



SPM Series ShorPOWER-Mini[®] FREQUENCY CONVERTERS

Atlas Marine Systems is the world leader in the design of marine electrical power equipment. The Atlas *Classic III*, *Ultra* and *SPA* ShorPOWER[®] product lines represent to the marine community the widest selection of onboard frequency converters, which are used to achieve dockside power compatibility for yachts anywhere in the world.

Now, the ShorPOWER-Mini[®] series, a dual module power system, takes the next step by assuring power compatibility with those loads onboard that require power other than what is available from the vessel's standard distribution system. This state-of-the-art system is the world's smallest and lightest in its class.



**SPM SERIES
POWER SYSTEM**

APPLICATION:

Since its beginning, Atlas has focused on the design and development of reliable solid-state power units. The SPM series power system is a shipboard version of a sixth generation design in a family of frequency converters which has seen extensive commercial use. The product and its accessories are intended for both aircraft and shipboard applications where AC electrical power needs exist other than those that can be provided by the onboard distribution system. The SPM ShorPower-Mini operates directly from any low voltage, 1Ø or 3Ø, 60 Hz AC shipboard distribution; or any high voltage, 1Ø or 3Ø, 50 Hz shipboard distribution, and provides an alternate frequency of 50 or 60 Hz output power respectively.



STANDARD FEATURES:

- Low Input Current Distortion
- Wide Input Frequency Range
- High Input Power Factor
- StopLite BITE™ Self Diagnostic System
- Remote Control
- Paralleling Accessories for Power Grid Expansion and N+1 Redundancy
- High Reliability
- Light Weight

MECHANICAL:

Size:

FREQUENCY CONVERTER

6" height, 9" width, 18" depth

TRANSFORMER MODULE

7" height, 8" width, 12" depth

Weight:

30 lbs. dependent on options

35 lbs. approximately

Mounting:

Hard mount

Hard mount

Cooling:

Self-contained fan

Convection

ATLAS MARINE SYSTEMS - ShorPOWER-Mini® SPM Series

GENERAL SPECIFICATIONS

INPUT:

| | |
|----------------------------------|--|
| Power Factor: | ≥ 0.99 |
| Input Current Distortion: | ≤ 5% at nominal input voltage and at full rated load |
| Protection: | Over/ under voltage, loss of phase, and over current |
| Phase Rotation: | Any |

ENVIRONMENTAL:

| | |
|---------------------------|---|
| Temperature Range: | -25°C to +55°C operating; -40°C to +71°C storage |
| Humidity: | 95% RH max at 30°C |

OUTPUT:

| | |
|------------------------------|--|
| Power Rating*: | 3.0 kVA |
| Overload: | 125% for 5 min. 175% for 10 sec. |
| Voltage Regulation: | ± 1.0 % |
| Frequency Regulation: | ± 0.1 % |
| Harmonic Distortion: | 2% THD Maximum |
| Power Factor Range: | 0.8 lagging to 0.8 leading (not damaged by any power factor load). |
| Efficiency: | 89% typical at rated load |
| Protection: | Over/under voltage, over load, short circuit |

* Paralleling accessories available for power grid expansion.

DETAILED SPECIFICATIONS (PROGRAMMABLE PLUG / TRANSFORMER SELECTION)

| INPUT | OUTPUT | PLUG NUMBER | TRANSFORMER |
|--|--------------------------|-------------|------------------|
| 115 volts, 1Ø, 60 Hz or 115/200 volts, 3Ø, 60 Hz | 230 volts, 1Ø, 50 Hz | PP-050-S | Output, Step Up |
| 220 volts, 1Ø, 50 Hz | 115 volts, 1Ø, 60 Hz | PP-060-S | Input, Step Down |
| 220 volts, 1Ø, 50 Hz | 115/230 volts, 1Ø, 60 Hz | PP-060-C | Input, Step Down |
| 220 volts, 1Ø, 50 Hz | 115/200 volts, 3Ø, 60 Hz | PP-060-T | Input, Step Down |

SYSTEM MODEL NUMBER SELECTION

| MODEL NUMBER | NOTES | NOTES REFERENCE LIST |
|--------------|---------|---|
| SPM-16 | 1,2,3 | <ol style="list-style-type: none"> 1. Programming plug (PP Series) or programming parallel cable (PPC Series) required to determine output frequency and phase configuration. 2. Two paralleled units require one programming parallel cable (PPC Series) only. Three or more paralleled units require a programming parallel box (PB Series) in addition to one programming parallel cable (PPC Series) for each unit. Paralleling for grid expansion up to 17.5 kVA only. 3. Unit does not include circuit breaker. 4. Two or more paralleled units require a paralleling control box (PCB Series) in addition to one paralleling box cable (PBC Series) and one interconnect power cable (IPC Series) for each unit. Paralleling for common output buss grid expansion (up to 17.5 kVA) or for N+1 redundancy/ hot swap system configuration. 5. Includes 100 msec. ride-through option. Contact Factory for height and weight details. |
| SPM-18 | 1,2 | |
| SPM-21 | 1,3,4 | |
| SPM-24 | 1,4 | |
| SPM-25 | 1,3,4,5 | |
| SPM-28 | 1,4,5 | |