

Western Instruments

Established 1965

26509 Township Road 543
Sturgeon County, Alberta
T8T 1M1 Canada

Phone: (780) 459-6720
Fax: (780) 459-7837
E-mail: info@westerninstruments.com

Web: www.westerninstruments.com

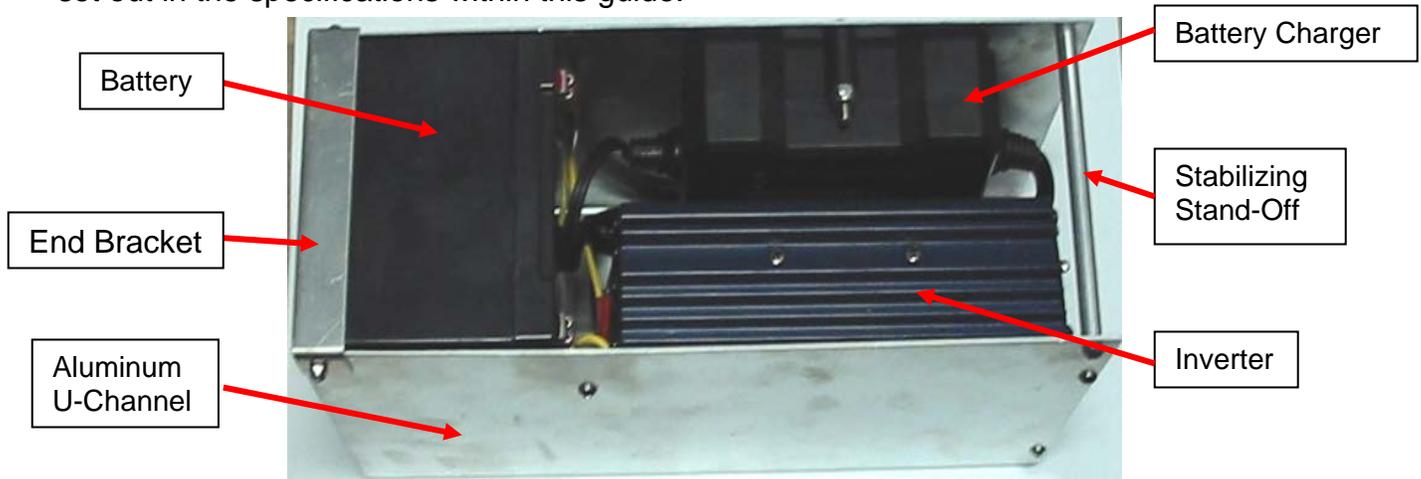
Operating Instructions November 2013



W-PPS

Portable Power Supply

The W-PPS (W-PPSK) is a Portable Power Supply designed to operate any of Western Instruments' standard AC or AC/DC Yokes. The W-PPS is equipped with an appropriately sized Battery, Battery Charger, and Inverter which should be used within the parameters as set out in the specifications within this guide.



1. Chassis Assembly – The W-PPS' Chassis Assembly consists of a custom made Aluminum U-Channel, Battery, Battery Charger and inverter with the following specifications;

Battery; 14 Amp Hour, 12 Volt Gel Cell.

Battery Charger; Western Instruments Model RS5022 Smart Charger.

Input voltage of 100 to 240 VAC at 50 to 60 Hz;

Output Amperage - 2 Amps

Inverter; Input Voltage 12VDC

Output Voltage 115VAC x 60Hz (W-PPS) or 230VAC x 50Hz (W-PPSK)

Output Power 400 Watts Continuous (800 Watts Peak)

The Battery Charger and Inverter are mounted to the Vertical sides of the U-Channel. The Battery is contained by the horizontal bottom and the vertical sides of the U-Channel, and secured with the special battery End Bracket. The opposite end of the Chassis Assembly is stabilized with an Aluminum Stand-Off.

