

**JASPER
ELECTRONICS**



FEATURES

- Inputs: >.99 Power Factor Corrected AC 90-264V, or DC 36-72V or DC 20-28V
- Hot Swap, N+1 Redundant with Internal OR-ing Diodes
- Single Wire Current Sharing
- Available with PICMG Standard 47 Pin and Optional 38 Pin I/O Connector Configurations
- Custom Configurations To Meet User Requirements
- Complies With All Requirements Of PICMG Power Interface Specifications
- cUL, TUV and CE Marked



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CompactPCI® Series

350 Watt Power Supplies

(PICMG® COMPLIANT)



COMPACTPCI® SERIES FRONT VIEW

GENERAL OVERVIEW

Jasper's Compact PCI Power Supplies comply with the industry standard PICMG requirements and are available in AC or DC input, from 175W to 500W DC output.

FEATURES ON SELECT MODELS INCLUDE:

- AC/DC: 90-264VAC Input – 175, 200, 250, 300, 350, & 500 Watt Models – 3U & 6U x 8HP
- DC/DC: 18-72VDC Input – 175, 200, 250, 300, 350, & 500 Watt Models – 3U & 6U x 8HP
- PICMG 2.11 Compliant
- Active PFC
- UL/CSA, NEMKO/TUV & CE Certified
- RoHS Compliant
- Current Sharing on 3.3, 5 & +12V Rails
- Hot Swap & ORing Diodes N+1 Operation
- Standard 47 Pin Output Connector with 38 & 32 Pin Options (Some Models)
- Models can be ruggedized against high shock, vibration, and humidity to meet MIL-STD-810 requirements
- Customizing To Meet Your System Requirements Is Our Specialty



ISO9001:2015

02127-001 N_Rev A_January-13-2023

TECHNICAL SPECIFICATIONS

INPUT				
Voltage/ Current	AC 90-264V, 47-63Hz, 7.0A max, 1 Phase, or DC 36-72V (48V nom.), 16.0A Max DC 20-28V (24V nom.), 20.0A Max			
Fusing	Internal line fuse provided, non-user serviceable AC- 10.0A, 250VAC; 48V DC- 20.0A, 125VDC 24V DC - 25.0A, 125VDC			
AC Power Factor	0.99 line PFC typical at AC 115V, full load			
Inrush Current	Thermistor soft start (~25°C cold start) 15Apk @ AC 115V; 30Apk @ AC 230V 15Apk @ DC 24V or 48V			
AC Transient Protection	MOV. Withstands differential and common mode transients as specified by IEEE C62.41 3KV			
AC EMI Filtering	Meets IFCC Level A, and EN 55022 Level A			
Efficiency	Typical, full load: 60% at AC 115V 65% at DC 48V; 60% at DC 24V			
Redundant/Hot Swap	Full power N+1 redundant, hot swap capable			
OUTPUT				
Voltage/Current (V/A)	V1	V2	V3	V4
AC Model: PCI354-1022	5.0/40	3.3/40	+12/9	-12/1
48VDC Model: DPCI354-1022	5.0/40	3.3/40	+12/9	-12/1
Total loading on all outputs not to exceed 350W				
24VDC Model: DPCI304-1022	5.0/30	3.3/30	+12/5	-12/1
Total loading on all outputs not to exceed 300W				
Line/ Load Regulation	At the Sense Point, Over Full Input Range 0 – 100% Output Loading <±1% for V1, V2, V3, sense leads connected. <±5% for V4			
Minimum Loading	None required for single unit applications. 10% loading required in N+1, N2 configurations			
Stability	Output drift <±0.2% after 20 minute warm-up			
Temperature Coefficient	<±0.02%/°C, 0° - 50°C, after 20 minute warm-up			
Dynamic Response	Less than 3% deviation with a 25% load change at 1A/μsec. Output returns to within 1% in less than 300μsec			
Ripple and Noise (PARD)	For all outputs, 50mV max or 1% peak-to-peak nominal, which ever is greater, DC to 20MHz bandwidth with a coaxial probe and 0.1μF/22μF capacitors at the output terminals			
Current Sharing/ Parallel N+1 Operation	V1, V2, V3 Outputs. Single wire connection for ±10% current sharing between any number of units			
Remote Sense	V1, V2, V3 outputs compensate for up to 0.25V total line drop in the load cables. Outputs are internally sensed if leads are opened			
AC Hold-Up Time	Outputs remain in regulation >15msec minimum following loss of AC power at low line, full load			
Over Current/ Short Circuit Protection	Constant current limit on all outputs. Automatic recovery when overload is removed			
Over Voltage Protection	Non-crowbar type. Any output that exceeds 25% ±10% of nominal Vout will cause all outputs to latch off. Remote inhibit, enable or power input recycle required to reset.			
Over Temperature Protection	Internal temperature sensing. Causes all outputs to shut down. Automatic recovery			
Under Voltage Warning	Any output dropping below 10% of nominal triggers the power fail warning signal			
Reverse Sense Protection	Outputs latch-off if remote sense connections are installed in reverse. Remote inhibit, enable or power input recycle required to reset			
Over/ Under Shoot	None at turn-on or turn-off			

*Specifications subject to change without notice.

SIGNALS, INDICATORS AND CONTROLS	
Remote Enable	Enabled by closed circuit or TTL logic 0. Disabled by open circuit or TTL logic 1
Remote Inhibit	Enabled by open circuit or TTL logic 1. Disabled by closed circuit or TTL logic 0
Power Fail Warning	Loss of input AC causes a TTL compatible signal to go low >4msec prior to any output dropping out of regulation. At AC turn-on, signal stays low until all outputs are in regulation. PF signal also triggered in both AC and DC input models by an under voltage condition on any output
LED Indicator	Single bi-color LED. Green indicates input power ON and outputs within regulation. OFF or RED indicates an input and/ or output power fault
MECHANICAL	
Mechanical Outline Drawings are available. Contact the factory and request copies by specifying input voltage and connector type	
Weight	Approx: 2.38 kg / 4.8 lbs
Retaining Latches	Supplied with Type IV Rittal #3686.903 upper and #3686.902 lower latches, or Type VII Telecom Rittal #3686.134 upper and #3686.135 lower latches. Models may be ordered without latches. Refer to Option Codes to select
I/O Connector Offset	47 pin models supplied with the I/O connector at 7.40 [.291] offset (PICMG std) only. 38 pin models supplied with the connector at 15.27 [.601] or optional 7.40 [.291] offset Refer to Option Codes to specify connector offset
Guide Rails	47 pin models supplied with guide rails at 6.61 [.260] offset for use with Rittal #3687.832 (or equivalent) PSU guides. 4.07 [.160] optional guide rail offset available for use with Rittal #3684.669 CPCI standard guides. 38 pin models available in both 6.61 [.260] and 4.07 [.160] offsets with 7.40 [.291] I/O connector offset, 4.07 [.160] only with 15.27 [.601] offset Refer to Option Codes to specify guide rail offset
Front Panel Overlay	Supplied with Lexan overlay and JE Logo. May be deleted, or supplied with customer specified logo or other information. Contact factory Refer to Option Codes to specify overlay
OPERATING ENVIRONMENT	
Operating Temperature	0° – 50°C ambient at full load, with specified forward airflow
Cooling	Direct forward airflow required to achieve full rated power and specified MTBF. AC Input: 90 cfm minimum for 47-pin configuration, 120 cfm minimum for 38-pin configuration. DC Input: 90 cfm minimum for all configurations
Relative Humidity	Up to 90% RH, non-condensing
Operational Vibration	0.75G peak, 5 – 500Hz along three orthogonal axis
Storage Temperature	-40° to 85°C
Altitude	Operating to 10,000 ft; Storage to 50,000 ft.
MTBF	Designed for 150,000 hrs at 25°C
INTERCONNECT	
Input/ Output Connectors	Use of the specified mating connector is required to insure proper “make/break” sequential contact sequence
PICMG Std 47 Pin	Positronic Ind. P/N PCIH47M400A1. Mates with PI P/N PCIH47F300A1
Optional 38 Pin	Positronic Ind. P/N PCIH38M400A1-241.1. Mates with PI P/N PCIH38F300A1
SAFETY	
48VDC and All AC Input Models	Recognized to UL 1950, Third (3 rd) Edition; Certified to CSA 22.2 No.234/950 (cULus); Approved to TUV EN60950/A11:1997. CE Marked
24VDC Input Models	Pending
Some user specified (custom) configurations may not be eligible to bear some or all of the agency approval marks noted above. Contact factory for information on non-standard models	

*Specifications subject to change without notice.

