

ESPM 2500W

ENVIRONMENTALLY SEALED POWER MODULE

DESIGNED FOR REMOTE OPERATION IN RUGGED ENVIRONMENTS

Environmentally Sealed Power Modules (ESPM's) are ideal for industrial applications or Military applications located in exposed environments. Leveraging Astrodyne TDI's vast experience in addressing aggressive physical environments, these products deliver the highest standards of dependability, reliability and value.



Designed for outdoor or indoor applications, the ESPM can be exposed directly to a variety of harsh environments

Features & Benefits

- **Environmentally Sealed**
AC-DC Rectifier is Environmentally Sealed and ideal for Harsh Environments
- **No Fans Needed**
Electronics are submerged in oil, providing superior heat conduction to convection cooling fins
- **Modular and Scalable**
ESPM's may be paralleled with other like units for increased system output
- **Reliable Robust Design**
100% HASS Tested
- **Safety**
Output over-voltage protection safely shuts down the ESPM without user intervention
- **Control**
Constant current output control via 0-5V analog signal

All electronics within the ESPM's aluminum chassis are fully sealed and encapsulated with environmentally friendly oil, allowing the convection cooled ESPM to be NEMA 6P and IP67 rated to be watertight, submersible, dust tight, corrosion resistant, and sleet resistant. The internal components stay cool and reliable without the need for fans or blowers.

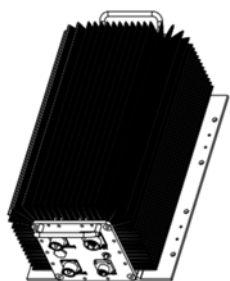
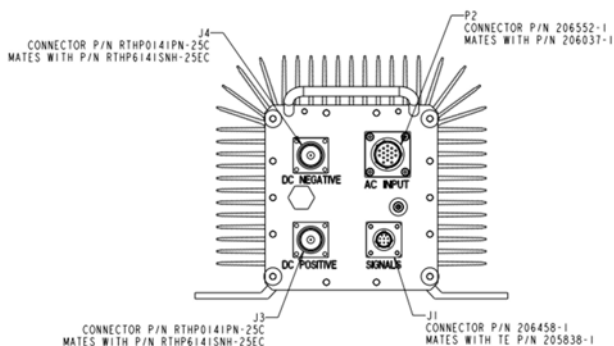
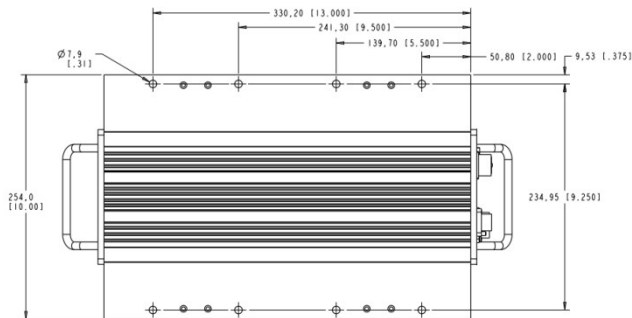
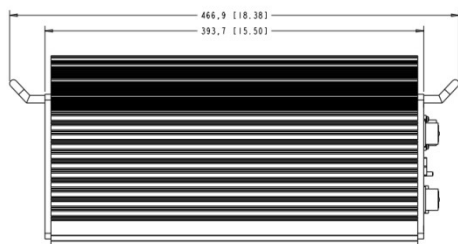
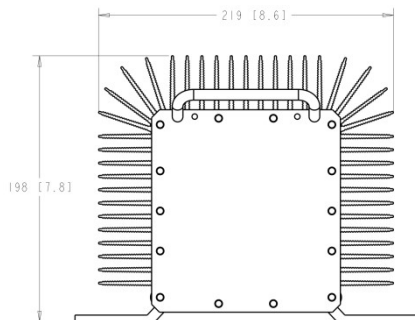


Models Available

Model Number	Output
ESPM25H-P25C-000-LF	25V/100A
ESPM25H-P50C-000-LF	50V/50A

ESPM 2500W

ENVIRONMENTALLY SEALED POWER MODULE



Specifications

AC INPUT

Voltage: 180-265VAC, 47-63Hz, Single Phase
Input Current: 17A maximum at 180VAC

DC OUTPUT

Voltage: 25V or 50V
Current: 100A max on 25V; 50A max on 50V
Power: 2500W maximum
Efficiency: 90% minimum, 50-100% rated load
Parallel Use: May be paralleled with other like units for increased system output – output fault isolation device included
Current Share: Slope program current share (droop)
Droop: 200mV 0-100A on 25V, 500mV 0-50A on 50V
Temperature Coefficient: $\pm 0.02\%$ per $^{\circ}\text{C}$

ENVIRONMENTAL SPECIFICATIONS

Ambient Temp: Full power available from -40 to $+55^{\circ}\text{C}$ when mounted in a vertical direction. (Up to 2 hour warm up may be required at -40°C before unit meets all specifications.) (Solar shield may be required in certain applications – consult factory)
Linearly de-rate output power from 2500W to 1750W from 55°C to 70°C ambient temperature.
Storage Temp: -40 to $+85^{\circ}\text{C}$
Humidity: 0-100% RH, condensing, operating and storage
Vibration: MIL-STD-202G Shipboard Vibration
MIL-STD-810 Cat 4 Transportation Vibration
MIL-STD-810G, Method 509.1
Salt Fog:
Audible Noise: None
Cooling: Natural convection – no fans or blowers required
IP Rating: Designed to meet IP65

PHYSICAL DIMENSIONS

Dimensions: H19.7 x W22.2 x D39.4 cm
(7.76" x 8.74" x 15.51")
Weight: 14.9kg (32.8lb)

PROTECTION

Output Over-Voltage: Shutdown at 120% nominal output voltage. Recycle of input voltage require to reset OVP circuit.
Output Over-Current: Electronic over-current protection via constant current regulation circuit.
Short Circuit: Unit is protected against short circuit of output terminals
Input: AC input is fused internally

CONTROLS/ALARMS

Output Current: Application of 0-10,000 Ohm resistor, or 0-5V signal adjusts output current limit point between zero and full load.
Inhibit: Application of TTL High (3-12V) will disable unit's output voltage
Fault Alarm: TTL Low indicates unit is operating and delivering output voltage. TTL high indicates fault.

SAFETY /REGULATORY

RoHS: Compliant with RoHS Directive
Safety: Designed to meet UL60950-1 2nd Edition
EMC: Conducted Emissions on Input designed to comply with FCC Part 15, Sub-part J, Class A and EN55022, Class A
Immunity: IEC61000-4-2,-3,-4,-5, -6,-8,-11