

# DEFENDER HAZLOC ESPM

2500W Environmentally Sealed Power Module



Astrodyne TDI's ESPM provides outstanding durability along with certification for use in Class1, Div2 Hazardous Environments. Defender ESPM Power Supplies are specifically designed for Impressed Current Cathodic Protection Applications. These AC-DC Power Converters are fully sealed against the Environment, Designed in accordance with Military Guidelines for Extremely Rugged Electrical Performance, and provide Constant Current Controllability that make them the ideal choice for ICCP Applications in Refineries, Oil Platforms, or other locations that involve exposure to potentially Explosive Atmospheres

## BENEFITS

### HAZLOC Certified

UL Certified to UL 121201

### Reduced System Complexity and Time to Market

Wide range of models with fully adjustable outputs. Multiple control modes provide ultimate application flexibility.

### High Reliability for Critical Applications

Astrodyne TDI's comprehensive reliability assurance processes, including design to the rigorous requirements of NAVSO P3641A, HALT, DFMEA and our unique Highly Accelerated Stress Screening (HASS) on 100% of production units, assure the ultimate in unit reliability and performance.

### High Power Density

Up to 2.5kW per module

## FEATURES

### AC Input

180VAC – 265VAC, 47-63Hz

### High Power

Up to 2.5kW power

Constant voltage, current, or power operating models

### Constant Current Output Control

Externally Adjustable – provides stable current independent of changes in Environmental Conditions

### No Fans Required

Free Air Convection Cooled

**Astrodyne** TDI  
Now you have power.

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| <b>MODEL NUMBER</b> | <b>PART NUMBER</b> | <b>DESCRIPTION</b>   |
|---------------------|--------------------|--|
| ESPM25H-P50C-100-LF | T100109381-1-LF    | CONVERTER, AC/DC, 2500W, HL, 50V, 50A, CS, HAZLOC<br>*For other options please contact the factory |

| <b>PARAMETER</b>              | <b>ESPM</b>  |
|-------------------------------|--|
| <b>Input AC</b>               | 180-265VAC   |
| <b>AC Frequency</b>           | 47-63Hz  |
| <b>Max Input Current</b>      | 16A  |
| <b>Power Factor</b>           | >.97 above 50% maximum rated load  |
| <b>Outputs, DC</b>            | 0-50V at I up to 50A   |
| <b>Output Power</b>           | 2,500 W Maximum  |
| <b>Efficiency</b>             | >90%   |
| <b>Ripple/Noise</b>           | <1% of nominal output voltage  |
| <b>Line Regulation</b>        | +/-0.25% of nominal output voltage   |
| <b>Turn On Delay</b>          | <5 seconds   |
| <b>Protection Features</b>    | Output Over-Voltage: Shutdown at 120% maximum rated output voltage<br>Output Over-Current: Electronic Constant Current Control<br>Over-Temperature: Over-Temperature Shut Down with Automatic Recovery |
| <b>Operating Temperature</b>  | -40 to +55°C (full rated)  |
| <b>Derating Temperature</b>   | 1750W at 70°C  |
| <b>Storage/Transportation</b> | -40 to +85°C   |
| <b>Humidity</b>               | 0% to 95% non-condensing   |
| <b>Salt Fog:</b>              | MIL-STD 810C, Method 509.1   |
| <b>Vibration (Operating)</b>  | 14g-rms, random, tri-axial for 1 hour  |
| <b>Connections</b>            | Umbilical Cable for AC, DC and Control Connections   |
| <b>Dimensions (inches)</b>    | 7.76" x 8.74" x 15.51"<br>32.8lbs  |
| <b>Certifications</b>         | Electrical Safety: UL61010-1<br>Hazardous Locations: UL 121201<br>(Class 1, Division 2, Groups A, B, C, D)   |
| <b>Cooling</b>                | Convection Cooled  |
| <b>Warranty</b>               | 1 Year   |



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### Module Outline:

