# LiquaBlade

16.5kW Water-Cooled Power Supply


**Providing high operating efficiency along with excellent reliability, compact size, and easy maintainability; LiquaBlade™ power supplies are the ideal choice for high power DC systems in industrial and military applications. The converter features automatic load sharing and international power input.**

## Agency/Compliance:

- EN61000-4-4 1995 Electrical Fast Transient/Burst - Severity Level 3
- EN61000-4-5 1995 Surge - Severity Level 4
- SEMI F47-0706 - Criteria A (Operating at less than 11kW Load)
- EMI: Designed to meet CISPR 11 Class A Group 1 2004 with external filter (consult factory)
- UL 60950-1, 2nd Edition
- EN 60950-1 / A12:2011
- IEC 60950-1, 2nd Edition

## BENEFITS

**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 16.5kW power in a 1U high, 19" rack space.

## FEATURES

- SEMI-F47
- DC Outputs Options: 0-60V, 0-120V, 0-180V,0-500V (Adjustable)
- Alarm Outputs
- CanBus Controls
- Constant Voltage / Constant Current / Constant Power Control Modes
- High Efficiency: 92% power conversion efficiency
- Liquid Cooled – Water, DI Water, WEG compatible
- Blind Mate/Hot Swappable
- High Reliability: 100% HASS Tested
- 1U / 19" Rack Compatible
- Parallel / Series compatible
- Designed to NAVSO P-3641A
- Full PFC - High Power Factor –
- Low Input Current THD

AstrodyneTDI
Now you have power.

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## 16.5kW Water-Cooled Power Supply

| PART NUMBER | DESCRIPTION |
|---|---|
| T100103091-1-LF | RECTIFIER, 0-60V, 0-360A, 16.5kW, L-Droop CS |
| T100108057-1-LF | RECTIFIER, 0-120V, 0-180A, 16.5kW, L-Droop CS |
| T100104286-1-LF | RECTIFIER, 0-180V, 0-120A, 16.5kW, Droop CS |
| T100117293-1-LF | RECTIFIER, 0-500V, 0-43.5A, 16.5kW, L-Droop CS |
| T100103270-LF | SHELF, LiquaBlade |

| PARAMETER | |
|---|---|
| **Input AC** | 380-480 VAC, three phase |
| **AC Frequency** | 50/60 Hz |
| **Max Input Current** | 31A |
| **Power Factor** | >.93 at full power |
| **Outputs, DC** | 0-60V, 0-120V, 0-180V, 0-500V<br>(For fixed output options contact factory) |
| **Output Power** | 16.5kW Maximum |
| **Efficiency** | >92% |
| **Ripple/Noise** | Less than 300mVpk-pk with 20Mhz bandwidth |
| **Line Regulation** | +1% of output voltage |
| **Protection Features** | Output Over Voltage Protection: Power Supply will latch off.<br>Output Over Current Protection: Automatic electronic current limit circuitry.<br>Over Temperature Protection: Unit shuts down if temperatures exceed safe limits. Unit will automatically power back on after cool down. |
| **Visual Indicators** | Front panel LED |
| **Operating Temp.** | +5 to +50°C |
| **Storage Temp.** | -40 to +85°C |
| **Humidity** | 0% to 95% non-condensing |
| **Isolation** | Input to Output: 3000Vac or 4242VDC<br>Input to Ground: 2164Vac or 3060VDC<br>Output to Ground: 1000Vdc |
| **Connections** | AC Input: Phoenix Contact Terminal Block<br>DC Output: 5/8" Stud<br>Signals: CAN BUS: RJ11<br>RS-232: DB9 |
| **Harmonics** | Meets IEC61000-3-4 1998 Emissions of Harmonic Currents |
| **Dimensions (inches)** | 1.72" x 19" x 31.2" (1U) |
| **Cooling** | Liquid Cooling<br>Nominal: 2 GPM |
| **Warranty** | 1 Year |

