

PBSP-74I Series

DC/AC ROLLING STOCK INVERTER

FEATURES

- 2,000W DC/AC Inverter
- Rolling Stock Rail 74VDC Input
- Rugged Build
- High Surge Rating 6KW
- Input Spike & Burst Protected
- True Sinewave at 50Hz
- Total Harmonic Distortion (THD) <3%
- High Surge Capacity
- Extremely High Overall Efficiency
- Intelligent Overload Control
- Short Circuit Protection
- Dynamic Battery Low Voltage Control
- Designed For Harsh Climatic Conditions
- Manufactured in SMD-Technology
- Integrated DC Input Circuit Breaker
- Integrated MCB/RCD on AC Output
- Optional Remote ON/OFF and RCD Alarm

PRELIMINARY SPECIFICATIONS

INPUT	
Input Voltage:	74Vdc (60-84Vdc)
Startup voltage	67Vdc
Under voltage cutout	59Vdc.
Under voltage reset	71Vdc.
Over voltage cutout	90Vdc.
Over voltage reset	87Vdc
Input Current	Standby: 30mA ON with no load: TBD Pout = 2,000W, Vin=74Vdc; 30A, Any load, 60V < Vin < 84Vdc; 37A max
OUTPUT	
Output Voltage	240Vrms (237.5 - 242.5Vrms) 0W < Pout < 2000W, Vin = 74Vdc (228 - 252Vrms) 0W < Pout < 2000W, 60V < Vin < 84Vdc
Total Harmonic Distortion	3% 0W < Pout < 2,000W, Vin = 74Vdc
Continuous output power	2,000W. (Ta=50°C, PF=1.0)
Continuous output current	8.3A rms
Output power	30 minutes: 2,500W 10 minutes: 3,000W 3 seconds: 6,000W
Output Frequency	50Hz ±1%
Efficiency	Pout = 200W: TBD% Pout = 2,000W: TBD% Ppeak: 92%



PROTECTION	
Input protection	50A, AS3111, 20kA MCB Input Over / Undervoltage Cutout
Output overload and short circuit protection	Automatic shutdown Auto restart after 60 seconds
Output protection	10A, AS3111/AS3190 4.5kA C-Curve MCB/RCD. Output neutral connected to inverter chassis earth on inverter side of MCBO
Over temperature protection	Automatic Shutdown
Dielectric Strength	Input to Chassis: 1700Vdc Output to Chassis: 2250Vdc Input to Output: 4250Vdc

DISPLAYS, CONTROLS & ALARMS	
Front Panel Controls (-PS)	DC Input 50A 10kA MCB AC Output 10A MCB/RCD
Right Side Controls (-PS)	ON/OFF Toggle Switch
Right Side Displays (-PS)	ON / Standby / Overload LED Overtemperature LED DC Volts Out of Range LED

ENVIRONMENTAL	
Operating temperature	0°C to 50°C ambient Continuous full load operation
Cooling	Internal thermostatically controlled fan.
Relative Humidity	95% 40°C non-condensing
Shock	4G ±20% longitudinally 2G ±20% laterally 2G ±20% vertically 50ms duration 20 shocks per axis
Vibration	Resonant search: 20 - 2.2mm double amplitude (1-9Hz) 2.2-0.8mm double amplitude (10-50Hz) Endurance: 3 hours per axis (X,Y,Z) at 50Hz 0.8mm double amplitude.

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PRELIMINARY SPECIFICATIONS

MECHANICAL	
Mechanical Outline	PBSP-74I-PS See Technical illustration
Construction	Powder coated aluminum chassis.
Dimensions	Length: 420mm Width: 230mm Height: 204mm
Weight	18kgs.
Mounting	M8 hardware on 425 x 170mm centres

Notes

1. Dielectric strength is tested for 1 minute with DC voltage. Testing with 50/60Hz AC voltage is not recommended due to voltages which this can induce in the circuitry under test. Internal EMC filter capacitors between input leads and chassis are disconnected during these tests. The internal output neutral to earth link must also be removed during these tests. Input to output dielectric strength is specified for internal components which bridge these connections only and cannot be tested on a finished unit.

3. Overall dimensions do not include connectors, circuit breakers or circuit breaker protection brackets.

TERMINATION	
DC Input termination	Spacecraft SCP02YJ22-2P F80 Three crimp pin chassis receptacle or equivalent. Olive drab cadmium finish
DC Input connector Mating connector	Spacecraft SCP08FJ22-2S F80 Right angle three crimp socket plug (3 x #8AWG / 10mm2) with cable clamp or equivalent. Olive drab cadmium finish.
AC Output termination	Spacecraft SCP08YJ18-10S F80 Four crimp socket chassis receptacle or equivalent. Olive drab cadmium finish.
AC Output termination Mating connector	Spacecraft SCP08FJ18-10P F80 Right angle four crimp socket plug (4 x #12AWG / 4mm2) with cable clamp or equivalent. Olive drab cadmium finish.
Chassis Earth Termination	M6 x 15mm stud on bottom face.
Wiring	All internal wiring uses Radox 125 halogen free low smoke cable.

TECHNICAL ILLUSTRATIONS

PBSP-74I-PS