The Charger should not be connected to Mains Power during Operation

2. Components –

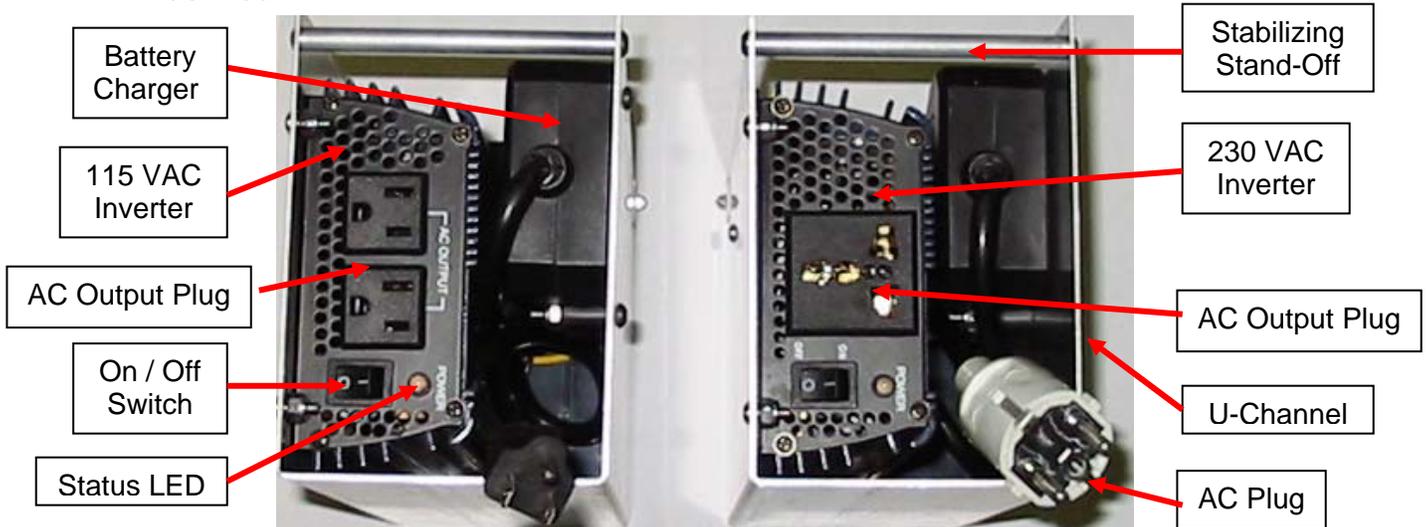
Battery; Standard Portable Lead Acid Battery.

Battery Charger; The RS5022 is processor based, and will sense the condition of the battery, re-setting for an optimum charging cycle. Leaving the Charger connected to Mains Power, while operating a Yoke, will cause the Charger to draw full power and may cause an incomplete charging cycle for the Gel Cell Battery. The Mains Power Plug is accessible inside the Access Flap on the Canvas Bag.

Inverter; Western Instruments Model PC115-400F (PC230-400F) Inverter is equipped with an On/Off Switch and Status LED's. The PC115-400F is equipped with 2 Standard North American AC receptacles, while the PC230-400F is equipped with a single Universal AC Receptacle. These items are accessible inside the Access Flap on the Canvas Bag.

The opposite end of the inverter is where the Pusher Cooling Fan is located, as well as the two fuses that are to protect the Inverter from an extended overload or short circuit. The Inverter is also equipped with a Temperature Protection circuit, that turns

the it off when it reaches 130°F (55°C). Lastly, when the output voltage from the battery drops below 10 VDC, the Inverter output stops, and the indicator LED will flash red.



230VAC x 50Hz Charger Plug installed by End User's qualified personnel

3. Operation – The W-PPS and the W-PPSK are designed for Western Instruments' very efficient WC and WE-Series Yokes. These models draw 4 Amps at 115/60 Power and 2 Amps at 230/50 Power, which is well within the output of the 2 types of inverters (115 and 230VAC).

You have just unplugged the charger on your W-PPS, and left your base. When you arrive to your inspection site and are ready to start testing, plug in your AC Yoke and turn on your W-PPS. The battery on your W-PPS will permit your Yoke to lift 10 Pounds (4.6kg) for over 2 hours continuously, which means that you should have a little reserve power left after 8 hours of intensive MPI (Yoke activated 20 to 25% of time).

4. Operational Parameters – The Operational Parameters or Duty Cycle for the operation of the W-PPS is set to avoid damage to the inverters used in the device, and must be observed to ensure an extended life of the open electronics.

The W-PPS can be used for extended periods of time, for normal operation of a Yoke. Normal operation is 5 - 15 seconds on, while applying inspection media, followed by 5 - 15 seconds off for inspection, and an additional 5 seconds for repositioning the Yoke to the target area. While working in heat, above 105°F (40°C), the operator may have to adjust cycle times to avoid overheating the Inverter.

It is recommended that the operator does not keep the Charger connected to mains power all the time. The top cover of the Canvas Bag should be left open during charging for two reasons; ventilation to allow heat to escape, and secondly to allow observation of the chargers status LED's. When the battery is fully charged, both LED's are green.

6. Maintenance:

After extended use the W-PPS should be cleaned. If the Canvas Bag becomes extremely dirty, it can be machine washed with a mild soap. The Bag should be hung to dry, and before fully dry it should be put over the Chassis Assembly to ensure it does not shrink excessively.

The unit should be visually inspected for any damage that could cause harm to the operator. Special attention should be paid to the ventilation holes on the inverter, to ensure they do not become obstructed by dust or dirt. If using compressed air to blow out the interior of the Chassis Assembly, do not direct it toward the inverter, as the Cooling Fan may turn excessively fast, indirect impingement with air is advantageous.

Before performing maintenance, or cleaning, to a W-PPS, the charger should be disconnected from Mains Power, and the Inverter turned off. Any potential problems to the assembly must be reported to the Distributor or Western Instruments for instructions on corrective action.

Whether industrial specifications are being observed or not, the W-PPS should be tested with a Yoke periodically, to ensure it continues to produce enough AC voltage to lift the specified weight. If the Yoke/Power Supply System fails such a test, first inspect the Pole Pieces of the Yoke to ensure they fully contact the test weight. If the unit continues to fail, contact the Distributor or Western Instruments for instructions on corrective action.

Wiring:

W-PPSK, designated by the "K" placed after the Model Number signifies a PC30-400F Inverter is installed. These models are shipped without an AC Power Plug as there is no international standardization. When installing an AC Power Plug onto the AWG 18-3 Power Cord of the Charger, the following is the identity of the 3 Color Coded Conductors;

- Green – Ground
- White - Neutral
- Black – Live

Care must be taken to insure the proper installation of an AC Power Plug, and if there is any question, contact your distributor or Western Instruments. If a fully grounded AC Plug is not installed, before use, any warranty is void.

Warranty

Western Instruments warrants its products, against defects in materials and workmanship for a period of 1 year from receipt by the end user. If Western Instruments receives notice of such defects during the warranty period, Western Instruments will either, at its option, repair, replace, or condemn products that prove to be defective. Consumable items, such as Batteries are warranted for 30 days, from receipt by the end user.

Any warranty is void if the unit has been modified in any way, or if it has been repaired by an unauthorized agency. The end user agrees that any equipment's disposition, when returned for warranty work, is at the full discretion of Western Instruments as to whether a claim is under warranty, or due to misuse. Western Instruments warranty shall overlook normal wear, however does not include operation outside the environmental specification of the product. All warranty work is FOB Western Instruments, and any returned units shall include a written description, by the end user, of the fault.

Western Instruments makes no other warranty, either expressed or implied, with respect to this product. Western Instruments specifically disclaims any liability arising from the use of this equipment. For the correct use of the product, refer to the Operating Instructions, furthermore we recommend instructional training to CGSB, ASNT, or other regulatory authority qualifications. Western Instruments highly recommends the end user exercise all possible safety precautions, including use of protective equipment, while operating this or other industrial equipment.

Specifications:

Model: W-PPS or W-PPSK
Charger Voltage: 110VAC to 240VAC
Charger Frequency: 50 to 60 Hz
Charger Current: 2.0 Amps @ 115 Volts or 1 Amp @ 230 Volts
Inverter Input Voltage; 10 to 14 VDC
Inverter Input Current; up to 30 Amps
Inverter Output Voltage: 115VAC or 240VAC
Inverter Output Frequency: 60 or 50 Hz
Inverter Output Current; 4 or 2 Amps
Dimensions (LWH); 12" x 4" x 6"(30.5cm x 10cm x 15cm)
Weight: 13 Pounds (6 kg)

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