



## DCHVLQ2000-700/27-3U2LA-T5627 DC/DC CONVERTER

This rugged, high voltage DC/DC converter is built with three internal modules to generate the required output power.

Cooling is by liquid coolant provided by the customer.

Ruggedizing and conformal coating provide added immunity to shock, vibration and humidity.

Low component count, large headrooms and the use of components with established reliability results in high MTBF.

Internal output separation diode allows the use of battery charging application.

It is manufactured at our plant under strict quality control.

Customized versions are also available.

### APPLICATIONS

- Industrial Controls
- Mining
- Oil Rigs
- Steel Mills
- Marine & other rugged environments
- Automotive / RV
- Electric Utilities and Substations
- Base Station Power
- Telecom Power Plants
- Railway / Transportation
- Military Applications
- Manufacturing Location
- OEM Applications

### FEATURES

- Field-proven rugged design
- Liquid cooled
- Full electronic protection
- Compact size
- Internal modules encapsulated
- IP 55 enclosure
- Output separation diode for float charging
- Output fail alarm
- 2000VA of output power



High  
frequency  
technology



Light weight,  
compact size



Full electronic  
protection



Output fail  
alarm  
Form C

# SPECIFICATIONS

Input Voltage	700Vdc nominal 600-800Vdc range Input current: 4A max
Input Protection	Inrush current limiting Varistor Reverse polarity protection Internal safety fuse Lower voltage than the specified minimum input will not damage the unit
Isolation	3000Vdc input to chassis 4300Vdc input to output 5600Vdc type test 500Vdc output to chassis
Switching Frequency	55kHz $\pm$ 5kHz
Output Voltage	27Vdc $\pm$ 0.2V / 74A Output is floating; either terminal can be grounded
Output Separation Diode	Installed internally
Load/Line Regulation	$\pm$ 2% combined from zero load to full load including separation diodes
Dynamic Response	Max 5% voltage deviation for 10% to 50% load step, with better than 1msec recovery time
Output Ripple Noise	Better than 60mVrms and 300mVpp (@ 20MHz BW)
Efficiency	85% at full load
Output Overload Protection	Rectangular current limiting with short-circuit protection (no hiccup) Thermal shutdown in case of insufficient cooling (self-resetting) Current Limit: 81A $\pm$ 4A
Output Overvoltage Protection	Second regulator loop, completely stable and independent of main regulator loop OVP limit: 28 V $\pm$ 2V
Standards	Designed to meet IEC61010, EN60950-1, EN 62368-1, CE and corresponding standards
EMI	EN55032 Class A with margins

Operating Temperature	-25°C to +50°C coolant temperature for full specification
Humidity	5 - 95% non-condensing
Temperature Drift	0.03% per °C over operating temperature range
Cooling	By liquid coolant provided by customer. Max coolant temperature 50°C, at 4 liter/min flow rate. Inside diameter of the cooling pipe 8mm at pipe length of 1.5m
Environmental Protection	Internal modules are encapsulated Outside enclosure is IP55 rated
Shock/Vibration	IEC 61373 Cat 1 A&B
Dimensions	Spec. 3U2/IP55: 132 x 147 x 406mm Excluding mounting flanges, water inlets and connectors, terminals
Weight	12 Kg
Connections	Input: 2-pole Phoenix FRONT 2.5V/SA10 Output: M6 red cube, with stud boots
MTBF	110,000 hours @ 45°C
Indicators	None
Control Input	None
Alarm output	Output Fail alarm Form C contacts
RoHS Compliance	Fully compliant
Warranty	2 years