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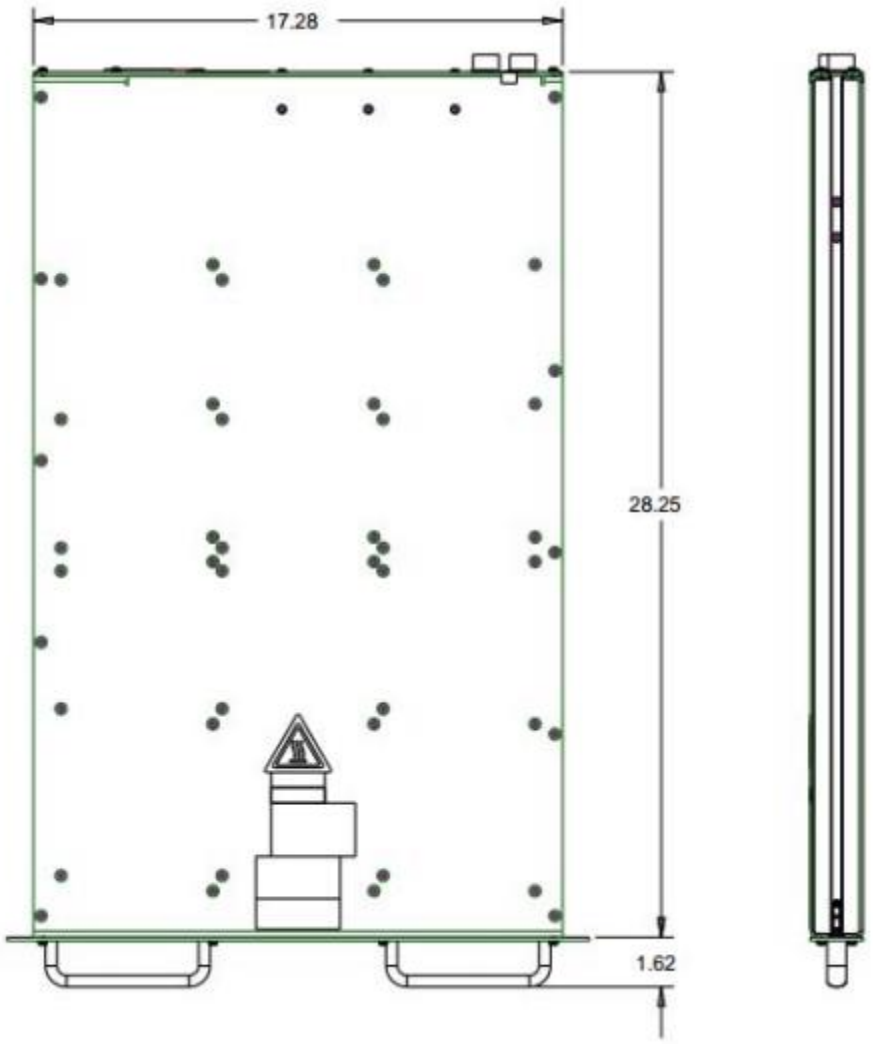
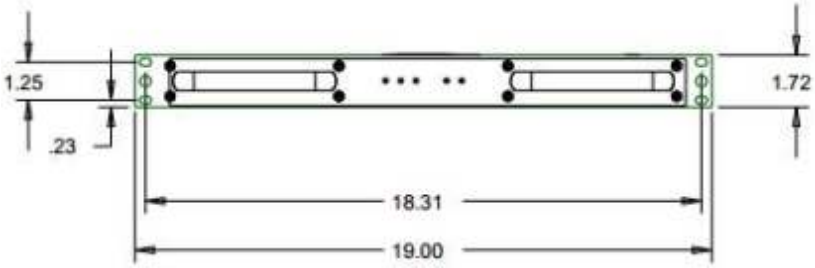
## Module and Shelf Outline:

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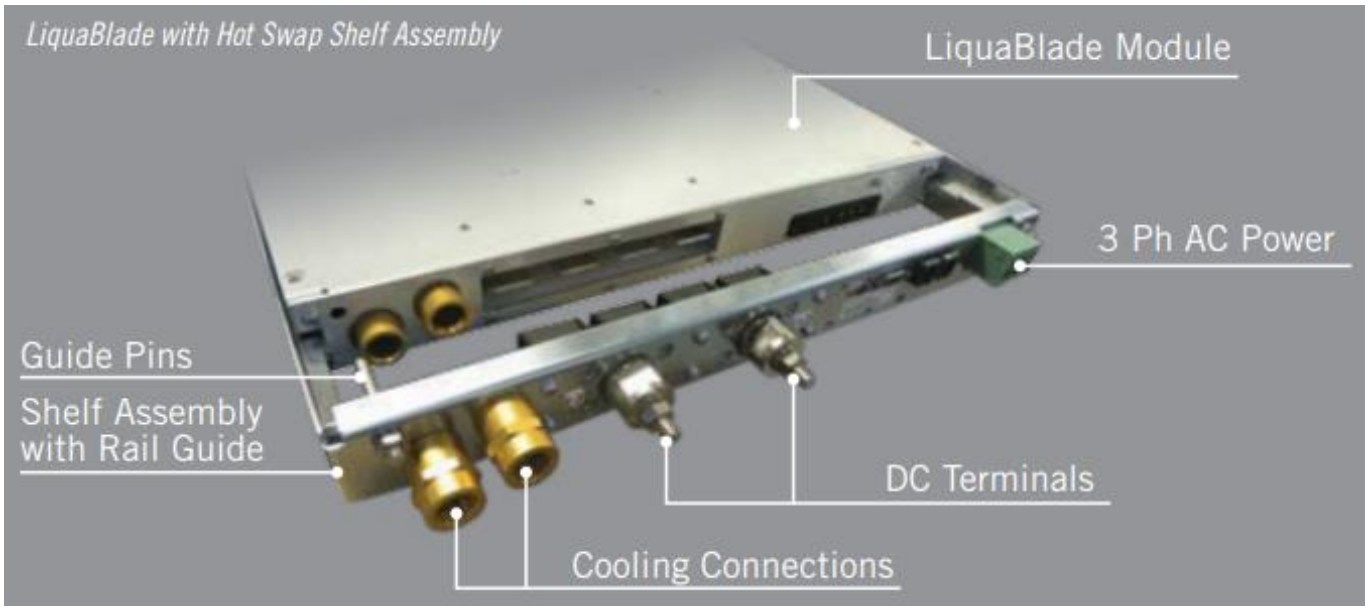
## Module to Shelf Connection:




## Block Diagrams: