

DEFENDER 15KW

IMPRESSED CURRENT CATHODIC PROTECTION RECTIFIER



Designed for remote operation in rugged environments, this rectifier is an ideal choice for Impressed Current Cathodic Protection Systems for ships, platforms, workboats and barges. Leveraging TDI Power's vast experience in high demand Industrial and Military/Aerospace applications, this product delivers the highest standards of dependability, reliability and value.

The LiquaBlade™ power supply uses three phase direct input and silicon carbide MOSFET technology to provide 15kW of power in an easily field replaceable module. The cabinet houses a self-contained closed loop cooling system so that the unit can be installed at the application site without any coolant lines. This unit provides precision current control to multiple anode taps.

Features:

- 15kW Constant Current Output (up to 330A)
- Field Serviceable TDI LiquaBlade™ Rectifier
- Industrial Grade – Suitable for Harsh Environments
- 380-480VAC / 3-phase Input / No Neutral
- 0-60VDC Wide Range Output Voltage
- Remotely programmable via CAN
- IP52 compliant
- Self contained closed-loop liquid cooling system



*Phase3 LiquaBlade™
Liquid Cooled DC Power Solution*



DEMANDING APPLICATIONS DEMAND TDIPOWER

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| Parameter | 15KW ICCP Power Supply |
|--------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AC Input | |
| Voltage | 380-480 Volts AC, 47-63Hz, Three Phase |
| Input Current | Up to 31A rms maximum @ 380VAC |
| Peak Inrush Current | <80A |
| DC OUTPUT | |
| Voltage | 0-60V |
| Power | 15kW (330A max) |
| Efficiency | 91% typical |
| Regulation | Output fully regulated to +/- 1% for all variations of input line and output load |
| Output Ripple | Less than 300mV p-p |
| Temperature Coefficient | < ±0.2% per °C |
| ENVIRONMENTAL SPECIFICATIONS | |
| Normal Operation | -20 to +50°C Ambient temperature |
| Low Temperature Turn On | -40°C Minimum for warm up Compliant with: MIL-STD-810E Method 501.4 Procedure II +50°C 24Hr 3 cycles MIL-STD-810E Method 502.4 Procedure II -40°C 16Hr |
| Storage / Transportation | -40°C to +85°C |
| Ingress Protection Rating | IP52 (Dust protected & Rain) |
| Humidity Operating & Storage | 5% to 95% RH non-condensing |
| Vibration / Operating | MIL-STD-810F Method 514.5 Category 20 (ground mobile) Figure 514.5C-3 |
| Shock / Operating | MIL-STD-810F Method 516.5 Procedure 1 Figure 516.5-8 |
| Altitude | Compatible with MIL-STD-810E Method 500.4 Procedure I (Transportation) MIL-STD-810E Method 500.4 Procedure II (operation) |
| Audible Noise | Less than 60dBA |
| Cooling | On-board liquid/air cooling system with long life, ball bearing fans |
| PHYSICAL DIMENSIONS | |
| Dimensions | 915x508x330mm (36"H x 20"W x 13"D) |
| Weight | 23kg (50 pounds) |
| Input/Output Connections | Heavy Duty Terminal Blocks |
| PROTECTION | |
| Input over-current | Circuit breaker |
| Output over-current | Electronic automatic current limiting |
| Over-Temperature | Over temperature shutdown with auto recovery |
| ALARMS and CONTROL | |
| AC On/Off | Input Circuit Breaker |
| Remote Control | Maximum Volts, Maximum Amps, Regulated Potential, On/Off via RS232, USB or Ethernet Interface |
| Remote Communication | Hard wired (Optional Cellular or Satellite Interface) |
| SAFETY AND REGULATORY AGENCY SPECIFICATIONS | |
| Safety Agency Approval | Designed in compliance with IEC950 |
| ELECTRO-MAGNETIC COMPATIBILITY – EN55022 Class A (radiated) | |
| Harmonics | EN61000-3-2 |
| Static Discharge | EN61000-4-2, Class 3, stand-alone |
| Surge | EN61000-4-5, Class 4 (2kV L-L, 4kV L-EARTH) (Units tested to 8kV surge L-L and L-EARTH) |

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