

Output Power Conditioning for Critical Naval Shipboard Applications



0.8 kW DC UPS 841-01

DRS Pivotal Power's 0.8 kW uninterruptible power supply (UPS) system is intended for use on board naval combat ships to power critical command, control, communication and navigation equipment. The input to the 0.8 kW UPS system is supplied from the ship's 440 V, 60 Hz, 3-phase AC service power conforming to MIL-STD-1399, Section 300. The UPS system provides 28 VDC high quality output power (factory selectable from 24 VDC to 32 VDC).

In event of loss of ship service power, the UPS system continues to provide the output power for a specified time using rechargeable storage batteries. Upon restoration of ship service power, the UPS system automatically reverts to input power from the ship service power to provide the output power and to charge the storage batteries. The transition between ship service and battery power is achieved with less than 2% harmonic distortion. The UPS also functions as a power conditioner, blocking surges, spikes and transients while maintaining stable voltage to the serviced equipment.

Each UPS system is made up of a power unit, which houses the power electronics, plus control and communication circuits and a battery unit, which house the storage batteries. The UPS system utilizes mil spec circular connectors for input, output and battery unit connection. DRS Pivotal Power manufactures a full line of Battery Units to support the UPS system for various backup durations.

The UPS power units are fully Simple Network Management Protocol (SNMP) compatible, offering effective computer network management of the UPS either independently, or as part of a larger distributed power system. When enabled the SNMP can remotely control various functions of the UPS and monitor a large number of status and system variables.

The UPS is fully qualified for military applications.

HIGHLIGHTS

- Mean time between failures (MTBF) – 40,000 hours
- Isolation switches for input, output and battery
- SNMP communications and control options
- Draw-out sub-assemblies and printed wiring boards
- Built-in-test (BIT) capability
- On-line maintenance of batteries and battery charger
- Output voltmeter
- LED status indication for input, output, back-up mode operation, low battery, over current, over temperature and unit shutdown
- Fault signal for remote indication
- Circular coupling connectors for input and output
- Secondary fuse protection for output
- LCD status display

INPUT

Voltage	440 VAC nominal, 3-phase
Frequency	60 Hz nominal

OUTPUT

Voltage	28 VDC
Power rating	0.8 kW
Power backup time	numerous durations available
Efficiency	80% at rated load
Number of available output connectors	1

ENVIRONMENTAL

Operating temperature	+10 °C to +50 °C / 50 °F to 122 °F
EMI/EMC	MIL-STD-461D, CE101, CE102, CS101, CS114, CS116, RE101, RE102, RS101, RS103
Vibration	MIL-STD-167-1, Type 1, 4 Hz to 33 Hz
Shock resistance	MIL-S-901D, Grade A, Class I, Type A
Airborne noise	MIL-STD-740-1, Grade A12
Cooling method	forced air convection

PHYSICAL

Dimensions	230 L x 513 W x 640 H mm / 9.1 L x 20.5 W x 25.2 H inches
Weight (excluding batteries)	42.6 kg (max) / 93.8 lbs. (max)

Specifications subject to change without notice.



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