7kW Liquid-Cooled Rectifier

Features

- **AC Input: 220 VAC Nominal (180-264 VAC Input Range)**
- **DC Output: 350 VDC Nominal**
- **High Efficiency: >90% Power Conversion Efficiency**
- **Liquid Cooled: Blind mate water feed and return connections**
- **Hot Plug: All electrical and cooling connections hot swap**
- **N+1 Compatible: Output Isolation Diode Included**
- **High Reliability: 100% HASS Tested**
- **Compact Size: Compact package: 12″ x 2.8″ x 16″**

Overview

Designed for use in Industrial Processing and Communications Power Systems, this power converter provides high operating efficiency along with excellent reliability and compact size. Features include input power factor correction, automatic load sharing, and full hot-swap N+1 operation. Each module is equipped with alarm outputs compatible with representative applications. Designed in compliance with NAVSO P-3641A, and with full Highly Accelerated Stress Screening (HASS) on all units, the converter provides the reliability required by enterprise critical applications.

TDI-Transistor Devices • 36 Newburgh Road, Hackettstown, NJ 07840 • Phone: 908.850.5088 • Fax: 908.850.5731

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Specifications:

AC INPUT
Input Voltage: 180-264 Volts AC, 47-63Hz, Single Phase
Input Current: 26 Amps RMS maximum at low line
Power Factor: 0.98
Harmonic Distortion: Less than 8% total harmonic distortion at full load and less than 5% for each harmonic
Peak Inrush Current: Less than 95A peak
Efficiency: 90% typical

DC OUTPUT
Output Voltage: 350VDC, nominal
Output Current: 20 Amps
Output Power: 7,000 Watts
Line Regulation: Less than 0.25%
Load Regulation: 0.2% from 10% to full load
Parallel Operation: May be paralleled with other like units for increased output power.

PROTECTION FEATURES
Output Over-voltage: Output protected with over-voltage shutdown circuitry
Output over-current: Automatic electronic current limit circuitry
Over-temperature: Internal thermostat shuts down unit if heatsink temperatures exceed safe limits.
Input Over-current: 50A fuse on both power lines

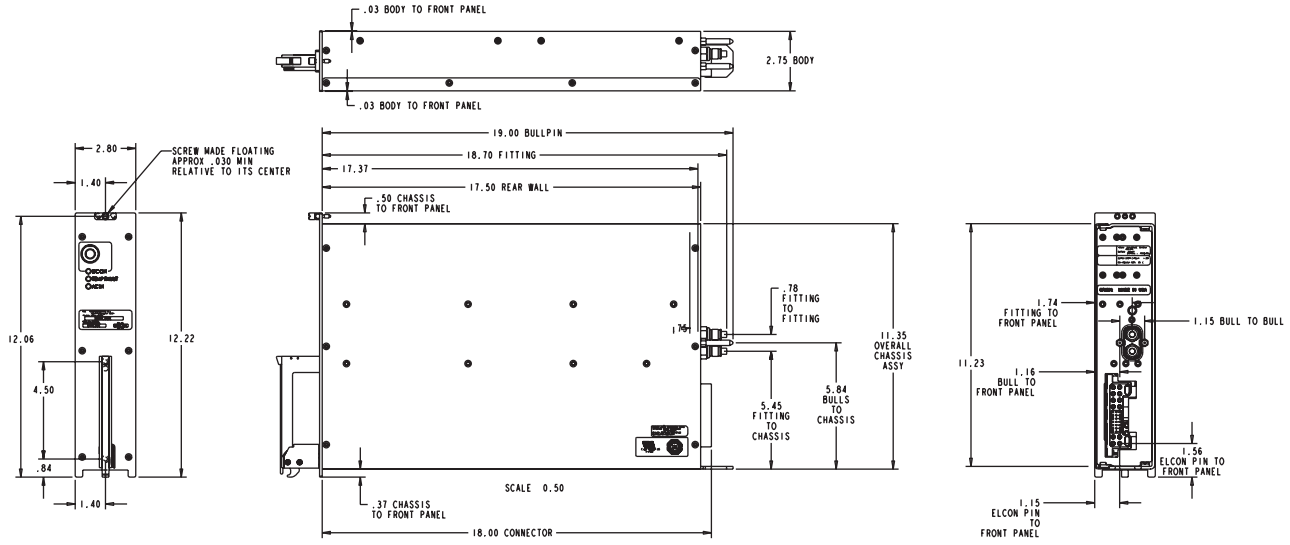
ALARMS AND CONTROL
AC Input Good: Green colored front panel LED
DC Output Good: Green colored front panel LED
Temperature Fault: Green colored front panel LED
AC On/Off: Requires external AC power interruption device (Note that module connector employs a "last make, first make" pin that disables module operation during hot swap.)
Module Reset: Front panel momentary push button switch that will reset unit to operational state subsequent to an over-voltage shutdown event.

ENVIRONMENTAL CONDITIONS
Cooling: Liquid cooled – coolant temperature range from 0oC to 35oC
Storage Temperature: -10 to +85oC
Humidity: 0 to 95% non-condensing, operating and storage

MECHANICAL
Converter Size: 12" x 2.8" x 16" (H x W x D)
Input/Output Connector: Blind mate Connector
Coolant Flow Rate: 1g/minute (water), 1.5g/minute (ethyl glycol)

AGENCY COMPLIANCE
EMI: Radiated and conducted emissions meet FCC Part 15, Subpart A and VDE0871, Class A
SAFETY: UL 60950

Outline



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