PICMG STANDARD 47 PIN CONNECTOR

PIN#	SEQ ⁽¹⁾	FUNCTION	
01-04	2	+5.0V	V1 Output
05-12	2	GND	V1+V2 Return
13-18	2	+3.3V	V2 Output
19	2	GND	V3 Return
20	2	+12.0V	V3 Output
21	2	-12.0V	V4 Output
22	2	RTN	Signal Return
23	2	N/C	No Connection (Reserved)
24	2	GND	V4 Return
25,26	2	N/C	No Connection (Reserved)
27	3	R/EN	Remote Enable. Close circuit to GND
28	2	N/C	No Connection (Reserved)
29	2	V1-ADJ	+5.0V Remote Voltage Adjust.
30	2	+S1	+5.0V (V1) Remote Sense
31	2	N/C	No Connection (Reserved)
32	2	V2-ADJ	+3.3V (V2) Remote Voltage Adjust
33	2	+S2	+3.3V (V2) Remote Sense
34	2	S-RTN	Sense Return for V1, V2, V3
35	3	ISHR-1	+5.0V (V1) Current Share
36	2	+S3	+12.0V (V3) Remote Sense
37,38	2	N/C	No Connection (Reserved)
39	2	R/INH	Remote Inhibit. Close circuit to GND
40	2	N/C	No Connection (Reserved)
41	3	ISHR-2	+3.3V (V2) Current Share
42	2	PF	Power Fail Signal
43	2	N/C	No Connection (Reserved)
44	3	ISHR-3	+12.0V (V3) Current Share
45	1	PE	Primary Earth (chassis) Safety Ground
46	2	ACC	Neutral AC Power Input
	2	+DC	+DC Input Power
47	2	AC	Line AC Power Input
	2	-DC	-DC Input Power

