- Wrong installation of electrical units on a boat may lead to corrosion of the boat. Therefore, please let a (boat-) electrician carry out the installation of the inverter.

About the cables

- If cables have to be inserted through metal walls or other sharp-edged materials, use a cable duct or cable bushes!
- Do not lay cables loose or in sharp bends on electrically conductive materials (metal)!
- Do not pull the cables!
- Do not lay 115/230V AC mains cable and 12/24V DC cable together in the same cable duct!
- The specified minimum cable cross-section must be complied with fix cables properly!
- Lay cables in such a way that on one can trip over them!
- Lay cables in such a way that they are not exposed to the risk of damage!

Use of switch-mode rectifiers

This switch-mode rectifiers can be used in all places where a 12VDC/24 VDC connection is available. Maximum continuous performance is 150W for 15S-12/15S-24 and 300W for 30S-12/30S-24.

Unit that need a higher performance rate may not be connected.

Remark! Please consider that in case of connection of electrically driven units (e.g. drilling machine, refrigerator, etc.) for operation start a higher performance is needed as indicated on the type plate.

Delivery kit

No.	Pieces	Description
1	1	Pure sine wave inverter with connection wire
2	1	Instruction manual

Installation

Take care that a firm connection is made when plugging in (for inverter with cigarette lighter plug) and take care that a firm connection is made with the right polarity.

- 1 115/230V AC Output
- 2 ON/OFF Switch
- 3 ON/OFF Controll-LED

Attention! In case of an extended wire, please take care of the right diameter of the wire.

For 300W sine wave inverter, please make sure that poles will not be exchanged! Reverse polarity connection will blow the internal fuses. Exchange of fuses by experts!

Operating the inverter

Operation of the switch-mode rectifiers is done by the ON/OFF switch. In case you switch the inverter "ON" the green control LED signals operation.

In case battery voltage falls below 10.5V for 12V version or 21.0V for 24V version during operating mode, an acoustic warning signal is given and the color of the control LED changes from green to orange.

In case the inverter is heated up too seriously, it switches off automatically and the color of the control LED changes from green to orange. Switch the inverter off manually. After the inverter has cooled down, you can switch it on again.

When running the pocket Power for a long time and with maximum load, it is recommendable to start the engine of the vehicle so to prevent the vehicles battery getting discharged.

The Pocket Power may be used either while the engine is running to turned off. However, do not start the engine with the Pocket Power in use. The voltage to the lighter plug (for inverter with lighter plug) may shut off during cranking.

The inverters of 150W and 300W are designed to automatically protect and limit output power on setting rating when overloading or short circuit and the inverter performs auto-recovery as overloading or short circuit condition released.

Fault detection

Error	Cause	Correction
No output voltage	Cigarette lighter is turned on via the ignition (for inverter w/cigarette lighter plug)	Turn on the ignition
	No or bad contact to battery terminal (30S-12/30S-24)	Improve wiring or battery contact
	Battery voltage lower than 10V (12V version) or 20V (24V version)	Charge the battery (start the engine)
	Thermal overload	Switch off the consumer cool down the inverter and improve air circulation
	Defective fuse either within the inverter or the car fuse	Replace the fuse by the help of an expert
Alarm sounds during operation	The battery voltage is below 10.5V (12V version) or 21V (24V version)	Charge the battery
	Bad contact in the cigarette lighter socket under load condition	Clean the contacts

Unit switches on/off frequently	Max. load is too high	Reduce the load Check power specification and
When turning on the consumer, the Pocket Power switches off	Initial current load too high	Verify with max. power of the inverter

Technical data

150W PURE SINE WAVE SPECIFICATION:

Model	115V 230V	15S-12A 15S-12E	15S-24A 15S-24E
Output Power			
Continuous		150W	150W
Surge		300W	300W
Output Voltage		115V+/-3% 230V+/-3%	115V+/-3% 230V+/-3%
Output Frequency		50Hz/60Hz be specified	50Hz/60Hz be specified
Output wave form		Pure Sine Wave	Pure Sine Wave
Total Harmonic Distortion		<3%	<3%
Input Voltage Range		10V-15V	20V-30V
Efficiency		>90%	>90%
No Load Current Draw		0.5A	0.3A
Low Battery Alarm		10.7V	21.4V
Low Battery Shut-Down		10V	20V
Dimension (L x W x H)		190 x 120 x 62 mm	190 x 120 x 62 mm
Weight		1.2kgs	1.2kgs

Technical data

300W PURE SINE WAVE SPECIFICATION:

Model	115V 230V	30S-12A 30S-12E	30S-24A 30S-24E
Output Power			
Continuous		300W	300W
20 Minutes		350W	350W
Surge		500W	500W
Output Voltage		115V+/-3% 230V+/-3%	115V+/-3% 230V+/-3%
Output Frequency		50Hz/60Hz be specified	50Hz/60Hz be specified
Output wave form		Pure Sine Wave	Pure Sine Wave
Total Harmonic Distortion		< 4%	< 4%
Input Voltage Range		10V-15V	20V-30V
Efficiency		> 90%	> 90%
No Load Current Draw		0.7A	0.4A
Low Battery Alarm		10.7V	21.4V
Low Battery Shut-Down		10V	20V
Dimension (L x W x H)		285 x 120 x 62 mm	285 x 120 x 62 mm
Weight		1.75kgs	1.75kgs