

## 2-3kW, Rugged, AC/DC Industrial Power Supply with High Output Voltage

### HVC 2K-3U4 Series

- Rugged industrial quality
- Single regulated and adjustable output
- Fan cooling (two internal fans)
- Full electronic protection
- Field-proven design
- N+1 redundancy available



This series of rugged, industrial quality AC/DC power supply uses field proven topology to generate up to 3000W, depending on input output configuration requirements. It is a mature design with a track record in numerous applications. The unit has four internal modules (two FIB 1000, two KHO 1502). Cooling is by two high-quality built-in fans and by conduction via the baseplate which provides sufficient airflow for operation without de-rating to the specified temperature. The fans draw air into the unit. All heat generating components are installed on aluminum heatsink blocks which are thermally connected to the base plate. This also ensures exceptional mechanical ruggedness. Conformal coating provides protection against humidity and airborne contaminants. Full electronic protection, low component count, large design headroom and the exclusive use of components with established reliability contribute to a high MTBF. An optional built-in redundancy diode allows for parallel and N+1 operation. The power supply is manufactured at our plant under strict quality control. Customized versions are also available.

#### SPECIFICATIONS

<b>Input Voltage</b> 230Vac $\pm 15\%$ 47-63Hz 115Vac and other inputs on request. DC input and PFC input versions are also available	<b>Output Voltage/Current</b> 85Vdc/23A, 125Vdc/16A, 136Vdc/15A, 250Vdc/8A, 300Vdc/6.6A or 400V/5A Consult factory for other voltages or higher power levels	<b>Efficiency</b> Output voltage dependent Typically 85% at full load	<b>Indicators</b> None
<b>Input Protection</b> Inrush current limiting Varistor Internal safety fuse Lower voltage than the specified minimum input will not damage the unit	<b>Redundancy Diode</b> Available as option	<b>Operating Temperature Range</b> 0 °C to 50 °C for full specification without derating Extended temperature ranges available	<b>Control Input</b> None on standard version Available as option
<b>Isolation</b> 2250VDC input to chassis 4300VDC input to output; 8mm spacing 500VDC output to chassis	<b>Line/Load Regulation</b> $\pm 1\%$ combined from zero load to full load	<b>Temperature Drift</b> 0.03% per °C over operating temperature range	<b>Alarm Output</b> None on standard version Optional Form C alarm available
<b>Standards</b> Designed to meet EN60950-1 and related standards	<b>Dynamic Response</b> Max 5% voltage deviation for 10% to 50% load step, with better than 1msec recovery time	<b>Cooling</b> By two high quality built-in fans Fans draw air into the unit.	<b>Package/Dimensions (H x W x D)</b> 3U4: 132 x 244 x 407 mm (5.2" x 9.6" x 16") including terminal blocks and fans, excluding flanges Mounting holes are clear
<b>EMI</b> EN55022 Class A as a minimum	<b>Output Ripple/Noise</b> Less than 1% peak to peak or 0.2%rms of the output voltage (20MHz BW)	<b>Environmental Protection</b> Ruggedizing Conformal coating Heavy ruggedizing available on request	<b>Weight</b> 8 kg (18 lb)
<b>Switching Frequency</b> 55kHz $\pm 3$ kHz	<b>Output Overload Protection</b> Rectangular current limiting with short-circuit protection (no hiccup) Thermal shutdown in case of insufficient cooling (self resetting)	<b>Shock/Vibration</b> IEC 61373 Cat 1 A&B	<b>Connections</b> Input/output: terminal block
<b>Hold Up Time</b> Min.10ms at full load for 5% drop of the output voltage	<b>Output Over-voltage Protection</b> Second regulator loop, completely stable and independent of main regulator loop	<b>Humidity</b> 5 – 95% non-condensing	<b>RoHS Compliance</b> Compliant
		<b>MTBF</b> 160,000 hours @ 45 °C (Fans excluded) Demonstrated MTBF is significantly higher	<b>Warranty</b> Two years subject to application within good engineering practice



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