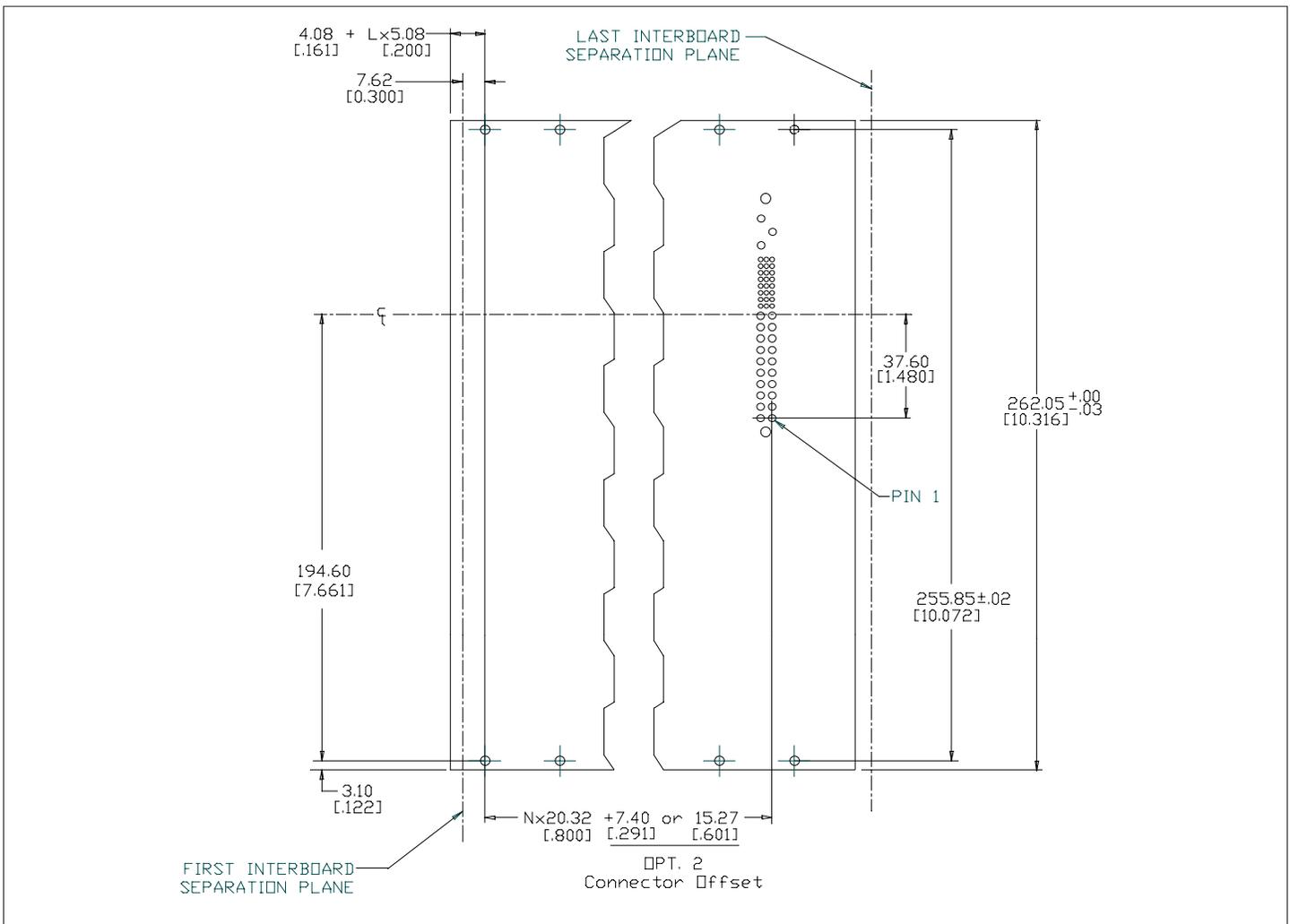
OPTIONAL 38 PIN CONNECTOR

PIN#	SEQ ⁽²⁾	FUNCTION	
01-04	2	+5.0V	V1 Output
05-12	2	GND	V1+V2 Return
13-16	2	+3.3V	V2 Output
17	2	GND	V3 Return
18	2	+12.0V	V3 Output
19,20	2	N/C	No Connection (Reserved)
21	2	-12.0V	V4 Output
22,23	2	GND	V4 Return
24	2	+S1	+5.0V (V1) Remote Sense
25	3	R/EN	Remote Enable. Close circuit to GND

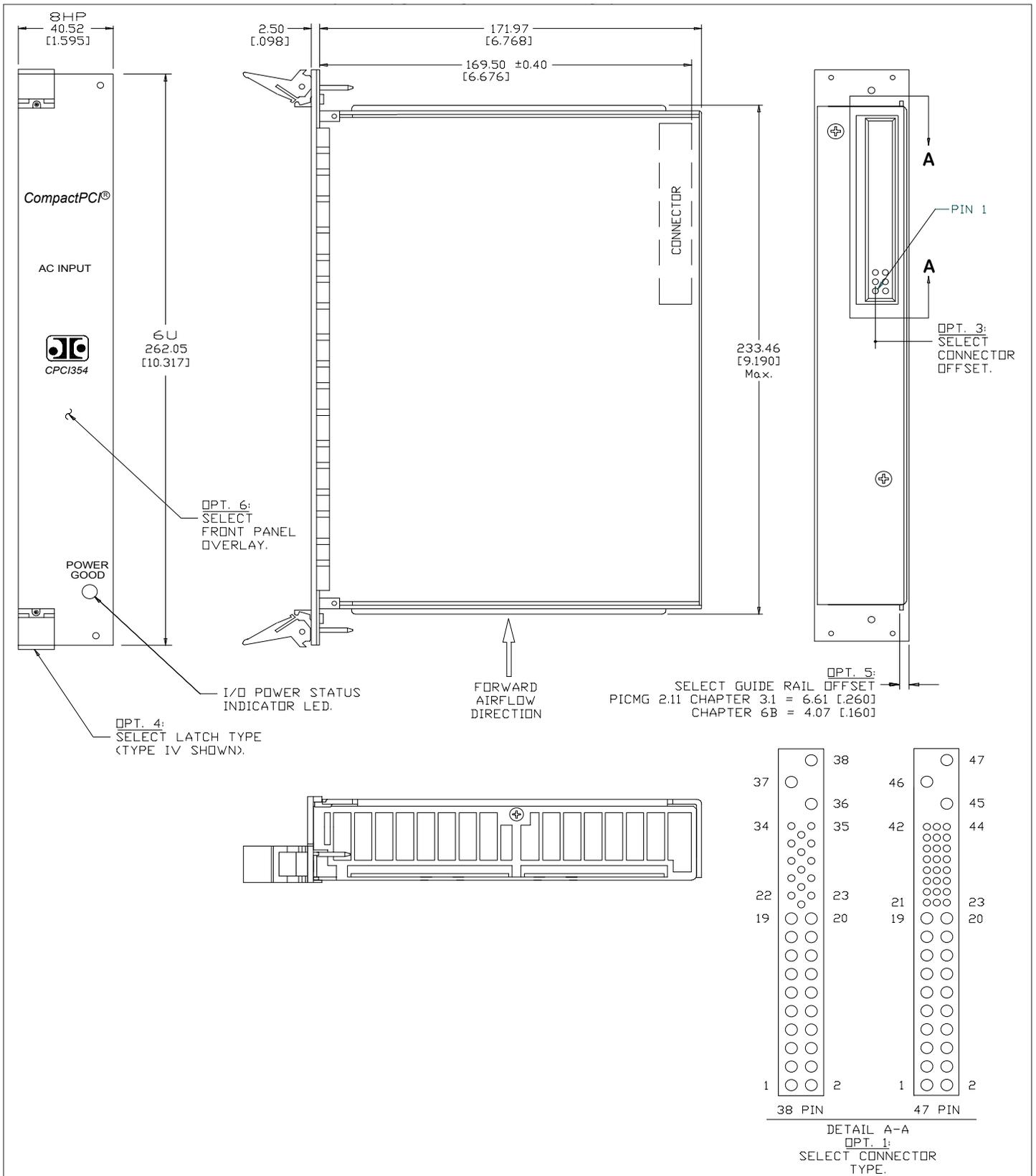
26	2	S-RTN	Sense Return for V1, V2, V3
27	2	+S2	+3.3V (V2) Remote Sense
28,29	2	N/C	No Connection (Reserved)
30	2	+S3	+12.0V (V3) Remote Sense
31	2	R/INH	Remote Inhibit. Close circuit to GND
32	3	ISHR-1	+5.0V (V1) Current Share
33	3	ISHR-2	+3.3V (V2) Current Share
34	3	ISHR-3	+12.0V (V3) Current Share
35	2	PF	Power Fail Signal
36	1	PE	Primary Earth (chassis) Safety Ground
37	2	ACC	Neutral AC Power Input
	2	+DC	+DC Input Power
38	2	AC	Line AC Power Input
	2	-DC	-DC Input Power

*(1) Contact mating sequence. 1= First to make/ last to break

BACKPLANE CONNECTOR LOCATIONS, VIEWED FROM THE FRONT OF THE ENCLOSURE



COMPACTPCI350® OUTLINE DRAWING



INNOVATIVE SPECIALTY DC POWER SYSTEMS

Standard and Custom Power Supplies from 5W to 10KW

TRAFFIC CONTROL POWER SUPPLIES



- 70-400+ Watts / 120 and 220 VAC Models Available
- CALTRANS TEES, NYSDOT, CDOT, GDOT Compliant for 332, 334, 336, 342, 344, and 346 Series cabinets
- RoHS and NEMA Compliant
- Custom labeling and barcoding available
- Ruggedization against shock / vibration / humidity available

CUSTOM POWER DISTRIBUTION ASSEMBLIES (PDAs)



- Compliant with TEES 2020
- 1U smaller than the PDA2-LX and PDA3-LX
- User accessible slots as specified
- Custom labeling and barcoding available
- Ruggedization against shock / vibration / humidity available

COMPACT PCI



- AC or DC input, 175W - 500W DC output, active PFC
- 3U x 8HP, 6U x 8HP sizes
- PICMG 2.11 compliant, UL/CSA, NEMKO/TUV/CE certified, ROHS compliant
- Ruggedization against shock/ vibration/ humidity optional

Primary Applications: Industrial Computing, Military, Satellite Comm, Test, Transportation, Telecom, Aerospace

SPECIALTY HOT-SWAPPABLE POWER SUPPLIES



- 200-1500W, Universal Input, 5-54VDC Output
- Hot Swap. N+1, 90+% Efficiency
- 1U Form Factors
- 30+ Variations for Various Applications Including Nuclear
- Ruggedization against shock/ vibration/ humidity optional

Primary Applications: Medical Equipment, Military, Test, Automotive, Computing, Audio, Sensitive Electronics

RACK POWER SYSTEMS



- 200W-1500W, 2-8 slots, single or mixed output voltages, up to 10KW total
- Single, dual, or individual unit AC or DC input
- Internally or externally redundant DC outputs
- Standard 19" and 23" size or user-specified configurations also available
- Ruggedization against shock/ vibration/ humidity optional

Primary Applications: Medical Equipment, Military, Test, Automotive, Computing, Audio, Sensitive Electronics

CUSTOMS & MODIFIED STANDARDS



- 75W-2KW
- Single to 7 outputs
- Designed and built to custom or semi-custom specifications
- Ruggedization against shock/ vibration/ humidity optional
- Custom electrical specs, chassis, paint, labeling, connectors, interface all available

Primary Applications: Medical Equipment, Military, Test, Automotive, Computing, Audio, Sensitive Electronics

LOW NOISE CONVECTION / CONDUCTION COOLED POWER SUPPLIES



- 200W-500W, 90—264VAC full range input with 12-54 VDC Output
- Wide operating temperature range / high efficiency
- Small form factors
- Ruggedization against shock/ vibration/ humidity optional

Primary Applications: Medical Equipment, Military, IT, Sensitive Electronics

MEDICAL ADAPTERS



- 6W-250W, Efficiency levels V & VI
- Desktop, Wall-mount, and Interchangeable AC plug types
- Large selection of output connectors – additional cable lengths available
- UL60601 (medical) approved adapters available
- Ruggedization against shock/ vibration/ humidity optional

